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The 2019 Annual Economic Report on the EU Fishing Fleet (STECF 19-06)

Edited by

Natacha Carvalho
Michael Keatinge
Jordi Guillen
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Contact information

Name: STECF secretariat

Address: Unit D.02 Water and Marine Resources, Via Enrico Fermi 2749, 21027 Ispra VA, Italy

E-mail: stecf-secretariat@jrc.ec.europa.eu

Tel.: +39 0332 789343

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Abstract

In 2017, the EU fishing fleet numbered 83 323 vessels with a combined gross tonnage (GT) of 1.56 million tonnes and engine power of 6.3 million kilowatts (kW). Based on data submitted by Member States under the EU MAP, there were 65 567 active vessels in 2017. Direct employment generated by the fleet amounted to 151 981 fishers, corresponding to 107 807 FTEs; on average earning EUR 28 362 in wages annually. The EU fleet* spent 4.8 million days-at-sea and consumed 2.2 billion litres of fuel to land 5.3 million tonnes of seafood with a reported value of EUR 7.6 billion. Revenue (income from landings plus other income), as reported amounted to EUR 7.7 billion while costs incurred by the fleet totalled EUR 6.4 billion (excludes fishing rights), 11% of which consisted of capital costs (EUR 688 million) and 89% of operating costs. The latter mainly consisted of labour and fuel costs (39% and 16% of total costs, respectively). The Gross Value Added (GVA) and gross profit (all excl. subsidies and fishing rights) was estimated at EUR 4.5 billion and almost EUR 2.0 billion, respectively. GVA as a proportion of revenue was estimated at 58% and gross profit margin at 26%. With a total net profit of EUR 1.3 billion in 2017, 17% of the revenue was retained as profit. This publication includes: 1) An structural and economic overview of the EU fishing fleet in 2017, with nowcasts for 2018-2019, and trend analyses for the years 2008-2017/18; 2) A regional analysis of the EU fishing fleet by major sea basin: North Sea & Eastern Arctic, Baltic Sea, North Western Waters, South Western Waters, Mediterranean Sea, Black Sea, as well as, fleets operating in Other Fishing Regions, covering the EU Outermost Regions and fishing areas outside EU waters and in Areas Beyond National Jurisdiction, covered by Regional Fisheries Bodies (e.g. NAFO and ICCAT); 3) A detailed structural and economic overview of each EU Member State fishing fleet, including qualitative economic performance assessments for 2017 and nowcasts for 2018 and 2019.

*Due to the incomplete coverage of the fishing activity and socio-economic data, Greece was excluded from all aggregated analyses

Authors:

STECF advice:

Abella, J. Alvaro, Bastardie, Francois, Borges, Lisa, Casey, John, Catchpole, Thomas, Damalas, Dimitrios, Daskalov, Georgi, Döring, Ralf, Gascuel, Didier, Grati, Fabio, Ibaibarriaga, Leire, Jung, Armelle, Knittweis, Leyla, Kraak, Sarah, Ligas, Alessandro, Martin, Paloma, Motova, Arina, Moutopoulos, Dimitrios, Nord, Jenny, Prellezo, Raúl, O'Neill, Barry, Raid, Tiit, Rihan, Dominic, Sampedro, Paz, Somarakis, Stylianos, Stransky, Christoph, Ulrich, Clara, Uriarte, Andres, Valentinsson, Daniel, van Hoof, Luc, Vanhee, Willy, Villasante, Sebastian, Vrgoc, Nedo

EWG-19-06 report:

EWG chairs Carvalho, N. and Keatinge M

Experts: Accadia, P., Avdic Mravlje, E., Berkenhagen, J., Blomqvist, G., Burke, B., Cano, S., Carpenter, R., Davidjuka, I., Doring, R., Fitzpatrick, M., Gambino, M., Guillen, J., Hoekstra, G., Ioannou, M., Jackson, E., Jung, A., Kazlauskas, E., Kuzebski, E., Lawrence, S., Le Grand, C., Lees, J., Liontakis, A., Malvarosa, L., Martin Franco, C., Minne, MD., Moset, M., Nicheva, S., Ramos Do Ó, J., Rodríguez, A., Rodríguez, G., Sabatella, R., Sciberras, A., Souffez, A., Tzouramani, I., Verlé, K., Virtanen, J., Vukov, I., Zhelev, K.

1 INTRODUCTION

The 2019 Annual Economic Report (AER) on the European Union (EU) fishing fleet provides a comprehensive overview of the latest information available on the structure and economic performance of EU Member States (MS) fishing fleets.

This report covers the period 2008 to 2017 and includes information on the EU fleet's fishing capacity, effort, employment, landings, income and costs, as well as nowcast performance estimates for 2018 and 2019, where possible. All monetary values have been adjusted for inflation to 2015 constant prices. The profitability and performance of the EU fishing fleet is also reported in terms of gross value added, profits, profit margins, resource productivity (labour and capital) and efficiency (fuel use, LPUE, etc.).

This publication includes:

1) A structural and economic overview of the EU fishing fleet for the reference year 2017, with trend analyses for the period 2008 to 2017, including estimates for 2018 and 2019;

2) A regional analysis of the EU fishing fleet by major sea basin: North Sea & Eastern Arctic, Baltic Sea, North Western Waters, Southern Western Waters, Mediterranean Sea, Black Sea, as well as for the EU Outermost regions and the long-distant fisheries (LDF) in Other Fishing Regions, i.e., RFMOs (e.g., NAFO, ICCAT, IOTC, CECAF);

3) A detailed structural and economic overview of each EU Member State fishing fleet, including qualitative economic performance assessments for the years 2008-2017 and nowcasts for 2018 and 2019.

The 2019 AER supersedes all previous AERs. Comparisons across AER reports cannot not be made.

Terms of Reference for STECF EWG-19-04 & 19-06

Background and general objectives provided by the Commission

The AER has become one of the main sources of economic and social data for scientific advice on the performance of the EU fleets. It is also increasingly used by scientific bodies, national administrations and international institutions.

Given the increasing number of scientific uses of the AER and its growing complexity, there is a greater need to guarantee robust and precise data and their analysis as well as streamline the content of the report. This will mainly be achieved through:

- dedicated data checking exercise: https://datacollection.jrc.ec.europa.eu/data-analysis
- more concise and less descriptive chapters, supplemented by the JRC online data dissemination tool https://datacollection.jrc.ec.europa.eu/da/fleet/
- A continued effort to provide more analytical outcomes, notably on drivers of profitability and trends at the EU and regional levels.

The trimming down of the AER is intended to achieve a more balanced effort/product exercise, concentrating on the core tasks of the AER on the one hand, while freeing up time and resources on the other so that EWG experts can focus on more applied economic analyses. Frequently asked questions following the publication of the AER include for example why a particular fleet segment has shown greater/lower profitability, what the (possible/probable) underlining factors causing the increase/decrease in performance are, etc.

In light of the above, the 2019 AER will provide a more in-depth look at the different factors driving the economic performance of the EU fleets with a special focus on the economic benefits of MSY (such as analysis of causality between stocks exploited sustainably and the improvement in the performance of the fleets). Also the recovery of stocks and implementation of management measures (such as analysis of causality between Landing obligation and economic performance). Economic impacts of choke-species situations. Other drivers may include changes in first sale prices and operational costs, structural and marketing measures. The analysis will be done at EU, region (North Sea, Baltic Sea, etc.) and MS levels.

This WG will be held alongside the EWG 19-03 (Social data in the EU Fisheries Sector) so that data experts involved in the data call submission can provide input in both EWG. Synergies between both EWG should be exploited.

Furthermore, STECF concluded that to improve the monitoring of the CFP, the Annual Economic Report 2019 EWG should assess the applicability of three proposed indicators: Return on fixed tangible assets (RoFTA), Net value added/Full time equivalent (NVA/FTE) and Net Profit Margin (NPM). The objective should be to do this at various levels of aggregation beyond the fleet segment (e.g. fishery, member state; region). The EWG on the improvement of the monitoring of the CFP also proposed an additional economic indicator to those above, the 'Economic Dependency Indicator (EDI)'. This indicator is also a candidate for the inclusion in the indicators to assess the balance between fleet capacity and fishing opportunities and will be further tested there.

In this context, for the possible inclusion of economic indicators in the monitoring of the CFP, STECF should elaborate and test the four proposed economic indicators (STECF-18-15). The aim should be to analyse various levels of aggregation beyond the fleet segment (e.g. fishery, member state; region) and whether that would add valuable information for the monitoring of the CFP.

The 2019 AER will have specific section on the following fleet categories:

- A section on the EU small-scale coastal fleets. This section will investigate the drivers/factors behind the trends of the small-scale coastal fleets, whether there are regional differences and the possible reasons for these differences.

- EU distant water fleets: this section will include an overview of the employment, profitability and salaries for the EU distant water fleets distinguishing by main fishing areas (e.g. NAFO, ICCAT, IOTC).

- a section on the EU outermost regions. This section will include an overview of the employment, profitability and salaries across different outermost regions. It will also investigate the factors behind the trends identified.

- links between economic growth and resource use. This section will examine key drivers and indicators, in particular, landings per unit of effort, gross value added by the different fleets, first sale prices, labour and capital productivity. It will examine for example trends in resource efficiency, i.e. fish landed per fishing day or day at sea, improvements in energy efficiency, etc.

Specific objectives

The specific objectives and priorities for the two working groups are:

EWG 19-04: the first AER STECF meeting should lead to a data endorsement by the attending experts, detailed accounts of any data transmission (DT) issues and the drafting of concise national chapters. Estimates of economic performance for 2018 and beyond (if possible) should be carried out.

As a matter of priority, the EWG is requested to ensure that all unresolved data transmission (DT) issues and failures encountered prior to and during the EWG meeting are recorded on line via the Data Transmission Monitoring Tool (DTMT) available at: https://datacollection.jrc.ec.europa.eu/web/dcf/dtmt

Guidance on how DT issues should be inserted in the DTMT, log-on credentials and access rights will be provided separately by the STECF Secretariat focal point for the EWG.

The data transmission issues may be further assessed by EWG 19-06, to check if data transmission issues have been fixed with the latest uploaded data.

EWG 19-06: the second AER EWG meeting will focus on developing applied economic analysis based on the data submitted. In particular, experts will produce a synthesis on the trends and economic results of the EU fishing fleet by sea-basin and aggregate it at EU level, and identify the main factors behind these trends.

Outline of the AER

STECF is requested to provide the Annual Economic Report on EU fishing fleets for 2019 including, the following sections:

STECF OBSERVATIONS

EXPERT WORKING GROUP REPORT

EU FLEET OVERVIEW

- Fleet structure
- Fishing activity and output

- Employment and average salaries
- Economic performance
- Resource productivity and efficiency
- Summary of the main drivers and trends
- EU small-scale coastal fleet segments (key socio-economic indicators)
- EU distant-water and outermost region fleets (key socio-economic indicators)
- Assessment of the economic performance for 2018 and 2019

REGIONAL ANALYSIS

Baltic Sea, North Sea, North Western Waters, South Western Waters, Mediterranean Sea, Black Sea, EU Outermost Regions and Other Fishing Regions (distinguishing by main fishing areas such as NAFO, ICCAT, IOTC, CECAF, etc.).

NATIONAL CHAPTERS

- Including a brief section on small-scale coastal fleet segments (key socioeconomic indicators) where relevant
- Including a brief section on EU distant-water fleets (key socio-economic indicators) where relevant
- Including a brief section on socio-economic aspects, considering the new social data and economic links with the main fishing communities, where relevant.

ANNEX (METHODOLOGIES, GLOSSARY, ETC)

EWG structure, workflow and outputs

The first meeting will focus primarily on data quality and coverage. All data issues that may impact the quality and robustness of the analyses in the AER, and associated STECF reports (e.g. Balance) will be reported in the Data Transmission Monitoring Tool (DTMT). Any outstanding data issues not covered by EWG 19-04 will be followed up by EWG 19-06. This may occur if MSs submit revised data after EWG 19-04. That is, according to the data handling procedure, data submission may occur up to two weeks after the first meeting upon request of STECF or the JRC. EWG 19-04 will also produce final draft national chapters. The formulation of the national chapters is an integral part of the data checking process. Time and data permitting, preliminary analyses for the EU overview chapter will be carried out. EWG 19-06 will continue on from EWG 19-04 and produce final EU overview and regional chapters. National chapters will be finalised if needed. Nowcasts for 2018 and 2019 where possible will be completed and incorporated into the various chapters.

All relevant documentation and data are available on the DCF_JRC or STCF websites or will be made available on a dedicated EWG FTP (see section 9 – List of Background Documents).

Data sources and coverage

The data used to compile all the various analyses contained within the report were collected under the data collection framework, cf. Council Regulation (EC) No 199/2008 of 25 February 2008 for the years 2008 -2016 (DCF) and cf. Council Regulation (EC) No 2017/1004 of 17 May 2017, for the years 2017-2018 (EU-MAP).

The 2019 call requested data for the years 2017 and 2018. Fleet capacity data were requested up to and including 2017, while fishing activity (effort and landings), employment and economic parameters were requested up to and including 2017. Additionally, income from landings and several effort and landings variables were requested (non-mandatory) for 2018 to allow for economic performance nowcasts to be estimated at fleet segment and national level for 2018 and 2019.

This report includes data reported by national totals and by fleet segments (a combination of the main fishing technology used and vessel length group operating predominately in one supra-region). The data analysed covers transversal (capacity, landings and effort) and economic data (income, costs, employment, enterprises, capital value and investment).

For a full list of variables and reference years requested under the 2019 call for economic data on the EU fishing fleet see Table 6.1 in Section 6 – AER Report Methodology.

In terms of the completeness of the Member States data submissions, most countries submitted the majority of parameters requested under the call. In many cases missing data relates to fleet segments with low vessel numbers for which data may be sensitive or hard to obtain (logbooks are compulsory for vessels over 10 meters only). In terms of data quality, inevitably some 'abnormal' estimates for various parameters were detected by the JRC or experts and in many cases rectified by the Member States. However, some coverage and quality issues remain outstanding:

- Greece provided only partial data for some years. Due to the incomplete coverage of the fishing activity and socio-economic data, Greece was excluded from all aggregated analyses.
- This year's submissions from France and Spain improved but continue to be incomplete, in particular missing effort and landings data for the years 2008-2009 and days-at-sea not provided by FAO sub-regions; some issues remain for fleets in the EU Outermost Regions (France) and for the Irish under 10m vessels;
- Due to the reduced number of vessels and/or enterprises, several MS, including Italy, Germany and some of the Baltic States, do not deliver sensitive data on their distant water fleets, making coverage at the EU and regional levels incomplete.
- As a new Member State, Croatia is only required to provide data from 2012 onwards.
- Incomplete time series data due to either the non-submission of data, questionable data and/or new MS additions, make trend analysis over the entire period 2008-2017/2018 at the EU and regional levels impossible without excluding the MS fleets that are incomplete.

See Section 7 – Data Coverage and Quality for more information on data transmission issues.

2 EWGs AND LIST OF PARTICIPANTS

The 2019 Annual Economic Report on the EU fleet (AER) has been produced by two working groups of economic experts (EWG 19-04 and 19-06) convened under the Scientific, Technical and Economic Committee for Fisheries (STECF), which took place from the 8 to 12 of April in Ispra, Italy and from the 3 to 7 June 2019 in Dublin, Ireland

The groups consisted of independent experts from within the EU and experts from the European Commission's Research Centre (JRC).

The full list of participants at EWG 19-04 and 19-06 is presented in section 8.

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THE 2019 ANNUAL ECONOMIC REPORT ON THE EU FISHING FLEET (STECF 19-06)

THIS REPORT WAS REVIEWED BY THE STECF PLENARY (PLEN-19-02), 1-5 JULY 2019

Request to the STECF

STECF is requested to review the report of the STECF Expert Working Group meeting, evaluate the findings and make any appropriate comments and recommendations.

STECF observations

The 2019 Annual Economic Report on the EU Fishing fleet was not completed by the time of the plenary, although an almost final version was available to the STECF at the time of starting the plenary. STECF observations are based on this draft version.

STECF acknowledges the extensive work undertaken by all scientists involved in the two EWGs (EWG 19-04 and EWG 19-06). These two EWGs produced the 2019 Annual Economic Report on the EU Fishing fleet (AER).

The 2019 AER represents a comprehensive overview of the structure and economic performance of EU fishing fleets (at EU, regional and Member State level) in the year 2017 and provides valuable statistics and analyses for different end users, including the industry, managers and scientists.

The results of the 2019 AER draft report indicate that the profitability of the EU fleet slightly decreased in 2017 compared to 2016, registering net profits of EUR 1.3 billion, compared to the EUR 1.37 billion in 2016. EU fleet capacity has continued to decrease but at a lower rate than observed in previous years. Direct employment generated by the sector (around 152 000 fishers) has slightly decreased compared to 2016 (-0.2%). While overall the EU fleet was profitable, four out of the 22 Member States' fleets (excl. Greece which not delivered all variables to calculate profit) generated net losses in 2017. Results varied by scale of operation and fishing region.

Based on the AER draft report, STECF made a number of observations regarding the organisation of the work for these EWGs:

STECF observes that the two EWGs that produce the AER of EU fleets respond to the same ToRs but have different objectives. EWG 19-04 (AER I) has the objectives of data endorsement by the attending experts, detailed accounts of any data transmission issue and the drafting of concise national chapters. EWG 19-06 (AER II) aims to focus on developing applied economic analysis based on the data submitted. In particular, experts are requested to produce a synthesis on the trends and economic results of the EU fishing fleet by sea-basin and aggregate it at EU level and identify the main factors behind these trends. Currently however, the tasks between the two EWGs are in practice not that clearly divided and tasks of the AER I tend to be carried over to AER II, effectively reducing the capacity of AER II to meet their objectives. The need to correct data quality and/or transmission issues during AER II does not allow the EWG to dedicate more time for analysis and the specific topics. Apart from late delivery of data, also problems with the database sometimes occur. For example, bugs and incorrect data may be uncovered during the meeting all of which lead to additional updates.

STECF notes that additional requests by DG MARE to include certain data or specific analyses in the report can also lead to the necessary updating of figures and or tables. There is sometimes no clear distinction, well ahead of the meetings, between the routine

contents of the report and additional information/analyses required by DG MARE and where sometimes preparatory work by e.g. JRC would improve the processes.

STECF observes that over time the AER has evolved in terms of structure and content. One part of the report, consisting of the National, Regional and EU wide statistical reports and analyses of trends and developments, has evolved into a standardised document. STECF observes that the report provides context to the trends and developments noted and hence provides a useful overview of developments of European fisheries. STECF observes that the standard AER reporting on statistics of the economic performance of selected European fleets follows a fixed structure and process, which is comprehensive.

STECF observes that in addition to the National, Regional and EU wide statistical reports and analyses of trends and developments, the EWG was requested to produce specific sections on small scale coastal fleets, EU distant water fleets, EU outermost regions and on the links between economic growth and resource use.

In addition, the two EWGs were also requested to have a more in-depth look at two stand-alone issues addressing the different factors driving the economic performance of the EU fleets with a special focus on i) the economic benefits of MSY (such as an analysis of causality between stocks exploited sustainably and the improvement in the performance of the fleets) and ii) the recovery of stocks and implementation of management measures (such as an analysis of causality between the Landing obligation and economic performance).

STECF observes that for assessing the economic benefits of MSY, EWG 19-06 proposed two possible approaches. A forward-looking approach demonstrating the economic costs and benefits to EU fishing fleets of a long-term state of MSY while holding other factors constant, and/or a backward-looking approach to tease out any causality between MSY pathways for European fish stocks and the economic performance of the EU fishing fleets that exploit them. STECF notes however that the EWG did not have sufficient time to complete neither of the two approaches.

Regarding the economic consequences of the landing obligation, the EWG acknowledged that there are potential economic consequences on the application of the landing obligation although they could not perform any assessment because there is currently no quantifiable information on either the direct economic or wider social impact of the policy.

STECF observes that, as indicated by the EWG 18-15 report, EWG 19-06 was requested to assess the appropriate aggregation level and the applicability of the three proposed indicators by EWG 18-15 (Return on fixed tangible assets -RoFTA-, Net Value Added/Full Time Equivalent -NVA/FTE- and Net Profit Margin -NPM-) for a possible inclusion in the CFP monitoring. STECF observes however, that due to time constraints, the EWG could not test all possible aggregation levels and decided to provide information on aggregation levels which seemed good candidates for a possible inclusion in the CFP monitoring. ROFTA was provided at fleet segments in a regional sea, pelagic and demersal fleet segments and small and large-scale fleet segments, aggregation levels. For NPM and NVA/FTE, regional sea level and thereafter distinguishing by length classes and fishing gears, was provided. The EWG was also requested to assess the usefulness of the economic dependency indicator as a possible indicator for CFP monitoring. The EWG considered that this should be explored in the Balance between capacity and fishing possibilities EWG 19-13, as was also concluded in the EWG 18-15 report. STECF notes EWG 19-13 has indeed already made steps to achieve this.

Finally, STECF observes that the assessment of the accuracy of the projection of economic and transversal estimates for the current and previous years by comparing these projections with the actual observations in the following year, as requested by the

PLEN 18-02, was undertaken by the EWG 19-06, but the results were not yet available in the draft report at the time of the plenary and the STECF could not comment on that.

STECF conclusions

The 2019 Annual Economic Report (AER) on the European Union (EU) fishing fleet provides the most comprehensive overview of the structure and economic performance of EU Member States' fishing fleets.

STECF concludes that the inclusion of specific sections in which specific fleet segments are more deeply analysed (small scale coastal fleets, EU distant water fleets, EU outermost regions and on the links between economic growth and resource use) are an informative addition to the overall overview and national chapters.

STECF concludes that the analysis of specific topical issues (e.g. economic consequences of the landing obligation and the economic performance of the fleets at MSY levels) should not be included as a section of the AER. STECF recalls its conclusion from STECF 18-07 that these specific topical issues require a wider perspective than what can be obtained from the analysis of the economic data of the EU fishing fleet alone. These analyses would be more informative if considered as a dedicated, multidisciplinary study, perhaps as a part of a dedicated EWG.

STECF concludes that the two EWGs (AER I and AER II) should be more focused with specific objectives and different ToRs for each meeting. AER I should be dedicated to data check and the production of national chapters, while AER II should focus on developing applied economic analyses based on the data submitted in AER I. STECF acknowledges however that some data or database issues can only be detected when the analyses are performed; therefore STECF encourages the increased automatisation

of the production of standard chapters (for example the possibility of using R markdown for some chapters could be explored); that would free more time for additional data checks in AER I and would also allow for quick update if data still need to be corrected during AER II. STECF considers that such automatisation would lead to a substantial reduction of the time deployed during AER II on fixing these data issues, and would allow focusing more time on the objectives of the second EWG.

STECF concludes that it would be beneficial for the use and readability of the report to evaluate the process of producing the AER in terms of efficiency and effectiveness, including a discussion about the actual level of details needed in the text for each section. STECF suggests that for the meetings in 2020 the ToRs could be structured along the following lines: 1) Routine parts of the report, 2) Analyses that are done or could be done in some way systematic and routinely, and 3) Specific topics that need more deeper analysis.

STECF considers that the possible use of FDI data for landings and effort should be considered when producing the economic performance of the fleet, as a step forward in the process of merging transversal and economic data calls. STECF suggests including a discussion ToR in the next STECF plenary (19-03) about the possible merging of the common variables of the two data calls. The comparability and the sources of discrepancies between the different data calls would need to be discussed with the JRC focal person and with the AER EWG chairs, in order to adequately define this task for the next year's AER EWGs.

STECF agrees with EWG 19-06 that further testing of potential economic CFP monitoring indicators is still required, among others to improve aspects of display and interpretation of the trends shown by the various indicators.

Contact details of STECF members

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Name	**Affiliation[1]**	**Email**
Abella, J. Alvaro	Independent consultant	aabellafisheries@gmail.com
Bastardie, Francois	Technical University of Denmark, National Institute of Aquatic Resources (DTU-AQUA), Kemitorvet, 2800 Kgs. Lyngby, Denmark	fba@aqua.dtu.dk
Borges, Lisa	FishFix, Lisbon, Portugal	info@fishfix.eu
Casey, John	Independent consultant	blindlemoncasey@gmail.com
Catchpole, Thomas	CEFAS Lowestoft Laboratory, Pakefield Road, Lowestoft, Suffolk, UK, NR33 0HT	thomas.catchpole@cefas.co.uk
Damalas, Dimitrios	Hellenic Centre for Marine Research, Institute of Marine Biological Resources & Inland Waters, 576 Vouliagmenis Avenue, Argyroupolis, 16452, Athens, Greece	shark@hcmr.gr
Daskalov, Georgi	Laboratory of Marine Ecology, Institute of Biodiversity and Ecosystem Research, Bulgarian Academy of Sciences	Georgi.m.daskalov@gmail.com
Döring, Ralf (vice-chair)	Thünen Institute [TI-SF] Federal Research Institute for Rural Areas, Forestry and Fisheries, Institute of Sea Fisheries, Economic analyses Herwigstrasse 31, D-27572 Bremerhaven, Germany	ralf.doering@thuenen.de
Gascuel, Didier	AGROCAMPUS OUEST, 65 Route de Saint Brieuc, CS 84215, F-35042 RENNES Cedex, France	Didier.Gascuel@agrocampus-ouest.fr
Grati, Fabio	National Research Council (CNR) – Institute for Biological Resources and Marine Biotechnologies (IRBIM), L.go Fiera della Pesca, 2, 60125, Ancona, Italy	fabio.grati@cnr.it
Ibaibarriaga, Leire	AZTI. Marine Research Unit. Txatxarramendi Ugartea z/g. E-48395 Sukarrieta, Bizkaia. Spain.	libaibarriaga@azti.es
Jung, Armelle	DRDH, Techopôle Brest-Iroise, BLP 15 rue Dumont d'Urville, Plouzane, France	armelle.jung@desrequinsetdeshommes.org
Knittweis, Leyla (vice-chair)	Department of Biology, University of Malta, Msida, MSD 2080, Malta	Leyla.knittweis@um.edu.mt
Kraak, Sarah	Thünen Institute of Baltic Sea Fisheries, Alter Hafen Süd 2, 18069 Rostock, Germany.	sarah.kraak@thuenen.de
Ligas, Alessandro	CIBM Consorzio per il Centro Interuniversitario di Biologia Marina ed Ecologia Applicata "G. Bacci", Viale N. Sauro 4, 57128 Livorno, Italy	ligas@cibm.it; ale.ligas76@gmail.com

Name	**Affiliation**[1]	**Email**
Martin, Paloma	CSIC Instituto de Ciencias del Mar Passeig Marítim, 37-49, 08003 Barcelona, Spain	paloma@icm.csic.es
Motova, Arina	Sea Fish Industry Authority, 18 Logie Mill, Logie Green Road, Edinburgh EH7 4HS, U.K	arina.motova@seafish.co.uk
Moutopoulos, Dimitrios	Department of Animal Production, Fisheries & Aquaculture, University of Patras, Rio-Patras, 26400, Greece	dmoutopo@teimes.gr
Nord, Jenny	The Swedish Agency for Marine and Water Management (SwAM)	Jenny.nord@havochvatten.se
Prellezo, Raúl	AZTI -Unidad de Investigación Marina, Txatxarramendi Ugartea z/g 48395 Sukarrieta (Bizkaia), Spain	rprellezo@azti.es
O'Neill, Barry	DTU Aqua, Willemoesvej 2, 9850 Hirtshals, Denmark	barone@aqua.dtu.dk
Raid, Tiit	Estonian Marine Institute, University of Tartu, Mäealuse 14, Tallin, EE-126, Estonia	Tiit.raid@gmail.com
Rihan, Dominic	BIM, Ireland	rihan@bim.ie
Sampedro, Paz	Spanish Institute of Oceanography, Center of A Coruña, Paseo Alcalde Francisco Vázquez, 10, 15001 A Coruña, Spain	paz.sampedro@ieo.es
Somarakis, Stylianos	Institute of Marine Biological Resources and Inland Waters (IMBRIW), Hellenic Centre of Marine Research (HCMR), Thalassocosmos Gournes, P.O. Box 2214, Heraklion 71003, Crete, Greece	somarak@hcmr. gr
Stransky, Christoph	Thünen Institute [TI-SF] Federal Research Institute for Rural Areas, Forestry and Fisheries, Institute of Sea Fisheries, Herwigstrasse 31, D-27572 Bremerhaven, Germany	christoph.stransky@thuenen.de
Ulrich, Clara (chair)	Technical University of Denmark, National Institute of Aquatic Resources (DTU-AQUA), Kemitorvet, 2800 Kgs. Lyngby, Denmark	clu@aqua.dtu.dk
Uriarte, Andres	AZTI. Gestión pesquera sostenible. Sustainable fisheries management. Arrantza kudeaketa jasangarria, Herrera Kaia - Portualdea z/g. E-20110 Pasaia – GIPUZKOA (Spain)	auriarte@azti.es
Valentinsson, Daniel	Swedish University of Agricultural Sciences (SLU), Department of Aquatic Resources, Turistgatan 5, SE-45330, Lysekil, Sweden	daniel.valentinsson@slu.se
van Hoof, Luc	Wageningen Marine Research Haringkade 1, Ijmuiden, The Netherlands	Luc.vanhoof@wur.nl
Vanhee, Willy	Independent consultant	wvanhee@telenet.be
Villasante, Sebastian	University of Santiago de Compostela, Santiago de Compostela, A Coruña, Spain, Department of Applied Economics	sebastian.villasante@usc.es
Vrgoc, Nedo	Institute of Oceanography and Fisheries, Split, Setaliste Ivana Mestrovica 63, 21000 Split, Croatia	vrgoc@izor.hr

EXECUTIVE SUMMARY

The 2019 Annual Economic Report (AER) on the European Union (EU) fishing fleet provides a comprehensive overview of the latest information available on the structure and economic performance of the 23 coastal EU Member State fishing fleets.

Results indicate that the profitability of the EU fleet maintained in 2017, registering a net profit of EUR 1.3 billion, down 3% from EUR 1.34 million in 2016. Continued performance into 2017 were mainly a result of higher average fish prices and continued low fuel prices, while improved status of some important stocks and technological advances also contributed. Nowcasts for 2018 suggest that developments are slightly offset by higher fuel prices compared to 2017. Slight improvement in performance is expected in 2019 due to higher landing prices and sustained low fuel prices and interest rates.

In 2017, the EU fishing fleet numbered 83 323 vessels with a combined gross tonnage (GT) of 1.56 million tonnes and engine power of 6.28 million kilowatts (kW) (or 68 338 vessels, 1.49 million GT and 5.86 million kW when excluding Greece). EU fleet capacity has continued to decrease but at a lower rate than observed in previous years.

Direct employment generated by the sector, including Greece, amounted to 151 981 fishers (-0.2% compared to 2016), corresponding to 107 807 FTEs (-6%). When excluding Greece, total employment numbered 129 510 fishers corresponding to 87 265 FTEs, an increase of 1.7% and a decrease of 5% compared to 2016 respectively.

Average annual wage per FTE was estimated at EUR 28 362 (+7.6%), ranging from EUR 1 606 for Cypriot fishers to EUR 140 858 for Belgian fishers. Average wage decreased in eight MS fleets compared to 2016.

The EU fleet, excluding Greece, spent 4.82 million days-at-sea in 2017 and consumed 2.25 billion litres of fuel, to land 5.3 million tonnes of seafood with a reported landed value of EUR 7.6 billion.

In 2017, the EU fishing fleet had an estimated, depreciated replacement value (tangible asset value) of EUR 5.1 billion and in-year investments amounted to EUR 551 million, a 4% increase on 2016.

The amount of Gross Value Added (GVA) and gross profit (all excl. subsidies) generated by the fleet (excl. Greece) in 2017 was EUR 4.5 billion and EUR 1.99 billion, respectively. GVA as a proportion of revenue was estimated at 58%, the same as in 2016 and gross profit margin at 25.8%, down from 26.7% in 2016. With a total net profit of EUR 1.3 billion, 16.9% of the revenue generated by the EU fleet was retained as net profit, a drop from 17.4% obtained in 2016.

While overall the EU fleet was profitable, one out of the 22 MS fleets (excl. Greece) suffered gross losses and four suffered net losses in 2017. Results also varied by scale of operation and fishing region.

The EU **small-scale coastal fleet (SSCF)** totalled 49 381 vessels in 2017, employing 76 801 fishers (incl. Greece). When excluding Greece, the SSCF totalled 36 793 vessels and employed 59 057 fishers or 26 526 in FTE. Collectively, the EU SSCF (excluding Greece) was profitable in 2017 but GVA decreased by 2% and gross profit by 4%. Net profit decreased from EUR 133 million in 2016 to EUR 122.5 million, i.e., an 8% decrease but still higher than 2015 results. While the EU SSCF as a whole was profitable over the period analysed, results by MS fleets reveal that five SSCF suffered gross losses and nine net losses.

The EU **large-scale fleet (LSF)** totalled 15 931 vessels in 2017 and employed 68 849 fishers (incl. Greece). When excluding Greece, the LSF totalled 15 082 vessels, employing 64 232 fishers or 53 591 in FTE. The LSF (excluding Greece) was profitable in 2017 but GVA decreased by 2% and gross profit by 6.5%. Net profit decreased 8%, from EUR 1 billion in 2016 to EUR 951 million in 2017. While the segment as a whole was profitable over the period analysed, results indicate that two MS LSF suffered gross losses and five net losses.

As reported, the EU **distant-water fleet (DWF)** numbered 255 vessels in 2017 and employed 6 222 fishers or 6 950 in FTE. As a whole, the EU DWF was profitable in 2017 with a reported GVA of EUR 487 million and gross profit of EUR 259 million. Compared to 2016, GVA increased by 17% and gross profit by 16%. Net profit also increased (14%), from EUR 137 million in 2016 to EUR 156 million in 2017. While the segment as a whole was profitable over the period analysed, one MS DWF suffered gross and net losses.

The overall performance of EU fleets operating in the **North Sea & Eastern Arctic** region was positive in 2017 but weakened slightly compared to the improved performance seen in 2016. Collectively, the fleet generated EUR 1.7 billion in revenue, transformed into EUR 1 billion in GVA, EUR 547 million in gross profit and EUR 385 million in net profit. The most profitable fleet was the UK large pelagic trawler segment (>40 m LOA), with a GVA of almost EUR 111 million (average GVA per vessel estimated was EUR 8.3 million) and a gross profit of EUR 79.9 million. By MS fleet, only the Lithuanian fleet operating in the region suffered gross losses in 2017, and all other MS fleets apart from the German generated net profits.

The main EU fishing nations operating in the **NAFO** area are Spain and Portugal, taking around 80% of the total EU catch. The most important species include Atlantic redfish, Greenland halibut and Atlantic cod. The overall performance of the fleets was positive and improved compared to 2016. Revenue, at EUR 109 million, increased by 2%, while GVA (EUR 73 million) increased by 6% and gross profit (EUR 42.7 million) by 7%. Aggregate net profit was estimated at EUR 33.5 million, with Portugal leading at EUR 18.8 million, followed by Spain with EUR 13.2 million. Low, stable fuel prices and higher average market prices have contributed positively to the overall performance, in particular, the demersal trawlers operating in the region.

Overall, the EU **Baltic Sea** fleet was profitable in 2017 yet results were mixed. The fleet generated EUR 226 million in revenue, a modest increase of 1% compared to 2016. Conversely, GVA and gross profit, estimated at EUR 112 million and EUR 44.3 million, decreased by 2%, and 15% respectively. Net profit at EUR 4.6 million however improved; this was mainly a result of lower or even negative opportunity costs of capital for several fleet segments. Four MS fleets – Denmark, Finland, Germany and Lithuania - suffered net losses in 2017. The LSF generally performed better than its smaller counterparts. The profitability of the SSCF deteriorated, from a gross profit of EUR 1.7 million in 2016 to a loss of EUR 3.4 million in 2017. Despite the overall poor performance of the SSCF, individual MS fare differently. The German, Estonian, Finnish and Latvian small-scale coastal fleets made reasonable profits. Other SSCF had either low profitability (Lithuania) or suffered losses. The most profitable fleet segment in the region was the Swedish demersal trawlers 24-40m (which also operates in the North Sea), followed by the Polish, Latvian and Finnish pelagic trawlers 24-40m. Fuel prices remained low, most pelagic fisheries in the region are exploited at MSY and the average price of cod recovered in 2017.

The main MS fleets in the **North Western Waters** are the UK, French and Irish. Belgium, Denmark, Spain and the Netherlands also have quite a substantial amount of production from the area while Germany, Lithuania and Portugal have low activity. The most important species include Atlantic mackerel, European hake, great Atlantic scallop, Norway lobster and blue whiting. Overall the fleet was profitable, but deteriorated slightly compared to 2016: GVA was estimated at EUR 949 million in 2017 (+1%), gross profit at EUR 397 million (-3%) and net profit EUR 259 million (-3%). All of the MS fleets operating in the NWW generated gross profits. Only one MS – Germany, suffered net losses but the fleet's activity in the area was also low. Variations in annual revenue is mainly linked to fluctuations in TACs and quotas and fish prices. On the whole, the value of landings decreased by 1% compared to 2016 even though total landed weight increased by 5%. Fuel prices remained low resulting in lower energy costs, especially for pelagic fisheries, TACs increased for a number of stocks, such as hake, herring and anglerfish and generally fish prices remained stable or increased for some important species e.g. common sole and *Nephrops*.

The main fishing nations in the **South Western Waters** are Spain, France and Portugal. The most important species include European hake, albacore, European anchovy, sardine and common octopus. Overall the fleet was profitable but generally deteriorated compared to 2016: revenue amounted to EUR 1.3 billion in 2017 and GVA was estimated at EUR 832 million (-1%), gross profit at EUR 243 million (-11.6%) and net profit EUR 152 million (+2%). The three main MS fleets operating in the SWW generated gross and net profits. The Irish fleet suffered losses but the fleet's activity in the area was very low. Fuel prices remained low resulting in lower energy costs. TACs increased for a number of stocks, such as hake, blue whiting and mackerel. Fish prices remained generally stable with certain species particularly contributing to boost revenues as was the case of hake, albacore and blue shark.

The economic situation of EU fleets operating in the **Mediterranean Sea** continued to improve in 2017, with increased gross and net profits, even if the variation across MS was high; this trend was mainly driven by the Italian fleet, the dominant fleet in the region (the economic performance of the Greek fleet cannot be analysed due to inconsistent data). Revenues benefited from an increase in landings and higher average fish prices while costs decreased due to low fuel prices and lower fuel consumption. Revenues (EUR 1.46 billion) increased 5% compared to 2016: only Slovenia and Portugal suffered decreases, all other MS fleets saw revenue grow, in particular, France (+34%), Cyprus (+28%) and Croatia (+23%). GVA amounted to EUR 922 million, an overall improvement of 7%. Gross profit was EUR 430 million, an estimated 16% increase and a record high over the period analysed. According to the available data, the fleet generated net profits of about EUR 227 million, a 40% rise compared to 2016, and all MS fleets were profitable except Malta. The regional fleet appears to be recovering to levels of profitability not achieved for many years. Investments (likely to be higher in the near future with the full implementation of the EMFF) that add value to fishery products have been met with great interest among fishers. The increase of the EU quota for bluefin tuna has positively impacted the profitability of some vessels. The overall level of overfishing, however, remains too high and the status of many stock remain poor.

After the visible improvement in the **Black Sea** EU fleet's economic performance in 2015, there was a slight decrease in 2016; while 2017 saw improvements on 2016. Revenue generated in 2017 was an estimated EUR 9.6 million (+4% compared to 2016); 53% by the Bulgarian fleet (EUR 5 million). GVA was EUR 6.2 million (+4%), EUR 3.2 million by Romanian and EUR 3 million by the Bulgarian fleets. The fleets operating in the region made EUR 3.9 million in gross profit, an estimated 7% increase compared to 2016. Overall net profit amounted to EUR 3 million in 2017, but this includes seven segments that recorded a net loss (-EUR 482 thousand). The Black Sea fishery is highly dependent on very few species and several commercially important stocks continue to be exploited above FMSY. The main target species in 2017 included sea snails, sprat, turbot, red mullet and mackerel. The main fishing gears used are set gillnets, pelagic trawls, purse and beach seine, pots and traps.

Although the main fishing grounds for the EU fishing fleet are located in FAO 27 and FAO 37, part of the EU fleet operates in fishing areas much further afield. These areas are collectively termed **Other Fishing Regions** (OFR) and can be divided into two main groups: (1) **EU Outermost Region** (OMR) fleet operating in the EEZs of the Canary Islands (Spain); the Azores and Madeira (Portugal); and the French overseas regions and departments of Guyana, Antilles (Martinique and Guadeloupe), Reunion and Mayotte and, (2) the EU **long distant fisheries** (LDF) in Other Regions, which includes all fishing areas outside EU waters and in Areas Beyond National Jurisdiction (ABNJ), covered by Regional Fisheries Bodies (RFBs), such as, the Northwest Atlantic Fisheries Organization (NAFO), the International Commission for the Conservation of Atlantic Tunas (ICCAT), the Indian Ocean Tuna Commission (IOTC), the North-East Atlantic Fisheries Commission (NEAFC) and the Fishery Committee for the Eastern Central Atlantic (CECAF); as well as, fishing areas within the EEZ of third countries regulated under the framework of EU sustainable fisheries partnership agreements (SFPAs).

EU fishing activity in OFR (excluding NAFO) accounts for roughly 14% of the landed weight (682 142 tonnes) and 16% in value (EUR 1.2 billion) of the total EU landings. Due to data limitations and time constraints, it was not

possible to provide a complete and accurate economic performance analysis of the EU fleets operating in OFR. Estimates are provided for the main OMR fleets and for selected MS fleets operating in the ICCAT.

At large, the economic performance of the **OMR fleets** improved in 2017 but given the lack of data submitted by Spain and France it was not possible to provide a comprehensive outlook for these fleets. However, considering current trends in fish prices and fuel costs, it is expected that these fleets will continue to be profitable on the whole. The profitability of the **Azorean** fleet has been positive and relatively stable over the period 2010-2017. In 2017, GVA was estimated at EUR 17.9 million, gross profit at 8.3 million and net profit at EUR 5.3 million. GVA to revenue was 73%, gross profit margin 34% and the net profit margin 22%. The profitability of the **Madeiran** fleet has also been positive over the period 2010-2017. Revenue was estimated at EUR 11.1 million, GVA at EUR 8.4 million, gross profit at EUR 2.2 million and net profit at EUR 1.7 million. GVA to revenue was 76%, gross profit margin 20% and net profit margin 15%. For the fleet in the **Canaries**, GVA was estimated at EUR 37.8 million and net profit at EUR 2.2 million. GVA to revenue, gross profit margin and net profit margin reached 78%, 8%, and 4%, respectively.

The Spanish fleet dominates the **tuna fisheries in the Atlantic (ICCAT)** with over 55% of the landings in weight and 62% of the value. Overall, the Spanish fleets generated around EUR 175 million in revenue, EUR 94 million in GVA, EUR 35 million in gross profit and EUR 29 million in net profit in 2017. In other words, 62% of the GVA and 59% of the total gross profits. In turn, the French fleet generated 22% and the Portuguese fleet 16% of the GVA. The overall performance of the selected fleets was positive in 2017, collectively generating EUR 283 million in revenue, EUR 151.5 million in GVA and EUR 60.2 million in gross profits. In relative terms, the combined fleet produced a GVA to revenue of 54% and a 21% gross profit margin. The most important target species include: blue shark, yellowfin tuna, albacore, swordfish and bigeye tuna. For some of these species, particularly swordfish and blue shark, the average market price remains high. Due to the relatively poor situation of the bigeye stock, it is possible that the tropical tuna TAC may be reduced or ICCAT may adopt management measures for all three tropical species (skipjack, yellowfin and bigeye). Such measures could have economic consequences in the medium-term. A large part of the activity in the **CECAF** region is related to the tuna fishery, which is covered under the ICCAT section. Several mixed or multi-species agreements offer fishing opportunities in CECAF for demersal and pelagic species, tuna, cephalopods and shrimp, mainly involving trawlers, purse seiners and longliners. The main fishing nations include Spain, Portugal, Latvia, Poland, the Netherlands and Lithuania. Around 311 414 tonnes, valued at EUR 387 million were landed from the region by EU vessels in 2017. Due to data limitations, it was not possible to assess fleet activity by SFPA individually, nor undertake detailed economic performance analysis of these fleets. Five EU Member States were active in the **tuna fisheries in the Indian Ocean** (**IOTC** Convention region) in 2017: France, Italy, Portugal, Spain and the United Kingdom. Owing to data limitations stemming from confidentiality issues, it was not possible to produce a complete overview of the EU IOTC fleet. The fleet analysed were profitable.

Preliminary results for 2018 and 2019 indicate a 7% decrease in landed weight with a corresponding 8% decrease in value. Nowcast suggest that the slight deterioration seen in 2017 with respect to 2016 continues into 2018, with the decrease in revenue (-8%). The decrease in most of the cost items are offset by the increase in fuel costs (+7%) and overall, total costs increase by 1% in 2018. With the loss in revenue and increased costs, there is a deterioration in economic performance results in 2018: GVA (-11%), gross profit (-17.5%) and net profit (-26%). Results suggest that the EU fleet operated at a profit in 2018, with an estimated gross profit margin of 23% and a net profit margin of 13.5%. In 2019, a 6% increase in revenue with respect to 2018 is counteracted by a 4% increase in total costs. As wages are projected to increase by 7% in 2019, GVA is estimated to increase by 6.5% compared to 2018 and GVA to revenue is expected to around 56%. With fuel costs also increasing in 2019 but by only 2%, the fleet remains profitable with similar, but slightly improved, gross and net profit margins of 23% and 14.3%, respectively.

This publication includes:

1) A structural and economic overview of the EU fishing fleet in 2017, with nowcasts for 2018 and 2019, and trend analyses for the years 2008-2018/19;

2) A regional analysis of the EU fishing fleet by major sea basin: Baltic Sea, North Sea & Eastern Arctic, North Atlantic (NAFO, NWW and SWW), Mediterranean Sea, Black Sea, as well as Other Fishing Regions, including the EU Outermost regions and the EU long distant fisheries in Other Regions;

3) A detailed structural and economic overview of each EU Member State fishing fleet, including qualitative economic performance assessments for 2017 and nowcasts for 2018 and forecasted results for 2019.

The data used to compile all the various analyses contained within the report were collected under the data collection framework, cf. Council Regulation (EC) No 199/2008 of 25 February 2008 for the years 2008 -2016 (DCF) and cf. Council Regulation (EC) No 2017/1004 of 17 May 2017, for the years 2017-2018 (EU_MAP)

The 2019 AER supersedes all previous AERs. Comparisons across AER reports should not be made.

This is mainly due to the inclusion of more MS fleets and greater coverage of the data this year. Again, Greece was the only MS to be excluded from the economic performance estimates in the current report. Moreover, MS may have provided revised data submitted in previous calls, which is expected to have increased the coverage and quality of the data reported under the 2019 Data Collection Framework (DCF and EU-MAP).

EU MEMBER STATE FLEET SUMMARY REPORTS

A brief summary of the performance results in 2017 by Member States' national fleet:

BELGIUM: overall a positive but deteriorated performance, operating at a net profit of EUR 10.1 million (-40%). Revenue decreased by 7%, amounting to EUR 88.6 million; GVA estimated at EUR 46.6 million (-14%) and gross profit EUR 16.4 million (-31%).

BULGARIA: overall positive with slight deterioration. Revenue decreased 7%, amounting to EUR 5.1 million; GVA estimated at EUR 3 million (-5%), gross profit EUR 1.4 million (-2%), while net profit increased to EUR 1.1 million (+377%).

CROATIA: performance improved and positive after years of losses. Revenue amounted to EUR 81.4 million (+23%); GVA estimated at EUR 48.5 million (+58%), gross profit EUR 26.1 million (+385%) and a net profit of EUR 11.3 million (+150%).

CYPRUS: performance improved and positive after years of losses. Revenue increased 62%, amounting to EUR 10.4 million; GVA estimated at EUR 6.7 million (+414%), gross profit EUR 5.6 million and net profit EUR 3 million (+162%).

DENMARK: overall positive but deteriorated performance. Revenue decreased 7%, amounting to EUR 448 million; GVA decreased by 11%, amounting to EUR 302 million, gross profit decreased 17%, amounting to EUR 177 million and net profit decreased by 20%, amounting to EUR 104 million.

ESTONIA: overall situation remained positive with some deterioration. Revenue stable, amounting to EUR 14.7 million; GVA estimated at EUR 9.7 million (-2%), gross profit EUR 4.4 million (-4%) and net profit EUR 2.7 million (+17%).

FINLAND: overall deteriorated performance. Revenue unchanged at EUR 35.8 million; GVA was EUR 15.9 million (-8%). Gross profit decreased (-15%) to EUR 9.3 million but was not high enough to cover the estimated capital costs of the fleet, in particular very high depreciation costs (possibly over-estimated), resulting in a net loss of -EUR 5.3 million (-35%). The Finnish fleet has suffered net losses throughout the period analysed while posting gross profits.

FRANCE: improved performance. Revenue increased 2%, amounting to EUR 1.35 billion; GVA estimated at EUR 769 million (+2%), gross profit EUR 268 million (+4%) and net profit EUR 177 million (+10%).

GERMANY: overall deteriorated performance; operating at a net loss. Revenue remained at EUR 162 million (excluding the pelagic trawler fleet); GVA estimated at EUR 75.4 million (-23%), gross profit EUR 26.7 million (-42%) and net profit -EUR 3.9 million (-115%)

GREECE: limited analysis possible. Landings data refer to large-scale fleet segments only. Available data indicate that the activity yields a positive income for fishers since the value of landings covers all expenses.

IRELAND: overall positive but deteriorated performance. Revenue (EUR 310 million) up 1%, GVA (EUR 163.3 million) down 1% and gross profit (EUR 64.2 million) -9% and net profit down 5% (EUR 34 million).

ITALY: overall improved performance with revenue increasing 4%, amounting to EUR 955 million; GVA estimated at EUR 607.7 million (+5%), gross profit EUR 330 million (+16%) and net profit EUR 172.4 million (+41%).

LATVIA: overall improved performance, the fleet operated at a profit. Revenue increased by 20%, amounting to EUR 21.1 million; GVA estimated at EUR 9.1 million (+27%), gross profit EUR 5.1 million (+22%) and net profit EUR 2.9 million (-4%).

LITHUANIA: further deterioration to a fleet already operating at a loss. Revenue decreased by 18%, GVA was estimated at EUR 5.1 million (-67%), gross profit at -EUR 4.9 million (-176%). Net loss amounted to -EUR 10.8 million (-141%).

MALTA: overall performance improved, moving from gross losses to profits but still operating at a negative net margin. Revenue increased 5%, amounting to EUR 10.9 million; GVA EUR 5.4 million (+27%), gross profit EUR 1.5 million (+869%) with a net loss of -EUR 0.2 million (+93%).

NETHERLANDS: overall performance decreased but remained positive. Revenue fell 7%, amounting to EUR 440 million; GVA estimated at EUR 238.6 million (-16%), gross profit EUR 103.6 million (-21%) and net profit EUR 74.8 million (-22%).

POLAND: overall performance decreased but remained positive. Revenue decreased 8%, amounting to EUR 47.7 million; GVA estimated at EUR 25.9 million (-17%), gross profit EUR 7.7 million (-54%) and net profit EUR 3.2 million (-59%).

PORTUGAL: overall positive but deteriorated performance. Revenue decreased 3%, amounting to EUR 383 million; GVA estimated at EUR 257 million (-4%), gross profit EUR 115 million (-6%) and net profit EUR 75.2 million (-2%).

ROMANIA: overall performance improved. Revenue increased 16%, amounting to EUR 4.5 million; GVA estimated at EUR 3.3 million (+10%), gross profit EUR 2.4 million (+8%) and net profit EUR 2.0 million (+14%).

SLOVENIA: positive performance with mixed results. Revenue decreased 3%, amounting to EUR 2.2 million; GVA estimated at EUR 1.7 million (-6%), gross profit EUR 1.1 million (+5%) and net profit EUR 1.1 million (+17%).

SPAIN: overall performance slightly decreased but remained positive, even if it varied significantly by fishery. Although revenue increased by 2%, amounting to EUR 2.02 billion and GVA increased by 6% (EUR 1.15 billion), gross profit decreased by 4% (EUR 445 million) and net profit decreased by 13% (EUR 333 million).

SWEDEN: overall improved performance. Revenue increased 2%, amounting to EUR 134.7 million; GVA estimated at EUR 72.8 million (+4%), gross profit EUR 44.1 million (+8%) and net profit remained stable at EUR 25.3 million.

UNITED KINGDOM: overall performance remained strong. Revenue decreased by 4%, amounting to EUR 1.13 billion; GVA estimated at EUR 651 million (same as 2016), gross profit EUR 343 million (-2%) and net profit EUR 293 million (same as 2016).

EXPERT WORKING GROUP REPORT

REPORT TO THE STECF

EXPERT WORKING GROUP OF THE 2019 ANNUAL ECONOMIC REPORT ON THE EU FISHING FLEET

EWG-19-04 & 19-06

ISPRA, ITALY 8-12 APRIL & DUBLIN, IRELAND, 3-7 JUNE 2019

This report does not necessarily reflect the view of the STECF and the European Commission and in no way anticipates the Commission's future policy in this area.

3 EU FLEET OVERVIEW

Introduction

The EU overview chapter provides a summary of the structure and economic performance of the EU fishing fleet in 2017 and highlights some key trends over the period 2008-2018, based on data submitted by MS under the 2019 fleet economic data call. All monetary values have been adjusted for inflation to 2015 constant prices and therefore data prior and subsequent to 2015 may not necessarily equate to the data submitted by MS.

Due to incomplete data submissions from several Member States, it is not possible to produce a complete overview of the entire EU fleet as well as trend analyses on the economic performance for the EU fleet over the period analysed.

Croatia officially joined the EU in 2013 and, hence, only able to provide DCF data from the year 2012 onwards. As Greece provided only partial landings, effort and economic data for the years 2014 to 2017, it is excluded from the EU overview. More details on data availability are included in the chapter on quality and checking procedures (Section 7 and annex 3).

For analyses at the EU and MS levels, national level datasets are used, whereas fleet segment level data are used to compile results by main type of fishing activity (i.e. small-scale, large-scale and distant-water fleets). Results for 2017 at the EU and fishing activity levels include all Member States fleets with the exception of Greece or unless otherwise stated.

While in theory, both the national and fleet segment datasets submitted by each Member State should be internally consistent, this is not always the case. Discrepancies can arise for several reasons including missing or incomplete datasets for fleet segments. In some cases, such discrepancies occur due to commercial confidentiality issues. To avoid this, Member State may combine such fleet segments into "clusters" and provide data at a more aggregated level. In other cases, commercially-sensitive data are not provided at the fleet segment level, but are included at the national total level, resulting in inconsistencies between the two datasets.

Normalised trends in indicator values at the EU level are presented relative to 2008 (based on 2008=100) and unless otherwise stated, exclude Greece and Croatia and should not be considered as a complete EU overview.

To provide the most reliable, complete and up-to-date information as possible, this chapter includes:

- A snapshot of the EU fishing fleet in 2017, by MS and main type of fishing activity, i.e. small-scale, large-scale and distant-water fleets (also see data summary tables);
- A section with nowcasts for 2018 and 2019 on the economic performance of MS fleets where possible (based on fleet segment data);
- A short description of the main drivers and trends that may have contributed to the economic performance of the EU fleet over recent years;
- Summary data tables by MS and main fishing activity with percentage change relative to 2016 (and shown in brackets after the 2017 figure in the text).

The three main types of fishing activity used in the AER are defined as:

- Small-scale coastal fleet (SSCF) - includes all vessels under 12 meters using static gears. According to the DCF gear definitions these include: 'drift and/or fixed netters', 'pots and/or traps', 'hooks', 'passive gears only', 'other passive gears', 'polyvalent passive gears only', 'active and passive gears'.
- Large-scale fleet (LSF) - segment includes all vessels over 12 meters using static gears and all vessels using towed gears operating predominately in EU waters. According to the DCF gear definitions these include: 'dredgers', 'demersal trawlers and/or demersal seiners', 'other active gears', 'polyvalent active gears only', 'purse seiners', 'beam trawlers', 'pelagic trawlers'.
- Distant-water fleet (DWF) - includes EU registered vessels over 24 metres operating in 'other fishing regions' including EU outermost regions.

At a glance

Due to incomplete data from Member States, the EU Fleet Overview (section 3) and Regional Analysis (section 4) omit Greece from a number of tables, figures and overall indicators (unless otherwise indicated). In addition, to ensure confidentiality, data on some fleet segments have not been provided by some Member States and these too have been omitted. The reference year is 2017.

Fleet Capacity

- In 2017, the EU fishing fleet numbered around 83 323 vessels with a combined gross tonnage (GT) of 1.56 million tonnes and engine power of 6.3 million kilowatts (kW) (incl. Greece).
- There were 17 756 inactive vessels (21.3% of the total number of vessels), bringing the number of active vessels to 65 567 (incl. Greece).
- Of the active vessels, 75% were small-scale coastal vessels, 24% large-scale and <1% distant-water vessels.
- EU fleet capacity has continued to decrease steadily but at a lower rate than previously: 1% in number and 0.3% in engine power and gross tonnage compared to 2016.

Employment and wages

- The EU fleet (incl. Greece) directly employed circa 151 981 fishers, corresponding to 107 807 FTE. Of the total employed, at least 43 747 were estimated as being unpaid labour[1].
- Excluding Greece, these figures amounted to 129 510 fishers and 87 265 FTE.
- Average annual wage* (including crew wages and unpaid labour) per FTE was estimated at EUR 28 362, ranging from EUR 140 858 for Belgian fishers to EUR 1 606 for Cypriot fishers.

Effort and landings*

- The EU fleet spent over 4.8 million days-at-sea and consumed almost 2.25 billion litres of fuel.
- Landings reported amounted to 5.3 million tonnes (+7.5%) of seafood, amounting to a reported value of EUR 7.6 billion (-0.6%).
- Landings per day at sea (LPUE), for the EU fleet as a whole, was estimated at around 1.1 tonnes per day (+13%).

Economic performance*

- Revenue (income from landings + other income) reported for the EU fleet in 2017 was EUR 7.7 billion, remaining almost unchanged from 2016 (-0.2%).
- GVA, gross profit and net profit (all excl. subsidies and fishing rights) generated by the fleet was EUR 4.5 billion (-0.2%), EUR 1.99 billion (-3.3%) and EUR 1.3 billion (-2.9%), respectively.
- GVA to revenue was estimated at 57.9% (unchanged from 2016); gross profit margin at 25.8% (down from 26.7% in 2016), and 16.9% of the revenue was retained as net profit (down from 17.4% in 2016).
- Overall the EU was profitable but performance stagnated slightly when compared to 2016 and four out of the 22 MS evaluated generated net losses (five in 2016), namely: Finland, Germany, Malta and Lithuania.
- Only Lithuania suffered gross losses as Malta recovered.
- Croatia and Cyprus moved from loss making positions in 2016 to posting net profits.
- On the other hand, the German fleet suffered net losses for the first time since 2011; yet it should be noted that the performance of the pelagic trawler fleet is not included in these results.
- The EU fleet was estimated to have a replacement value of EUR 5.1 billion (-2.3%) and in-year investments amounted to just over EUR 551 million (+3.8%).

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[1] Unpaid labour figures exclude Belgium and France

* Excludes Greece

EU Small-scale coastal fleet (SSCF)

- Including Greece, the EU SSCF comprised 49 381 vessels with a combined gross tonnage of 121 852 GT and engine power of almost 1.8 million kW, thus covering 75% of the number of vessels, 8% of the gross tonnage and 32% of the engine power.
- When excluding Greece, the SSCF numbered 36 793 vessels and covered 6.4% of the gross tonnage and 26% of the engine power.
- Engaged crew amounted to 76 801 fishers, including 37 811 unpaid labour (51% and 86% of the EU total respectively).
- Excluding Greece, there were 59 057 fishers, corresponding to 26 526 FTEs, with an average annual wage per FTE of EUR 17 091 (+8%).
- Contributed 5% of the weight landed (271 510 tonnes) and 12.5% of the landed value (EUR 954.4 million, +7%).
- Generated EUR 1.025 million in revenue, EUR 686 million in GVA (-2%), EUR 236 million in gross profit (-4%) and EUR 122.5 million in net profit (-8%).
- In relative terms, this amounted to a GVA to revenue of 67%, a gross profit margin of 23% and a net profit margin of 12.3% (down from 13.8% in 2016).

EU Large-scale fleet (LSF)

- Comprised 15 931 vessels and covered 74% of the gross tonnage and 62% of the engine power, when including Greece.
- Engaged crew amounted to 68 849 fishers, including around 6 032 unpaid labour (45% and 14% of the total, respectively).
- When excluding Greece, there were 64 232 fishers, corresponding to 53 591 FTEs, with an average annual wage per FTE of around EUR 33 578 (+6%).
- Contributed 81% to landings in weight (4.3 million tonnes) and 72% to landings in value (EUR 5.5 billion).
- Generated EUR 3.3 billion in GVA (-2.3%), EUR 1.5 billion (-6.5%) in gross profit and EUR 951 million in net profit (-8.2%)
- In relative terms, this amounted to 59% GVA to revenue (down from 60%), 27% gross profit margin (down from 28%) and 17% net profit margin (down from 19%).

EU Distant-water fleet (DWF)

- Comprised 255 vessels and covered 18% of the total gross tonnage and 6% of the engine power.
- Employed 6 222 fishers or 6 950 FTEs (4% and 8% of the total, respectively), with an average annual wage per FTE of EUR 33 547 (+19%).
- Contributed 14% to landings in weight and 15% to landings in value.
- Generated EUR 487 million in GVA (+17%), EUR 259 million in gross profit (+16%) and EUR 156 million in net profit (+14%).
- In relative terms, this amounted to 44% GVA to revenue (up from 39%), 23.5% gross profit margin (up from 21%) and 16.6% net profit margin (up from 15%).

Table 3.1 below provides a summary of the main results for the EU fleet (all figures exclude Greece) for the period 2010-2017 and nowcast results for 2018 and 2019. Table 3.2 provides some findings including Greece.

Tables 3.3 to 3.11 provide a summary of the main findings for the EU Outermost region (OMR) fleets for 2017.

Tables 3.12 to 3.14 provide a summary of the main findings for the EU fleet by fishing activity (all figures exclude Greece) for the period 2010-2017 and nowcast results for 2018 and 2019.

Tables 3.17 to 3.40 in Section 3.9 at the end of this chapter provide results by Member State fleet and by fishing activity in 2017 (with % change to 2016).

Table 3-1 Main results for the EU fleet (excl. Greece) for 2008-2017 and nowcasts for 2018-2019

		2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	*2018*	*2019*	%Δ 2017-2016	%Δ 2017-2012	%Δ 2017-2010	%Δ 2017-2008
Number of vessels	thousand	70.9	67.7	66.8	65.9	68.1	67.3	66.7	68.7	68.2	68.3	*67.0*	*65.7*	0.1%	0.4%	2.3%	-3.6%
Total vessel tonnage	thousand GT	1,765	1,716	1,660	1,601	1,580	1,555	1,564	1,525	1,489	1,485	-	-	-0.3%	-6.0%	-10.5%	-15.8%
Total vessel power	thousand kW	6,404	6,192	6,050	5,909	6,069	6,008	5,991	5,961	5,868	5,857	-	-	-0.2%	-3.5%	-3.2%	-8.5%
Engaged crew	number	139,354	137,683	137,725	132,265	133,470	130,464	129,470	126,735	127,327	129,510	*125,730*	*123,402*	1.7%	-3.0%	-6.0%	-7.1%
FTE national	number	100,337	100,368	97,388	95,031	93,182	90,304	89,642	91,219	91,680	87,265	*83,237*	*84,939*	-4.8%	-6.4%	-10.4%	-13.0%
Days at sea	thousand	5,429	5,428	5,370	5,292	5,310	5,149	5,086	5,009	5,023	4,821			-4.0%	-9.2%	-10.2%	-11.2%
Fishing days	thousand	5,210	5,309	5,278	5,189	5,166	5,046	5,015	4,883	5,006	4,700			-6.1%	-9.0%	-10.9%	-9.8%
Energy consumption	million litre	2,481	2,631	2,527	2,358	2,257	2,262	2,206	2,316	2,256	2,249	*2,126*	*2,156*	-0.3%	-0.4%	-11.0%	-9.4%
Live weight of landings	thousand tonnes	4,625	4,782	4,862	4,577	4,445	4,727	5,074	5,067	4,903	5,272	*4,887*	*4,564*	7.5%	18.6%	8.4%	14.0%
Value of landings	million EUR	7,185	7,014	7,093	7,294	7,142	7,011	7,315	7,136	7,672	7,624	*7,037*	*7,232*	-0.6%	6.7%	7.5%	6.1%
Gross value of landings	million EUR	6,731	6,993	7,000	7,353	6,987	6,776	7,093	7,118	7,602	7,521	*6,989*	*7,317*	-1.1%	7.7%	7.4%	11.7%
Other income	million EUR	126	118	141	144	125	143	162	137	128	191	*186*	*187*	48.6%	52.8%	35.6%	51.2%
Operating subsidies	million EUR	178.7	143.3	94.0	80.9	80.5	59.2	68.8	56.6	40.9	51.6	-		26.1%	-35.8%	-45.1%	-71.1%
Income from leasing out quota	million EUR	2.8	7.6	8.4	12.0	16.1	40.8	41.3	43.7	33.6	39.8	-		18.3%	147.7%	374.3%	1300.5%
Personnel costs	million EUR	1,832	2,097	1,959	1,948	1,841	1,781	1,904	2,030	2,163	2,203	*2,058*	*2,200*	1.9%	19.7%	12.5%	20.3%
Value of unpaid labour	million EUR	254	328	283	251	237	251	253	232	255	272	*271*	*292*	6.6%	14.8%	-3.9%	7.2%
Energy costs	million EUR	1,610	1,221	1,378	1,615	1,610	1,487	1,352	1,103	919	998	*1,065*	*1,091*	8.6%	-38.0%	-27.6%	-38.0%
Repair & maintenance costs	million EUR	547	606	578	616	564	545	595	646	684	651	*610*	*611*	-4.9%	15.5%	12.6%	19.1%
Other variable costs	million EUR	903	1,063	1,002	1,067	939	962	985	1,078	1,101	1,014	*969*	*1,017*	-7.9%	8.0%	1.2%	12.2%
Other non-variable costs	million EUR	612	626	627	608	577	555	531	538	548	582	*554*	*556*	6.2%	0.9%	-7.2%	-4.9%
Consumption of fixed capital	million EUR	873.1	869.3	809.3	807.6	779.0	717.6	705.7	747.1	654.6	693.5	*686.7*	*678.3*	5.9%	-11.0%	-14.3%	-20.6%
Lease/rental payments for quota	million EUR	46.9	53.7	59.1	69.4	68.5	75.9	85.6	112.0	101.9	106.9	-		4.9%	56.1%	80.8%	128.0%
Opportunity cost of capital	million EUR	43.3	199.5	147.7	126.0	96.9	110.3	112.3	88.0	61.9	- 5.8	- *8.5*	- *13.3*	-109.3%	-106.0%	-103.9%	-113.3%
Value of physical capital	million EUR	5,397	5,339	5,835	5,366	5,436	5,142	5,422	5,578	5,268	5,145	*5,052*	*4,999*	-2.3%	-5.4%	-11.8%	-4.7%
Value of quota and other fishing rights	million EUR	1,739	2,339	2,241	2,382	2,531	2,274	2,925	3,509	3,505	4,014	-		14.5%	58.6%	79.1%	130.8%
Investments	million EUR	402	419	527	375	499	473	409	525	531	551			3.8%	10.4%	4.7%	37.1%
Gross Value Added	million EUR	3,186	3,595	3,555	3,591	3,422	3,371	3,791	3,891	4,478	4,468	*3,976*	*4,229*	-0.2%	30.6%	25.7%	40.3%
GVA to revenue	%	46.5	50.6	49.8	47.9	48.1	48.7	52.3	53.6	57.9	57.9	*55.4*	*56.3*	0.0%	20.4%	16.4%	24.7%
Net Value Added	million EUR	2,312	2,726	2,746	2,784	2,643	2,653	3,085	3,144	3,823	3,775	*3,289*	*3,550*	-1.3%	42.8%	37.5%	63.2%
Gross profit	million EUR	1,100	1,170	1,313	1,392	1,345	1,338	1,634	1,630	2,060	1,993	*1,647*	*1,736*	-3.3%	48.2%	51.8%	81.2%
Gross profit margin	%	16.0	16.5	18.4	18.6	18.9	19.3	22.5	22.5	26.7	25.8	*23.0*	*23.1*	-3.0%	36.7%	40.6%	61.1%
Net profit	million EUR	184	101	356	458	469	510	816	795	1,344	1,305	*969*	*1,071*	-2.9%	178.6%	266.7%	610.0%
Net profit margin	%	2.7	1.4	5.0	6.1	6.6	7.4	11.2	11.0	17.4	16.9	*13.5*	*14.3*	-2.6%	156.9%	239.6%	531.3%
Average wage per FTE	thousand EUR	20.8	24.2	23.0	23.1	22.3	22.5	24.1	24.8	26.3698	28.3622017	*28.0*	*29.3*	7.6%	27.2%	23.2%	36.5%
GVA per FTE (labour productivity)	thousand EUR	31.75	35.82	36.50	37.79	36.72	37.33	42.29	42.66	48.84	51.20	*47.77*	*49.78*	4.8%	39.4%	40.3%	61.3%
Return on fixed tangible assets	%	3.3	4.9	8.6	10.9	10.4	12.1	17.1	15.8	26.7	25.3	*19.0*	*21.2*	-5.3%	142.8%	192.7%	671.5%
Fuel efficiency	%	23.9	17.5	19.7	22.0	23.0	21.9	19.1	15.5	12.1	13.3	*15.2*	*14.9*	9.7%	-42.5%	-32.6%	-44.5%
Energy consumed per landed tonne	litre per tonne	536.5	550.2	519.7	515.2	507.8	478.4	434.7	457.1	460.1	426.5	*434.9*	*472.3*	-7.3%	-16.0%	-17.9%	-20.5%

Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/ACS(2019)); All monetary values adjusted for inflation; constant prices (2015). Nowcast values for 2018 and 2019..

Table 3-2 Main results for the EU fleet (incl. Greece) for 2008-2017 and nowcasts for 2018-2019

		2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	*2018*	*2019*	%Δ 2017-2016	%Δ 2017-2012	%Δ 2017-2010	%Δ 2017-2008
Number of vessels	thousand	88.1	84.8	83.9	82.4	84.2	83.2	81.4	84.3	83.4	83.3	*81.2*	*81.4*	-0.1%	-1.0%	-0.6%	-5.5%
Total vessel tonnage	thousand GT	1,848	1,799	1,743	1,681	1,656	1,630	1,637	1,600	1,561	1,556	-	-	-0.3%	-6.0%	-10.7%	-15.8%
Total vessel power	thousand kW	6,901	6,687	6,543	6,383	6,525	6,463	6,422	6,408	6,298	6,284	-	-	-0.2%	-3.7%	-4.0%	-8.9%
Engaged crew	number	139,354	137,683	137,725	132,265	161,029	154,950	152,702	152,141	152,302	151,981	*149,561*	*147,233*	-0.2%	-5.6%	10.4%	9.1%
FTE national	number	100,337	100,368	97,388	95,031	117,127	112,850	110,422	114,650	114,721	107,807	*83,237*	*84,939*	-6.0%	-8.0%	10.7%	7.4%

Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/ACS(2019)); All monetary values adjusted for inflation; constant prices (2015). Nowcast values for 2018 and 2019.

3.1 Overview of the EU Fishing Fleet in 2017

Fleet Capacity and structure

The EU fleet numbered 83 323 vessels in 2017, of which 65 567 were active (Figure 3.1).

For the purpose of comparison, when the national fleet of Greece is excluded, the remaining EU fleet consisted of 68 338 vessels, of which 16 208 were inactive, representing 24% of the EU fleet. The bulk of the inactive capacity is small-scale in nature.

Capacity of the EU fleet[2] has decreased gradually over the period analysed, overall declining 15% in number, 14.5% in kW and 18% in GT compared to 2008 (Figure 3.2). When including Croatia, the fleet capacity declined 5% in number, 16% in GT and 9% in kW compared to 2008 (figure 3.1).

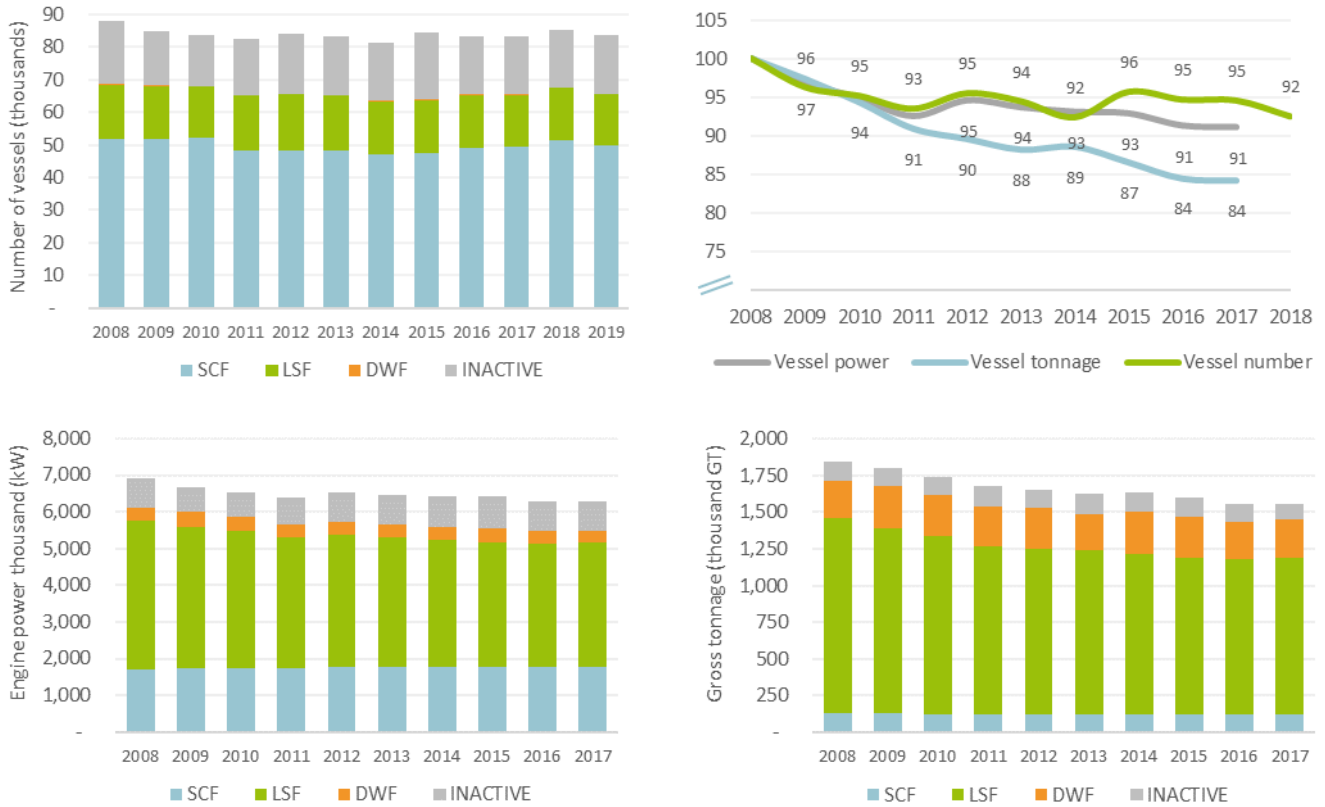


Figure 3.1 Trends and variations on capacity in number of vessels, gross tonnage and engine power (Greece and Croatia included)
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/ACS(2019))

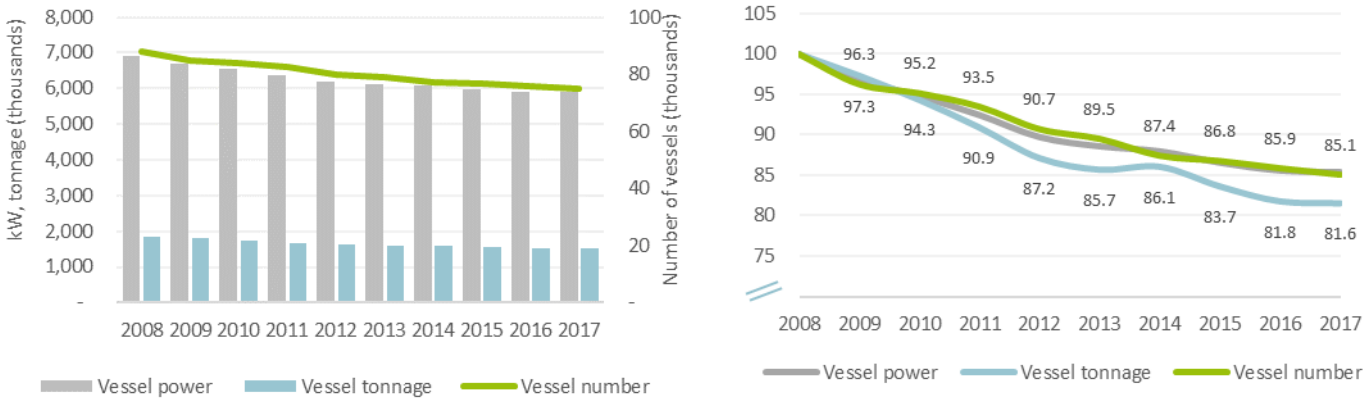


Figure 3.2 Trends and variations (based on 2008 = 100) on fleet capacity excluding Croatia
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/ACS(2019))

[2] Variations exclude Croatia for time-series consistency unless otherwise stated

Greece maintained the largest fleet within the EU (by vessel number) with 18% of the total number of vessels, followed by Italy (15%) and Spain (11%). Belgium, with 73 vessels, 67 of which were active in 2017, operated the smallest fleet. The Spanish fleet held the largest gross tonnage (22% of the total) while the French fleet was superior in engine power (16.3% of the total) (see data tables).

Capacity and structure by scale of fishing activity

A comparison of the active fleet (including Greece) by main fishing activity indicates that the small-scale coastal fleet (SSCF) contained 49 381 vessels making up 75% of the EU active fleet in number, 32% of the engine power and 8% of the gross tonnage (Figure 3.3).

The distant-water fleet (DWF), although containing only 0.4% of the total number of vessels (n=255), represented 17.7% of the total gross tonnage and 6.3% of the engine power (Figure 3.3).

The large-scale fleet (LSF) covered the remaining 24.3% of the fleet in number, 73.8% of the gross tonnage and 61.6% of the engine power (Figure 3.3).

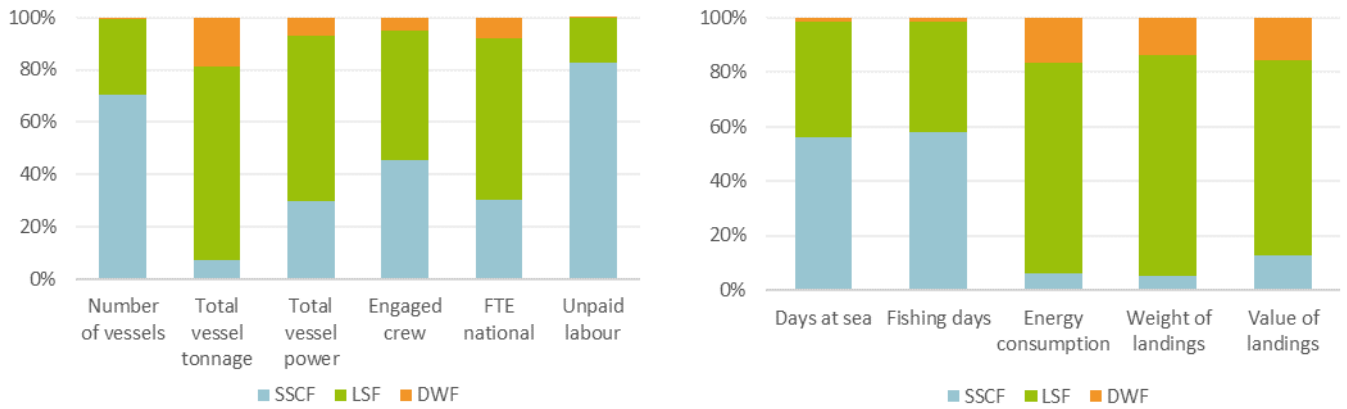


Figure 3.3 Share of capacity, employment, effort and landings by main type of fishing activity, 2017
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/ACS(2019))

Employment and average wage

In 2017, 151 981 fishers were directly employed in the EU fishing fleet (including Greece), corresponding to 107 807 FTEs. Total employed decreased by 0.2% and FTE by 6% compared to 2016 (Figure 3.4).

The decline in employment coupled with the 2% rise in personnel costs produced a 7.6% increase in the average wage per FTE (EUR 28 652 in 2017), compared to EUR 26 370 in 2016. Average wage is expected to have stagnated in 2018 but estimated to increase further in 2019 (Figure 3.4).

Employment has steadily decreased over the period; -13% in total employed and -14.7% in FTE compared to 2008, while average wage per FTE increased 38% (excluding Croatia and Greece for consistency[3]) (Figure 3.5).

At EUR 140 858, Belgian (FTE) fishers earned the highest annual wages on average in 2017, followed by Dutch (EUR 78 357) and Danish (EUR 76 261) fishers (Figure 3.5).

Cypriot fishers received the lowest average wage (EUR 1 606), followed by Bulgarian (EUR 2 162) and then Maltese (EUR 5 311) fishers (Figure 3.5).

The Spanish fleet employed 23% of the total, followed by the Italian (17%) and Greek (15%) fleets. In terms of FTEs, the Greek fleet surpasses the Italian, indicating more part-time fishers in Italy (see data tables).

[3] Employment data unavailable for the years 2008 to 2012 for both Croatia and Greece

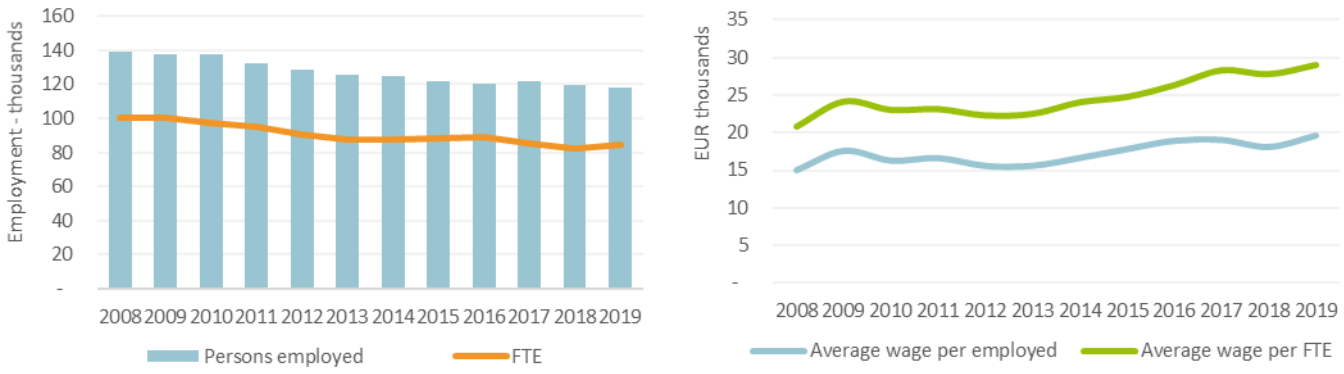


Figure 3.4 Trends on employment (in persons employed and FTE) and average wage per FTE
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/ACS(2019)); All monetary values have been adjusted for inflation; constant prices (2015). Nowcasts for 2018 and 2019

Note: Trends exclude Croatia and Greece for time-series consistency

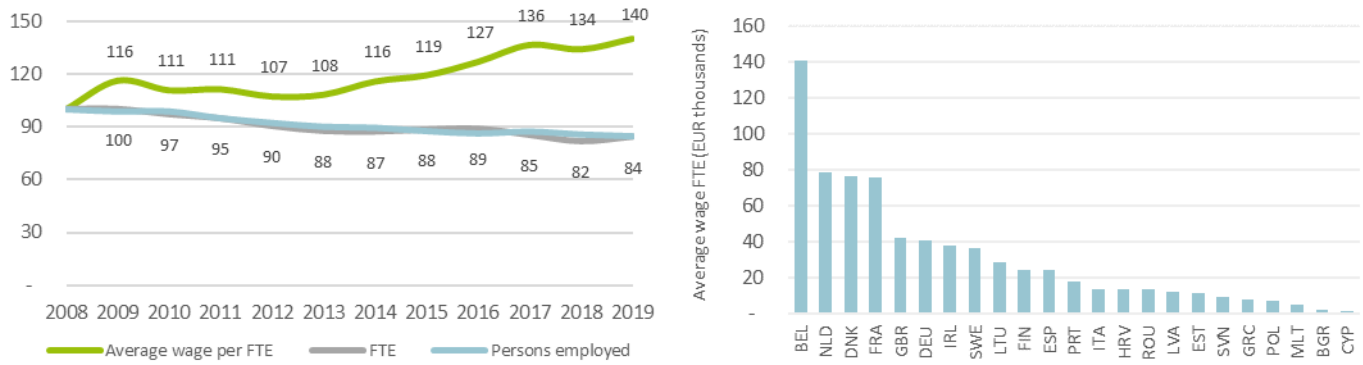


Figure 3.5 Variation in employment and average wage (based on 2008=100); average wage per FTE by MS, 2017
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/ACS(2019)); All monetary values have been adjusted for inflation; constant prices (2015). Nowcasts for 2018 and 2019

Note: Variations exclude Croatia and Greece for time-series consistency

Employment and average wage by scale of fishing activity

In 2017, the SSCF employed 76 801 fishers (51% of the total), the LSF employed 68 849 (45% of the total) and the DWF employed 6 222 fishers (4% of the total) (including Greece).

Excluding Greece, the SSCF employed 59 057 fishers, corresponding to 26 526 FTEs (30.5% of the total). The large-scale fleet employed 64 232 fishers, corresponding to 53 591 FTEs (62%), while the distant-water fleet employed the same amount of fishers (Greece does not have a DWF), corresponding to 6 950 FTEs (8%).

Average wage per FTE has increased in all the three types of fishing activity analysed when compared to 2008; growth being more pronounced in the DWF and only more recent for the SSCF (Figure 3.6).

Compared to 2016, the average wage per FTE in the SSCF, estimated at EUR 17 091 in 2017, increased 8%. The highest earners were French fishers, closely followed by the Danish, then the British and Swedish fishers (Figure 3.6 and 3.7).

Compared to 2016, average wage per FTE in the large-scale fleet (excluding Greece) increased 5.7% (EUR 33 578). The highest earners were Belgian fishers (EUR 140 858), followed by the Dutch (EUR 81 202), Danish (EUR 78 286) and French (EUR 76 196) fishers (Figure 3.6 and 3.7).

Fishers (in FTE) in the EU distant-water fleet saw their annual average wages (EUR 33 547) increase by 19.4% compared to 2016. The highest earners by far were the French DWF fishers, earning on average EUR 229 763 (Figure 3.6 and 3.7).

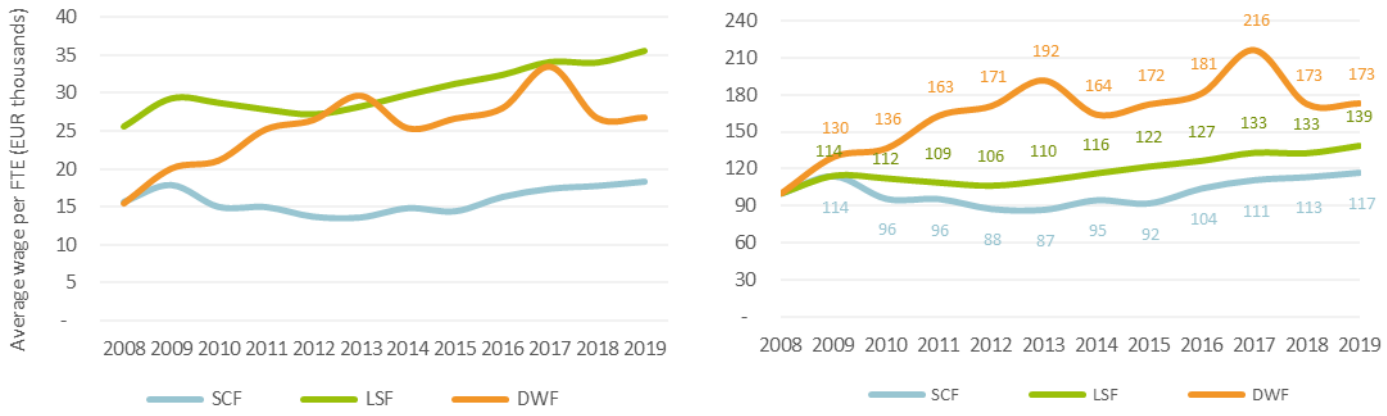


Figure 3.6 Trends and variations on average wage per FTE by main fishing activity (based on 2008=100)
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/ACS(2019)); All monetary values have been adjusted for inflation; constant prices (2015). Nowcasts for 2018 and 2019.

Note: Trends and variations exclude Croatia and Greece for time-series consistency

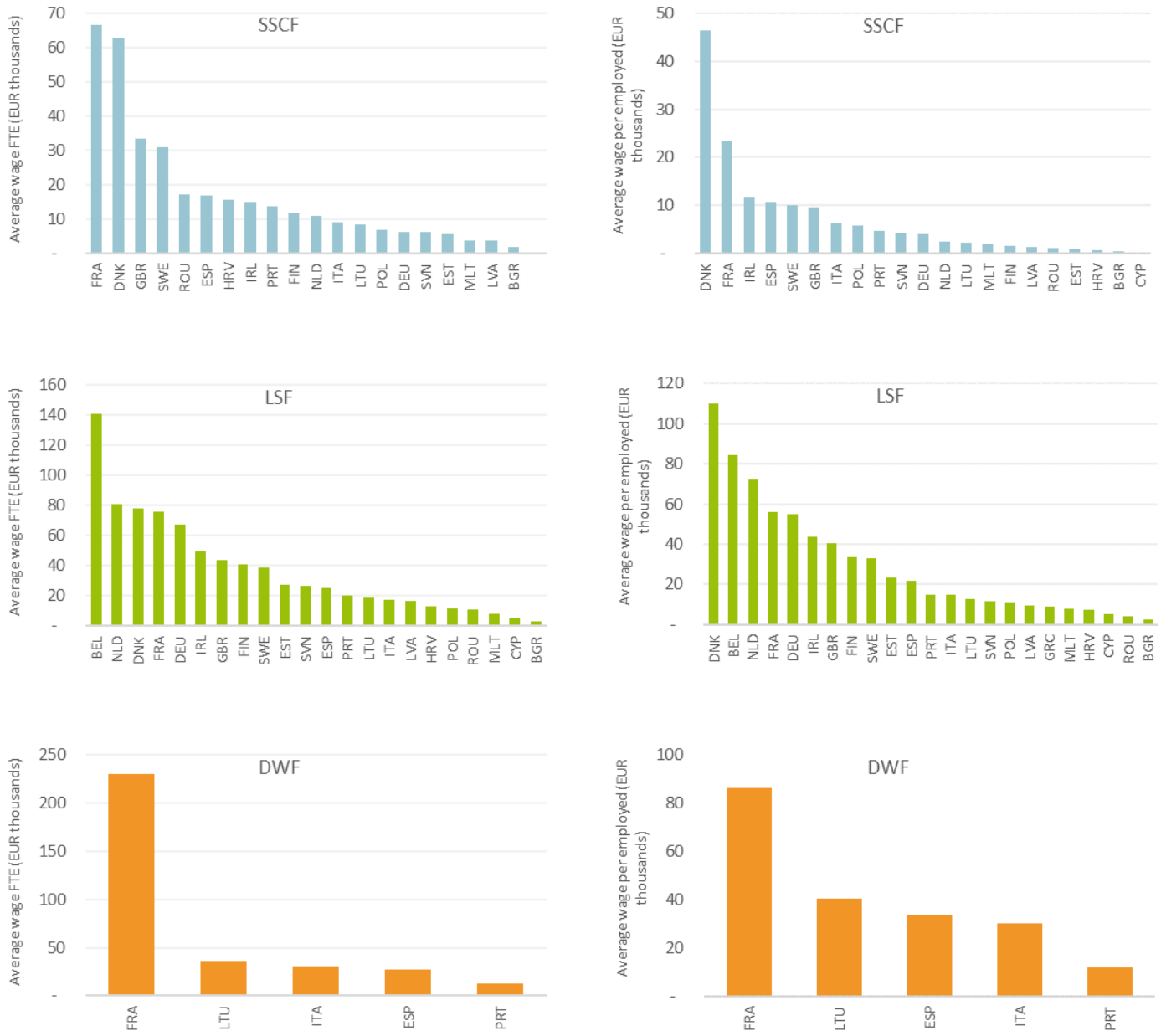


Figure 3.7 Average wage per FTE and average wage per employed by fishing activity and Member State, 2017
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/ACS(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Fishing effort and fuel consumption

In 2017, the EU fishing fleet (excluding Greece) spent over 4.8 million days-at-sea and consumed almost 2.25 billion litres of fuel (Figure 3.8), that means that on average, each active vessel spent around 92 days-at-sea and consumed almost 43 136 litres of fuel in 2017. The Belgian fleet consumed on average the most fuel (546 373 litres per vessel) followed by the Lithuanian (465 742 litres) and then the Dutch (320 106 litres) fleets. Belgian vessels also spent the most days-at-sea (on average 205 days), followed by Spanish vessels (129 days) and then Italian (124 days). On average, Bulgarian vessels spent only 19 days-at-sea, followed by Maltese vessels (33 days), Romanian (36 days) and Croatian (39 days) in 2017.

Effort, in days-at-sea, deployed by EU fleets declined by 4% compared to 2016. Energy consumption too decreased, albeit to a lesser degree (-0.3%). For more detail, see section on energy use – fuel efficiency and intensity

Italy reported the highest number of sea days (1.4 million or 28.6% of the total), followed by Spain (1.07 million days) and then France (651 thousand days). The Spanish fleet consumed the most fuel (606 million litres or 26% of total), followed by the Italian (357 million litres) and French (314 million litres) (see data tables).

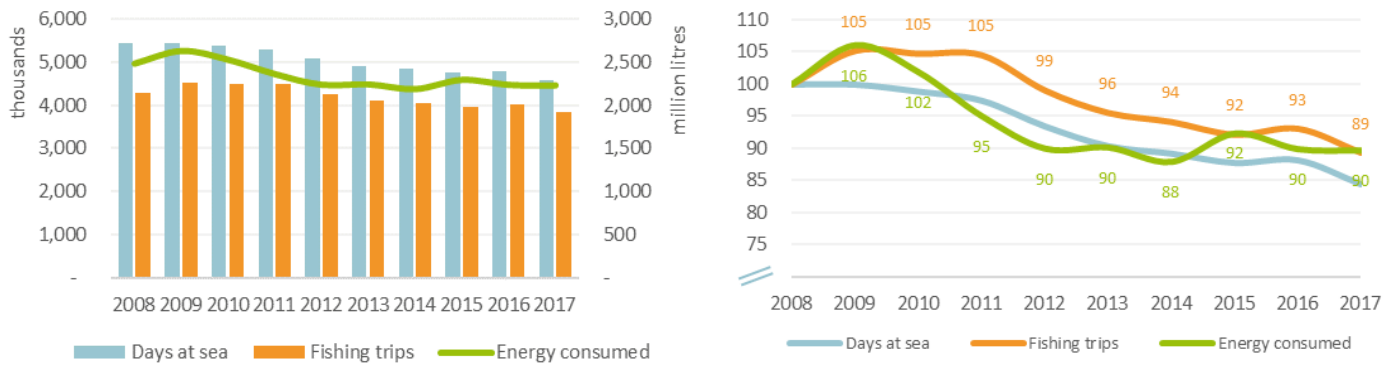


Figure 3.8 Trends and variations on fishing effort and fuel consumption (based on 2008=100)
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/ACS(2019))

Note: Trends exclude Croatia and Greece due to incomplete time-series data

Fishing effort and fuel consumption by scale (fishing activity)

In 2017, the small-scale coastal fleet, excluding Greece, accounted for more than half (56%) of the total days-at-sea deployed while consuming just 6% of the fuel. The large-scale fleet on the other hand accounted for less than half of the days-at-sea (42%) and consumed more than three-fourths of the fuel while the distant-water fleet deployed less than 2% of days-at-sea and consumed 16.5% of the fuel (Figure 3.9).

The average number of days spent at sea by small and large-scale vessels have generally decreased over the period 2008-2017: from 91 days in 2008 to 74 days in 2017 for SSCF and 144 days in 2008 to 138 days in 2017 for LSF. On the other hand, the days spent at sea by vessels in the DWF have on average increased, from 248 in 2008 to 287 in 2017 (Figure 3.10).

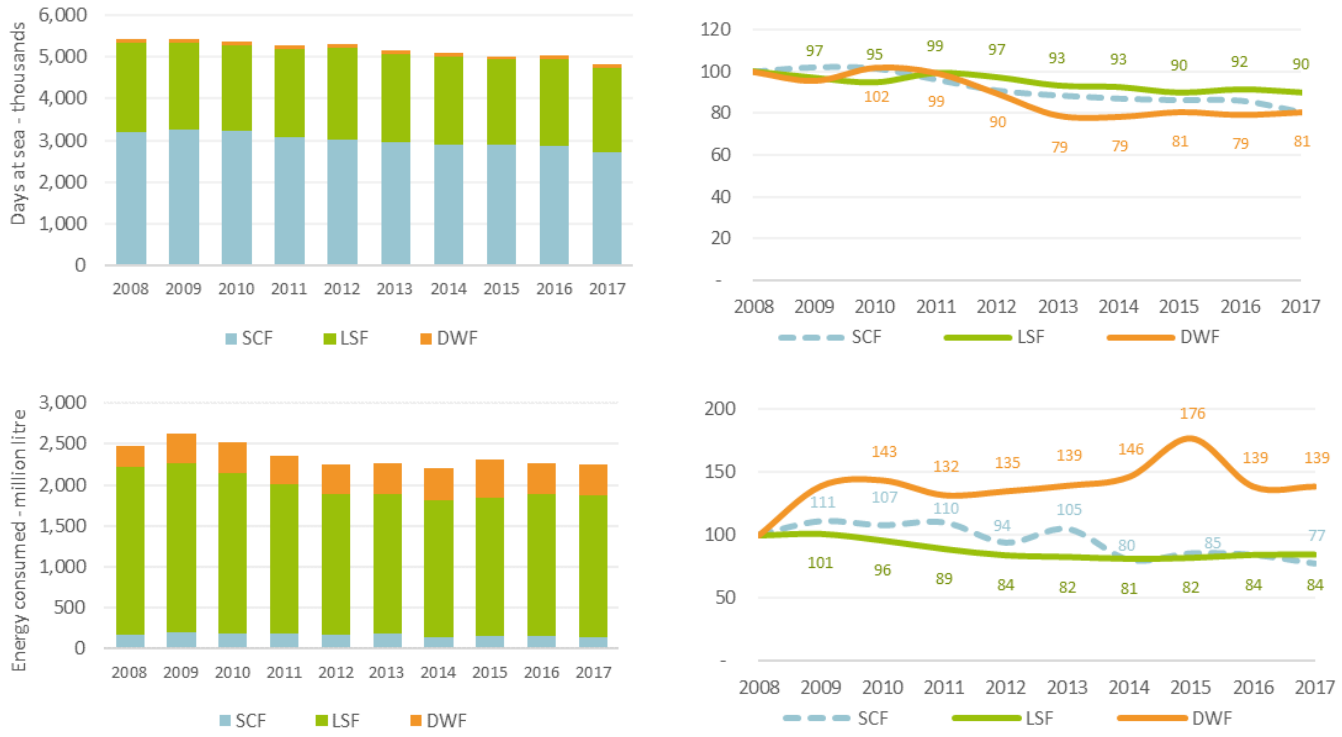


Figure 3.9 Trends and variations on fishing effort and fuel consumption by main fishing activity, 2017
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/ACS(2019))

Note: Variation exclude Croatia and Greece due to incomplete time-series data

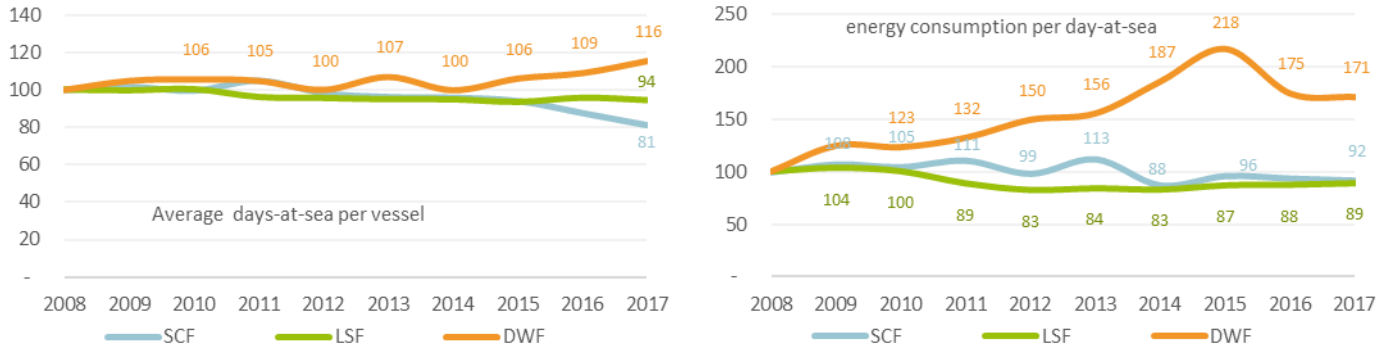


Figure 3.10 Variation on average fishing effort and energy use by main fishing activity, 2017
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/ACS(2019))

Note: Variation exclude Croatia and Greece due to incomplete time-series data

Landings

Excluding Greece, the EU fleet landed almost 5.3 million tonnes of seafood in 2017 (+7.5%), the highest volume since 2014. The value of landings, reported at EUR 7.6 billion, decreased slightly (-0.6%) compared to 2016 (Figure 3.11).

While landings have, on average, grown since 2012 and are now some 6% in value and 14% in weight greater than 2008, these figures now include Croatia and are not directly comparable, even if Croatia has contributed less than 1% of the landed value and 1.6% of the landed weight since 2012.

Despite changes in the landed weight between 2008 and 2017 their total value varied less. This is reflected in the average fish price over the period, with some periods of increased landings associated with lower average price and vice-versa, noticeably in 2016. The average price per kilo has remained relatively stable over the entire time period analysed, oscillating between EUR 1.4 and EUR 1.6 per kilo (Figure 3.11).

The Spanish fleet accounted for 26% of the total value landed during the year (18% by weight), followed by France (17% by value, 10% by weight), the UK (13.6% by value and 13.8% by weight), Italy (12% by value, 3.6% by weight) and Denmark (5.6% by value, 17% by weight) (see data tables).

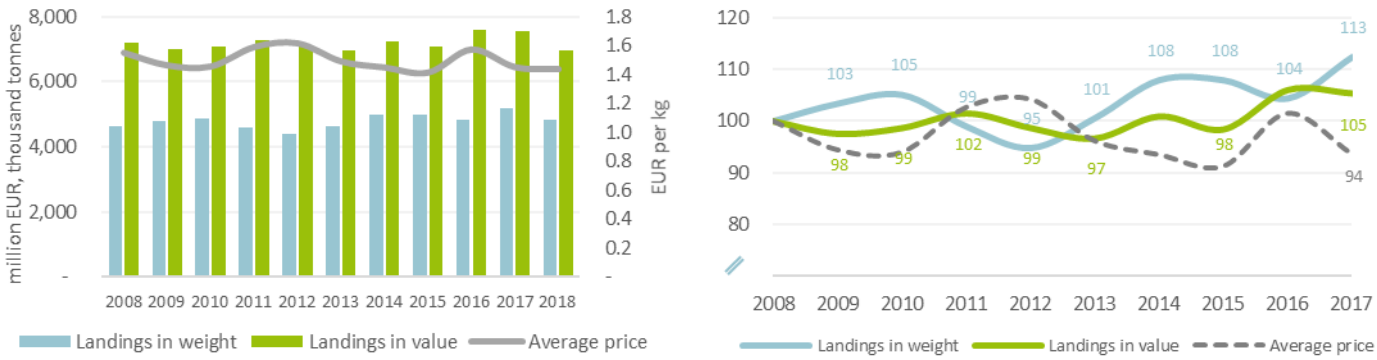


Figure 3.11 Trends and variations on landings in weight and value and average landed price (based on 2008=100)
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/ACS(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Top species and average landed prices

Atlantic herring, at 781 535 tonnes, continued to be the most important species (by weight) landed by the EU fleet in 2017, followed by Atlantic mackerel (460 thousand tonnes), sandeels and European sprat.

Atlantic mackerel, at EUR 459.5 million, was the top species landed in value, followed by European hake, yellowfin tuna, Norway lobster and Atlantic herring (Figure 3.12).

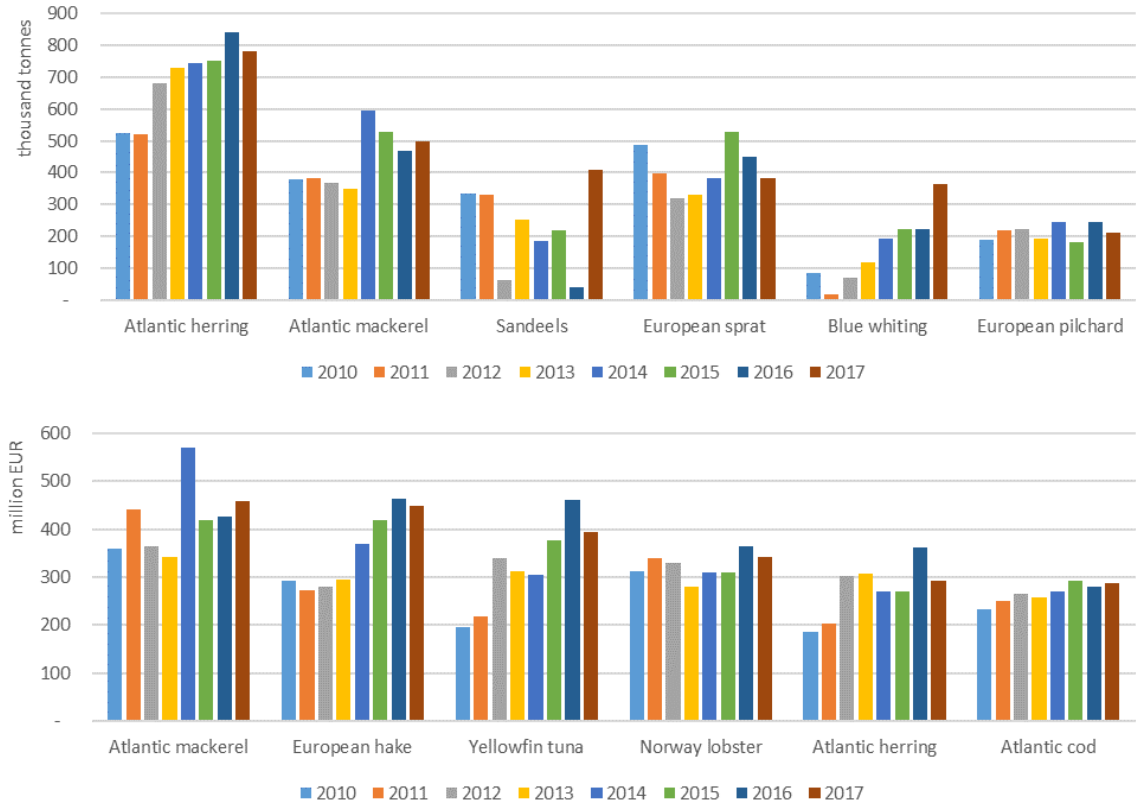


Figure 3.12 Trends for the top six species landed in weight and in value
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/ACS(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Landings of Atlantic mackerel increased 6% in weight and 7.8% in value in 2017, while Atlantic herring decreased 7% in weight and 19% in value compared to 2016, reflecting on the average first sale price.

Sandeel landings increased significantly, from 39 219 tonnes in 2016 to 409 948 tonnes in 2017, also impacting on the first-sale price, reducing to almost half the 2016 average price (from EUR 0.33 to 0.15 per kg). The average price for blue whiting has dropped since 2013.

On the other hand, the average price of yellowfin tuna has been on the rise since 2015, reaching record high prices in 2016 and 2017. Atlantic cod also saw a slight increase while the average price for European hake maintained compared to 2016 prices (Figure 3.13 and 3.14).

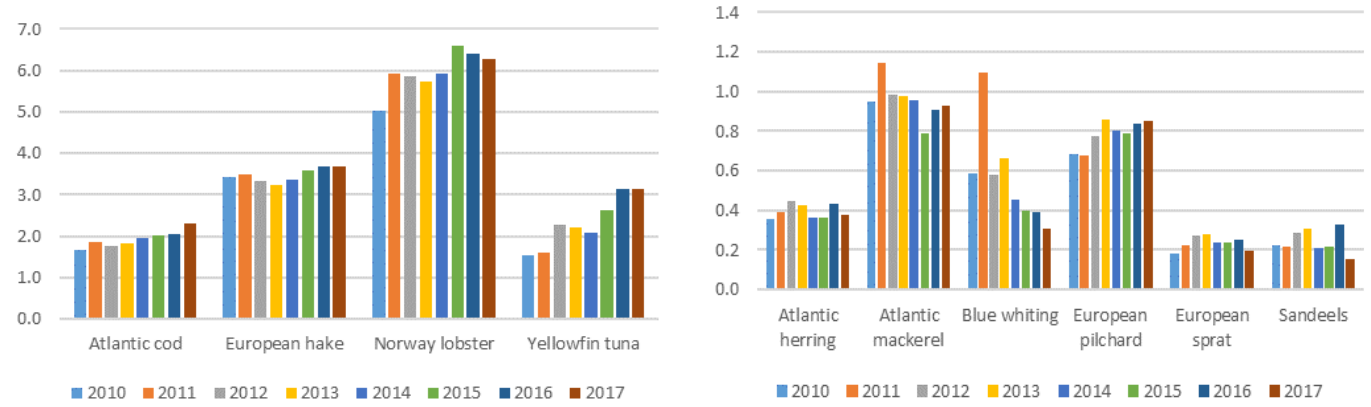


Figure 3.13 Average landed price of the top species landed in weight and/or value
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/ACS(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

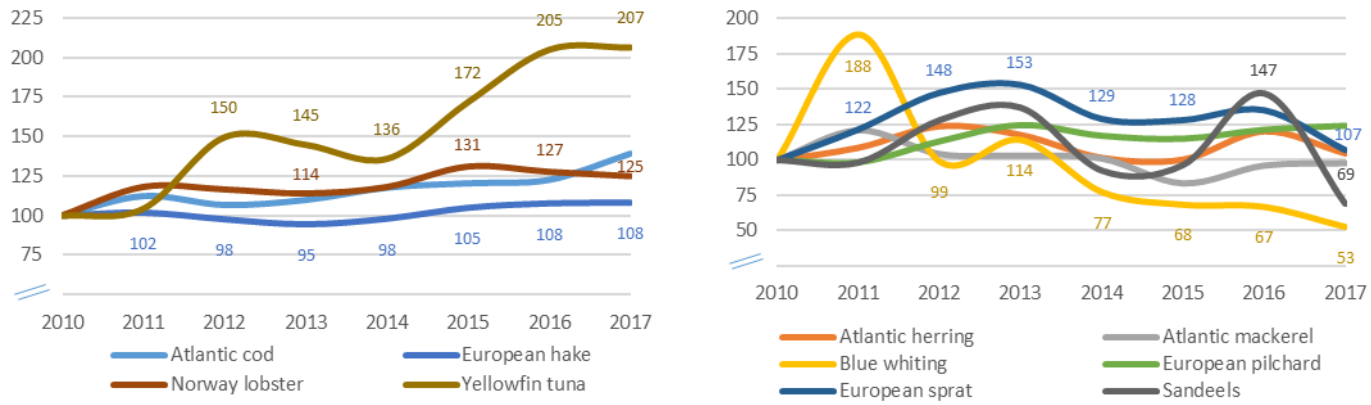


Figure 3.14 Variations in average price of the top species landed in weight and/or value (based on 2008=100)
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/ACS(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Landings by scale of fishing activity

The large-scale fleet contributed 81% to landings in weight and 72% to landings in value. The distant water fleet produced almost 14% of the landed weight and 15.4% of the landed value. The SSCF landed the remaining 5% in weight and 12.5% in value, indicating that when compared to its larger counterparts, the SSCF on average obtains higher first sale prices. The landed weight by the LSF increased significantly in 2017 compared to 2016 while dropping one percentage point in value. Contrarily for the SSCF landings in value increase while stagnate in weight. The DWF obtained less value for the same weight (Figure 3.15 and 3.16).

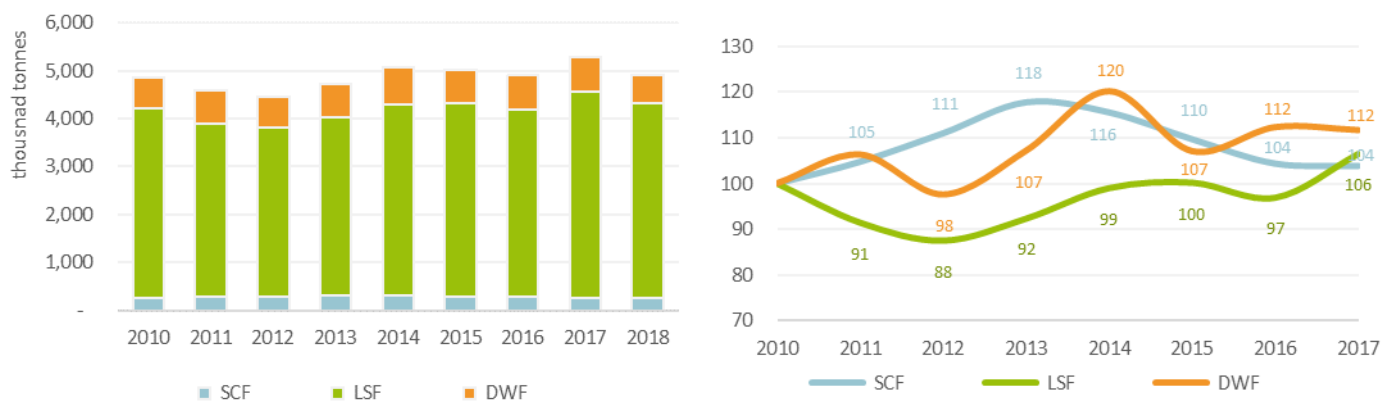


Figure 3.15 Trends and variations on landings in weight by fishing activity (based on 2008=100)
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/ACS(2019))

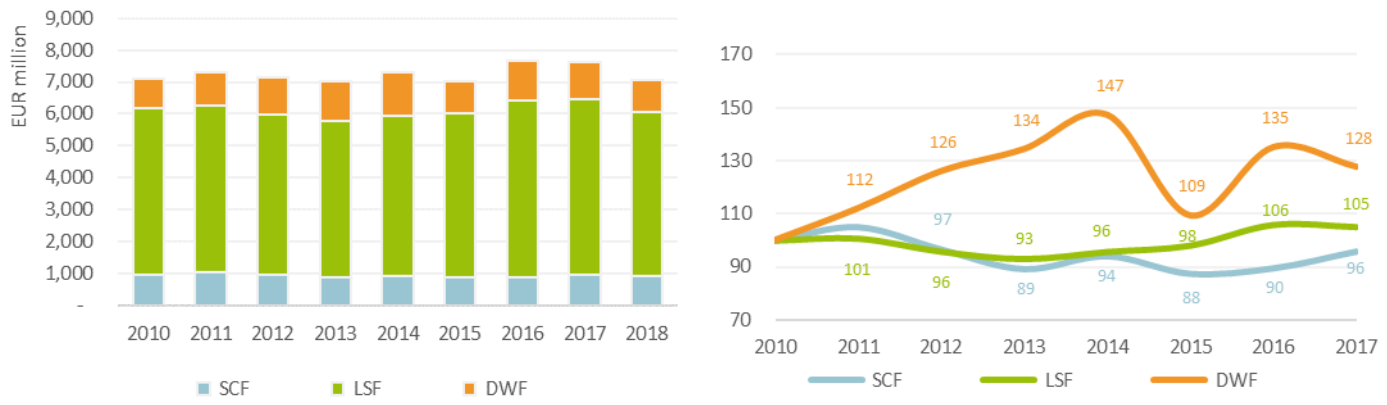


Figure 3.16 Trends and variations on landings in value by fishing activity (based on 2008=100)
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/ACS(2019)); All monetary values have been adjusted for inflation; constant prices (2015). Nowcast values for 2018

Landings per unit of effort

Landings-per-unit-effort is often used by fisheries managers as a proxy of relative stock abundance. The following is a simple analysis of the landings-per-unit-effort, in this case landings weight per day-at-sea (LPUE) and landings value per day-at-sea (VPUE), for the EU fleet as a whole and by main fishing activity. Results should be considered with caution and only as indicative as no standardisation has been performed and variations may be the result of many factors, such as seasonal and locational characteristics, fisher experience, fishing methods and technological advances and shifting management regimes (e.g. area closures, trip limits, effort limits, choke species, etc.).

Landing per day-at-sea, for the EU fleet as a whole, was estimated at 1 135 kg and EUR 1 651 per day-at-sea in 2017, an increase of 13% and 4% compared to 2016 respectively (Figure 3.17).

Compared to 2008, the average LPUE was 33% and VPUE 25% higher in 2017. After a decrease in 2011 and 2012, average LPUE has followed an increasing trend (Figure 3.17).

Landings per day at sea (LPUE) for the SSCF was estimated at 104 kg per day in 2017. For the LSF, LPUE was estimated at 2.1 tonnes and 9.9 tonnes for the DWF. LPUE for the SSCF and LSF increased in 2017 while decreasing slightly for the DWF (Figure 3.18).

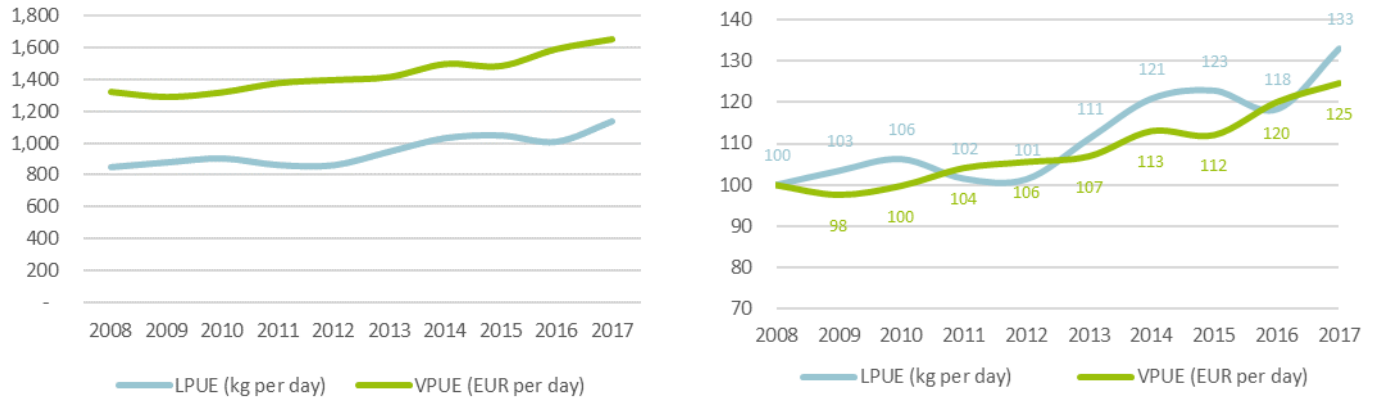


Figure 3.17 Trends and variations on landings per unit of effort (days-at-sea) by weight (LPUE) and value (VPUE) (based on 2008=100)
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/ACS(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

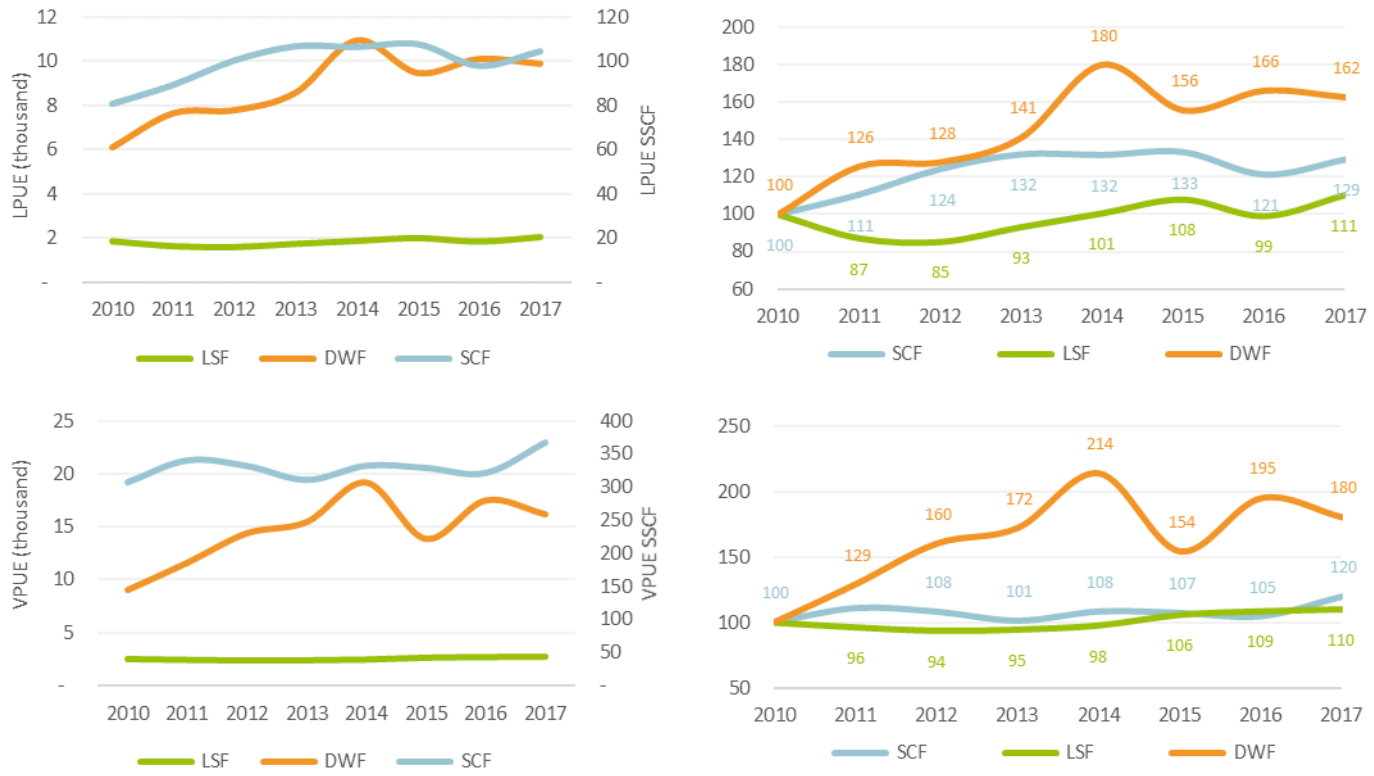


Figure 3.18 Trends and variations on landings per unit effort by weight (LPUE) and value (VPUE) by main fishing activity (based on 2008=100)

Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/ACS(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Income and Costs

In 2017 the total revenue (income form fishing and other income)[4] generated by the EU fishing fleet (excluding Greece) was EUR 7.7 billion. Total costs amounted to EUR 6.4 billion; that is, 83% of the revenue generated (Figure 3.19).

Of the revenue generated, EUR 7.5 billion was generated by the sale of fish and EUR 191 million from non-fishing income. Additionally, the fleet received EUR 51.6 million in operating subsidies and EUR 39.8 million in income from leasing out quota and other fishing rights (Figure 3.19). Of the costs incurred by the fleet in 2017, 89% consisted of operating costs[5] (EUR 5.7 billion) and 11% of capital costs (EUR 688 million).

The main operating costs were labour costs (39% of total costs: EUR 2.2 billion in personnel costs and EUR 272 million in unpaid labour), other variable costs (16% of total costs: EUR 1 billion) and fuel costs (EUR 998 million, 15.6% of total costs). Other costs linked to production amounted to EUR 1.2 billion: EUR 651 million in repair & maintenance and EUR 582 million in other non-variable (fixed) costs. Figure 3.20 shows costs as a percentage of revenue.

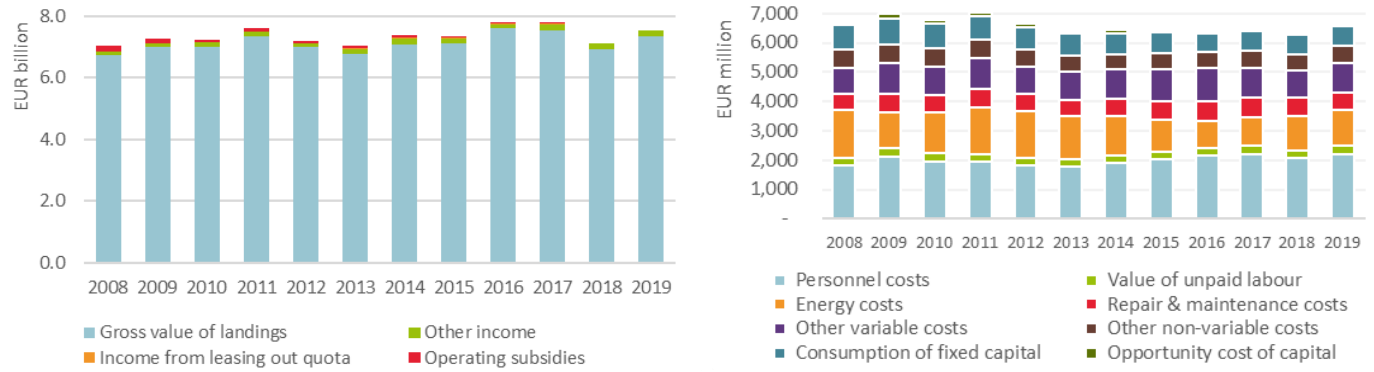


Figure 3.19 Trends on main income and costs items

Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/ACS(2019)); All monetary values have been adjusted for inflation; constant prices (2015). Nowcast values for 2018 and 2019

4 Direct income subsidies and income from leasing out fishing rights excluded from the economic analyses.

5 Total operating costs include: crew wage costs, unpaid labour, energy costs, other variable costs, repair costs, other non-variable costs

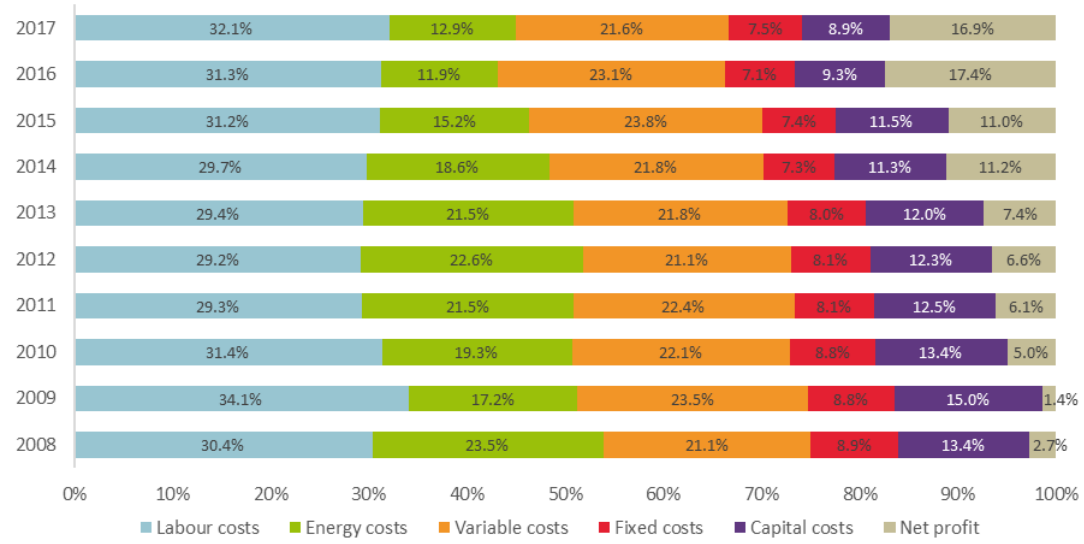


Figure 3.20 Trends on costs as a percentage of revenue
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/ACS(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

While revenue has varied little over the period 2008–2017, oscillating around EUR 7 billion, it has shown an overall increase over the period analysed, increasing 12.5% when compared to 2008. Revenue decreased slightly (-0.2%) in 2017 compared to 2016; due to the 1.1% decrease in the sale of fish as other income increased 48.6%. Income from leasing/renting out quota or other fishing rights have generally increased while operational subsidies have decreased (Figure 3.21).

Total costs[6] followed a similar but opposite trend to revenue; in general decreasing over the period analysed (-4% compared to 2008). This reduction was mainly a result of decreasing energy costs (-38%) and consumption of fixed capital (-21%), in line with the lower fuel prices in recent years and reduction in fleet capacity. Conversely, personnel costs (+20%) and repair & maintenance costs (+19%) increased compared to 2008. In 2017, costs increased 0.3% compared to 2016 brought on by slight increases in almost all cost items, with the exception of repair & maintenance and other variable costs (Figure 3.21).

At EUR 2 billion, Spain again generated just over a quarter of the total EU fleet revenue, followed by France (EUR 1.35 billion, 17%), the UK (EUR 1.1 billion, 14%) and then Italy (EUR 955 million, 12%) (see data tables).

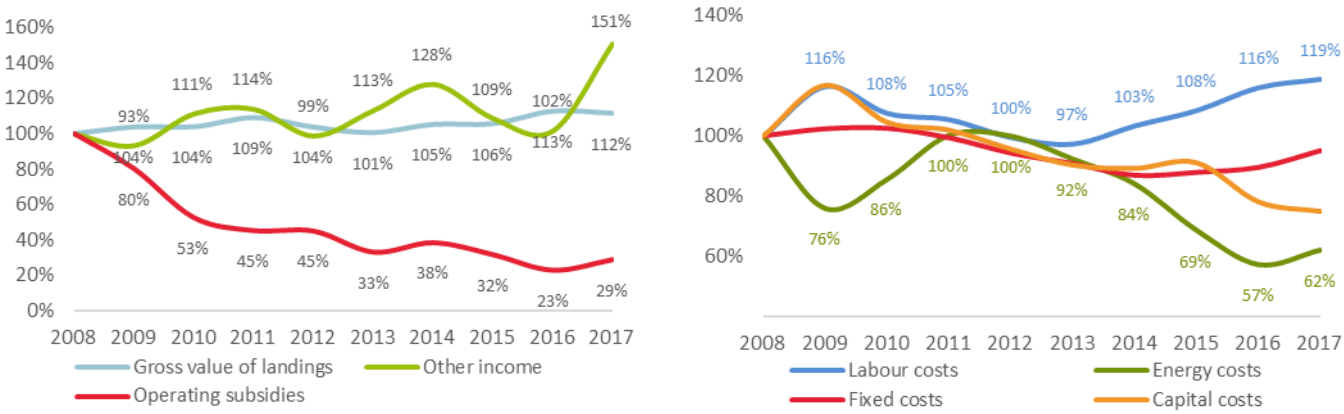


Figure 3.21 Variations on main income and costs items (based on 2008=100)
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/ACS(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Figure 3.22 shows the average monthly price of marine fuel in the EU for the period 2007-2019. Average prices remained relatively low during 2009 and early 2010, increasing steadily throughout late 2010 and remained so until mid-2014, decreasing sharply and hitting a low in early 2016. Average fuel prices remained low throughout 2016-2017, increasing further throughout 2018 and 2019 2018. By mid-2018, prices had returned to 2015 levels.

6 Total costs include crew wage costs, unpaid labour, energy costs, repair costs, other variable costs, other non-variable costs, annual depreciation and opportunity cost of capital (capital costs).

The rise that began in spring of 2016 was driven by various global factors (e.g., demand growth, OPEC strategic behaviour, Middle East tensions, US sanctions on Iran, etc.). Exchange rate developments also add to price uncertainty, as global energy markets are commonly denominated in US dollars rather than euro-based. Fluctuations in fuel prices had a significant impact on the performance of the fleet. The data suggest that as international fuel prices fluctuated throughout the period so too did the consequential energy costs of the fishing fleet. Thus, energy costs in 2017 (13% of revenue) are significantly lower than those recorded in 2008 and over the period 2011-2013 (around 22%) but slightly higher than in 2016 (12%).

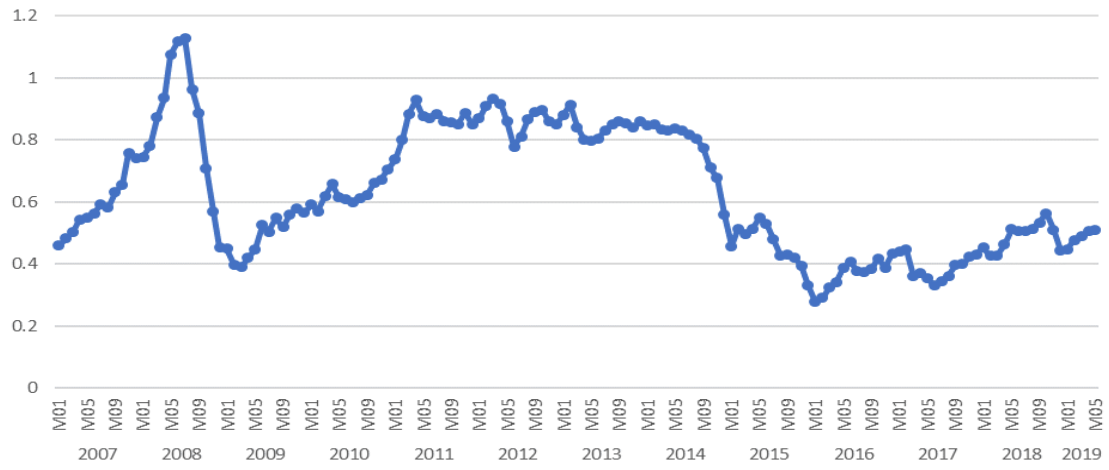


Figure 3.22 Trends on average EU marine fuel price (EUR /litre)
Data source: adapted from EUMOFA

Income and costs by scale of fishing activity

Revenue and costs by fishing activity are shown in Figure 3.22 as proportions of the EU totals in 2017 and trends in Figure 3.23. The large-scale fleet generated 72% of the total EU fleet revenue and accounted for 73% of the labour costs and 76% of the energy costs whereas the SSCF generated 13% of the revenue and accounted for 19% of the labour costs and 9% of the energy costs. The distant-water fleet generated the remaining 15% of the revenue and contributed 8% to labour and 15% to energy costs (Figure 3.23).

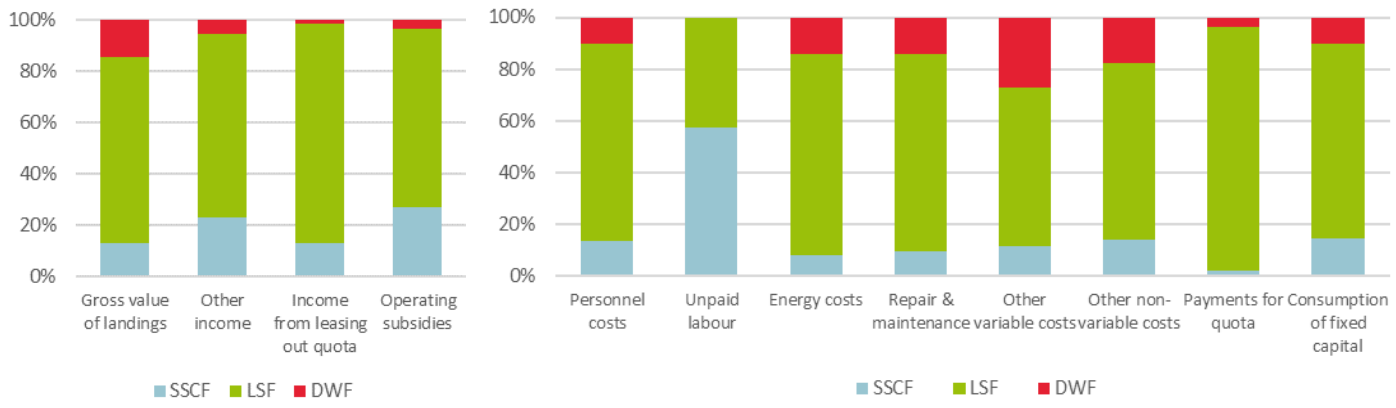


Figure 3.23 Share of income and cost items by fishing activity, 2017
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/ACS(2019))

Over the period 2010-2014 the revenue generated by the SSCF showed an overall negative trend, rebounding in 2015 and 2016, decreasing 2.4% in 2017. Total costs to revenue ranged from 86% in 2016 to 98% in 2013 (Figure 3.24 and 3.25).

Revenue generated by the LSF decreased 1.1% compared to 2016 while total costs to revenue increased from 80.8% to 82.4% (Figure 3.24 and 3.25).

The DWF experienced a 4.7% increase in revenue in 2017 compared to 2016, with total costs to revenue moving from 85% in 2016 to 82% in 2017 (Figure 3.24 and 3.25).

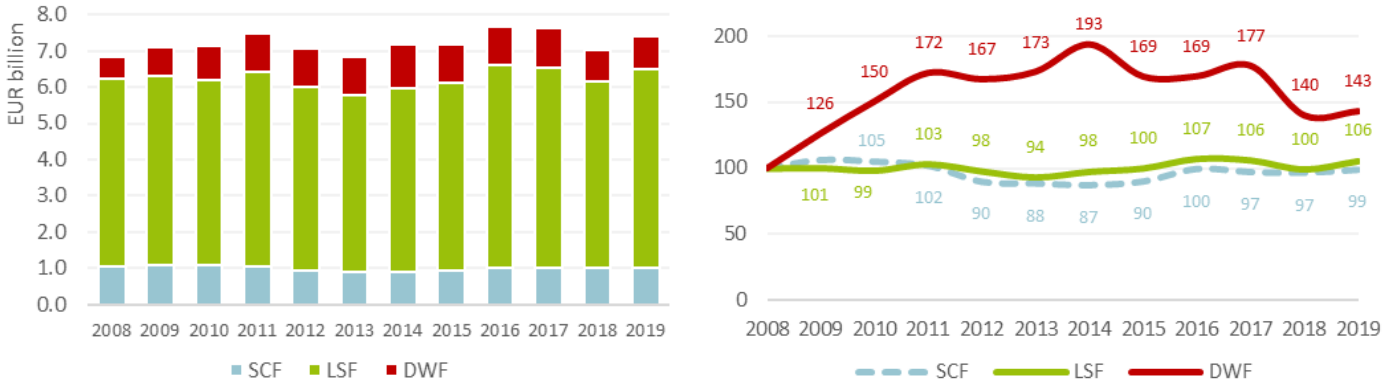


Figure 3.24 Trends and variations on revenue by main type of fishing activity

Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/ACS(2019)); All monetary values have been adjusted for inflation; constant prices (2015). Nowcast values for 2018 and 2019

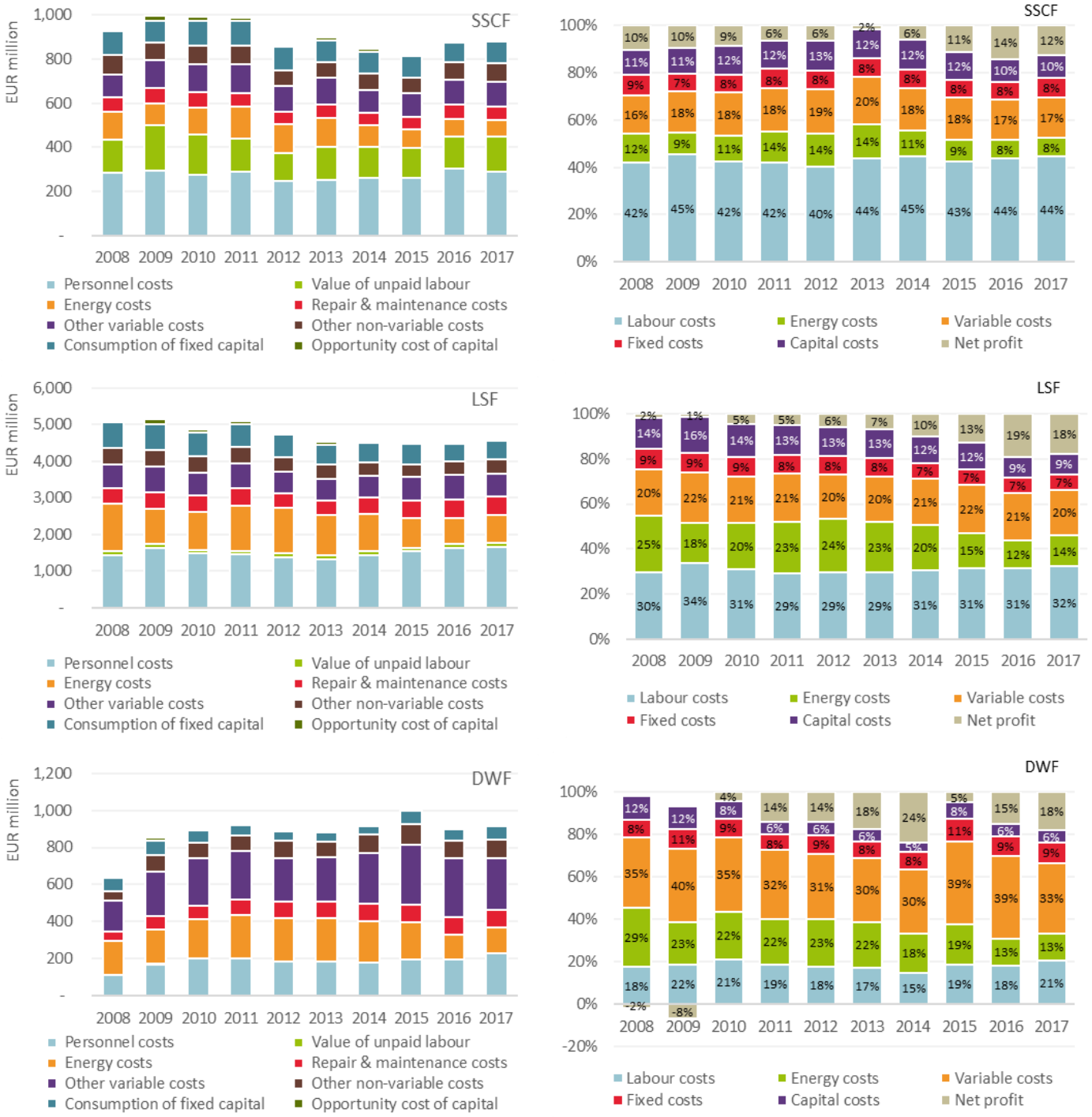


Figure 3.25 Trends on income and cost structure by main type of fishing activity

Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/ACS(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

3.2 Economic Performance Indicators

Situation in 2017

Main performance indicators are listed by MS and for the EU fleet as a whole in Tables 3.8 to 3.13.

The amount of Gross Value Added (GVA), gross profit and net profit (excluding subsidies) generated by the EU fishing fleet (excluding Greece) in 2017 was EUR 4.5 billion (-0.2% decrease on 2016), EUR 1.9 billion (-3.3%) and EUR 1.3 billion (-2.9%), respectively (Figure 3.26).

In relative terms, and once again excluding Greece, GVA to revenue was 57.9%, 25.8% of revenue was retained as gross profit and, after deducting capital costs, 16.9% of revenue was retained as net profit (see data tables). As depictured in Figures 3.26 and 3.27, results remained almost unchanged, albeit a slight deterioration, compared to 2016.

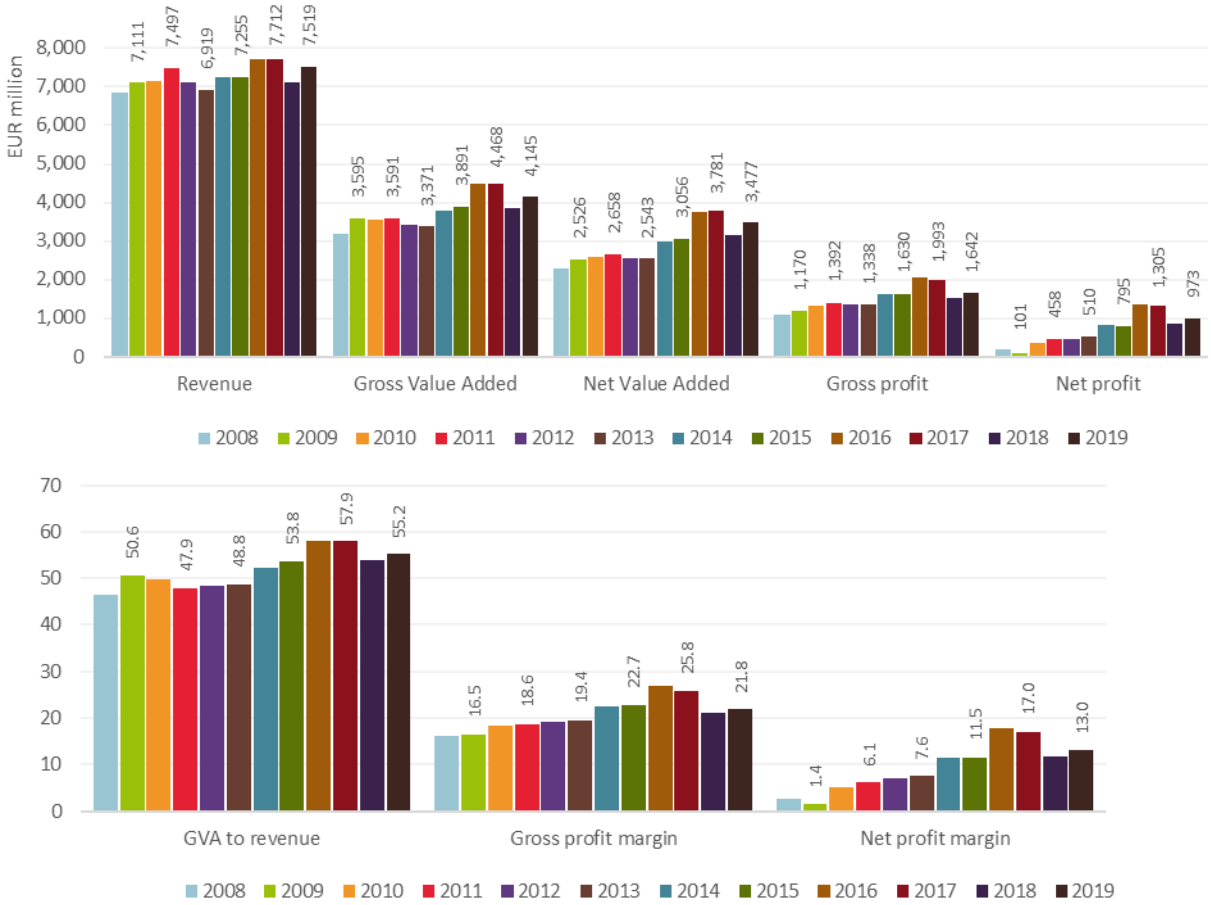


Figure 3.26 Trends on revenue and profit for the EU fleet
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/ACS(2019)); All monetary values have been adjusted for inflation; constant prices (2015). Nowcast values for 2018 and 2019

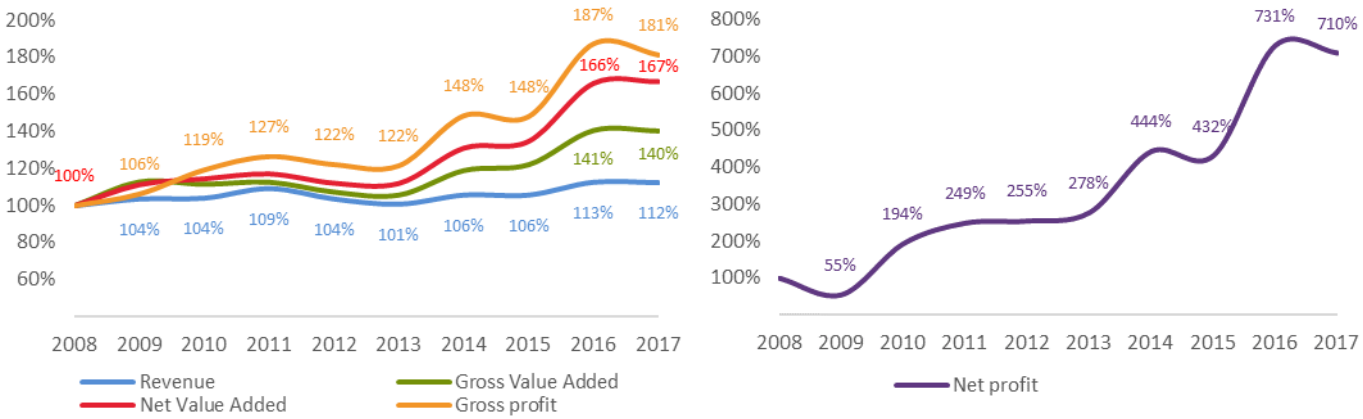


Figure 3.27 Variations on revenue and profits for the EU fleet (based on 2008=100)
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/ACS(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

An analysis of the 2017 economic performance by Member State revealed a mixed picture. The data suggest that one MS (Lithuania) out of the 22 MS fleets (Greece excluded) suffered gross losses while four generated net losses (Germany, Finland and Malta, in addition to Lithuania) (see data tables).

Results indicate that the Spanish fleet generated by far the highest revenue (EUR 2 billion, +2%), GVA (EUR 1.15 billion, +6%), gross profit (EUR 445, -4%) and net profit (EUR 333 million, -13%) (see data tables).

The French fleet generated almost EUR 1.4 billion (+2%) in revenue and EUR 758 in GVA (+2%), followed by the UK fleet, with EUR 1.1 billion (-4%) in revenue and EUR 651 million in GVA (see data tables).

In relative terms, the Slovenian fleet generated the highest level of GVA relative to revenue (80%), followed by Romania (72%), followed by Denmark and Portugal (67%) (see data tables).

The Romanian fleet generated the highest gross profit margin (58%), followed by Slovenia (49%) and Denmark (44%) (see data tables).

Economic performance by scale of fishing activity

The data indicate that in 2017, the SSCF generated net profits of EUR 122.5 million, an 8% decrease on 2016. Yet, this fleet component generated net losses in nine MS in 2017 (see data tables).

The large-scale fleet accounted for 74% of the total GVA generated by the EU fleet, 75% of the gross profits and 77% of net profits (Figure 3.28). Three Member State LSF generated gross losses in 2017 while five MS fleets out of 22 reported net losses (Cyprus, Germany, Finland, Lithuania and Slovenia). Overall, net profits generated by this part of the fleet amounted to just over EUR 950 million in 2017, down 8.2% from 2016 (EUR 1 billion) (see data tables).

The distant water fleet contributed 11% to GVA and around 13% to both gross and net profit, generating an overall net profit of EUR 156 million, a 13.7% increase on the EUR 137 million reported in 2016. Note, due to data confidentiality results for this segment are undervalued (see data tables).

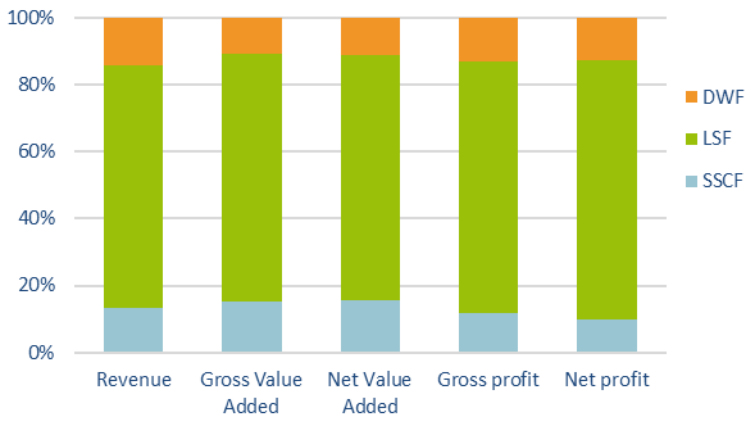


Figure 3.28 Share of revenue and profits by fishing activity, 2017
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/ACS(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

In relative terms, the small-scale coastal fleet generated the highest GVA as a percentage of revenue (67%), followed by the large-scale fleet (59%) and then the distant water fleet (44%) (see data tables).

The large-scale fleet generated the highest gross profit margin (26.7%), followed by the distant water fleet (23.5%) and then the small-scale coastal fleet (23%).

The large-scale fleet generated the highest net profit margin (17.4%), followed by the distant water fleet (16.6%) and then the small-scale coastal fleet (12.3%).

Trends in the main economic performance indicators for the SSCF, LSF and DWF are shown in Figures 3.29 to 3.31.

For the EU small-scale coastal fleet, all indicators show a decline in performance over the period 2009-2013, with improvements from 2014 onwards, finally surpassing 2009 results in 2016, deteriorating in 2017.

The EU large-scale fleet follows a similar trend with all indicators showing an improved performance since 2013. Net profit in 2016 was estimated EUR 1 billion, a record high over the period analysed.

Conversely, the DWF suffered general deterioration in 2015, after years of improved performance. Overall improvements were seen in 2016 and 2017, yet results still remain below the 2014 record high figures.

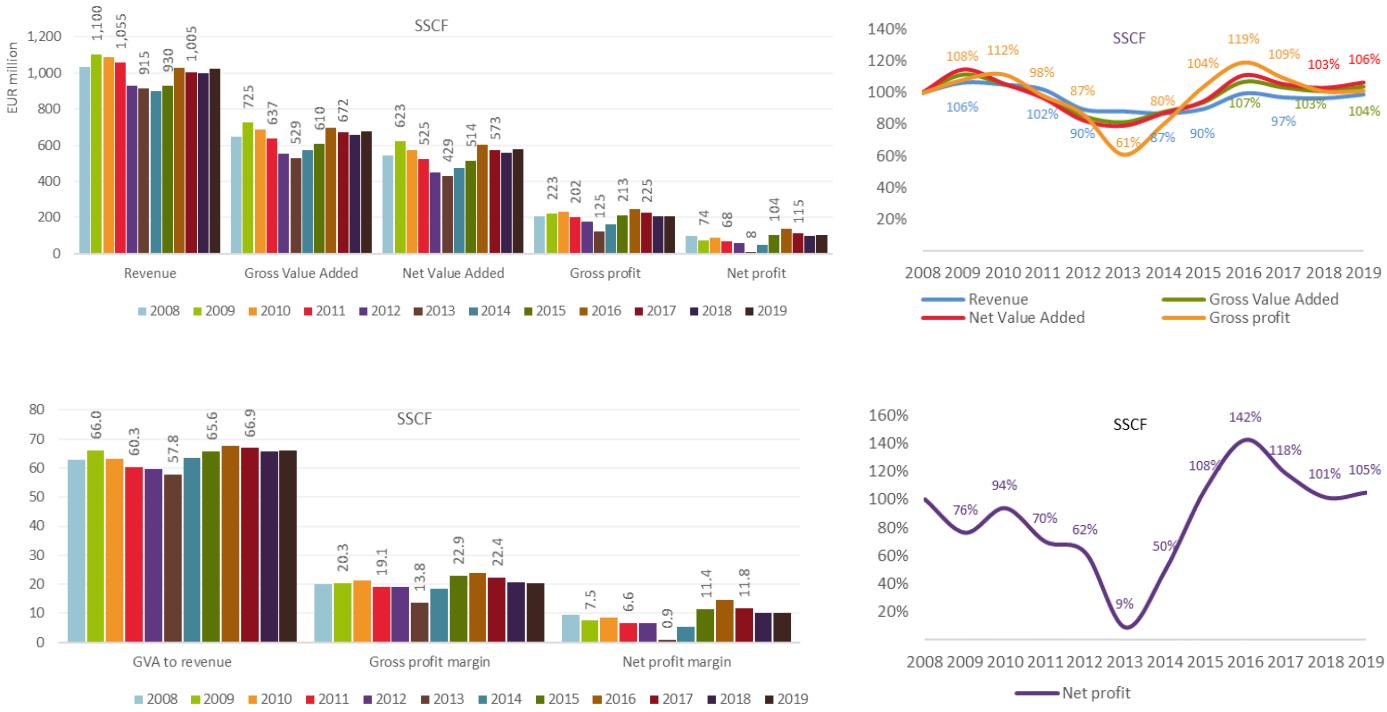


Figure 3.29 Trends on revenue and profits for the EU SSCF

Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/ACS(2019)); All monetary values have been adjusted for inflation; constant prices (2015). Nowcast values for 2018 and 2019

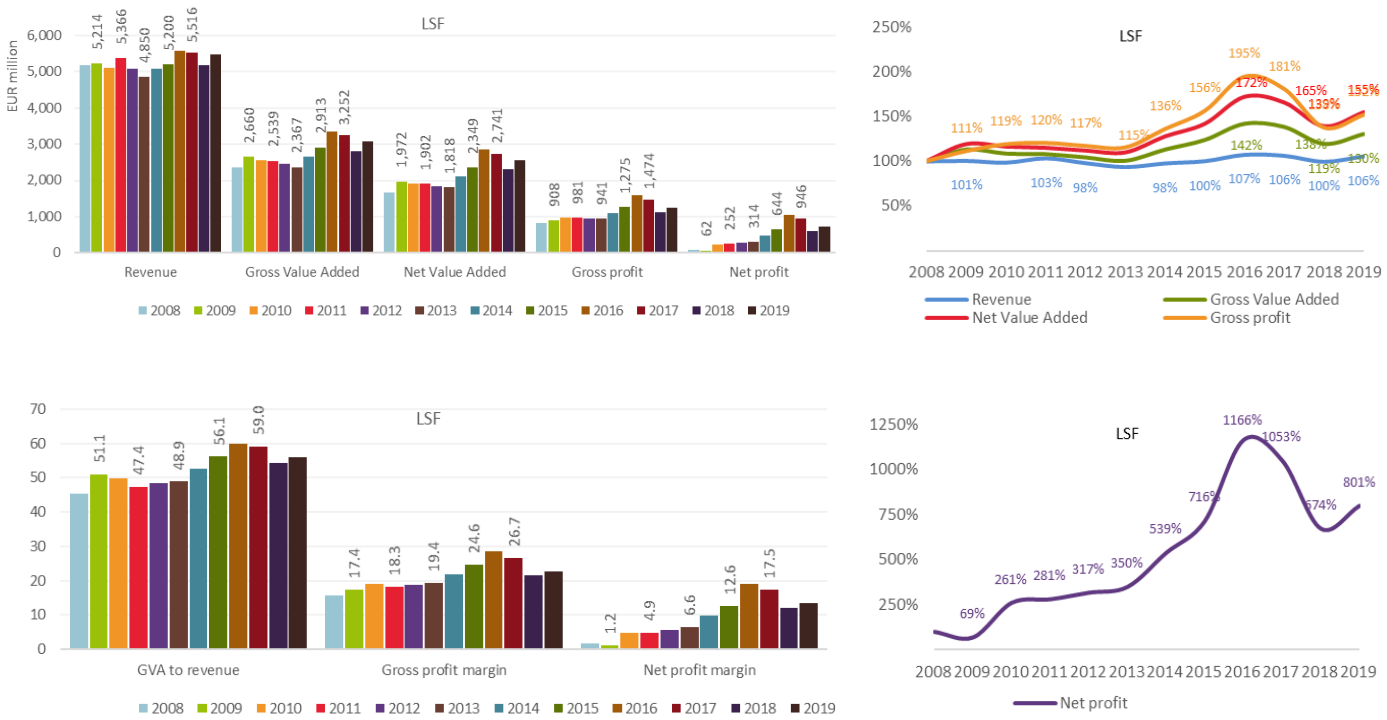


Figure 3.30 Trends on revenue and profits for the EU LSF

Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/ACS(2019)); All monetary values have been adjusted for inflation; constant prices (2015). Nowcast values for 2018 and 2019

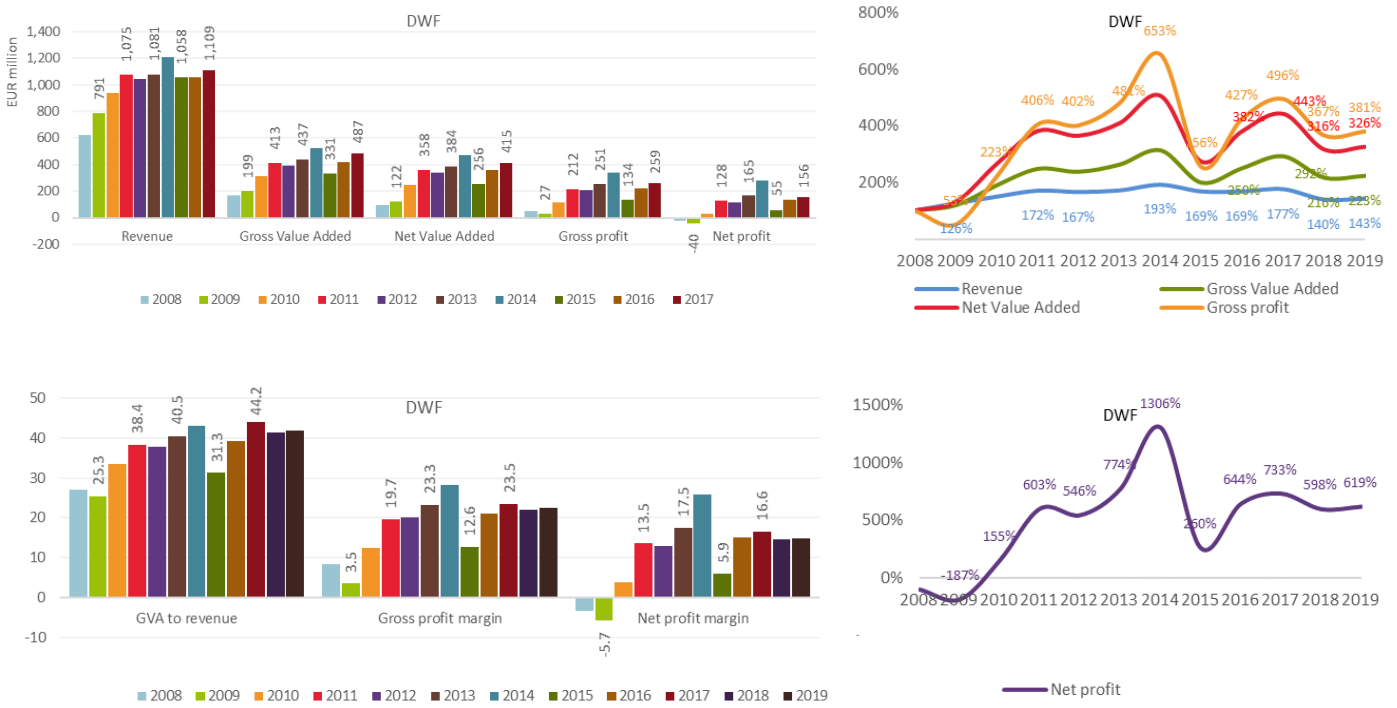


Figure 3.31 Trends on revenue and profits for the EU DWF

Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/ACS(2019)); All monetary values have been adjusted for inflation; constant prices (2015). Nowcast values for 2018 and 2019

Capital value and investments

In 2017, the EU fleet (excluding Greece) had an estimated (depreciated) replacement value of EUR 5.1 billion. In-year investments amounted to EUR 551 million; a 4% increase compared to 2016. The Danish fleet was reported to have the highest (depreciated) replacement value amounting to some EUR 725.5 million, followed by those of Italy (EUR 658 million) and France (EUR 655 million). In terms of investment, the German fleet invested EUR 111.5 million in 2017, followed by the Belgium (EUR 101.8 million) and French (EUR 71 million) fleets (see data tables).

Capital value and investments by scale of fishing activity

The EU small-scale coastal fleet had a depreciated replacement value of EUR 673 million in 2017 (14% of the EU fleet). Also, excluding the Greek SSCF, in-year investment in the small-scale coastal segment amounted to EUR 33.5 million, -42% compared to 2016 (6% of the EU total).

The highest depreciated replacement value and in-year investments corresponded to the large-scale fleet (80% and 88% of the total, respectively).

The (depreciated) replacement value reported for the EU distant water fleet amounted to EUR 286 million; however, this figure is significantly under-estimated as it excludes several MS high seas vessels due to data confidentiality.

The amount of in-year investment in the EU distant water fleet, again under-reported for the reasons stated above, was EUR 30 million in 2017 (+12%).

The remaining EUR 441 million in tangible asset value (replacement) was reported for inactive vessels, along with EUR 3 500 in investments (these figures are also under-reported as not all MS provide capital values for their inactive vessels).

3.3 Resource Productivity and Efficiency

Labour and Capital Productivity

Labour productivity, defined as gross value added per FTE (GVA/FTE), gives an indication of growth in the sector, while capital productivity measures profit per unit of capital invested. Apart from a small decline between 2011 and 2012, labour productivity of the EU fishing fleet has generally increased since 2008 (Figure 3.32).

In 2017, labour productivity was estimated at EUR 51 200, a 4.8% increase on 2016 with the Belgian fleet reporting the highest level (EUR 217 thousand), followed by the Danish fleet (EUR 183 thousand) and the Netherlands (EUR 138 thousand). Capital productivity, measured as the return on fixed tangible assets (RoFTA), was estimated at 25.3%, a 5% decrease compared to 2016 (see data tables).

Labour and capital productivity by scale of fishing activity

Figure 3.32 shows that labour productivity is lowest in the SSCF, at around EUR 26 048 per FTE, and decreased after 2009 until 2013 before rebounding in 2014 and levelling out at levels similar to 2009. Capital productivity followed a similar trend but achieved better results from 2015 until falling in 2017.

Labour and capital productivity for the LSF and DWF show generally increasing trends over the entire period, with that of the DWF being more pronounced albeit with a significant drop in 2015, rebounding in 2016 and continuing to climb in 2017.

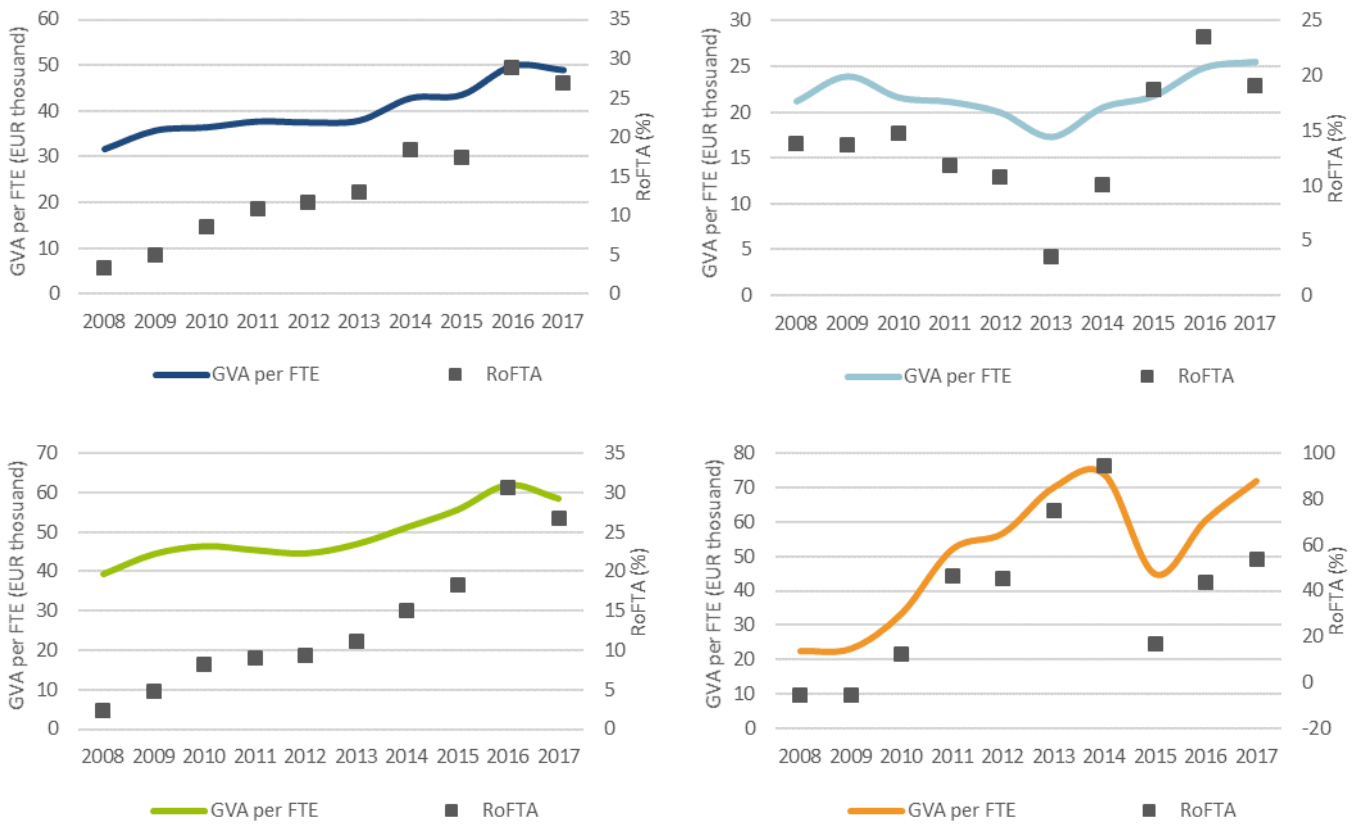


Figure 3.32 Trends on labour (GVA per FTE) and capital productivity (RoFTA) for the EU fleet and by fishing activity
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/ACS(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Energy use – fuel efficiency and intensity

The quantity of fuel used by the EU fishing fleet is influenced by a number of factors, in particular the type of fishing operation and gear used. In this report fuel usage is measured as in two ways: 1) fuel intensity, i.e. the quantity of fuel consumed per quantity of fish landed (litre per tonne), and, 2) fuel efficiency, the ratio between fuel costs and revenue, expressed as a percentage (%). For the latter, the lower the percentage the more fuel-efficient the vessel (i.e. less income is used to cover fuel costs).

Based on the data submitted by MS, the results indicate that overall, the EU fleet has become more fuel efficient when compared to the period 2008-2015. In 2017, fuel costs as a proportion of revenue was

estimated at 13%, up one percentage point compared to 2016 but still lower than 15% in 2015. Improvement in fleet performance can largely be attributed to lower fuel prices. However, it is noteworthy that fuel intensity – the amount of fuel consumed per landed tonne - has also steadily declined since 2009 (see data tables).

With the increase in the volume of landings and the marginal decrease in fuel consumption in 2017, the amount of fuel consumed per landed tonne decreased 7.4% compared to 2016; reaching a record low of 428 litres per tonne (Figure 3.33).

Similarly, and even though the value of landings decreased slightly in 2017 (0.6%), the reduction in effort allowed for a 3.5% increase in the landed value per day-at-sea (EUR 1 581 per day at sea).

Energy costs show a more complex pattern reflecting significant changes in the average price of fuel over the period. On average energy costs in 2017 were 38% lower compared to 2008 but increased almost 9% compared to 2016 (see data tables).

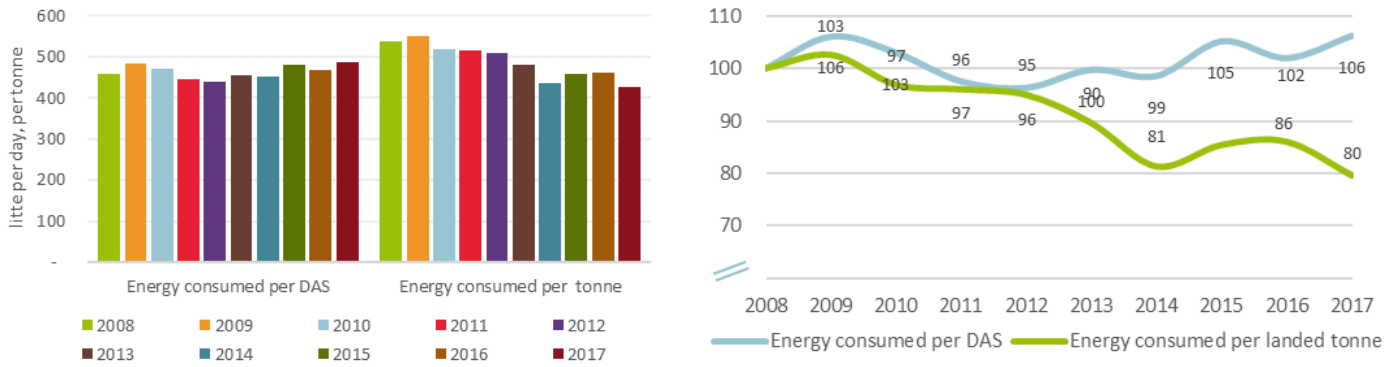


Figure 3.33 Trends and variations on energy consumed per day-at-sea and per landed tonne
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/ACS(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Note: Trends exclude Croatia, Greece and France due to incomplete time-series data

Fuel efficiency and intensity by scale of fishing activity

Results show that small-scale coastal vessels are more fuel intensive, consuming on average 524 litres per tonne landed in 2017, compared to 428 litres for the LSF. On the other hand, at 8% in 2017, the SSCF has the lowest fuel cost to revenue ratio. On average, around 14% of the revenue generated by large-scale vessels was spent on fuel in 2017, up from 13% in 2016. The DWF was also less fuel efficient in 2017 compared to 2016, moving from to 12.7% in 2016 to 13.1% in 2017 (Figure 3.34).

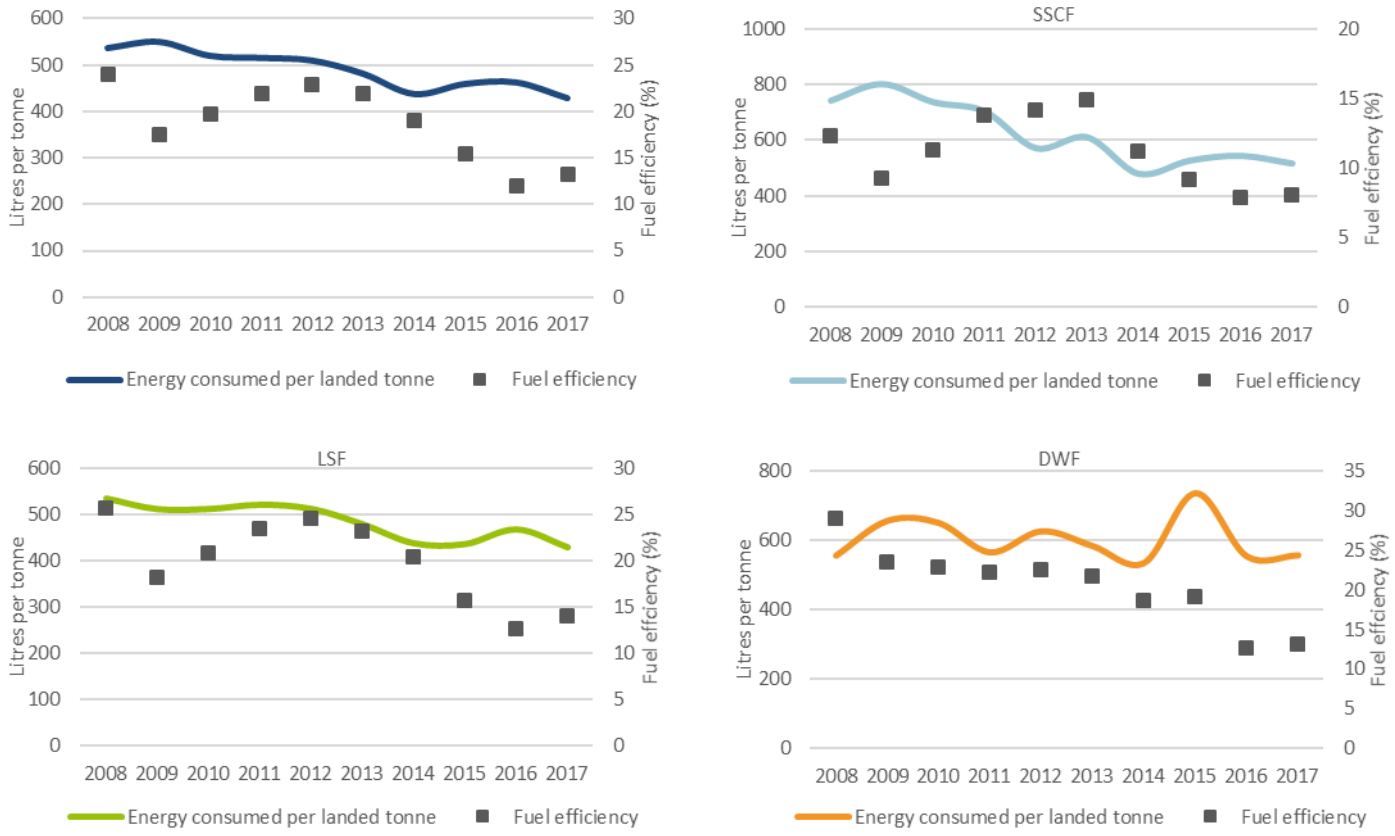


Figure 3.34 Trends on fuel efficiency (fuel costs to income from landings) and fuel consumed per landed tonne (fuel intensity) for the EU fleet and by main fishing activity

Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/ACS(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

3.4 EU Small-Scale Coastal Fleet

Introduction

Findings for the EU small-scale coastal fleet (SSCF) are provided throughout each chapter, including nowcast results for 2018 and 2019 (Table 3.3).

This section provides a summary of the main findings for the EU SSCF and in particular, by main fishing region. Due to incomplete time-series, Other Fishing Regions (OFR) as well as the Greek fleet are excluded from the analysis (there are no EU small-scale vessels operating in the NAFO area). The Greek small-scale coastal fleet is the largest in number of vessels (approximately 13 000) in the Mediterranean; this should be taken into account when considering the analysis provided below.

Main characteristics of Small-scale coastal vessels

- Under 12m using passive gears;
- Typical multi-gear and multi-species fleet. The most commonly used gears are trammel nets and set gillnets, followed by pots, set longline and hand lines;
- Area of operation closest to landing points, usually operating within 12 nm;
- Small family–owned businesses usually of one physical person;
- Utilize a variety of fishing gears even on the same fishing trip;
- Represents, by far, the most significant part of the EU fleet in terms of number of vessels.
- SSCF generally improves production price to a higher degree than the Large-scale Fleet (LSF), and the gap between prices at first sale can be very high. These gaps may be explained by both differences in quality linked to freshness and the size grade and marketing channels.

Key findings for 2017 and recent trends

Results presented below indicate that the SSCF has recovered from 2013, but not as fast as the large-scale fleet. The LSF has made great progress in recent years. Vessels are becoming larger and faster, are traveling farther from their homeports, using more sophisticated (and expensive) technologies and catching fish in shorter periods of time.

For the EU small-scale coastal fleet, most of the indicators show a decline in performance over the period 2010-2013, with improvements from 2014 onwards, and finally surpassing 2010 results in 2016. However, a decline in performance is evident from 2016 to 2017.

A clear downward trend in the economic performance of the European SSCF, especially in the Mediterranean, observed over the period 2010-2013 is mainly due to the poor economic performance of the Italian small-scale coastal fleet. The main factors contributing to the reduced profits in the Italian SSCF include:

- Reduced biomass of many stocks, which impacted on productivity;
- High fuel price even if lower than in 2012;
- The market price of seafood was affected by the economic crisis and the related decline in the purchasing power of consumers, which has further reduced landings income.

Fleet capacity and landings

The total value of landings by the LSF is approximately five times larger than that of the SSCF. However, comparison between the segments can be misleading as the LSF possesses eleven times the capacity, in total vessel tonnage (even if the LSF is less than half the size of the SSCF in number of vessels). Furthermore, the differences between the two segments is also driven by many other factors such as gear selectivity, operating costs, selling price, indebtedness, etc. A declining trend, with respect to GT, can be seen in both segments, yet less pronounced in the SSCF (Figure 3.35).

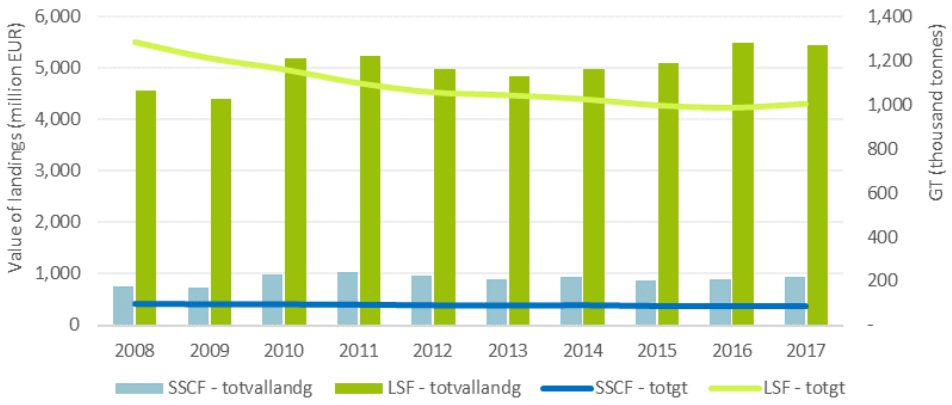


Figure 3.35 Trends on the landings in value and vessel tonnage for the SSCF and LSF
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/ACS(2019)). All monetary values have been adjusted for inflation; constant prices (2015).

The Mediterranean is by far the most significant region for small-scale coastal vessels. Overall, it generates the highest value of landings. Noting that Greece, with the biggest SSCF, is excluded from this analysis, the region in fact has greater importance (Figure 3.36).

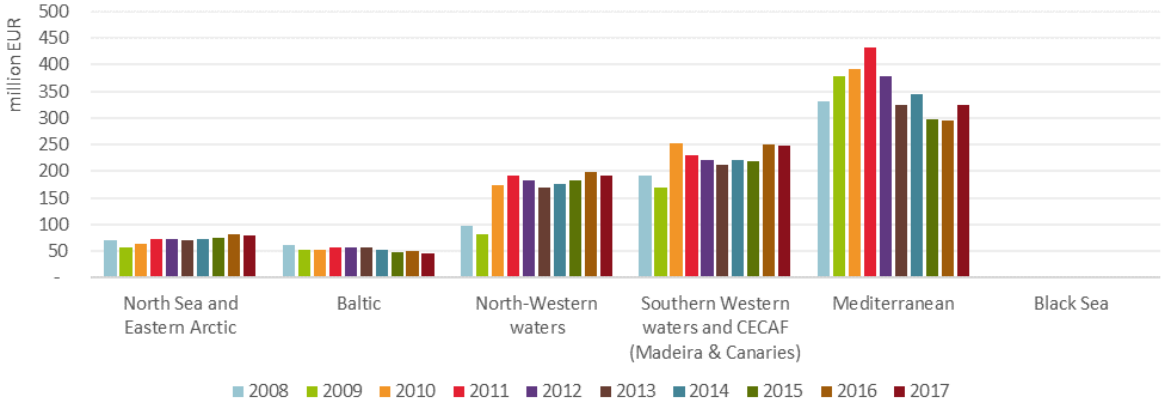


Figure 3.36 Trends on landings in value for the SSCF by main fishing region
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/ACS(2019)). All monetary values have been adjusted for inflation; constant prices (2015).

Economic performance

Figure 3.37 clearly shows the difference between the SSCF and LSF in terms of the average GVA generated by vessel. Furthermore, the average GVA per vessel for the LSF shows an increasing trend in particular from 2013 onwards, while somewhat stagnated, although increasing, for the SSCF.

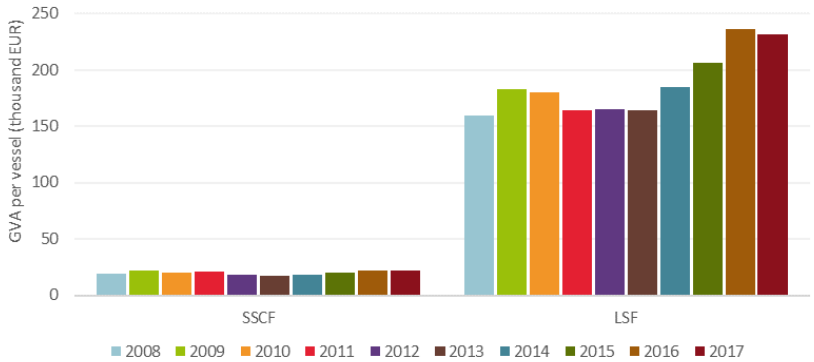


Figure 3.37 Trends on average GVA per vessel for the SSCF and LSF
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/ACS(2019)). All monetary values have been adjusted for inflation; constant prices (2015).

Looking deeper into the different fishing regions reveals that the average GVA per vessel for SSCF has generally decreased in the Baltic and Mediterranean regions while steadily increasing in the South

Western Waters region. The North Sea SSCF has also seen some in improvement especially over the last few years analysed while on the other hand, the Black Sea SSCF has deteriorated significantly compared to 2015 results. The North Western Waters SSCF, generating the highest average GVA, has oscillated around EUR 35 000 – EUR 40 000 per vessel since 2010. In comparison, trends for the LSF have generally increased in all fishing regions, albeit a slight drop in 2017 in the North Sea & Eastern Arctic region (Figure 3.38).

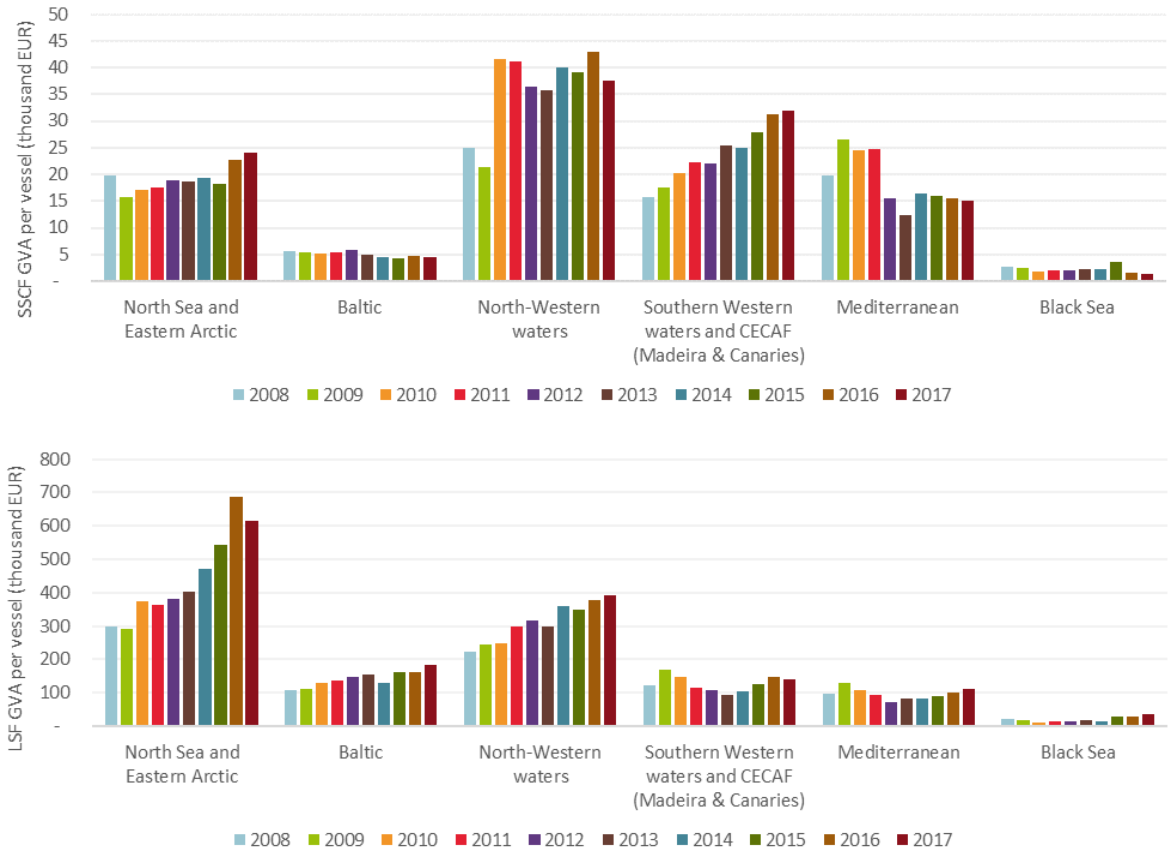


Figure 3.38 Trends on average GVA per vessel for the SSCF and LSF by fishing region
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/ACS(2019)). All monetary values have been adjusted for inflation; constant prices (2015).

Unlike the LSF, both the gross and net profit margin for the SSCF declined significantly in 2013, probably reflecting the economic crisis experienced by the wider economy over that period. After 2013, the SSCF not only recovers but even surpassed 2008-2009 results. On the other hand, the LSF followed a steady upward trend since year 2009, apparently hardly being impacted by the crisis. It is interesting to note that the SSCF obtained higher profit margins until 2012, where the LSF surpasses and retains a better performance until the end of the period analysed. In 2017, gross and net profit margins show a small decline for the SSCF and LSFs (Figure 3.39).

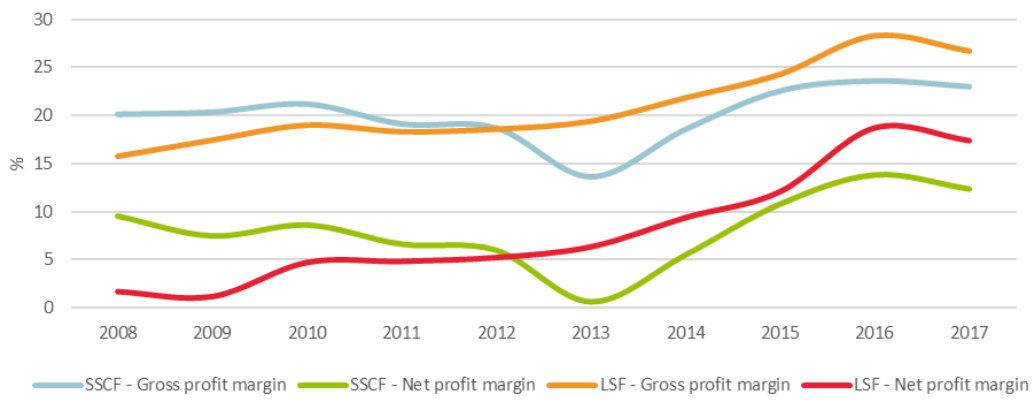


Figure 3.39 Trends on gross and net profit margin for the SSCF and LSF
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/ACS(2019)). All monetary values have been adjusted for inflation; constant prices (2015).

Figure 3.40 reveals that there is a large heterogeneity among regions as far as the gross profit margin is concerned. Moreover, it is important to emphasise that all fishing regions have generated positive profit margins over the period analysed - except from the Baltic Sea, which has fluctuated between losses and profits, hitting a record low in 2017, and the Black Sea SSCF, which suffered losses in 2013. The LSF has generally performed better in all fishing regions, in particular in the Mediterranean and Black Sea regions over the period 2015-2017.

Figure 3.40 Trends on gross profit margin for the SSCF and LSF by fishing region
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/ACS(2019)). All monetary values have been adjusted for inflation; constant prices (2015).

Gross profit generated by the SSCF and LSFs have followed different trends: while for the LSF, performance has improved over the period, apart from a drop in 2017, the SSCF saw profits declining in 2011, reaching a record low in 2013, to then improving steadily until 2016 (Figure 3.42).

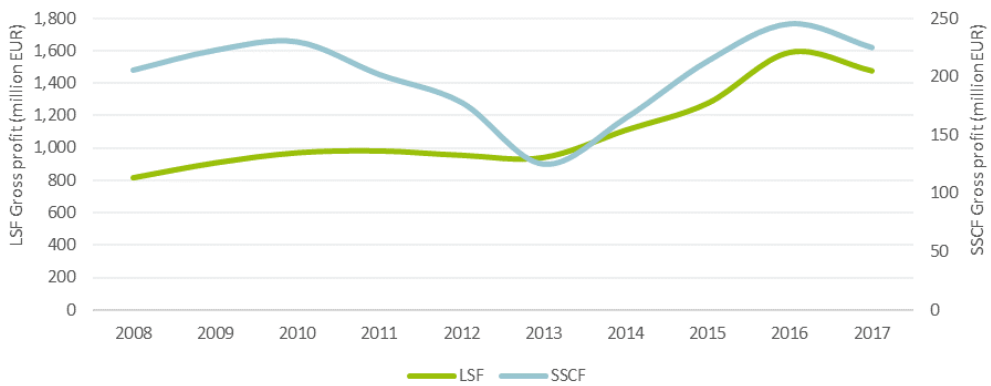


Figure 3.41 Trends on gross profit for the SSCF and LSF
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/ACS(2019)). All monetary values have been adjusted for inflation; constant prices (2015).

Figure 3.42 shows trends on the gross profit generated by the SSCF and LSFs operating in the different fishing regions. It would appear that small-scale fishers in the Mediterranean were hit the hardest by the

financial crisis although other regions felt it too, albeit to a lesser degree, e.g., the North and South western Waters. Significant improvements occur after 2013 for the SSCF especially in the Mediterranean, despite the fact that it has still not fully recovered. The LSF appears to have been less affected by the crisis, apart from vessels operating in the South Western Waters and to a lesser degree, in the North Western Waters region. Performance of the Mediterranean LSF fleet deteriorated in 2010, remaining poor until 2014, recovering in 2015 and finally surpassing 2009 results in 2017.

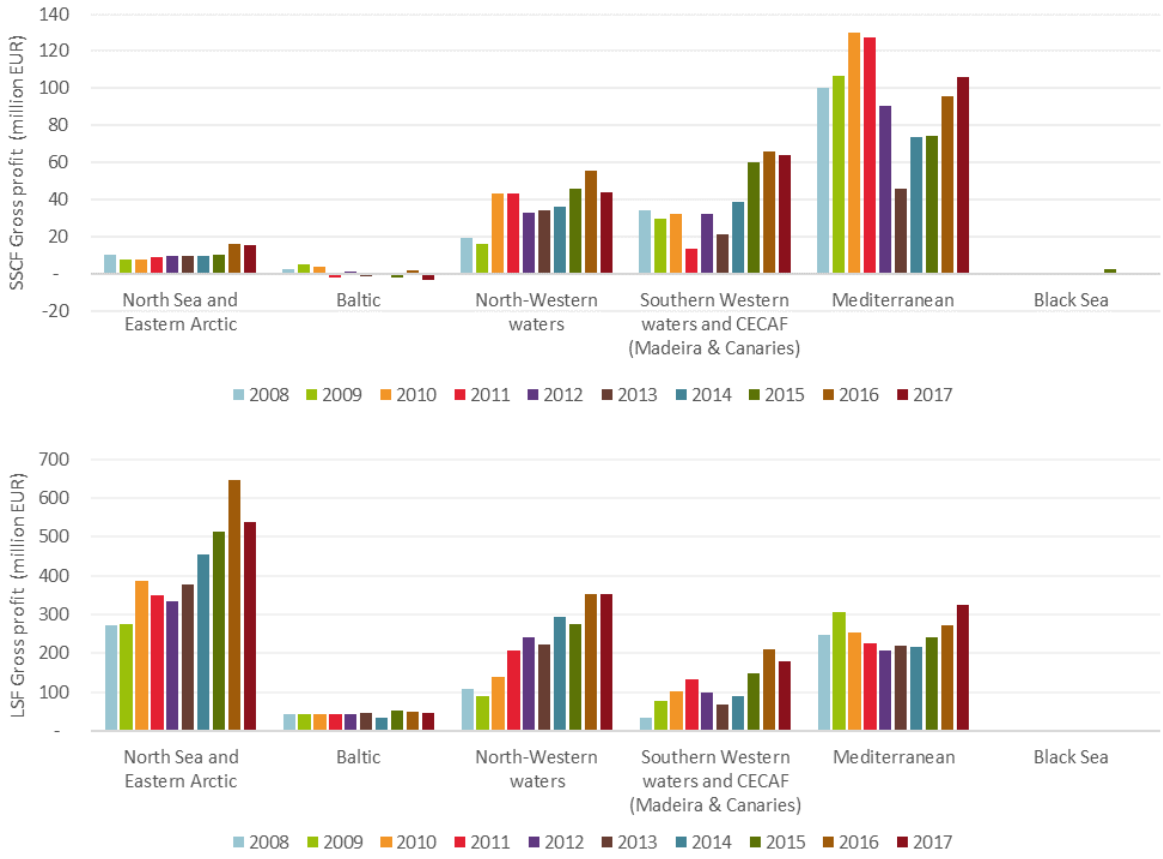


Figure 3.42 Trends on gross profit for the SSCF and LSF by fishing region
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/ACS(2019)). All monetary values have been adjusted for inflation; constant prices (2015).

Figure 3.43 shows the average gross profit per vessel for SSCF and LSF, highlighting the difference between the two (orange line). The greatest deviation between the SSCF and the LSF occurred in 2013; this was largely due to the poor value of landings observed for the SSCF, in particular the Italian SSCF. In general, the divergence between the two segments is increasing indicating that while the average gross profit per vessel for both sector is improving, recovery of the SSCF is slower.

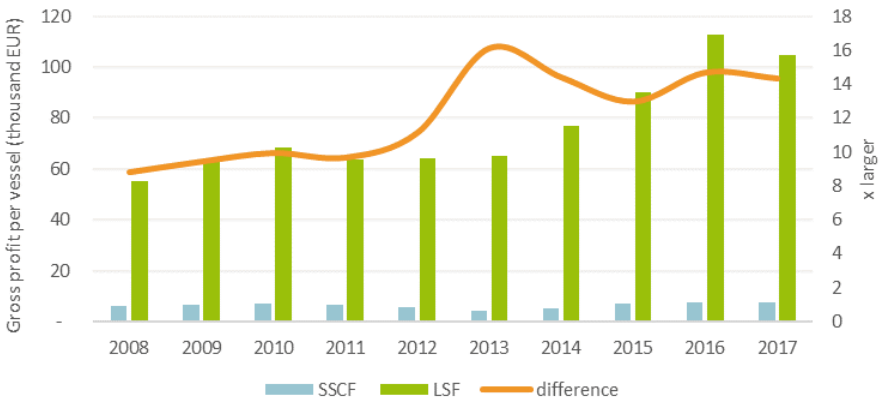


Figure 3.43 Trends on average gross profit per vessel for the SSCF and LSF by fishing region
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/ACS(2019)). All monetary values have been adjusted for inflation; constant prices (2015).

3.5 EU Distant-Water Fleet and Outermost Region Fleets

EU Distant-Water Fleet (DWF)

See Table 3.14 for main results on the EU distant-water fleet (DWF)

EU Outermost Region Fleet (OMR)

The EU Outermost Region (OMR) fleet refers to vessels based in the nine remote territories belonging to three EU Member States: six French territories - Guadeloupe, French Guiana, Martinique, Mayotte, La Reunion, and Saint-Martin; one Spanish territory - Canary Islands; and two Portuguese autonomous regions - Azores and Madeira.

Combined, the EU OMR fleet numbered 4 485 vessels in 2017, of which 3 034 were active. With 1 737 vessels, the French OMR fleet is the most numerous, followed by Portuguese fleet with 673 active vessels and then the Spanish fleet with 624 vessels.

Collectively, these vessels employed 8 200 fishers (or 3 396 in FTE) and landings in weight amounted to 41 382 tonnes valued at EUR 153.7 million (excluding Saint Martin).

On the whole the Spanish and Portuguese fleets were profitable in 2017. Due to missing data, it was not possible to assess the performance of the French OMR fleets.

A brief overview of the performance of each of the nine OMR fleets is provided below.

Also see Chapter 4.8 and national chapters for France, Portugal and Spain (sections 5.8, 5.18 and 5.21) for more details on the EU Outermost region fishing fleets.

Note: results presented below do not entirely match with the results presented in the regional OMR chapter as the definition applied in the latter refers do vessels under 24m LOA.

Results on the key parameters for the OMR fleets in this section include all fleet segments reported (through the geographical indicator) as predominately based in one of the EU OMRs.

Canary Island fleet (Spain)

The fleet based in the Spanish outermost region (Canary Islands, FAO 34.1.2) number 768 vessels, of which 144 were inactive in 2017 (almost 19% of the regional fleet). Additionally, 19 of these vessels (demersal trawlers and hook and line vessels targeting tuna and tuna-like species collectively grouped under the fleet segment ESP NAO HOK 1218 MA*), fish almost exclusively in COPACE waters under different agreements using mainly drifting longlines.

The majority (n=540, 89%) of the Canary active fleet are small-scale vessels and employ 74% of the fishers. Collectively the Canary fleet generated EUR 50.2 million in revenue, EUR 36 million in GVA and EUR 3.7 million in gross profits. Overall, the fleet was profitable with a net profit of EUR 2 million. Yet, two fleet segments suffered gross losses and four net losses.

GVA to revenue was quite high at 72% while gross profit and net profit margins were low at 7.4% and 4.3% respectively. Average GVA per FTE was estimated at EUR 27 960, ranging from EUR 9 248 for vessels using pots and traps (10-12m) to EUR 48 311 for purse seiners (between 12 and 18m) (Table 3.3).

Table 3-3 Key parameters and performance indicators for the Spanish OMR fleet

Fleet segment	Number of vessels	Total vessel tonnage	Total vessel power	Engaged crew	FTE national	Live weight of landings	Value of landings	Revenue	Gross Value Added	GVA to revenue	Gross profit	Gross profit margin	Net profit	Net profit margin	GVA per FTE (labour productivity)
	number	GT	kW	number	number	tonnes	thousand EUR	thousand EUR	thousand EUR	%	thousand EUR	%	thousand EUR	%	EUR
ESP NAO FPO1012 IC *	12	103	664	40	22	70.9	336	320	202.5	63.3	8.3	2.6	- 69.7	- 21.8	9,248
ESP NAO HOK1012 IC *	43	279	2,394	129	78	1,738.1	3,120	4,750	3,669.8	77.3	1,334.4	28.1	1,215.0	25.6	47,200
ESP NAO HOK1218 IC	27	544	2,329	144	119	1,947.7	3,825	4,963	3,849.4	77.6	1,866.1	37.6	1,807.5	36.4	32,293
ESP NAO HOK2440 IC *	22	2,299	6,303	260	245	3,557.7	7,514	10,558	5,345.6	50.6	- 531.5	- 5.0	- 1,158.9	- 11.0	21,780
ESP NAO PMP0010 IC	465	954	9,750	1,124	726	3,396.1	9,581	24,325	19,432.7	79.9	285.4	1.2	- 84.3	- 0.3	26,776
ESP NAO PMP1012 IC *	20	394	1,496	91	37	278.9	538	1,254	535.7	42.7	- 136.0	- 10.9	- 296.9	- 23.7	14,544
ESP NAO PS 1218 IC *	16	216	1,392	91	62	2,178.1	2,503	4,020	3,009.2	74.9	911.6	22.7	761.4	18.9	48,311
Canary active fleet	**605**	**4,788**	**24,328**	**1,879**	**1,289**	**13,168**	**27,418**	**50,189**	**36,045**	**71.8%**	**3,738**	**7.4%**	**2,174**	**4.3%**	**27,960**
ESP NAO HOK1218 MA *	19	432	1,756	108	73	1,309.01	4,678	3,088	1,723	55.8	259	8.4	-		23,637
ESP NAO INA0010 IC	134	190	1,825												
ESP NAO INA1012 IC *	10	158	814												
Inactive fleet	144	348	2,639												
ESP OMR fleet	**768**	**5,568**	**28,723**	**1,987**	**1,362**	**14,476.58**	**32,096**	**53,277**	**37,767**	**71%**	**3,997**	**7.5%**	**2,174**	**4.1%**	**27,729**

Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/ACS(2019)). All monetary values have been adjusted for inflation; constant prices (2015).

Madeira (Portugal)

The Madeiran fleet consisted of 431 vessels in 2017, having a combined gross tonnage (GT) of 4 thousand and an engine power of 16.5 thousand kW, of which 343 were inactive (80% of the regional fleet). The majority of vessels are under 12 m in LOA and are active mainly in Subarea 2 ZEE-Madeira. Some of the larger vessels also operate seasonally in Azorean waters and the Canary Islands, under reciprocity agreements. The majority of the active vessels operated with long-lines and the most important species are tunas and black scabbardfish.

Collectively the fleet generated EUR 16 million in revenue, EUR 12.3 million in GVA and EUR 4 million in gross profits. Overall, the fleet was profitable with a net profit of EUR 3.3 million. All fleet segments generated gross profits while one fleet segment suffered net losses.

GVA to revenue was high at 76.6%. The fleet also obtained healthy gross profit and net profit margins at 26% and 21% respectively, performing comparatively much better than its Spanish counterpart. Average GVA per FTE was estimated at EUR 26 272, ranging from EUR 8 440 to EUR 50 095 for hook and line vessels between 24 and 40m (Table 3.4).

Table 3-4 Key parameters and performance indicators for the Portuguese OMR fleet in Madeira

Fleet segment	Number of vessels	Total vessel tonnage	Total vessel power	Engaged crew	FTE national	Live weight of landings	Value of landings	Revenue	Gross Value Added	GVA to revenue	Gross profit	Gross profit margin	Net profit	Net profit margin	GVA per FTE (labour productivity)
	number	GT	kW	number	number	tonnes	thousand EUR	thousand EUR	thousand EUR	%	thousand EUR	%	thousand EUR	%	EUR
PRT NAO HOK0010 P2 *	53	183	2041.5	177	110	432.3	1,761	1,761	1,221	69.4	358.1	20.3	243.2	13.8	11,104
PRT NAO HOK1218 P2	18	413	2786.2	198	192	2,090.1	6,920	6,925	5,394	77.9	1,438.9	20.8	1,210.2	17.5	28,094
PRT NAO HOK1824 P2	3	189.2	784.7	41	41	562.4	1,615	1,615	1,265	78.3	351.0	21.7	227.8	14.1	30,864
PRT NAO HOK2440 P2	6	881.8	2807.5	88	78	1,232.3	3,499	4,964	3,907	78.7	1,923.6	38.7	1,594.5	32.1	50,095
PRT NAO MGP0010 P2	5	9.9	173.6	17	9	71.2	247	247	168	68.3	40.2	16.3	32.6	13.2	18,715
PRT NAO MGP1824 P2 *	3	135.8	777.3	37	37	470.1	504	504	312	61.9	35.4	7.0	- 1.7	- 0.3	8,440
Active fleet	**88**	**1812.5**	**9370.8**	**558**	**467**	**4,859**	**14,547**	**16,017**	**12,269**	**76.6%**	**4,147**	**25.9%**	**3,307**	**20.6%**	**26,272**
PRT NAO INA0010 P2	325	252	1375												
PRT NAO INA1012 P2	2	20	147												
PRT NAO INA1218 P2	4	210	655												
PRT NAO INA1824 P2	6	288	1354												
PRT NAO INA2440 P2	6	1400	3638												
Inactive fleet	**343**	**499**	**2009**												
PRT OMR fleet Madeira	**431**	**3,984**	**16,539**												

Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/ACS(2019)). All monetary values have been adjusted for inflation; constant prices (2015).

Azores (Portugal)

In 2017, the fleet of Azores numbered 758 vessels, with a combined gross tonnage of 8.6 thousand GT and an engine power of 51.7 thousand kW, of which 173 vessels were inactive (The majority of the fleet (84%) are vessels under 12 m LOA and operate in the Azorean EEZ sub-area. Most of the vessels use licensed for longlines (HOK) and purse seines (PS). The most important species include tunas species, blue jack mackerel, blue shark and blackspot seabream.

Collectively the fleet generated EUR 38.5 million in revenue, EUR 27.6 million in GVA and EUR 11.6 million in gross profits. Overall, the fleet was profitable with a net profit of EUR 6.6 million. All fleet segments were profitable.

GVA to revenue was high at 72%. The fleet also obtained healthy gross profit and net profit margins at 30% and 17% respectively, performing comparatively similar to the Madeiran fleet and much better than its Spanish counterpart.

Average GVA per FTE was estimated at EUR 25 253, ranging from EUR 10 658 to EUR 35 905 for hook and line vessels between 24 and 40m. Average wage per FTE was estimated at EUR 14 646, ranging from EUR 3 043 to EUR 23 515 (Table 3.5).

Overall, performance improved compared to 2016: landings in weight increased 31% and 21% in value while GVA increased 30%, gross profit 31% and net profit 78%. GVA per FTE and average wage per FTE also improved from EUR 18 423 and EUR 10 773 in 2016, respectively.

Table 3-5 Key parameters and performance indicators for the Portuguese OMR fleet in the Azores

Fleet segment	Number of vessels	Total vessel tonnage	Total vessel power	Engaged crew	FTE national	Live weight of landings	Value of landings	Revenue	Gross Value Added	GVA to revenue	Gross profit	Gross profit margin	Net profit	Net profit margin	GVA per FTE (labour productivity)	Average wage per FTE
	number	GT	kW	number	number	tonnes	thousand EUR	thousand EUR	thousand EUR	%	thousand EUR	%	thousand EUR	%	EUR	EUR
PRT NAO DFN0010 P3	39	61	1293.8	89	31	294.4	939	940.13	733	78.0	350.0	37.2	263.1	28.0	23,657	12,368
PRT NAO HOK0010 P3	360	979	15215.4	805	226	1,303.0	9,190	9,193	7,150	77.8	3,650.0	39.7	2,328.1	25.3	31,636	15,486
PRT NAO HOK1012 P3	72	747	6317.2	403	225	1,107.2	6,849	6,849	4,913	71.7	2,159.7	31.5	1,376.7	20.1	21,834	12,235
PRT NAO HOK1218 P3	44	918	5455.4	386	236	1,364.4	5,631	5,633	3,790	67.3	1,265.4	22.5	729.3	12.9	16,060	10,698
PRT NAO HOK2440 P3 *	28	3,919	10948.8	455	267	5,306.7	13,918	13,971	9,587	68.6	3,308.1	23.7	1,303.4	9.3	35,905	23,515
PRT NAO PGP0010 P3 *	10	50	655.6	38	16	63.3	406	406	270	66.5	153.3	37.8	77.9	19.2	16,861	7,278
PRT NAO PS 0010 P3	20	39	777.2	53	19	265.1	449	450	352	78.2	145.0	32.3	92.4	20.6	18,501	10,868
PRT NAO PS 1012 P3 *	12	123	935.3	116	71	485.1	1,059	1,059	757	71.4	540.7	51.1	432.9	40.9	10,658	3,043
Active fleet	**585**	**6,835**	**41598.7**	**2345**	**1091**	**10,189**	**38,441**	**38,500**	**27,551**	**71.6%**	**11,572**	**30.1%**	**6,604**	**17.2%**	**25,253**	**14,645.54**
PRT NAO INA2440 P3	5	678	1673													
PRT NAO INA0010 P3	115	216	3501													
PRT NAO INA1012 P3	16	130	1458													
PRT NAO INA1218 P3	33	572	2788													
PRT NAO INA1824 P3	4	166	640													
Inactive fleet	**173**	**702**	**4246**													
PRT OMR fleet Azores	**758**	**8,596**	**51,659**													

Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/ACS(2019)). All monetary values have been adjusted for inflation; constant prices (2015).

French Guiana (GF)

Incomplete economic data available

Table 3-6 Key parameters and performance indicators for the French OMR fleet in Guiana

Fleet segment	Number of vessels	Total vessel tonnage	Total vessel power	Engaged crew	FTE national	Live weight of landings	Value of landings	Revenue	Gross Value Added	GVA to revenue	Gross profit	Gross profit margin	Net profit	Net profit margin	GVA per FTE (labour productivity)	Average wage per FTE
	number	GT	kW	number	number	tonnes	thousand EUR	thousand EUR	thousand EUR	%	thousand EUR	%	thousand EUR	%	EUR	EUR
FRA OFR DFN0010 GF	47	135	2685	116	19.52	689.5	1,609.71	1,981.73	1,076.34	54.3	252.9	12.8	152.9	7.7	55,140	42,187
FRA OFR DFN1012 GF	61	453	5276	203.71	44.89	1,496.2	3,867	5,305	3,415	64.4	1,084.0	20.4	869.6	16.4	76,080	51,932
FRA OFR DTS1824 GF	14	1,610	4513	70	26.51	355.0	1,266	-	-	-	-	-	-	-	-	-
FRA OFR HOK0010 GF	1	1	66	1	0.13	20.7	48	-	-	-	-	-	-	-	-	-
FRA OFR PGP0010 GF	5	14	213	10	0.89	78.2	199	167	90	54.1	22.4	13.4	12.1	7.2	101,178	76,033
Active fleet	**128**	**2,213**	**12753**	**400.71**	**91.94**	**2,640**	**6,989**	**7,453**	**4,582**	**61.5%**	**1,359**	**18.2%**	**1,035**	**13.9%**	**70,163**	**49,347**
FRA OFR INA0010 GF	10	29.07	767													
FRA OFR INA1012 GF	10	64.41	792													
FRA OFR INA1824 GF	5	494	1577													
Inactive fleet	**25**	**494**	**1577**													

Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/ACS(2019)). All monetary values have been adjusted for inflation; constant prices (2015).

Guadeloupe (GP)

Incomplete economic data available

Table 3-7 Key parameters and performance indicators for the French OMR fleet in Guadeloupe

Fleet segment	Number of vessels	Total vessel tonnage	Total vessel power	Engaged crew	FTE national	Live weight of landings	Value of landings	Revenue	Gross Value Added	GVA to revenue	Gross profit	Gross profit margin	Net profit	Net profit margin	GVA per FTE (labour productivity)	Average wage per FTE
	number	GT	kW	number	number	tonnes	thousand EUR	thousand EUR	thousand EUR	%	thousand EUR	%	thousand EUR	%	EUR	EUR
FRA OFR DFN0010 GP	92	271	15214	184	27.16	370.4	3,626.10	3,602.79	2,375.83	65.9	526.5	14.6	133.7	3.7	87,475	68,091
FRA OFR DFN1012 GP	4	27	1005	8	1.34	12.3	76.73	-	-	-	-	-	-	-	-	-
FRA OFR FPO0010 GP	96	235	13816	168.92	7.41	320.9	3,078.53	2,959.27	1,837.65	62.1	282.1	9.5	- 87.1	- 2.9	247,996	209,931
FRA OFR FPO1012 GP	3	24	956	5	3.65	29.6	152.29	-	-	-	-	-	-	-	-	-
FRA OFR HOK0010 GP	122	373	21288	208.48	27.59	614.0	5,045.09	5,219.13	3,793.51	72.7	1,298.1	24.9	621.9	11.9	137,496	90,446
FRA OFR HOK1012 GP	10	77	3156	18	4.44	101.5	636.29	-	-	-	-	-	-	-	-	-
FRA OFR PGP0010 GP	252	711	41970	441.07	40.11	1,323.7	11,806.10	11,888.59	7,571.55	63.7	1,868.5	15.7	591.1	5.0	188,770	142,185
FRA OFR PGO0010 GP	8	21	1118	10	0.11	15.3	212.38	-	-	-	-	-	-	-	-	-
FRA OFR PGP1012 GP	6	58	1705	12	8.71	18.2	176.71	1,142.64	529.16	46.3	10.7	0.9	- 227.3	- 19.9	60,753	59,527
FRA OFR PS 0010 GP	18	49	2524	78.5	9.17	120.7	882.39	870.20	683.43	78.5	349.4	40.2	271.9	31.3	74,529	36,423
Active fleet	**611**	**1,846**	**102,752**	**1,134**	**130**	**2,926**	**25,693**	**25,683**	**16,791**	**65.4%**	**4,335**	**16.9%**	**1,304**	**5.1%**	**139,751**	**103,669.52**
FRA OFR INA0010 GP	352	942.07	51561													
FRA OFR INA1012 GP	22	189.88	6085													
Inactive fleet	**374**	**1,132**	**57,646**													

Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/ACS(2019)). All monetary values have been adjusted for inflation; constant prices (2015).

Reunion (RE)

Incomplete economic data available

Table 3-8 Key parameters and performance indicators for the French OMR fleet in Reunion

Fleet segment	Number of vessels	Total vessel tonnage	Total vessel power	Engaged crew	FTE national	Live weight of landings	Value of landings	Revenue	Gross Value Added	GVA to revenue	Gross profit	Gross profit margin	Net profit	Net profit margin	GVA per FTE (labour productivity)	Average wage per FTE
	number	GT	kW	number	number	tonnes	thousand EUR	thousand EUR	thousand EUR	%	thousand EUR	%	thousand EUR	%	EUR	EUR
FRA OFR DFN0010 RE	1	0	11	1	0.15	1.1	12.31	-	-	-	-	-	-	-	-	-
FRA OFR HOK0010 RE	160	399	13410	221.3	32.45	1,064.4	8,822.96	-	-	-	-	-	-	-	-	-
FRA OFR HOK1012 RE	8	82	2671	16.74	5.21	130.3	1,020.56	-	-	-	-	-	-	-	-	-
FRA OFR HOK1218 RE	15	431	3239	73.4	56.12	1,053.8	8,309.96	4,480	403	9.0	- 1,222.8	- 27.3	- 1,615.9	- 36.1	7,173	28,962
FRA OFR HOK1824 RE *	4	631	1679	25	17.16	2,074.2	3,409.14	685	- 12	- 1.7	- 274.0	- 40.0	- 509.6	- 74.4	- 692	15,275
FRA OFR PGO0010 RE	7	4	108	9.57	0.11	38.3	114.78									
FRA OFR PGP0010 RE	8	14	461	11	0.94	36.7	389.12									
Active fleet	**203**	**1,561**	**21,579**	**358**	**112**	**4,399**	**22,079**	**5,165**	**390.7**	**7.6%**	**- 1,497**	**-29.0%**	**- 2,126**	**-41.2%**	**7,851**	**-**
FRA OFR INA0010 RE	31	45.08	1449													
FRA OFR INA1824 RE	3	495	1323													
Inactive fleet	**34**	**540**	**2,772**													

Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/ACS(2019)). All monetary values have been adjusted for inflation; constant prices (2015).

Mayotte (YT)

No economic data available for Mayotte.

Table 3-9 Key parameters and performance indicators for the French OMR fleet in Mayotte

Fleet segment	Number of vessels	Total vessel tonnage	Total vessel power	Engaged crew	FTE national	Live weight of landings	Value of landings	Revenue	Gross Value Added	GVA to revenue	Gross profit	Gross profit margin	Net profit	Net profit margin	GVA per FTE (labour productivity)	Average wage per FTE
	number	GT	kW	number	number	tonnes	thousand EUR	thousand EUR	thousand EUR	%	thousand EUR	%	thousand EUR	%	EUR	EUR
FRA OFR DFN0010 YT	7	14	227	24	3.69	95.1	375.45	-	-	-	-	-	-	-	-	-
FRA OFR HOK0010 YT	113	227	4568	259.56	35.03	1,036.7	5,117.11	-	-	-	-	-	-	-	-	-
FRA OFR PGP0010 YT	2	2	81	4	0.35	6.1	32.86	-	-	-	-	-	-	-	-	-
FRA OFR INA0010 YT	21	44	914	0	0	-	-	-	-	-	-	-	-	-	-	-
	143	287	5790	287.56	39.07	1,137.8	5,525.42	-	-	-	-	-	-	-	-	-

Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/ACS(2019)). All monetary values have been adjusted for inflation; constant prices (2015).

Martinique (MQ)

No economic data available for Martinique (MQ).

Table 3-10 Key parameters and performance indicators for the French OMR fleet in Martinique

Fleet segment	Number of vessels	Total vessel tonnage	Total vessel power	Engaged crew	FTE national	Live weight of landings	Value of landings	Revenue	Gross Value Added	GVA to revenue	Gross profit	Gross profit margin	Net profit	Net profit margin	GVA per FTE (labour productivity)	Average wage per FTE
	number	GT	kW	number	number	tonnes	thousand EUR	thousand EUR	thousand EUR	%	thousand EUR	%	thousand EUR	%	EUR	EUR
FRA OFR DFN0010 MQ	50	85	4478	86.2	12.8	29.3	442.82	-	-	-	-	-	-	-	-	-
FRA OFR FPO0010 MQ	174	251	12982	282.78	11.3	59.7	768.04	-	-	-	-	-	-	-	-	-
FRA OFR FPO1218 MQ	2	103	537	11.5	4.55	16.1	43.43	-	-	-	-	-	-	-	-	-
FRA OFR FPO1824 MQ	1	42	368	5	3.64	5.6	55.09	-	-	-	-	-	-	-	-	-
FRA OFR HOK0010 MQ	133	294	19019	213	28.6	190.5	2,003.97	-	-	-	-	-	-	-	-	-
FRA OFR HOK1012 MQ	8	89	1593	20	3.79	83.7	777.10	-	-	-	-	-	-	-	-	-
FRA OFR HOK1218 MQ	1	13	125	1	0.75	1.0	8.22	-	-	-	-	-	-	-	-	-
FRA OFR PGP0010 MQ	235	407	22566	390.17	34.29	334.9	3,983.23	-	-	-	-	-	-	-	-	-
FRA OFR PGO0010 MQ	54	71	3544	98.99	1.08	29.1	239.02	-	-	-	-	-	-	-	-	-
FRA OFR PS 0010 MQ	4	5	257	5.5	0.68	4.9	36.46	-	-	-	-	-	-	-	-	-
FRA OFR INA0010 MQ	337	580	32778			-	-	-	-	-	-	-	-	-	-	-
FRA OFR INA1012 MQ	9	67	1905			-	-	-	-	-	-	-	-	-	-	-
FRA OFR INA1824 MQ	1	117	373			-	-	-	-	-	-	-	-	-	-	-
	1,009	2,123	100525	1114.14	101.48	754.9	8,357.38	-	-	-	-	-	-	-	-	-

Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/ACS(2019)). All monetary values have been adjusted for inflation; constant prices (2015).

Saint Martin (MF)

No landings and economic data available for Saint Martin (MF)

Table 3-11 Key parameters and performance indicators for the French OMR fleet in Saint Martin

Fleet segment	Number of vessels	Total vessel tonnage	Total vessel power	Engaged crew	FTE national	Live weight of landings	Value of landings	Revenue	Gross Value Added	GVA to revenue	Gross profit	Gross profit margin	Net profit	Net profit margin	GVA per FTE (labour productivity)	Average wage per FTE
	number	GT	kW	number	number	tonnes	thousand EUR	thousand EUR	thousand EUR	%	thousand EUR	%	thousand EUR	%	EUR	EUR
FRA OFR FPO0010 MF	2	7	272	2.6	0.11	-	-	-	-	-	-	-	-	-	-	-
FRA OFR HOK0010 MF	2	10	313	4	0.54	-	-	-	-	-	-	-	-	-	-	-
FRA OFR PGP0010 MF	6	25	1209	8.5	0.75	-	-	-	-	-	-	-	-	-	-	-
FRA OFR PS 0010 MF	1	3	88	1	0.12	-	-	-	-	-	-	-	-	-	-	-
FRA OFR INA0010 MF	8	38	1565	0	0	-	-	-	-	-	-	-	-	-	-	-
FRA OFR INA1012 MF	1	11	239	0	0	-	-	-	-	-	-	-	-	-	-	-
	20	95	3686	16.1	1.52	-	-	-	-	-	-	-	-	-	-	-

Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/ACS(2019)). All monetary values have been adjusted for inflation; constant prices (2015).

Table 3-12 Main results for the EU SSCF (excl. Greece) for 2008-2017 and nowcasts for 2018-2019

		2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	*2018*	*2019*	%Δ 2017-2016	%Δ 2017-2012	%Δ 2017-2010	%Δ 2017-2008
Number of vessels	thousand	36.0	35.9	36.4	32.9	34.8	34.7	34.3	34.1	36.4	36.8	*38*	*36*	1%	6%	1%	2%
Total vessel tonnage	thousand GT	97.2	95.7	95.3	93.8	96.5	95.5	96.9	94.0	96.2	96.5		-	0%	0%	1%	-1%
Total vessel power	thousand kW	1,430	1,444	1,459	1,447	1,535	1,538	1,522	1,508	1,522	1,526		-	0%	-1%	5%	7%
Engaged crew	number	63,683	61,679	63,146	59,033	59,475	60,281	57,579	56,567	58,731	59,057	*57,766*	*57,078*	1%	-1%	-6%	-7%
FTE national	number	31,345	31,204	32,342	30,781	29,126	31,607	28,763	29,213	28,847	26,526	*25,795*	*26,034*	-8%	-9%	-18%	-15%
Days at sea	thousand	3,184	3,249	3,231	3,063	3,032	2,958	2,910	2,888	2,877	2,702			-6%	-11%	-16%	-15%
Fishing days	thousand	3,140	3,253	3,261	3,084	3,045	3,017	2,992	2,920	3,958	2,723			-31%	-11%	-17%	-13%
Energy consumption	million litre	175.3	194.0	188.4	192.2	166.9	186.0	143.1	152.1	150.1	137.9	*135*	*137*	-8%	-17%	-27%	-21%
Live weight of landings	thousand tonnes	195.0	196.8	260.2	272.7	290.2	308.0	302.3	286.9	273.0	271.5	*260*	*259*	-1%	-6%	4%	39%
Value of landings	million EUR	756.2	742.3	988.1	1,037.5	961.3	889.2	937.1	872.7	893.3	954.4	*936*	*946*	7%	-1%	-3%	26%
Gross value of landings	million EUR	1,012.1	1,073.7	1,050.7	1,029.4	910.4	898.1	885.9	921.3	1,016.8	981.1	*965*	*994*	-4%	8%	-7%	-3%
Other income	million EUR	22.7	26.3	37.0	25.8	25.5	29.0	31.4	19.4	24.6	44.2	*43*	*43*	80%	73%	19%	94%
Operating subsidies	million EUR	23.3	18.7	12.1	13.3	17.0	13.0	10.4	10.6	4.0	14.0			247%	-17%	16%	-40%
Income from leasing out quota	million EUR	0.3	0.2	0.1	1.7	0.6	1.4	1.2	2.4	1.2	5.2			341%	697%	6422%	1648%
Personnel costs	million EUR	284.3	293.6	275.7	287.5	250.4	256.3	264.7	264.6	304.7	294.6	*294*	*303*	-3%	18%	7%	4%
Value of unpaid labour	million EUR	150.7	205.7	183.8	153.6	127.4	147.8	144.1	138.6	150.3	155.6	*154*	*165*	4%	22%	-15%	3%
Energy costs	million EUR	124.4	99.8	119.4	142.8	131.0	134.6	100.3	85.2	81.1	80.2	*87*	*89*	-1%	-39%	-33%	-36%
Repair & maintenance costs	million EUR	68.4	71.2	69.7	63.5	61.8	61.0	57.3	58.1	64.6	61.8	*60*	*61*	-4%	0%	-11%	-10%
Other variable costs	million EUR	102.2	123.3	130.5	127.4	117.4	125.5	105.0	110.4	116.0	114.7	*111*	*115*	-1%	-2%	-12%	12%
Other non-variable costs	million EUR	90.1	80.0	83.3	85.7	73.1	72.4	73.6	71.8	79.4	82.4	*80*	*81*	4%	13%	-1%	-9%
Consumption of fixed capital	million EUR	104.6	102.4	110.8	112.7	108.7	101.4	100.9	98.5	95.2	101.0	*97*	*97*	6%	-7%	-9%	-3%
Lease/rental payments for quota	million EUR	0.9	0.9	2.1	1.7	2.3	1.9	1.3	1.7	1.7	1.9			8%	-19%	-10%	112%
Opportunity cost of capital	million EUR	4.1	19.2	18.3	14.5	12.6	15.3	15.4	13.2	10.5	1.8	*0.6*	*0.9*	-82%	-85%	-90%	-55%
Value of physical capital	million EUR	580.5	564.3	765.3	716.5	717.3	685.4	665.2	679.3	696.5	673.3	*653*	*651*	-3%	-6%	-12%	16%
Value of quota and other fishing rights	million EUR	113.8	153.7	134.3	147.9	128.6	149.7	161.4	157.3	152.8	193.5			27%	50%	44%	70%
Investments	million EUR	41.8	53.9	73.1	81.0	75.5	92.3	63.1	57.4	57.6	33.5			-42%	-56%	-54%	-20%
Gross Value Added	million EUR	649.7	725.1	686.3	636.7	554.8	533.6	581.1	615.4	700.3	686.1	*670*	*692*	-2%	24%	0%	6%
GVA to revenue	%	62.8	66.0	63.1	60.3	59.3	57.6	63.4	65.4	67.2	66.9	*66.5*	*66.7*	0%	13%	6%	7%
Net Value Added	million EUR	545.1	623.5	575.5	525.0	446.6	432.2	480.2	516.9	605.0	585.1	*573*	*595*	-3%	31%	2%	7%
Gross profit	million EUR	205.6	222.5	229.7	201.7	174.5	125.7	169.5	212.2	245.6	235.8	*222*	*224*	-4%	35%	3%	15%
Gross profit margin	%	20.1	20.3	21.2	19.1	18.7	13.6	18.6	22.6	23.6	23.0	*22.1*	*21.6*	-2%	23%	9%	14%
Net profit	million EUR	96.9	73.8	90.8	67.7	53.6	6.1	49.5	99.4	133.1	122.5	*112*	*116*	-8%	129%	35%	26%
Net profit margin	%	9.5	7.5	8.6	6.6	6.0	0.7	5.5	10.8	13.8	12.3	*11.5*	*11.5*	-11%	106%	43%	29%
Average wage per FTE	thousand EUR	15.3	16.5	14.7	14.6	13.2	13.1	14.5	14.1	15.8	17.1	*17.5*	*18.1*	8%	29%	16%	12%
GVA per FTE (labour productivity)	thousand EUR	21.19	23.88	21.61	21.14	19.44	17.12	20.49	21.46	24.32	26.05	*26.2*	*26.7*	7%	34%	21%	23%
Return on fixed tangible assets	%	13.8	13.7	14.8	11.8	9.4	3.1	9.8	16.9	21.5	18.5	*17.3*	*17.9*	-14%	97%	25%	34%
Fuel efficiency	%	12.3	9.3	11.3	13.8	14.3	15.0	11.3	9.2	8.0	8.2	*9.0*	*8.9*	3%	-43%	-28%	-33%
Energy consumed per landed tonne	litre per tonne	744.3	803.7	738.3	705.4	579.7	618.3	486.7	534.6	552.1	524.0	*534*	*545*	-5%	-10%	-29%	-30%

Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/ACS(2019)); All monetary values adjusted for inflation; constant prices (2015).

Table 3-13 Main results for the EU LSF (excl. Greece) for 2008-2017 and nowcasts for 2018-2019

		2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	*2018*	*2019*	%Δ 2017-2016	%Δ 2017-2012	%Δ 2017-2010	%Δ 2017-2008
Number of vessels	thousand	15.1	14.7	14.3	15.6	16.1	15.6	15.6	15.3	15.1	15.1	*15*	*14*	0%	-6%	6%	0%
Total vessel tonnage	thousand GT	1,282.9	1,210.4	1,159.6	1,097.5	1,084.1	1,070.0	1,052.7	1,025.0	1,012.6	1,030.0		-	2%	-5%	-11%	-20%
Total vessel power	thousand kW	3,847	3,656	3,515	3,374	3,401	3,336	3,307	3,261	3,223	3,242		-	1%	-5%	-8%	-16%
Engaged crew	number	69,220	68,753	65,915	66,089	67,960	64,396	65,461	63,947	62,993	64,232	*62,432*	*60,477*	2%	-5%	-3%	-7%
FTE national	number	61,265	60,335	55,350	56,053	56,902	52,301	53,648	54,474	55,742	53,591	*50,857*	*51,935*	-4%	-6%	-3%	-13%
Days at sea	thousand	2,157	2,093	2,046	2,140	2,197	2,119	2,105	2,049	2,077	2,046			-1%	-7%	0%	-5%
Fishing days	thousand	1,994	1,984	1,939	2,028	2,051	1,965	1,961	1,902	1,942	1,915			-1%	-7%	-1%	-4%
Energy consumption	million litre	2,037.2	2,064.3	1,953.5	1,812.0	1,728.4	1,701.7	1,669.8	1,686.4	1,736.2	1,738.7	*1,681*	*1,690*	0%	1%	-11%	-15%
Live weight of landings	thousand tonnes	3,465.8	3,569.5	3,954.3	3,615.3	3,522.2	3,725.0	3,993.4	4,032.8	3,902.3	4,277.4	*4,066*	*3,734*	10%	21%	8%	23%
Value of landings	million EUR	4,554.7	4,397.0	5,183.1	5,220.4	5,013.5	4,882.5	5,020.4	5,138.6	5,533.5	5,492.8	*5,130*	*5,266*	-1%	10%	6%	21%
Gross value of landings	million EUR	5,083.9	5,127.5	5,021.8	5,274.9	5,031.1	4,803.6	5,013.6	5,153.2	5,537.5	5,441.5	*5,102*	*5,376*	-2%	8%	8%	7%
Other income	million EUR	103.4	86.4	89.8	91.3	98.7	107.5	114.5	103.2	93.1	135.6	*132*	*134*	46%	37%	51%	31%
Operating subsidies	million EUR	140.8	117.7	67.2	55.7	50.2	39.9	52.7	42.4	35.8	35.8			0%	-29%	-47%	-75%
Income from leasing out quota	million EUR	2.5	7.4	8.3	10.3	15.4	38.5	39.4	40.4	32.1	33.9			6%	121%	309%	1235%
Personnel costs	million EUR	1,433.5	1,634.0	1,484.5	1,461.6	1,406.8	1,339.4	1,459.1	1,568.2	1,664.8	1,680.8	*1,589*	*1,712*	1%	19%	13%	17%
Value of unpaid labour	million EUR	102.0	120.5	98.6	96.1	107.9	103.0	108.9	92.8	104.0	116.1	*117*	*127*	12%	8%	18%	14%
Energy costs	million EUR	1,305.7	936.9	1,047.2	1,238.8	1,243.6	1,117.9	1,028.2	817.5	704.1	773.9	*859*	*878*	10%	-38%	-26%	-41%
Repair & maintenance costs	million EUR	427.4	458.1	433.2	465.7	412.5	394.3	444.9	495.5	522.0	498.0	*492*	*491*	-5%	21%	15%	17%
Other variable costs	million EUR	633.6	700.5	614.8	678.6	590.4	600.1	606.1	645.3	670.8	621.2	*591*	*628*	-7%	5%	1%	-2%
Other non-variable costs	million EUR	469.7	459.1	461.9	440.3	409.1	399.2	361.1	353.3	371.0	396.0	*395*	*395*	7%	-3%	-14%	-16%
Consumption of fixed capital	million EUR	694.8	689.9	628.6	637.5	615.3	560.4	557.0	574.3	497.1	518.6	*518*	*509*	4%	-16%	-17%	-25%
Lease/rental payments for quota	million EUR	45.2	52.2	54.7	64.3	64.8	73.2	83.2	106.7	97.1	101.3			4%	56%	85%	124%
Opportunity cost of capital	million EUR	34.9	143.7	104.2	83.0	60.1	71.6	73.0	56.4	39.1	- 5.2	- *6.6*	- *13.3*	-113%	-109%	-105%	-115%
Value of physical capital	million EUR	3,996.1	3,923.1	4,157.1	3,743.9	3,852.5	3,617.3	3,848.5	4,000.6	3,734.1	3,724.5	*3,686*	*3,640*	0%	-3%	-10%	-7%
Value of quota and other fishing rights	million EUR	1,514.3	2,065.6	1,990.6	2,115.9	2,265.4	1,985.7	2,605.2	3,099.9	3,132.4	3,595.6			15%	59%	81%	137%
Investments	million EUR	333.3	335.3	352.8	- 4.7	415.6	367.6	324.6	354.6	447.0	488.2			9%	17%	38%	47%
Gross Value Added	million EUR	2,351.6	2,660.3	2,553.3	2,539.3	2,465.7	2,392.9	2,687.0	2,934.7	3,362.1	3,286.1	*2,894*	*3,116*	-2%	33%	29%	40%
GVA to revenue	%	45.3	51.1	50.0	47.4	48.1	48.8	52.4	55.9	59.7	58.9	*55.3*	*56.6*	-1%	22%	18%	30%
Net Value Added	million EUR	1,657.4	1,972.0	1,925.3	1,902.0	1,850.4	1,832.6	2,130.0	2,362.1	2,865.0	2,767.5	*2,376*	*2,607*	-3%	50%	44%	67%
Gross profit	million EUR	815.9	907.7	969.8	981.1	951.0	950.7	1,118.9	1,273.8	1,593.2	1,489.2	*1,188*	*1,277*	-7%	57%	54%	83%
Gross profit margin	%	15.7	17.4	19.0	18.3	18.6	19.4	21.8	24.3	28.3	26.7	*22.7*	*23.2*	-6%	44%	41%	70%
Net profit	million EUR	89.9	62.0	234.5	252.3	263.2	308.3	473.1	625.1	1,035.6	951.1	*660*	*753*	-8%	261%	306%	958%
Net profit margin	%	1.8	1.2	4.8	4.9	5.3	6.4	9.4	12.1	18.7	17.4	*12.9*	*14.0*	-7%	230%	264%	891%
Average wage per FTE	thousand EUR	25.7	29.4	28.8	27.9	26.7	27.6	29.3	30.5	31.8	33.6	*33.6*	*35.5*	6%	26%	17%	31%
GVA per FTE (labour productivity)	thousand EUR	39.32	44.41	46.40	45.42	43.48	45.85	50.18	54.07	60.40	61.43	*57.0*	*60.1*	2%	41%	32%	56%
Return on fixed tangible assets	%	2.4	4.9	8.2	9.0	8.4	10.5	14.1	17.0	28.8	25.4	*17.7*	*20.3*	-12%	202%	210%	967%
Fuel efficiency	%	25.7	18.2	20.9	23.5	24.8	23.3	20.5	15.9	12.7	14.2	*16.9*	*16.3*	12%	-43%	-32%	-45%
Energy consumed per landed tonne	litre per tonne	535.0	512.3	512.6	521.7	510.0	476.2	435.7	435.1	465.9	428.3	*436*	*475*	-8%	-16%	-16%	-20%

Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/ACS(2019)); All monetary values adjusted for inflation; constant prices (2015).

Table 3-14 Main results for the EU DWF for 2008-2017 and nowcasts for 2018-2019

		2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	*2018*	*2019*	%Δ 2017-2016	%Δ 2017-2012	%Δ 2017-2010	%Δ 2017-2008
Number of vessels	number	366	352	369	346	327	287	287	278	266	255	*236*	*223*	-4%	-22%	-31%	-30%
Total vessel tonnage	thousand GT	246.4	286.6	281.2	270.6	273.7	249.6	286.0	279.5	259.7	256.8	*193.3*	-	-1%	-6%	-9%	4%
Total vessel power	thousand kW	346.8	400.4	387.5	368.7	371.9	337.6	377.4	371.9	352.2	345.7	*257.8*	-	-2%	-7%	-11%	0%
Engaged crew	number	6,452	7,251	8,664	7,144	6,037	5,790	6,427	6,219	5,603	6,222	*5,533*	*5,416*	11%	3%	-28%	-4%
FTE national	number	7,728	8,830	9,699	8,198	7,156	6,399	7,229	7,532	7,091	6,950	*6,585*	*6,465*	-2%	-3%	-28%	-10%
Days at sea	thousand	91	87	92	90	81	72	71	73	72	73			2%	-10%	-21%	-19%
Fishing days	thousand	76	72	78	77	70	63	63	62	61	62			3%	-11%	-20%	-18%
Energy consumption	million litre	268.5	372.8	385.2	353.7	362.1	374.0	392.7	474.0	372.2	372.1	*315.7*	*312.0*	0%	3%	-3%	39%
Live weight of landings	thousand tonnes	515.9	569.1	647.6	688.4	631.5	694.1	778.8	693.2	727.5	723.3	*565.1*	*548.8*	-1%	15%	12%	40%
Value of landings	million EUR	798.7	824.0	922.2	1,033.0	1,161.8	1,239.0	1,357.7	1,007.3	1,245.2	1,177.0	*982.4*	*964.8*	-5%	1%	28%	47%
Gross value of landings	million EUR	626.1	785.5	927.6	1,048.8	1,045.0	1,074.4	1,193.6	1,043.5	1,048.6	1,098.4	*922.1*	*905.5*	5%	5%	18%	75%
Other income	million EUR	0.0	5.1	13.8	26.7	0.6	6.5	15.8	14.7	11.1	10.9	*10.6*	*10.5*	-1%	1698%	-21%	
Operating subsidies	million EUR	14.6	7.0	14.7	12.0	13.3	6.4	5.7	3.6	0.9	1.8			103%	-86%	-88%	-88%
Income from leasing out quota	million EUR	-	-	-	-	0.0	0.9	0.7	0.8	0.4	0.6			71%	4051%		
Personnel costs	million EUR	113.9	169.5	199.0	198.9	183.6	185.4	179.9	197.1	193.3	227.8	*175.1*	*172.0*	18%	24%	14%	100%
Value of unpaid labour	million EUR	0.8	1.8	0.5	1.5	1.4	0.7	0.4	0.2	0.6	0.0	*0.0*	*0.0*				
Energy costs	million EUR	179.6	184.1	211.8	233.5	235.7	234.2	223.6	200.4	133.6	143.5	*119.4*	*117.9*	7%	-39%	-32%	-20%
Repair & maintenance costs	million EUR	50.8	76.3	75.3	86.9	89.3	89.4	93.5	92.0	97.4	90.9	*57.4*	*56.8*	-7%	2%	21%	79%
Other variable costs	million EUR	167.5	239.4	256.8	260.6	230.9	236.1	274.0	322.2	314.5	278.0	*267.4*	*264.4*	-12%	20%	8%	66%
Other non-variable costs	million EUR	52.0	87.0	81.8	81.9	94.6	83.8	96.8	112.7	97.5	103.3	*79.6*	*78.8*	6%	9%	26%	99%
Consumption of fixed capital	million EUR	73.4	76.7	67.0	54.8	53.2	53.9	47.0	75.2	59.5	72.0	*71.3*	*70.5*	21%	35%	8%	-2%
Lease/rental payments for quota	million EUR	0.8	0.6	2.4	3.4	1.4	0.8	1.0	3.7	3.1	3.8			21%	177%	56%	368%
Opportunity cost of capital	million EUR	0.1	18.7	9.1	7.7	10.0	7.6	8.8	8.2	4.1	- 3.1	- *2.0*	- *1.0*	-177%	-131%	-134%	-2266%
Value of physical capital	million EUR	408.4	397.2	338.1	292.8	278.5	229.9	304.1	370.4	323.7	286.1	*284.4*	*280.2*	-12%	3%	-15%	-30%
Value of quota and other fishing rights	million EUR	-	-	10.8	-	-	9.0	18.7	9.7	10.2	16.1			59%		50%	
Investments	million EUR	27.1	13.2	49.1	31.2	8.2	13.4	20.9	36.8	26.5	29.8	*29.6*	*29.2*	12%	263%	-39%	10%
Gross Value Added	million EUR	166.9	198.9	315.8	412.6	395.1	437.5	521.5	330.8	416.7	486.8	*402.1*	*391.2*	17%	23%	54%	192%
GVA to revenue	%	27.1	25.3	33.5	38.4	37.8	40.5	43.1	31.3	39.3	44.2	*43.4*	*43.0*	12%	17%	32%	63%
Net Value Added	million EUR	93.6	122.2	248.8	357.7	341.9	383.5	474.6	255.7	357.2	414.8	*330.7*	*320.7*	16%	21%	67%	343%
Gross profit	million EUR	52.2	27.5	116.2	212.1	210.1	251.4	341.2	133.5	222.8	259.0	*227.0*	*219.2*	16%	23%	123%	396%
Gross profit margin	%	8.5	3.5	12.3	19.7	20.1	23.3	28.2	12.6	21.0	23.5	*24.5*	*24.1*	12%	17%	90%	178%
Net profit	million EUR	- 21.3	- 39.7	32.9	128.4	116.2	164.8	278.2	55.4	137.2	156.1	*157.6*	*149.7*	14%	34%	374%	833%
Net profit margin	%	- 3.5	- 5.7	3.9	13.5	13.0	17.5	26.0	5.9	15.1	16.6	*17.0*	*16.5*	10%	28%	327%	581%
Average wage per FTE	thousand EUR	15.5	20.1	21.2	25.3	26.5	29.7	25.4	26.7	28.1	33.5	*27.1*	*27.0*	19%	26%	58%	116%
GVA per FTE (labour productivity)	thousand EUR	22.58	23.34	33.52	52.04	56.64	69.87	73.57	44.80	60.39	71.69	*62.27*	*61.43*	19%	27%	114%	217%
Return on fixed tangible assets	%	- 5.2	- 5.3	12.4	46.5	45.3	75.0	94.4	17.2	43.6	53.5	*54.7*	*53.1*	23%	18%	330%	1132%
Fuel efficiency	%	29.1	23.6	22.8	22.3	22.6	21.8	18.7	19.2	12.7	13.1	*13.0*	*13.1*	3%	-42%	-42%	-55%
Energy consumed per landed tonne	litre per tonne	557.0	656.7	650.7	566.4	626.8	584.4	536.2	735.5	555.1	558.0	*608.6*	*608.7*	1%	-11%	-14%	0%

Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/ACS(2019)); All monetary values adjusted for inflation; constant prices (2015).

3.6 EU Pelagic Reference fleet

Introduction

The Pelagic Advisory Council (PelAC) prepares and provides advice on the management of pelagic fish stocks on behalf of the fisheries sector and other stakeholders. It covers pelagic stocks in all areas with the exception of stocks in the Baltic and Mediterranean Seas. Given the scale and importance of these fleets, and further to a request from the Pelagic Advisory Council, in 2019 the AER report was extended to include a summary economic profile of a representative sample of these vessels.

This section provides a concise overview of the economic performance of the EU's pelagic fishing fleet. Given that these vessels may, in some cases, operate in multiple fisheries - including some non-pelagic, the analysis presented centres on a representative sample of these vessels referred to, hereafter, as the Pelagic Reference Fleet (see below).

This analysis is presented in two parts; a summary of key parameters (number of vessels, tonnage, power, etc.), cost structure (energy costs, repairs and maintenance, etc.) and performance indicators (gross and net profit, GVA etc.). The second part of the analysis comprises a dashboard of key trends over time and, for 2017, how these vary across the different national fleets that make up the Pelagic Reference Fleet. All the data used in the dashboards are also presented in tables accompanying this analysis.

The Pelagic Reference Fleet comprised 70 vessels in 2017, including fleets from 5 Member States; UK, Denmark, France, Ireland, and the Netherlands. **The fleet segments included in the analysis are**:

- UK pelagic trawlers over 40 m (GBR NAO TM VL40XX) - 100% pelagic segment (27 vessels in 2017)
- Danish pelagic trawlers (DNK NAO TM VL40XX) - (11 vessels in 2017)
- French pelagic trawlers over 40m (FRA NAO TM VL40XX) - 100% pelagic segment (4 vessels in 2017)
- Irish pelagic trawlers (IRL NAO TM VL40XX) - 100% pelagic segment (20 vessels in 2017)
- Dutch pelagic freezer trawlers (NLD NAO TM VL40XX) - Dutch flagged pelagic - (8 vessels in 2017).

The fleet segments not included in the analysis are:

- The German pelagic trawler over 40 m segment (DEU A27 TM40XX) - of the 15 vessels under this code only 4 vessels are 100% pelagic. The other 11 are demersal trawlers (i.e., mixed segment).
- The Lithuanian segment (LTU OFR TM40XX) - of the 6 vessels in the segment only 1 freezer-trawler is active in the NE Atlantic (at times). The other 5 are either not pelagic vessels or only active in W Africa.
- The Swedish pelagic trawlers – insufficient number of vessels to create a pelagic trawler segment over 40 m (confidentiality issues); these are grouped with demersal trawlers as well as with vessels between 24 meters and above (i.e., mixed segment).
- The Polish pelagic trawlers over 40 m - mostly operate in waters outside the NE Atlantic.

Key findings for 2017 and recent trends

Fleet Capacity

The Pelagic Reference Fleet numbered 70 vessels in 2017 (10 fewer than 2016), with a combined gross tonnage (GT) of 167 438 tonnes and engine power of 276 544 kilowatts (kW).

Fleet capacity has fluctuated over the period, with the lowest number of vessels, 67, recorded in 2011 and the highest, 86 vessels, recorded in 2012.

Effort and landings

In 2017, the Pelagic Reference Fleet spent 10 340 days-at-sea and consumed 143 million litres of fuel.

The fleet landed 1.2 million tonnes of seafood with a reported value of EUR 601 million.

Landings per fishing day (LPUE), for the Pelagic Reference Fleet as a whole, were estimated at 269 tonnes per day in 2017, 2.4% more than in 2016.

Employment and wages

The Pelagic Reference Fleet directly employed circa 1 230 fishers, corresponding to 897 FTEs.

Of the total employed only 14 were estimated as being unpaid labour.

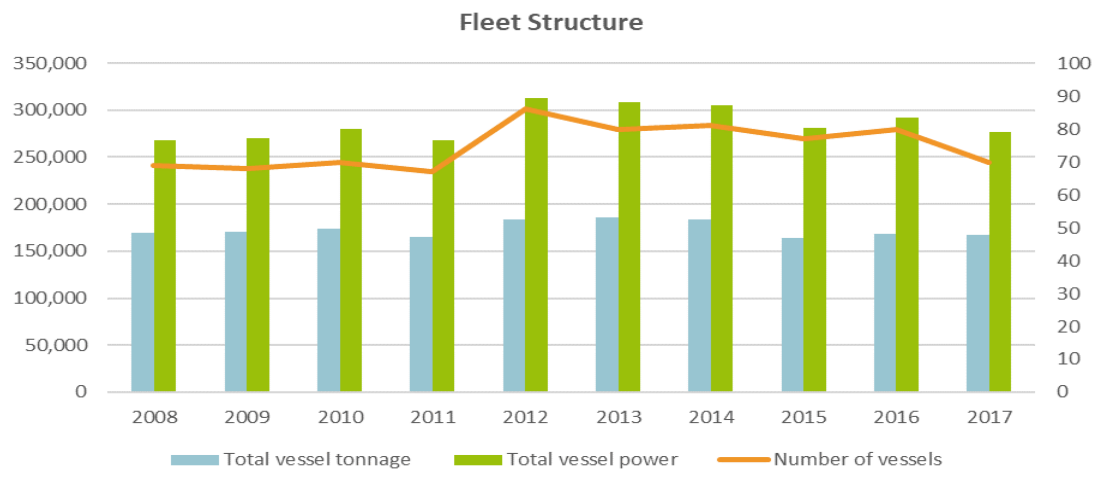
Average annual wage (per total employed) was estimated at EUR 129 799 in 2017, ranging from EUR 69 474 for French fishers to EUR 209 260 for Danish fishers.

Economic performance

Total revenue (income from landings + other income) earned by the Pelagic Reference Fleet in 2017 was estimated at EUR 611 million (-14%).

The amount of GVA, gross profit and net profit (all excl. subsidies and fishing rights) generated by the fleet in 2017 was EUR 408 million (-12%), EUR 267 million (-15%) and EUR 203 million (-3%), respectively.

GVA to revenue was estimated at 66% (+2%); gross profit margin at 40% (-5.8%), and 28% of the revenue was retained as net profit (+6.7%).



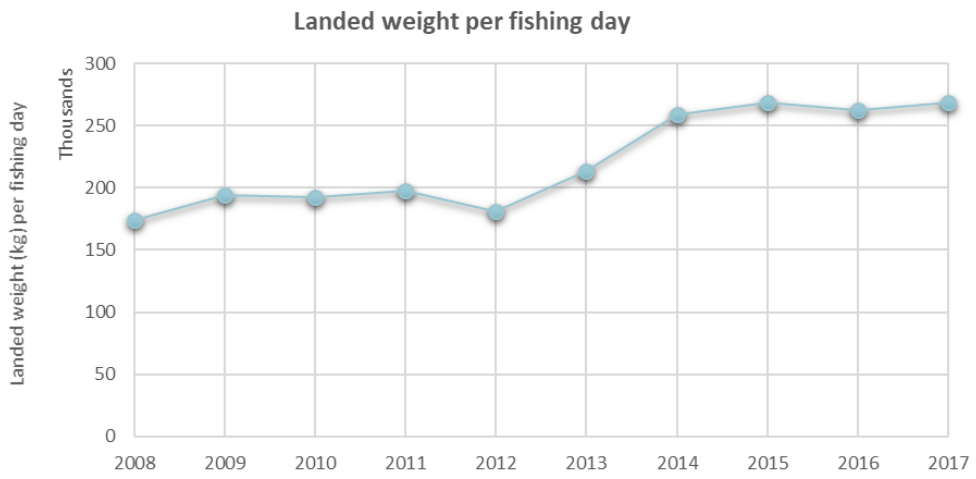
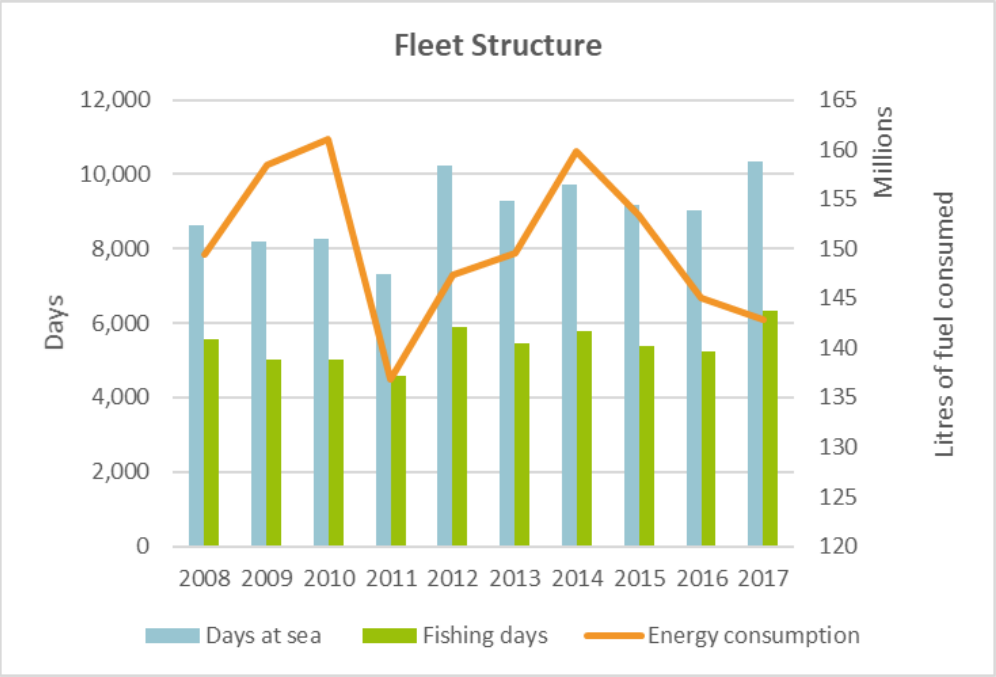
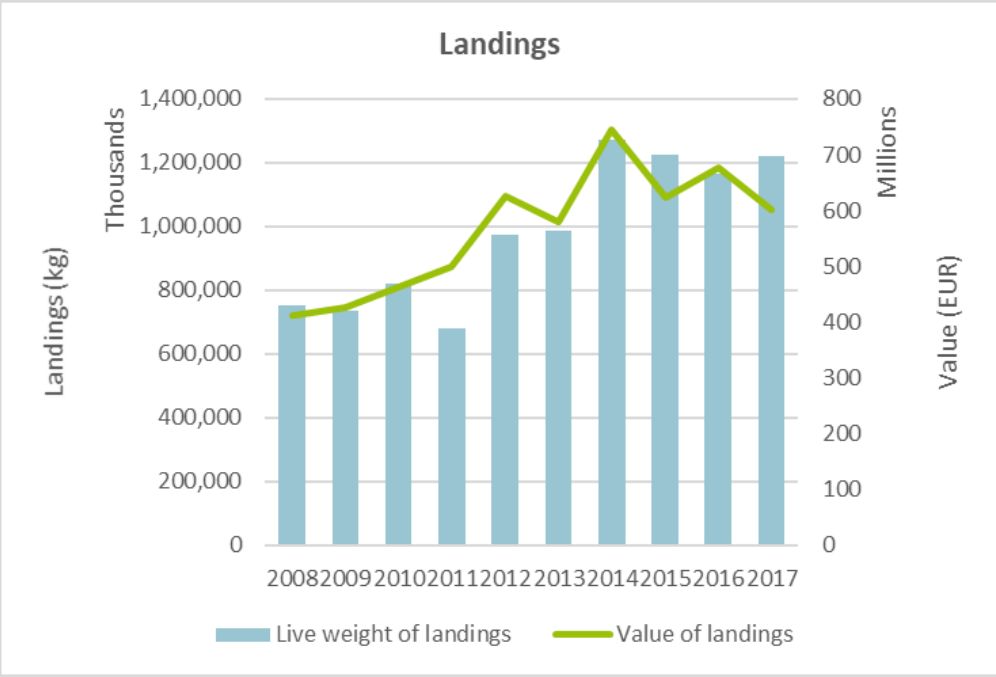
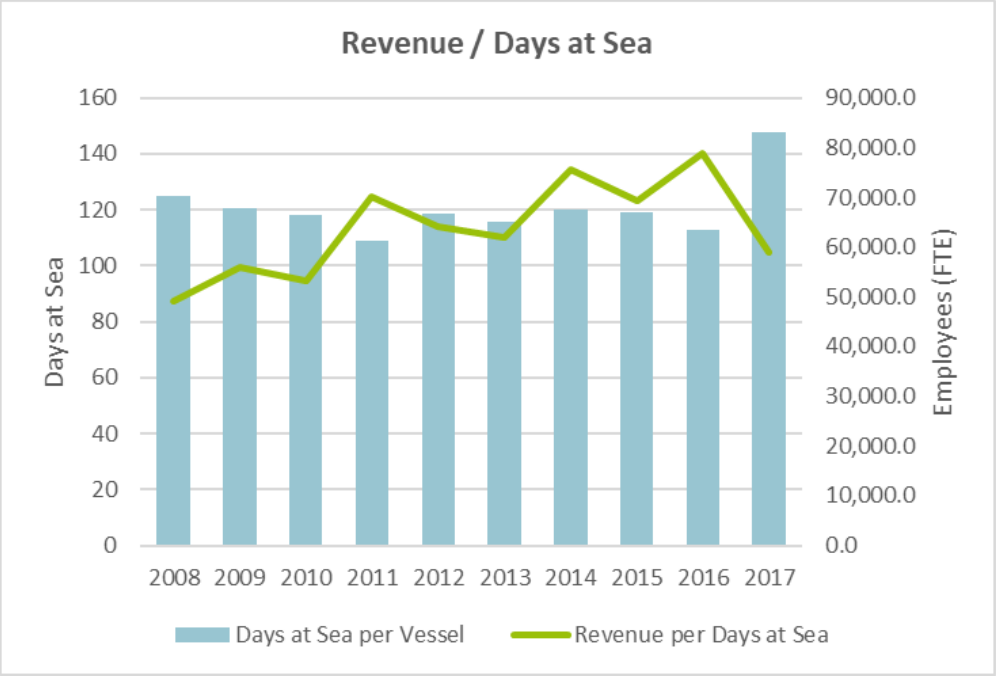


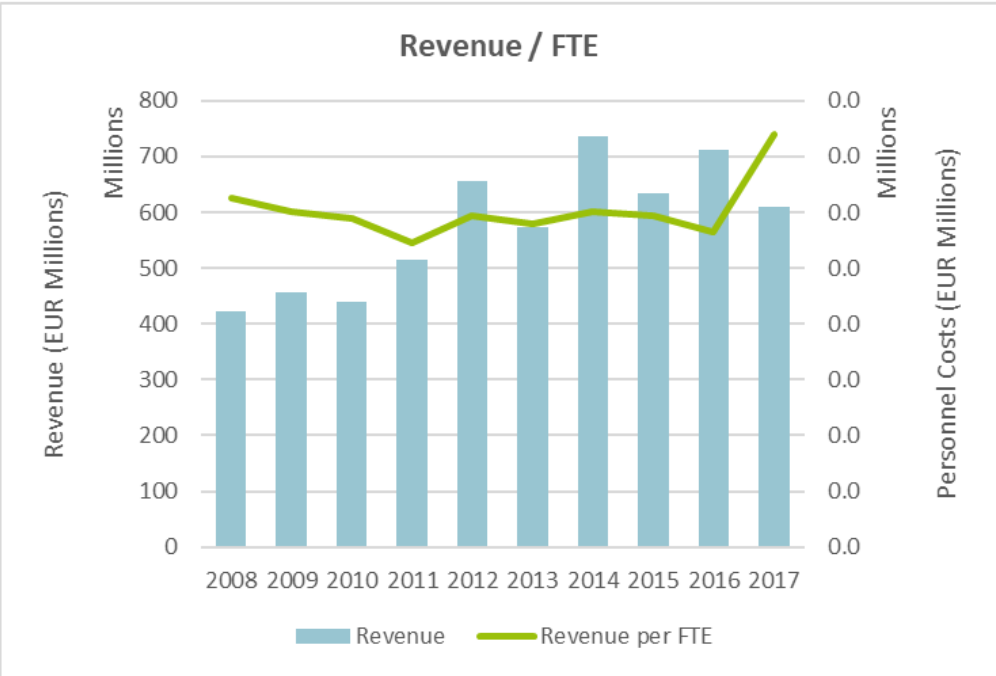
Table 3-15 Key parameters and performance indicators for the Pelagic Reference Fleet

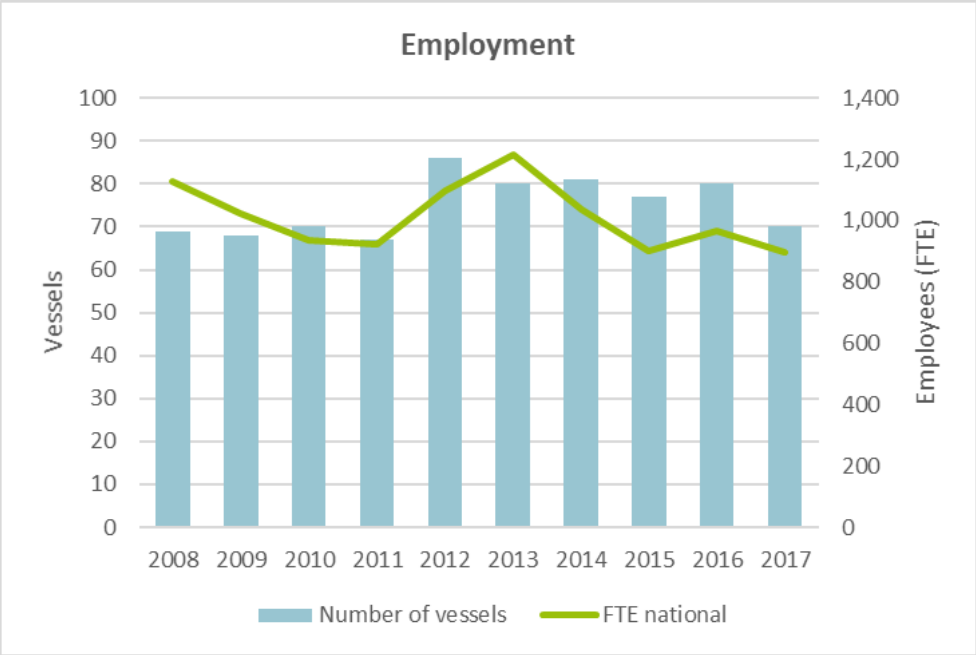
Pelagic Reference Fleet		2012	2013	2014	2015	2016	2017	% Change '16 - 17	2018 (*Provisional*)
Number of vessels	Number	86	80	81	77	80	70	-13%	69
Total vessel tonnage	GT	183,879	185,795	183,927	164,015	168,336	167,438	-1%	131,301
Total vessel power	kW	312,494.53	308,747.33	305,242.91	280,779.82	291,642.05	276,544.11	-5%	222,523.90
Employment (FTEs)	Persons	1,097	1,214	1,035	903	967	897	-7%	681
Fishing days	Day	5,905	5,470	5,770	5,392	5,242	6,338	21%	3,698
Days at sea	Day	10,219	9,275	9,737	9,162	9,032	10,340	14%	6,059
Energy costs	Lit	98,699,915	90,177,574	90,022,038	66,170,902	50,592,136	54,794,173	8%	62,214,009
Live weight of landings	kg	975,445,953	986,979,254	1,271,790,926	1,224,958,101	1,167,631,062	1,219,260,041	4%	876,933,875
Value of landings	EUR (€)	626,025,694	579,688,305	745,951,745	623,801,787	677,213,048	601,254,118	-11%	507,332,153
Gross value of landings	EUR (€)	648,237,982	567,913,682	727,808,277	625,675,355	705,809,466	604,882,999	-14%	453,417,033
Other income	EUR (€)	6,921,856	5,916,619	7,625,764	8,251,963	6,976,475	5,695,085	-18%	3,823,096
Income from leasing out quota	EUR (€)	1,953,345	7,475,538	9,499,682	12,362,041	16,050,141	6,211,409	-61%	-
Operating subsidies	EUR (€)	-	16,310	75,064	330	926	-	-	-
Personnel costs	EUR (€)	139,875,619	120,210,842	164,722,534	151,583,290	147,803,143	137,528,732	-7%	108,037,278
Energy costs	EUR (€)	98,699,915	90,177,574	90,022,038	66,170,902	50,592,136	54,794,173	8%	62,214,009
Repair & maintenance costs	EUR (€)	72,819,990	57,947,163	94,970,044	106,287,442	98,712,709	73,014,743	-26%	62,658,231
Other variable costs	EUR (€)	41,359,155	41,866,865	61,694,725	65,220,570	54,222,205	37,646,409	-31%	34,199,020
Other non-variable costs	EUR (€)	89,199,691	80,578,123	35,989,699	35,335,147	43,181,271	37,095,602	-14%	26,679,883
Lease/rental payments for quota	EUR (€)	14,405,625	12,605,734	16,250,787	13,243,263	17,959,468	21,417,303	19%	-
Revenue	EUR (€)	655,159,839	573,830,301	735,434,041	633,927,318	712,785,941	610,578,084	-14%	457,240,129
Gross Value Added	EUR (€)	353,081,088	303,260,576	452,757,536	360,913,257	466,077,620	408,027,157	-12%	296,419,515
Gross profit	EUR (€)	211,100,953	181,134,083	285,652,083	206,671,012	314,066,359	266,930,591	-15%	187,859,337
Net profit	EUR (€)	94,732,040	61,831,350	166,851,578	89,653,460	208,943,626	202,814,025	-3%	166,102,989
Opportunity cost of capital	EUR (€)	8,604,030	9,380,219	12,183,663	10,669,756	4,836,592	-3,743,323	-177%	-3,403,720
Investments	EUR (€)	143,859,478	40,260,423	82,523,645	69,093,961	148,232,743	-5,002,278	-103%	-
Value of physical capital	EUR (€)	783,130,947	689,799,003	936,916,123	1,021,211,089	916,282,170	787,992,444	-14%	544,575,848
Value of quota and other fishing rights	EUR (€)	1,144,753,030	976,511,643	1,300,771,613	1,372,867,721	1,428,170,277	1,291,641,089	-10%	-

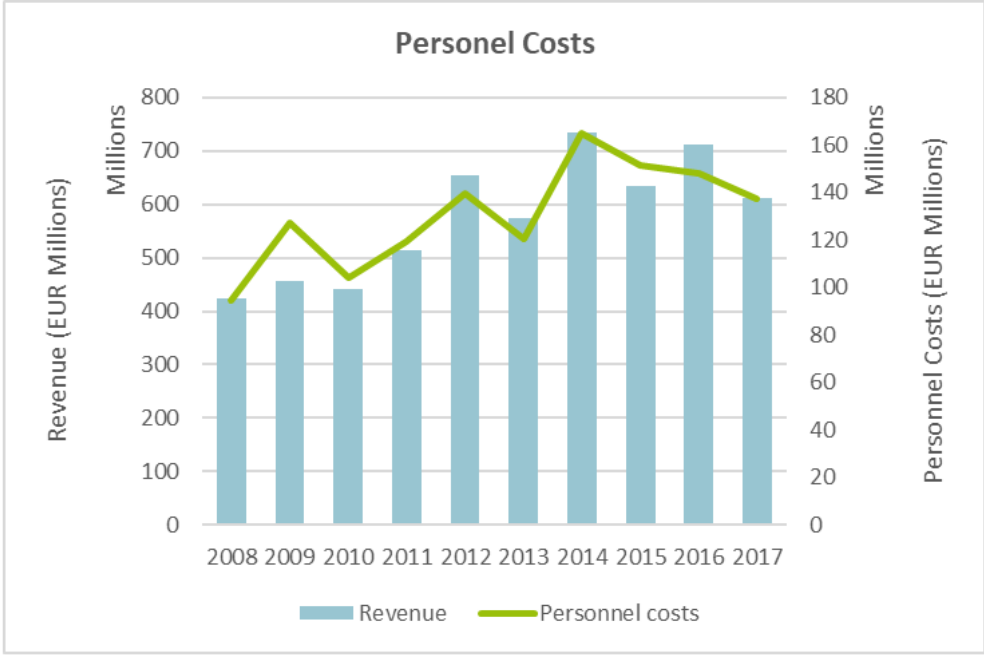

Fleet Structure
Days
Millions
Litres of fuel consumed
12,000
10,000
8,000
6,000
4,000
2,000
0
165
160
155
150
145
140
135
130
125
120
2008 2009 2010 2011 2012 2013 2014 2015 2016 2017
Days at sea
Fishing days
Energy consumption

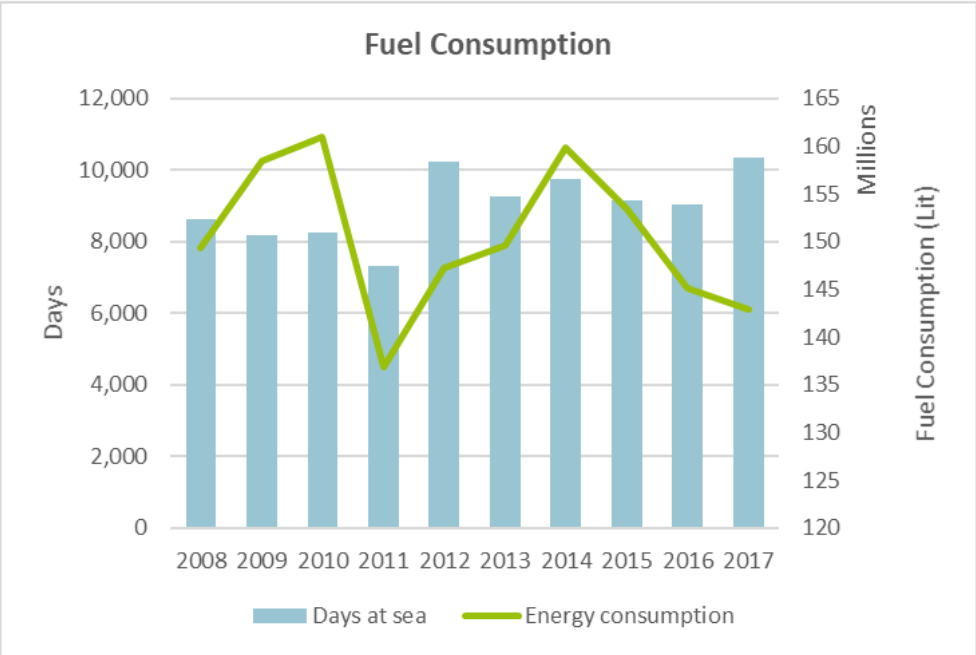

Landings
Landings (kg)
Thousands
Millions
Value (EUR)
1,400,000
1,200,000
1,000,000
800,000
600,000
400,000
200,000
0
800
700
600
500
400
300
200
100
0
2008 2009 2010 2011 2012 2013 2014 2015 2016 2017
Live weight of landings
Value of landings

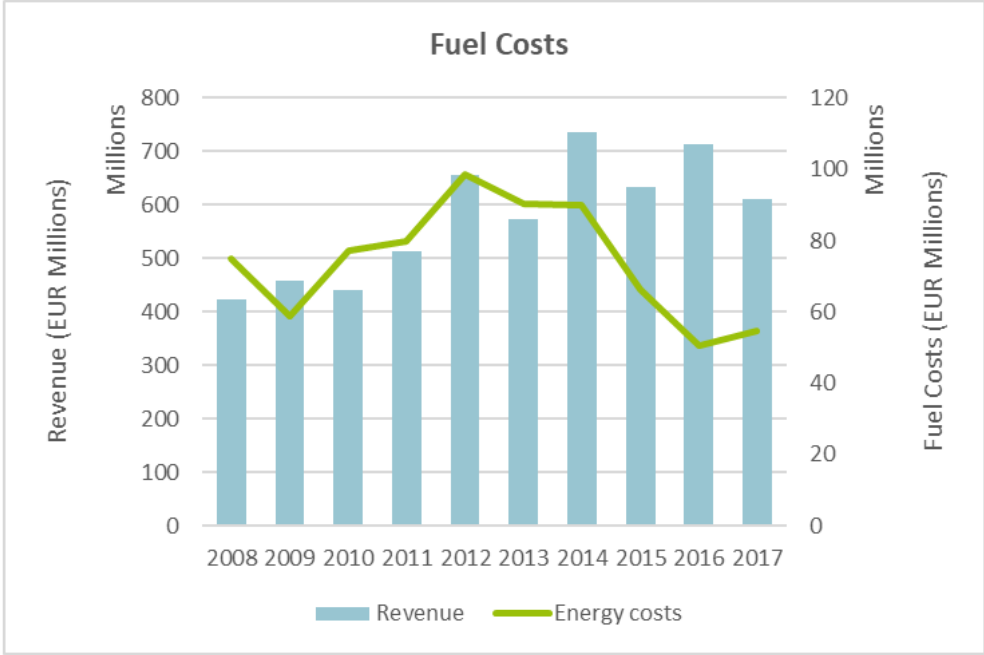

Revenue / Days at Sea
Days at Sea
Employees (FTE)
160
140
120
100
80
60
40
20
0
90,000.0
80,000.0
70,000.0
60,000.0
50,000.0
40,000.0
30,000.0
20,000.0
10,000.0
0.0
2008 2009 2010 2011 2012 2013 2014 2015 2016 2017
Days at Sea per Vessel
Revenue per Days at Sea

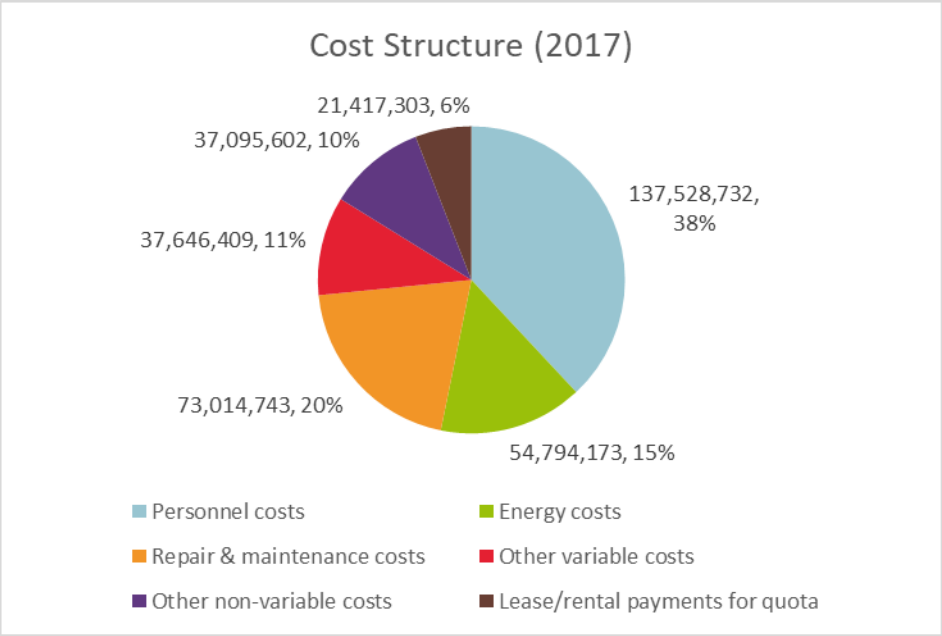

Revenue / FTE
Revenue (EUR Millions)
Millions
Personnel Costs (EUR Millions)
800
700
600
500
400
300
200
100
0
0.0
2008 2009 2010 2011 2012 2013 2014 2015 2016 2017
Revenue
Revenue per FTE

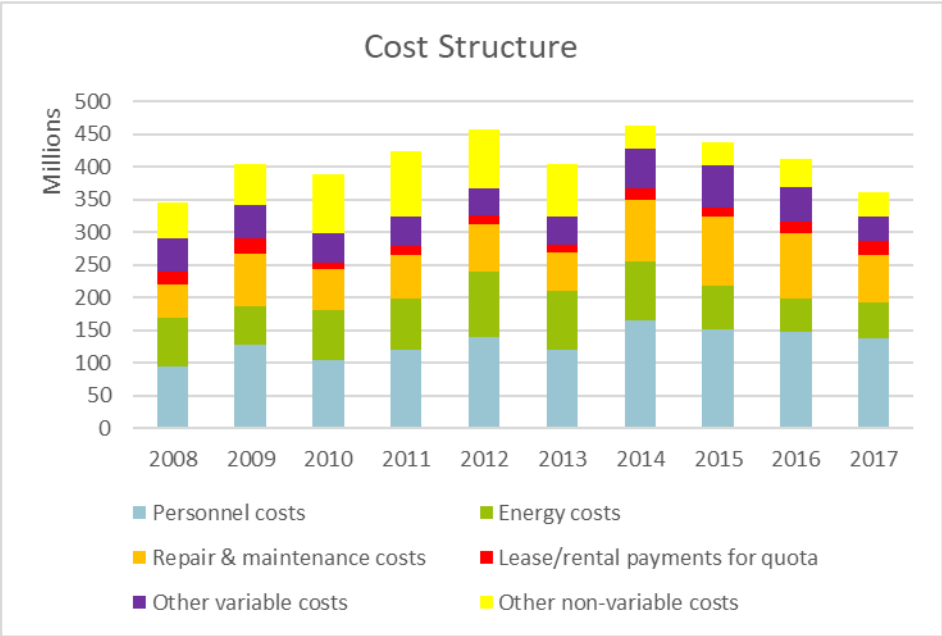

Employment
Vessels
Employees (FTE)
100
90
80
70
60
50
40
30
20
10
0
1,400
1,200
1,000
800
600
400
200
0
2008 2009 2010 2011 2012 2013 2014 2015 2016 2017
Number of vessels
FTE national

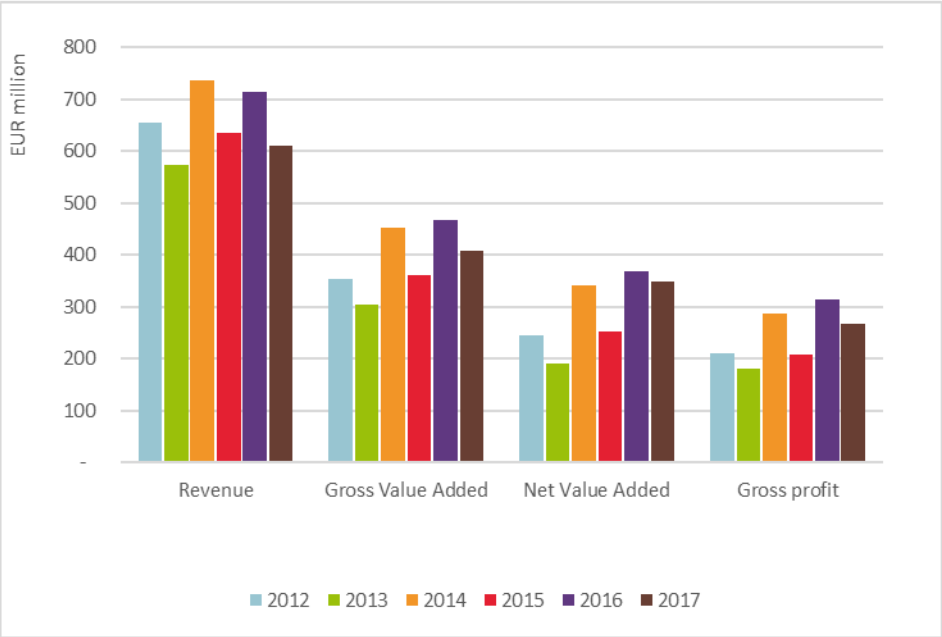

Personel Costs
Revenue (EUR Millions)
Millions
Personnel Costs (EUR Millions)
Millions
800
700
600
500
400
300
200
100
0
180
160
140
120
100
80
60
40
20
0
2008 2009 2010 2011 2012 2013 2014 2015 2016 2017
Revenue
Personnel costs

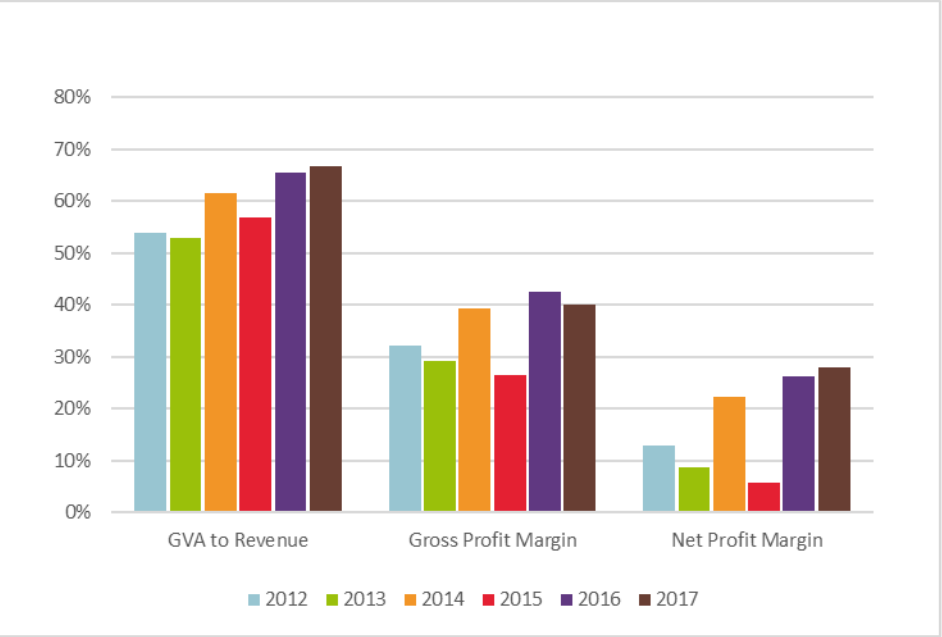

Fuel Consumption
Days
Millions
Fuel Consumption (Lit)
12,000
10,000
8,000
6,000
4,000
2,000
0
165
160
155
150
145
140
135
130
125
120
2008 2009 2010 2011 2012 2013 2014 2015 2016 2017
Days at sea
Energy consumption

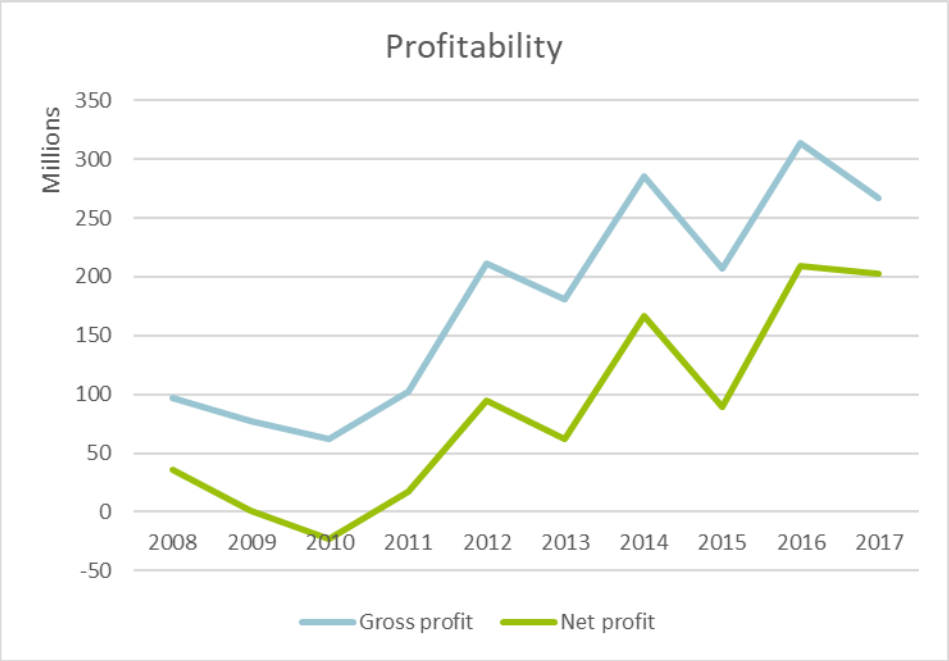

Fuel Costs
Revenue (EUR Millions)
Millions
Fuel Costs (EUR Millions)
Millions
800
700
600
500
400
300
200
100
0
120
100
80
60
40
20
0
2008 2009 2010 2011 2012 2013 2014 2015 2016 2017
Revenue
Energy costs

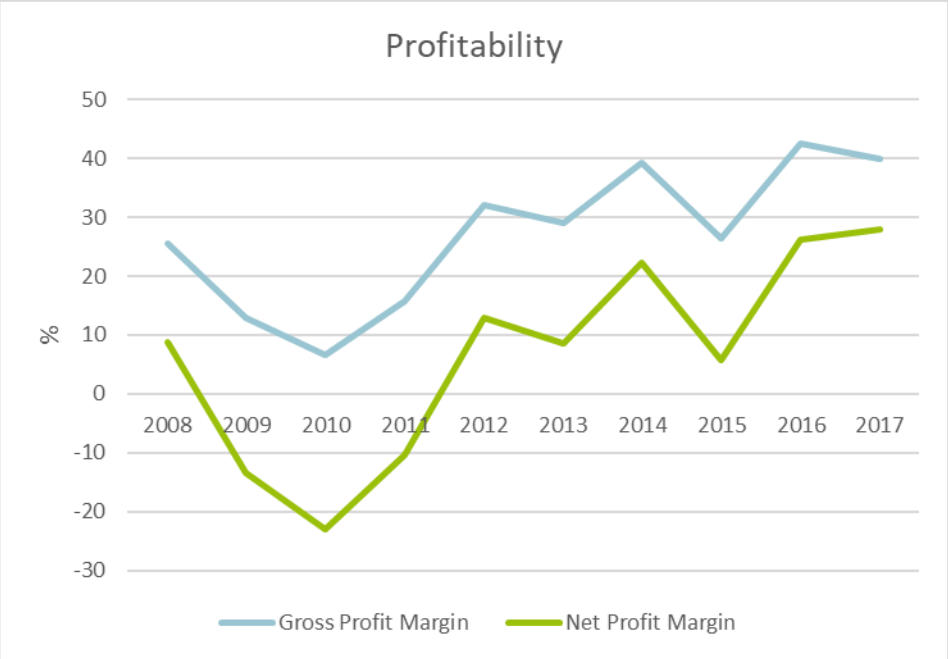

Cost Structure (2017)
21,417,303, 6%
37,095,602, 10%
137,528,732, 38%
37,646,409, 11%
73,014,743, 20%
54,794,173, 15%
Personnel costs
Energy costs
Repair & maintenance costs
Other variable costs
Other non-variable costs
Lease/rental payments for quota

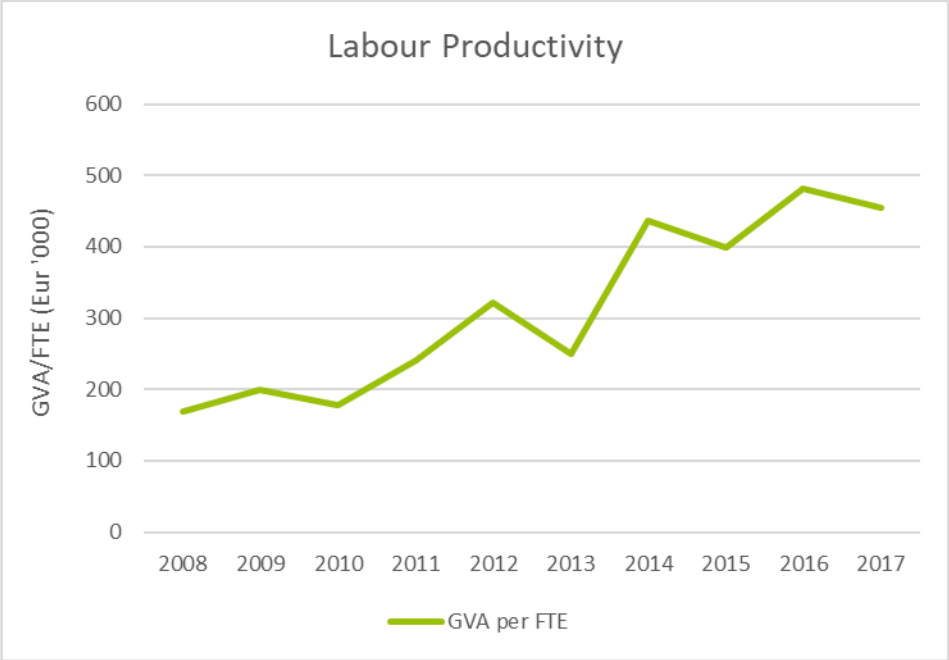

Cost Structure
Millions
500
450
400
350
300
250
200
150
100
50
0
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
Personnel costs
Energy costs
Repair & maintenance costs
Lease/rental payments for quota
Other variable costs
Other non-variable costs


EUR million
800
700
600
500
400
300
200
100
-
Revenue
Gross Value Added
Net Value Added
Gross profit
2012
2013
2014
2015
2016
2017


80%
70%
60%
50%
40%
30%
20%
10%
0%
GVA to Revenue
Gross Profit Margin
Net Profit Margin
2012
2013
2014
2015
2016
2017


Profitability
Millions
350
300
250
200
150
100
50
0
-50
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
Gross profit
Net profit


Profitability
%
50
40
30
20
10
0
-10
-20
-30
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
Gross Profit Margin
Net Profit Margin


Labour Productivity
GVA/FTE (Eur '000)
600
500
400
300
200
100
0
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
GVA per FTE

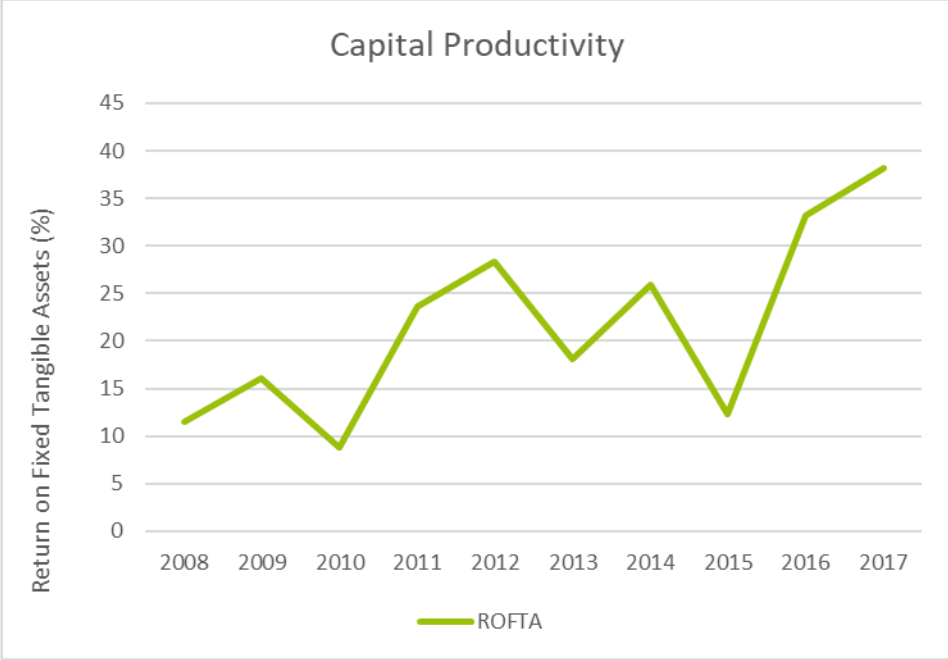

Capital Productivity
Return on Fixed Tangible Assets (%)
45
40
35
30
25
20
15
10
5
0
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
ROFTA

Table 3-16 Key economic indicators for the Pelagic Reference Fleet, by fleet, 2017

	Number of vessels	FTE national	Days-at-sea	Energy consumed per landed tonne	Live weight of landings	Value of landings	Revenue	Gross Value Added
GBR NAO TM 40XX NGI*	27	87	1,779	103	383,869,038	276,781,471	275,162,187	205,909,447
DNK NAO TM 40XX NGI	11	124	4,278		341,828,249	115,542,371	117,729,555	93,256,726
FRA NAO TM 40XX NGI	4	122	767	181	55,605,429	27,415,825	27,555,366	12,457,147
IRL NAO TM 40XX	20	186	1,457	97	142,643,825	64,748,721	66,659,315	39,057,621
NLD NAO TM 40XX NGI*	8	378	2,059	193	295,313,501	116,765,731	123,471,660	57,346,217

	Gross profit	Gross profit margin	Net profit	Net profit margin	GVA per FTE (labour productivity)	Return on fixed tangible assets
GBR NAO TM 40XX NGI*	147,122,642	53.47	140,146,196	50.93	2,379,658	89
DNK NAO TM 40XX NGI	75,905,278	64.47	49,936,881	42.42	750,195	18
FRA NAO TM 40XX NGI	4,606,601	16.72			101,874	
IRL NAO TM 40XX	13,937,648	20.91	1,401,757	2.10	209,705	1
NLD NAO TM 40XX NGI*	25,358,422	20.54	11,329,190	9.18	151,710	8

3.7 Main drivers and trends affecting the economic performance of the EU fleet

Summary of main trends on economic performance

After nine consecutive years of continued growth, the economic performance of the EU fishing fleet waned in 2017, with net profit decreasing by 3% compared to 2016.

The record high results observed in 2016 were nonetheless broadly maintained in 2017, and results still superior to those obtained in 2015.

Compared to 2016, the fleet spent less days-at-sea (-4%), fished less (-6% fishing days) and consumed slightly less fuel overall (-0.3%), while landing more seafood in weight (+8%) but at a lower value (-0.6%).

Results vary by Member State, fishing activity and region. All but one (Lithuania) of the 22 Member State fleets analysed (Greece excluded) recorded gross profits in 2017. The fleet as a whole generated a gross profit of EUR 1.993 billion; a 3.3% decreases on the 2016 position. Net profit continued to elude four MS fleets but overall the EU fleet made (a net profit of) EUR 1.3 billion, 3% less than in 2016.

GVA remained at a similar level to 2016 (EUR 4.5 billion); with a 5% reduction in employment (in FTE), this is reflected in the overall higher average wages (+8% compared to 2016).

For the small-scale coastal fleet, while still better off than in 2015, all performance results in 2017 show some contraction compared to 2016: GVA -2%, gross profit -4% and net profit -8%.

The same was observed for the EU large-scale fleet, but with gross profit falling comparatively more, in part due to the 10% increase in fuel costs (against a 1% reduction for the SSCF): GVA -2%, gross profit -7% and net profit -8%.

Contrariwise, the EU DWF saw improvements even if energy costs also increased (7%) for this segment: revenue increased by 5%, GVA +17%, gross profit +16% and net profit +14% compared to 2016. Contributing to the improved situation was the 7% and 12% reduction in repair & maintenance costs and other variable costs, respectively.

Common to all segments of the fleet, and what may have mitigated to some extent the increased depreciation costs in 2017, was the fall in opportunity cost of capital (overall negative values for the LSF and DWF), impacting net profits.

With a fleet as diverse as the EU fishing fleet, operating in fishing areas across the globe, it is difficult to pin-point the underlying drivers of economic performance. In fact, different factors will have varying levels of impact on different fleets. However, several factors stand out, some more sector-specific than others, as the main driving forces behind the sustained profitability in 2017, such as the continued (relatively) low fuel prices, increased fishing opportunities and higher average prices for some important fish stocks.

Summary of main drivers affecting economic performance

More specifically, factors that may have contributed to improved economic performance, include, but are not limited to the following (in no specific order) by main fishing region:

North Sea and Eastern Arctic

Factors that may have contributed to the situation include:

- Recovery of certain stocks, e.g. North Sea common sole, European plaice, Atlantic herring, haddock, saithe stocks have all reached levels that are capable of delivering MSY.
- Increase in the TAC over time for a number of species such as Atlantic herring, European plaice, Atlantic cod and Norway lobster.
- Reduced TACs and quotas in 2017 for stocks, such as haddock, Northern prawn, Atlantic herring and European sprat.
- In 2017 the TAC for Atlantic mackerel increased. It is seen as an important driver of the economic performance of the UK fleet (>50% of the value of landings in the NS).
- Key demersal species haddock for the UK fleet saw its initial quota cut in 2017, however weight of landings remained stable and value of landings increased as prices rose.

- Higher average prices for some of the main species, such as Atlantic cod, common shrimp and European plaice
- Average prices for Atlantic herring and Atlantic mackerel slightly decreased.
- Fuel prices remained stable.

Factors that may drive/hamper economic performance in the future include:

- Decreasing TAC for most important species except for saithe and Norway lobster.
- Large-scale fleets in Denmark, the Netherlands and Germany are investing in new vessels and fishing techniques.
- More vertical integration is being observed leading to shifts in ownership
- Especially for the Dutch fleet the ban of pulse fishing technique will raise fuel costs and decrease net profits when enterprises has to switch to the more traditional beam trawl fishing technique

Baltic Sea

Factors that may have contributed to the positive situation

- The falling cost of marine fuel in the first quarter of 2016 contributed significantly to lower production costs. This was maintained throughout 2016 and 2017.
- The EMFF has provided measures to improve profitability including increased added value (for the small-scale coastal fleet) and utilisation of by-catch arising from the landing obligations (for the LSF). Measures are already applicable in some MS fishing in the Baltic region.
- The average price of cod recovered in 2017.

Factors that may have negatively influenced economic performance

- Lower average prices for sprat, due to the Russian embargo and higher landings of low value (reduction) species
- TAC reduction in Baltic cod stocks: ICES advice for the Eastern cod in 2020 is to close the fishery.
- ICES advice for the Bothnian Sea herring stock that when the precautionary approach is applied, catches in 2020 should be no more than 65 018 tonnes: that corresponds to a 30% decrease in quota.
- Fishing performance, especially in the small-scale coastal fleet, is very weather dependent. Even with favourable economic conditions, it can be a limiting factor for fleet performance, especially for seasonal fisheries.
- While aging vessels, obsolete equipment and insufficient investment all lead to increased maintenance costs and reduce the profitability of the fleet, the EMFF does provide the possibility of engine replacement if the fishing capacity is proven to be in balance with exploitation. Some MS have already introduced such schemes.

North Western Waters

Factors that may have contributed to the positive situation include:

- Recovery of some stocks, e.g. the biomass of most herring stocks have increased and the Northern hake stock continues to follow a positive trend.
- Low fuel prices resulting in lower energy costs, especially for pelagic trawlers.
- Increased TACs for a number of stocks, e.g. hake, herring and anglerfish.
- Stable fish prices generally and higher average prices for some important species e.g. common sole and *Nephrops*

Factors that may have hampered economic performance in the region include:

- Lower average prices and landings for plaice, common shrimp, herring and mackerel.

South Western Waters

Overall the fleet as a whole was profitable but generally deteriorated compared to 2016

Factors that may have contributed to the positive situation include:

- Most of the stocks have generally progressed towards MSY and, particularly, key stocks such as the case of the Northern hake stock, which continues to follow a positive trend.
- Increased TACs for a number of stocks, e.g. hake, blue whiting or mackerel and subsequently, higher landings.
- Prices have been generally stable with certain species particularly contributing to boost revenues as is the case of hake, albacore and blue shark.
- Crew wages have tended to grow in real terms in 2017, thus, achievements in environmental and economic sustainability could also be contributing to social sustainability.

Factors that may have hampered economic performance in the region include:

- Lower average prices for European pilchard, European anchovy, blue whiting and chub mackerel.
- Moderate increase in fuel prices resulting in slightly higher energy costs, especially for pelagic fisheries. This trend will continue in the next years.

Mediterranean Sea

The overall positive trend in economic performance registered has been largely driven by the Italian fleet, the largest fleet after Greece (not included in the economic analysis for lack of data). The fleet appears to be returning to levels of profitability not achieved for many years.

Factors that may have contributed to the positive situation include:

- Decreased energy consumption leading to proportionally lower energy costs per landed tonne
- Higher incomes thanks to the positive trend in fish prices for some key species.
- Investments (that will be likely higher in the next years with the full implementation of EMFF) aimed at adding value to fishery products, i.e. allowing fishers to carry out the processing, marketing and direct sale of their own catches, have been met with great interest among Mediterranean fishers.
- Recent commercial strategies aimed at improving traceability and quality of local seafood, such as the "Venetian Wild Harvested Striped Clam fishery" - the first Italian and Mediterranean fishery to achieve an MSC certification in 2018, is likely to impact the future trend in the landings value of clams, considering the impact that certification has on some foreign markets.
- Increase of the EU bluefin tuna quota has positively impacted the profitability of vessels involved in the fishery.

Factors that may have hampered economic performance in the region include:

- According to GFCM (FAO 2018.a and b) only 38% of the stocks are at biologically sustainable levels even if there are examples of fisheries where stocks are being exploited at rates consistent with achieving MSY (STECF, 2019).
- The overall level of overfishing remains generally too high.
- Marine resources and ecosystems have come under increasing pressure in recent years, driven by diversification and intensification of marine and maritime activities.
- Fishing capacity has been frozen or reduced in EU countries since the mid '90s, the trend in non-EU Mediterranean countries is probably following a different pattern, and an increase in effort and capacity is likely to still occur in some areas.

Black Sea

After the visible improvement of the fleet's economic performance in 2015 with an increase in both gross and net profits, there was a small decrease in 2016 and in 2017.

Factors that may have contributed to an improved situation include:

- An increase in the turbot quota for both Bulgaria and Romania in 2018 and 2019 together with fixed quotas for third countries fishing in the Black Sea.
- A small increase in the average prices for some of the species with significant landings and maintaining the average prices for the other species.
- The sea snails stock in GSA 29 is fished below F_{MSY}, which means that fishing vessels and processing plants utilising this species will continue to provide employment in the region.
- Keeping the trend with lower fuel costs at regional level.

Factors that may affect negatively the fleet performance in the region:

- The weather conditions in the Black Sea, including strong winds and large temperature differences between winter and summer, significantly affect fishing activities.
- As trawling is typically fuel intensive, fluctuations in fuel consumption and increase in fuel prices may lead to a significant increase in the energy costs.
- The Black Sea fishery is highly dependent on very few species, and, according to the scientific assessments, some of the commercially important stocks are currently being exploited above F_{MSY}.
- The GFCM has established a set of emergency measures for stocks in the Black Sea region in order to align the implementation of management measures by all countries operating in the region.

General issues and factors impacting on the EU long distant and OMR fleets

Potentially positive drivers

- Energy costs continue to be one of the main expenditure items for the large-scale fleet, especially demersal and pelagic trawlers. Consequently, the falling cost of marine fuel in the first quarter of 2016 (when it reached the lowest value since 2009) contributed significantly to lower production costs. This was maintained throughout 2017 when fuel prices remained stable, but recent (2018 and 2019) increases in oil prices are leading to increased fuel costs once again.
- The implementation of certification schemes and the growing demand for certified products.
- Research and innovation projects (more selective fishing gears) funded by the European Fishing Fund and national support
- The witch flounder 3NO stock reopened to activity in 2015, following many years with no directed fishery (NDF). The low TAC may create a discarding problem for those vessels without quota but with a by-catch of this species
- Low, stable fuel prices and higher average market prices have contributed positively to the overall performance of vessels operating in NAFO, in particular, demersal trawlers.
- The new Management Strategy Evaluation for Greenland halibut, adopted at the NAFO Annual Meeting in September 2017, was implemented in 2018 with a starting TAC of 17 500 tonnes.
- Average market prices of swordfish and blue shark, important to vessels operating the ICCAT RA remained high.
- The introduction of a Harvest Control Rule for Northern Atlantic albacore in 2018, together with a 20% TAC increase has given increased certainty to EU operators, particularly in Spain and France. This could bring about increased landings for Spanish and French purse seiners and longliners from 2018 onwards.
- The economic performance of most OMR fleets improved in 2017. OMR fleets mostly supply local markets with fresh fish. The exceptions are tunas and other large pelagics - the price obtained for these species is heavily dependent on the international market while landings depend on the status of stocks.
-

Potentially negative drivers

- Whilst the consequences of Brexit are unknown, it could have a large impact on many EU fishing vessels. The UK holds a significant portion of the value of landings in the region (30%). Furthermore, there is a high dependency on UK waters for a number of MS in the region. Belgium, the Netherlands, Germany, Denmark, France, Ireland, Sweden and to a lesser overall extent Spain are expected to be affected.
- After the Brexit vote the pound fell in value affecting UK prices in 2016 and 2017.
- Aging vessels, obsolete equipment and insufficient investment can lead to increased maintenance costs and lower profitability.
- Increased competition between professional and recreational fishers in some areas.
- Full implementation of the landing obligation which may bring with it additional costs due to a significant increase in sorting time and less income .
- The inability, of many fleets, to attract new entrants to the sector is of growing concern. Jobs on board fishing vessels are not particularly attractive for younger people due to the low wages and relatively poor working conditions although there are some exceptions
- Damage to fishing gears caused by marine mammals and other protected species, such as, seals, dolphins, sea turtles, and seabirds for a number of fleets, in particular, in the Baltic, Celtic and Mediterranean seas. These damages increase repair and maintenance costs and negatively affect their overall economic performance, bearing in mind that fishers do not receive compensation for their losses.
- Severe weather conditions and increase of areas that prohibit or limit specific fishing access/activity due to established restrictions for energy production or temporary closures of areas for stock recovery and nature conservation.
- The adoption of measures designed to reduce fishing pressure and rebuild the northern stock of shortfin mako stock may likely have a short term economic impact. This could see lower landings in 2018 and beyond.

3.8 Assessment for 2018 and outlook for 2019 and beyond

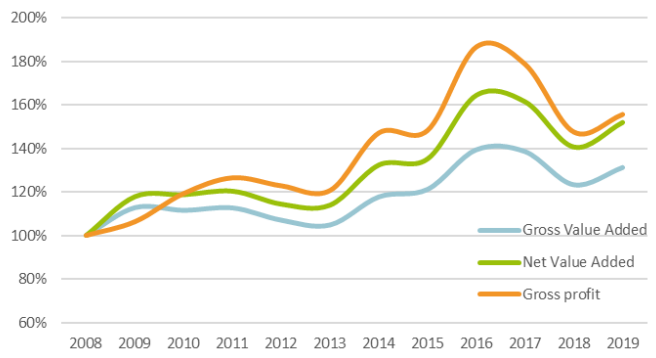
Nowcasts for 2018 and 2019

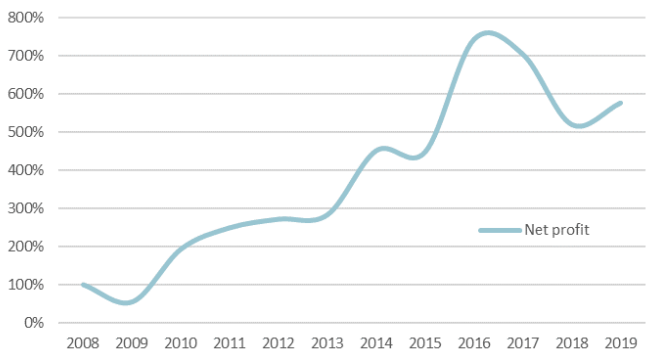
The 2019 call for economic data on the EU fishing fleet requested transversal data (effort, landings and capacity) from MS up to 2018 and economic data up to 2017. Hence, the submitted data has a one-year (transversal) to two-year (economic) time lag in relation to the publication date of the Annual Economic Report. Yet, to better inform the management of EU fisheries, the most recent information on the EU fishing fleet is required. The lag in data availability thus presents a major challenge. To address this issue, the economic performance of the EU fishing fleet for t+1 (2018) and t+2 (2019) were estimated using 'nowcasting' techniques.

The nowcast results for 2018 and 2019 for the main analyses are provided throughout each of the chapters (and in the data tables). This section summarises the estimates on the performance of the EU fleet in 2018 and 2019:

- Preliminary results forecast a 7% drop in landed weight in 2018, accompanied by an 8% fall in value (based on preliminary data). Nowcasts indicate a 3% rise in landed value in 2019 compared to 2018; still 5% less than in 2017.
- Revenue thus decreases by almost 7% in 2018; increasing 5% in 2019 compared to 2018
- In sum, 2017 results are offset in 2018 as nowcasts suggest that the slight decrease in total costs (-3%) (only energy costs increase, 7%) is cancelled out by the loss in revenue (-7%); thus, there is some deterioration in performance results in 2018: GVA (-11%), gross profit (-17.5%) and net profit (-26%).
- Despite the retrograde on previous year's results, projections indicate that the EU fleet still continued to operate at healthy profit margins in 2018.
- In relative terms, projected results show a GVA to revenue of 55% in 2018 (down from 58% in 2017), gross profit margin at 23% (down from 26%) and a net margin at 13.5% (down from 17%).
- In 2019, a 5% increase in revenue on 2018 is almost neutralised by a rise in total costs (+4%).
- Labour costs are projected to increase by 7% in 2019, increasing GVA by 6.5% compared to 2018. GVA to revenue increases slightly to 56%
- With fuel costs again increasing in 2019 but only slightly (+2%) and real interest rates lowering further, the EU fleet as a whole remains profitable with similar gross and net profit margins of 23% and 14%, respectively.
- By Member State, projected results for 2018 and 2019 indicate that all fleets but Lithuania (excludes Greece) generated gross profits
- Lithuania, already at a gross loss in 2017, is projected to remain so in 2018 and 2019, deteriorating further.
- With the exception of Finland, Germany and Lithuania, all Member State fleets are projected to generate net profits in 2018 and 2019.
- As with Lithuanian, the situation of the Finnish and German fleets is expected to deteriorate further in 2019 compared to 2017.
- Generally, the performance of most Member State fleets (n=10) stagnated slightly in 2018, rebounding in 2019. Some exceptions are:
  - improved performance of the Bulgarian fleet in 2018 and 2019
  - deteriorated performance in 2018 with further deterioration expected in 2019 – Cyprus, Estonia, Croatia, Italy, Latvia, the Netherlands and Poland
  - Ireland, Italy and Malta improved in 2018 to then deteriorate in 2019
  - Finland showed a mix performance in 2018 and deterioration in 2019

		2016	2017	*2018*	*2019*	%Δ 2017-2016	%Δ 2018-2017	%Δ 2019-2018
Number of vessels	thousand	60.5	60.0	*59.3*	*58.2*	-0.8%	-1.2%	-1.8%
Engaged crew	number	120,100	121,620	*118,223*	*115,971*	1.3%	-2.8%	-1.9%
FTE national	number	89,069	85,599	*81,733*	*83,485*	-3.9%	-4.5%	2.1%
Energy consumption	million litre	2,231	2,225	*2,103*	*2,135*	-0.3%	-5.5%	1.5%
Live weight of landings	thousand tonnes	4,831	5,203	*4,818*	*4,498*	7.7%	-7.4%	-6.7%
Value of landings	million EUR	7,614	7,568	*6,977*	*7,175*	-0.6%	-7.8%	2.8%
Gross value of landings	million EUR	7,543	7,466	*6,939*	*7,268*	-1.0%	-7.1%	4.7%
Other income	million EUR	121	165	*162*	*163*	37.0%	-2.3%	1.2%
Personnel costs	million EUR	2,140	2,181	*2,038*	*2,181*	1.9%	-6.6%	7.0%
Value of unpaid labour	million EUR	252	271	*270*	*292*	7.6%	-0.4%	7.9%
Energy costs	million EUR	906	983	*1,052*	*1,078*	8.6%	7.0%	2.4%
Repair & maintenance costs	million EUR	676	645	*605*	*606*	-4.6%	-6.2%	0.2%
Other variable costs	million EUR	1,093	1,006	*962*	*1,010*	-8.0%	-4.4%	5.0%
Other non-variable costs	million EUR	541	577	*550*	*552*	6.7%	-4.7%	0.4%
Consumption of fixed capital	million EUR	642.1	684.0	*678.2*	*670.0*	6.5%	-0.9%	-1.2%
Opportunity cost of capital	million EUR	46.4	- 11.1	- *10.5*	- *16.9*	-124.0%	6.2%	-62.1%
Value of physical capital	million EUR	4,892	4,774	*4,708*	*4,667*	-2.4%	-1.4%	-0.9%
Gross Value Added	million EUR	4,447	4,420	*3,932*	*4,185*	-0.6%	-11.0%	6.5%
GVA to revenue	%	58.0	57.9	*55.4*	*56.3*	-0.2%	-4.4%	1.7%
Net Value Added	million EUR	3,805	3,736	*3,254*	*3,515*	-1.8%	-12.9%	8.0%
Gross profit	million EUR	2,055	1,967	*1,624*	*1,713*	-4.3%	-17.5%	5.5%
Gross profit margin	%	26.8	25.8	*22.9*	*23.0*	-3.9%	-11.3%	0.8%
Net profit	million EUR	1,367	1,294	*956*	*1,060*	-5.3%	-26.1%	10.9%
Net profit margin	%	17.8	17.0	*13.5*	*14.3*	-4.9%	-20.6%	5.9%
Average wage per FTE	thousand EUR	26.8577	28.6525	*28.2*	*29.6*	6.7%	-1.4%	4.9%
GVA per FTE (labour productivity)	thousand EUR	49.93	51.63	*48.10*	*50.13*	3.4%	-6.8%	4.2%
Return on fixed tangible assets	%	28.9	26.9	*20.1*	*22.3*	-7.0%	-25.3%	11.3%
Fuel efficiency	%	12.0	13.2	*15.2*	*14.8*	9.7%	15.2%	-2.2%
Energy consumed per landed tonne	litre per tonne	461.9	427.7	*436.6*	*474.6*	-7.4%	2.1%	8.7%





Outlook for 2019 and beyond

Production

Global seafood production has grown rapidly in the last decades. As capture fisheries production has stabilised at an average of about 90 million tonnes per annum, this increase in overall production is mainly due to aquaculture production growth.

According to OECD–FAO (2019)[7], overall, 2018 was a year of further expansion for the fisheries and aquaculture sectors, with production, trade and consumption all reaching historical peaks. The growth in production was due to an increase in capture fisheries (mainly of anchoveta in South America) and the continued expansion of aquaculture production, at some 3-4% a year.

Aquaculture production growth is likely to continue but at a lower rate and despite becoming less dependent on fishmeal and oil from capture fisheries. Lower aquaculture production growth will not be able to fully satisfy the increasing global demand for seafood products. With increases in income and purchasing power in emerging economies (e.g. China, India and Brazil), seafood prices from capture fisheries and aquaculture are likely to increase. As capture fisheries production is not expected to change significantly, the lower the aquaculture production increase, the higher will be the increase in seafood prices.

Capture production is expected to increase to 95 million tonnes. This slight increase is attributed to increases in sustainability and the recovery of fish stocks as a result from improved resource management. Other factors behind this growth are reduced discards, waste and losses, improved fishing technologies, and decreases in illegal, unreported and unregulated (IUU) fishing, increased efficiency of small-scale fisheries.

According to the China Agricultural Outlook (2015-26), in the next 10 years, the Chinese government will introduce major reforms to improve the fisheries sustainability, including control of fishing vessels, improvement of the moratorium and the quota systems, and reduced quotas for some species. Thus, Chinese capture fisheries production is expected to decrease, at least in the short to medium term. Aquaculture is also expected to go through a process of restructuration.

Aquaculture production will be less dependent on fishmeal and oil from capture fisheries thanks to improved efficiency in the use of fishmeal, substitution to other types of feed and expansion of farmed species that require no or little fishmeal as inputs.

EU fisheries and aquaculture sectors, in particular, are going to be affected by the UK leaving the EU (i.e., Brexit), the landing obligation and the results from trying to exploit all fish stocks at MSY level. In the long-term, also climate change and ocean acidification may impact fisheries and aquaculture. However, their impact on productivity rates are uncertain and may vary significantly by region.

Fish prices

According to OECD–FAO (2019), fish prices grew during the first part of 2018, driven by demand growing faster than supply for a number of key species, and weakened over the rest of the year due to increased supply and softening consumer demand in the United States and some European markets. The aggregate FAO Fish Price Index reached a record high in March 2018 (165 from a base of 100 in 2002-04), and then started to slightly decline. However, fish prices remained above 2017 levels for most species and products.

Fish prices are expected to remain relatively stable in the short term. In the mid-term, small reductions are expected in most cases with the greatest decrease projected for capture production (-6.5%) followed by fishmeal (-4.0%), traded fish products (-3.0%), and then aquaculture (-2.2%), while the price of fish oil is projected to increase slightly (+1.8%). While the price of fishmeal is expected to fall slightly in real terms it will still be significantly higher than those seen in 2005. This situation is even more pronounced for fish oil.

GDP, inflation and employment

The European Central Bank (ECB)'s macroeconomic forecasts for the euro area forecast a decrease in real Gross Domestic Product (GDP) growth. ECB estimates a real GDP increase of 1.2% in 2019, 1.4% in 2020 and 1.4% in 2021.

- The projections foresee annual (HICP) inflation at 1.3% in 2019, 1.4% in 2020 and 1.6% in 2021. The decline in inflation in 2019 is mainly accounted for by a significant decrease in HICP energy inflation on the back of downward base effects and slightly declining crude oil prices in euro. In 2020 and 2021, HICP energy prices are expected to rise at subdued rates, partly reflecting the slightly downward sloping oil price futures curve.

[7] OECD/FAO (2019), "Fish and seafood", in *OECD-FAO Agricultural Outlook 2019-2028*, OECD Publishing, Paris, https://doi.org/10.1787/b91999c4-en.

- Employment will continue to increase in the euro area, reducing unemployment. ECB estimates a 7.3% unemployment rate in 2020. However, significant differences by country will prevail.
- Labour costs are expected to continue to increase. Growth in compensation per employee is projected to rise from 2.2% in 2018 to 2.5% in 2021 as labour markets continue to tighten.

Fuel prices

Major changes in fuel prices are not expected in 2019 and 2020 - worldwide crude oil price[8] are projected to average $67 a barrel in the second half of 2019 and remain at that level in 2020 (EIA 2019). The projected build of global oil inventory in 2020 puts some downward pressure on oil prices, which may be offset by upward price pressures as a result of the International Maritime Organisation's (IMO) 2020 regulations taking effect so that Brent crude oil prices will continue to average $67/b in 2020.

Yet, high levels of variability and uncertainty may be expected, some of the reasons being:

- Growth in U.S. production of shale oil and alternative fuels, such as ethanol since 2010;
- Global demand continues to grow but at a slower rate than anticipated. Most of the increase has been from China but growth is slowing. India is expected to surpass China in the near future.
- OPEC (Organization of the Petroleum Exporting Countries) December 2018 decision to cut 1.2 million barrels per day; OPEC members agreed to extend production cuts into 2020 to prevent a decline in prices.
- Supply growth is constrained by the OPEC decision and by Venezuela and Iran embargoes
- In 2019, commitments to stop climate change introduces more uncertainty into future oil demand.
- In 2020, the global limit on sulfur content for all marine fuels will be lowered dramatically. As the IMO 2020 regulation to ban high sulfur fuel oil (HSFO) from the bunker pool comes into effect, the bunker fuel demand landscape is expected to change in 2020. Demand for HSFO, the main vessel fuel since the 1960's, will fall from 3.5 mb/d to 1.4 mb/d in just one year. Many shipping companies may prefer to use marine gasoil (MGO) instead of a new very low sulfur fuel oil (VLSFO), despite its higher price as the quantity of VLSFO produced will initially be limited to 1 mb/d because of reduced availability of low sulphur blending materials. Some shipping companies may also be reluctant to adopt a new fuel immediately, and would prefer to use MGO until they have confidence that VLSFO will be easily available in ports and stable and compatible with similar grades. MGO prices are expected to increase in 2020 (IEA 2019).

[8] There are two grades of crude oil that are benchmarks for other oil prices. West Texas Intermediate (WTI) comes from the United States and is the benchmark for U.S. oil prices. Brent North Sea oil comes from Northwest Europe and is the benchmark for global oil prices.

3.9 Summary data tables by Member State and fishing activity (scale of operation)

Table 3-17 Main capacity and employment variables by Member State, 2017

MS fleet	Total no. of vessels number	% Δ to 2016	as % of EU Total	Active vessels number	% Δ to 2016	Active vessels as % of EU Total	% of inactive vessels in MS fleet	Total vessel tonnage thousand GT	% Δ to 2016	as % of EU Total	Total vessel power thousand kW	% Δ to 2016	as % of EU Total	Engaged crew number	% Δ to 2016	as % of EU Total	Unpaid labour number	as % of EU Total	FTE national number	% Δ to 2016	as % of EU Total
BEL	73	-3.9%	0.1%	67	-1.5%	0.1%	8%	14.0	0.3%	0.9%	47.1	2.0%	0.7%	357	12.3%	0.2%			214	-7.1%	0.2%
BGR	1,897	-1.1%	2.3%	1,295	7.4%	2.0%	32%	6.3	-0.3%	0.4%	57.0	1.8%	0.9%	1,947	21.5%	1.3%	485	1.1%	716	23.4%	0.7%
CYP	799	-12.0%	1.0%	765	-0.4%	1.2%	4%	3.2	-4.4%	0.2%	36.9	1.4%	0.6%	1,134	1.5%	0.7%	996	2.3%	689	3.1%	0.6%
DEU	1,397	-2.3%	1.7%	1,012	-4.4%	1.5%	28%	60.4	-0.4%	3.9%	131.5	-1.1%	2.1%	1,668	8.4%	1.1%	351	0.8%	1,207	0.2%	1.1%
DNK	1,726	-3.7%	2.1%	1,308	-4.8%	2.0%	24%	66.8	0.5%	4.3%	198.6	-3.1%	3.2%	1,306	-3.6%	0.9%	443	1.0%	1,644	-0.8%	1.5%
ESP	9,356	-1.1%	11.2%	8,295	-0.7%	12.7%	11%	341.0	-0.8%	21.9%	799.7	-0.4%	12.7%	34,326	8.6%	22.6%	7,693	17.6%	29,203	-0.7%	27.1%
EST	1,589	2.4%	1.9%	1,587	2.5%	2.4%	0%	5.7	-0.9%	0.4%	31.3	-0.6%	0.5%	2,100	-0.3%	1.4%	1,069	2.4%	460	0.7%	0.4%
FIN	3,217	4.0%	3.9%	1,469	-7.8%	2.2%	54%	16.4	1.5%	1.1%	173.5	3.0%	2.8%	1,359	-10.8%	0.9%	785	1.8%	271	-9.7%	0.3%
FRA	6,970	2.0%	8.4%	5,739	1.0%	8.8%	18%	176.7	1.8%	11.4%	1,025.8	2.2%	16.3%	13,540	0.0%	8.9%	-	0.0%	6,623	-7.2%	6.1%
GBR	6,267	-0.6%	7.5%	4,709	1.6%	7.2%	25%	200.5	3.6%	12.9%	798.0	0.9%	12.7%	11,692	-0.6%	7.7%	686	1.6%	7,358	-17.2%	6.8%
GRC	14,985	-1.3%	18.0%	13,437	-1.5%	20.5%	10%	71.1	-0.9%	4.6%	426.7	-1.0%	6.8%	22,471	-10.0%	14.8%	14,863	34.0%	20,542	-10.8%	19.1%
HRV	8,349	7.8%	10.0%	6,052	13.7%	9.2%	28%	48.8	-0.6%	3.1%	386.8	-0.2%	6.2%	7,890	9.2%	5.2%	4,135	9.5%	1,665	-36.2%	1.5%
IRL	1,954	-4.4%	2.3%	1,316	-8.6%	2.0%	33%	61.3	2.4%	3.9%	181.0	-1.0%	2.9%	3,062	-11.5%	2.0%	321	0.7%	2,608	-2.4%	2.4%
ITA	12,270	-0.3%	14.7%	11,255	-0.1%	17.2%	8%	157.2	-0.3%	10.1%	983.0	-1.1%	15.6%	25,499	-1.7%	16.8%	8,262	18.9%	20,268	-5.1%	18.8%
LTU	149	-2.6%	0.2%	90	-7.2%	0.1%	40%	41.3	-12.0%	2.7%	49.0	-9.0%	0.8%	466	-6.4%	0.3%	12	0.0%	348	0.6%	0.3%
LVA	324	-2.4%	0.4%	251	-5.3%	0.4%	23%	6.8	-8.1%	0.4%	20.3	-2.8%	0.3%	661	2.2%	0.4%	138	0.3%	326	2.5%	0.3%
MLT	935	-7.8%	1.1%	686	-6.2%	1.0%	27%	6.4	-10.6%	0.4%	69.9	-5.4%	1.1%	1,134	-10.1%	0.7%	774	1.8%	719	-7.1%	0.7%
NLD	736	0.4%	0.9%	525	-0.4%	0.8%	29%	116.4	1.5%	7.5%	259.0	1.7%	4.1%	2,149	8.9%	1.4%	408	0.9%	1,723	4.5%	1.6%
POL	844	-3.5%	1.0%	795	-2.1%	1.2%	6%	37.2	8.7%	2.4%	86.2	5.7%	1.4%	2,560	3.2%	1.7%	1,081	2.5%	2,484	9.1%	2.3%
PRT	7,950	-1.9%	9.5%	3,788	-0.8%	5.8%	52%	88.5	-6.7%	5.7%	348.0	-3.3%	5.5%	14,705	-4.5%	9.7%	1,006	2.3%	7,823	-4.9%	7.3%
ROU	155	5.4%	0.2%	135	11.6%	0.2%	13%	1.4	26.9%	0.1%	6.2	6.1%	0.1%	406	17.7%	0.3%	20	0.0%	60	26.4%	0.1%
SVN	172	0.6%	0.2%	80	-3.6%	0.1%	53%	0.6	2.6%	0.0%	8.8	3.6%	0.1%	101	-8.2%	0.1%	59	0.1%	63	-9.8%	0.1%
SWE	1,209	-3.6%	1.5%	911	-6.5%	1.4%	25%	28.2	-11.6%	1.8%	159.3	-6.7%	2.5%	1,449	-6.0%	1.0%	160	0.4%	793	-3.1%	0.7%
EU total	**83,323**	-0.1%		**65,567**	0.3%			**1,556**	-0.3%		**6,284**	-0.2%		**151,981**	-0.2%		**43,747**		**107,807**	-6.0%	
EU excl. GRC	**68,338**	0.1%		**52,130**	0.7%			**1,485**	-0.3%		**5,857**	-0.2%		**129,510**	1.7%		**28,884**		**87,265**	-4.8%	

Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/ACS(2019))

Table 3-18 Main fishing activity variables by Member State, 2017

MS fleet	Days at sea thousand days	% Δ to 2016	as % of EU Total	Fishing days thousand days	% Δ to 2016	as % of EU Total	Energy consumed million litres	% Δ to 2016	as % of EU Total	Landed weight thousand tonnes	% Δ to 2016	as % of EU Total	Landed value million EUR	% Δ to 2016	as % of EU Total	Average price overall EUR per kg	% Δ to 2016
BEL	13.7	-4.3%	0.3%	14.9	-5.7%	0.3%	36.7	-2.2%	1.6%	24.3	-9.7%	0.5%	84.8	-7.7%	1.1%	3.5	2.2%
BGR	25.1	-3.1%	0.5%	25.1	-3.1%	0.5%	2.8	8.6%	0.1%	7.5	7.4%	0.1%	4.8	2.9%	0.1%	0.6	-4.2%
CYP	50.6	-13.1%	1.0%	50.6	-13.1%	1.1%	2.2	-2.7%	0.1%	1.7	19.3%	0.0%	10.4	34.4%	0.1%	6.0	12.7%
DEU	101.5	-2.5%	2.1%	104.0	-2.3%	2.2%	43.3	5.3%	1.8%	252.8	10.8%	4.8%	232.3	-0.7%	3.0%	0.9	-10.4%
DNK	88.3	-7.0%	1.8%	82.3	-7.2%	1.7%	97.8	6.1%	4.2%	903.6	35.5%	17.0%	437.7	-7.9%	5.6%	0.5	-32.0%
ESP	1,066.7	-1.5%	21.8%	1,023.8	-1.3%	21.4%	605.8	4.0%	25.9%	931.5	3.8%	17.5%	2,032.8	-2.6%	25.9%	2.2	-6.1%
EST	63.3	-12.1%	1.3%	119.5	-19.4%	2.5%	3.3	19.6%	0.1%	64.5	6.5%	1.2%	14.5	-0.6%	0.2%	0.2	-6.7%
FIN	99.1	-9.9%	2.0%	98.8	-10.0%	2.1%	18.7	-8.0%	0.8%	154.5	-1.8%	2.9%	35.8	-9.9%	0.5%	0.2	-8.2%
FRA	650.6	0.1%	13.3%	620.6	-0.2%	13.0%	310.6	-1.2%	13.3%	555.9	2.9%	10.4%	1,350.1	10.6%	17.2%	2.4	7.5%
GBR	369.6	-14.3%	7.5%	324.6	1.1%	6.8%	270.9	-3.8%	11.6%	726.4	3.7%	13.6%	1,080.2	-4.4%	13.8%	1.5	-7.8%
GRC	80.8		1.6%	80.8	-96.0%	1.7%	93.2	-11.2%	4.0%	49.2	-34.3%	0.9%	215.9	-53.4%	2.8%	4.4	-29.1%
HRV	236.4	0.7%	4.8%	205.7	0.7%	4.3%	23.3	-6.2%	1.0%	68.9	-4.8%	1.3%	55.9	-4.3%	0.7%	0.8	0.5%
IRL	80.0	3.6%	1.6%	67.8	0.1%	1.4%	95.3	-2.6%	4.1%	252.7	5.6%	4.7%	271.8	2.4%	3.5%	1.1	-3.0%
ITA	1,400.8	-4.3%	28.6%	1,412.5	-13.0%	29.5%	357.0	-4.4%	15.2%	191.9	-0.2%	3.6%	934.1	2.9%	11.9%	4.9	3.1%
LTU	7.7	-18.0%	0.2%	6.8	-19.1%	0.1%	41.9	-6.2%	1.8%	88.7	-16.1%	1.7%	58.2	-18.0%	0.7%	0.7	-2.2%
LVA	17.3	-4.6%	0.4%	18.1	-7.2%	0.4%	4.8	38.2%	0.2%	67.0	11.7%	1.3%	19.1	20.9%	0.2%	0.3	8.3%
MLT	22.3	-4.1%	0.5%	19.6	-6.1%	0.4%	3.7	-11.0%	0.2%	2.2	-6.5%	0.0%	10.4	5.7%	0.1%	4.8	13.0%
NLD	51.0	-2.6%	1.0%	44.9	-2.9%	0.9%	168.1	5.0%	7.2%	375.6	2.2%	7.1%	431.4	-7.5%	5.5%	1.1	-9.5%
POL	60.0	-20.2%	1.2%	56.8	-20.3%	1.2%	17.0	-0.3%	0.7%	208.7	5.2%	3.9%	47.5	-7.6%	0.6%	0.2	-12.1%
PRT	337.6	-0.5%	6.9%	324.5	-0.2%	6.8%	86.6	-6.7%	3.7%	162.6	-6.1%	3.1%	380.0	-2.6%	4.8%	2.3	3.8%
ROU	4.9	18.7%	0.1%	4.8	27.3%	0.1%	0.8	3.2%	0.0%	9.6	39.7%	0.2%	4.5	16.4%	0.1%	0.5	-16.7%
SVN	7.3	-7.2%	0.1%	7.3	-7.2%	0.2%	0.2	0.7%	0.0%	0.1	-15.9%	0.0%	0.9	-9.6%	0.0%	6.8	7.5%
SWE	67.3	-8.7%	1.4%	67.3	-8.7%	1.4%	57.8	-2.5%	2.5%	221.7	12.0%	4.2%	127.2	1.1%	1.6%	0.6	-9.7%
EU total	**4,902**	-2.4%		**4,781**	-32.2%		**2,342**	-0.8%		**5,321**	6.9%		**7,840**	-3.6%		**1.5**	-9.9%
EU excl. GRC	**4,821**	-4.0%		**4,700**	-6.1%		**2,249**	-0.3%		**5,272**	7.5%		**7,624**	-0.6%		**1.4**	-7.6%

Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/ACS(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Table 3-19 Main income variables by Member State, 2017

MS fleet	Gross value of landings million EUR	% Δ to 2016	as % of EU Total	Other income million EUR	% Δ to 2016		Operating subsidies million EUR	% Δ to 2016	as % of EU Total	Income from leasing out quota million EUR	% Δ to 2016	as % of EU Total
BEL	84.8	-7.5%	1.1%	3.8	20%	2.0%	0.8	-51%	1.5%	-		0.0%
BGR	4.8	-9.7%	0.1%	0.3	105%	0.2%	-		0.0%	-		0.0%
CYP	10.4	61.6%	0.1%	-		0.0%	0.8	846%	1.5%	-		0.0%
DEU	158.3	0.1%	2.0%	3.7	6%	1.9%	0.6	8%	1.2%	-		0.0%
DNK	437.4	-7.8%	5.7%	10.9	52%	5.6%	1.5		2.9%	25.6	12%	64.3%
ESP	1,993.5	1.3%	25.8%	26.2	46%	13.5%	7.4	56%	14.0%	5.8	275%	14.6%
EST	14.5	-0.6%	0.2%	0.2	12%	0.1%	-		0.0%	0.0	-80%	0.0%
FIN	34.0	0.1%	0.4%	1.8	3%	1.0%	0.7	-24%	1.3%	-		0.0%
FRA	1,329.9	1.9%	17.2%	19.6	-11%	10.1%	6.5	-39%	12.2%	-		0.0%
GBR	1,076.7	-5.1%	13.9%	53.0	39%	27.4%	-		0.0%	5.0	-10%	12.5%
GRC	215.9	-53.5%	2.8%	2.8		1.5%	1.5	-48%	2.7%	-		0.0%
HRV	55.9	-4.3%	0.7%	25.5	228%	13.2%	5.5	-68%	10.3%	0.3	-35%	0.7%
IRL	301.4	-0.8%	3.9%	8.9	328%	4.6%	0.4	-10%	0.7%	-		0.0%
ITA	934.1	2.9%	12.1%	20.9	118%	10.8%	5.7		10.8%	0.3		0.7%
LTU	55.9	-17.8%	0.7%	1.6	-18%	0.8%	0.2	584%	0.3%	-		0.0%
LVA	19.1	20.9%	0.2%	2.0	12%	1.0%	-	-100%	0.0%	-		0.0%
MLT	10.4	5.7%	0.1%	0.5	-10%	0.3%	-	-100%	0.0%	1.0	-16%	2.4%
NLD	438.2	-6.6%	5.7%	2.0	-19%	1.1%	-	-100%	0.0%	1.9	-11%	4.7%
POL	47.4	-7.7%	0.6%	0.2	31%	0.1%	15.5	2284%	29.2%	-		0.0%
PRT	382.4	-3.1%	4.9%	0.8	12%	0.4%	6.1	493%	11.5%	-		0.0%
ROU	4.5	16.4%	0.1%	-		0.0%	-		0.0%	-		0.0%
SVN	0.9	-9.6%	0.0%	1.3	3%	0.7%	-	-100%	0.0%	-		0.0%
SWE	127.2	1.1%	1.6%	7.6	29%	3.9%	-		0.0%	-		0.0%
EU total	**7,737**	-4.1%		**193.5**	51%		**53.1**	21%		**39.8**	18%	
EU excl. GRC	**7,521**	-1.1%		**191**	49%		**51.6**	26%		**39.8**	18%	

Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/ACS(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Table 3-20 Main cost items variables by Member State, 2017

MS fleet	Personnel costs million EUR	% Δ to 2016	as % of EU Total	Value of unpaid labour million EUR	% Δ to 2016	as % of EU Total	Energy costs million EUR	% Δ to 2016	as % of EU Total	Repair & maintenance costs million EUR	% Δ to 2016	as % of EU Total	Other variable costs million EUR	% Δ to 2016	as % of EU Total	Other non-variable costs million EUR	% Δ to 2016	as % of EU Total	Lease/rental payments for quota million EUR	% Δ to 2016	as % of EU Total	Consumption of fixed capital million EUR	% Δ to 2016	as % of EU Total
BEL	28.1	-1%	1.2%	2.1	15%	0.6%	14.5	8%	1.4%	12.8	46%	1.9%	8.6	-27%	0.8%	6.1	-10%	1.0%	-		0.0%	6.9	-7%	0.9%
BGR	1.5	-5%	0.1%	0.1	-38%	0.0%	1.1	-12%	0.1%	0.6	14%	0.1%	0.2	-21%	0.0%	0.2	-29%	0.0%	-		0.0%	0.3	-47%	0.0%
CYP	0.8	-11%	0.0%	0.3	14%	0.1%	1.5	10%	0.1%	0.8	4%	0.1%	1.2	-57%	0.1%	0.2	-14%	0.0%	-		0.0%	1.7	-35%	0.2%
DEU	38.6	-8%	1.7%	10.1	-2%	2.7%	17.4	19%	1.6%	20.2	7%	3.0%	16.7	29%	1.6%	32.4	91%	5.6%	-		0.0%	33.0	62%	4.5%
DNK	87.4	-1%	3.8%	38.0	-2%	10.3%	43.7	21%	4.1%	48.1	-2%	7.1%	33.1	-8%	3.1%	21.3	1%	3.7%	24.6	-17%	23.0%	77.2	-4%	10.6%
ESP	615.3	13%	27.0%	89.4	15%	24.3%	233.2	8%	21.9%	127.9	-11%	18.9%	378.3	-11%	35.3%	130.5	14%	22.4%	10.6	39%	9.9%	114.0	56%	15.6%
EST	4.4	3%	0.2%	1.0	-13%	0.3%	1.8	30%	0.2%	1.3	-13%	0.2%	1.4	-7%	0.1%	0.5	0%	0.1%	0.1	6%	0.1%	1.7	-2%	0.2%
FIN	4.9	5%	0.2%	1.7	0%	0.5%	9.1	8%	0.9%	3.9	6%	0.6%	2.5	10%	0.2%	4.5	8%	0.8%	0.3	29%	0.3%	14.7	-2%	2.0%
FRA	501.4	0%	22.0%	-		0.0%	147.7	7%	13.9%	118.0	-5%	17.4%	154.5	-1%	14.4%	159.9	6%	27.5%	-		0.0%	93.7	-2%	12.8%
GBR	277.5	-3%	12.2%	30.4	113%	8.2%	124.6	9%	11.7%	106.6	-13%	15.7%	184.5	-16%	17.2%	62.8	-4%	10.8%	64.2	38%	60.1%	58.1	4%	8.0%
GRC	71.8	-21%	3.2%	96.7	2%	26.2%	67.3	-11%	6.3%	26.6	-19%	3.9%	56.3	-28%	5.3%	7.5	16%	1.3%	-		0.0%	35.8	-1%	4.9%
HRV	22.1	-4%	1.0%	0.3	-88%	0.1%	14.4	9%	1.4%	5.7	-24%	0.8%	8.2	3%	0.8%	4.5	-33%	0.8%	0.2	-56%	0.2%	9.5	-24%	1.3%
IRL	93.2	5%	4.1%	5.9	15%	1.6%	40.7	22%	3.8%	42.9	-2%	6.3%	39.9	15%	3.7%	23.4	-21%	4.0%			0.0%	28.1	-7%	3.9%
ITA	222.3	-3%	9.8%	55.2	-12%	15.0%	186.7	4%	17.5%	45.8	-1%	6.8%	73.1	-4%	6.8%	41.7	10%	7.2%	0.5		0.5%	152.5	0%	20.9%
LTU	10.0	9%	0.4%	0.0	104%	0.0%	12.8	10%	1.2%	7.7	26%	1.1%	22.5	-13%	2.1%	9.4	-14%	1.6%	-		0.0%	9.6	-10%	1.3%
LVA	3.9	37%	0.2%	0.1	-46%	0.0%	2.4	42%	0.2%	1.0	1%	0.1%	3.6	47%	0.3%	5.0	-5%	0.9%	-		0.0%	2.4	126%	0.3%
MLT	2.2	53%	0.1%	1.7	-45%	0.5%	2.1	-12%	0.2%	1.6	-12%	0.2%	1.7	-6%	0.2%	0.2	-7%	0.0%	1.2	2%	1.1%	1.7	-29%	0.2%
NLD	120.1	-12%	5.3%	14.9	-2%	4.0%	60.6	18%	5.7%	53.7	-2%	7.9%	32.8	6%	3.1%	54.4	8%	9.4%	5.1	-68%	4.8%	30.8	-13%	4.2%
POL	12.0	21%	0.5%	6.2	34%	1.7%	7.9	2%	0.7%	4.0	12%	0.6%	4.6	1%	0.4%	5.3	17%	0.9%	-		0.0%	2.4	-50%	0.3%
PRT	137.1	-2%	6.0%	5.1	-2%	1.4%	48.7	-1%	4.6%	25.1	0%	3.7%	41.2	2%	3.8%	10.9	-14%	1.9%	-		0.0%	34.6	-4%	4.7%
ROU	0.8	22%	0.0%	0.0	-21%	0.0%	0.6	20%	0.1%	0.3	62%	0.1%	0.1	13%	0.0%	0.2	59%	0.0%	0.1	16%	0.1%	0.2	25%	0.0%
SVN	0.5	-12%	0.0%	0.1	-44%	0.0%	0.2	13%	0.0%	0.2	19%	0.0%	0.0	-1%	0.0%	0.0	-34%	0.0%	-		0.0%	0.1	-31%	0.0%
SWE	19.6	1%	0.9%	9.0	-8%	2.5%	26.1	9%	2.4%	22.3	4%	3.3%	5.4	-28%	0.5%	8.2	-4%	1.4%	-		0.0%	20.3	25%	2.8%
EU total	**2,275**	0.9%		**369**	5.3%		**1,065**	7.1%		**677.4**	-5.5%		**1,070**	-9.2%		**589.3**	6.3%		**106.9**	4.9%		**729.3**	5.6%	
EU excl. GRC	**2,203**	1.9%		**272**	6.6%		**998**	8.6%		**650.8**	-4.9%		**1,014**	-7.9%		**581.8**	6.2%		**106.9**	4.9%		**693.5**	5.9%	

Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/ACS(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Table 3-21 Main performance results by Member State, 2017

MS fleet	Revenue	as % of EU Total	% Δ to 2016	Gross Value Added	as % of EU Total	% Δ to 2016	GVA to revenue	Net Value Added	as % of EU Total	% Δ to 2016	Gross profit	as % of EU Total	% Δ to 2016	Gross profit margin	Net profit	as % of EU Total	% Δ to 2016	Net profit margin
	million EUR			million EUR			%	million EUR			million EUR			%	million EUR			%
BEL	88.6	1.1%	-7%	46.6	1.0%	-14%	52.6	40.3	1.1%	-14%	16.4	0.8%	-31%	18.5	10.1	0.8%	-40%	11.4
BGR	5.1	0.1%	-7%	3.0	0.1%	-5%	58.7	2.6	0.1%	38%	1.4	0.1%	-2%	28.1	1.1	0.1%	377%	21.3
CYP	10.4	0.1%	62%	6.7	0.2%	414%	64.7	4.1	0.1%	212%	5.6	0.3%	4277%	54.0	3.0	0.2%	162%	29.0
DEU	162.0	2.1%	0%	75.4	1.7%	-23%	46.6	44.8	1.2%	-43%	26.7	1.3%	-42%	16.5	-3.9	-0.3%	-115%	-2.4
DNK	448.2	5.8%	-7%	302.0	6.8%	-11%	67.4	229.2	6.1%	-11%	176.6	8.9%	-17%	39.4	103.8	8.0%	-20%	23.2
ESP	2,019.7	26.2%	2%	1,149.7	25.7%	6%	56.9	1,037.7	27.4%	3%	445.1	22.3%	-4%	22.0	333.0	25.5%	-13%	16.5
EST	14.7	0.2%	0%	9.7	0.2%	-2%	66.0	8.1	0.2%	5%	4.4	0.2%	-4%	29.7	2.7	0.2%	17%	18.5
FIN	35.8	0.5%	0%	15.9	0.4%	-8%	44.3	1.3	0.0%	-48%	9.3	0.5%	-15%	25.9	-5.3	-0.4%	-35%	-14.9
FRA	1,349.5	17.5%	2%	769.5	17.2%	2%	57.0	678.3	17.9%	3%	268.1	13.5%	4%	19.9	177.0	13.6%	10%	13.1
GBR	1,129.6	14.6%	-4%	651.1	14.6%	0%	57.6	600.6	15.9%	1%	343.3	17.2%	-2%	30.4	292.8	22.4%	0%	25.9
GRC	218.8		-53%	60.9		-78%	27.9	17.5		-92%	-107.6		-227%	-49.2	-151.0		-519%	-69.0
HRV	81.4	1.1%	23%	48.5	1.1%	58%	59.6	33.7	0.9%	1090%	26.1	1.3%	385%	32.1	11.3	0.9%	150%	13.9
IRL	310.2	4.0%	1%	163.3	3.7%	-1%	52.6	133.2	3.5%	3%	64.2	3.2%	-9%	20.7	34.1	2.6%	-5%	11.0
ITA	955.0	12.4%	4%	607.7	13.6%	5%	63.6	449.9	11.9%	9%	330.1	16.6%	16%	34.6	172.4	13.2%	41%	18.0
LTU	57.5	0.7%	-18%	5.1	0.1%	-67%	8.9	-0.9	0.0%	-118%	-4.9	-0.2%	-176%	-8.5	-10.8	-0.8%	-141%	-18.8
LVA	21.1	0.3%	20%	9.1	0.2%	27%	43.0	6.9	0.2%	14%	5.1	0.3%	22%	24.3	2.9	0.2%	-4%	14.0
MLT	10.9	0.1%	5%	5.4	0.1%	27%	49.2	3.6	0.1%	101%	1.5	0.1%	869%	14.1	-0.2	0.0%	93%	-1.6
NLD	440.2	5.7%	-7%	238.6	5.3%	-16%	54.2	209.8	5.5%	-15%	103.6	5.2%	-21%	23.5	74.8	5.7%	-22%	17.0
POL	47.7	0.6%	-8%	25.9	0.6%	-17%	54.3	21.4	0.6%	-4%	7.7	0.4%	-54%	16.1	3.2	0.2%	-59%	6.6
PRT	383.3	5.0%	-3%	257.3	5.8%	-4%	67.1	217.5	5.8%	-2%	115.1	5.8%	-6%	30.0	75.2	5.8%	-2%	19.6
ROU	4.5	0.1%	16%	3.3	0.1%	10%	72.0	2.8	0.1%	15%	2.4	0.1%	8%	54.1	2.0	0.1%	14%	43.3
SVN	2.2	0.0%	-3%	1.7	0.0%	-6%	80.2	1.7	0.0%	-1%	1.1	0.1%	5%	52.7	1.1	0.1%	17%	50.4
SWE	134.7	1.7%	2%	72.8	1.6%	4%	54.0	53.9	1.4%	-1%	44.1	2.2%	8%	32.8	25.3	1.9%	0%	18.8
EU excl. GRC	**7,712.18**		-0.2%	**4,468**		-0.2%	**57.9**	**3,781**		-1.3%	**1,993**		-3.3%	**25.8**	**1,305**		-2.9%	**16.9**

Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/ACS(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Table 3-22 Main productivity results by Member State, 2017

MS fleet	Return on fixed tangible assets	Net Value Added per FTE	% Δ to 2016	GVA per FTE (labour productivity)	% Δ to 2016	Average wage per FTE	% Δ to 2016	Energy consumed per day at sea	% Δ to 2016	Fuel efficiency	% Δ to 2016	Energy consumed per landed tonne	% Δ to 2016
	%	thousand EUR		thousand EUR		thousand EUR		litre/day		%		litres/tonne	
BEL	22.8	187.9	-8%	217.3	-7%	140.9	7%	2,672.3	2%	17.1	17%	1,510	8%
BGR	8.7	3.7	12%	4.1	-23%	2.2	-25%	110.9	12%	23.5	-14%	372	1%
CYP	8.4	6.0	209%	9.7	398%	1.6	-9%	43.3	12%	14.0	-18%	1,264	-18%
DEU	-3.6	37.1	-43%	62.5	-23%	40.3	-7%	426.9	8%	7.5	20%	171	-5%
DNK	13.7	139.4	-10%	183.7	-10%	76.261	0%	1,108.1	14%	10.0	31%	108	-22%
ESP	74.3	35.5	4%	39.4	6%	24.1	14%	567.9	6%	11.5	11%	650	0%
EST	15.4	17.6	4%	21.1	-3%	11.6	-1%	52.4	36%	12.4	31%	51	12%
FIN	-12.7	4.7	-42%	58.6	2%	24.4	14%	188.4	2%	25.4	20%	121	-6%
FRA	26.6	102.4	10%	116.2	9%	75.7	8%	477.4	-1%	10.9	-3%	559	-4%
GBR	55.2	81.6	23%	88.5	21%	41.8	24%	733.0	12%	11.5	14%	373	-7%
GRC	-91.1	0.9	-91%	3.0	-75%	8.2	1%	1,152.8		31.2	91%	1,894	35%
HRV	4.5	20.2	1766%	29.1	147%	13.4	38%	98.7	-7%	25.7	14%	339	-2%
IRL	8.9	51.1	5%	62.6	2%	38.0	8%	1,191.9	-6%	15.0	19%	377	-8%
ITA	27.0	22.2	14%	30.0	11%	13.7	0%	254.9	0%	20.0	1%	1,860	-4%
LTU	-12.9	-2.5	-118%	14.7	-67%	28.7	8%	5,467.9	14%	21.9	34%	473	12%
LVA	24.8	21.1	11%	27.8	24%	12.1	29%	278.3	45%	12.7	18%	72	24%
MLT	-0.5	5.1	116%	7.4	37%	5.3	-7%	168.1	-7%	20.2	-17%	1,742	-5%
NLD	28.1	121.8	-19%	138.5	-20%	78.4	-15%	3,292.7	8%	14.1	27%	447	3%
POL	4.5	8.6	-12%	10.4	-24%	7.3	14%	283.1	25%	16.5	11%	81	-5%
PRT	21.8	27.8	3%	32.9	1%	18.2	3%	256.6	-6%	12.8	2%	533	-1%
ROU	24.3	45.9	-9%	54.0	-13%	13.4	-6%	158.1	-13%	14.0	3%	80	-26%
SVN	29.8	26.7	10%	27.5	4%	9.4	-14%	31.1	9%	23.5	25%	1,779	20%
SWE	20.9	68.1	2%	91.9	7%	36.2	1%	858.8	7%	20.5	8%	261	-13%
EU excl. GRC	**25.3**	**43,256**	3.7%	**51,203**	4.8%	**28,362**	7.6%	**466.4**	4%	**13.3**	10%	**427**	-7%

Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/ACS(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Table 3-23 Main capacity and employment variables - EU small-scale coastal fleet, 2017

SSCF	Number of vessels number	% Δ to 2016	as % of EU SSF	Total vessel tonnage GT	% Δ to 2016	as % of EU Total	Total vessel power thousand kW	% Δ to 2016	as % of EU Total	Engaged crew number	% Δ to 2016	as % of EU Total	Unpaid labour number	as % of EU Total	FTE national number	% Δ to 2016	as % of EU Total
BGR	1,191	9.7%	2.4%	1,939	6.4%	1.6%	24.9	6.5%	1.4%	1,660	24.8%	2.2%	453	1.2%	490	31.4%	1.8%
CYP	728	-0.7%	1.5%	1,692	1.3%	1.4%	29.0	8.1%	1.6%	962	-0.5%	1.3%	962	2.5%	517	-0.2%	1.9%
DEU	736	-5.2%	1.5%	2,052	-5.0%	1.7%	21.3	-3.9%	1.2%	839	13.2%	1.1%	104	0.3%	534	-6.0%	2.0%
DNK	926	-5.2%	1.9%	3,518	-5.3%	2.9%	38.9	-4.6%	2.2%	290	-4.9%	0.4%	224	0.6%	214	-6.3%	0.8%
ESP	3,957	-4.0%	8.0%	11,348	-1.9%	9.3%	108.1	-2.7%	6.1%	9,664	9.0%	12.6%	4,448	11.8%	6,189	-0.3%	23.3%
EST	1,557	2.6%	3.2%	2,215	0.0%	1.8%	22.3	0.9%	1.3%	1,950	-0.1%	2.5%	1,068	2.8%	332	-0.9%	1.3%
FIN	1,413	-7.6%	2.9%	3,127	-9.1%	2.6%	61.8	-7.9%	3.5%	1,217	-11.1%	1.6%	763	2.0%	154	-12.5%	0.6%
FRA	4,186	1.5%	8.5%	15,701	1.7%	12.9%	427.2	2.1%	24.2%	7,005	0.8%	9.1%	-		2,054	-7.0%	7.7%
GBR	3,337	2.5%	6.8%	13,769	2.4%	11.3%	208.1	2.2%	11.8%	5,390	-0.6%	7.0%	529	1.4%	1,558	-26.0%	5.9%
GRC	12,588	-0.8%	25.5%	25,316	0.5%	20.8%	239.0	0.5%	13.5%	17,744	-9.5%	23.1%	13,977	37.0%			
HRV	5,085	17.2%	10.3%	8,529	10.0%	7.0%	120.8	5.3%	6.8%	5,290	14.5%	6.9%	4,049	10.7%	217	-73.1%	0.8%
IRL	783	-13.8%	1.6%	2,543	-8.7%	2.1%	22.6	-10.2%	1.3%	1,097	-20.8%	1.4%	177	0.5%	844	-1.4%	3.2%
ITA	7,346	0.1%	14.9%	14,100	1.3%	11.6%	205.9	-1.6%	11.7%	11,996	-5.4%	15.6%	8,050	21.3%	8,599	-10.0%	32.4%
LTU	62	-4.6%	0.1%	274	-6.1%	0.2%	1.9	-8.8%	0.1%	137	-16.0%	0.2%	12	0.0%	38	-17.0%	0.1%
LVA	196	-4.9%	0.4%	391	-8.9%	0.3%	2.5	-9.4%	0.1%	298	16.4%	0.4%	138	0.4%	120	13.2%	0.5%
MLT	624	-5.9%	1.3%	1,498	-2.7%	1.2%	36.2	-4.3%	2.1%	872	-11.6%	1.1%	716	1.9%	459	-10.8%	1.7%
NLD	179	-1.1%	0.4%	446	-2.2%	0.4%	18.8	5.3%	1.1%	300	-8.7%	0.4%	175	0.5%	70	-19.8%	0.3%
POL	623	1.0%	1.3%	2,758	2.2%	2.3%	21.6	2.0%	1.2%	1,456	4.5%	1.9%	923	2.4%	1,263	4.6%	4.8%
PRT	3,004	0.0%	6.1%	7,282	0.1%	6.0%	101.1	1.5%	5.7%	7,412	-4.2%	9.7%	897	2.4%	2,524	-2.1%	9.5%
ROU	111	6.7%	0.2%	215	11.7%	0.2%	1.3	-9.5%	0.1%	307	15.4%	0.4%	13	0.0%	22	32.4%	0.1%
SVN	69	-4.2%	0.1%	186	-3.9%	0.2%	3.1	3.1%	0.2%	79	-9.2%	0.1%	50	0.1%	53	-6.4%	0.2%
SWE	680	-7.7%	1.4%	2,953	-8.5%	2.4%	48.8	-6.0%	2.8%	836	-9.3%	1.1%	82	0.2%	275	-8.1%	1.0%
SSCF total	**49,381**	0.7%		**121,852**	0.4%		**1,765**	0.3%		**76,801**	-2.0%		**37,811**		**26,526**	-43.1%	
SSCF excl. GRC	**36,793**	1.2%		**96,536**	0.3%		**1,526**	0.3%		**59,057**	0.6%		**23,834**		**26,526**	-8.0%	
SSCF as % of EU active fleet	75.3%			8.4%			32.1%			50.6%			86.2%		30.5%		

Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/ACS(2019))

Table 3-24 Main fishing activity variables - EU small-scale coastal fleet, 2017

SSCF	Days at sea thousand day	% Δ to 2016	as % of EU SSF	Fishing days thousand day	% Δ to 2016	as % of EU Total	Energy consumed million litre	% Δ to 2016	as % of EU Total	Landed weight thousand tonne	% Δ to 2016	as % of EU Total	Landed value million EUR	% Δ to 2016	as % of EU Total
BGR	17.0	2.4%	0.6%	17.0	2.4%	0.6%	0.5	9.7%	0.3%	1.9	-1.3%	0.7%	1.2	1.5%	0.1%
CYP	47.5	-14.7%	1.8%	47.5	-95.3%	1.7%	1.2	-11.2%	0.8%	0.8	35.3%	0.3%	6.3	49.5%	0.7%
DEU	65.0	-0.5%	2.4%	67.4	0.1%	2.5%	0.8	-5.7%	0.6%	7.1	-9.2%	2.6%	8.2	-1.7%	0.9%
DNK	33.7	-13.0%	1.2%	33.5	-12.9%	1.2%	2.0	-13.7%	1.5%	8.3	-15.8%	3.1%	22.7	-7.9%	2.4%
ESP	383.0	-8.1%	14.2%	382.8	-8.1%	14.1%	22.2	5.6%	16.1%	29.7	-3.4%	10.9%	119.7	-1.9%	12.5%
EST	59.7	-13.3%	2.2%	116.1	-20.1%	4.3%	0.6	-7.5%	0.5%	10.8	-6.5%	4.0%	5.3	-6.0%	0.6%
FIN	92.4	-9.6%	3.4%	92.3	-9.6%	3.4%	1.2	-20.1%	0.8%	8.8	-4.4%	3.3%	8.2	-5.1%	0.9%
FRA	396.2	-0.2%	14.7%	393.1	-0.6%	14.4%	25.7	-1.8%	18.6%	77.7	18.9%	28.6%	300.6	48.2%	31.5%
GBR	187.4	-21.3%	6.9%	166.2	5.7%	6.1%	24.4	-20.2%	17.7%	48.0	-4.6%	17.7%	133.1	-7.3%	13.9%
GRC							35.1	-22.1%	25.4%						
HRV	135.7	1.1%	5.0%	114.5	0.0%	4.2%	2.5	-9.4%	1.8%	1.2	-10.1%	0.5%	7.4	-8.4%	0.8%
IRL	27.8	4.5%	1.0%	27.1	4.8%	1.0%	7.8	-19.0%	5.7%	11.9	-18.1%	4.4%	24.9	-0.2%	2.6%
ITA	909.2	-4.5%	33.6%	920.6	-16.8%	33.8%	33.2	-7.4%	24.0%	23.9	-11.7%	8.8%	195.2	-9.2%	20.5%
LTU	4.2	-21.0%	0.2%	4.1	-20.8%	0.2%	0.1	-11.9%	0.1%	0.7	-14.0%	0.3%	0.7	5.9%	0.1%
LVA	10.1	-6.8%	0.4%	11.3	-11.6%	0.4%	0.0	1.3%	0.0%	3.4	-9.7%	1.3%	1.1	0.5%	0.1%
MLT	18.3	-1.1%	0.7%	17.1	-3.7%	0.6%	1.5	-3.8%	1.1%	0.6	2.5%	0.2%	3.7	3.0%	0.4%
NLD	3.4	-4.8%	0.1%	3.2	-4.9%	0.1%	0.4	-0.9%	0.3%	0.3	-27.2%	0.1%	2.4	-29.1%	0.3%
POL	41.8	-20.8%	1.5%	41.0	-21.2%	1.5%	1.8	-4.2%	1.3%	10.4	-16.4%	3.8%	10.4	-9.0%	1.1%
PRT	217.0	0.8%	8.0%	215.5	1.2%	7.9%	8.0	-1.0%	5.8%	19.5	7.2%	7.2%	88.7	2.2%	9.3%
ROU	3.3	14.5%	0.1%	3.3	26.7%	0.1%	0.2	-7.1%	0.2%	2.7	67.4%	1.0%	1.6	29.4%	0.2%
SVN	6.6	-4.8%	0.2%	6.6	-4.8%	0.2%	0.1	4.1%	0.1%	0.1	3.9%	0.0%	0.6	10.6%	0.1%
SWE	42.8	-10.8%	1.6%	42.8	-10.8%	1.6%	3.8	-18.4%	2.7%	3.5	-23.7%	1.3%	12.5	-19.5%	1.3%
SSCF total	**2,702**			**2,723**			**173**	-11.3%		**272**			**954**		
SSCF excl. GRC	**2,702**	-6.1%		**2,723**	-31.2%		**138**	-8.1%		**272**	-0.6%		**954**	6.8%	
SSCF as % of EU fleet	56.0%			57.9%			6.1%			5.1%			12.5%		

Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/ACS(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Table 3-25 Main income variables - EU small-scale coastal fleet, 2017

SSCF	Gross value of landings million EUR	% Δ to 2016	as % of EU Total	Other income million EUR	% Δ to 2016	as % of EU Total	Operating subsidies million EUR	% Δ to 2016	as % of EU Total	Income from leasing out quota million EUR	% Δ to 2016	as % of EU Total
BGR	1.2	-30.7%	0.1%	0.12	20.4%	0.3%	-			-		
CYP	6.3	49.5%	0.6%	-			0.73	1660%	4.7%	-		
DEU	8.8	5.5%	0.9%	0.53	10.1%	1.1%	0.46	40%	3.0%	-		
DNK	22.8	-7.9%	2.3%	0.84	45.5%	1.8%	0.67		4.3%	4.6	500%	88.5%
ESP	161.5	2.4%	16.5%	0.24	884.6%	0.5%	0.06	-85%	0.4%	-		
EST	5.3	-6.0%	0.5%	0.17	-5.0%	0.4%	-			-		
FIN	8.6	8.1%	0.9%	1.03	1.2%	2.2%	0.70	-23%	4.5%	-		
FRA	269.5	-2.8%	27.5%	3.47	-28.2%	7.5%	0.70	-58%	4.5%	-		
GBR	133.0	-7.4%	13.6%	6.06	-14.0%	13.2%	-		0.0%	0.2	289%	3.4%
GRC				1.86		4.0%	1.44	-42%	9.3%	-		
HRV	7.4	-8.4%	0.8%	12.99	263.4%	28.2%	0.01	-55%	0.1%	0.0	-90%	0.2%
IRL	39.3	3.1%	4.0%	0.74	-15.3%	1.6%	0.25	20%	1.6%	-		
ITA	195.2	-9.2%	19.9%	14.97	375.4%	32.5%	0.02		0.1%	0.0		0.3%
LTU	0.6	-4.0%	0.1%	0.00	-67.1%	0.0%	0.12	452%	0.8%	-		
LVA	1.1	0.5%	0.1%	0.11	23824.0%	0.2%	-			-		
MLT	3.7	3.0%	0.4%	0.03	-50.0%	0.1%	-	-100%	0.0%	0.3	63%	6.5%
NLD	2.9	-8.2%	0.3%	0.63	87.6%	1.4%	-			0.1	-25%	1.1%
POL	10.4	-9.2%	1.1%	0.03	-42.0%	0.1%	9.71	2800%	62.7%	-		
PRT	88.7	1.9%	9.0%	0.10	97.1%	0.2%	0.60		3.9%	-		
ROU	1.6	29.4%	0.2%	-			-			-		
SVN	0.6	10.6%	0.1%	1.15	19.5%	2.5%	-	-100%	0.0%	-		
SWE	12.5	-19.5%	1.3%	0.93	-24.4%	2.0%	-			-		
SSCF total	981.1	-21.6%		46.0	87.3%		15.5	137%		5.2	341%	
SSCF excl. GRC	981.1	-3.5%		44.2	79.7%		14.0	247%		5.2	341%	
SSCF as % of EU active fleet	**13%**			**23%**			**27.2%**			**13%**		

Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/ACS(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Table 3-26 Main cost items variables - EU small-scale coastal fleet, 2017

SSCF	Personnel costs	% Δ to 2016	as % of EU Total	Value of unpaid labour	% Δ to 2016	as % of EU Total	Energy costs	% Δ to 2016	as % of EU Total	Repair & maintenance costs	% Δ to 2016	as % of EU Total	Other variable costs	% Δ to 2016	as % of EU Total	Other non-variable costs	% Δ to 2016	as % of EU Total	Consumption of fixed capital	% Δ to 2016	as % of EU Total	Lease/rental payments for quota	% Δ to 2016	as % of EU Total
	million EUR			million EUR			million EUR			million EUR			million EUR			million EUR			million EUR			million EUR		
BGR	0.8	1.9%	0.2%	0.1	-34.3%	0.0%	0.3	-4%	0.3%	0.2	24%	0.3%	0.1	-12%	0.1%	0.1	-24%	0.1%	0.1	-30%	0.1%	-		
CYP	-		0.0%	0.2	-0.6%	0.1%	0.8	1%	0.7%	0.4	-13%	0.5%	0.4	-77%	0.3%	0.0	542%	0.0%	0.9	-31%	0.8%	-		
DEU	1.6	28.8%	0.5%	1.7	21.0%	0.7%	0.5	9%	0.5%	1.1	22%	1.5%	1.4	40%	1.1%	2.7	28%	3.1%	1.2	-16%	1.1%	-		
DNK	2.4	-13.0%	0.7%	11.1	3.9%	4.6%	1.3	-3%	1.1%	3.8	-23%	4.9%	4.2	-1%	3.1%	2.6	-4%	3.0%	2.8	-11%	2.5%	0.6	-42%	33.3%
ESP	55.6	15.1%	16.7%	48.1	15.9%	19.8%	10.3	-5%	8.8%	9.1	17%	11.5%	15.9	-1%	11.9%	5.0	-1%	5.8%	5.8	1571%	5.0%	-		
EST	0.9	1.1%	0.3%	1.0	-13.5%	0.4%	0.5	0%	0.5%	0.8	-12%	1.1%	0.7	-6%	0.5%	0.1	-3%	0.1%	0.5	-5%	0.4%	0.1	2%	2.9%
FIN	0.6	12.5%	0.2%	1.2	1.9%	0.5%	0.8	-11%	0.7%	1.2	2%	1.6%	0.8	11%	0.6%	1.3	15%	1.5%	5.4	-9%	4.7%	0.2	36%	13.2%
FRA	124.6	-2.4%	37.3%	-		0.0%	16.6	6%	14.3%	14.1	-7%	17.8%	27.5	-6%	20.6%	36.7	2%	42.0%	22.1	1%	19.2%	-		
GBR	34.9	-11.9%	10.5%	17.2	31.5%	7.1%	11.1	-11%	9.6%	8.7	4%	11.0%	32.0	0%	23.9%	12.5	4%	14.3%	10.7	31%	9.3%	0.5	63%	28.5%
GRC	39.2	-0.9%	11.7%	86.9	-2.6%	35.8%	36.3	-20%	31.2%	17.2	-8%	21.7%	18.9	-24%	14.1%	4.9	41%	5.6%	14.0	6%	12.2%	-		
HRV	3.2	-7.3%	1.0%	0.2	-87.9%	0.1%	1.5	13%	1.2%	1.3	-32%	1.7%	2.2	30%	1.6%	1.1	-33%	1.3%	2.3	-34%	2.0%	0.0	-58%	0.9%
IRL	9.4	-13.7%	2.8%	3.3	15.1%	1.3%	3.3	1%	2.9%	3.9	-7%	5.0%	6.5	15%	4.8%	2.3	-13%	2.6%	0.5	-71%	0.4%			0.0%
ITA	23.1	-28.6%	6.9%	53.5	-8.6%	22.0%	20.4	-3%	17.5%	10.0	-5%	12.7%	13.2	0%	9.9%	12.8	25%	14.7%	34.4	2%	29.9%	0.3		15.2%
LTU	0.3	-10.7%	0.1%	0.0	104.3%	0.0%	0.1	0%	0.1%	0.0	-20%	0.0%	0.1	-9%	0.1%	0.1	104%	0.1%	0.1	3%	0.1%	-		
LVA	0.4	314.7%	0.1%	0.1	-46.4%	0.0%	0.2	586%	0.1%	0.1	1279%	0.1%	0.2	186%	0.1%	0.3	3789%	0.3%	0.3	996%	0.3%	-		
MLT	0.6	-1.8%	0.2%	1.2	-48.8%	0.5%	1.0	2%	0.8%	0.6	-17%	0.8%	0.7	26%	0.5%	0.1	32%	0.1%	0.6	-13%	0.5%	0.0		1.3%
NLD	0.3	90.1%	0.1%	0.4	5.8%	0.2%	0.4	11%	0.3%	0.4	-6%	0.5%	0.1	-16%	0.1%	0.3	20%	0.4%	0.8	30%	0.7%	0.1	150%	3.1%
POL	3.8	18.7%	1.1%	4.8	52.3%	2.0%	1.0	-2%	0.9%	0.4	-5%	0.6%	1.5	22%	1.1%	1.0	19%	1.2%	0.3	-16%	0.2%	-		
PRT	30.2	1.9%	9.1%	4.4	0.4%	1.8%	7.7	8%	6.6%	3.3	7%	4.1%	6.2	-2%	4.6%	1.6	-22%	1.8%	8.4	5%	7.3%	-		
ROU	0.4	29.9%	0.1%	0.0	-17.0%	0.0%	0.2	12%	0.2%	0.2	58%	0.2%	0.0	36%	0.0%	0.1	-1%	0.1%	0.0	4%	0.0%	0.0	11%	1.5%
SVN	0.2	-28.5%	0.1%	0.1	-41.6%	0.0%	0.1	12%	0.1%	0.1	9%	0.1%	0.0	26%	0.0%	0.0	-84%	0.0%	0.0	-51%	0.0%	-		
SWE	1.3	-11.3%	0.4%	7.2	-5.8%	2.9%	2.1	-6%	1.8%	1.9	-33%	2.4%	1.0	-13%	0.8%	1.5	-16%	1.7%	3.8	10%	3.3%	-		
SSCF total	333.8	-3.0%		242.6	1.3%		116.5	-7.8%		79.0	-5.1%		133.6	-5.1%		87.3	5.4%		115.0	6.0%		1.9	7.9%	
SSCF excl. GRC	294.6	-3.3%		155.6	3.6%		80.2	-1.1%		61.8	-4.3%		114.7	-1.2%		82.4	3.9%		101.0	6.0%		1.9	7.9%	
SSCF as % of EU active fleet	**13%**			**57%**			**8.0%**			**10%**			**11%**			**14%**			**15%**			**2%**		

Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/ACS(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Table 3-27 Main performance results - EU small-scale coastal fleet, 2017

SSF	Revenue	as % of EU Total	% Δ to 2016	Gross Value Added	as % of EU Total	% Δ to 2016	GVA to revenue	% Δ to 2016	Net Value Added	as % of EU Total	% Δ to 2016	Gross profit	as % of EU Total	% Δ to 2016	Gross profit margin	% Δ to 2016	Net profit	as % of EU Total	% Δ to 2016	Net profit margin	% Δ to 2016
	million EUR			million EUR			%		million EUR			million EUR			%		million EUR			%	
BGR	1.3	0.1%	-28%	0.6	0.1%	-46%	44.0	-25%	0.5	0.0%	-49%	-0.3	-0.1%	-247%	-21.0	-303%	-0.4	-0.3%	-143%	-32.3	-237%
CYP	6.3	0.6%	49%	4.7	0.7%	259%	74.6	140%	3.8	0.1%	6318%	4.5	1.9%	316%	70.9	178%	3.1	2.5%	299%	48.6	233%
DEU	9.4	0.9%	6%	3.6	0.5%	-17%	37.9	-22%	2.3	0.0%	-18%	0.2	0.1%	-86%	2.4	-87%	-0.9	-0.8%	-633%	-10.0	-604%
DNK	23.7	2.3%	-7%	11.7	1.7%	-3%	49.5	4%	8.9	0.2%	0%	-1.7	-0.7%	-29%	-7.4	-38%	-4.4	-3.6%	6%	-18.5	-1%
ESP	161.7	15.8%	3%	121.5	17.7%	3%	75.1	0%	115.7	2.0%	-2%	17.7	7.5%	-37%	11.0	-39%	12.3	10.1%	-37%	7.7	-68%
EST	5.5	0.5%	-6%	3.3	0.5%	-5%	59.7	1%	2.8	0.0%	-5%	1.4	0.6%	-3%	25.8	4%	1.0	0.8%	30%	17.7	38%
FIN	9.6	0.9%	7%	5.4	0.8%	9%	56.4	2%	0.0	0.0%	100%	3.6	1.5%	12%	37.5	4%	-1.8	-1.5%	33%	-18.5	38%
FRA	272.9	26.6%	-3%	178.1	26.0%	-4%	65.2	-1%	156.0	2.7%	-5%	53.5	22.7%	-8%	19.6	-5%	31.9	26.1%	-12%	11.7	-9%
GBR	139.1	13.6%	-8%	74.8	10.9%	-13%	53.8	-6%	64.1	1.1%	-17%	22.7	9.6%	-31%	16.3	-26%	13.0	10.6%	-47%	9.4	-42%
HRV	20.4	2.0%	75%	14.4	2.1%	182%	70.3	61%	12.1	0.2%	624%	11.0	4.7%	2603%	53.7	1439%	7.8	6.3%	260%	38.0	191%
IRL	40.0	3.9%	3%	24.0	3.5%	3%	60.0	1%	23.5	0.4%	9%	11.4	4.8%	19%	28.4	16%	0.1	0.1%	-99%	1.1	-94%
ITA	210.2	20.5%	-4%	153.7	22.4%	-6%	73.1	-2%	119.3	2.0%	-8%	77.1	32.7%	7%	36.7	11%	41.7	34.0%	15%	19.8	19%
LTU	0.6	0.1%	-5%	0.3	0.0%	-21%	49.4	-16%	0.3	0.0%	-25%	0.0	0.0%	-96%	0.3	-96%	-0.0	0.0%	-1180%	-6.6	-1249%
LVA	1.2	0.1%	11%	0.6	0.1%	-44%	46.5	-49%	0.3	0.0%	-73%	0.1	0.1%	-84%	10.3	-85%	-0.2	-0.1%	-121%	-12.7	-119%
MLT	3.7	0.4%	2%	1.3	0.2%	1%	34.7	-1%	0.7	0.0%	16%	-0.5	-0.2%	71%	-12.5	71%	-1.0	-0.9%	54%	-28.2	55%
NLD	3.6	0.3%	1%	2.3	0.3%	-1%	65.2	-1%	1.5	0.0%	-12%	1.6	0.7%	-11%	43.8	-12%	0.8	0.7%	-27%	22.7	-27%
POL	10.4	1.0%	-9%	6.4	0.9%	-19%	61.5	-10%	6.1	0.1%	-19%	-2.1	-0.9%	-236%	-20.5	-250%	-3.1	-2.5%	-13217%	-29.3	-14568%
PRT	88.8	8.7%	2%	70.0	10.2%	2%	78.8	0%	61.6	1.1%	2%	35.4	15.0%	3%	39.8	1%	26.0	21.3%	4%	29.3	2%
ROU	1.6	0.2%	29%	1.1	0.2%	33%	68.4	3%	1.1	0.0%	35%	0.7	0.3%	38%	44.8	7%	0.6	0.5%	49%	40.5	15%
SVN	1.7	0.2%	16%	1.5	0.2%	17%	86.9	1%	1.5	0.0%	22%	1.2	0.5%	48%	67.7	27%	1.1	0.9%	66%	65.8	42%
SWE	13.4	1.3%	-20%	6.9	1.0%	-21%	51.8	-1%	3.2	0.1%	-41%	-1.5	-0.7%	-384%	-11.5	-504%	-5.1	-4.2%	-40%	-38.3	-75%
SSF excl. GRC	**1,025**		-1.5%	**686**		-2.0%	**66.9**	-0.5%	**5,851**		-3.3%	**235.8**		-4.0%	**23.0**	-2.5%	**122.5**		-8.0%	**12.3**	-10.5%
SSF as % of EU active fleet	**13.3%**			**15.4%**					**15.5%**			**11.9%**					**10.0%**				

Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/ACS(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Table 3-28 Main productivity results - EU small-scale coastal fleet, 2017

SSF	Return on fixed tangible assets %	% Δ to 2016	GVA per FTE (labour productivity) thousand EUR	% Δ to 2016	Net Value Added per FTE thousand EUR	% Δ to 2016	Average wage per FTE thousand EUR	% Δ to 2016	Fuel efficiency %	% Δ to 2016	Energy consumed per landed tonne litres/tonne	% Δ to 2016	Value of physical capital million EUR	% Δ to 2016	Investments thousand EUR	% Δ to 2016	Subsidies on investments thousand EUR
BGR	- 7.7	-8250%	1.2	-59%	0.9	-61%	1.8	-26%	27.0	38%	270	11%	5.2	5%	21.4	-91%	-
CYP	14.5	1311%	9.1	260%	7.3	6330%	0.5	0%	12.2	-33%	1,454	-34%	24.5	-1%	-		-
DEU	- 18.0	-821%	6.7	-12%	4.3	-13%	6.3	33%	6.0	3%	108	4%	5.7	-10%	1,508.0	-19%	-
DNK	- 14.0	2%	54.6	4%	41.4	7%	62.8	7%	5.8	5%	242	3%	32.7	2%	- 17,394.7	-308%	-
ESP	37.4	-68%		3%		-1%	16.8	16%	6.4	-7%	745	9%	33.3	-6%	3,082.7	3740%	13.6
EST	11.5	-2%	9.8	-4%	8.4	-4%	5.6	-6%	10.2	7%	57	-1%	8.2	1%	839.2	-17%	14.7
FIN	- 10.6	27%	35.2	25%	0.0	100%	11.8	20%	9.1	-18%	131	-16%	17.2	-8%	4,828.4	10%	64.2
FRA	23.7	-14%	95.1	10%	83.3	10%	66.5	12%	6.2	9%	370	-9%	132.2	0%	10,974.5	-24%	491.0
GBR	17.0	-40%		18%		12%	33.5	34%	8.4	-4%	509	-16%	70.2	-20%	8,449.0	-49%	1,351.0
HRV	13.2	299%	66.3	948%	55.8	2591%	15.6	152%	19.5	23%	2,034	1%	65.9	9%	3,710.8	-24%	-
IRL	2.6	-93%	28.7	5%	28.1	11%	15.0	-6%	8.5	-1%	659	-1%	5.0	-75%	3,660.8	-42%	533.0
ITA	32.5	12%	17.9	5%	13.9	3%	8.9	-6%	10.5	7%	1,391	5%	131.3	0%	8,794.5	12%	-
LTU	- 12.7	-2304%	8.5	-4%	6.9	-9%	8.5	10%	12.9	4%	197	2%	0.5	-1%	2.9	933%	-
LVA	- 15.5	-102%	4.6	-50%	2.1	-76%	3.6	69%	14.6	583%	14	12%	1.1	1214%	20.8		-
MLT	- 12.5	45%	2.8	13%	1.5	30%	3.8	-31%	26.2	-1%	2,616	-6%	8.4	-16%	646.0	1%	-
NLD	8.0	-33%	33.4	24%	21.5	10%	10.9	63%	13.3	21%	1,320	36%	9.2	-1%	403.0	-8%	-
POL	- 6.6	-300%	5.1	-22%	4.9	-22%	6.8	29%	10.0	8%	170	15%	36.2	-4%	363.6	32%	924.5
PRT	39.5	-11%	27.7	4%	24.4	4%	13.7	4%	8.7	6%	409	-8%	68.3	15%	1,879.1	56%	147.8
ROU	58.0	34%	49.7	1%	48.0	2%	17.1	-6%	11.7	-14%	85	-44%	1.2	6%	485.8	232%	-
SVN	83.3	84%	28.3	25%	27.5	30%	6.2	-28%	15.7	1%	1,138	0%	1.4	-13%	61.2	-28%	-
SWE	- 34.4	-31%	25.2	-14%	11.5	-36%	30.9	2%	16.5	17%	1,065	7%	15.5	9%	1,143.6	-26%	-
SSF excl. GRC	**18.5**	-14.1%	**26,048**	7.1%	**22,215**	5.7%	**17,091**	8.2%	**8.2**	2.5%	**524**	-5.1%	**673.29**	**-3.3%**	**33,481**	**-42%**	**3,540**
SSF as % of EU active fleet													**14.4%**		**6.1%**		**21.8%**

Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/ACS(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Table 3-29 Main capacity and employment variables - EU large-scale fleet, 2017

LSF	Number of vessels number	% Δ to 2016	as % of EU Total	Vessel tonnage thousand GT	% Δ to 2016	as % of EU Total	Engine power thousand kW	% Δ to 2016	as % of EU Total	Engaged crew number	% Δ to 2016	as % of EU Total	Unpaid labour number	as % of EU Total	FTE national number	% Δ to 2016	as % of EU Total
BEL	67	-1.5%	0.4%	13.4	0.7%	1.3%	44.2	3.2%	1.3%	357	12.3%	0.5%			214	-7.1%	0.4%
BGR	104	-13.3%	0.7%	3.0	-6.7%	0.3%	16.3	-6.0%	0.5%	287	5.1%	0.4%	32	0.5%	226	8.9%	0.4%
CYP	37	5.7%	0.2%	1.7	13.0%	0.2%	6.8	2.9%	0.2%	172	14.7%	0.2%	34	0.6%	172	14.7%	0.3%
DEU	276	-2.5%	1.7%	56.3	-0.3%	5.3%	99.1	-2.6%	2.9%	829	3.9%	1.2%	247	4.1%	673	5.8%	1.3%
DNK	382	-3.8%	2.4%	62.2	1.2%	5.8%	149.7	-2.0%	4.4%	1,016	-3.3%	1.5%	219	3.6%	1,429	0.1%	2.7%
ESP	4,139	2.9%	26.0%	161.2	-1.3%	15.1%	441.3	1.4%	13.0%	19,697	6.9%	28.6%	3,241	53.7%	16,962	-2.3%	31.7%
EST	30	-3.2%	0.2%	3.5	-0.4%	0.3%	8.8	-1.8%	0.3%	150	-3.2%	0.2%	1	0.0%	128	4.9%	0.2%
FIN	56	-11.1%	0.4%	8.8	-6.3%	0.8%	30.4	-6.6%	0.9%	142	-8.4%	0.2%	22	0.4%	117	-5.6%	0.2%
FRA	1,531	-0.4%	9.6%	108.9	2.5%	10.2%	389.4	1.1%	11.5%	5,993	0.1%	8.7%	-	0.0%	4,365	0.9%	8.1%
GBR	1,372	-0.6%	8.6%	174.3	3.6%	16.3%	494.9	1.5%	14.6%	6,302	-0.5%	9.2%	157	2.6%	5,801	-14.5%	10.8%
GRC	849	-11.6%	5.3%	39.0	-7.5%	3.6%	142.7	-8.7%	4.2%	4,617	-13.9%	6.7%	985	16.3%			
HRV	967	-1.8%	6.1%	26.1	-1.3%	2.4%	142.7	-2.2%	4.2%	2,600	-0.2%	3.8%	86	1.4%	1,449	-19.8%	2.7%
IRL	533	0.2%	3.3%	56.1	4.3%	5.2%	138.0	1.5%	4.1%	1,965	-5.4%	2.9%	144	2.4%	1,764	-2.9%	3.3%
ITA	3,901	-0.6%	24.5%	129.6	2.1%	12.1%	715.0	0.6%	21.1%	13,419	1.8%	19.5%	212	3.5%	11,585	-1.4%	21.6%
LTU	22	-4.3%	0.1%	3.9	5.6%	0.4%	8.1	4.8%	0.2%	133	4.7%	0.2%	-	0.0%	90	-1.7%	0.2%
LVA	55	-6.8%	0.3%	6.2	-8.5%	0.6%	16.9	-3.1%	0.5%	363	-7.2%	0.5%	-	0.0%	206	-2.8%	0.4%
MLT	62	-8.8%	0.4%	3.3	-9.3%	0.3%	15.7	-10.7%	0.5%	262	-5.1%	0.4%	58	1.0%	260	0.3%	0.5%
NLD	346	0.0%	2.2%	110.8	4.6%	10.4%	216.8	3.1%	6.4%	1,849	12.5%	2.7%	232	3.9%	1,653	5.9%	3.1%
POL	170	-11.9%	1.1%	18.2	20.4%	1.7%	50.6	11.2%	1.5%	929	3.6%	1.3%	158	2.6%	862	-1.7%	1.6%
PRT	766	-3.9%	4.8%	57.9	-1.3%	5.4%	160.1	-2.1%	4.7%	7,035	-5.4%	10.2%	109	1.8%	5,070	-6.9%	9.5%
ROU	24	41.2%	0.2%	1.2	42.3%	0.1%	4.8	22.4%	0.1%	99	25.3%	0.1%	7	0.1%	38	23.0%	0.1%
SVN	11	0.0%	0.1%	0.2	-7.4%	0.0%	1.7	9.5%	0.0%	22	-4.3%	0.0%	9	0.1%	10	-24.9%	0.0%
SWE	231	-2.5%	1.4%	23.1	-3.0%	2.2%	91.0	-1.3%	2.7%	612	-1.1%	0.9%	78	1.3%	517	-0.3%	1.0%
LSF total	**15,931**	-1.0%		**1,069**	1.3%		**3,385**	0.2%		**68,849**	0.7%		**6,032**		**53,591**	-12.1%	
LSF excl. GRC	**15,082**	-0.3%		**1,030**	2%		**3,242**	0.6%		**64,232**	2.0%		**5,046**		**53,591**	-3.9%	
LSF as % of EU active fleet	24%			73.8%			61.6%			45.3%			13.8%		61.6%		

Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/ACS(2019)).

Table 3-30 Main fishing activity variables - EU large-scale fleet, 2017

LSF	Days at sea thousand days	% Δ to 2016	as % of EU Total	Fishing days thousand days	% Δ to 2016	as % of EU Total	Energy consumed million litres	% Δ to 2016	as % of EU Total	Landed weight thousand tonnes	% Δ to 2016	as % of EU Total	Landed value million EUR	% Δ to 2016	as % of EU Total
BEL	13.7	-4.3%	0.6%	14.9	-5.7%	0.7%	36.7	-2.2%	2.0%	24.3	-9.7%	0.6%	84.8	-7.7%	1.5%
BGR	8.1	-13.0%	0.4%	8.1	-13.0%	0.4%	2.3	8.3%	0.1%	5.5	10.8%	0.1%	3.6	3.3%	0.1%
CYP	3.2	22.4%	0.1%	3.2	22.4%	0.2%	1.0	8.9%	0.1%	0.9	8.4%	0.0%	4.1	16.2%	0.1%
DEU	36.5	-6.0%	1.7%	36.6	-6.4%	1.8%	42.5	5.5%	2.4%	245.7	11.5%	5.7%	224.0	-0.7%	3.9%
DNK	54.6	-2.9%	2.6%	48.7	-2.9%	2.4%	95.8	6.6%	5.5%	895.3	36.3%	20.7%	415.0	-7.9%	7.3%
ESP	625.0	3.2%	29.4%	590.3	3.8%	29.6%	311.6	5.2%	17.9%	431.2	6.5%	10.0%	987.1	2.9%	17.3%
EST	3.6	15.3%	0.2%	3.4	17.5%	0.2%	2.7	28.3%	0.2%	53.6	9.6%	1.2%	9.2	2.8%	0.2%
FIN	6.6	-13.3%	0.3%	6.5	-14.8%	0.3%	17.5	-7.1%	1.0%	145.7	-1.6%	3.4%	27.5	-11.2%	0.5%
FRA	248.4	-0.1%	11.7%	224.0	-0.1%	11.2%	234.8	0.2%	13.5%	363.9	1.0%	8.4%	887.6	2.1%	15.5%
GBR	182.2	-5.5%	8.6%	158.5	-3.2%	7.9%	246.5	-1.8%	14.2%	678.4	4.3%	15.7%	947.2	-4.0%	16.6%
GRC	80.8	-27.8%	3.8%	80.8	-27.8%	4.0%	57.8	-3.4%	3.3%	49.2	3.8%	1.1%	215.9	-6.1%	3.8%
HRV	100.8	0.1%	4.7%	91.2	1.6%	4.6%	20.8	-5.8%	1.2%	67.6	-4.7%	1.6%	48.5	-3.6%	0.8%
IRL	52.2	-1.9%	2.5%	40.7	-2.8%	2.0%	87.5	-0.8%	5.0%	240.8	7.1%	5.6%	246.9	2.6%	4.3%
ITA	489.6	-4.2%	23.0%	489.8	-5.2%	24.5%	321.0	-3.8%	18.5%	160.9	-0.1%	3.7%	723.4	4.9%	12.7%
LTU	1.9	-12.0%	0.1%	1.4	-16.7%	0.1%	2.3	-4.8%	0.1%	18.2	-0.7%	0.4%	4.4	-13.4%	0.1%
LVA	7.2	-1.4%	0.3%	6.8	1.2%	0.3%	4.8	38.7%	0.3%	63.5	13.1%	1.5%	18.0	22.6%	0.3%
MLT	4.0	-15.6%	0.2%	2.5	-19.5%	0.1%	2.2	-15.2%	0.1%	1.6	-9.4%	0.0%	6.7	7.3%	0.1%
NLD	47.6	-2.5%	2.2%	41.7	-2.7%	2.1%	167.6	3.0%	9.6%	375.3	2.2%	8.7%	429.0	-7.4%	7.5%
POL	17.8	-18.4%	0.8%	15.4	-17.8%	0.8%	15.2	0.2%	0.9%	147.7	11.1%	3.4%	37.1	-7.1%	0.6%
PRT	116.2	-3.4%	5.5%	104.7	-3.5%	5.2%	71.0	-8.1%	4.1%	132.3	-10.6%	3.1%	270.8	-3.5%	4.7%
ROU	1.5	29.0%	0.1%	1.5	28.6%	0.1%	0.5	8.4%	0.0%	6.8	31.0%	0.2%	2.9	10.3%	0.1%
SVN	0.8	-24.0%	0.0%	0.8	-24.0%	0.0%	0.2	-0.9%	0.0%	0.1	-30.6%	0.0%	0.3	-33.9%	0.0%
SWE	24.4	-4.8%	1.1%	24.4	-4.8%	1.2%	54.0	-1.1%	3.1%	218.1	12.9%	5.0%	114.7	4.0%	2.0%
LSF total	**2,127**	-2.8%		**1,996**	-2.8%		**1,796**	0.0%		**4,327**	9.5%		**5,709**	-1.0%	
LSF excl. GRC	**2,046**	-1.5%		**1,915**	-1.4%		**1,739**	0.1%		**4,277**	9.6%		**5,493**	-0.7%	
LSF as % of EU active fleet	**42.4%**			**40.7%**			**77.3%**			**81.1%**			**72.0%**		

Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/ACS(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Table 3-31 Main income variables - EU large-scale fleet, 2017

LSF	Gross value of landings	% Δ to 2016	as % of EU Total	Other income	% Δ to 2016	as % of EU Total	Operating subsidies	% Δ to 2016	as % of EU Total	Income from leasing out quota	as % of EU Total
	million EUR			million EUR			million EUR			million EUR	
BEL	84.8	-7.5%	1.5%	3.8	19.6%	2.8%	0.8	-51%	2.2%	-	0.0%
BGR	3.6	0.6%	0.1%	0.2	310.8%	0.1%	-		0.0%	-	0.0%
CYP	3.6	2.0%	0.1%	-		0.0%	0.1	71%	0.2%	-	0.0%
DEU	149.5	-0.1%	2.6%	3.2	4.8%	2.3%	0.1	-37%	0.4%	-	0.0%
DNK	414.5	-7.8%	7.3%	10.0	52.8%	7.3%	0.8		2.4%	21.0	61.8%
ESP	982.4	-1.6%	17.4%	17.4	96.0%	12.7%	5.5	61%	15.4%	5.3	15.6%
EST	9.2	2.8%	0.2%	0.0	357.4%	0.0%	-		0.0%	0.0	0.0%
FIN	25.4	-2.4%	0.4%	0.8	4.8%	0.6%	0.0	-69%	0.0%	-	0.0%
FRA	898.3	2.2%	15.9%	16.1	-5.8%	11.8%	5.8	-36%	16.1%	-	0.0%
GBR	943.6	-4.8%	16.7%	46.9	50.4%	34.3%	-		0.0%	4.8	14.1%
GRC	215.9	-6.1%	3.8%	1.0		0.7%	0.01	-96%	0.0%	-	
HRV	48.5	-3.6%	0.9%	12.5	197.5%	9.1%	5.5	-68%	15.3%	0.3	0.8%
IRL	262.1	-1.3%	4.6%	8.1	433.1%	6.0%	0.1	-41%	0.3%	-	0.0%
ITA	723.4	4.9%	12.8%	5.1	-20.7%	3.7%	5.7		15.9%	0.1	0.4%
LTU	4.5	-13.0%	0.1%	0.2	317.6%	0.1%	0.0		0.1%	-	0.0%
LVA	18.0	22.4%	0.3%	1.9	5.7%	1.4%	-	-100%	0.0%	-	0.0%
MLT	6.7	7.3%	0.1%	0.5	-4.6%	0.4%	-	-100%	0.0%	0.6	1.9%
NLD	435.2	-6.6%	7.7%	1.4	-35.7%	1.0%	-	-100%	0.0%	1.8	5.4%
POL	37.1	-7.3%	0.7%	0.2	67.6%	0.1%	5.8	1735%	16.2%	-	0.0%
PRT	273.4	-4.1%	4.8%	0.6	-4.3%	0.4%	5.5	435%	15.4%	-	0.0%
ROU	2.9	10.3%	0.1%	-		0.0%	-		0.0%	-	0.0%
SVN	0.3	-33.9%	0.0%	0.1	-53.1%	0.1%	-	-100%	0.0%	-	0.0%
SWE	114.7	4.0%	2.0%	6.6	43.1%	4.9%	-		0.0%	-	0.0%
LSF total	5,657.4	-1.9%		136.6	46.8%		35.8	-1%		34	
LSF excl. GRC	5,441.5	-1.7%		135.6			35.8			34	
LSF as % of EU active fleet	**72%**			**71%**			**69.3%**			**85%**	

Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/ACS(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Table 3-32 Main cost items variables - EU large-scale fleet, 2017

LSF	Personnel costs	% Δ to 2016	as % of EU Total	Value of unpaid labour	% Δ to 2016	as % of EU Total	Energy costs	% Δ to 2016	as % of EU Total	Repair & maintenance costs	% Δ to 2016	as % of EU Total	Other variable costs	% Δ to 2016	as % of EU Total	Other non-variable costs	% Δ to 2016	as % of EU Total	Consumption of fixed capital	% Δ to 2016	as % of EU Total	Lease/rental payments for quota	% Δ to 2016	as % of EU Total
	million EUR			million EUR			million EUR			million EUR			million EUR			million EUR			million EUR			million EUR		
BEL	28.1	-1.3%	1.6%	2.1	14.9%	1.7%	14.5	8%	1.8%	12.8	46%	2.5%	8.6	-27%	1.3%	6.1	-10%	1.5%	6.9	-7%	1.3%	-		
BGR	0.7	-12.3%	0.0%	0.0	-50.1%	0.0%	0.8	-15%	0.1%	0.4	9%	0.1%	0.1	-29%	0.0%	0.1	-36%	0.0%	0.2	-56%	0.0%	-		
CYP	0.8	-11.1%	0.0%	0.0		0.0%	0.7	24%	0.1%	0.4	27%	0.1%	0.8	-28%	0.1%	0.1	-28%	0.0%	0.8	-39%	0.1%	-		
DEU	36.9	-9.2%	2.2%	8.4	-5.7%	6.7%	16.8	19%	2.1%	19.0	6%	3.8%	15.2	29%	2.3%	29.7	101%	7.4%	31.8	68%	5.9%	-		
DNK	85.0	-0.3%	5.0%	26.9	-4.1%	21.4%	42.4	22%	5.3%	44.3	1%	8.7%	28.9	-8%	4.4%	18.7	1%	4.7%	74.4	-4%	13.8%	24.0	-16%	23.7%
ESP	392.4	9.0%	22.9%	41.3	16.2%	32.9%	116.9	9%	14.5%	69.2	-10%	13.6%	118.4	-10%	18.0%	54.1	16%	13.6%	48.4	85%	9.0%	7.1	57%	7.0%
EST	3.5	3.9%	0.2%	0.0		0.0%	1.3	49%	0.2%	0.5	-15%	0.1%	0.6	-7%	0.1%	0.4	1%	0.1%	1.2	-1%	0.2%	0.0	14%	0.0%
FIN	4.2	3.4%	0.2%	0.5	-5.3%	0.4%	8.3	10%	1.0%	2.7	8%	0.5%	1.7	9%	0.3%	3.1	5%	0.8%	9.3	2%	1.7%	0.0	-3%	0.0%
FRA	329.8	0.4%	19.3%	-		0.0%	111.1	9%	13.8%	71.6	-8%	14.1%	120.6	0%	18.3%	100.7	11%	25.3%	71.6	-3%	13.2%	-		
GBR	242.5	-1.2%	14.2%	13.2	988.4%	10.5%	113.4	11%	14.1%	98.0	-14%	19.3%	152.5	-19%	23.2%	50.3	-6%	12.6%	47.5	-1%	8.8%	63.7	38%	62.9%
GRC	32.2	-37.7%	1.9%	9.5	61.1%	7.6%	30.8	1%	3.8%	9.4	-34%	1.9%	37.2	-30%	5.6%	2.6	-14%	0.7%	22.3	-3%	4.1%	-		
HRV	18.9	-3.2%	1.1%	0.1	-87.1%	0.1%	12.9	9%	1.6%	4.4	-21%	0.9%	6.1	-4%	0.9%	3.4	-33%	0.8%	7.2	-21%	1.3%	0.2	-56%	0.2%
IRL	83.8	7.9%	4.9%	2.7	15.1%	2.1%	37.4	24%	4.6%	39.0	-1%	7.7%	33.5	15%	5.1%	21.1	-22%	5.3%	27.6	-3%	5.1%			
ITA	196.7	0.5%	11.5%	1.8	-59.3%	1.4%	164.6	5%	20.5%	35.2	0%	6.9%	59.2	-5%	9.0%	28.5	3%	7.2%	114.9	0%	21.2%	-		
LTU	1.7	20.6%	0.1%	-		0.0%	1.1	16%	0.1%	0.7	11%	0.1%	0.5	-19%	0.1%	1.0	43%	0.2%	0.7	41%	0.1%	-		
LVA	3.5	27.8%	0.2%	-		0.0%	2.3	35%	0.3%	0.9	-5%	0.2%	3.4	43%	0.5%	4.8	-10%	1.2%	2.1	104%	0.4%	-		
MLT	1.6	95.0%	0.1%	0.5	-32.2%	0.4%	1.1	-21%	0.1%	0.9	-9%	0.2%	1.0	-21%	0.1%	0.1	-30%	0.0%	1.1	-35%	0.2%	1.1	0%	1.1%
NLD	119.7	-12.2%	7.0%	14.5	-2.3%	11.5%	60.2	18%	7.5%	53.4	-2%	10.5%	32.6	6%	5.0%	54.1	8%	13.6%	30.0	-14%	5.5%	5.1	-69%	5.0%
POL	8.2	21.5%	0.5%	1.5	-4.6%	1.2%	6.8	3%	0.8%	3.6	15%	0.7%	3.1	-6%	0.5%	4.3	17%	1.1%	2.2	-53%	0.4%	-		
PRT	103.8	-3.5%	6.1%	0.7	-14.4%	0.6%	36.7	-4%	4.6%	20.4	0%	4.0%	30.0	3%	4.6%	8.6	-13%	2.1%	24.1	-7%	4.5%	-		
ROU	0.4	15.9%	0.0%	0.0	-25.4%	0.0%	0.4	24%	0.1%	0.2	67%	0.0%	0.0	-18%	0.0%	0.1	262%	0.0%	0.2	30%	0.0%	0.1	19%	0.1%
SVN	0.2	24.4%	0.0%	0.1	-47.6%	0.0%	0.1	13%	0.0%	0.1	39%	0.0%	0.0	-31%	0.0%	0.0	96%	0.0%	0.0	51%	0.0%	-		
SWE	18.3	2.0%	1.1%	1.9	-15.2%	1.5%	24.0	11%	3.0%	20.4	9%	4.0%	4.4	-31%	0.7%	6.7	-1%	1.7%	16.5	29%	3.1%	-		
LSF total	1,713.1	-0.2%		125.6	14.3%		804.7	9.5%		507.4	-5.4%		658.3	-9.1%		398.6	6.6%		540.9	4.0%		101.3	4.3%	
LSF excl. GRC	1,680.8	1.0%		116.1	11.7%		773.9	9.9%		498.0	-4.6%		621.2	-7.4%		396.0	6.7%		518.6	4.3%		101.3	4.3%	
LSF as % of EU active fleet	**76%**			**43%**			**77.6%**			**77%**			**61%**			**68%**			**75%**			**95%**		

Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/ACS(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Table 3-33 Main performance results - EU large-scale fleet, 2017

LSF	Revenue	as % of EU Total	% Δ to 2016	Gross Value Added	as % of EU Total	% Δ to 2016	GVA to revenue	% Δ to 2016	Net Value Added	as % of EU Total	% Δ to 2016	Gross profit	as % of EU Total	% Δ to 2016	Gross profit margin	% Δ to 2016	Net profit	as % of EU Total	% Δ to 2016	Net profit margin	% Δ to 2016
	million EUR			million EUR			%		million EUR			million EUR			%		million EUR			%	
BEL	88.6	1.6%	-7%	46.6	1.4%	-14%	52.6	-8%	39.7	1.4%	-15%	16.4	1.1%	-31%	18.5	-26%	10.1	1.1%	-40%	11.4	-36%
BGR	3.7	0.1%	4%	2.4	0.1%	16%	63.9	12%	2.2	0.1%	32%	1.7	0.1%	35%	45.4	30%	1.5	0.2%	202%	40.3	190%
CYP	3.6	0.1%	2%	1.5	0.0%	16%	42.2	14%	0.7	0.0%	2629%	0.6	0.0%	79%	17.7	75%	- 0.6	-0.1%	72%	- 15.6	72%
DEU	152.7	2.7%	0%	71.9	2.2%	-23%	47.1	-23%	40.1	1.4%	-47%	26.5	1.8%	-40%	17.4	-40%	- 3.0	-0.3%	-112%	- 2.0	-112%
DNK	424.6	7.6%	-7%	290.3	8.8%	-11%	68.4	-5%	215.9	7.8%	-14%	178.4	12.0%	-17%	42.0	-11%	108.2	11.4%	-20%	25.5	-14%
ESP	999.7	17.9%	-1%	641.1	19.5%	-1%	64.1	0%	592.6	21.4%	-4%	207.4	13.9%	-17%	20.7	-16%	158.7	16.7%	-27%	16.0	-27%
EST	9.3	0.2%	3%	6.5	0.2%	0%	69.7	-3%	5.3	0.2%	0%	3.0	0.2%	-4%	31.9	-7%	1.8	0.2%	11%	19.0	8%
FIN	26.2	0.5%	-2%	10.4	0.3%	-15%	39.9	-13%	1.2	0.0%	-63%	5.7	0.4%	-26%	21.6	-24%	- 3.5	-0.4%	-160%	- 13.5	-166%
FRA	914.4	16.4%	2%	510.4	15.5%	1%	55.8	-1%	438.9	15.9%	2%	180.6	12.1%	2%	19.8	0%	95.7	10.1%	15%	11.5	13%
GBR	990.5	17.8%	-3%	576.3	17.5%	2%	58.2	5%	528.9	19.1%	2%	320.6	21.5%	1%	32.4	4%	279.3	29.4%	4%	28.2	7%
HRV	61.0	1.1%	12%	34.2	1.0%	33%	56.0	19%	27.0	1.0%	62%	15.2	1.0%	190%	24.9	159%	4.9	0.5%	139%	8.1	135%
IRL	270.2	4.8%	1%	137.3	4.2%	-3%	51.2	-3%	109.7	4.0%	-3%	50.9	3.4%	-17%	19.0	-17%	12.8	1.3%	-54%	5.2	-51%
ITA	728.5	13.1%	5%	441.0	13.4%	7%	60.5	2%	326.2	11.8%	9%	242.6	16.3%	14%	33.3	8%	123.9	13.0%	36%	17.0	30%
LTU	4.7	0.1%	-10%	1.4	0.0%	-40%	29.9	-33%	0.7	0.0%	-61%	- 0.3	0.0%	-137%	- 7.0	-141%	- 0.8	-0.1%	-305%	- 17.0	-328%
LVA	19.9	0.4%	21%	8.5	0.3%	38%	42.8	14%	6.4	0.2%	25%	5.0	0.3%	46%	25.2	21%	3.1	0.3%	32%	15.5	9%
MLT	7.2	0.1%	6%	4.1	0.1%	38%	56.7	30%	2.9	0.1%	145%	2.0	0.1%	57%	27.9	43%	0.9	0.1%	344%	12.2	323%
NLD	436.6	7.8%	-7%	236.3	7.2%	-16%	54.1	-10%	206.3	7.5%	-16%	102.1	6.9%	-22%	23.4	-16%	73.8	7.8%	-22%	16.9	-17%
POL	37.2	0.7%	-7%	19.5	0.6%	-17%	52.3	-10%	17.3	0.6%	-8%	9.8	0.7%	-35%	26.4	-30%	6.2	0.7%	-19%	16.7	-13%
PRT	274.0	4.9%	-4%	178.3	5.4%	-5%	65.1	-1%	154.2	5.6%	-5%	73.8	5.0%	-7%	26.9	-4%	46.9	4.9%	-4%	17.1	0%
ROU	2.9	0.1%	10%	2.2	0.1%	1%	73.9	-8%	2.0	0.1%	-1%	1.7	0.1%	-1%	59.2	-10%	1.3	0.1%	0%	45.0	-9%
SVN	0.4	0.0%	-42%	0.2	0.0%	-59%	53.1	-30%	0.2	0.0%	-64%	- 0.0	0.0%	-112%	- 8.0	-120%	- 0.1	0.0%	-123%	- 14.0	-140%
SWE	121.3	2.2%	6%	65.9	2.0%	7%	54.3	1%	49.4	1.8%	1%	45.7	3.1%	11%	37.7	5%	30.1	3.2%	4%	24.8	-1%
LSF excl. GRC	**5,577.11**		-0.9%	**3,286.11**		-2.3%	**58.9**	-1.3%	**2,767.54**		-3.4%	**1,489.17**		-6.5%	**26.7**	-5.6%	**951.15**		-8.2%	**17.4**	**- 0.1**

Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/ACS(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Table 3-34 Main productivity results - EU large-scale fleet, 2017

LSF	Return on fixed tangible assets %	% Δ to 2016	GVA per FTE (labour productivity) thousand EUR	% Δ to 2016	Net Value Added per FTE thousand EUR	% Δ to 2016	Average wage per FTE thousand EUR	% Δ to 2016	Fuel efficiency %	% Δ to 2016	Energy consumed per landed tonne litres/tonne	% Δ to 2016	Value of physical capital million EUR	% Δ to 2016	Investments thousand EUR	% Δ to 2016	Subsidies on investments thousand EUR
BEL	22.8	-56%	217.3	-7%	185.1	-8%	140.9	7%	17.1	17%	1,510	8%	41.6	31%	101,811	67%	1,482
BGR	20.0	143%	10.6	7%	9.9	21%	3.1	-21%	22.3	-15%	408	-2%	7.7	-29%	51	-78%	-
CYP	- 0.7	84%	8.7	1%	4.2	2280%	5.1	-19%	19.3	21%	1,181	8%	21.4	3%	187	1750%	-
DEU	- 3.2	-112%	106.8	-28%	59.6	-50%	67.4	-14%	11.3	19%	818	7%	164.7	73%	109,951	516%	-
DNK	15.0	-32%	203.1	-11%	151.0	-14%	78.3	-1%	10.2	32%	107	-22%	692.8	12%	48,432	-58%	-
ESP	70.1	-34%	37.8	2%	34.9	-2%	25.6	12%	11.9	11%	723	-1%	227.0	6%	24,689	298%	2,855
EST	18.9	4%	50.5	-5%	41.0	-4%	27.4	-1%	13.8	45%	50	17%	9.3	-10%	863	8%	82
FIN	- 14.1	-141%	89.3	-10%	10.0	-61%	40.9	8%	32.7	13%	120	-6%	25.6	3%	11,067	22%	-
FRA	22.3	14%	117.9	0%	101.4	1%	76.2	-1%	12.4	7%	646	-1%	421.9	-2%	60,348	202%	1,905
GBR	66.7	12%	99.4	19%	91.2	20%	44.1	21%	12.0	17%	363	-6%	409.6	-10%	60,077	-34%	2,103
HRV	3.8	311%	23.6	66%	18.6	102%	13.1	16%	26.7	13%	308	-1%	209.8	-2%	4,459	-7%	-
IRL	3.7	-44%	79.2	1%	63.3	1%	49.2	12%	14.4	27%	369	-6%	402.5	-19%	14,985	-79%	1,039
ITA	27.0	30%	38.1	8%	28.2	11%	17.1	1%	22.8	0%	1,995	-4%	473.8	0%	17,119	12%	-
LTU	- 15.5	-365%	15.5	-39%	8.0	-60%	19.1	23%	24.7	33%	127	-4%	6.5	-6%	232	-6%	-
LVA	30.6	40%	41.3	42%	31.1	28%	17.1	32%	12.6	10%	75	23%	9.5	-13%	129	10%	116
MLT	5.3	438%	15.6	44%	11.3	146%	7.9	33%	17.0	-27%	1,420	-26%	16.4	-33%	616	138%	-
NLD	31.8	-22%	142.9	-21%	124.8	-21%	81.2	-16%	13.8	26%	447	1%	226.5	-3%	17,185	17%	321
POL	9.6	-20%	23.4	-15%	20.8	-7%	11.6	18%	18.4	11%	119	-1%	79.4	-9%	522	-54%	88
PRT	25.5	-3%	35.2	2%	30.4	2%	20.6	4%	13.4	0%	537	3%	194.5	-4%	9,244	-36%	1,580
ROU	19.7	-20%	56.6	-18%	51.5	-19%	11.3	-8%	15.2	13%	79	-17%	7.8	20%	853	59%	-
SVN	- 6.9	-119%	23.1	-46%	19.8	-52%	26.5	28%	39.1	72%	2,492	43%	0.9	30%	46	145%	-
SWE	38.6	-18%	127.4	7%	95.5	2%	39.0	0%	20.9	7%	248	-12%	75.6	25%	5,383	-6%	-
LSF excl. GRC	**25.4**	-11.8%	**61.4**	1.7%	**51.7**	0.5%	**33.6**	5.7%	**14.2**	11.9%	**428**	-8.1%	**3,724.51**	-0.3%		9.2%	**11,570.7**
LSF as % of EU active fleet													**79.5%**		**88.5%**		**71.3%**

Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/ACS(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Table 3-35 Main capacity and employment variables - EU distant-water fleet, 2017

DWF	Total no. of vessels number	% Δ to 2016	as % of EU Total	Vessel tonnage thousand GT	% Δ to 2016	as % of EU Total	Engine power thousand kW	% Δ to 2016	as % of EU Total	Engaged crew number	% Δ to 2016	as % of EU Total	Unpaid labour number	as % of EU Total	FTE national number	% Δ to 2016	as % of EU Total
ESP	199	-4.3%	78.0%	152.4	1.2%	59.4%	207.5	0.1%	60.0%	4,965	15.4%	79.8%	4	100.0%	6,051	3.7%	87.1%
FRA	22	0.0%	8.6%	46.0	0.0%	17.9%	75.7	0.0%	21.9%	543	-10.0%	8.7%	-	0.0%	204	-66.1%	2.9%
ITA	8	0.0%	3.1%	6.0	0.0%	2.3%	12.7	0.0%	3.7%	84	20.0%	1.4%	-	0.0%	84	89.0%	1.2%
LTU	6	-33.3%	2.4%	29.4	-16.6%	11.5%	26.3	-23.4%	7.6%	196	-5.8%	3.2%	-	0.0%	220	5.4%	3.2%
POL	2	0.0%	0.8%	15.4	0.0%	6.0%	11.2	0.0%	3.2%	175	-8.4%	2.8%	-	0.0%	160	-16.2%	2.3%
PRT	18	5.9%	7.1%	7.5	16.9%	2.9%	12.2	13.6%	3.5%	259	13.6%	4.2%	-	0.0%	230	10.0%	3.3%
DWF total	**255**	-4.1%		**256.8**	-1.1%		**345.71**	-1.8%		**6,222**	11.0%		**4**		**6,950**	-2.0%	
DWF as % of EU active fleet	**0.4%**			**17.7%**			**6.3%**			**4.1%**			**0.0%**		**8.0%**		

Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/ACS(2019)).

Table 3-36 Main fishing activity variables - EU distant-water fleet, 2017

DWF as % of EU active fleet	Days at sea thousand days	% Δ to 2016	as % of EU Total	Fishing days thousand days	% Δ to 2016	as % of EU Total	Energy consumed million litres	% Δ to 2016	as % of EU Total	Landed weight thousand tonnes	% Δ to 2016	as % of EU Total	Landed value million EUR	% Δ to 2016	as % of EU Total
ESP	58.7	-3.2%	80.3%	50.7	-2.8%	81.4%	272.0	2.8%	73.1%	470.6	1.9%	65.1%	926.0	-7.9%	78.7%
FRA	5.9	38.6%	8.1%	3.6	67.7%	5.7%	50.1	-7.2%	13.5%	114.4	-0.3%	15.8%	161.9	9.0%	13.8%
ITA	2.1	182.3%	2.9%	2.1	210.5%	3.4%	2.9	-29.2%	0.8%	7.1	64.6%	1.0%	15.5	347.3%	1.3%
LTU	1.5	-16.4%	2.1%	1.3	-15.8%	2.0%	39.5	-6.2%	10.6%	69.8	-19.4%	9.7%	53.1	-18.5%	4.5%
POL	0.5	-29.6%	0.6%	0.4	-22.8%	0.6%				50.7	-4.6%	7.0%			0.0%
PRT	4.4	14.9%	6.1%	4.3	14.7%	6.9%	7.6	1.6%	2.0%	10.7	55.0%	1.5%	20.5	-10.0%	1.7%
EU total	73.1	1.6%		62.3	2.6%		372.1	0.0%		723.3	-0.6%		1,177.0	-5.5%	
DWF as % of EU active fleet	**1.5%**			**1.3%**			**16.5%**			**13.7%**			**15.4%**		

Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/ACS(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Table 3-37 Main income variables - EU distant-water fleet, 2017

DWF	Gross value of landings	% Δ to 2016	as % of EU Total	Other income	% Δ to 2016	as % of EU Total	Operating subsidies	% Δ to 2016	as % of EU Total	Income from leasing out quota	as % of EU Total
	million EUR			million EUR			million EUR			EUR thousand	
ESP	849.6	4.6%	77.4%	8.6	-5.6%	78.6%	1.8	103%	100.0%	496.9	77.6%
FRA	162.2	9.2%	14.8%	-		0.0%	-		0.0%	-	0.0%
ITA	15.5	347.3%	1.4%	0.8		7.4%	-		0.0%	143.1	22.4%
LTU	50.8	-18.3%	4.6%	1.4	-25.4%	12.7%	-		0.0%	-	0.0%
POL										-	0.0%
PRT	20.3	-9.2%	1.8%	0.1	91.1%	1.3%	-		0.0%	-	0.0%
DWF total	1,098.4	4.7%		10.9	-1.0%		1.8	103%		640.0	
DWF as % of EU active fleet	**14.6%**			**5.7%**			**3.5%**			**1.6%**	

Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/ACS(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Table 3-38 Main cost items variables - EU distant-water fleet, 2017

DWF	Personnel costs	% Δ to 2016	as % of EU Total	Value of unpaid labour	as % of EU Total	Energy costs	% Δ to 2016	as % of EU Total	Repair & maintenance costs	% Δ to 2016	as % of EU Total	Other variable costs	% Δ to 2016	as % of EU Total	Other non-variable costs	% Δ to 2016	as % of EU Total	Consumption of fixed capital	% Δ to 2016	as % of EU Total	Lease/rental payments for quota	% Δ to 2016	as % of EU Total
	million EUR			EUR		million EUR			million EUR			million EUR			million EUR			million EUR			million EUR		
ESP	167.3	22.3%	73.4%	81.8	100.0%	106.0	9%	73.9%	49.6	-16%	54.6%	244.0	-12%	87.8%	71.4	14%	69.1%	59.8	29%	83.0%	3.5	13%	93.1%
FRA	47.0	3.8%	20.6%	-		20.0	-1%	13.9%	32.3	4%	35.5%	6.4	2%	2.3%	22.5	-5%	21.8%				-		
ITA	2.5	329.8%	1.1%	-		1.7	-11%	1.2%	0.6	152%	0.7%	0.7	-4%	0.3%	0.3	152%	0.3%	3.2	-11%	4.5%	0.3		6.9%
LTU	7.9	7.3%	3.5%	-		11.6	10%	8.1%	7.0	28%	7.7%	21.9	-12%	7.9%	8.3	-18%	8.1%	7.0	-6%	9.7%	-		
POL																							
PRT	3.1	-5.2%	1.3%	-		4.3	15%	3.0%	1.4	-8%	1.6%	5.0	0%	1.8%	0.7	-11%	0.7%	2.1	0%	2.9%	-		
DWF total	227.8	17.8%		81.8		143.5	7%		90.9	-7%		278.0	-12%		103.3	6%		72.0	21%		3.8	21%	
DWF as % of EU active fleet	**10.3%**			**0.0%**		**14.4%**			**14.0%**			**27.4%**			**17.8%**			**10.4%**			**3.5%**		

Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/ACS(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Table 3-39 Main performance results - EU distant-water fleet, 2017

DWF	Revenue	as % of EU Total	% Δ to 2016	Gross Value Added	as % of EU Total	% Δ to 2016	GVA to revenue	% Δ to 2016	Net Value Added	as % of EU Total	% Δ to 2016	Gross profit	as % of EU Total	% Δ to 2016	Gross profit margin	% Δ to 2016	Net profit	as % of EU Total	% Δ to 2016	Net profit margin	% Δ to 2016
	million EUR			million EUR			%		million EUR			million EUR			%		million EUR			%	
ESP	858.2	77.4%	4%	387.2	79.5%	19%	45.1	14%	327.5	78.9%	18%	219.9	84.9%	17%	25.6	12%	160.9	103.1%	17%	18.8	12%
FRA	162.2	14.6%	9%	81.0	16.6%	20%	49.9	10%	81.0	19.5%	20%	34.0	13.1%	54%	21.0	41%					
ITA	16.3	1.5%	371%	6.2	1.3%	1290%	64.7	405%	3.0	0.7%	192%	3.7	1.4%	2642%	38.2	1024%	0.3	0.2%	108%	3.3	103%
LTU	52.2	4.7%	-19%	3.4	0.7%	-74%	6.5	-68%	- 3.6	-0.9%	-165%	- 4.5	-1.8%	-183%	- 8.7	-202%	- 8.8	-5.6%	-313%	- 16.8	-407%
POL		0.0%			0.0%					0.0%			0.0%								
PRT	20.4	1.8%	-9%	9.0	1.8%	-21%	44.1	-13%	6.9	1.7%	-25%	5.9	2.3%	-27%	29.1	-19%	3.6	2.3%	-36%	17.7	-29%
DWF excl. GRC	**1,109.3**		4.7%	**486.78**		16.8%	**44.2**	25%	**414.76**		16.1%	**259.01**		16.2%	**23.5**	35%	**156.09**		13.7%	**16.6**	10.2%
DWF as % of EU active fleet	**14.4%**			**10.9%**								**13.1%**					**12.7%**				

Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/ACS(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Table 3-40 Main productivity results - EU distant-water fleet, 2017

DWF	Return on fixed tangible assets	Net Value Added per FTE	% Δ to 2016	GVA per FTE (labour productivity)	% Δ to 2016	Average wage per FTE	% Δ to 2016	Fuel efficiency	% Δ to 2016	Energy consumed per landed tonne	% Δ to 2016	Value of physical capital	% Δ to 2016	Investments	% Δ to 2016	Subsidies on investments
	%	thousand EUR						%		litres/tonne		million EUR		thousand EUR		thousand EUR
ESP	94.3	54.1	13%	64.0	15%	27.6	17%	12.5	4%	578	1%	169,802	-10%	27,713	13%	1,126.7
FRA		396.1	255%	396.1	255%	229.8	206%	12.3	-9%	438	-7%			-		
ITA	3.2	35.2	149%	73.6	636%	30.1	127%	19.0	-65%	2,077	-81%	13,367	-11%	1,196.9		-
LTU	- 13.7	- 16.3	-162%	15.4	-75%	36.0	2%	22.8	34%	565	16%	84,232	-19%	-		-
POL																
PRT	20.8	30.2	-32%	39.2	-28%	13.3	-14%	21.1	27%	707	-34%	18,694	12%	849.2	374%	-
DWF excl. GRC	**53.5**	**61,087**	18.0%	**71,694**	18.7%	**33,547**	19.4%	**13.1**	3.1%	**558**	0.5%	**286**	-11.6%	**29,759**	12.1%	**1,127**
DWF as % of EU active fleet												**6.1%**		**5.4%**		**6.9%**

Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/ACS(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

4 EU Regional Analysis

Introduction

The main fishing grounds for the EU fishing fleet are located FAO fishing areas 27 (Northeast Atlantic, Baltic and North seas) and FAO 37 (Mediterranean and Black seas). Some activity Part of the EU fleet also operates in fishing areas much further afield. These areas, including EU outermost regions, are collectively termed "*Other Fishing Regions"* or OFR.

This section analyses the economic performance of the EU fishing fleet by main fishing region. For this economic data provided by fleet segment at the supra-region level are disaggregated based on effort and landings data provided by sub-region (FAO level 3 or 4) (see Chapter 6 for more details on the methodology used).

The EU fishing fleet was analysed by the following fishing regions:

North Atlantic (NAO):

- North Sea & Eastern Arctic
- NAFO
- Baltic Sea
- North western Waters (extended)
- Southern Western Waters

Mediterranean & Black seas (MBS):

- Mediterranean Sea
- Black Sea

Other Fishing Regions (OFR):

- EU Outermost regions – 6 France, 2 Portugal and 1 Spain
- Long distant fisheries – ICCAT, IOTC, CECAF

Due to time constraints and data limitations, EU fishing fleets operating in other RFMOs, such as IOTC and CECAF were only partially evaluated in this year's report.

Note: Due to explicit data and methodological limitations (see chapter 6), all results provided in this chapter should be considered exploratory rather than a source of factual statements that are considered robust enough to be a basis for policy decisions.

4.1 North Sea & Eastern Arctic

Regional Details

The North Sea & Eastern Arctic region, as defined for this report, comprises ICES areas I, II, IIIa, IV, and VIId. French data were incomplete and are only included in the analysis from 2010 onwards. In addition, where insufficient data were provided for fleet segments these may have been excluded from all or some of the analyses. **As, for confidentiality reasons, not all data were provided for the German pelagic trawlers and some high sea Polish vessels; these segments are not included in the analysis.** Trends and absolute regional figures should therefore be interpreted and considered with care.

The analysis includes reported landings from 11 MS fleets: Belgium, Denmark, Germany, France, Ireland, Lithuania, the Netherlands, Portugal, Spain, Sweden and the UK. These MS fleets target high value species including common sole (The Netherlands, Belgium, Germany and France), common shrimp (The Netherlands, Germany, Denmark and Belgium) and Norway lobster (Denmark, The Netherlands, Germany, Sweden and to some extent Belgium). Other important demersal species include Atlantic cod (UK, France, Spain and Denmark) and European plaice (The Netherlands, UK, Denmark and Belgium). Furthermore, a number of these MS also target pelagic species such as Atlantic mackerel and Atlantic herring (Denmark, UK, The Netherlands, Germany and Sweden).

None of the MS fleets are wholly dependent on the region for their fishing activity, yet based on the value of landings, Denmark (87% of total landings), the Netherlands (83%), Germany (73%), Sweden (59%), the UK (51%) and Belgium (45%) are considerably dependent on the North Sea & Eastern Arctic region (Figure 4.1).

Three main players dominate the seascape of this region. The Danish fleet was the most important in terms of landed weight (776 thousand tonnes). While the UK fleet was only 51% dependent on its landings from the region, it was the most important fleet in terms of landed value (EUR 550 million). Furthermore, the Dutch fleet is also an important contributor (Figure 4.1).

In terms of landed weight, Denmark caught 85% of their landings in the North Sea & Eastern Arctic, followed by the Netherlands and Germany (each 59%). The pelagic fisheries influence these ratios to a large extent. Large volumes of sandeel are caught by the Danish fleet, while this is not a high valued species.

Even though the share of small-scale vessels is more than 50% and the effort is about one third of the total days-at-sea in the North Sea, their economic contribution as well as their share of the landed weight is marginal. The large-scale fleet (LSF) landed 98% of the total weight and 95% of the total value (Figure 4.2).

Tables at the send of this section contain a summary of the economic performance of the North Sea & Eastern Arctic fleet by Member State, main type of fishing activity and fleet segment.

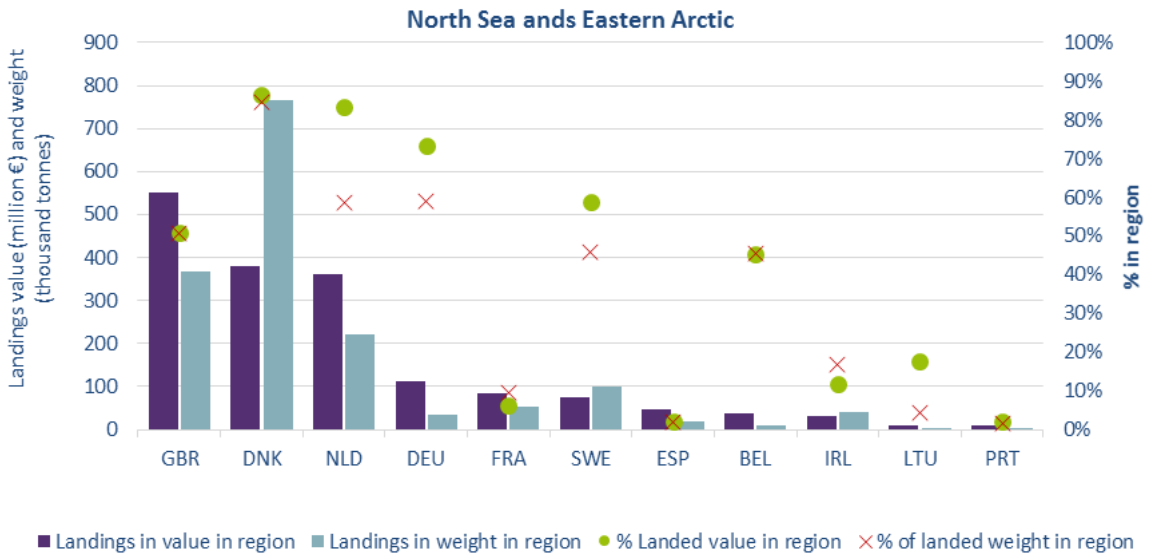


Figure 4.1 Importance of the North Sea & Eastern Arctic for MS fisheries in landings weight and value, 2017
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

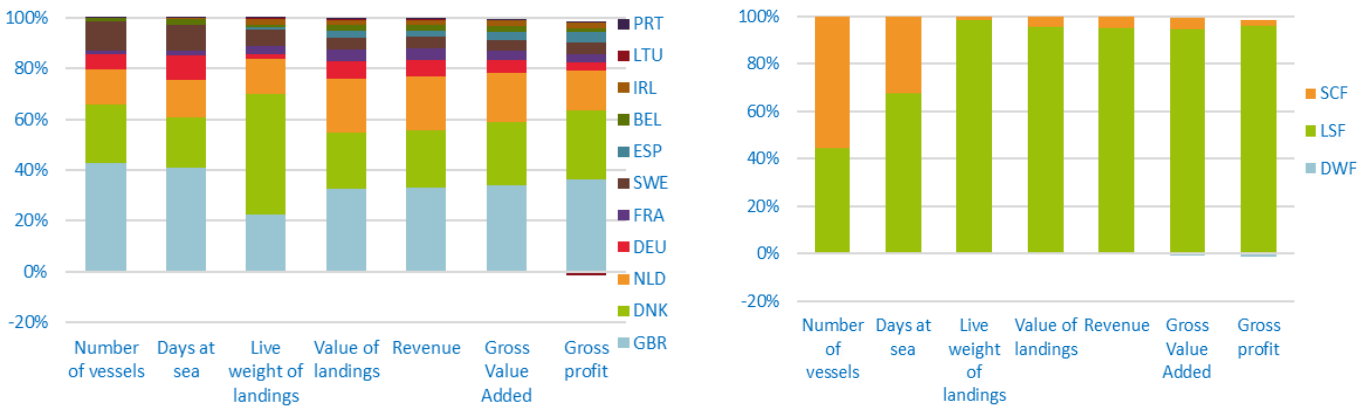


Figure 4.2 Share by MS fleet and fishing activity in the North Sea & Eastern Arctic, 2017
Data source: Member State data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)).

Overview of the main results for EU fleets in the NWW

Fishing effort and landings

Fishing effort has generally decreased while landings have increased (Figure 4.3). The value of landings increased by 25% between 2010 and 2017. For a number of important North Sea fish species prices were comparable to 2016 and higher compared to other years. The price for common shrimp was particularly striking in 2016 and remained high in 2017. The total landings in weight increased by 38% in 2017 compared to 2016. Furthermore, the fuel prices increased in 2017, but remained relatively low. Fuel is an important operational cost and therefore an important driver for revenues.

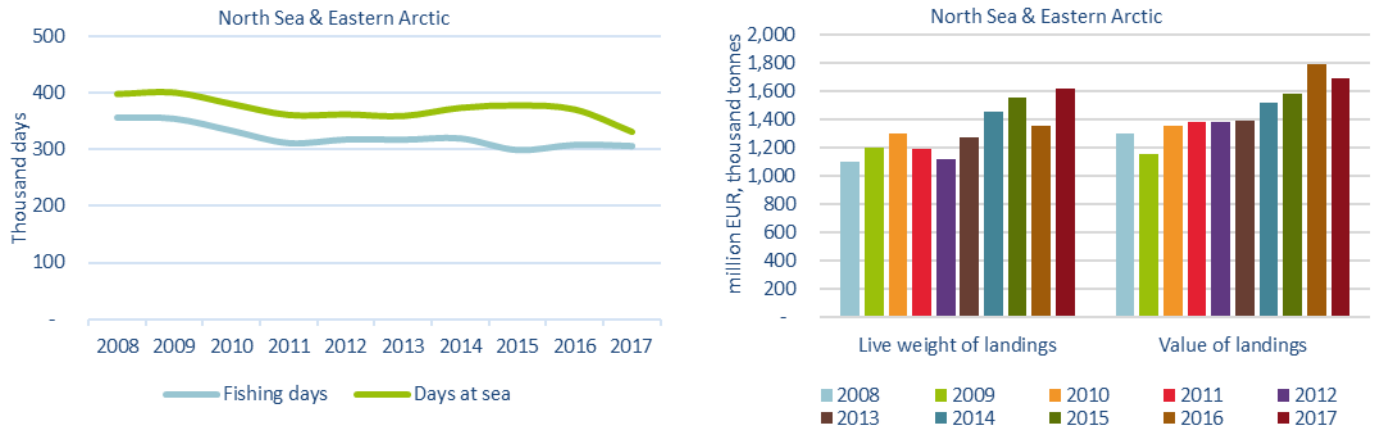


Figure 4.3 Trends on effort and landings for MS fleets operating in the North Sea & Eastern Arctic
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Employment

Over the past years, employment measured in terms of Full Time Equivalents (FTE) showed a decreasing trend between 2010 and 2017 (-8%) to an estimated 7 493 FTE. In 2017 there was a decrease (-6%) in employment compared to 2016. The main contributors to the employment are the UK (40%), Denmark (19%) and the Netherlands (20%). There is an overall declining trend in employment in LSF. FTEs in the SSCF were much lower and remained relatively stable over time, but decreased in 2017.

Wages and Salaries

Wages per FTE decreased by 0.8% in the large-scale fleet from 2016 to 2017. There was a trend between 2010 and 2016 where the wages per FTE increased by 45% (Figure 4.4). In 2017, the average wage in the LSF was estimated at EUR 69 600. In the SSCF such a trend was less clear, but there was still an overall increase (50%) between 2010 and 2017. Between 2016 and 2017 the average wage per FTE for the SSCF increased by 37%, fluctuating around EUR 37 500.

Labour productivity

The productivity (GVA/FTE) of the large-scale fleet increased considerably between 2010 and 2016 (+60%). This coincided with a decrease in employment. However, since 2014, the impact on the number of jobs ceased. In 2017 labour productivity dropped again. For the SSCF, labour productivity increased considerably in 2017.

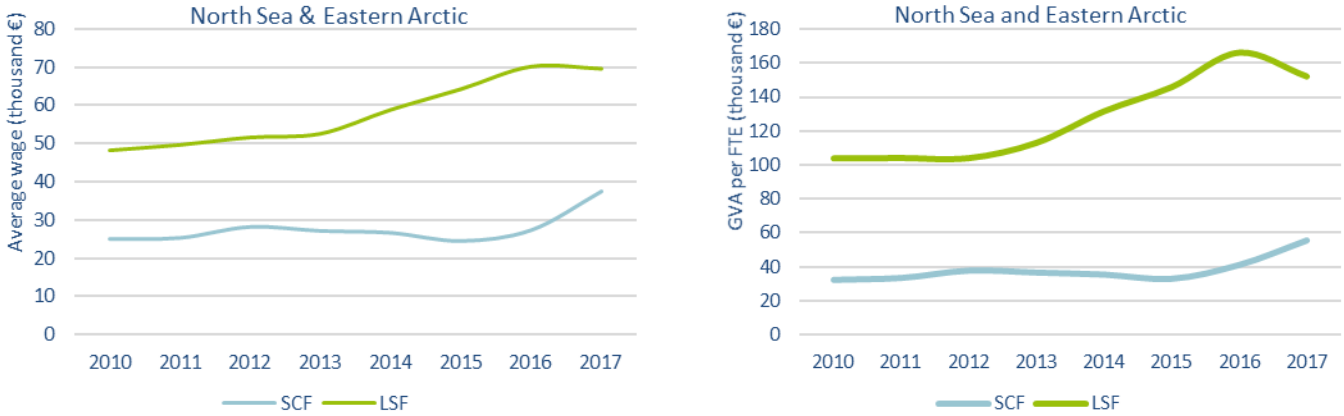


Figure 4.4 Trends on average wage per FTE and labour productivity (GVA per FTE) by fishing activity for MS fleets operating in the North Sea & Eastern Arctic
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Economic performance

The revenue (income from landings and other income) generated by the North Sea & Eastern Arctic fleet in 2017 was estimated at almost EUR 1.7 billion, a 5% decrease compared to 2016.

GVA produced by the fleets covered in the analysis was estimated at over EUR 1 billion, representing an overall decrease of almost 11% compared to 2016. After accounting for all operating costs, the fleets made almost EUR 547 million in gross profit, an estimated 16% decrease compared to 2016 (Figure 4.5).

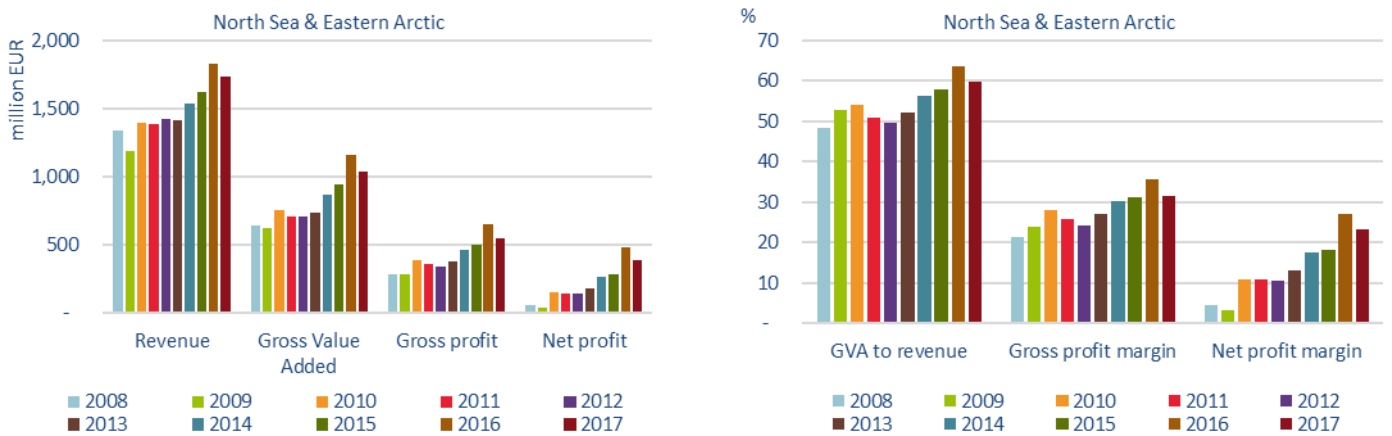


Figure 4.5 Trends on revenue and profits for MS fleets operating in the North Sea & Eastern Arctic
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Main drivers affecting fleet performance in the region

The overall changes have been mostly driven by the large-scale fleets, whereas the trends for the SSCF in the North Sea & Eastern Arctic are less clear.

Factors that may have contributed to the situation include:

- Recovery of certain stocks, e.g. North Sea common sole, European plaice, Atlantic herring, haddock, saithe stocks have all reached levels that are capable of delivering MSY.
- Increase in the TAC over time for a number of species such as Atlantic herring, European plaice, Atlantic cod and Norway lobster.

- Reduced TACs and quotas in 2017 for stocks, such as haddock, Northern prawn, Atlantic herring and European sprat.
- In 2017 the TAC for Atlantic mackerel increased. It is seen as an important driver of the economic performance of the UK fleet (>50% of the value of landings in the NS).
- Key demersal species haddock for the UK fleet saw its initial quota cut in 2017, however weight of landings remained stable and value of landings increased as prices rose.
- Higher average prices for some of the main species, such as Atlantic cod, common shrimp and European plaice
- Average prices for Atlantic herring and Atlantic mackerel slightly decreased.
- Fuel prices remained stable.

Factors that may drive/hamper economic performance in the future include:

- Decreasing TAC for most important species except for saithe and Norway lobster.
- Large-scale fleets in Denmark, the Netherlands and Germany are investing in new vessels and fishing techniques.
- More vertical integration is being observed leading to shifts in ownership
- Especially for the Dutch fleet the ban of pulse fishing technique will raise fuel costs and decrease net profits when enterprises has to switch to the more traditional beam trawl fishing technique

Whilst the consequences of Brexit are unknown, it is to be expected that it could have a large impact on the North Sea. The UK holds a significant portion of the value of landings in the region (32% in 2017). Furthermore, there is a high dependency on UK waters for a number of MS in the region. Belgium, The Netherlands, Germany, Denmark, France, Ireland, Sweden and to a lesser overall extent Spain are expected to be affected.

Trends by Member State fleet and fishing activity

Fleet capacity and employment

Member State fleets operating in the North Sea & Eastern Arctic region in 2017 numbered 3 656 vessels. The UK North Sea & Eastern Arctic fleet comprised the largest in number (1 563 active vessels), accounting for 43% of the total reported for the region and 47% of their national fleet (Figure 4.6)

Overall the number of vessels operating in the region has followed a decreasing trend between 2010 and 2014, with an increase in 2015, mainly due to more UK vessels. In 2016 there was a slight decrease in the number of vessels, from an estimated 3 900 in 2015 to 3 656 vessels. The employment, measured in terms of Full Time Equivalents (FTE), also showed a decreasing trend between 2010 and 2014, and increased in 2015 and 2016, in line with the number of vessels (Figure 4.6). In terms of employment, the SSCF generated 2 567 - mostly part time - jobs (883 FTE) while the LSF generated 6 826 jobs (6 533 FTE).

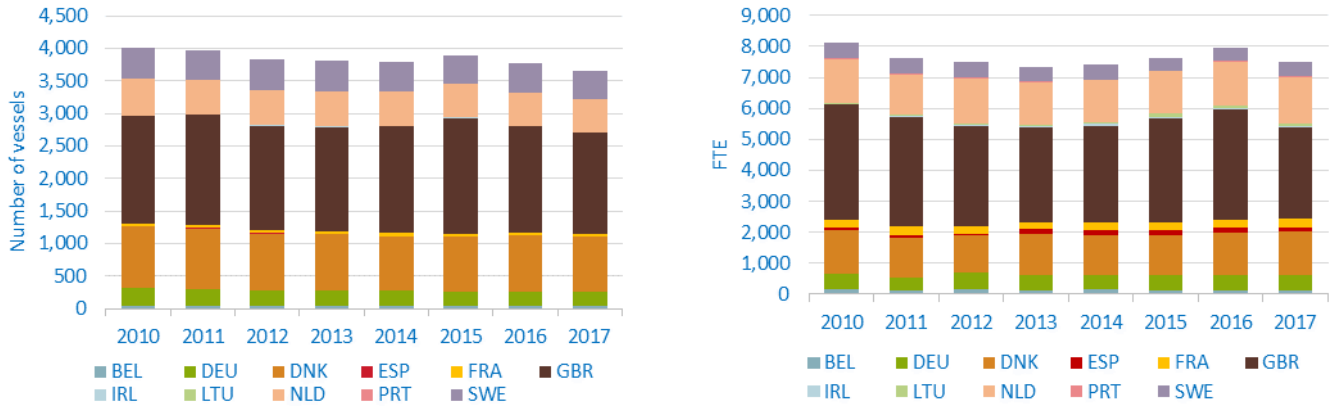


Figure 4.6 Trends on number of vessels and employment (in FTE) for MS fleets operating in the North Sea & Eastern Arctic

Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)).

Fishing effort

Effort, more or less, followed the fleet capacity reduction, with an increase in 2014 and 2015 largely attributed to the UK fleet. Fuel consumption decreased significantly from 2010 to 2011, continuing on a steady decreasing trend until 2014 (Figure 4.7). In 2015, fuel consumption slightly increased, in line with the increased number of vessels and relatively low fuel prices and further increased in 2016 and 2017.

Around 32% of the days-at-sea were undertaken by small-scale coastal vessels using passive gears. The UK, France and Denmark accounted for 78% of this effort. Large-scale fisheries (LSF) accounted for most of the remaining 68% of the days-at-sea, of which most were undertaken by the demersal fleet.

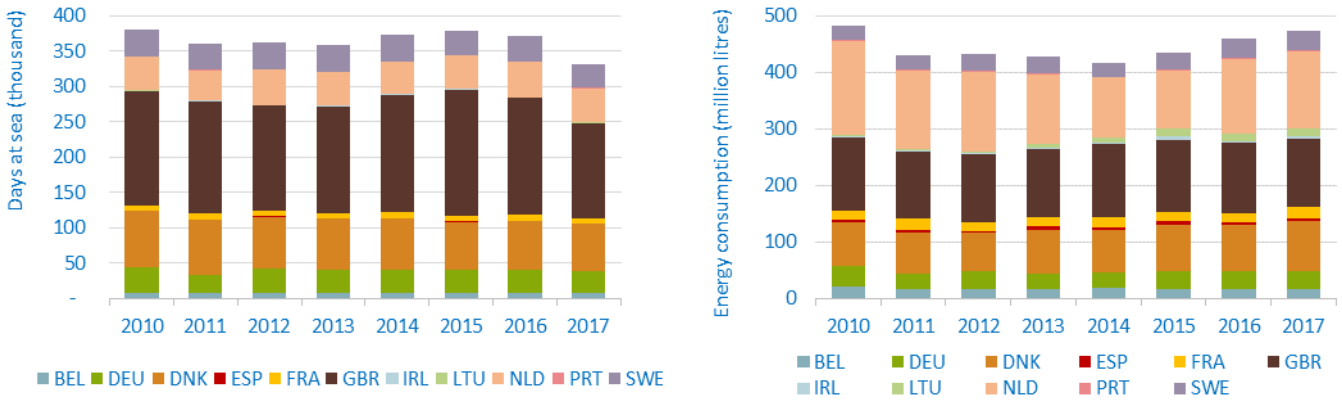


Figure 4.7 Trends on fishing effort (in days-at-sea) and fuel consumption for MS fleets operating in the North Sea & Eastern Arctic
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019))

Landings and top species

The weight and value of landings generated by the fleet amounted to approximately 1.6 billion tonnes and EUR 1.7 billion, respectively in 2017. Despite more landings in weight compared to 2016 (1.4 billion tonnes) less value of the landings were obtained (EUR 1.8 billion in 2016) due to lower fish prices.

Landings in weight decreased sharply between 2010 and 2012, mainly due to lower catches made by the Danish fleet. It increased steadily from 2013 onwards, again due to the contribution of the Danish fleet, as well as the contribution of the UK fleet, dropping again in 2016. Landings in value remained rather stable over the period 2010 to 2013, increasing in 2014, 2015 and even more in 2016 (Figure 4.8). Despite lower landings in terms of weight, there was a strong increase in value in 2016. Remarkably, in 2016 the landings of sandeel dropped in weight by 85% to 33 thousand tonnes compared to 2015 due to a radically lower TAC, while in 2017, it was significantly up again.

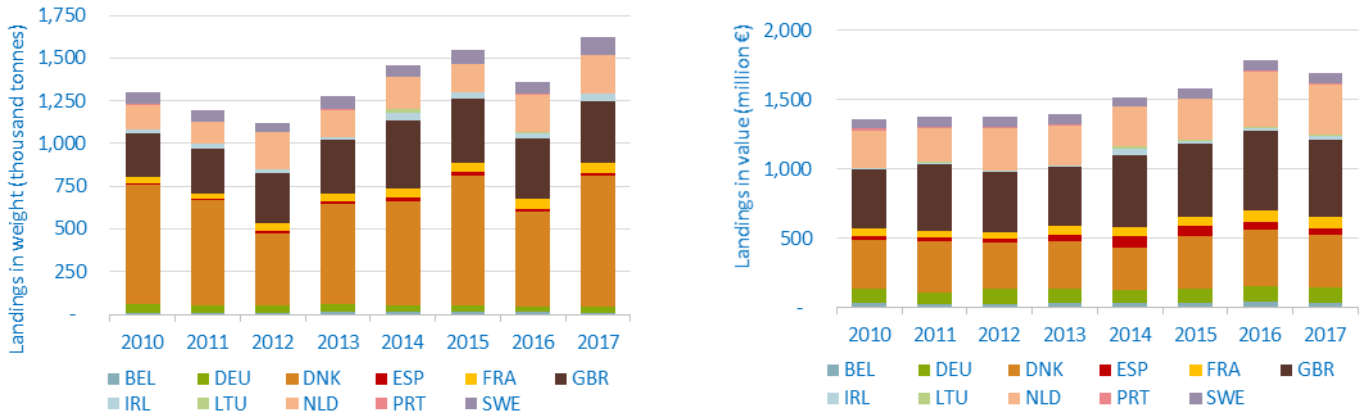


Figure 4.8 Trends on landings in weight and value for MS fleets operating in the North Sea & Eastern Arctic
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

In 2017 sandeel (408 456 tonnes) and Atlantic herring (388 274 tonnes) were the most important species in terms of weight. Landings of Atlantic mackerel (223 397 tonnes), European sprat (119 417 tonnes) and Atlantic cod (84 952 tonnes) were the next most important species in terms of weight (Figures 4.8

and 4.9). Compared to 2016 the landings of these species changed by +1150%, -6%, +15%, - 47% and 1% respectively.

In terms of value, the most important species in 2017 were: Atlantic cod (EUR 221.7 million), Atlantic mackerel (EUR 207.2 million), followed by Atlantic herring (EUR 175.4 million), common shrimp (EUR 160 million), European plaice (EUR 131 million), common sole (EUR 128.3 million) and Norway lobster (EUR 121 million) (Figures 4.9 and 4.10). Especially, the increase in landed value of sandeel (+571%) and cod (+11%) were noteworthy in 2017.

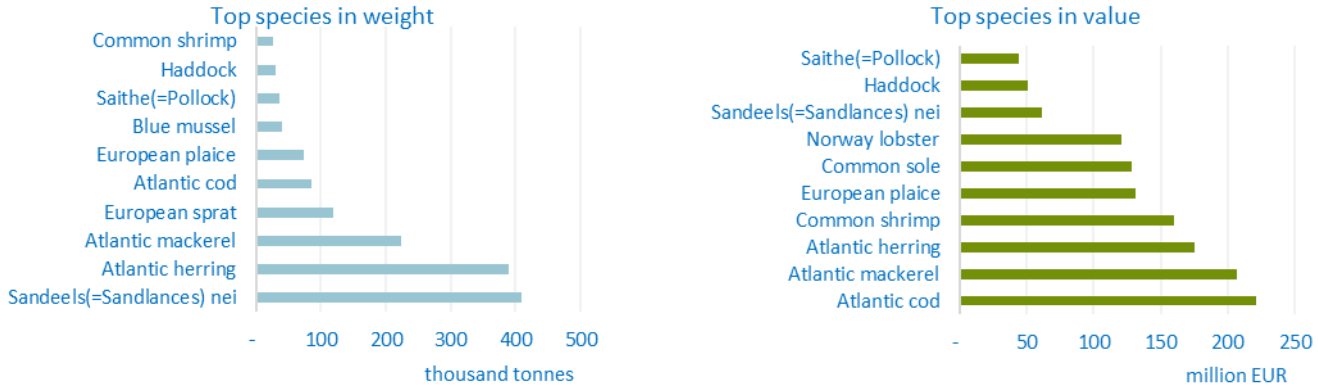


Figure 4.9 Top 10 species in landed weight and value from the North Sea & Eastern Arctic, 2017
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

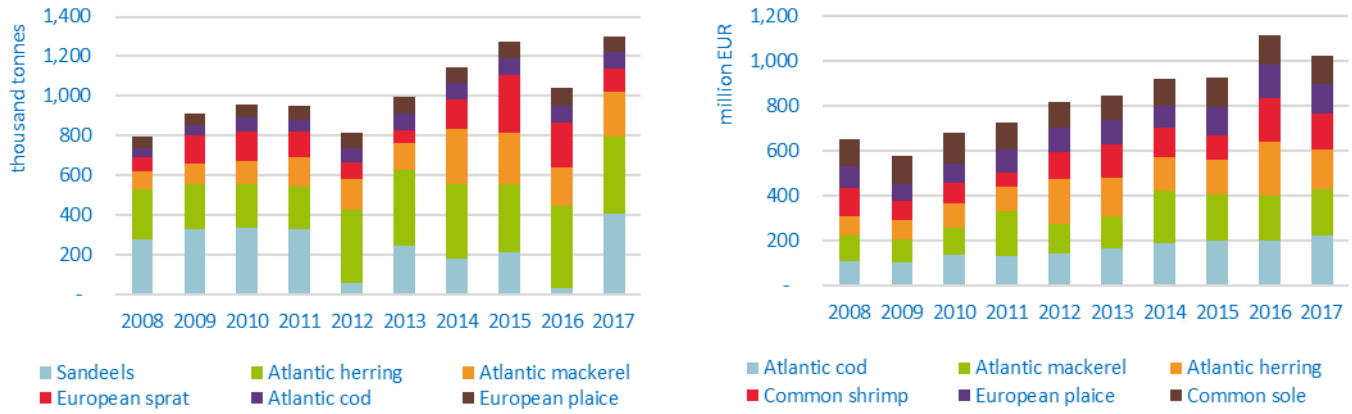


Figure 4.10 Trends on landings for the top six species in landed weight and value for MS fleets operating in the North Sea & Eastern Arctic
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Socio-economic performance

The revenue (income from landings and other income) generated by the North Sea & Eastern Arctic fleet in 2017 was estimated at EUR 1.7 billion, 77% of which was provided by 3 Member States: UK (EUR 576 million), Denmark (EUR 388 million) and the Netherlands (EUR 365 million) (Figure 4.11).

Revenue decreased in 2017 by 5% compared to 2016: Belgium (-15%), Denmark (-6%), the UK (-3%), the Netherlands (-9%), Spain (-21%), Portugal (-2%) and Sweden (-5%) all suffered a decrease compared to 2016, while the remaining MS fleets saw revenues grow, more noticeably, Ireland (+22%) and Lithuania (+10%).

GVA produced by the fleet covered in the analysis was estimated at over EUR 1 billion in 2017. This represented an overall decrease of 11% compared to the GVA generated in 2016. After accounting for operating costs, the fleets made almost EUR 547 million in gross profit, an estimated 16% decrease compared to 2016 (Figure 4.11).

By fishing activity, the SSCF generated EUR 84 million in revenue, a 3% decrease relative to 2016, while the LSF generated EUR 1.6 billion in revenue, an estimated 5% decrease compared to 2016.

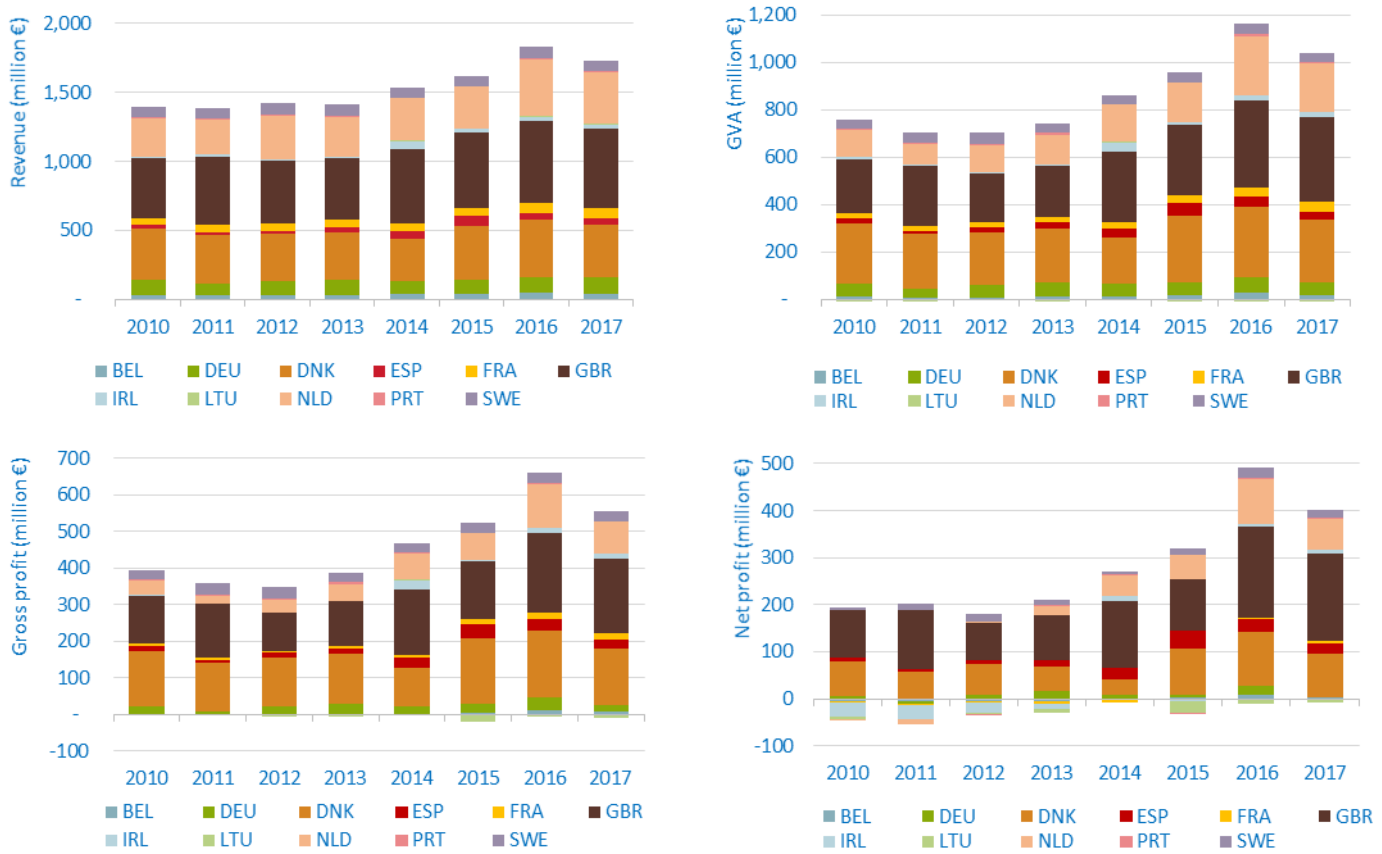


Figure 4.11 Trends on revenue (landings income + other income) and profit (GVA, gross profit and net profit) for MS fleets operating in the North Sea & Eastern Arctic

Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Main factors affecting the performance of the fleet

Regulation and Fisheries management in the region

The management plans in force in 2017 that impacted on the North Sea included:

- Long-term plan for cod stocks and the fisheries exploiting those stocks (Council Regulation (EC) No 1342/2008). The effort controls of the cod recovery zone were repealed in November 2016 by EU Parliament and Council Regulation No 2016/2094. This will not have a significant impact on 2017 results.
- Multiannual plans for fisheries exploiting stocks of European plaice and common sole in the North Sea (Council Regulation (EC) No 676/2007).
- Recovery plan for the Northern hake stock covering the areas Kattegat, Skagerrak, North Sea, the Channel, West of Scotland, all around Ireland and the Bay of Biscay (Council Regulation (EC) No 811/2004).
- Fishing opportunities for certain fish stocks and groups of fish stocks, applicable in Union waters and, for Union vessels, in certain non-Union waters (Council Regulation (EU) 2015/104 of 19 January, 2015).
- Fishing opportunities available in EU waters and, to EU vessels, in certain non- EU waters (Council Regulation (EU) No 40/2013 of Jan 21, 2013), including European Union and Norway bilateral fisheries arrangements.
- Other management measures that may affect economic performance of the fleets operating in the North Sea include marine protected areas and other national legislation.

Status of important stocks

Atlantic herring, common sole, European plaice, haddock, saithe and Norway lobster in the North Sea are all managed at MSY. However, not all Norway lobster stocks have an Fmsy assessment. According

to ICES advice, the plaice stock has developed favourably under the current management plan. However, caution must still be applied as discard rates for plaice were estimated to be high.

Despite the implementation of the cod management plan since 2003 and contrary to earlier predicaments, the fishing mortality of North Sea cod is still above FMSY. The recovery did not occur as quickly as expected. The spawning stock biomass was estimated to be slightly above MSY Btrigger in the assessment of 2017 with high uncertainty. Therefore cod in the North Sea and Eastern English Channel remains a point of concern. In July 2017 North Sea Cod was certified as sustainable by the Marine Stewardship Council (MSC 2017). The Kattegat cod remains at a low level but the biomass has increased since 2009.

Another economically important species is brown shrimp (*Crangon crangon*). This species is currently not under a TAC regime. However, there have been initiatives from the fishing industry to move towards implementing harvest control rules and in 2016 measures were taken to regulate the weekly fishing effort. This was one of the requirements to qualify for an MSC certificate. The fishery was certified in 2017.

TAC development of main species

Figure 4.12 shows the EU TACs for 2008 to 2018 for some pelagic and demersal species (2019 when available). It should be noted that in some cases the TAC areas are not limited to the North Sea & Eastern Arctic and include adjacent waters. The time series shows a gradual increasing trend for some of these key species such as **plaice**, **cod**, **Norway lobster** and **herring**. However, TAC for **cod, plaice** have been decreasing since 2017. For **common sole** TAC increased slightly between 2015 and 2018 (+17%).

Between 2008 and 2014 the TAC for **Atlantic mackerel** shows an increasing trend. In 2014 the TAC for Atlantic mackerel increased significantly compared to 2013 (+77%), but shows an overall decreasing trend between 2014 and 2019 (-46%). This is seen as an important driver of the economic performance of the UK fleet. In 2016, the weight of landings decreased, however in this instance the value of landings increased due to a significant price increase. In 2017 the initial quota for this species increased and as a result the weight and value of landings also increased, representing 20% of the total value of landings and 31% of the total weight of landings by the UK fleet.

The TAC for **sandeel**, an important species for the Danish industrial fishery, is more unpredictable. It seems to oscillate considerably from one year to another. It decreased considerably in 2014 compared to 2013, but increased again in 2015. It drastically dropped again in 2016, increased considerably in 2017 and dropped again in 2018. Theses oscillations are not reflected in the price of this species. Furthermore, the TAC for **sprat** reached a remarkable high point in 2015, but shows a decreasing trend since (-48% between 2015 and 2018).

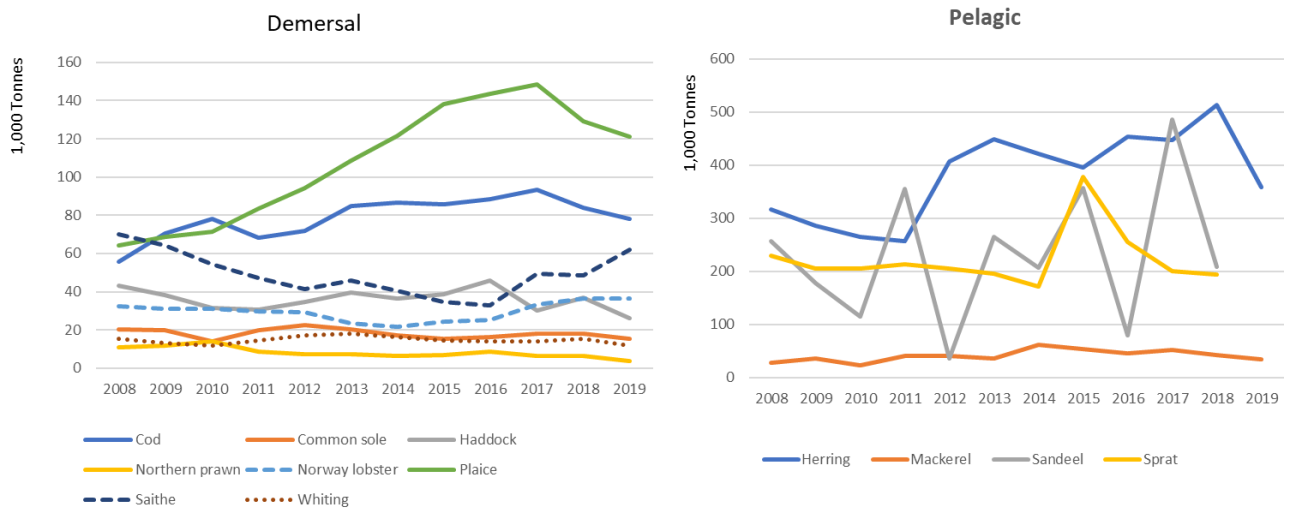


Figure 4.12 TACs pre-uplift for demersal species (left) and major pelagic species (right)
Source: Calculated based on TAC Council Regulations

Areas included for each species (Figure 4.12):

- Cod: 1 and 2b; 4; Union waters of 2a; that part of 3a not covered by the Skagerrak and Kattegat; 7d; Kattegat; Norwegian waters of 1 and 2; Norwegian waters south of 62° N; Skagerrak
- Common sole: 3a; Union waters of Subdivisions 22-24; 7d; Union waters of 2a and 4

- Haddock:3a; 4; Union waters of 2a; Norwegian waters of 1 and 2; Norwegian waters south of 62° N
- Northern prawn: 3a; Norwegian waters south of 62° N; Union waters of 2a and 4
- Norway lobster: 3a; Norwegian waters of 4; Union waters of 2a and 4
- Plaice: 4; Union waters of 2a; that part of 3a not covered by the Skagerrak and the Kattegat; 7d and 7e; Kattegat; Skagerrak
- Saithe: 3a and 4; Union waters of 2a; International waters of 1 and 2; Norwegian waters of 1 and 2; Norwegian waters south of 62° N
- Whiting: 3a; 4; Union waters of 2a; Norwegian waters south of 62° N
- Herring: 3a; 3a (by-catches); 4, 7d and Union waters of 2a (by-catches); 4c, 7d (by-catches); Norwegian waters south of 62° N; Union and Norwegian waters of 4 north of 53° 30′ N; Union, Faroese, Norwegian and international waters of 1 and 2
- Mackerel:3a and 4; Union waters of 2a, 3b, 3c & Subdivisions 22-32; Norwegian waters of 2a and 4a
- Sandeel: Norwegian waters of 4; Union waters of 2a, 3a and 4
- Sprat: 3a; 7d and 7e; Union waters of 2a and 4

Landing obligation

The highest profile regulation is the landing obligation which is being phased in over a number of years. In general, no obvious economic impact was observed in the first years of implementation (2015-2017). More specifically, the pelagic fishery is not expected to be affected too much, as in many cases fish is not sorted at sea and is usually landed directly to processing plants where sorting takes place.

The saithe fisheries traditionally have had low bycatch rates. However, more challenges are to be expected for demersal (mixed) fisheries. Fishers fear that the landing obligation will have a large impact on their profitability, mainly due to increased costs. Another concern is related to potential choke species. Particularly in a mixed fishery this could be an issue as many species are caught at the same time and multiple choke species may occur. Ray, plaice, dab, turbot and brill are potential choke species candidates in mixed demersal fisheries (Batsleer, 2016). Therefore, to continue fishing throughout the year, it will be vital to have either enough quota available or adapt fishing strategies (optimal solution has not been discovered thus far). No major issues with choke species have been recorded as of yet mainly due to exceptions accepted by the European Commission for certain species (e.g. plaice, turbot etc.).

For demersal fisheries and shrimps the landing obligation has been implemented in several phases (2015-2019) and entirely by January 2019. As dab no longer has a TAC (2018) it does not fall under the landing obligation. Furthermore, an exception for plaice was introduced in 2018 in a joint recommendation of the Scheveningen Group and Northern Sea Atlantic Group (NSAC). The NSAC has advised rescheduling the introduction of the landing obligation to January 2019 to allow additional time to complete research, conduct trials to test gears and other measures that contribute to an improved selectivity and reduced discarding, and to finalise additional on-going projects aiming to estimate the survival rates of discarded plaice (Scheveningen Group, 2017). Last year (June, 2018) the NSAC and the Scheveningen Group have asked the European Commission to extend this exception (for plaice) for three more years as further research on these topics is necessary. Furthermore, the fishing industry in the North Sea would need more time to adapt to a landing obligation for plaice. The European Commission has decided (September, 2018) that for specific mesh-sizes and gears there will be an exception for species like plaice, ray, sea bass, mackerel, horse mackerel, Norwegian lobster and cod. These exceptions are based on the recommended scientific research programs to obtain a highly survival rate for discards. Fishers are obliged to register the fish caught and discarded regardless the fact whether the fish is marketable or not.

Description of relevant fisheries in the region

At the fleet segment level, the most important large-scale segments were the UK pelagic trawlers >40m (EUR 145 million) based on revenue, followed by the British demersal trawlers 24-40m (EUR 134 million), the Dutch beam trawlers >40m (EUR 132 million) and the Danish pelagic trawlers >40m (EUR 90 million). The most important fleets in terms of GVA were again the UK pelagic trawlers over 40m and the UK demersal trawlers 24-40m.

Small-scale coastal fishery

Small-scale coastal fleets from six Member States operate in the North Sea & Eastern Arctic. Of these, the UK fleet, consisting of 1 063 vessels and employing 557 FTEs, generated the highest revenue (EUR 53.4 million) and net profit (EUR 7.3 million). The Danish SSCF, with 504 vessels generated revenue of EUR 15 million and a net profit of EUR 70 845.

Six MS operated small-scale coastal fisheries (SSCF) in the region. Overall the SSCF segment was profitable in 2017, posting a net profit of EUR 9.3 million. Five out of six MS small-scale coastal fleets made gross profits. The German SSCF suffered gross losses.

The most profitable in terms of gross and net profit was the UK with EUR 10 million and EUR 7 million, respectively. All MS in the North Sea and Eastern Arctic demonstrated a lower FTE figure in comparison with total employed indicating that a large majority of those employed in the SSCF are part-time or casual workers. Total employment for the SSCF is highest for the UK and Sweden totalling 1 728 and 329 respectively.

Landings were valued at EUR 80.1 million in 2017. The most important species for SSCF in 2017 were edible crab, whelk and European lobster in weight. In value the top species were again European lobster, edible crab and Norway lobster (Figure 4.13).

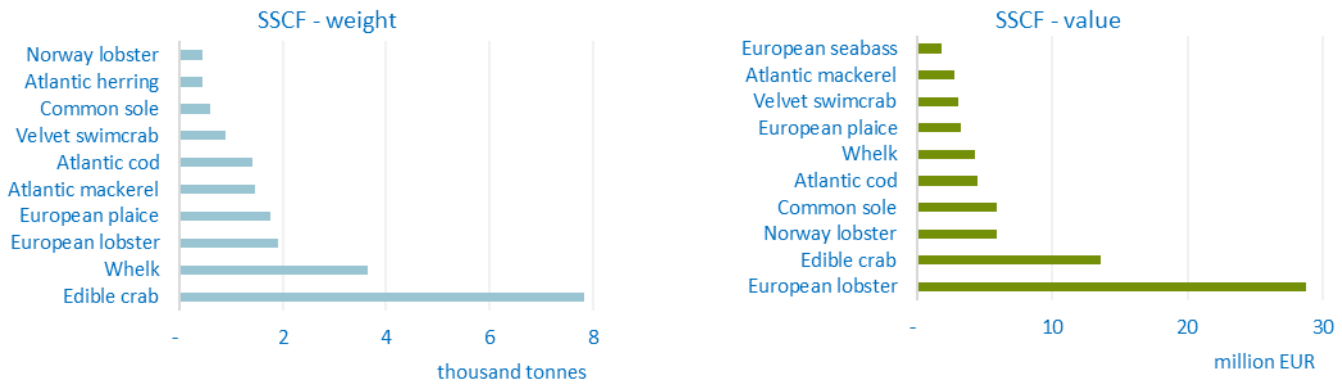


Figure 4.13 Top 10 species landed in weight (left) and value (right) by MS small-scale fleets operating in the North Sea & Eastern Arctic, 2017

Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Large-scale fishery

There were ten MS LSF operating in the North Sea and Eastern Arctic totalling 1 621 vessels. The UK, the Netherlands, Denmark, and Germany had the largest number of active vessels in the region with numbers of 500, 334, 330 and 220, respectively.

The UK large-scale fleet, consisting of 500 vessels, generated the highest revenue (EUR 523 million), followed by the Danish (EUR 373 million) and then the Dutch (EUR 362 million) LSF.

Overall the LSF was profitable in 2017, generating almost EUR 1 billion in GVA and EUR 539 million in gross profit. The UK generated the highest GVA, EUR 326 million. All North Sea and Eastern Arctic MS large-scale fleets generated gross and net profits in 2017. The most profitable MS in terms of gross and net profit were the UK with EUR 193 million and EUR 176 million, Denmark with EUR 153 million and EUR 92 million, and the Netherlands with EUR 85 million and EUR 65 million, respectively.

Total employment for the LSF was highest for the UK and the Netherlands totalling 2 589 and 1 615, respectively, reflecting the high number of active vessels in these MS. While the SSCF demonstrates a dramatic difference between the total number employed and total FTE for all MS, the LSF figures for total employed and FTE are closer in value indicating the high level of full time employment in this segment.

Landings were valued at EUR 1.6 million in 2017. The most important species for the LSF in the region in 2017 were sandeels, Atlantic herring and Atlantic mackerel in weight. In value the top species were Atlantic cod, Atlantic mackerel and Atlantic herring.

Two Lithuanian vessels are engaged in demersal fisheries in the Eastern Arctic. As these are in a cluster with the long distance fleet, these vessels are displayed under "LDF". As for all fleets covering more than one region the figures on employment, cost and economic performance are estimated based upon disaggregation procedures. As the segment is very small, the data must be interpreted with particular

caution. Lithuanian catches are not included in Figure 4.14 but as these are small the main species would not, in any case, be amongst the top 10 species.

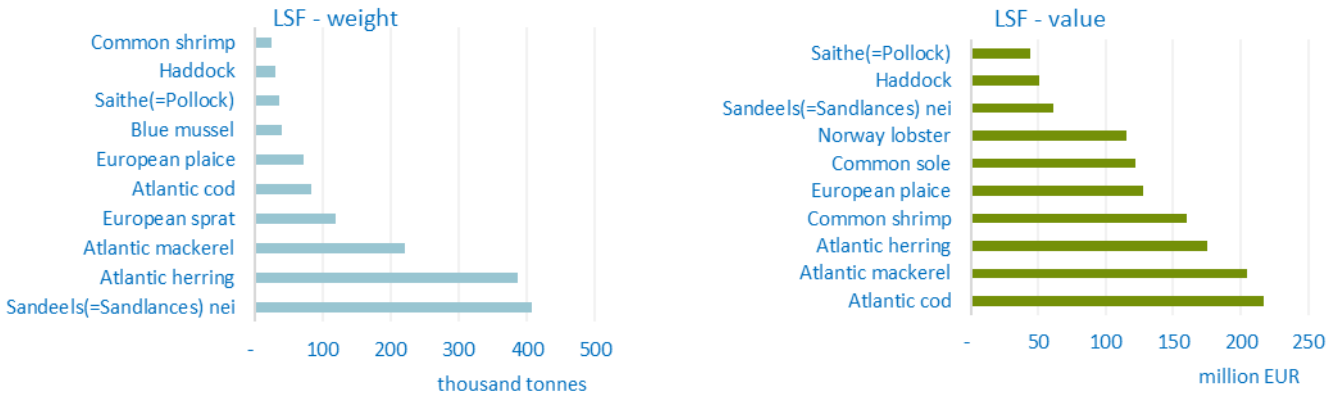


Figure 4.14 Top 10 species landed in weight (left) and value (right) by MS large-scale fleets operating in the North Sea & Eastern Arctic, 2017

Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Pelagic fishery

The pelagic fishery operates both in the North Sea, the Eastern Arctic as well as in the North East Atlantic. MS involved are, in order of importance, Denmark, UK, the Netherlands, Germany, Sweden, France and Ireland. A distinction can be made between industrial and non-industrial fisheries. In generally, a large share of the Danish and Swedish landed volume consists of sandeel and European sprat, which are used for industrial purposes (e.g. fishmeal and fish oil). Important target species for human consumption are Atlantic mackerel, Atlantic herring and horse mackerel.

The Danish pelagic fishery in the North Sea mainly targets mackerel, herring, sandeel and sprat. The latter two species are used for industrial purposes (fishmeal and fish oil). All these species are under an ITQ regime. The fishery is executed mainly by large pelagic trawlers, but also by vessels from the demersal segment, which switch gears seasonally.

The UK pelagic fishery is mainly carried out by vessels using pelagic trawls targeting herring, mackerel and jack mackerel in the northern North Sea and are prosecuted mostly by Scottish large pelagic trawlers (>50m).

The Dutch pelagic fleet in the North Sea consists of large trawlers (from 60 to over 100m). These vessels target herring, horse mackerel, blue whiting and mackerel. There is no fishery directed for industrial purposes.

The German pelagic fishery is performed by large freezer trawlers and medium sized trawlers targeting Atlantic herring and Atlantic mackerel. Pelagic trawlers of about 30m perform a seasonal fishery on sandeel.

The Swedish pelagic fishery is performed by vessels that seasonally switch to demersal fisheries. All industrial catches are landed in Denmark. Major amounts of herring and mackerel are also fished and are more important in terms of value of landings.

Demersal roundfish and *Nephrops* (Norway lobster) fishery

Important target species were cod, Norway lobster, haddock, saithe and hake. Haddock, saithe and hake were fished below Fmsy, cod fisheries were still above Fmsy in 2017. The cod recovery plan in the North Sea may have contributed to improved stock status over the past years. Overall the performance of most demersal roundfish and *Nephrops* fleets seemed positive in 2016.

The UK fishery is the most important demersal roundfish fishery in the North Sea. UK vessels (over 40m) took the bulk of the quota of haddock; this is caught in the northwest and central North Sea and landed almost entirely in the UK. The same vessels exploit a major part of saithe, mainly in the northern North Sea. A great deal of saithe is landed fresh in Denmark as the market in the UK is limited. UK vessels catch the largest *Nephrops* and Atlantic cod share in the North Sea (excluding the Eastern Arctic).

The Spanish fleet was mainly active in the Eastern Arctic with TAC for Atlantic cod (EU and Norway waters I, IIb).

The Danish demersal roundfish fishery targets considerable amounts of cod, hake, haddock and saithe. A broad range of vessel segments are involved in that fishery. Moreover, the Danish fleet is second according to the value of landings in the *Nephrops* fishery in the North Sea.

The French fleet also participates in the cod, saithe and fishery in IVa.

The main species for German demersal trawlers in the North Sea is saithe in Iva, involving vessels between 30 and 41 metres in length. These vessels also catch some cod and minor amounts of haddock. The fish is landed in Denmark or Germany and is destined for the fresh market, but also for processing. While the *Nephrops* fishery has gained importance for some vessels it remains of minor importance overall.

The Dutch demersal roundfish fishery targets cod and *Nephrops*, but these fisheries are of minor importance in the national context.

While Swedish vessels catch large amounts of *Nephrops*, cod, saithe and haddock, overall these fisheries are not of major importance.

Belgium has very small demersal fishery for roundfish and *Nephrops*.

Lithuanian vessels perform fisheries targeting Northern prawn in the Eastern Arctic.

Flatfish fishery (plaice and sole)

The main actors in the flatfish fishery in 2017 were the Netherlands, Denmark, UK, Belgium, France and Germany. Important target species were common sole and European plaice, but also included brill and turbot. Management plans are in place and the status of the stocks has evolved favourably. Sole and plaice were fished below Fmsy in 2017 and the TAC increased. Overall the performance of most flatfish beam trawl fleets seemed positive in 2017.

The Netherlands exert by far the most activity in the flatfish fishery, carried out mainly by large beam trawlers in the southern North Sea (IVc). In 2017 almost all EU permitted 'pulse fisheries' were operating in Dutch fleets resulting in considerable fuel savings. Common sole is very important due to high prices. As a result, this fishery is profitable. Since June 2019 this fishing technique is forbidden after voting by the European Parliament for many enterprises (for those which have a pulse exemption for a 5 year period since 2014). In July 2021 this fishing technique will be forbidden for all European fishing enterprises.

While the plaice stock biomass is very high the fishery was only partly profitable as prices decreased prior to 2014 and, as a result, the quota was not fully exploited. While it is expected that there will be increased effort leading to higher quota uptake (and profitability) in the coming years, concerns have been expressed about the catchability of this stock.

The Danish fleet targets flatfish mainly using otter trawls in both IIIa and IV. The ratio of sole catches to plaice catches is rather low compared to other MS. Plaice is a target species in some fisheries, but constitutes a bycatch in the cod and *Nephrops* fisheries.

UK beam trawlers targeting flatfish are owned by Dutch fishers: this is a fishery which is comparable with the traditional Dutch beam trawl flatfish fishery (as opposed to flatfish pulse fishing). The catch is mainly landed in the Netherlands (Urk). Moreover, shares of the quota are being swapped. Flatfish is of relatively minor importance for the UK market as a whole, but remains of local importance, particularly in the east and south of England.

Flatfish is a major species for Belgian beam trawlers in the southern North Sea. As opposed to the Dutch vessels, the Belgian beam trawlers still use more traditional gear, although they have made a number of technical adjustments in order to reduce fuel consumption. Even so, beam trawlers impose a high towing resistance and this, in combination with dispersed fishing grounds, results in high fuel consumption. Therefore, the fuel crisis in 2008 had a large impact on the profitability of the Belgian fleet.

French vessels target plaice and sole in the Channel area (VIId). Sole catches are considerably higher than plaice catches.

The German flatfish fishery is operated by a small number of (Dutch owned) beam trawlers. These vessels fish in a manner very similar to the Dutch fleet.

Brown Shrimp Fishery

The main actors in the shrimp fishery in 2017 were the Netherlands, Germany, Denmark, and Belgium. Overall the performance of most of these fleets was positive in 2017. Considerable catches are being made in coastal areas of the southern North Sea. The fishery is carried out by smaller beam trawlers

(mainly below 24m). Dutch and German catches account for about 88% of the total weight. The Dutch fleet caught about 50% of the total brown shrimp catch (in landed value). The Danish and the Belgian fleets also contribute to the total while France and the UK report only negligible amounts. Some German vessels operate under Dutch ownership. Some Dutch vessels switch between flatfish and shrimp fishery.

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Table 4.1 Key parameter estimates for MS fleets operating in the North Sea & Eastern Arctic, 2017

North Sea & Eastern Arctic	Estimated no. of vessels	% of total EU active vessels	Total vessel tonnage	Total vessel power	Engaged crew	FTE national	Days at sea	as a % of total sea days	Energy consumption	Live weight of landings	as a % of total weight landed	Value of landings	as a % of total value landed	Revenue	Gross Value Added	GVA to revenue	Gross profit	Gross profit margin	Net profit	Net profit margin	Average GVA	GVA per FTE (labour productivity)
	number	(%)	GT	kW	number	number	day	(%)	litre	kg	(%)	€	(%)	€	€	(%)	€	(%)	€	(%)	€	€
BEL	39	1.1%	6,138	19,981	189	106	7,418	2.2%	16,041,552	11,053,103	0.7%	38,318,104	2.3%	40,120,630	20,547,863	51.2	6,766,279	16.9	3,970,722	9.9	526,318	193,752
DEU	225	6.2%	20,936	58,940	650	529	31,925	9.6%	33,123,662	34,812,660	2.1%	110,851,589	6.5%	117,188,839	53,617,364	45.8	19,350,157	16.5	- 843,719	- 0.7	238,216	101,452
DNK	834	22.8%	57,098	152,804	1,054	1,399	66,075	20.0%	86,807,292	765,903,459	47.3%	379,292,568	22.4%	388,236,796	261,869,380	67.5	154,250,898	39.7	91,368,778	23.5	313,848	187,186
ESP	4	0.1%	4,821	5,026	119	124	785	0.2%	5,776,445	17,687,990	1.1%	46,471,355	2.7%	43,284,021	35,866,834	82.9	22,774,142	52.6	20,445,857	47.2	8,677,530	288,558
FRA	39	1.1%	12,237	23,873	298	267	6,681	2.0%	19,823,963	53,688,743	3.3%	83,990,885	5.0%	72,660,397	40,295,043	55.5	17,942,741	24.7	5,437,266	23.3	1,020,339	150,806
GBR	1,563	42.7%	88,230	288,611	4,317	2,963	134,876	40.7%	121,763,953	367,143,204	22.7%	550,009,379	32.5%	576,060,285	356,718,217	61.9	203,847,797	35.4	180,366,566	31.3	228,277	120,390
IRL	8	0.2%	4,719	9,345	58	53	819	0.2%	3,115,276	41,576,608	2.6%	30,790,724	1.8%	31,325,287	25,059,577	80.2	14,033,159	44.9	11,365,623	36.4	3,137,506	473,400
LTU	2	0.1%	10,294	9,201	69	77	529	0.2%	13,811,910	3,910,328	0.2%	10,366,987	0.6%	10,392,534	- 6,675,806	- 64.2	- 8,222,248	- 79.1	- 9,697,606	- 93.3	- 3,180,015	- 86,654
NLD	513	14.0%	81,293	202,944	1,914	1,492	48,624	14.7%	136,669,603	220,959,196	13.6%	359,939,730	21.3%	365,420,109	201,557,349	55.2	86,792,027	23.8	65,321,949	17.9	393,060	135,111
PRT	2	0.0%	3,231	3,662	55	40	314	0.1%	1,939,992	2,507,767	0.2%	8,686,394	0.5%	8,712,286	5,216,584	59.9	2,968,014	34.1	2,121,150	24.3	2,975,295	131,439
SWE	426	11.7%	15,557	79,559	737	444	33,132	10.0%	34,450,249	101,308,451	6.3%	74,930,588	4.4%	79,733,924	42,214,592	52.9	26,249,789	32.9	15,014,329	18.8	99,010	95,153
Total NSEA fleet	**3,656**		**304,555**	**853,946**	**9,461**	**7,493**	**331,177**		**473,323,897**	**1,620,551,509**		**1,693,648,303**		**1,733,135,109**	**1,036,286,998**		**546,752,755**		**384,870,915**			

Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Table 4.2 Key parameter estimates by fishing activity for MS fleets operating in the North Sea & Eastern Arctic, 2017

North Sea & Eastern Arctic	Estimated no. of vessels	% of total active vessels	Total vessel tonnage	Total vessel power	Engaged crew	FTE national	Days at sea	% of total days at sea	Energy consumption	Live weight of landings	% of total landed weight	Value of landings	% of total value landed	Revenue	Gross Value Added	GVA to revenue	Gross profit	Gross profit margin	Net profit	Net profit margin	Average GVA	GVA per FTE (labour productivity)
	GT	(%)	kW	number	number	number	day	(%)	litre	litre	(%)	€	(%)	€	€	(%)	€	(%)	€	(%)	€	€
SCF	2,033	55.6%	8,441	132,224	2,567	883	107,541	32.5%	12,473,326	22,927,924	1.4%	80,066,948	4.7%	84,415,242	48,963,949	58.0	15,822,838	18.7	9,264,144	11.0	24,082	55,455.7
LSF	1,621	44.3%	285,820	712,522	6,826	6,533	223,108	67.4%	447,038,661	1,593,713,257	98.3%	1,603,214,367	94.7%	1,638,327,332	993,998,855	60.7	539,152,165	32.9	390,886,909	24.6	613,388	152,146.3
DWF	2	0.1%	10,294	9,201	69	77	529	0.2%	13,811,910	3,910,328	0.2%	10,366,987	0.6%	10,392,534	- 6,675,806	- 64.2	- 8,222,248	- 79.1	- 7,907,486	- 76.1	- 3,180,015	- 86,654.1
Total NS+EA	**3,656**		**304,555**	**853,946**	**9,461**	**7,493**	**331,177**		**473,323,897**	**1,620,551,509**		**1,693,648,303**		**1,733,135,109**	**1,036,286,998**		**546,752,755**		**392,243,567**			

Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Table 4.3 Key parameter estimates by fishing activity and MS fleet operating in the North Sea & Eastern Arctic, 2017

NS+EA		Estimated no. of vessels	% of total EU active vessels	Total vessel tonnage	Total vessel power	Engaged crew	FTE national	Days at sea	as a % of total fishing days	Energy consumption	Live weight of landings	as a % of total weight landed	Value of landings	as a % of total value landed	Revenue	Gross Value Added	GVA to revenue	Gross profit	Gross profit margin	Net profit	Net profit margin	Average GVA	GVA per FTE (labour productivity)
		number	(%)	GT	kW	number	number	day	(%)	litre	kg	(%)	€	(%)	€	€	(%)	€	(%)	€	(%)	€	€
SCF	DEU	6	0.2%	11	132	6	4	488	0.1%	4,528	10,773	0.0%	40,115	0.0%	44,334	13,648	30.8	- 3,284	- 7.4			2,447	3,352
	DNK	504	13.8%	1,863	20,819	152	111	17,955	5.4%	1,065,150	4,733,357	0.3%	14,455,843	0.9%	14,979,148	8,692,561	58.0	1,363,610	9.1	70,845	0.5	17,239	78,084
	FRA	18	0.5%	202	2,738	52	31	2,551	0.8%	493,966	629,485	0.0%	3,848,333	0.2%	4,019,341	2,439,159	60.7	621,055	15.5	462,650	11.5	135,118	77,608
	GBR	1,063	29.1%	4,643	69,318	1,728	557	66,391	20.0%	8,919,942	16,060,425	1.0%	51,361,186	3.0%	53,419,338	29,818,671	55.8	10,246,375	19.2	7,322,390	13.7	28,058	53,508
	NLD	179	4.9%	444	18,791	299	70	3,425	1.0%	420,266	317,947	0.0%	2,382,937	0.1%	3,563,362	2,321,320	65.1	1,560,842	43.8	806,971	22.6	12,990	33,343
	SWE	264	7.2%	1,277	20,426	329	109	16,731	5.1%	1,569,474	1,175,937	0.1%	7,978,534	0.5%	8,389,719	5,678,591	67.7	2,034,239	24.2	557,419	6.6	21,520	51,991
LSF	BEL	39	1.1%	6,138	19,981	189	106	7,418	2.2%	16,041,552	11,053,103	0.7%	38,318,104	2.3%	40,120,630	20,547,863	51.2	6,766,279	16.9	4,241,858	10.6	526,318	193,752
	DEU	220	6.0%	20,925	58,808	644	524	31,437	9.5%	33,119,135	34,801,887	2.1%	110,811,474	6.5%	117,144,505	53,603,717	45.8	19,353,442	16.5	- 124,796	- 0.1	244,205	102,213
	DNK	330	9.0%	55,235	131,986	902	1,288	48,121	14.5%	85,742,142	761,170,102	47.0%	364,836,724	21.5%	373,257,648	253,176,819	67.8	152,887,288	41.0	91,948,012	24.6	766,853	196,618
	ESP	4	0.1%	4,821	5,026	119	124	785	0.2%	5,776,445	17,687,990	1.1%	46,471,355	2.7%	43,284,021	35,866,834	82.9	22,774,142	52.6	20,469,442	47.3	8,677,530	288,558
	FRA	21	0.6%	12,035	21,135	246	236	4,130	1.2%	19,329,997	53,059,257	3.3%	80,142,552	4.7%	68,641,056	37,855,885	55.2	17,321,686	25.2	6,240,522	32.3	1,765,691	160,564
	GBR	500	13.7%	83,587	219,293	2,589	2,406	68,485	20.7%	112,844,011	351,082,780	21.7%	498,648,193	29.4%	522,640,947	326,899,547	62.5	193,601,422	37.0	176,811,898	33.8	653,919	135,882
	IRL	8	0.2%	4,719	9,345	58	53	819	0.2%	3,115,276	41,576,608	2.6%	30,790,724	1.8%	31,325,287	25,059,577	80.2	14,033,159	44.9	9,744,968	31.2	3,137,506	473,400
	NLD	334	9.1%	80,848	184,153	1,615	1,422	45,199	13.6%	136,249,337	220,641,249	13.6%	357,556,793	21.1%	361,856,747	199,236,029	55.1	85,231,185	23.6	65,028,555	18.0	596,344	140,093
	PRT	2	0.0%	3,231	3,662	55	40	314	0.1%	1,939,992	2,507,767	0.2%	8,686,394	0.5%	8,712,286	5,216,584	59.9	2,968,014	34.1	1,610,019	18.5	2,975,295	131,439
	SWE	162	4.4%	14,280	59,133	408	334	16,401	5.0%	32,880,775	100,132,514	6.2%	66,952,054	4.0%	71,344,205	36,536,002	51.2	24,215,549	33.9	14,916,430	20.9	224,846	109,249
DWF	LTU	2	0.1%	10,294	9,201	69	77	529	0.2%	13,811,910	3,910,328	0.2%	10,366,987	0.6%	10,392,534	- 6,675,806	- 64.2	- 8,222,248	- 79.1	- 7,907,486	- 76.1	- 3,180,015	- 86,654
Total		**3,656**		**304,555**	**853,946**	**9,461**	**7,493**	**331,177**		**473,323,897**	**1,620,551,509**		**1,693,648,303**		**1,733,135,109**	**1,036,286,998**		**546,752,755**		**392,243,567**			

Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Table 4.4 Key parameter estimates for fleet segments operating in the North Sea & Eastern Arctic, 2017

North Sea & Eastern Arctic	Estimated no. of vessels	% of total EU active vessels	Total vessel power	% of total GT	Engaged crew	% of total kW	FTE national	% of total FTE	Days at sea	% of total days at sea	Fishing days	as a % of total fishing days	Energy consumption	as a % of total consumption	Live weight of landings	as a % of total energy consumed	Value of landings	as a % of total value landed	Revenue	Gross Value Added	GVA to revenue	Gross profit	Gross profit margin	Net profit	Net profit margin	Average GVA	GVA per FTE (labour productivity)
	GT	(%)	kW	(%)	number	(%)	number	(%)	day	(%)	day	(%)	litre	(%)	kg	(%)	kg	(%)	€	€	%	€	%	€	%	€	€
GBR NAO TM 40XX NGI*	27	0%	66,810	8%	232	2.5%	43	1%	883	0.3%	675	0.2%	19,677,981	4%	188,513,204	11.6%	146,168,481	9%	145,273,669	110,891,943	76.3	79,860,732.2	55.0	77,556,416.4	53.4	8,272,678.2	2,581,356
NLD NAO TBB40XX NGI*	58	1%	81,640	10%	462	4.9%	462	6%	12,196	3.7%	10,367	3.4%	57,733,552	12%	35,172,579	2.2%	132,034,120	8%	132,427,369	74,287,339	56.1	35,854,423.7	27.1	32,081,870.7	24.2	1,280,816.2	160,947
GBR NAO DTS2440 NGI	93	1%	38,779	5%	520	5.5%	667	9%	12,431	3.8%	10,929	3.6%	30,973,938	7%	62,547,180	3.9%	129,857,292	8%	134,814,441	77,860,942	57.8	42,526,169.5	31.5	37,625,244.9	27.9	1,245,229.2	116,783
DNK NAO TM 40XX NGI	11	0%	23,006	3%	55	0.6%	99	1%	1,709	0.5%	994	0.3%	17,755,864	4%	263,735,372	16.3%	88,262,473	5%	90,013,554	70,456,074	78.3	57,098,677.2	63.4	36,682,657.7	40.8	8,014,842.2	709,225
NLD NAO TBB1824 NGI*	155	2%	32,643	4%	457	4.8%	411	5%	20,413	6.2%	18,362	6.0%	22,887,988	5%	15,077,695	0.9%	87,857,275	5%	88,064,990	52,626,547	59.8	18,940,810.1	21.5	13,097,308.4	14.9	339,580.4	128,067
GBR NAO DTS1824 NGI	163	2%	34,423	4%	569	6.0%	541	7%	14,978	4.5%	12,529	4.1%	20,082,380	4%	31,191,022	1.9%	77,554,017	5%	83,545,375	51,778,724	62.0	30,571,285.0	36.6	27,095,644.4	32.4	590,987.6	95,707
DNK NAO DTS2440 NGI	35	0%	20,662	2%	154	1.6%	310	4%	8,625	2.6%	7,237	2.4%	23,324,909	5%	65,260,815	4.0%	75,904,867	4%	76,772,082	49,235,963	64.1	26,266,003.7	34.2	16,469,701.5	21.5	1,479,975.2	158,727
NLD NAO TM 40XX NGI*	8	0%	29,191	3%	191	2.0%	191	3%	1,041	0.3%	832	0.3%	28,856,339	6%	145,106,868	9.0%	59,937,052	4%	63,377,238	29,966,993	47.3	13,547,328.3	21.4	6,926,037.0	10.9	7,413,902.2	156,906
DNK NAO DTS40XX NGI	20	0%	33,170	4%	91	1.0%	141	2%	2,808	0.8%	1,961	0.6%	18,315,042	4%	266,944,691	16.5%	59,066,178	3%	63,361,683	42,193,355	66.6	28,838,689.1	45.5	14,734,329.0	23.3	2,280,968.5	298,637
FRA NAO DTS40XX NGI	10	0%	11,700	1%	114	1.2%	110	1%	1,421	0.4%	1,421	0.5%	11,553,668	2%	23,509,303	1.5%	54,578,898	3%	39,196,322	21,386,885	54.6	10,219,330.6	26.1			3,483,489.8	193,850
ESP NAO DTS40XX NGI	13	0%	5,026	1%	119	1.3%	124	2%	785	0.2%	785	0.3%	5,776,445	1%	17,687,990	1.1%	46,471,355	3%	43,284,021	35,866,834	82.9	22,774,141.6	52.6	20,469,442.5	47.3	8,677,529.9	288,558
DNK NAO DTS1824 NGI	43	0%	13,476	2%	134	1.4%	218	3%	7,904	2.4%	7,174	2.3%	9,850,463	2%	55,438,199	3.4%	44,929,058	3%	45,643,485	28,408,866	62.2	12,590,423.8	27.6	6,117,135.6	13.4	678,556.8	130,213
GBR NAO DTS40XX NGI*	9	0%	14,865	2%	120	1.3%	122	2%	1,628	0.5%	1,415	0.5%	12,822,877	3%	24,316,788	1.5%	44,736,437	3%	54,142,749	27,652,559	51.1	12,865,269.3	23.8	10,310,108.6	19.0	4,173,719.2	227,200
SWE NAO DTS2440 NGI*	33	0%	25,114	3%	123	1.3%	141	2%	3,884	1.2%	3,884	1.3%	23,330,677	5%	94,844,144	5.9%	39,366,959	2%	41,271,774	21,590,313	52.3	16,353,046.2	39.6	11,138,506.5	27.0	1,138,033.3	153,193
GBR NAO FPO0010 NGI	1,842	18%	49,238	6%	1,211	12.8%	358	5%	49,244	14.9%	45,362	14.8%	6,377,501	1%	10,185,530	0.6%	35,145,450	2%	36,006,145	18,939,169	52.6	5,615,388.0	15.6	3,515,088.2	9.8	23,797.7	52,860
NLD NAO TBB2440 NGI*	27	0%	19,586	2%	142	1.5%	126	2%	4,682	1.4%	4,074	1.3%	13,657,530	3%	7,706,952	0.5%	33,830,104	2%	33,926,918	18,830,825	55.5	8,390,592.6	24.7	7,051,787.5	20.8	697,438.0	149,632
DNK NAO DTS1218 NGI	114	1%	17,597	2%	178	1.9%	195	3%	11,051	3.3%	10,668	3.5%	6,381,368	1%	24,474,889	1.5%	30,494,554	2%	30,700,233	17,945,817	58.5	5,805,682.8	18.9	2,710,330.1	8.8	194,768.7	92,012
DEU NAO TBB1218 NGI	108	1%	21,234	2%	198	2.1%	161	2%	13,680	4.1%	14,380	4.7%	5,166,079	1%	4,677,332	0.3%	28,321,251	2%	30,009,258	16,488,829	54.9	5,627,597.5	18.8	3,913,113.9	13.0	152,674.3	102,415
IRL NAO TM 40XX	20	0%	8,221	1%	37	0.4%	34	0%	266	0.1%	71	0.0%	2,535,789	1%	35,941,455	2.2%	24,610,596	1%	24,959,408	19,920,251	79.8	10,413,444.3	41.7	7,160,992.1	28.7	5,455,660.0	585,836
DEU NAO TBB1824 NGI	65	1%	14,177	2%	155	1.6%	129	2%	9,753	2.9%	10,616	3.5%	5,954,049	1%	3,913,406	0.2%	24,319,310	1%	26,082,173	12,099,819	46.4	3,966,611.2	15.2	1,606,184.5	6.2	186,151.1	93,797
NLD NAO DTS2440 NGI*	27	0%	10,102	1%	115	1.2%	109	1%	3,410	1.0%	2,959	1.0%	7,771,402	2%	8,150,428	0.5%	22,987,716	1%	23,213,197	10,849,841	46.7	3,194,842.1	13.8	1,825,414.9	7.9	560,883.4	99,516
DEU NAO DTS40XX NGI	7	0%	9,613	1%	127	1.3%	105	1%	977	0.3%	820	0.3%	8,971,312	2%	12,693,123	0.8%	18,524,748	1%	19,519,664	5,138,480	26.3	- 1,185,570.2	- 6.1	- 13,009,575.1	- 66.6	1,200,663.7	49,150
BEL NAO TBB2440 NGI	28	0%	8,844	1%	55	0.6%	37	0%	2,022	0.6%	1,929	0.6%	7,634,911	2%	5,983,405	0.4%	18,183,562	1%	18,887,204	10,827,486	57.3	4,583,684.6	24.3	3,502,505.5	18.5	1,322,392.5	289,274
DNK NAO PMP1824 NGI	11	0%	4,254	0%	49	0.5%	90	1%	2,371	0.7%	1,899	0.6%	2,944,652	1%	6,337,880	0.4%	17,427,248	1%	17,434,156	11,359,655	65.2	4,926,107.0	28.3	2,840,286.1	16.3	1,032,695.9	126,773
DEU NAO DTS2440 NGI	8	0%	3,408	0%	37	0.4%	28	0%	1,564	0.5%	1,367	0.4%	4,240,793	1%	7,746,593	0.5%	16,480,661	1%	17,126,733	6,674,731	39.0	4,384,724.6	25.6	2,897,662.7	16.9	938,899.5	234,725
GBR NAO DTS1218 NGI*	196	2%	11,114	1%	225	2.4%	191	3%	8,048	2.4%	6,960	2.3%	4,938,788	1%	5,672,541	0.4%	16,353,940	1%	17,300,003	9,580,136	55.4	4,574,749.0	26.4	3,641,003.8	21.0	178,525.4	50,286
GBR NAO FPO1218 NGI	77	1%	6,136	1%	144	1.5%	161	2%	4,984	1.5%	4,419	1.4%	3,057,213	1%	6,592,086	0.4%	14,794,703	1%	16,460,487	10,628,894	64.6	5,058,790.8	30.7	4,305,876.3	26.2	379,306.7	65,975
GBR NAO TBB2440 NGI*	36	0%	6,553	1%	59	0.6%	73	1%	1,713	0.5%	1,480	0.5%	5,881,549	1%	7,171,761	0.4%	14,714,398	1%	14,733,603	9,327,062	63.3	5,508,888.3	37.4	5,525,716.7	37.5	1,161,599.4	127,077
NLD NAO TBB1218 NGI*	23	0%	5,855	1%	122	1.3%	87	1%	1,557	0.5%	1,373	0.4%	3,425,841	1%	7,233,691	0.4%	13,590,377	1%	13,654,973	9,424,120	69.0	4,324,899.9	31.7	3,917,275.5	28.7	409,744.3	108,586
SWE NAO DTS1824 NGI*	38	0%	9,796	1%	84	0.9%	81	1%	3,755	1.1%	3,755	1.2%	4,477,952	1%	3,695,131	0.2%	13,211,150	1%	13,792,638	6,870,009	49.8	3,610,280.4	26.2	1,931,669.3	14.0	275,397.4	85,214
BEL NAO DTS2440 NGI*	13	0%	5,936	1%	61	0.6%	31	0%	1,999	0.6%	1,836	0.6%	4,293,486	1%	3,430,425	0.2%	12,169,302	1%	12,590,498	6,744,065	53.6	2,428,841.5	19.3	1,678,595.1	13.3	640,882.0	219,250
GBR NAO FPO1012 NGI	179	2%	9,272	1%	198	2.1%	141	2%	9,957	3.0%	8,283	2.7%	1,573,281	0%	4,325,348	0.3%	12,003,301	1%	12,990,329	8,804,917	67.8	4,190,683.1	32.3	3,335,559.9	25.7	131,424.7	62,408
DNK NAO DRB1218 NGI	30	0%	4,474	1%	55	0.6%	31	0%	2,071	0.6%	2,063	0.7%	500,089	0%	46,480,706	2.9%	11,754,035	1%	11,754,033	9,368,231	79.7	6,712,261.2	57.1	5,462,236.6	46.5	312,274.4	299,497
DEU NAO TBB2440 NGI*	9	0%	6,037	1%	52	0.5%	44	1%	1,806	0.5%	1,788	0.6%	6,050,607	1%	2,678,072	0.2%	11,744,963	1%	11,789,993	5,601,825	47.5	2,252,904.0	19.1	1,166,310.8	9.9	622,425.0	127,314
LTU OFR TM 40XX NEU*	6	0%	9,201	1%	69	0.7%	77	1%	529	0.2%	463	0.2%	13,811,910	3%	3,910,328	0.2%	10,366,987	1%	10,392,534	- 6,675,806	- 64.2	- 8,222,248.0	- 79.1	- 7,907,485.6	- 76.1	- 3,180,015.3	- 86,654
SWE NAO DTS1218 NGI*	71	1%	13,759	2%	110	1.2%	74	1%	5,113	1.5%	5,113	1.7%	3,410,317	1%	1,145,903	0.1%	10,238,457	1%	11,561,093	5,872,421	50.8	3,290,312.8	28.5	2,168,789.8	18.8	104,904.2	79,745
DNK NAO TBB1824 NGI	16	0%	2,860	0%	41	0.4%	52	1%	2,623	0.8%	2,533	0.8%	2,438,460	1%	1,457,392	0.1%	10,084,376	1%	10,207,542	6,823,463	66.8	3,291,295.8	32.2	2,455,888.7	24.1	426,466.4	131,225
FRA NAO TM 40XX NGI	4	0%	4,433	1%	48	0.5%	52	1%	219	0.1%	219	0.1%	4,288,249	1%	24,096,942	1.5%	10,063,760	1%	10,114,982	3,668,167	36.3	786,400.5	7.8			2,147,638.9	70,254
PRT NAO DTS40XX IWE	11	0%	3,662	0%	55	0.6%	40	1%	314	0.1%	301	0.1%	1,939,992	0%	2,507,767	0.2%	8,686,394	1%	8,712,286	5,216,584	59.9	2,968,014.2	34.1	1,610,018.5	18.5	2,975,294.7	131,439
DEU NAO DTS1824 NGI	13	0%	2,134	0%	34	0.4%	27	0%	1,732	0.5%	1,504	0.5%	1,794,428	0%	2,138,645	0.1%	8,227,955	0%	8,398,918	5,312,494	63.3	2,721,587.6	32.4	2,046,419.9	24.4	597,171.1	199,057

4.2 NAFO

Regional Details

Fisheries in the Northwest Atlantic are performed in the exclusive economic zones of the coastal states and on the high seas where fishery is regulated by the Northwest Atlantic Fisheries Organization (NAFO). NAFO was founded to manage most fishery resources in the EEZs of Contracting Parties (straddling stocks) and outside the national jurisdiction in the NAFO Regulatory Area. Currently NAFO has 12 Contracting Parties.

The NAFO Regulatory Area is defined in the NAFO Convention as that part of the Convention Area, which lies beyond the areas in which Costal States exercise fisheries jurisdiction (outside of the Exclusive Economic Zones).

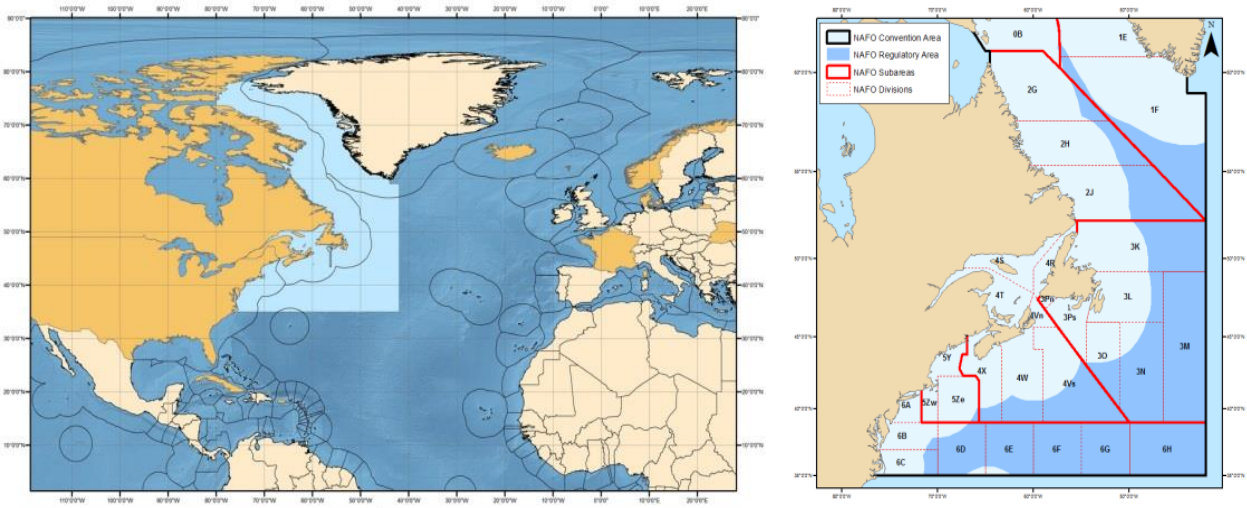


Figure 4.15 NAFO Area of Competence
Source: NAFO, GEOMAR http://www.marineplan.es/ES/fichas_kml/rfbs.html

The three main fisheries regulated in the NAFO area are ground fish, shrimp, and pelagic redfish, however there is currently a moratorium on the shrimp and pelagic redfish fisheries. The ground fish fishery occurs mainly in NAFO Divisions 3LMNO within the *Fishing Footprint* and is conducted using mainly bottom trawls.

NAFO does not manage sedentary species (e.g. shellfish) and species managed by other fishery bodies, i.e. salmon (NASCO), tunas/marlins (ICCAT), and whales (NAMMCO).

Six EU Member State fleets were active in the NAFO Convention region in 2017: Estonia, France, Germany, Portugal, Spain and the United Kingdom. Of these, the main fishing nations were Spain and Portugal. France did not report data of activity this year, which is shown for comparative purposes via the official statistics of NAFO (STATLAND). The remaining MS with active fleets, namely Estonia, Germany and UK, consisted of less than three vessels fishing only seasonally and, due to data limitations, these fleets could only be partially covered in the analysis below with no economic analysis of their performance for confidentiality issues.

MS fishing activity as reported by NAFO (STATLANT)

According to NAFO (STATLANT), the total catch by the EU fleet in the area amounted to 50 000 tonnes in 2017.

The main European fishing nations are Spain and Portugal, with an average total catch of the EU fleet of 41.6% and 38.2%, respectively in 2017. This means that combined, both countries take nearly 80% of total catches.

The remaining EU catch is taken by Estonia (9.3%), Denmark (5%), Germany (3.7%), and the UK (2.3%). France mainland has not reported any catches with a small quota of 103 tonnes (<0.5%) and according to NAFO data, the French/St. Pierre et Miquelon fleet caught 1 400 tonnes in 2017. Data on the French St. Pierre et Miquelon fleet are indicated separately and not counted as part of the EU total as they are not reported under the DCF.

No activity has been reported for the Latvian, Lithuanian and Polish fleets since 2013 apart from some reduced catch in 2014 by Lithuania (7 tonnes) and Poland (414 tonnes) (Table 4.6).

Table 4.5 Catches (tonnes) by MS fleets operating in NAFO area

	2010	2011	2012	2013	2014	2015	2016	2017	*2018*	Δ 2017-2016	% over EU total	% over NAFO total
Denmark	3,409	267	173	3,391	3,409	1,686	2,921	2,511	-	-14%	4.9%	0.1%
Estonia	3,654	4,593	3,444	4,529	3,307	3,149	3,284	4,740	*5,556*	44%	9.3%	0.2%
Germany	1,820	2,126	1,855	2,416	2,150	1,884	1,899	1,875	*1,892*	-1%	3.7%	0.1%
France Mainland	-	-	-	-	-	-	-	-	-		0.0%	0.0%
Latvia	995	587	137	-	-	-	-	-	-		0.0%	0.0%
Lithuania	1,542	1,000	753	-	7	-	-	-	-		0.0%	0.0%
Poland	-	-	-	-	414	-	-	-	-		0.0%	0.0%
Portugal	15,488	16,680	16,230	18,073	19,167	16,901	18,221	19,448	*18,345*	7%	38.2%	1.0%
Spain	26,585	28,230	35,392	35,422	26,396	14,491	19,623	21,207	-	8%	41.6%	1.1%
United Kingdom	3,604	1,083	979	1,352	-	-	1,209	1,155	-	-4%	2.3%	0.1%
EU total	**57,097**	**54,566**	**58,963**	**65,183**	**54,850**	**38,111**	**47,157**	**50,936**	***25,793***	8%		**2.6%**
St. Pierre et Miquelon (FR)	*4,508*	*2,685*	*2,210*	*2,102*	*2,046*	*2,088*	*1,954*	*1,380*	*1,168*	-29%		0.1%
NAFO all	1,783,432	1,929,886	1,783,219	1,900,229	1,768,631	1,639,726	1,922,582	1,954,889	*531,893*			

Source: https://www.nafo.int/Data/STATLANT

Overall, an analysis of historical catches by the EU fleet shows high level of catches between 2000-2003 (over 80 000 tonnes), followed by a downward spiral and hitting a low of around 45 000 tonnes in 2007 and 2009. Catches then oscillate in the region of 45-60 000 tonnes annually, mainly due to Spanish and Portuguese catches resulting from policy decisions on TACs. The lowest levels are seen in 2015 and 2016 before recovering slightly in 2017, at around 50 000 tonnes (Figure 4.16).

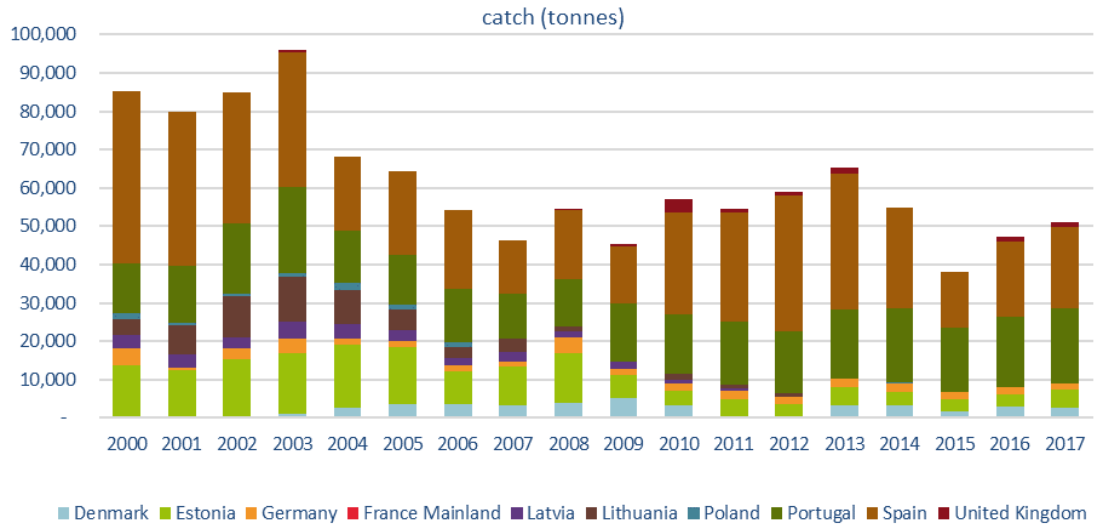


Figure 4.16 Historical catches by the EU fleet operating in NAFO area
Source: https://www.nafo.int/Data/STATLANT; data for Spain in 2016 estimated from the DCF 2018 Fleet Economic (MARE/A3/AC(2018))

According to STATLAND, in 2017, Spain recorded the largest catch with 42% of the total reported EU catches followed by Portugal with 38%. The main target species are Atlantic redfish, Atlantic cod and Greenland halibut (Figure 4.17).

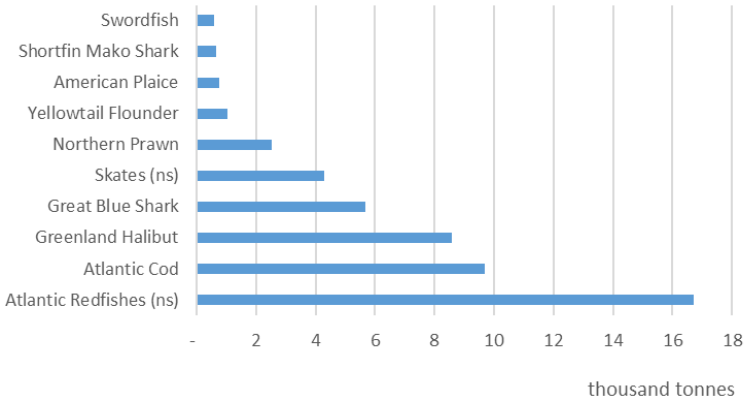


Figure 4.17 Top ten species in quantity caught by the EU fleet operating in NAFO area
Source: https://www.nafo.int/Data/STATLANT

MS fishing activity in NAFO as reported by EU-MAP

Although none of the national fleets is heavily dependent on the region for their fishing activity, Portugal obtains 14% of the fleet's total landings in value from the region. All the other MS fleets have less than 10% dependency. Nonetheless, landings obtained from the area have an impact on the total income obtained by these fleets. Based on the EU MAP data available, Spanish vessels obtained the most in terms of value (EUR 55 million), closely followed by Portuguese vessels with EUR 54.7 million (40% of the total). Germany took around 5.5% (EUR 6.1 million) and the UK 2% (EUR 2.3 million) (Figures 4.18 and 4.19).

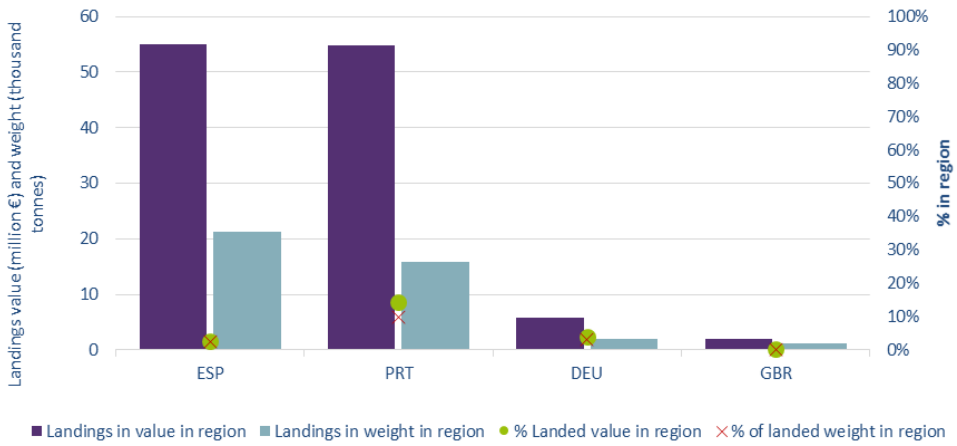


Figure 4.18 Importance of the NAFO region for MS fisheries in terms of landings in weight and value, 2017
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

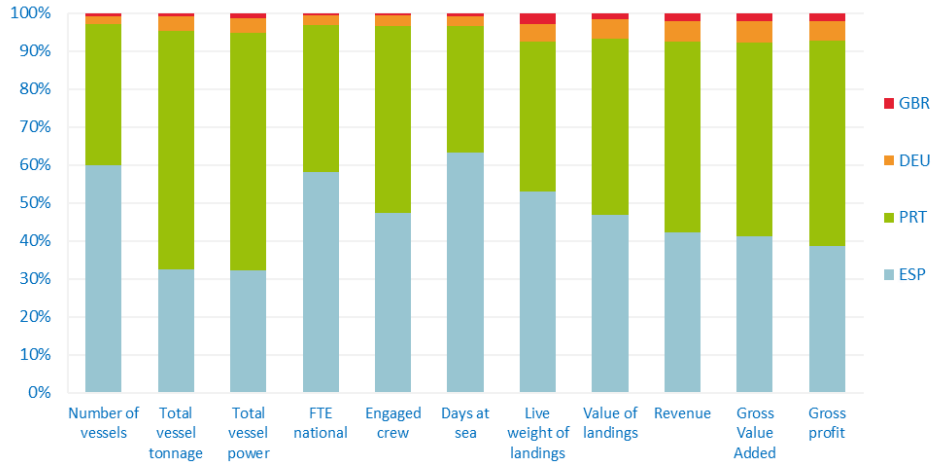


Figure 4.19 Share of the NAFO fleet by MS fleets, 2017
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Tables at the send of this section contain a summary of the economic performance of the NAFO fleet by Member State, main type of fishing activity and fleet segment.

Overview of the main results for EU fleet operating in the NAFO area

Fishing effort and landings

Fishing effort increased in the period 2010 to 2012 from 6 to near 8 000 days but has steadily decreased since 2013. In the last two years analysed (2016 and 2017), it has remained stable around 5 000 days. Also differences between number of fishing days and days-at-sea have been reduced considerably since 2014 onwards, which might be an indicator of better fleet performance in terms of fuel efficiency and costs (Figure 4.20).

Landings in weight have remained generally stable since 2010 at around 40-45 000 tonnes. The value of landings has fluctuated between EUR 115 million and EUR 117 million over the period 2010-2012, experiencing a considerable decrease in 2013 to EUR 95 million and then increasing steadily from 2014

until coming back to peak levels in 2017 (EUR 117.5 million) (Figure 4.20). This means that for a number of important fish species prices were higher while landings in weight remained relatively stable. This was particularly striking for species such as Greenland halibut, blue shark or swordfish.

The total landings in weight decreased by 5% in 2017 compared to 2016, at 40 000 tonnes being the lowest of the period analysed since 2010. However, the value of landings peaked at EUR 117.5 million. This is partly due to higher average prices for certain species; increasing revenue mainly for Portugal and, to a lesser extent, Spain.

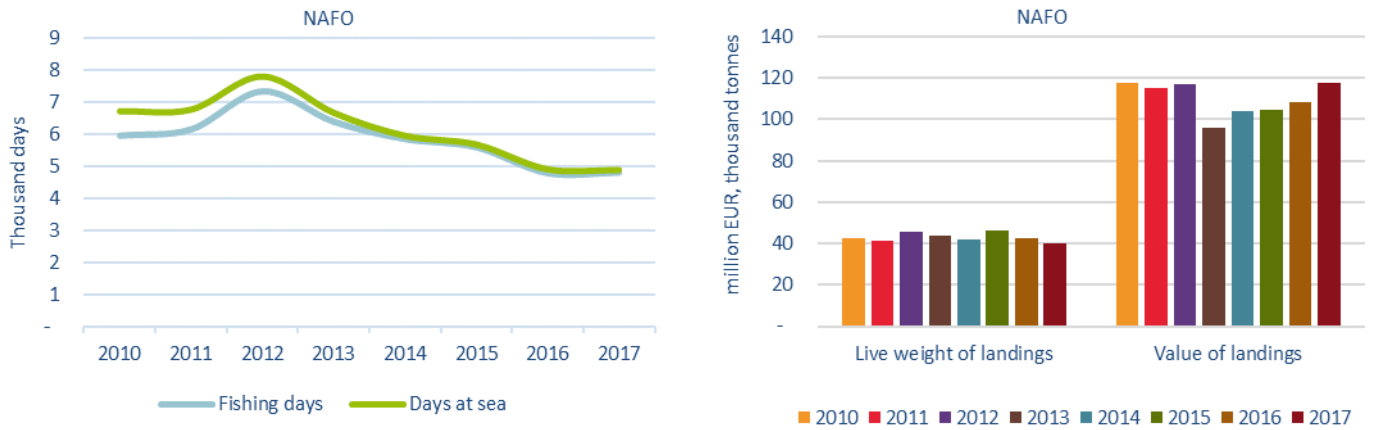


Figure 4.20 Trends on effort and landings for MS fleets operating in the NAFO region
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Employment

Over the past years, employment measured in terms of Full Time Equivalents (FTE) showed a declining trend between 2014 and 2017 from 655 to 519 FTE. In 2017 there was a 14% decrease in employment compared to 2016. In terms of fleet segments, the biggest number of total jobs is for the Portuguese demersal trawlers over 40 metres with 278 jobs and 199 FTEs, followed by the Spanish demersal trawlers over 40 meters, with 140 jobs and 146 FTE. The hook and line (surface longliners) fleets between 24 and 40 metres, account for with 87 jobs and 104 FTEs for the Spanish vessels, and 19 jobs and 23 FTEs for the Portuguese.

Wages and Salaries

In 2017, the average wage was estimated to be around EUR 53 700 per employed and EUR 58 600 per FTE. Wages per FTE increased by 22% compared to 2016, following a sustained increase since 2014 (Figure 4.21).

However, there are big differences of average wages between MS, which could be explained by a multiplicity of factors such as different methods for calculation by each national administration on labour costs (including social security and financial costs), dynamics of employment (e.g. part time rotational crews doing two fishing trips per year) or cultural and social arrangements related to bonuses as a result of percentage of sharing in the profits, etc.

German crew were the top earners at around EUR 128 300 in 2017, a slight decrease on 2016. Portuguese crew earned on average EUR 70 600, significantly more than in the previous year (EUR 54 000), while Spanish counterparts were around EUR 45 000, +18% compared to 2016.

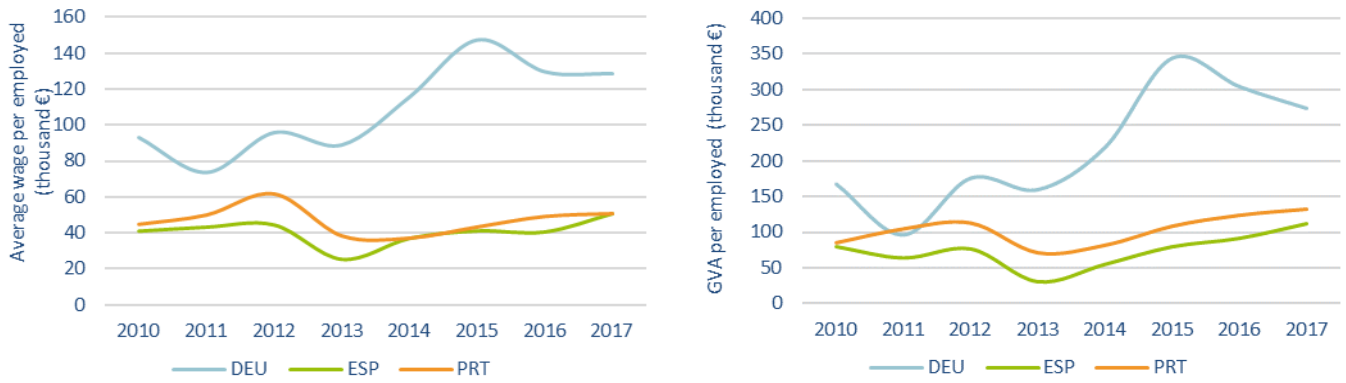


Figure 4.21 Trends on average wage for MS fleets operating in the NAFO region
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Labour productivity

The average labour productivity (GVA/FTE) was estimated at EUR 141 000 in 2017, with the large-scale fleet production EUR 150 200 per FTE (against EUR 58 200 for the distant-water fleet). GVA per FTE in the LSF has increased considerably since 2013 (Figure 4.22).

However, GVA per FTE varies significantly by MS. The highest labour productivity in 2017 was reached by Germany (EUR 331 600), versus the EUR 185 400 in the Portuguese fleets, and EUR 99 800 for the Spanish fleet (UK and Lithuania excluded due to incomplete time series data).

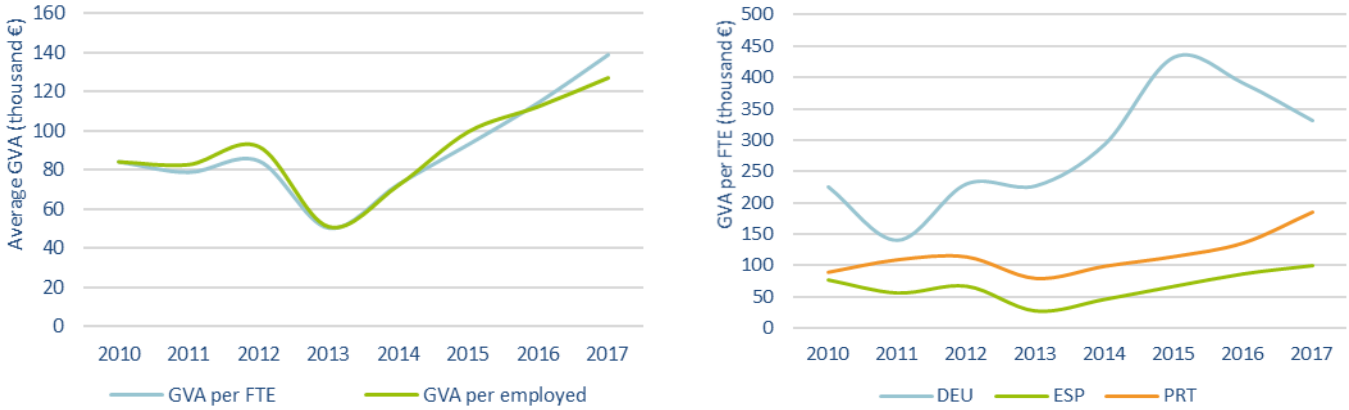


Figure 4.22 Trends on average labour productivity (GVA per FTE and GVA per employed) by fishing activity for MS fleets operating in the NAFO region

Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Economic performance

All fleet segments were profitable in 2017, continuing with the trend of steady improvement observed since 2014, with the highest net profits for Portugal and Spain.

Looking at the historical series, with the exception of 2013, revenue has remained relatively stable oscillating between EUR 90 and EUR 110 million. Gross Added Value and gross profit have experienced similar fluctuations at different scales, showing an increasing trend for the period 2010-2012 severely interrupted in 2013, and again a steady rebuilding and increase from 2014 onwards, reaching its maximum values for both indicators in the present year 2017 (Figure 4.23).

However, the net profit has suffered from severe oscillations along the period 2010-2014, with very narrow margins, with stable increases over the period 2015-2017 (Figure 4.23).

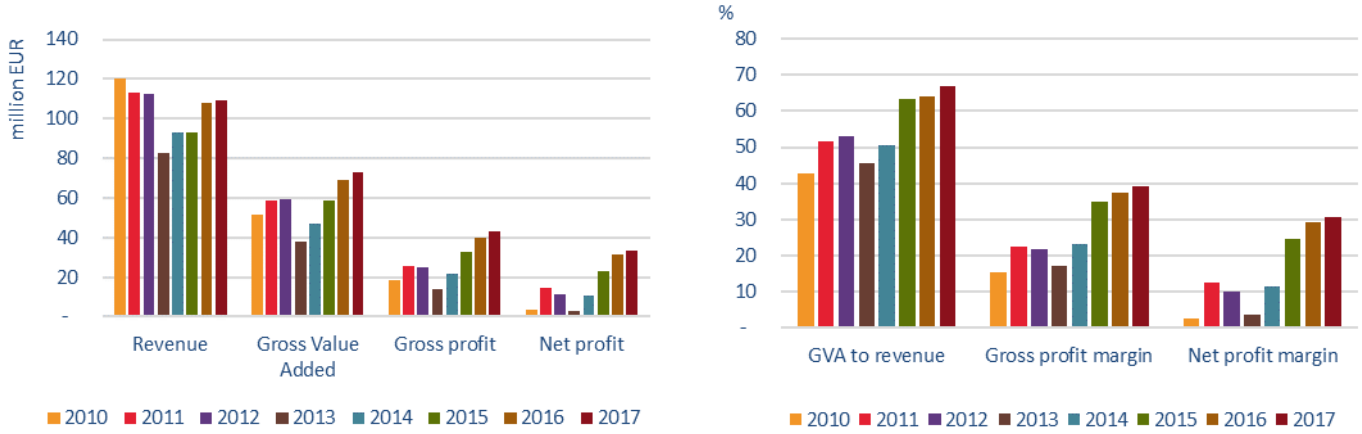


Figure 4.23 Trends on revenue and profits for MS fleets operating in the NAFO region

Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Main drivers affecting fleet performance in the region

- Capacity, effort, and landings in weight have decreased considerably since 2013 onwards. Despite this fact, all the EU fleets have shown a good economic performance in the course of the last 4 years

(2014-2017) due to a higher value in the key commercial species landed and relatively low fuel costs and energy efficiency. This year showed the highest revenue with near EUR 117.5 million.

- The gross profit margin close to 40% in average returned by the fleets is quite high; this also reflects the stability of fixed costs including fuel price. The average net profit margin around 33% shows also an overall reduction of fixed and variable costs with more efficiency in the cost structure.
- There is some specific concern about the decline in employment (in number of FTE), in particular with the Spanish fleet, although this might be linked to the modernisation of boats and mechanisation of processing activities at sea, together with a rotation system of the employed full time staff on several fishing trips.
- The annual wages have increased significantly over the last 3 years for the case of Portugal, Spain and UK. Germany remained stable at high levels.
- The witch flounder 3NO stock reopened to activity in 2015, following many years with no directed fishery (NDF). A low TAC might create a discarding problem for those vessels without quota but with a by-catches of this species (i.e. the majority of the EU vessels operating in NAFO except for the Baltic States namely Estonia and Lithuania) and therefore, may generate some noise in the EU fleet performance.
- Low, stable fuel prices and higher average market prices have contributed positively to the overall performance, in particular, the demersal trawlers operating in the region.
- The new Management Strategy Evaluation for Greenland halibut, adopted at the NAFO Annual Meeting in September 2017, was implemented in 2018 with a starting TAC of 17 500 tonnes.

Outlook for 2019 and beyond

- Management measures for key commercial stocks in NAFO, the implementation seems to be working quite efficiently in terms of quota consumption and reporting by the fleets.
- There are some problems in the full utilisation of the redfish 3M stock: this is an "Olympic" fishery operating on a days-at-sea regime.
- Improved catch, discard, and effort data reporting, through combined e-logbooks and VMS, should help improve the quality of this analysis as MS will be able to provide more refined data through the DCF call.
- 2018 was the first year of implementation of the new Management Strategy Evaluation for Greenland halibut, adopted at NAFO Annual Meeting in September 2017 with a starting TAC of 17 500t. A protocol for exceptional circumstances will be developed to guarantee that the full process is respected.
- The benchmark review of the cod (3M) initiated in 2018 to develop a HCR will be a major challenge for the EU NAFO fleet. Changes to the assessment models and, potentially, lower catch levels (TACs) given to poor level or recruitments could have a potentially detrimental socio-economic impact in the mid/long-term, in particular, for the Spanish and Portuguese demersal trawler fleets targeting this stock.
- The development of an ecosystem based approach to fisheries management in the NAFO regulatory area and the setting of a coherent network of Vulnerable Marine Ecosystem (VME) areas could bring about new closures or expansion of existing ones (e.g. seamounts, sponges and sea pens concentrations).
- The performance review of NAFO has shown that there needs to be increased transparency in the decision making and more efficient implementation of the rules through improved MCS in the region.
- A study of the impact of bottom fisheries in the NAFO area will be conducted in 2021. However, a preliminary evaluation that assessed eight fisheries in areas where there are VMEs found that while the Greenland halibut fishery does overlap with polygons containing VMEs, the longline cod and the shrimp fisheries do not. Other fisheries analysed showed an intermediate level of overlap. The SC recommended that this first analysis be augmented with more detailed data including VMS and haul

data. The outcomes of this study could influence the dynamics of specific EU fleet segments through closures/displacement and/or reduced effort and/or concentration of catches in other areas.

- Apart from proposals to potentially close certain fishing areas, the NAFO regulatory area will also likely be affected by other activities that impact the seabed; these include oil and gas drilling and deep-sea mineral mining. Indeed, any licence to prospect or commercially extract known deposits might have an adverse effect on the fishing activities of EU fleets operating in the area.
- An industry-science partnership, particularly around improved gear selectivity for cod trawlers operating in Subdivision 3M, could contribute to more efficient fishing seasons, lower energy consumption, and overall cost optimisation in the medium to long term.
- While the 3M shrimp fishery was a very valuable one for certain EU fleets, it has been closed to fishing for nearly a decade. During this time there has been little improvement in the stock status with the exception of female biomass; this increased slightly in 2014 and 2015 but is still below Blim. The weak signs of recovery in the stock mean that they cannot be directly connected to lower fishing effort. The only information available for the last seven years has been an annual 3M ground-fish survey; this, however, does not provide comprehensive information on the shrimp stock. The eventual reopening of commercial shrimp fishing, in both 3LN and 3M, could generate significant incomes for the specialised demersal trawl fleet.
- An EU funded project developing a method for a multispecies assessment in 3M for looking at the ecosystem and the predator-prey interactions between Cod, Redfish and Shrimp is currently under development. This will include a bio economic tool to test management scenarios and evaluate economic trade-offs. This work is meant to be presented to the Ecosystem WG with the view of considering its pertinence for future management proposals. This approach could bring further uncertainty for fleets dependent on one commercial species and create unexpected changes in their behaviour.

Trends by Member State fleet and fishing activity

Fleet capacity and employment

Spain represents near 60% of the total number of EU active vessels in the area with 12 large-scale vessels and 2 distant water vessels. This is followed by Portugal with nine vessels (37% of the total). Germany has one vessel and the UK another vessel fishing seasonally (Figure 4.24). This has a proportional reflection in terms of effort measured as number of days-at-sea per MS: Spain holds near two thirds of the total (63% of the total or 3 087 days), followed by Portugal with one third (1 628 days). The remaining 3% is covered by Germany and UK, with a total of 163 days-at-sea (Figure 4.25).

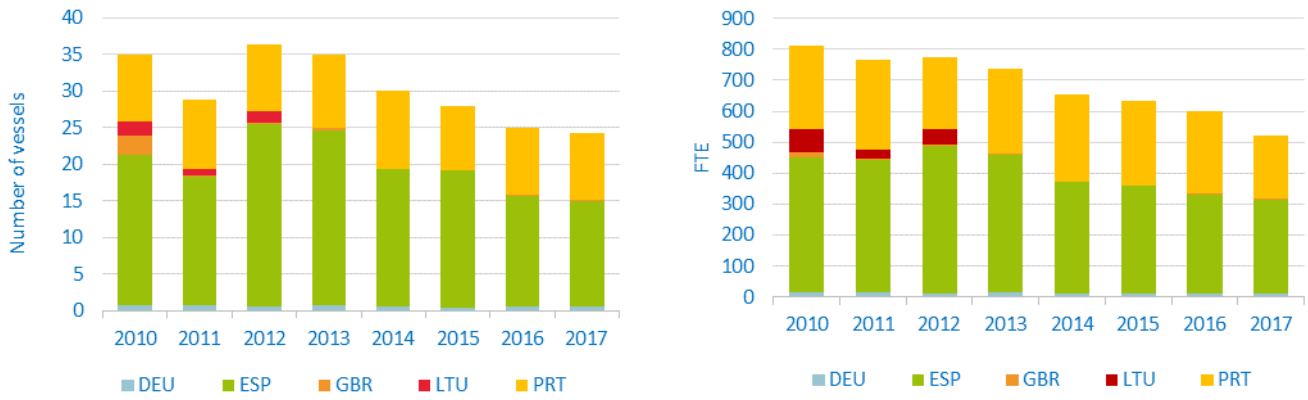


Figure 4.24 Trends on number of vessels and employment (in FTE) for MS fleets operating in the NAFO region
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019))

The total vessel tonnage for all EU fleets in the NAFO area was estimated at 25 762 GT and total vessel power near 29 500 kW.

Overall, the number of vessels operating in NAFO has followed a decreasing trend between 2010 and 2017, with an increase in 2012 and 2013, mainly due to less activity in the area by countries such as Spain, Estonia and the UK (Figure 4.24).

Employment, measured in terms of Full Time Equivalents (FTE), followed a similar decreasing trend in line with the number of vessels, reaching its lowest values in the two last years analysed, i.e. 2016 and 2017 (Figure 4.24).

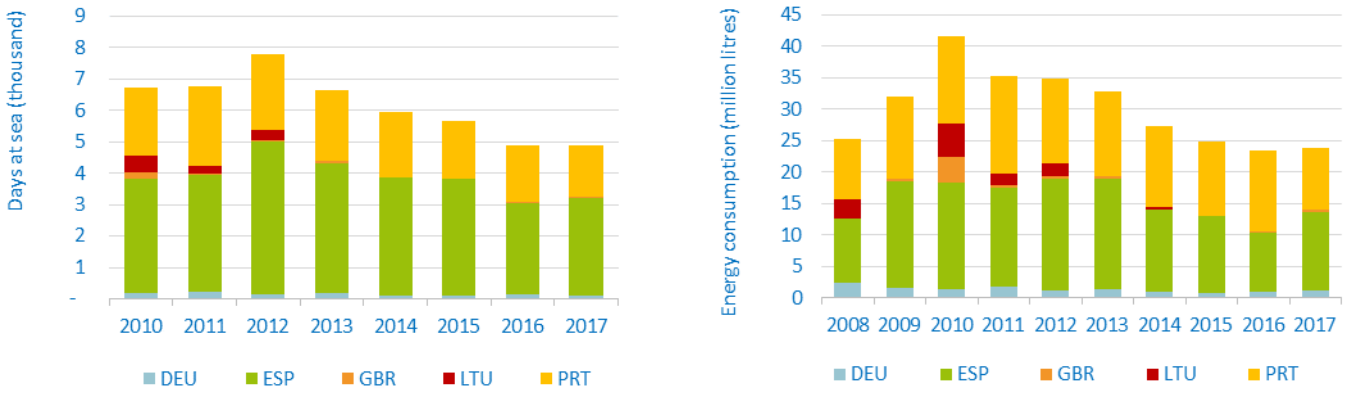


Figure 4.25 Trends on fishing effort (in days-at-sea) and fuel consumption for MS fleets operating in the NAFO region
Data source: MS data submissions under the DCF 2018 Fleet Economic (MARE/A3/AC(2018)).

Landings and top species

In terms of landings, Spain accounts for 53% of the total weight landed (21 300 tonnes) and 47% in value (with nearly EUR 55 million). Despite Portugal landing considerably less in volume than Spain (40% of the total weight landed), it reaches almost the same value, with 46.6% of the total (EUR 54.7 million).

Germany ranks third with 4.7% of total weight landed (1 875 tonnes) and 4.9% of the value (with EUR 5.8 million). UK has 3% of total landings in weight (1 100 tonnes) and 1.7% of total value, worth EUR 2 million.

Atlantic redfish was the most landed species in weight in 2017, with almost 12 900 tonnes. The second most landed species was Greenland halibut (7 754 tonnes), followed by Atlantic cod (6 380 tonnes), blue shark (5 764 tonnes) and raja rays (3 644 tonnes). The remaining top 10 species (yellowtail flounder, shortfin mako, American plaice, swordfish and witch flounder) oscillate in volume between 323-658 tonnes (Figure 4.26).

In terms of value, the five most important species were: Atlantic redfish with EUR 39 million, Greenland halibut EUR 30.3 million, Atlantic cod (EUR 18.7 million), blue shark (EUR 14 million), raja rays (EUR 5.4 million) and swordfish (EUR 3.2 million).

The Portuguese fleet dominates the redfish and cod landings while Spain leads in Greenland halibut, blue shark and rays. Germany also takes a substantial share of Greenland halibut while the UK almost exclusively targets Atlantic cod (Figure 4.27).

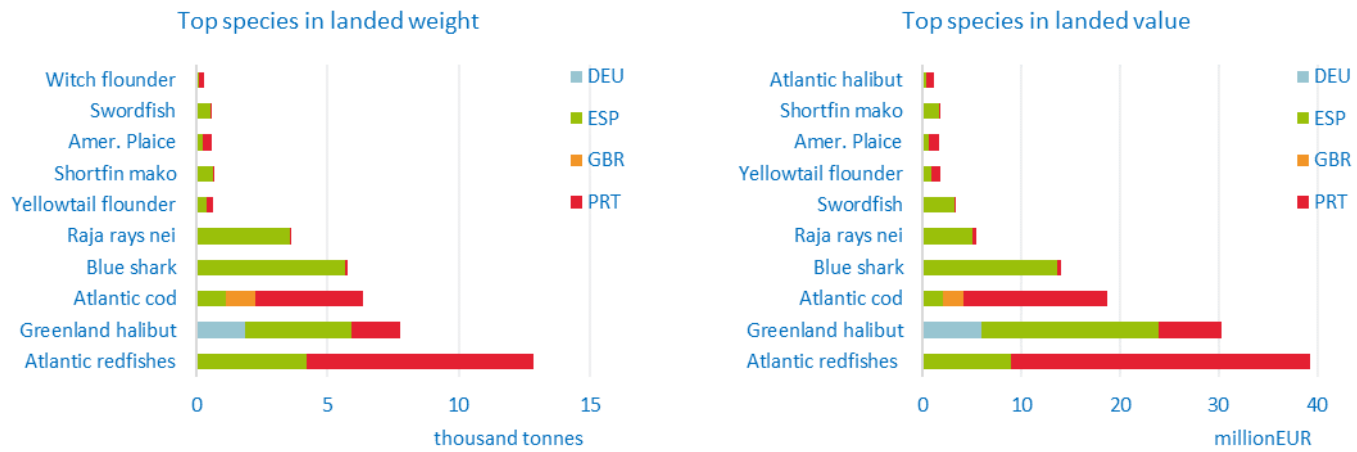


Figure 4.26 Top 10 species in weight and value by MS fleet landed from the NAFO region in 2017
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

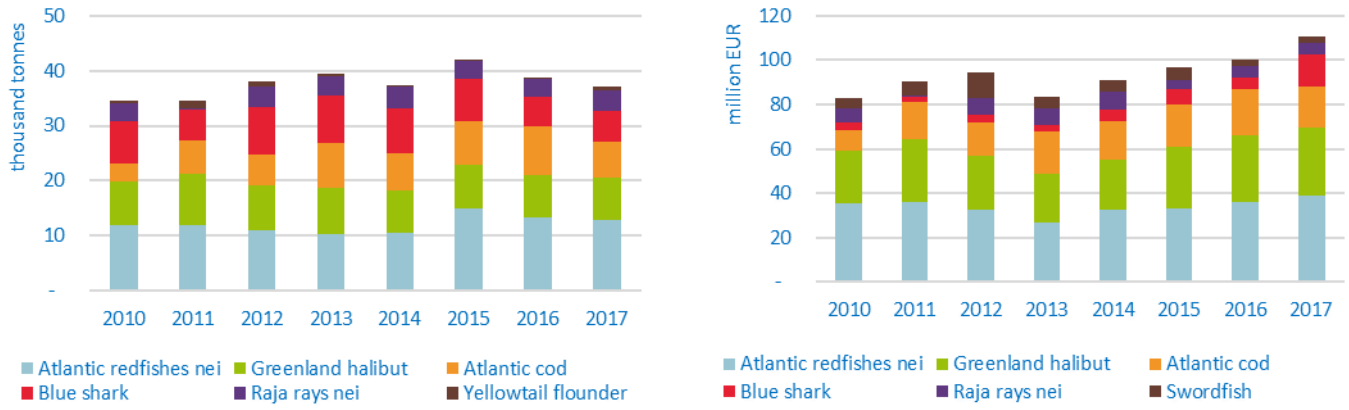


Figure 4.27 Trends on landings of the top six species in landed value for MS fleets operating in the NAFO region
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Looking specifically at the DWF, composed of two vessels from Spain (1 surface longliner and 1 demersal trawler), there are considerable shifts in the order of volume of total weight in landing and total value. The blue shark is the first species in weight with 806 000 tonnes followed by Greenland halibut (630 000 tonnes) and rays (511 000 tonnes) and Atlantic redfish (370 500 tonnes). In terms of value of landings, Greenland halibut reached EUR 2.8 million while blue shark was closer to EUR 2 million. Raja rays rank third with EUR 723 million followed by Atlantic Redfish with EUR 610 million (Figure 4.28).

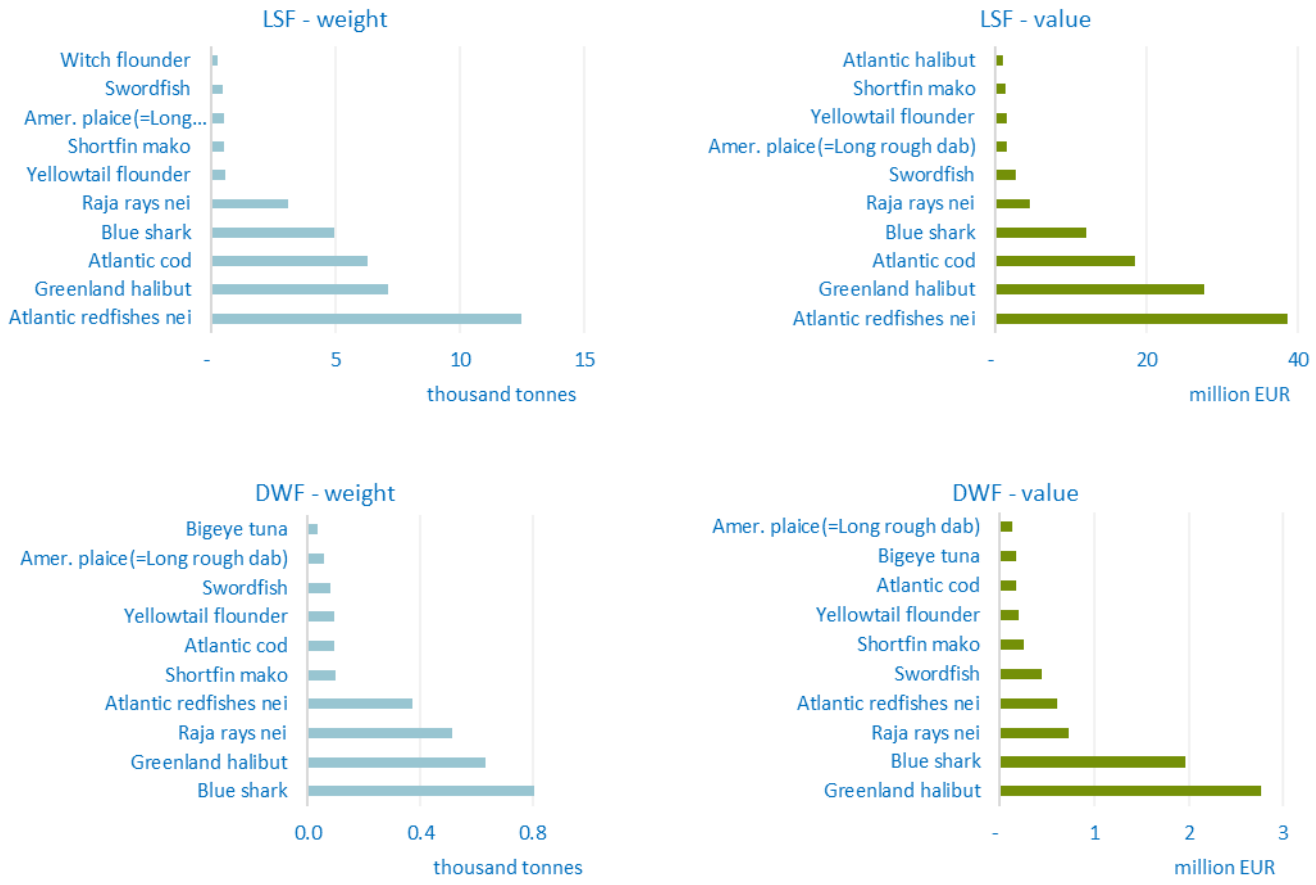


Figure 4.28 Landings of the top species in value by fishing activity, 2017
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Landings from the Spanish fleet remained relatively stable since 2013, with an increase in 2017 in line with the slight increase in days-at-sea. The Portuguese fleet shows an opposite trend, with landings decreasing slightly in 2017, together with days-at-sea (Figure 4.29).

The average landed price has remained rather stable between EUR 2.0 and EUR 3.0 per kg over most of the period, with increases since 2015, more pronounced for the Portuguese fleet (Figure 1.14). Fuel prices have decreased significantly since 2014, reaching levels below 2011 figures (Figure 4.30).

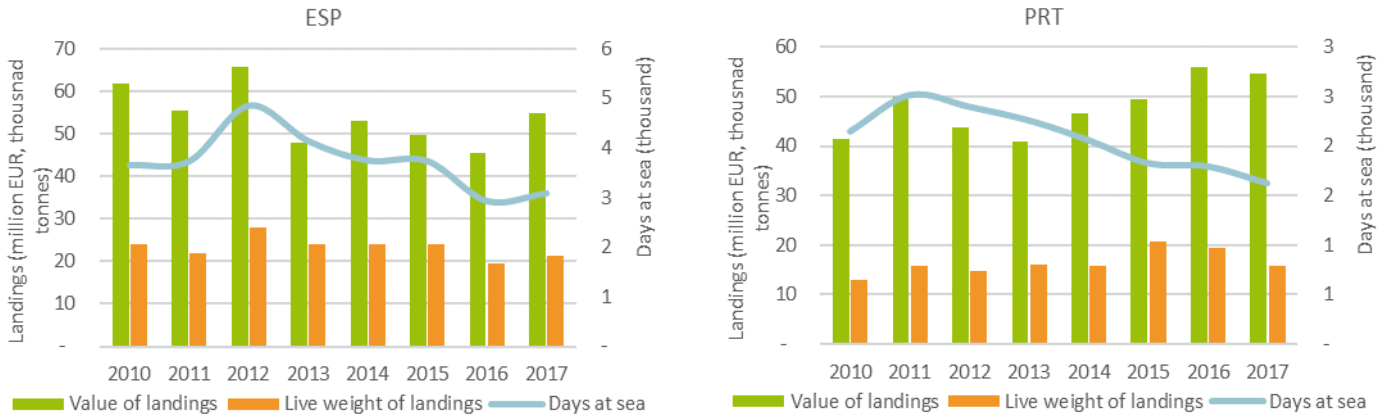


Figure 4.29 Trends in landings and effort for the main fleets (Portuguese and Spanish) operating in the NAFO area
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

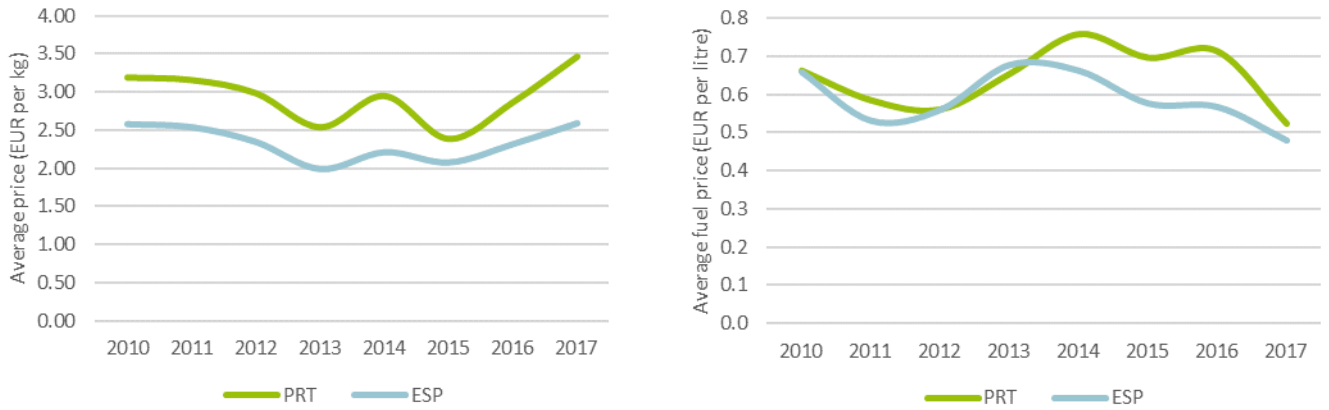


Figure 4.30 Trends in average landed price and fuel price for the main fleets operating in the NAFO area
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Socio-Economic performance

The revenue (income from landings and other income) generated by the 24 vessels in 2017 was estimated at almost EUR 109.4 million. This represents a 1.6% increase in comparison to EUR 107.6 million in 2016 (Figure 4.31).

Revenue in 2017 was distributed as follows (percentage over the total): Portugal EUR 54.9 million (50%), Spain EUR 46.3 million (42%) and Germany EUR 6.0 million (5%). The remaining landings in value were landed by UK with EUR 2.3 million and Estonian vessels (Table 4.7).

There is a high GVA to revenue for all fleet segments. Gross Value Added (GVA) produced by the vessels covered was estimated at EUR 73 million compared to EUR 68.8 million in 2016, a 6% increase.

2011 was a year where Portuguese demersal trawl fleet performed considerably better than its Spanish counterparts in terms of revenue, GVA, and gross and net profit, and also the fall of 2013 was milder for Portuguese fleets.

After accounting for operating costs, the fleet made almost EUR 43 million in gross profit, a 7% increase compared to EUR 40 million in 2016. All MS fleets in the region were profitable, and combined, generated an average gross profit margin of 39%, slightly above the 37% achieved in 2016. Portugal reported the highest profit margin (42%), followed by the UK (39%), Germany (38%) and Spain (36%). The Spanish DWF obtained a 27% gross profit margin, lowest margin of the entire fleet .

In terms of net profit, which is equal to the gross profit minus the capital costs (including depreciation and opportunity cost of capital), the aggregated net profit was EUR 33.5 million, with Portugal leading with EUR 18.8 million, followed by Spain with EUR 13.2 million. The overall average net profit margin was 31%, being UK the most productive fleet with 35.7%, followed by Portugal with 34.3%, Spain with 28.5% and then Germany with 12%.

Average fuel price for the fleet was estimated at EUR 0.41 per litre, ranging from EUR 0.33 for German vessels to EUR 0.49 for Portuguese trawlers.

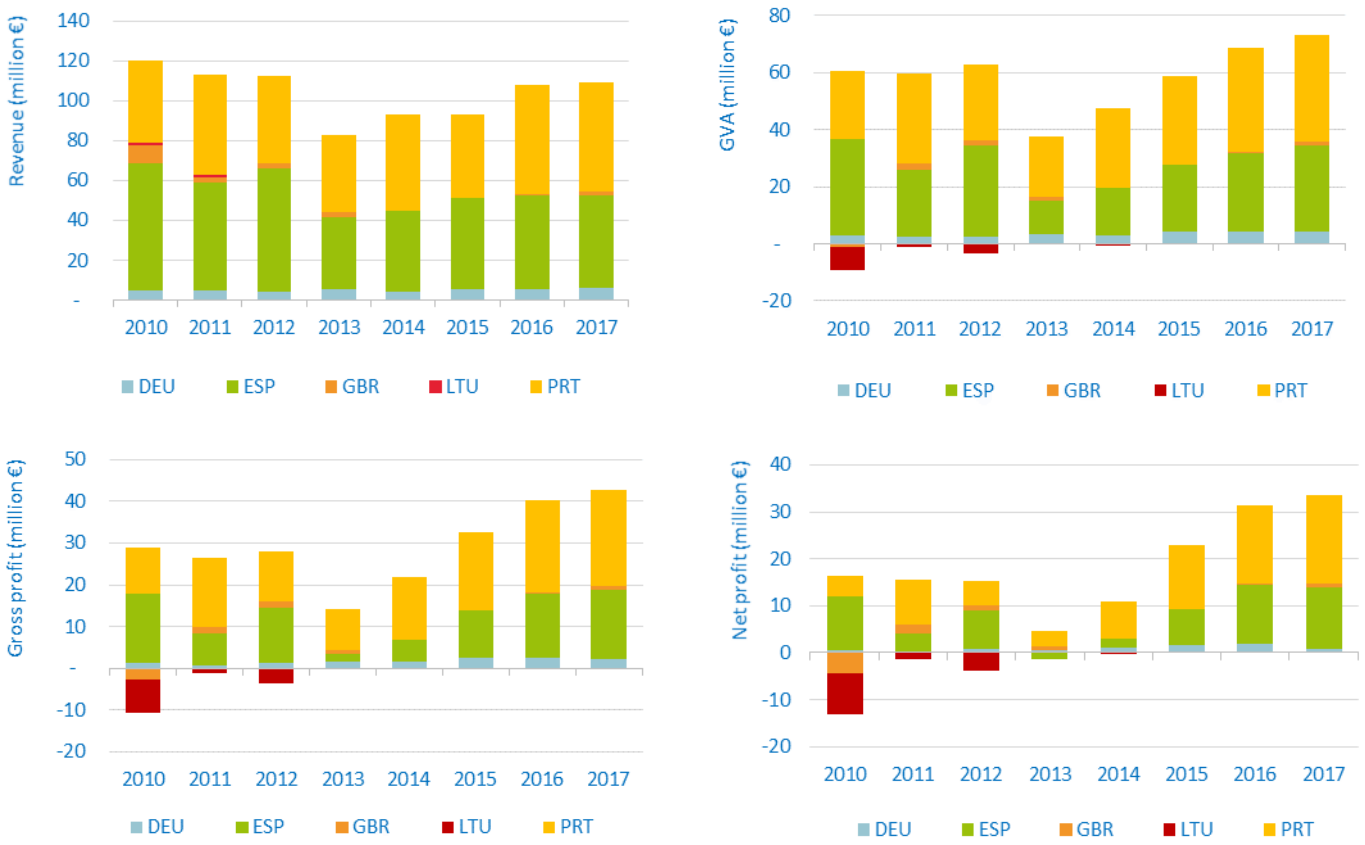


Figure 4.31 Trends on revenue and profits for MS fleets operating in the NAFO region
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Regarding Gross Value Added, the trends followed by Spain and Portugal are relatively similar, with increasing trends during the period 2010-2012, a sharp fall in 2013 and increase coming back to previous level in 2014-2016. 2017 has been the best year for both, with GVA of EUR 30.1 million for Spain and EUR 37.3 million for Portugal, respectively. In 2011, Portuguese demersal fleets performed significantly better than its Spanish counterparts, EUR 31.5 million versus EUR 23.7 million reported for Spain. Also, the decrease in 2013 was milder, as Portugal went from EUR 26.7 million in 2012 to EUR 21.5 million in 2013, while Spain from EUR 31.7 million to EUR 11.9 million, respectively.

Portuguese and Spanish fleets have experimented a considerable increase in their gross profits in the course of the last 4 years analysed, reaching its highest values in 2017 (EUR 16.5 million for Spain and EUR 23.1 for Portugal).

Germany has remained stable between EUR 2.3 and EUR 2.5 million in the last three years, while UK has had very small gross profit under EUR 1 million since 2012. Lithuania has not reported any activity in the last 3 years following periods of gross losses (around EUR 7.8 million in 2010.

Regarding net profit, Spain reported EUR 7.7 million in 2015, EUR 12.6 million in 2016 and a record of EUR 13.2 million in 2017. Portugal reported EUR 13.4 million in 2015, EUR 16.9 million in 2016 and EUR 18.8 million in 2017, the highest of the time series.

Main factors affecting the performance of the fleet

SFPAs, Regulation and fisheries management in the region

The NAFO Conservation and Enforcement Measures (CEM) incorporate all NAFO measures presently in force as adopted by the Commission in accordance with provisions of Articles VI and XIV of the Convention on Cooperation in the Northwest Atlantic Fisheries. Every year the NAFO CEM is revised by the Commission.

These Measures shall, unless otherwise provided, apply to all fishing vessels used or intended for use for the purposes of commercial fishing activities conducted on fishery resources in the Regulatory Area as defined in Article 1 of the NAFO Convention.

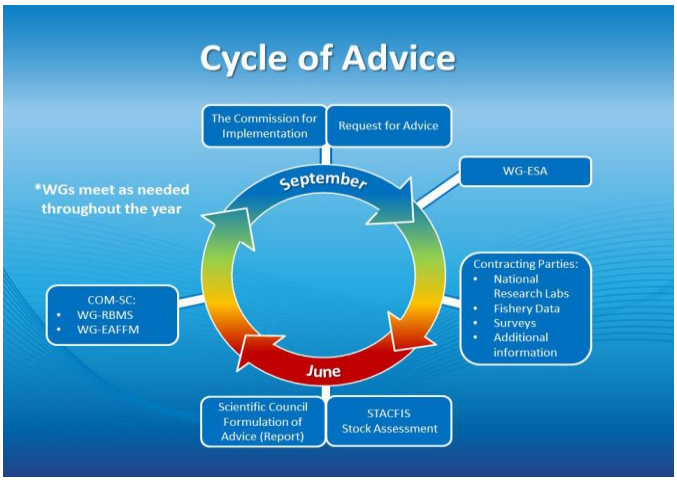
The latest version of the document incorporates amendments which were adopted at the most recent NAFO Annual Meetings held in September 2018 and is available for download here.

The applicable CEM measures for the period analysed in this report (2017) is available here: https://www.nafo.int/Portals/0/PDFs/fc/2017/CEM-2017-web.pdf

Also, more information on the historical archive of management measures and quota tables can be consulted at NAFO website: https://www.nafo.int/Fisheries/Conservation

Status of important stocks

NAFO Scientific Advice is generated through a joint effort by NAFO Members (nine CPCs) and makes use of different data sampling programs carried out by Members states. Additionally, available statistics on the resources and their environment are also used when producing the advice.



In the reference year for this AER (2017), the following NAFO stocks occurring in the RA and straddling the EEZs of the Coastal States had a full assessment.

Stocks in the Flemish Cap

- Cod in Division 3M
- Redfish in Division 3M
- American Plaice in Div. 3M

Stocks in the Grand Bank

- Redfish in Div. 3LN***
- Cod in Div. 3NO (*interim monitor*)
- Witch flounder in Div. 3NO
- White Hake in Div. 3NOPs

*** The Commission adopted in 2014 an MSE approach for Redfish in Division 3LN (FC Doc. 14/29). This approach uses a Harvest Control Rule (HCR) designed to reach 18 100 t of annual catch by 2019-2020 through a stepwise biannual catch increase, with the same amount of increase every two years.

Landing obligation

The Long Distance Advisory Council (LDAC) adopted in September 2016 an advice in response to a consultation on a proposal for a regulatory text from the European Commission ("Delegated Act") following Article 15.2 of the Basic Regulation of the CFP (EU) No. 1380/2013, whereby it establishes a derogation from the landing obligation for such NAFO stocks in which a specific legal conflict occurs with such articles under NCEM which authorize or require discards in certain cases.

For the three cases identified, the proposal reflected the incompatibility of such NCEM rules with the LO as follows: the requirement not to retain on board redfish in zone 3M once the Olympic quota has been completed (NCEM Art 5.3 (c)), the maximum limits to retentions and authorised by-catches involving the obligation to discard the excess (NCEM Art. 6), with the particular case of capelin as a species under a moratorium (NCEM Art. 6.3 (d)), and the mandatory discard of catches with sizes below the minimum included in Annex I.D (NCEM Art. 14).

In all such cases, the priority of the international standard was recognised, and it was made clear that NAFO rules should continue to apply, by specific derogation from the obligation to land under Article 15 of the Basic Regulation.

The LDAC also made a listing and case study of potentially limiting species ("choke species") under other situations which could prevent the normal catch of the allocated quotas for the EU Fleets, due to a conflict or a lack of legal certainty between an obligation under NAFO's NCEM of not retaining on board, and the obligation to land at a port as provided for under Community legislation.

The content of the LDAC advice is available here:
http://ldac.eu/images/documents/publications/LDAC_Advice_on_Implementation_of_LO_in_NAFO.pdf

As a result, the EC adopted a Delegated Act establishing a specific derogation to the application of the LO outside EU waters for NAFO RA was granted.

It also requested to STECF to provide scientific advice for those fisheries outside EU waters on possible rules for a *de minimis* exemption for certain target stocks.

The reply of the Commission is available here:
http://ldac.eu/images/documents/publications/Commision_reply_to_consultation_on_external_dimension_landing_obligation.pdf

At the 2018 NAFO Annual Meeting, it was decided by proposal of Norway that a study would be launched in 2019 to analyse potential implications of adoption of a landing obligation in NAFO by looking at the EU and Norwegian legislations. The results of this study will be presented and discussed at the forthcoming NAFO Working Group on Selectivity, By-Catch and Discards Working Group.

Description of relevant fisheries in the region

Performance by fleet segment

Portuguese demersal trawlers over 40 m (PRT NAO DTS40XX IWE)

- This fleet is composed of nine vessels operating in the area (37% of the vessels in the region). The fleet's activity has remained relatively stable in terms of landings and effort. The latest 3-year trend shows an increase from 2014 to 2015 and then a slight decrease in 2016 and 2017 in the number of fishing days, days-at-sea (1 628) and landed weight (15 700 tonnes). The Portuguese trawlers reported the highest value of landings in the region together with Spain, with EUR 54.7 million, which is a slight decrease from that of previous year (EUR 56.3 million).
- In 2017, this fleet operated mostly in NAFO Divisions 3LMNO, targeting Atlantic redfish, Atlantic cod and Greenland halibut.

Spanish demersal trawlers over 40 m LOA (ESP A27 DTS VL40XX).

- Spain possessed the largest fleet in number with 14 vessels in 2017 (58% of the number of vessels). The segment generated a volume of landings of 21 300 tonnes and a landed value of EUR 54.9 million, ranking the highest. Compared to previous years, Spanish fleet capacity in terms of presence in days-at-sea and in number of vessels shows a decreasing trend from 19 in 2014 to 17 in 2016 and to 14-15 in 2017.
- In 2017 this fleet operated mainly in NAFO Divisions 3LMNO targeting Greenland halibut, Atlantic redfish, raja rays and Atlantic cod.

German demersal trawlers over 40 m LOA (DEU A27 DTS VL40XX).

No activity reported in 2014 and 2015 under the DCF. Yet, according to NAFO data, the German fleet was active in the region, catching 2 200 tonnes in 2014 and 1 900 tonnes in 2015, corresponding to 4 and 5% of the total EU catches in the area, respectively.

- In 2017, this segment reported activity from 1 vessel spending 119 days-at-sea in the area, (all in NAFO Divisions 1CD), and landed 3.2% of the total weight in the region (1.9 thousand tonnes) and 3.8% of the value tonnes estimated at EUR 5.8 million euro.
- The biggest share of catch for this fleet is made up of Greenland halibut. To a lesser extent, the fleet also targets Atlantic redfish and roundnose grenadier.

UK demersal trawlers over 40 m LOA (GBR A27 DTS40XX).

- No activity reported in 2014 and 2015.
- In 2016, their presence was limited to 2% of the fishing days and days-at-sea; 2% of landed value and 4% of the landed weight.
- In 2017, their presence was of one vessel spending only 44 days-at-sea, with 0.2% of the landed weight in the region (1 100 tonnes) and the same amount for the landed value (EUR 2 million).
- The fleet operated in NAFO Division 3M, targeting Atlantic cod, Atlantic redfish and American plaice.

Estonian demersal trawlers over 40 m LOA (EST A27 DTS VL40XX)

- Data was reported by EWG expert on the activity of 2 vessels representing with 498 days-at-sea of which 398 were fishing days.
- In terms of capacity, these vessels reported a total power of 2 376 kw/days and a total vessel tonnage of 2 573 GT.
- In terms of effort, they deployed 660 869 GT sea days and 609 800 kw/day total days-at-sea
- The fleet operated in NAFO Division 3LMNO, targeting Atlantic cod, Atlantic redfish and Greenland Halibut.

France

- Due to very low levels of activity and the fact that only partial DCF data are available, this fleet has not been included in the analysis. Data on the French St. Pierre et Miquelon fleet are not reported under the DCF. The latter, according to NAFO official statistics, caught 1.4 thousand tonnes in 2017.

Table 4.6 Key parameter estimates by MS fleet operating in the NAFO area, 2017

NAFO	Estimated no. of vessels	% of total EU active vessels	Total vessel tonnage	Total vessel power	Engaged crew	FTE national	Days at sea	as a % of total sea days	Energy consumption	Live weight of landings	as a % of total weight landed	Value of landings	as a % of total value landed	Revenue	as a % of total revenue	Gross Value Added	GVA to revenue	Gross profit	Gross profit margin	Net profit	Net profit margin	Average GVA	GVA per FTE (labour productivity)
	number	(%)	GT	kW	number	number	day	(%)	litre	kg	(%)	euro	(%)	€	(%)	€	%	€	%	€	%	€	€
DEU	1	2.2%	960	1,171	15	13	119	2.4%	1,092,719	1,875,780	4.7%	5,793,529	4.9%	5,974,028	5.5%	4,222,379	70.7	2,244,562	37.6	725,433	12.1	8,099,711	331,583
ESP	15	59.9%	8,345	9,454	268	302	3,087	63.3%	12,568,186	21,265,350	53.1%	54,976,728	46.8%	46,259,695	42.3%	30,146,945	65.2	16,546,860	35.8	13,172,434	28.5	2,074,707	99,771
GBR	0	0.7%	236	402	3	3	44	0.9%	346,541	1,155,106	2.9%	2,015,538	1.7%	2,258,354	2.1%	1,542,452	68.3	877,769	38.9	805,827	35.7	8,612,237	468,944
PRT	9	37.2%	16,221	18,416	280	201	1,628	33.4%	9,762,259	15,777,808	39.4%	54,723,730	46.6%	54,858,348	50.2%	37,289,964	68.0	23,085,252	42.1	18,828,211	34.3	4,136,757	185,428
-	**24**		**25,762**	**29,443**	**567**	**519**	**4,878**		**23,769,705**	**40,074,044**		**117,509,524**		**109,350,426**		**73,201,740**		**42,754,444**		**33,531,906**			

Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Table 4.7 Key parameter estimates by fishing activity for MS fleets operating in the NAFO area, 2017

NAFO	Estimated no. of vessels	% of total EU active vessels	Total vessel tonnage	Total vessel power	Engaged crew	FTE national	Days at sea	% of total days at sea	Fishing days	as a % of total fishing days	Live weight of landings	as a % of total weight landed	Value of landings	as a % of total value landed	Revenue	as a % of total revenue	Gross Value Added	GVA to revenue	Gross profit	Gross profit margin	Net profit	Net profit margin	Average GVA	GVA per FTE (labour productivity)
	GT	(%)	kW	number	number	number	day	(%)	day	(%)	litre	(%)	euro	(%)	€	(%)	€	%	€	%	€	%	€	€
LSF	22	91.6%	24,671	28,112	526	467	4,406	90.3%	4,332	90.2%	37,305,679	93.1%	110,072,375	93.7%	103,186,330	94.4%	70,159,018	68.0	41,093,977	39.8	32,129,086	31.1	3,158,851	150,220.1
DWF	2	8.4%	1,091	1,331	40	52	472	9.7%	472	9.8%	2,768,365	6.9%	7,437,149	6.3%	6,164,096	5.6%	3,042,723	49.4	1,660,467	26.9	1,402,820	22.8	1,495,122	58,239.7
-	**24**		**25,762**	**29,443**	**567**	**519**	**4,878**		**4,804**		**40,074,044**		**117,509,524**		**109,350,426**		**73,201,740**		**42,754,444**		**33,531,906**			

Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Table 4.8 Key parameter estimates by fishing activity and MS fleet operating in the NAFO area, 2017

NAFO		Estimated no. of vessels	% of total EU active vessels	Total vessel tonnage	Total vessel power	Engaged crew	FTE national	Days at sea	as a % of total fishing days	Energy consumption	Live weight of landings	as a % of total weight landed	Value of landings	as a % of total value landed	Revenue	as a % of total revenue	Gross Value Added	GVA to revenue	Gross profit	Gross profit margin	Net profit	Net profit margin	Average GVA	GVA per FTE (labour productivity)
		number	(%)	GT	kW	number	number	day	(%)	litre	kg	(%)	euro	(%)	€	(%)	€	%	€	%	€	%	€	€
LSF	DEU	1	2.2%	960	1,171	15	13	119	2.4%	1,092,719	1,875,780	4.7%	5,793,529	4.9%	5,974,028	5.5%	4,222,379	70.7	2,244,562	37.6	725,433	12.1	8,099,711	331,583
	ESP	12	51.5%	7,253	8,123	227	250	2,615	53.6%	10,512,163	18,496,985	46.2%	47,539,579	40.5%	40,095,599	36.7%	27,104,222	67.6	14,886,394	37.1	11,769,614	29.4	2,169,101	108,454
	GBR	0	0.7%	236	402	3	3	44	0.9%	346,541	1,155,106	2.9%	2,015,538	1.7%	2,258,354	2.1%	1,542,452	68.3	877,769	38.9	805,827	35.7	8,612,237	468,944
	PRT	9	37.2%	16,221	18,416	280	201	1,628	33.4%	9,762,259	15,777,808	39.4%	54,723,730	46.6%	54,858,348	50.2%	37,289,964	68.0	23,085,252	42.1	18,828,211	34.3	4,136,757	185,428
DWF	ESP	2	8.4%	1,091	1,331	40	52	472	9.7%	2,056,023	2,768,365	6.9%	7,437,149	6.3%	6,164,096	5.6%	3,042,723	49.4	1,660,467	26.9	1,402,820	22.8	1,495,122	58,240
	-	**24**		**25,762**	**29,443**	**567**	**519**	**4,878**		**23,769,705**	**40,074,044**		**117,509,524**		**109,350,426**		**73,201,740**		**42,754,444**		**33,531,906**			

Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Table 4.9 Key parameter estimates by MS fleet segments operating in the NAFO area, 2017

NAFO	Estimated no. of vessels	% of total EU active vessels	Total vessel tonnage	Total vessel power	Engaged crew	FTE national	Days at sea	as a % of total sea days	Fishing days	Energy consumption	Weight of landings	as a % of total weight landed	Value of landings	as a % of total value landed	Revenue	as a % of total revenue	Gross Value Added	GVA to revenue	Gross profit	Gross profit margin	Net profit	Net profit margin	Average GVA	GVA per FTE (labour productivity)
	number	(%)	GT	kW	number	number	day	(%)	day	litre	kg	(%)	€	(%)	€	(%)	€	%	€	%	€	%	€	€
DEU NAO DTS40XX NGI	1	2.2%	960	1,171	15	13	119	2.4%	94	1,092,719	1,875,780	4.7%	5,793,529	4.9%	5,974,028	5.5%	4,222,379	70.7	2,244,562	37.6	725,433	12.1	8,099,711	331,583
ESP NAO DTS40XX NGI	5	20.0%	5,663	5,904	140	146	922	18.9%	922	6,784,563	12,370,822	30.9%	31,233,301	26.6%	29,128,668	26.6%	20,417,017	70.1	11,617,446	39.9	8,882,824	30.5	4,205,705	139,853
ESP OFR DTS40XX NGI	1	2.9%	718	817	21	29	158	3.2%	158	1,278,014	1,740,421	4.3%	4,656,312	4.0%	3,783,530	3.5%	1,935,196	51.1	1,059,567	28.0	882,545	23.3	2,776,066	66,359
ESP NAO HOK2440 LLD*	8	31.5%	1,591	2,219	87	104	1,693	34.7%	1,693	3,727,600	6,126,163	15.3%	16,306,278	13.9%	10,966,931	10.0%	6,687,205	61.0	3,268,948	29.8	2,886,790	26.3	875,174	64,346
ESP OFR HOK2440 LLD*	1	5.5%	374	514	19	23	314	6.4%	314	778,009	1,027,944	2.6%	2,780,837	2.4%	2,380,566	2.2%	1,107,527	46.5	600,899	25.2	520,275	21.9	827,748	47,982
GBR NAO DTS40XX NGI*	0	0.7%	236	402	3	3	44	0.9%	29	346,541	1,155,106	2.9%	2,015,538	1.7%	2,258,354	2.1%	1,542,452	68.3	877,769	38.9	805,827	35.7	8,612,237	468,944
PRT NAO DTS40XX IWE	9	36.2%	16,177	18,331	278	199	1,572	32.2%	1,538	9,712,317	15,690,719	39.2%	54,349,461	46.3%	54,485,405	49.8%	36,984,631	67.9	22,915,667	42.1	18,675,950	34.3	4,213,476	186,138
PRT NAO HOK2440 NGI	0	1.0%	43	85	3	2	56	1.1%	56	49,942	87,089	0.2%	374,269	0.3%	372,943	0.3%	305,333	81.9	169,585	45.5	152,261	40.8	1,290,505	126,789
-	**24**		**25,762**	**29,443**	**567**	**519**	**4,878**		**4,804**	**23,769,705**	**40,074,044**		**117,509,524**		**109,350,426**		**73,201,740**	**517.5**	**42,754,444**		**33,531,906**			

4.3 Baltic Sea

Regional Details

The Baltic Sea covers ICES areas IIIb, IIIc and IIId and is bounded by the Swedish part of the Scandinavian Peninsula, mainland Europe and the Danish islands. The central part of the Baltic Sea is bordered on its northern edge by the Gulf of Bothnia, in the north-east by the Gulf of Finland, and in the east by the Gulf of Riga. For simplicity, hereafter the EU vessels operating in the aforementioned ICES areas are referred to as the EU Baltic Sea fleet or fisheries.

Nine EU Member States were involved in Baltic Sea fisheries in 2017: Denmark, Estonia, Finland, Germany, Latvia, Lithuania, Poland, Sweden and Netherlands (Figure 4.32). Most of the Member States bordering the Baltic Sea are highly dependent on the region, where the main species targeted include herring, sprat and cod.

In terms of landings, and based on the EU MAP data available, the Estonian, Finnish, Latvian and Polish fisheries are fully dependent on the Baltic Sea region. However, it should be noted that Estonian, Latvian and Polish vessels operating in the High Seas (distant water fleets) are not included in the analysis due to insufficient data or for reasons of confidentiality. On the other hand, the Lithuanian low dependency rate is due to the distant water fleet operating in other areas. Most German, Danish and Swedish vessels operate in both the Baltic and North Sea fishing regions.

The Swedish fleet was the most important fleet in terms of landed value (EUR 52 million), while the Finnish fleet was the most important in terms of landed weight (154 thousand tonnes).

Tables at the send of this section contain a summary of the economic performance of the Baltic Sea fleet by Member State, main type of fishing activity and fleet segment.

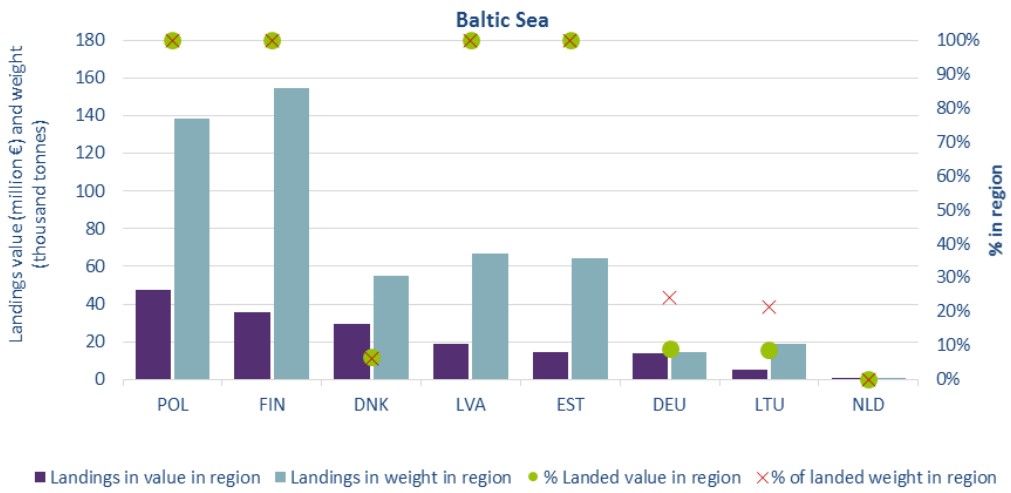


Figure 4.32 Importance of the Baltic Sea region for MS fleets in terms of landings in weight and value, 2017
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

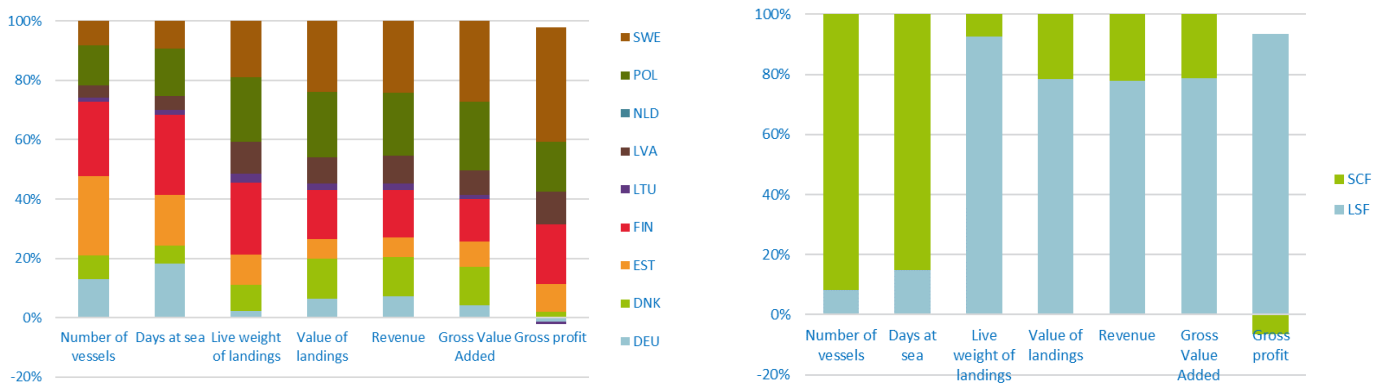


Figure 4.33 Share by MS and fishing activity fleets operating in the Baltic Sea, 2017
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Overview of the main results for EU Baltic Sea fleet

Fishing effort and landings

The EU Baltic Sea fleets spent 368 431 days-at-sea in 2017 (11% less than in 2016). Generally, the effort variables show decreasing trend compared to 2008. The weight and value of landings was approximately 632 538 tonnes and EUR 217 million. Landings (by weight) from the Baltic declined between 2009 and 2012, followed by a slight increase in 2013 and further increase after 2014. Conversely, landings by value increased steadily from 2009 to 2013, decreased significantly in 2014 (due to slump in the price for small pelagic) and had still not entirely recovered in 2017 (Figure 4.34).

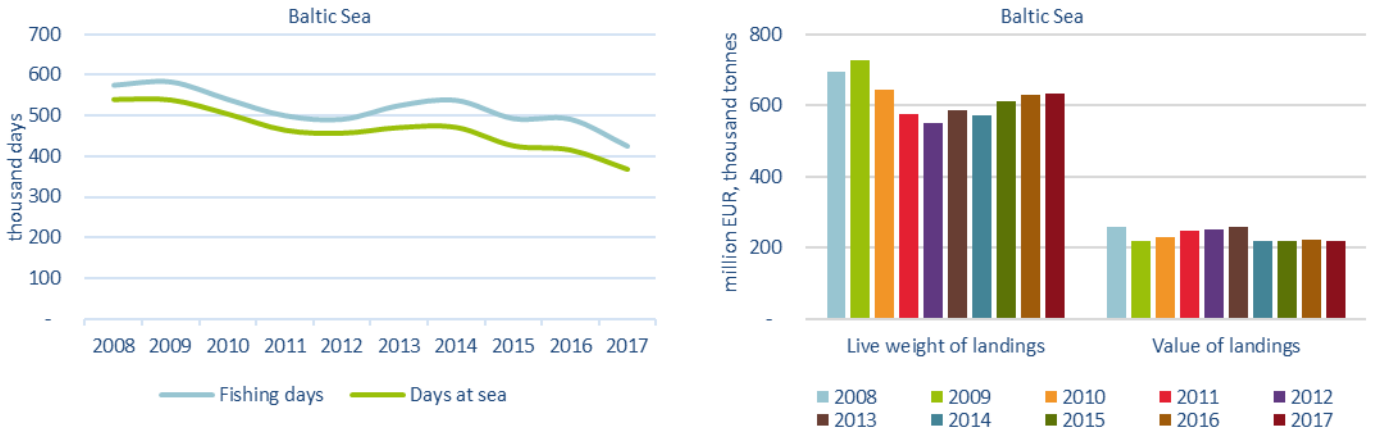


Figure 4.34 Trends on effort and landings for MS fleets operating in the Baltic Sea region
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Wages and Salaries

For the small-scale coastal fleet (SSCF), the overall average wage per FTE increased by 11% in 2017 fluctuating around EUR 10 076 per year (Figure 4.35). Average wages per FTE in the LSF increased by 10% between 2016 and 2017 and was estimated at around EUR 23 527 per year.

Labour productivity

The overall labour productivity (GVA/FTE) for the SSCF decreased 9% and was estimated around at EUR 8 817 in 2017. The overall labour productivity (GVA/FTE) for the LSF increased 2.3% to reach an estimated EUR 51 293 (Figure 4.35).

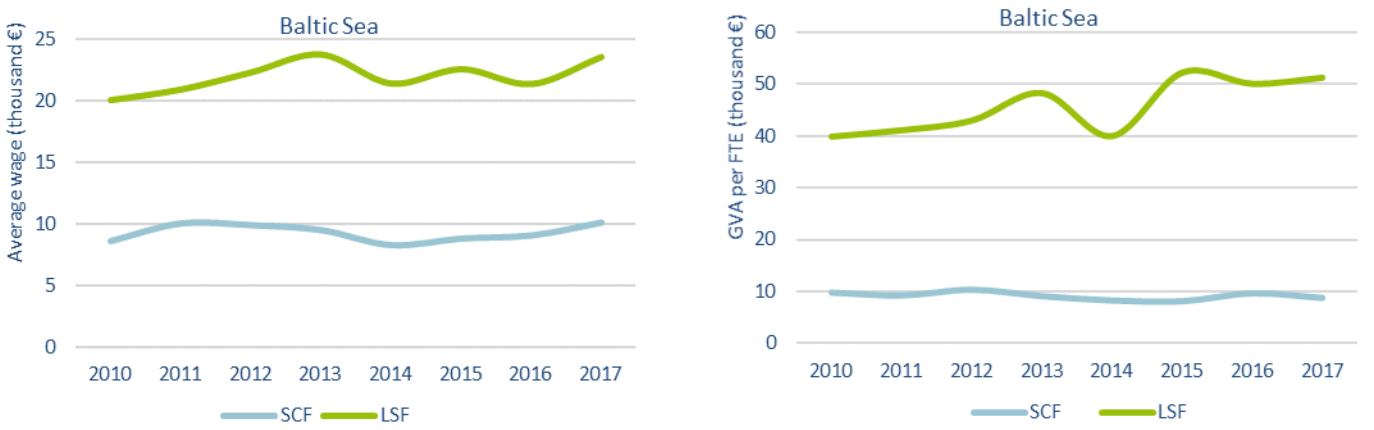


Figure 4.35 Trends on average wage and labour productivity (GVA per FTE) by fishing activity for MS fleets operating in the Baltic Sea
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Economic performance

The revenue (income from landings and other income) generated by the Baltic Sea fleet in 2017 was estimated at almost EUR 226 million, modest increase of 1% compared to 2016.

GVA produced by the fleets covered in the analysis was estimated at over EUR 112 million and compared to 2016, decreased by 2%. After accounting for all operating costs, the fleets operating in the region made almost EUR 44.3 million in gross profit, an estimated 15% decline from the record high profits (EUR 52 million) in 2016. Net profit however improved compared to 2016 (Figure 4.36).

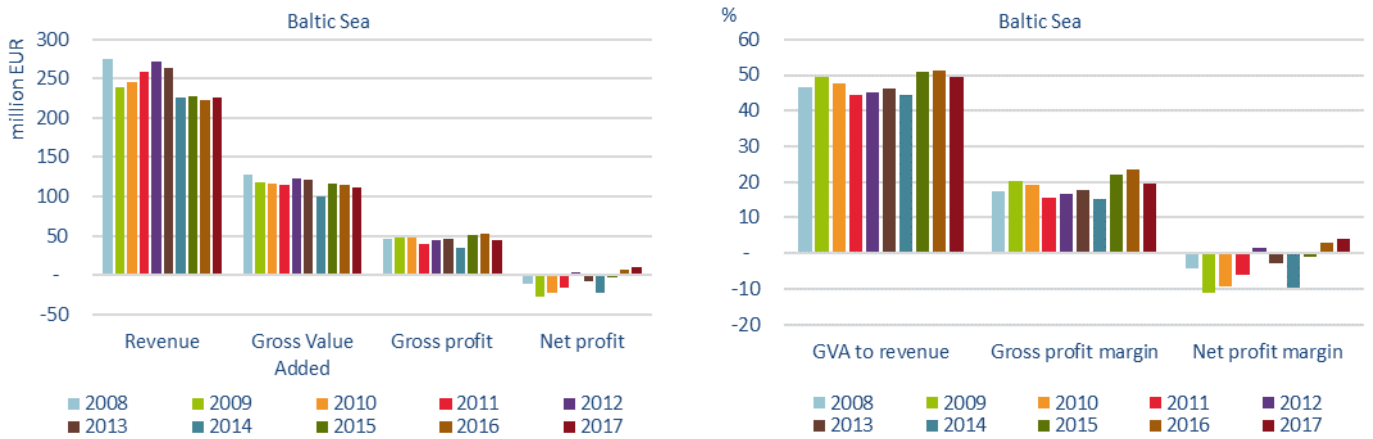


Figure 4.36 Trends on revenue and profits for MS fleets operating in the Baltic Sea
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Main drivers affecting fleet performance in the region

The major factors that may have contributed to the positive situation:

- Energy costs continue to be one of the main expenditure items for the large-scale fleet, especially demersal and pelagic trawlers. Consequently, the falling cost of marine fuel to the first quarter of 2016, when it reached the lowest value since 2009, contributed significantly to lower production costs. This was maintained throughout 2016 and 2017 when fuel prices remained stable.
- Policy management instruments, specifically quota allocation (introduced in some countries) may have significantly helped to improve the economic performance of certain fleets.
- Based on ICES advice in 2019, stock for the sprat, which is commercially important species, is exploited at MSY level and harvested sustainably as well as Baltic herring stocks in central Baltic Sea and Gulf of Riga.
- The EMFF has provided measures to improve profitability including increased added value (for the small-scale coastal fleet) and utilisation of by-catch arising from the landing obligations (for the LSF). Measures are already applicable in some MS fishing in the Baltic region.
- From 2017, the average price of cod recovered.

The major factors that may have negatively influenced economic performance:

- Lower average prices for sprat, which is a commercially important species. The Russian embargo and higher landings of low value (reduction) species has seen a fall in the price of sprat.
- Cod stocks in Baltic Sea are at the low level and have seen recent reductions in the TAC: ICES advice for the Eastern cod in 2020 is to close the fishery.
- ICES advice for the Bothnian Sea herring stock that when the precautionary approach is applied, catches in 2020 should be no more than 65 018 tonnes: that corresponds to a 30% decrease in quota.

- Fishing performance, especially in the small-scale coastal fleet, is very weather dependent. Even with favourable economic conditions, it can be a limiting factor for fleet performance, especially for seasonal fisheries.
- While aging vessels, obsolete equipment and insufficient investment all lead to increased maintenance costs and reduce the profitability of the fleet, the EMFF does provide the possibility of engine replacement if the fishing capacity is proven to be in balance with exploitation. Some MS have already introduced such schemes.

Trends by Member State fleet and fishing activity

Fleet capacity and employment

Member State fleets operating in the Baltic Sea collectively numbered around 5 900 active vessels in 2017. The Estonian fleet was the largest with 1 587 active vessels, some 27% of the total. The number of vessels decreased steadily between 2008 and 2011, mainly a result of capacity reductions in the Latvian and Polish fleets but rose again with the entry of Finnish and Estonian vessels in 2013 and 2014. However, in 2017 the total number of vessels operating in Baltic Sea had annual declined by 4.3% and reached the lowest level since 2008 (Figure 4.37).

Total capacity further declined by 8% during the year, falling to 63 307 GT with the largest share made up of Polish (14 916 GT) and Finnish (11 894 GT) vessels. Compared to 2008, capacity in terms of GT, decreased by 34%. Capacity reductions resulted mainly from decommissioning programmes implemented in Latvia (after EU accession) and Poland, the introduction of an ITQ system in Swedish pelagic fisheries in 2009, and the introduction of entry restrictions to the Swedish eel fishery. Recent reduction in the number of active vessels was mostly visible in SSCF segments.

While the SSCF had 92% of the vessels (5 418 vessels) in 2017, total employment in the sector only amounted to 2 705 FTE or 61% of the total reflecting the predominantly part-time nature of employment in this fleet segment. Employment, measured in terms of Full Time Equivalents (FTE), showed a decreasing trend over the period, apart from a small increase in 2012. Overall FTE decreased 2% in 2017 (Figure 4.37).

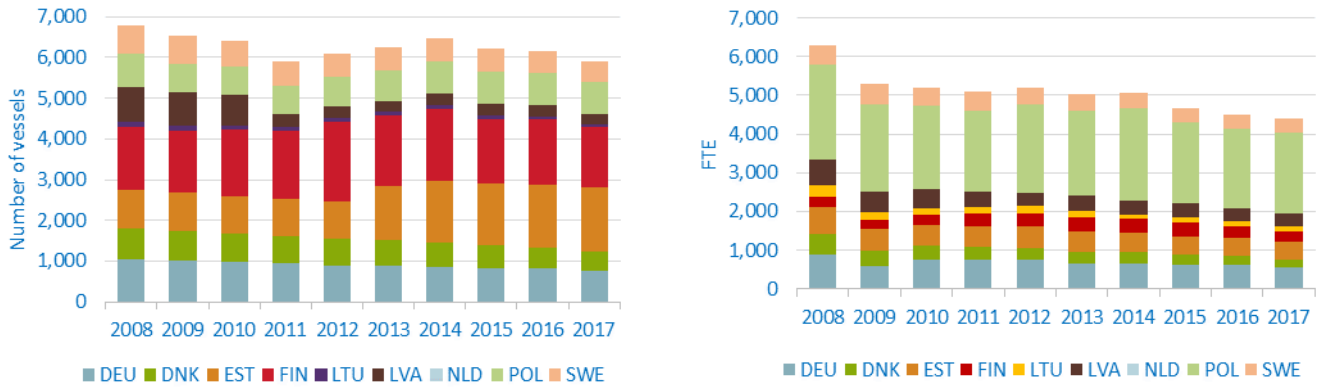


Figure 4.37 Trends on the number of vessels and employment in FTE for MS fleets operating in the Baltic Sea
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019))

Fishing effort

The EU Baltic Sea fleets spent 368 431 days-at-sea in 2017 with remarkable decline by 11% from 2016. Vessels from Finland had the highest effort in the region, accounting for 27% of total days-at-sea. Most (85%) of the effort resulted from the SSCF. Within the large-scale fleet, most of the effort was deployed by pelagic trawlers.

Effort trends in the region more or less reflect similar trends in fleet capacity and in 2017 the total number of days-at-sea was 32% less than that in 2008. The biggest reductions were seen in the Latvian, Danish and Swedish fleets (Figure 4.38).

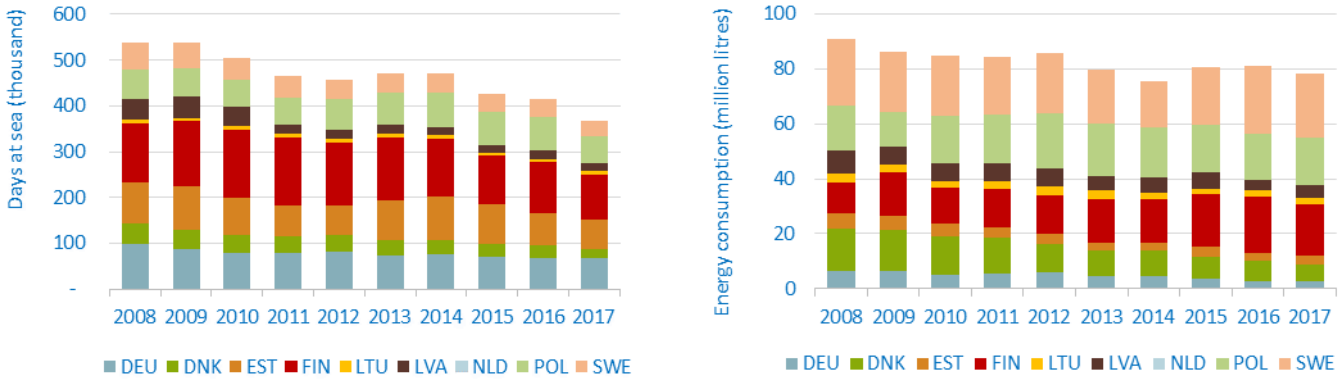


Figure 4.38 Trends on effort (in days-at-sea) and energy consumption for MS fleets operating in the Baltic Sea
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)).

Landings and top species

The weight and value of landings was approximately 632 538 tonnes and EUR 217 195 million. The LSF landed 93% of the total weight and 79% of the total value (Figure 4.39). Despite the significant decline in effort during 2017, the volume of landings (by weight) increased by 1% compare to 2016. However, value of landings decreased by 2%.

In terms of landed weight, Finland (154 505 tonnes), Poland (138 141 tonnes) and Sweden (120 354 tonnes) were the leading MS: Sweden (EUR 52.5 million), Poland (EUR 47.5 million), Finland (EUR 35.7 million) and Denmark (EUR 29.3 million) collectively accounted for around 74% of the total value of landings in 2017.

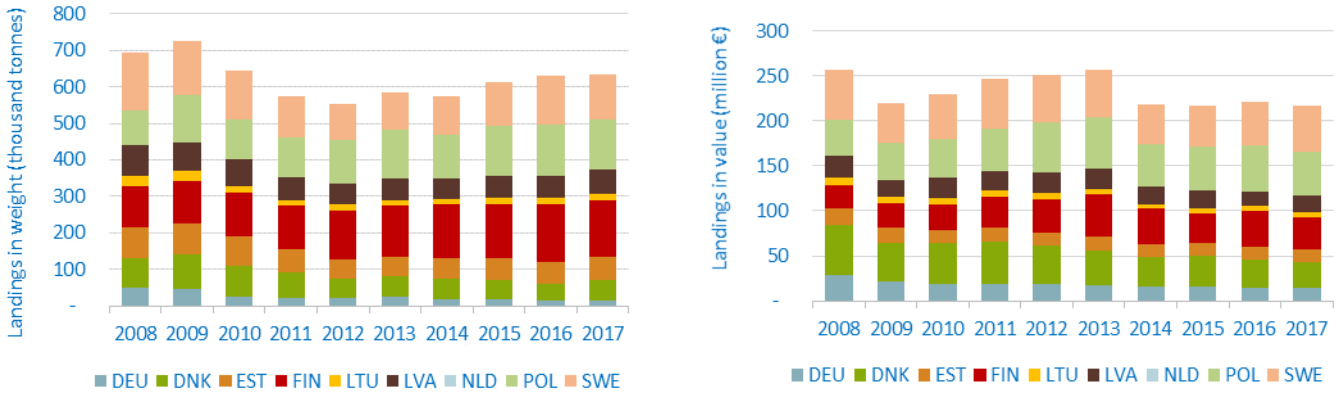


Figure 4.39 Trends on landings in weight and value for MS fleets operating in the Baltic Sea
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

In 2017, the most important species (by volume) were herring (338 811 tonnes, 52.3% of the landed weight), sprat (253 361 tonnes), followed by cod (26 899 tonnes) and flounder (15 020 tonnes) (Figure 4.40).

Herring generated the highest value (EUR 95.2 million, representing 45% of the landed value), followed by sprat (EUR 51 million, 24% of the landed value) and cod (EUR 32.5 million, 15% of the landed value).

Sprat landings, by weight and value, increased by 19% and 7% respectively in 2017 compared to 2016. The total landed weight of Baltic herring decreased by 4.5%, while the value rose by 4%. Cod landings dropped by 27% in weight and 20% in value in 2017 compare to 2016 (Figure 4.41).

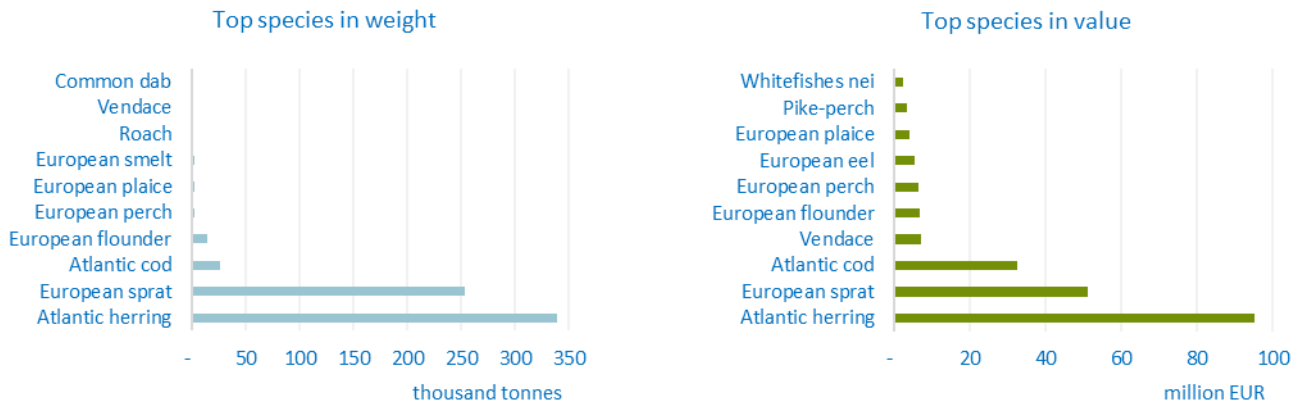


Figure 4.40 Top 10 species in landed weight and value by MS fleets operating in the Baltic Sea, 2017
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

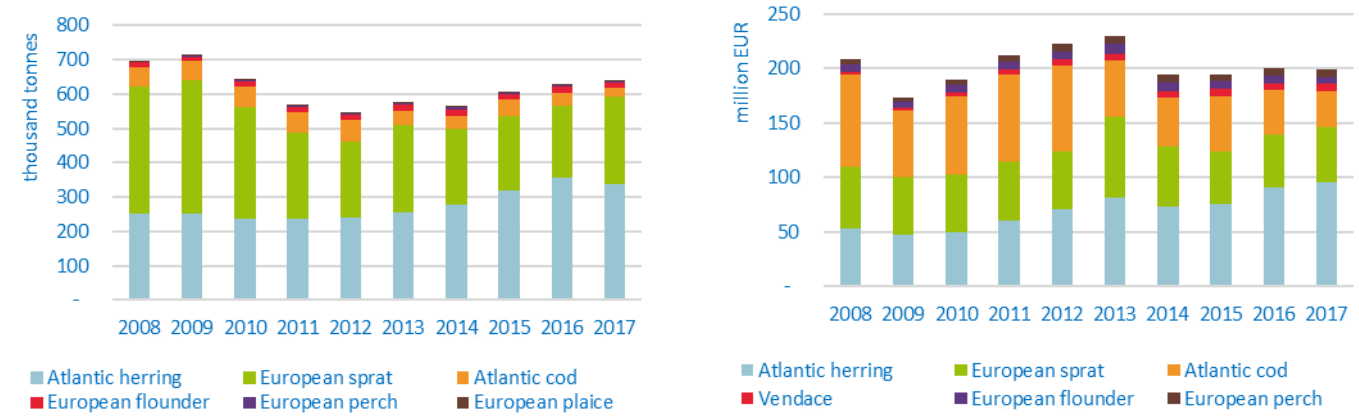


Figure 4.41 Trends on landings of the top six species in landed value for MS fleets operating in the Baltic Sea
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Socio-Economic performance

Overall, the Baltic fleet was profitable in 2017, generating gross profits. However, four MS fleets – Denmark, Finland, Germany and Lithuania - suffered net losses in 2017 (Figure 4.42).

The revenue (income from landings and other income) generated in 2017 was estimated at EUR 226 million, an increase of 1% from the previous year. Four Member States accounted for 74% of all revenues: Sweden (EUR 54 million), Poland (EUR 47 million), Finland (EUR 35 million) and Denmark (EUR 30 million).

GVA was estimated at over EUR 112 million, gross profit at EUR 44.3 million (-15%) and EUR 9.4 million in net profit.

Overall the gross profit margin of the region decreased from 23.5% in 2016 to 19.6% in 2017 with the Swedish fleet the most profitable (33% profit margin), followed by Estonia (30%), Finland (26%), Latvia (24%) and Poland (16%). While the Finnish fleet experienced positive gross profits it was insufficient to cover the estimated capital costs. Denmark, Germany and Lithuania also experienced net losses in 2017.

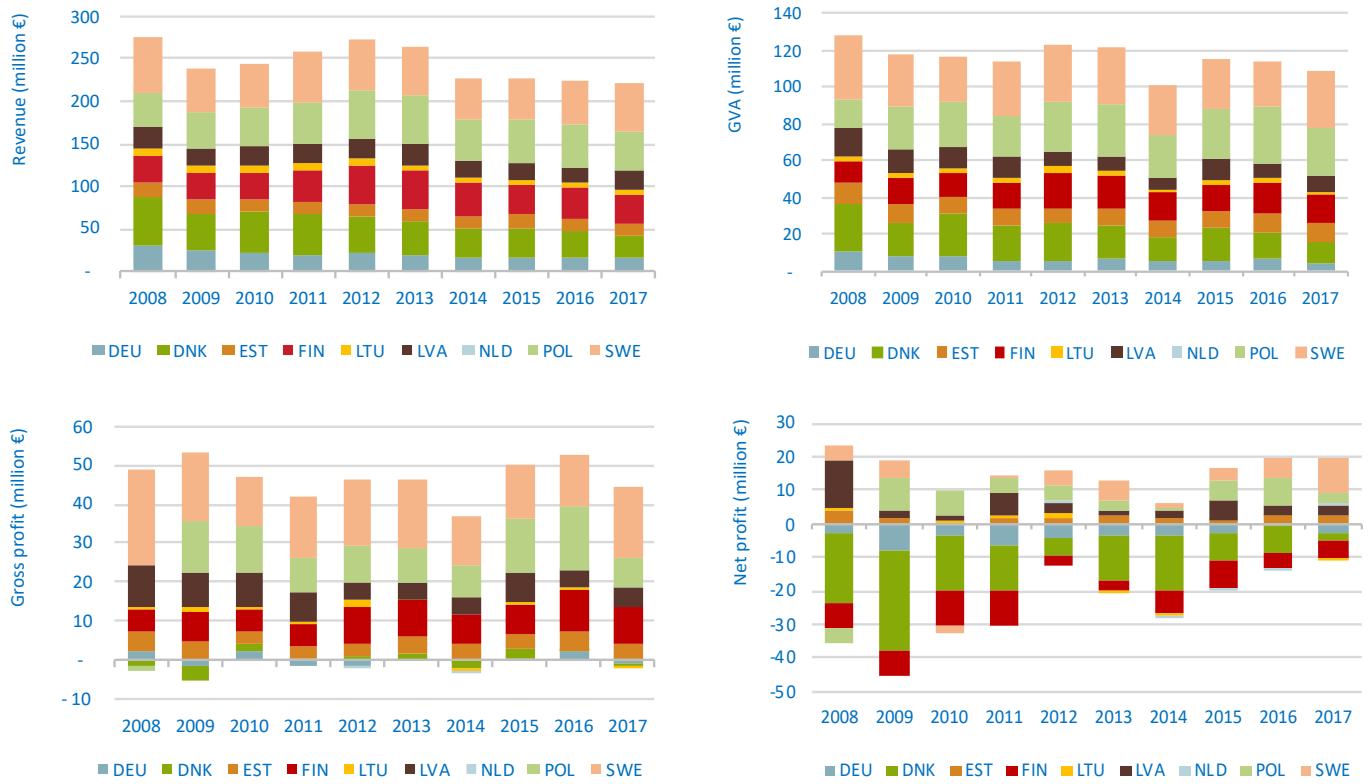


Figure 4.42 Trends on revenue and profits for MS fleets operating in the Baltic Sea region
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Main factors affecting the performance of the fleet

Regulation and fisheries management in the region

To incorporate the ecosystem approach in the fisheries management a multiannual management plan for the Baltic Sea fisheries has been developed. In March 2016 representatives of the Council, Parliament and Commission reached provisional agreement on this plan. Furthermore, The EU fisheries management includes input from the Regional Baltic Sea Fisheries Forum (BALTFISH) and the Baltic Sea Advisory Council.

While coastal fisheries are managed nationally fisheries advice is provided by the International Council for the Exploration of the Sea (ICES) and STECF. The key species in Baltic Sea are cod, herring, sprat, salmon, and plaice and these fisheries are all managed using TACs.

The European eel Recovery plan also affects several Baltic States. Within this plan, MS are required to allow 40% of adult eels to escape from inland waters to the sea where they can spawn. EU Regulations also include technical conservation measures, including mesh size, minimum landing size, by-catch limitations as well as periods and areas closed to fishing. A ban on driftnet fisheries was introduced after a three-year transitional period in 2008. The Baltic Sea coastal and inland fisheries are mainly regulated by each MS in the region through their national legislation.

A salmon management plan was proposed by the Commission in August 2011 (COM(2011) 470 final). This established an F(fishing mortality rate)-based harvest control rule with each MS's setting annual fishing limits in rivers at the appropriate MSY level. It also sets targets for salmon management in rivers: 75% of smolt (juvenile salmon) production to be reached in 5 or 10 years, depending on the status of rivers. However, the Council and the European Parliament have not yet reached an agreement on the Commission's proposal.

The landings obligation has been in force since 1 January 2015 for pelagic and demersal fisheries in the Baltic Sea.

TAC development of main species

The European Commission (EC) prepares proposals for measures and instruments for resource conservation including fishing quotas and fishing effort limitations[9] after a consultative process. TACs and quotas are set annually for five commercially important fish stocks: Atlantic cod, Atlantic herring, European sprat, Atlantic salmon and plaice. Each year, ICES provides separate advice for two stocks of cod, four stocks of herring and one stock of sprat.

Figure 4.43 provides the development of TACs for the main species in the Baltic Sea. TACs are defined based on the status of stock, assessed by ICES, and the cod management plan.

The landing obligation has been in force since 1 January 2015 for pelagic and demersal fisheries in the Baltic Sea. The exploitation of the available TACs by MS, provided in the Table 4.11 suggests that in several cases, e.g. Finland, the available sprat quota could be a limiting factor (choke specie) in the mixed pelagic fishery. On the other hand, available cod fishing opportunities were not fully utilised by most MS in the Baltic Sea.

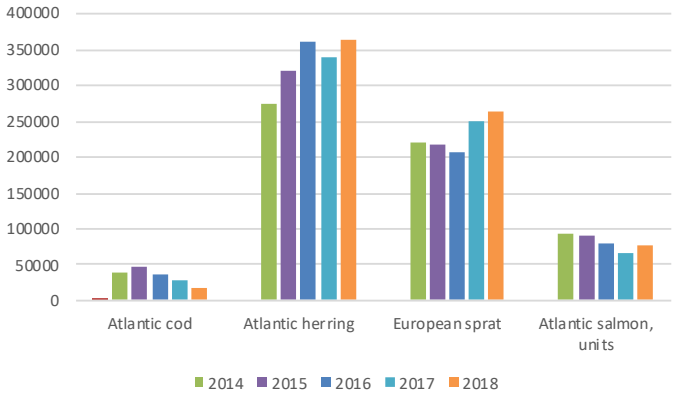


Figure 4.43 Reported catches for the four most important TACs species in the Baltic Sea region, 2014-2018
Source: EU Catch reporting system (FIDES3)

Table 4.10 TAC use for some of the most important stocks in the Baltic Sea region, 2014-2018

		Germany	Denmark	Estonia	Finland	Lithuania	Latvia	Poland	Sweden
Atlantic cod	2014	45%	55%	10%	24%	24%	31%	55%	30%
	2015	60%	82%	12%	36%	46%	55%	75%	43%
	2016	55%	74%	0%	9%	55%	63%	72%	48%
	2017	52%	78%	0%	28%	70%	77%	60%	56%
	2018	71%	52%	0%	9%	42%	53%	56%	33%
Atlantic herring	2014	92%	94%	85%	87%	57%	92%	78%	79%
	2015	98%	46%	87%	74%	85%	98%	87%	70%
	2016	98%	89%	86%	82%	75%	97%	79%	89%
	2017	90%	87%	90%	77%	62%	100%	79%	71%
	2018	95%	90%	87%	86%	96%	99%	85%	91%
European sprat	2014	92%	88%	95%	93%	92%	94%	94%	97%
	2015	98%	95%	89%	100%	96%	97%	97%	100%
	2016	99%	96%	93%	100%	95%	100%	98%	99%
	2017	99%	90%	90%	100%	98%	98%	92%	98%
	2018	91%	90%	95%	100%	99%	100%	98%	91%
Atlantic salmon	2014	44%	95%	41%	83%	9%	13%	48%	95%
	2015	99%	78%	46%	87%	8%	22%	62%	100%
	2016	85%	44%	47%	76%	6%	16%	48%	108%
	2017	46%	13%	50%	74%	3%	18%	48%	83%
	2018	60%	32%	43%	81%	69%	77%	52%	90%
European plaice	2014	67%	63%		6%			28%	33%
	2015	99%	59%		1%			46%	35%
	2016	91%	52%		0%			36%	46%
	2017	87%	30%		0%			42%	6%
	2018	90%	44%					100%	25%

Source: EU Catch reporting system (FIDES3)

Status of important stocks

Based on ICES advice in 2019, sprat stock was at MSY level and harvested sustainably. Also, Baltic herring stocks in central Baltic Sea and Gulf of Riga were at MSY level and harvested sustainably, while in the western Baltic, Skagerrak and Kattegat stock was below MSY. The Bothnian Sea herring stock was assessed to be at MSY level in 2018 but the latest assessment was not accepted, and the status of the

9 Fishing effort limitations were abolished from 2016.

stock was undefined. However, ICES advise that when the precautionary approach is applied, catches in 2020 should be no more than 65 018 tonnes: that corresponds to a 30% decrease in quota.

Cod stocks in Baltic Sea are at the low level and have seen recent reductions in the TAC: ICES advice for the Eastern cod in 2020 is to close the fishery.

The Gulf of Finland salmon has a precautionary TAC. The TAC for the main basin salmon is kept stable at a low level, with the aim of contributing further to improve the stock status in the weakest salmon rivers.

There is a multiannual plan for the stocks of cod, herring and sprat in the Baltic Sea and the fisheries exploiting those stocks (Regulation (EU) 2016/1139). The objective of the plan is to adapt the exploitation rates of cod, herring and sprat in the Baltic Sea so as to ensure that the exploitation of those stocks restores and maintains them above levels that can produce MSY.

Landing obligation

According to ICES advice discarding of cod, which ICES understands not to be in accordance with the current regulations, still takes place despite the fact that the landing obligation has been in place since 2015. Landings of fish below the minimum conservation reference size (MCRS; 35 cm) are very low (108 tonnes reported in 2018), compared to the discards (3 103 tonnes in 2018) in the management area of SD 25–32. The estimated discard amount in 2018 (approximately 16% of the total catch) was based on observer data, but this is considered to be an underestimate. The available information from the fisheries and observers suggests that modifications to the selectivity properties of the gear takes place, leading to a higher proportion of smaller fish being caught.

According to ICES advice discarding of cod still takes place despite the fact that the landing obligation has been in place since 2015. The estimated amount of discards is 157 tonnes in 2018 (approximately 4.2%), based on observer data. ICES understand that this is not in accordance with the current regulations. For herring and sprat the discarding is considered negligible.

Description of relevant fisheries in the region

Small-scale coastal fleet (SSCF)

Small-scale coastal fleet (SSCF) in the Baltic Sea are very important from a socio-economic point of view. They dominate the Baltic Sea fishing in terms of vessels (92%) and employment (77% of total employed and 60% of FTE). However, the segment only accounts for 7% of landed weight and 21% of the value. Revenue generated by the SSCF in 2017 was estimated at EUR 50.3 million compared to EUR 52.6 million in 2016 (Figure 4.44).

In 2017, the SSCF generated EUR 23.8 million in GVA (26.5 million in 2016), corresponding to 47% of its revenue. The profitability of the SSCF deteriorated, from a gross profit of EUR 1.7 million in 2016 to a gross loss of EUR 3.4 million in 2017.

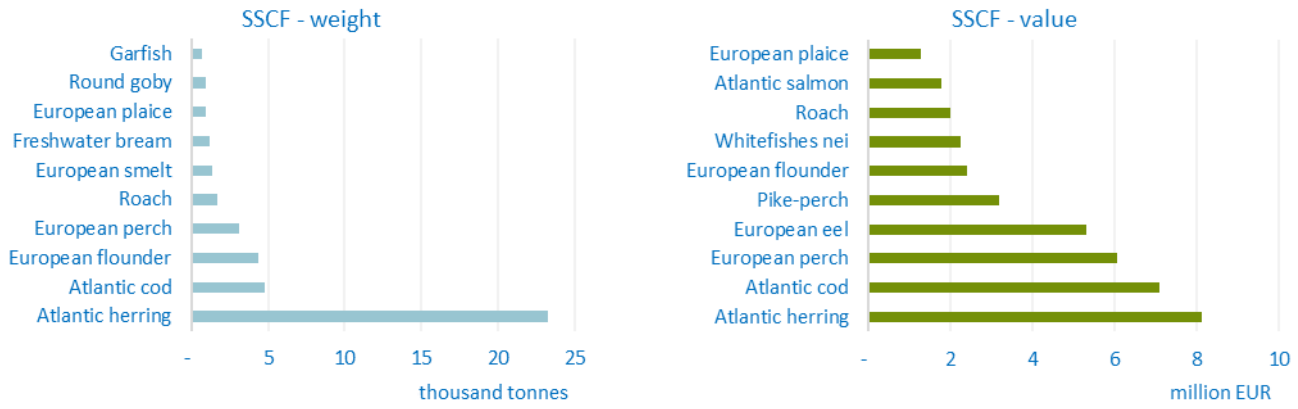


Figure 4.44 Top 10 species landed in weight (left) and value (right) by SSCF operating in the Baltic Sea, 2017
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Despite the overall poor performance of the SSCF, individual MS fare differently. The German, Estonian, Finnish and Latvian small-scale coastal fleets made reasonable gross profits while the others had either low profitability (Lithuania) or suffered losses. After taking account of estimated capital costs, only the

Estonian fleet was still making net profits and generating resource rent in their fisheries in 2017. Swedish, Danish and Finnish small-scale fleets have been suffering high net losses since 2008. This has affected the overall economic picture of the sector in the Baltic Sea. The negative output was mainly caused by relatively high capital costs (mostly in case of Finland) as well as high labour costs in the Swedish and Danish fleet (mostly in unpaid labour) compared to other countries. The phenomena can be explained by higher contribution of less commercially active vessels in Denmark, Sweden and Finland compared to other Baltic states.

Large-scale fleet (LSF)

Large-scale Baltic fleet consisted of 482 vessels, 11% less than in 2016. Revenue generated by the LSF in 2017 was estimated at EUR 176 million; a 3% rise compared to the year before (Figure 4.45). However, the gross profit deteriorated during the year and, overall, the Baltic LSF segment generated EUR 47.7 million (-6%), however net profit (EUR 24 million) improved by 32%, as a result of lower capital costs.

Labour productivity (GVA/FTE) in the Baltic Sea LSF has been stable in recent years with the highest levels in 2017 achieved by Sweden (EUR 160 528), Denmark (EUR 92 715) and Finland (EUR 89 267). However, the productivity of the Swedish fleet partly depends on the fisheries in North Sea region as the same fleet operates in both the Baltic and North Seas. Lower productivity levels were observed in Lithuania, Poland and Germany varying from EUR 15 400 to EUR 30 000.

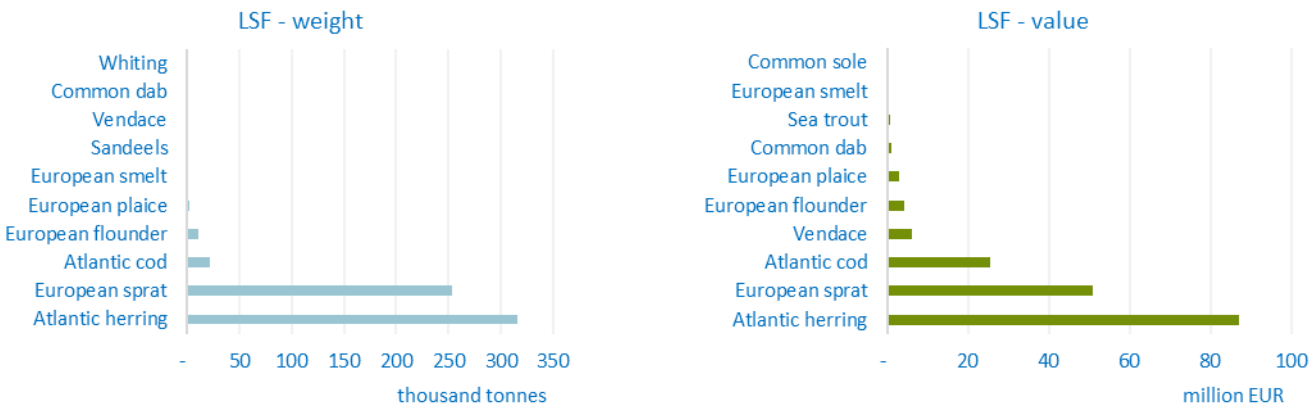


Figure 4.45 Top 10 species landed in weight (left) and value (right) by LSF operating in the Baltic Sea, 2017
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

The economic indicators deteriorated in 2017 for SSCF fleet but improved generally for the LSF fleet.

GVA decreased for most of the Baltic MS fleets in 2017 compared to 2016, except for Sweden and Latvia. The decrease was higher for SSCF than for LSF.

Net profit was positive and higher than the year before, mainly thanks to extraordinarily high profit produced by Swedish demersal trawler segment (DTS VL2440). SSCF produced high negative profit in contrary to LSF that generated higher profit compared to 2016.

Labour and energy costs were most important items in the costs structure, both increased in 2017 by 6%. The most significantly in Latvia (33% and 42% respectively). SSCF fleet labour costs increased by 10% while LSF by 4%.

GVA/revenue indicator deteriorated slightly from 51 to 49, were lower in case of Germany, Lithuania and Poland, increased for Sweden or remain almost unchanged for Estonia, Latvia and Denmark. The indicator deteriorated for SSCF fleet while LSF improved.

Performance by fleet segment

Table 0.5 shows the capacity, effort and socio-economic indicators estimated for the top 40 MS fleet segments (out of 51), based on the value of revenue in the region. These 40 segments represented 99% of the landed weight (626 thousand tonnes) and 98% of the revenue (EUR 220 million) generated by the Baltic Sea fleet in 2017. Of the top 40 fleet segments, 26 made positive gross profits.

One important reason for the gross losses of smaller vessels is the estimated opportunity cost of unpaid labour. For the fleet segments below 12 meters, and to a certain extent for the 12-18m, the estimated

opportunity cost of labour may be high in proportion to the catch value, making the gross profit negative. This indicates that many vessel owners actually earn less income than that used as an opportunity cost with the result that the observed negative gross profits do not directly lead to insolvency even though income at the fleet level does not provide a high livelihood for fishers (on average).

At the fleet segment level, the Swedish demersal trawl and seine 24-40m segment generated the highest landed value in 2017 (EUR 34 million), followed by the Polish pelagic trawl 24-40m segment (EUR 21 million) and then the Finnish pelagic trawl 24-40m segment (EUR 20 million). The most important fleets, in terms of GVA, were the Swedish demersal trawlers 24-40m, and the Polish and Latvian pelagic trawlers 24-40m.

In relative terms, the two Swedish demersal trawl segments (DTS VL1218 and DTS VL1012) generated the highest gross profit margins. However, these Swedish fleet segments were mostly fishing in the North Sea.

While 30 of the 52 fleets operating in the Baltic Sea recorded gross profits in 2017, 19 of the 25 fleets operating solely in the Baltic Sea did so. Furthermore 11 of these (fleet segments wholly dependent on the Baltic) also generated a net profit.

Table 4.11 Key parameter estimates by MS fleet operating in the Baltic Sea, 2017

Baltic	Estimated no. of vessels	% of total EU active vessels	Total vessel tonnage	Total vessel power	Engaged crew	FTE national	Days at sea	as a % of total sea days	Energy consumption	Live weight of landings	as a % of total weight landed	Value of landings	as a % of total value landed	Revenue	Gross Value Added	GVA to revenue	Gross profit	Gross profit margin	Net profit	Net profit margin	Average GVA	GVA per FTE (labour productivity)
	number	(%)	GT	kW	number	number	day	(%)	litre	kg	(%)	€	(%)	€	€	%	€	%	€	%	€	€
DEU	764	12.9%	3,605	27,474	885	569	67,363	18.3%	2,830,336	14,309,464	2.3%	13,813,958	6.4%	16,077,693	4,793,721	29.8	- 644,827	- 4.0	- 2,720,076	- 16.9	6,278	8,425
DNK	472	8.0%	5,910	31,008	240	224	21,853	5.9%	7,648,875	54,930,466	8.7%	29,265,714	13.5%	30,380,175	14,266,193	47.0	892,580	2.9	- 5,336,788	- 17.6	30,253	63,560
EST	1,587	26.9%	5,710	31,153	2,100	460	63,264	17.2%	3,314,527	64,475,110	10.2%	14,519,092	6.7%	14,733,526	9,726,089	66.0	4,373,202	29.7	2,727,752	18.5	6,129	21,144
FIN	1,469	24.9%	11,894	92,186	1,359	271	99,065	26.9%	18,662,176	154,505,731	24.4%	35,756,266	16.5%	35,804,137	15,869,473	44.3	9,262,666	25.9	- 5,328,626	- 14.9	10,803	58,559
LTU	84	1.4%	4,164	9,949	270	128	6,154	1.7%	2,441,908	18,864,381	3.0%	5,034,989	2.3%	5,316,126	1,715,328	32.3	- 324,793	- 6.1	- 834,651	- 15.7	20,421	13,438
LVA	251	4.3%	6,615	19,372	661	326	17,269	4.7%	4,806,682	66,957,594	10.6%	19,102,653	8.8%	21,080,849	9,069,643	43.0	5,126,797	24.3	2,938,149	13.9	36,134	27,821
POL	789	13.4%	14,916	59,712	2,307	2,095	59,332	16.1%	16,995,778	138,140,789	21.8%	47,479,250	21.9%	47,658,998	25,885,430	54.3	7,686,102	16.1	3,167,048	6.6	32,808	12,356
SWE	485	8.2%	10,493	60,229	712	349	34,130	9.3%	23,314,662	120,354,432	19.0%	52,221,305	24.0%	54,988,389	30,594,657	55.6	17,898,997	32.6	9,978,790	18.1	63,130	87,699
-	**5,900**		**63,307**	**331,084**	**8,533**	**4,422**	**368,431**		**80,015,673**	**632,538,450**		**217,195,892**		**226,042,564**	**111,922,076**		**44,271,231**		**4,591,919**			

Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Table 4.12 Key parameter estimates by fishing activity for MS fleets operating in the Baltic Sea, 2017

Baltic	Estimated no. of vessels	% of total EU active vessels	Total vessel tonnage	% of total EU GT	Total vessel power	% of total EU kW	Engaged crew	FTE national	Days at sea	% of total days at sea	Fishing days	as a % of total fishing days	Live weight of landings	as a % of total landed weight	Value of landings	as a % of total value landed	Revenue	Gross Value Added	GVA to revenue	Gross profit	Gross profit margin	Average GVA	GVA per FTE (labour productivity)
	GT	(%)	kW	(%)	number	(%)	number	number	day	(%)	day	(%)	litre	(%)	€	(%)	€	€	%	€	%	€	€
SCF	5,418	91.8%	14,118	22.3%	177,537	53.6%	6,534	2,705	313,943	85.2%	372,878	88.1%	47,243,332	7.5%	46,616,708	21.5%	50,354,110	23,849,641	47.4	- 3,403,691	- 6.8	4,402	8,817.2
LSF	482	8.2%	49,188	77.7%	153,547	46.4%	2,000	1,717	54,488	14.8%	50,177	11.9%	585,295,118	92.5%	170,579,184	78.5%	175,688,454	88,072,435	50.1	47,674,923	27.1	182,692	51,292.5
	5,900		**63,307**		**331,084**		**8,533**	**4,422**	**368,431**		**423,055**		**632,538,450**		**217,195,892**		**226,042,564**	**111,922,076**		**44,271,231**			

Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Table 4.13 Key parameter estimates by fishing activity and MS fleet operating in the Baltic Sea, 2017

BS		Estimated no. of vessels	% of total EU active vessels	Total vessel tonnage	Total vessel power	Engaged crew	FTE national	Days at sea	as a % of total fishing days	Energy consumption	Live weight of landings	as a % of total weight landed	Value of landings	as a % of total value landed	Revenue	as a % of total revenue	Gross Value Added	GVA to revenue	Gross profit	Gross profit margin	Average GVA	GVA per FTE (labour productivity)
		number	(%)	GT	kW	number	number	day	(%)	litre	kg	(%)	euro	(%)	€	(%)	€	%	€	%	€	€
SCF	DEU	729	12.4%	2,022	21,049	831	529	63,841	17.3%	763,163	7,110,613	1.1%	8,206,591	3.8%	9,325,973	4.1%	3,595,046	38.5	287,617	3.1	4,933	6,798
	DNK	422	7.1%	1,655	18,036	138	103	15,765	4.3%	943,456	3,559,220	0.6%	8,263,925	3.8%	8,681,463	3.8%	3,019,684	34.8	- 3,112,362	- 35.9	7,160	29,275
	EST	1,557	26.4%	2,215	22,340	1,950	332	59,672	16.2%	622,290	10,840,683	1.7%	5,281,128	2.4%	5,455,284	2.4%	3,258,608	59.7	1,409,983	25.8	2,093	9,815
	FIN	1,413	23.9%	3,127	61,757	1,217	154	92,421	25.1%	1,161,797	8,843,564	1.4%	8,224,924	3.8%	9,614,546	4.3%	5,425,235	56.4	3,601,760	37.5	3,840	35,229
	LTU	62	1.1%	274	1,881	137	38	4,248	1.2%	139,801	710,407	0.1%	665,321	0.3%	649,883	0.3%	321,349	49.4	2,167	0.3	5,183	8,523
	LVA	196	3.3%	391	2,470	298	120	10,094	2.7%	47,363	3,421,388	0.5%	1,076,149	0.5%	1,187,762	0.5%	552,659	46.5	122,370	10.3	2,820	4,605
	POL	623	10.6%	2,758	21,620	1,456	1,263	41,784	11.3%	1,770,686	10,409,289	1.6%	10,391,764	4.8%	10,414,161	4.6%	6,408,101	61.5	- 2,132,001	- 20.5	10,286	5,074
	SWE	416	7.1%	1,676	28,383	507	166	26,118	7.1%	2,182,974	2,348,169	0.4%	4,506,906	2.1%	5,025,038	2.2%	1,268,960	25.3	- 3,583,226	- 71.3	3,049	7,636
LSF	DEU	35	0.6%	1,583	6,425	54	40	3,522	1.0%	2,067,173	7,198,851	1.1%	5,607,367	2.6%	6,751,720	3.0%	1,198,675	17.8	- 932,444	- 13.8	34,467	29,879
	DNK	50	0.8%	4,255	12,971	102	121	6,088	1.7%	6,705,419	51,371,247	8.1%	21,001,789	9.7%	21,698,712	9.6%	11,246,509	51.8	4,004,942	18.5	225,867	92,715
	EST	30	0.5%	3,495	8,813	150	128	3,592	1.0%	2,692,237	53,634,427	8.5%	9,237,963	4.3%	9,278,242	4.1%	6,467,481	69.7	2,963,219	31.9	215,583	50,527
	FIN	56	0.9%	8,767	30,429	142	117	6,644	1.8%	17,500,379	145,662,167	23.0%	27,531,341	12.7%	26,189,591	11.6%	10,444,239	39.9	5,660,906	21.6	186,504	89,267
	LTU	22	0.4%	3,890	8,068	133	90	1,906	0.5%	2,302,107	18,153,974	2.9%	4,369,667	2.0%	4,666,244	2.1%	1,393,978	29.9	- 326,961	- 7.0	63,363	15,498
	LVA	55	0.9%	6,224	16,902	363	206	7,175	1.9%	4,759,319	63,536,206	10.0%	18,026,505	8.3%	19,893,086	8.8%	8,516,983	42.8	5,004,427	25.2	154,854	41,345
	POL	166	2.8%	12,158	38,092	851	832	17,548	4.8%	15,225,092	127,731,500	20.2%	37,087,486	17.1%	37,244,837	16.5%	19,477,329	52.3	9,818,103	26.4	117,333	23,410
	SWE	69	1.2%	8,817	31,846	205	183	8,012	2.2%	21,131,689	118,006,264	18.7%	47,714,399	22.0%	49,963,351	22.1%	29,325,697	58.7	21,482,223	43.0	428,074	160,528
-	-	**5,900**		**63,307**	**331,084**	**8,533**	**4,422**	**368,431**		**80,015,673**	**632,538,450**		**217,195,892**		**226,042,564**		**111,922,076**		**44,271,231**			

Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Table 4.14 Key parameter estimates for the top 40 fleet segments operating in the Baltic Sea, 2017

Baltic	Estimated no. of vessels	% of total EU active vessels	Total vessel tonnage	Total vessel power	Engaged crew	FTE national	Days at sea	as a % of total sea days	Fishing days	as a % of total fishing days	Energy consumption	as a % of total energy consumed	Weight of landings	as a % of total weight landed	Value of landings	as a % of total value landed	Revenue	as a % of total revenue	Gross Value Added	GVA to revenue	Gross profit	Gross profit margin	Average GVA	GVA per FTE (labour productivity)
	number	(%)	GT	kW	number	number	day	(%)	day	(%)	litre	(%)	kg	(%)	€	(%)	€	(%)	€	%	€	%	€	€
SWE NAO DTS2440 NGI*	14	0.2%	6,286	18,570	91	104	2,872	0.8%	6,756	1.3%	17,251,726	21.6%	100,085,789	15.8%	33,597,444	15.5%	35,005,947	15.5%	20,452,611	58.4	15,999,228	45.7	1,457,943	196,256
POL NAO TM 2440 *	43	0.7%	6,932	16,949	286	282	5,749	1.6%	4,928	0.9%	8,550,474	10.7%	86,419,864	13.7%	21,119,592	9.7%	21,117,908	9.3%	11,747,961	55.6	6,108,545	28.9	273,208	41,659
FIN NAO TM 2440 NGI*	21	0.4%	6,995	20,060	94	75	3,837	1.0%	3,714	0.7%	15,795,996	19.7%	108,102,170	17.1%	20,160,332	9.3%	19,585,715	8.7%	6,652,605	34.0	4,040,482	20.6	316,791	88,701
LVA NAO TM 2440 NGI	44	0.7%	5,893	14,811	308	162	5,208	1.4%	4,856	0.9%	3,559,648	4.4%	54,133,990	8.6%	15,451,450	7.1%	17,105,626	7.6%	7,175,841	42.0	4,340,100	25.4	163,087	44,295
EST NAO TM 2440 NGI*	25	0.4%	3,412	8,219	142	126	3,419	0.9%	3,263	0.6%	2,671,948	3.3%	52,835,628	8.4%	9,100,345	4.2%	9,140,623	4.0%	6,361,740	69.6	2,921,449	32.0	254,470	50,490
FIN NAO PG 0010 NGI	1,372	23.3%	2,714	55,191	1,176	146	91,338	24.8%	91,338	17.2%	852,786	1.1%	6,234,035	1.0%	7,372,548	3.4%	8,369,044	3.7%	4,938,171	59.0	3,341,990	39.9	3,599	33,823
DEU NAO PG 0010 NGI	672	11.4%	1,373	15,892	768	491	58,843	16.0%	61,420	11.6%	545,975	0.7%	4,752,770	0.8%	6,623,543	3.0%	7,212,608	3.2%	3,512,418	48.7	1,162,043	16.1	5,224	7,155
POL NAO PG 0010	509	8.6%	1,539	14,269	1,076	923	34,197	9.3%	34,140	6.4%	900,651	1.1%	6,435,136	1.0%	7,028,585	3.2%	7,049,401	3.1%	4,804,201	68.2	- 1,580,915	- 22.4	9,439	5,205
SWE NAO DTS1218 NGI*	15	0.3%	543	3,692	30	20	1,372	0.4%	6,485	1.2%	915,110	1.1%	3,992,796	0.6%	6,104,612	2.8%	6,459,522	2.9%	4,933,049	76.4	3,541,368	54.8	328,408	249,647
SWE NAO DTS1824 NGI*	13	0.2%	1,535	5,126	44	42	1,965	0.5%	5,720	1.1%	2,343,323	2.9%	11,060,060	1.7%	5,218,905	2.4%	5,523,199	2.4%	1,900,572	34.4	597,226	10.8	145,591	45,049
POL NAO DTS1218 *	49	0.8%	1,334	5,917	196	190	4,478	1.2%	3,940	0.7%	2,482,541	3.1%	10,691,791	1.7%	5,356,830	2.5%	5,473,151	2.4%	2,164,299	39.5	817,562	14.9	44,169	11,391
POL NAO TM 1824	31	0.5%	1,845	7,664	165	160	3,164	0.9%	2,981	0.6%	1,593,550	2.0%	20,547,389	3.2%	5,222,837	2.4%	5,220,515	2.3%	3,398,040	65.1	2,203,821	42.2	109,614	21,238
DNK NAO DTS1218 NGI	22	0.4%	833	4,175	42	46	2,622	0.7%	13,204	2.5%	1,514,043	1.9%	4,702,848	0.7%	4,915,869	2.3%	4,965,160	2.2%	1,939,048	39.1	- 400,884	- 8.1	88,699	41,903
DNK NAO PGP0010 NGI	335	5.7%	939	11,252	78	54	9,815	2.7%	21,533	4.1%	212,621	0.3%	1,482,008	0.2%	4,402,266	2.0%	4,710,138	2.1%	2,229,009	47.3	- 1,298,401	- 27.6	6,659	41,312
FIN NAO TM 1824 NGI	13	0.2%	1,107	5,396	26	24	1,520	0.4%	1,464	0.3%	1,087,952	1.4%	28,153,170	4.5%	5,278,543	2.4%	4,408,569	2.0%	2,814,888	63.9	1,020,775	23.2	216,530	117,287
EST NAO PG 0010 NGI	1,480	25.1%	1,675	17,965	1,642	221	58,734	15.9%	113,812	21.4%	401,172	0.5%	3,655,044	0.6%	3,783,597	1.7%	3,933,250	1.7%	2,109,957	53.6	988,411	25.1	1,426	9,547
POL NAO DTS1824 *	23	0.4%	1,393	5,112	97	94	2,288	0.6%	1,941	0.4%	2,050,664	2.6%	8,750,011	1.4%	3,899,552	1.8%	3,895,840	1.7%	1,460,700	37.5	585,707	15.0	63,509	15,539
DNK NAO TM 40XX NGI	1	0.0%	1,436	2,364	6	10	176	0.0%	1,217	0.2%	1,824,793	2.3%	16,960,322	2.7%	3,474,515	1.6%	3,658,859	1.6%	1,648,912	45.1	975,510	26.7	1,825,230	161,508
SWE NAO DFN0010 NGI*	362	6.1%	1,067	20,235	427	137	22,389	6.1%	34,980	6.6%	1,559,025	1.9%	1,219,878	0.2%	3,194,643	1.5%	3,494,076	1.5%	831,023	23.8	- 3,310,600	- 94.7	2,298	6,049
POL NAO PG 1012	114	1.9%	1,219	7,351	380	340	7,587	2.1%	6,895	1.3%	870,035	1.1%	3,974,153	0.6%	3,363,179	1.5%	3,364,759	1.5%	1,603,899	47.7	- 551,086	- 16.4	14,069	4,717
DEU NAO DTS1218 NGI	20	0.3%	655	3,746	23	17	1,791	0.5%	1,532	0.3%	606,197	0.8%	3,121,758	0.5%	2,459,780	1.1%	3,239,186	1.4%	1,113,045	34.4	39,657	1.2	55,652	65,473
DNK NAO TM 1218 NGI	3	0.0%	201	569	7	9	301	0.1%	685	0.1%	334,756	0.4%	9,713,743	1.5%	2,978,963	1.4%	3,130,615	1.4%	2,471,233	78.9	1,510,498	48.2	940,634	290,436
LTU NAO TM 2440 NGI*	8	0.1%	2,239	4,980	60	39	735	0.2%	435	0.1%	1,691,904	2.1%	14,817,795	2.3%	2,674,666	1.2%	3,028,587	1.3%	942,933	31.1	- 177,940	- 5.9	117,867	24,219
DNK NAO DTS40XX NGI	1	0.0%	654	1,347	4	6	114	0.0%	2,072	0.4%	743,494	0.9%	12,555,659	2.0%	2,711,801	1.2%	2,884,474	1.3%	2,025,151	70.2	1,429,192	49.5	2,696,965	353,091
LVA NAO TM 1218 NGI	11	0.2%	331	2,091	55	44	1,967	0.5%	1,967	0.4%	1,199,671	1.5%	9,402,216	1.5%	2,575,055	1.2%	2,787,460	1.2%	1,341,143	48.1	664,327	23.8	121,922	30,481
SWE NAO DTS1012 NGI*	18	0.3%	238	3,084	27	12	1,065	0.3%	4,616	0.9%	493,301	0.6%	2,634,168	0.4%	2,535,032	1.2%	2,709,683	1.2%	1,962,762	72.4	1,393,076	51.4	106,340	169,657
DNK NAO PGP1012 NGI	29	0.5%	330	2,860	31	28	2,761	0.7%	4,267	0.8%	239,844	0.3%	933,004	0.1%	2,246,338	1.0%	2,270,865	1.0%	880,538	38.8	- 496,589	- 21.9	30,039	31,984
FIN NAO TM 1218 NGI*	22	0.4%	665	4,973	22	18	1,287	0.3%	1,285	0.2%	616,431	0.8%	9,406,827	1.5%	2,092,467	1.0%	2,195,308	1.0%	976,746	44.5	599,648	27.3	44,398	54,264
DNK NAO DTS2440 NGI	2	0.0%	513	1,076	8	16	449	0.1%	7,600	1.4%	1,214,274	1.5%	1,897,329	0.3%	2,083,488	1.0%	2,128,935	0.9%	695,428	32.7	- 11,501	- 0.5	401,541	43,065
DEU NAO PG 1012 NGI	56	1.0%	650	5,157	63	38	4,998	1.4%	5,959	1.1%	217,188	0.3%	2,357,843	0.4%	1,583,048	0.7%	2,113,365	0.9%	82,628	3.9	- 874,426	- 41.4	1,465	2,178
DNK NAO PMP1218 NGI	8	0.1%	248	1,319	13	15	891	0.2%	3,469	0.7%	450,778	0.6%	1,990,483	0.3%	2,063,285	0.9%	2,087,866	0.9%	1,177,291	56.4	336,859	16.1	149,349	80,077
DEU NAO DTS1824 NGI	4	0.1%	487	984	16	12	799	0.2%	2,194	0.4%	827,799	1.0%	2,373,261	0.4%	1,844,887	0.8%	1,920,190	0.8%	496,372	25.9	- 182,105	- 9.5	120,951	40,317
LTU NAO DTS2440 NGI*	14	0.2%	1,651	3,088	73	51	1,171	0.3%	950	0.2%	610,204	0.8%	3,336,179	0.5%	1,695,001	0.8%	1,637,657	0.7%	451,046	27.5	- 149,021	- 9.1	32,218	8,842
POL NAO DFN1218 *	20	0.3%	654	2,450	107	106	1,869	0.5%	1,412	0.3%	547,863	0.7%	1,322,445	0.2%	1,488,675	0.7%	1,537,423	0.7%	706,329	45.9	102,466	6.7	35,316	6,663
SWE NAO DFN1012 NGI*	54	0.9%	610	8,148	80	29	3,729	1.0%	7,869	1.5%	623,948	0.8%	1,128,291	0.2%	1,312,263	0.6%	1,530,962	0.7%	437,936	28.6	- 272,626	- 17.8	8,036	15,213
EST NAO PG 1012 NGI	77	1.3%	540	4,375	308	111	938	0.3%	2,264	0.4%	221,118	0.3%	7,185,639	1.1%	1,497,532	0.7%	1,522,034	0.7%	1,148,651	75.5	421,572	27.7	14,918	10,348
FIN NAO PG 1012 NGI*	41	0.7%	413	6,566	41	8	1,083	0.3%	950	0.2%	309,011	0.4%	2,609,529	0.4%	852,377	0.4%	1,245,502	0.6%	487,063	39.1	259,771	20.9	11,880	60,883
DNK NAO DTS1824 NGI	1	0.0%	129	365	4	6	214	0.1%	7,379	1.4%	266,675	0.3%	2,070,041	0.3%	1,189,480	0.5%	1,208,829	0.5%	742,247	61.4	321,624	26.6	654,885	125,668
LVA NAO PGP0010 NGI	196	3.3%	391	2,470	298	120	10,094	2.7%	11,322	2.1%	47,363	0.1%	3,421,388	0.5%	1,076,149	0.5%	1,187,762	0.5%	552,659	46.5	122,370	10.3	2,820	4,605
DNK NAO PMP0010 NGI	44	0.8%	220	2,543	17	13	2,019	0.5%	5,193	1.0%	204,690	0.3%	421,099	0.1%	832,744	0.4%	890,994	0.4%	- 39,059	- 4.4	- 725,213	- 81.4	- 882	- 3,103

Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

4.4 North Western Waters

Regional Details

The North Western Waters cover the Atlantic ICES areas V, VI and VII. For simplicity EU vessels operating in the aforementioned fishing areas are referred to as the EU North Western Waters (NWW) fleet.

The nations fishing in the NWW are Belgium, Denmark, France, Germany, Ireland, Lithuania, the Netherlands, Portugal, Spain and the United Kingdom. The main fleets operating in 2017 were the UK, French and Irish fleets. Some effort data by FAO fishing area (division) are missing for France for 2008 to 2009. Spain, France and Portugal also conduct a significant part of their fishing activity in the Southern Western Waters.

Based on the value of landings, the French, UK and Irish fisheries have the highest level of landings in the NWW. However, Ireland has the highest total percentage of national landed value from the region at 85% indicating their high dependency on this area (98% of the days-at-sea take place in these waters). Belgium (50%), the UK (48%) and France (40%) also have a high dependence on the area. While Ireland and Belgium have high dependency the highest share of fishing is conducted by the UK and France (Figure 4.46).

Tables at the end of this section contain a summary of the economic performance of the North Western Waters fleet by Member State, main type of fishing activity and fleet segment.

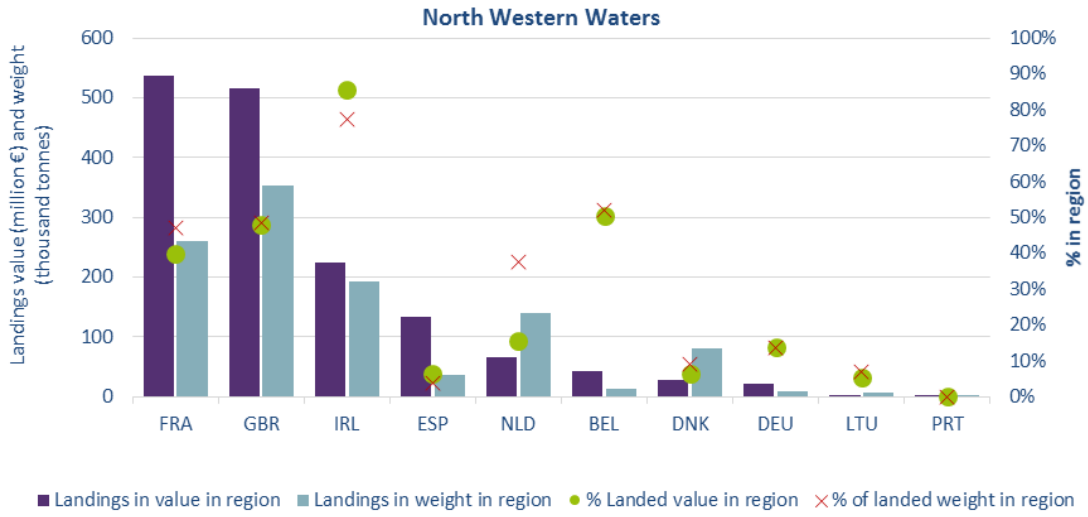


Figure 4.46 Importance of the North Western Waters for MS fleets in terms of landings in weight and value, 2017
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

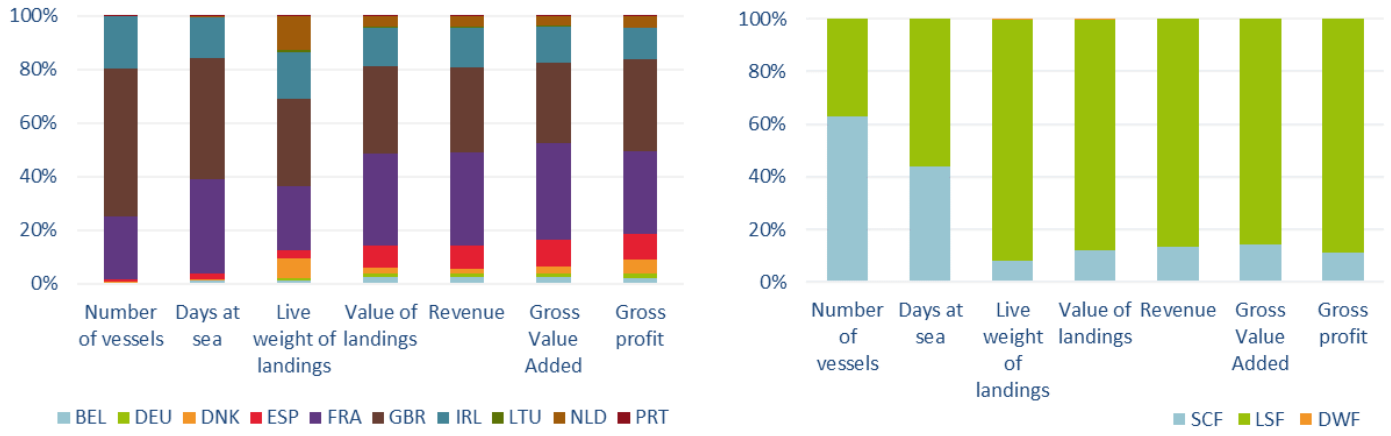


Figure 4.47 Share by MS fleet and fishing activity in the North Western Waters, 2017
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Overview of the main results for EU fleets in the NWW

Fishing effort and landings

Fishing effort has generally decreased while landings have increased. The value of landings increased by 10% between 2010 and 2017 (Figure 4.48). For several important fish species, prices were higher while landings in weight were lower. This is the case for example for edible crab and Atlantic mackerel. The total landings in weight increased by 5% in 2017 compared to 2016. Furthermore, fuel prices increased slightly with an average price of EUR 0.44 per litre while fuel consumption decreased 1%. Fuel is an important operational cost and therefore an important driver for higher revenues in 2017.

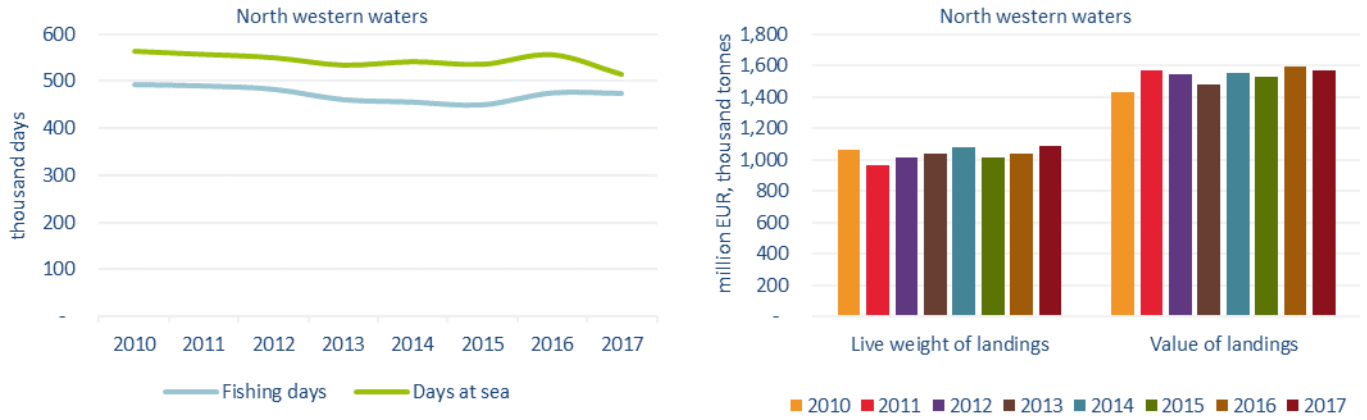


Figure 4.48 Trends on effort and landings for MS fleets operating in the North Western Waters
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Employment

Total employment in this region was estimated at 15.5 thousand with the number of Full Time Equivalent (FTE) employees at 11 thousand, a decreased of 7% from 2016. The most important fleets in terms of overall employment correlate to those fisheries that have the highest dependency on this area. The UK has the highest level of employment with over 4 322 FTE, followed by France (2 888), Ireland (2 294) and Spain (1 074).

Total employment for the LSF is highest for the UK and France, totalling 3 658 and 2 819 respectively, reflecting the high number of active vessels in these MS. These numbers have decreased slightly from their 2016 position.

The SSCF, for all MS, demonstrates a marked difference between the numbers of total employed and total FTE indicating that a large number of those employed in the SSCF are part-time or casual workers. Total employed for the SSCF was highest in the UK, France and Ireland reflecting their high number of SSCF vessels. LSF figures for total employed and FTEs are closer in value indicating a high level of full time employment in this segment in comparison to the SSCF.

Wages and Salaries

The overall average wage per FTE for the SSCF increased by 8% in 2017, fluctuating around EUR 38 000. For the LSF average wage increased by 12% to a value of EUR 53 500, the highest value recorded for the period 2010-2017. Labour productivity in the LSF has increased steadily over recent years while that for the SSCF has remained at levels under EUR 60 000 per FTE (Figure 4.49).

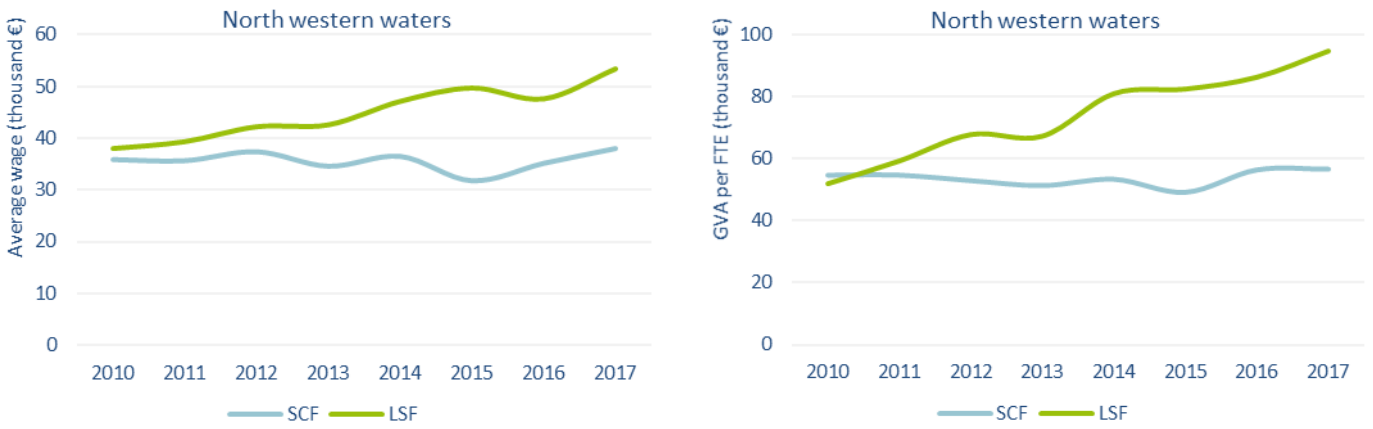


Figure 4.49 Trends on average wage and labour productivity (GVA per FTE) by fishing activity for MS fleets operating in the North Western Waters
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Economic performance

The revenue (income from landings and other income) generated by the NWW fleet covered in the analysis in 2017 was estimated at EUR 1.7 billion. The GVA produced was estimated at EUR 949 million, representing an overall increase of 1% compared to the previous year. The fleet made EUR 397 million in gross profit, a decrease of 3% compared to 2016. The net profit, at EUR 259 million, also decreased by 3% compared to 2016 (Figure 4.50).

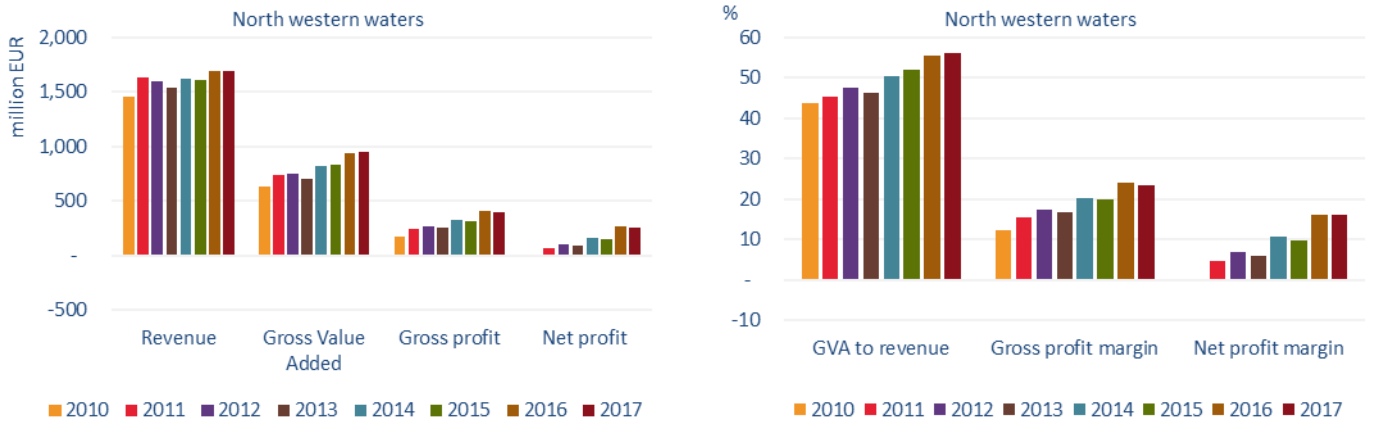


Figure 4.50 Trends on revenue and profits for MS fleets operating in the North Western Waters
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Main drivers affecting fleet performance in the region

Factors that may have contributed to the positive situation include:

- Recovery of some stocks, e.g. the biomass of most herring stocks have increased and the Northern hake stock continues to follow a positive trend.
- Low fuel prices resulting in lower energy costs, especially for pelagic fisheries.
- Increased TACs for a number of stocks, e.g. hake, herring and anglerfish.
- Stable fish prices generally and higher average prices for some important species e.g. common sole and *Nephrops*

Factors that may have hampered economic performance in the region include:

- Lower average prices and total landings for plaice, common shrimp, herring and mackerel.
- Whilst the consequences of Brexit are unknown, it is expected that it could have a large impact on fleets operating in the region. The UK holds a significant portion of the landings. Furthermore, there

is a high dependency on UK waters for a number of MS: Ireland, France, Spain, Belgium, the Netherlands and Germany.

Trends by Member State fleet and fishing activity

Fleet capacity and employment

According to the figures estimated at the regional level, the ten Member State fleets operating in the NWW collectively numbered over 5 664 active vessels in 2017 an increase of 1.6% from 2016. The number of vessels increased by 17% since 2014.

The SSCF accounted for 63% of the number of vessels and 44% of the days-at-sea, while LSF generated by far the highest landed weight, with 91% of the total and 88% of the value.

While the SSCF covered 63% of the number of vessels, employment estimated for this group amounted to more than 5 828 jobs and around 2 377 FTE in 2017, representing respectively around 38% of the total jobs and 22% of the total FTEs in the NWW fisheries and indicating the predominate part-time nature of this fishing fleet.

While fleet capacity increased slightly, employment of the MS fleets operating in the region have followed a general decreasing trend over most of the period analysed, apart from a slight increase in 2015 and into 2016 (Figure 4.51).

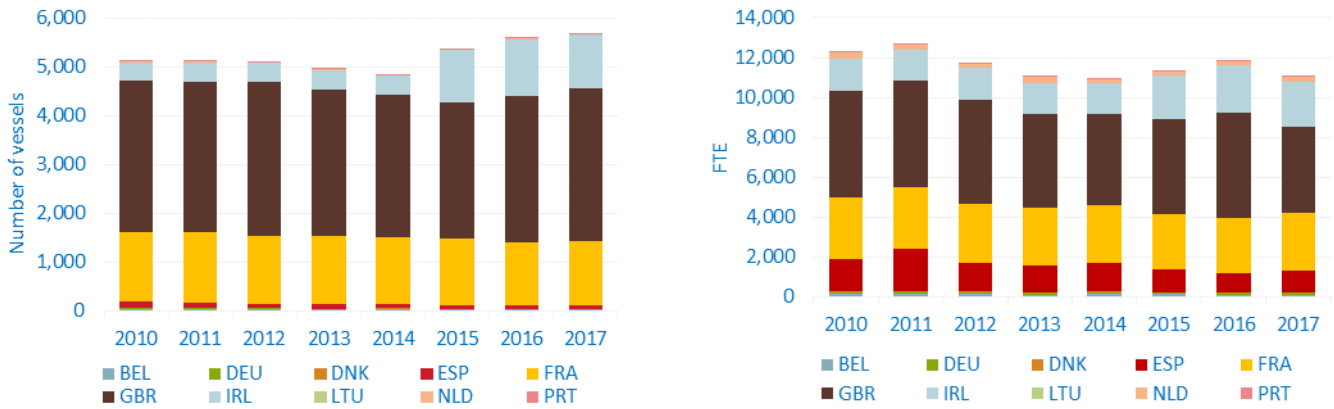


Figure 4.51 Trends on the number of vessels and employment (in FTE) for MS fleets operating in the North Western Waters

Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019))

Fishing effort

The latest official DC MAP data suggests that the EU North Western Waters fleet spent over 473 thousand days-at-sea in 2017, 45% of which were deployed by the UK fleet. Collectively, vessels from France, the UK, and Ireland accounted for around 96% of the total days-at-sea. These five fleets represented almost the total effort deployed in the region. It must be noted that Ireland had partial effort data for vessels less than 10m in length and only for the years 2013-2016, so conclusions regarding effort need to be taken with caution as Ireland's effort is underestimated for this segment (Figures 4.52).

The number of days-at-sea per fishing activity (LSF, SSCF) is quite balanced in the recent years. In 2017, SSCF vessels accounted for 44% of the total number of days-at-sea in the NWW area but only 9% of the landed weight and 13% of the landed value share.

Fishing effort has decreased much in line with capacity, over the period analysed but with a slight increase in 2016 most likely in response to the increase in total vessels from 2015. Energy consumption has also followed a general decreasing trend, albeit more accentuated in 2014 after which we have seen an increase in energy consumption in 2016.

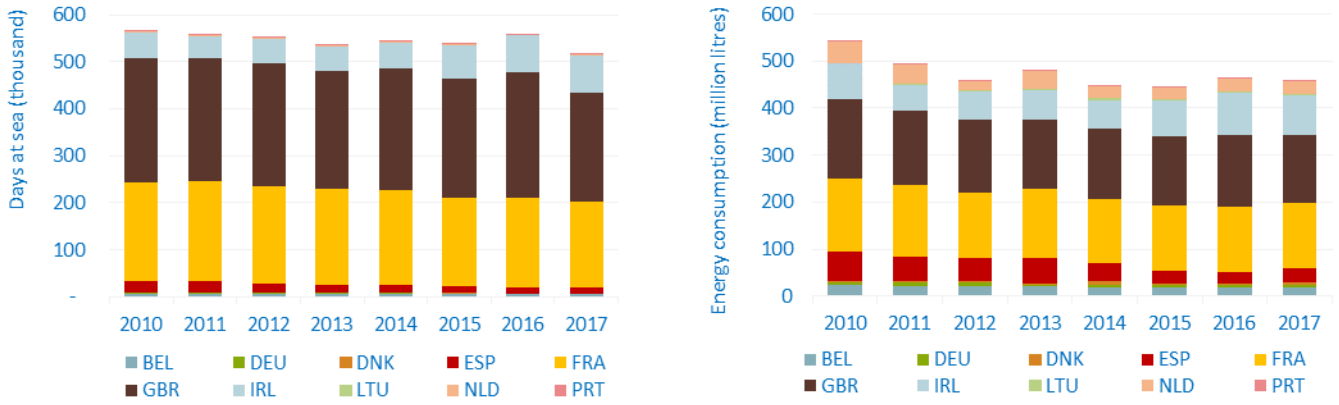


Figure 4.52 Trends on fishing effort (in days-at-sea) and energy consumption for MS fleets operating in the North Western Waters
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Landings and top species

The weight and value of landings amounted to approximately 1.09 million tonnes and EUR 1.57 billion, respectively. In terms of landed weight, the UK (352 thousand tonnes), French (261 thousand tonnes) and Irish (192 thousand tonnes) were the leading national fleets, together accounting for over 74% of the total weight landed (Figure 4.53). The Netherlands also had a high landed weight of 140 thousand tonnes the majority of this being pelagic species, making up 134 thousand tonnes of these landings.

The French (EUR 537 million), UK (EUR 516 million), and Irish (EUR 224 million) fleets together accounted for around 81% of the total value of landings in 2017.

Landings are mainly generated by the large-scale fleet, making up 91% of the live weight and 88% of the landed value.

In 2017, the main species landed in terms of weight were small pelagic species, including blue whiting (321 thousand tonnes), Atlantic mackerel (220 thousand tonnes) and Atlantic Herring (54 thousand tonnes) followed by European hake (54 thousand tonnes) and great Atlantic scallop (49 thousand tonnes) (Figure 4.54).

In terms of value, Atlantic mackerel (EUR 196 million) was the most important species in 2017, followed by European hake (EUR 181 million) great Atlantic scallop (EUR 146 million) and Norway lobster (EUR 124 million) (Figure 4.54).

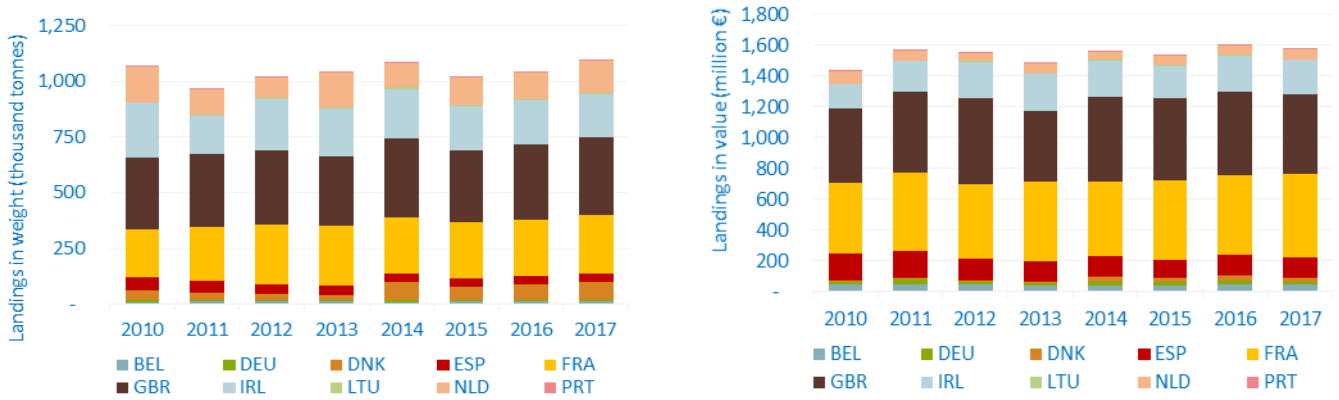


Figure 4.53 Trends on landings in weight and value from MS fleets operating in the North Western Waters
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

The top species are drivers for MS fleet performances. The share in landed value of European hake is dominated by Spain (45%) and France (39%). Atlantic mackerel landing values are dominated by the UK accounting for 59% of landed value, followed by Ireland (17%). Norway lobster landings values are also dominated by the UK, with 52% of total landings, followed by Ireland with 44%. Monkfish landings value (reported as MON) are dominated by Ireland (89%) and the Netherlands (11%), while anglerfish (ANF) values are dominated by the UK (48%), Spain (24%) and Ireland (18%). Blue whiting landings

value are shared evenly between MS with the highest being for the Netherlands (29%) and the UK (16%).

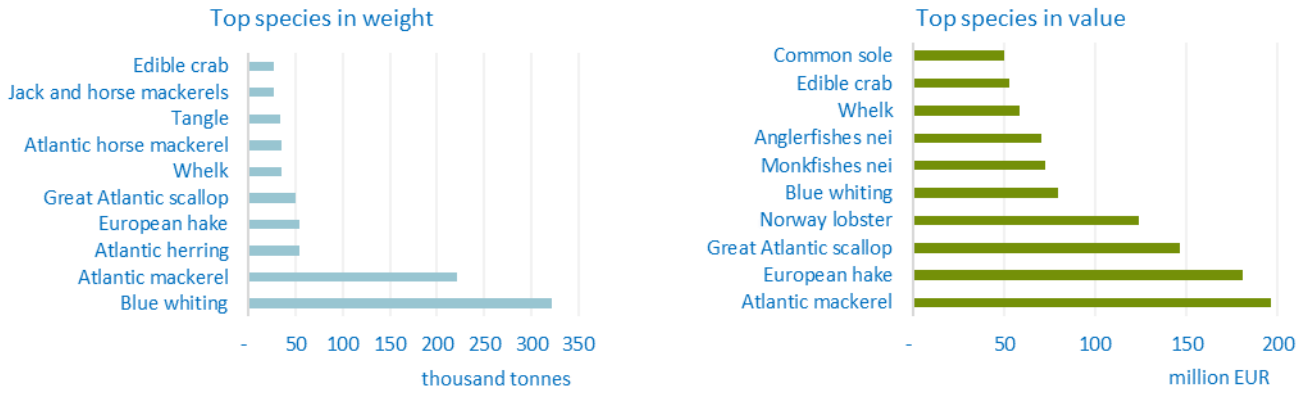


Figure 4.54 Top 10 species in landed weight and value for MS fleets operating in the North Western Waters, 2017
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Temporal trends in the value and weight of landings, have been significantly influenced by fluctuations in TAC and quotas for Atlantic mackerel, blue whiting and hake. Mackerel went through a significant increase in 2014 followed by a decrease in 2015, which impacted the total value of landings for MS targeting this species (Figure 4.55).

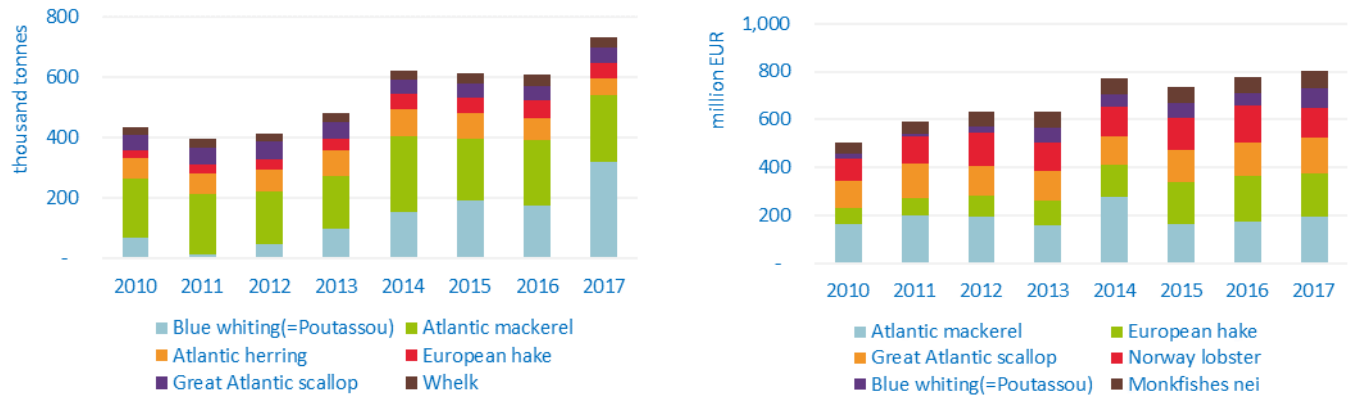


Figure 4.55 Trends on landings of the top six species landed value for MS fleets operating in the North Western Waters
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Socio-economic performance

The revenue (income from landings and other income) generated by the NWW fleet covered in the analysis in 2017 was estimated at EUR 1.7 billion, over 90% produced by four MS fleets: France (EUR 590 million), UK (EUR 538 million), Ireland (EUR 256 million) and Spain (EUR 143 million) (Figure 4.56).

Five Member State fleets saw increases in revenue Belgian (1.5%), France (4%), Spain (8%), the Netherlands (17%) and Portugal (1053%). The remaining five MS saw decreases in revenue in the area. The Danish and Lithuanian, fleets suffered a decrease in revenue of 20% and 24%, respectively. These decreases are primarily driven by TAC and quota reductions.

The GVA produced was estimated at EUR 948.8 million in 2017. This represented an overall increase of 1% compared to the previous year. An increase in GVA was experience by Spain (7%), France (4%), UK (3%) and the Netherlands (22.5%). The remaining MS saw decreases.

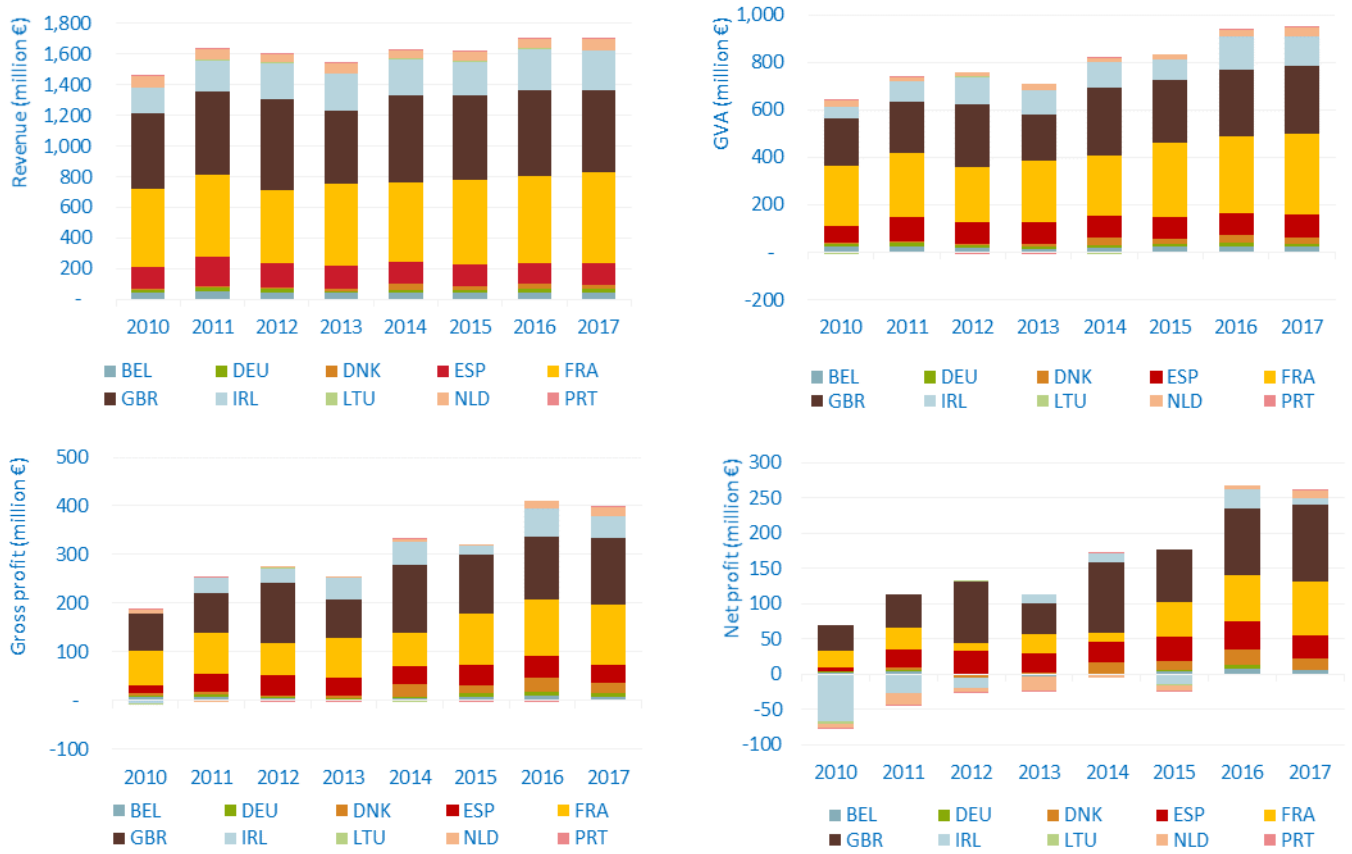


Figure 4.56 Trends on revenue and profit for MS fleets operating in the North Western Waters
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

After accounting for operating costs, the fleet made EUR 397 million in gross profit, a decrease of 3% compared to 2016. All of the MS fleets operating in the NWW generated gross and net profits, apart from Germany which suffered net losses (-EUR 986 thousand) but the fleet's activity in the area was also low.

By fishing activity, the NWW SSCF generated almost EUR 225 million in revenue in 2017, while the large-scale fleet generated almost EUR 1.47 billion. The reaming EUR 3.2 million in revenue was made by the DWF operating occasionally in the area.

The variation in total annual revenue is mainly linked to fluctuations in TACs and quotas and fish prices. On the whole, the value of landings decreased by 1% compared to 2016 even through total landed weight increased by 5%.

Main factors affecting the performance of the fleet

Regulation and Fisheries management in the region

- Council Regulation (EC) No 1300/2008 established a multi-annual plan for the herring stock distributed to the west of Scotland and the fisheries exploiting that stock in international and EU waters in ICES zones Vb and VIb, and the northern part of ICES zone VIa excluding the Clyde. The UK and Irish fleets are the most important fleet segment for this fishery. Most herring stocks (North Sea, Irish Sea and Celtic Sea) are fished in accordance with MSY, with corresponding 2016 TAC for these stocks. The situation is also positive for southern and western horse mackerel and the TAC allows fishing at levels corresponding to MSY in 2016.
- Long-term plan for cod stocks and the fisheries exploiting those stocks (Council Regulation (EC) No 1342/2008). The long-term plan for cod has an impact on the North-eastern Member States. The French, Belgian, German, UK, Irish, Dutch, Spanish and Portuguese fleets all have quota for cod and thus interact with the cod fisheries. As days-at-sea restrictions are becoming more constraining, it may have an effect on the economic performance of the fleets.
- Council Regulation (EC) No 388/2006 established a multiannual plan for the sustainable exploitation of the stock of sole in the Bay of Biscay covering ICES areas VIIIa and VIIIb. The French DFN

segments are the most important fleets in term of sole landings in weight in the Northeast Atlantic with 26 000 tonnes (61%).

- Council Regulation (EC) No 509/2007 established a multi-annual plan for the sustainable exploitation of the stock of sole in the Western Channel (ICES VIIe). The sole fishery is most important to the UK and French fleets.
- Council Regulation (EC) No 2166/2005 established measures for the recovery of the Southern hake and Norway lobster stocks in the Cantabrian Sea and Western Iberian Peninsula and amending Regulation (EC) No 850/98 for the conservation of fishery resources through technical measures for the protection of juveniles of marine organisms. This has been very successful.
- Council Regulation (EU) No 713/2013 establishing the fishing opportunities for anchovy in the Bay of Biscay for the 2013/14 fishing season. This management plan concerns mainly Spanish and French fleets.
- Measures for the recovery of eel. Area covered includes EU estuaries and rivers that flow into seas in ICES areas III, IV, VI, VII, VIII, IX and the Mediterranean (Council Regulation (EC) No 1100/2007 of 18 September 2007). In the region, this management plan applies mainly to France.
- Council Regulation (EC) No 302/2009- 500/2012 Measures concerning a multiannual recovery plan for bluefin tuna in the eastern Atlantic and Mediterranean. According to STECF data, in 2015, three national fleets operated in this fishery with the French fleet representing 50% of the total of landings value in the Northeast Atlantic (followed by Portugal (48%) and Irish fleet (1%).
- Council Regulation (EC) No 811/2004 to increase the quantities of mature fish in the Northern hake stock to at least 140 000 tonnes. This management plan concerns Spanish, French, Portuguese, Irish, UK, Dutch and Belgian fleets and has been successful.

Other management measures that may affect economic performance of the fleets operating in the NWW include marine protected areas and other legislation that has a multispecies impact.

In 2016, the landings obligation for demersal fisheries in the North Sea and the Atlantic EU waters came into force, bringing an important part of the EU fleet in the Northeast Atlantic under the obligation to bring and retain on board, and to land all catches. Fishing opportunities for stocks falling under the landing obligation are fixed taking into account catches rather than landings, based on biological advice and in the understanding that this should not jeopardise the MSY objective or increase the fishing mortality.

Status of important stocks

Fishing has generally progressed towards MSY (fishing at or below MSY) in all areas of the Northeast Atlantic since 2006.

Important stocks in the North Western Waters: many stocks, such as Norway Lobster (VII), mackerel and horse mackerel are overfished (but inside safe biological limits or managed under LTMP). Blue whiting, common sole (in VIIe) and Norway lobster (Vb and VI) and most herring stocks (North Sea, west of Scotland, Irish Sea and Celtic Sea) are exploited at a rate that is consistent with MSY. The common sole stock in VIIa is outside safe biological limits. The status of the anglerfish stock is unknown.

Important stocks in the South Western Waters: hake, mackerel, common sole and Norway lobster are overfished (but inside safe biological limits or managed under LTMP). All blue whiting stocks, one of the main horse mackerel stocks (IX) and the main anchovy stocks are fished in correspondence with MSY. Only one horse mackerel stock (VIIIc) is still outside safe biological limits. Norway lobster (VIIIabde) and anglerfish status of stocks are unknown.

TAC development of main species

In 2018, there were quotas for over 30 fish species defined for the region.

Demersal species:

- This total TAC increase is mainly due to the positive development of hake stocks. Hake stocks in divisions VI, VII and VIIIabd are exploited below MSY.
- In NWW, TAC of anglerfish increased by 24% over the period 2008-2017. There has been a steady annual increase since 2014 up until 2019.
- Norway lobster TAC in NWW quite stable but has experienced decreased in 2018 by 6%. However, since 2008 to 2017 there has been an overall 13% reduction in TAC for the area.

Pelagic Species:

TACs for pelagic species in the Northeast Atlantic region have varied since 2001 especially for blue whiting and mackerel with very high values in 2005 and then again in 2014 (Figure 4.57).

- After a peak in 2014, the mackerel TAC of decreased from 2014 to 2015, horse mackerel TAC decreased in NWW from 2014 to 2015. Both of these reductions impacted the Irish and British fleets and having a knock-on effect on total revenue and economic indicators. Mackerel quotes in the area experiences a reduction in 2018 and 2019 by 20% annually since 2017. This will undoubtedly have a negative impact on the total profitability of the pelagic sector and the overall fleets for future economic analysis.
- TAC of blue whiting increased by 107% from 2008 to 2017, with an 85% increase from 2016 and 2017. This increase positively affected the five most important MS fleets in the NWW.
- Herring has fluctuated from 2008 and overall has experienced a 56% decline from 2008 to 2017.

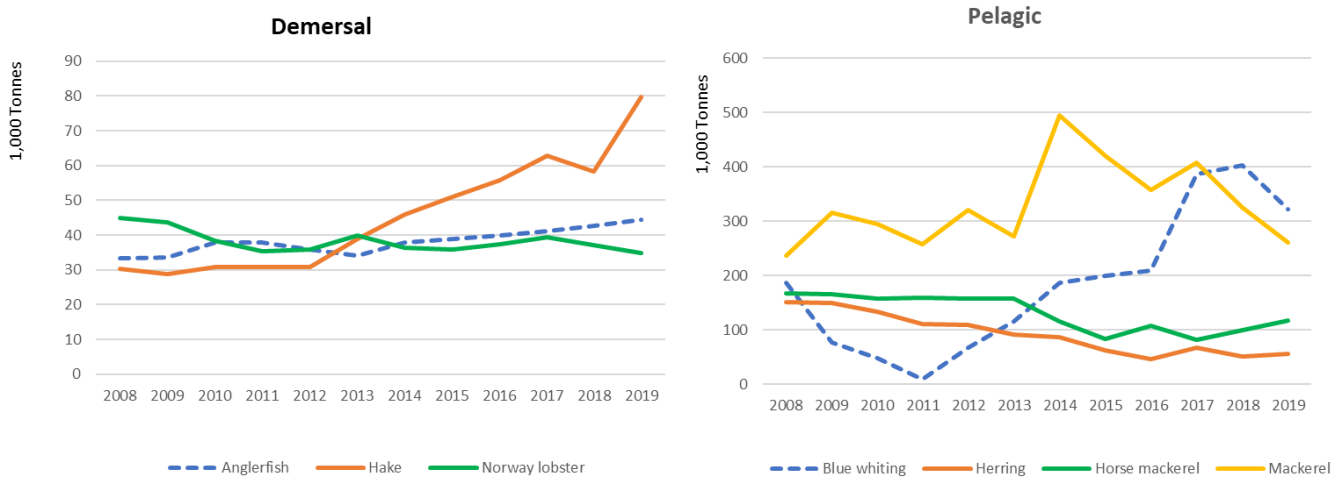


Figure 4.57 Trends on TACs for major demersal (left) and pelagic (right) stocks in the North Western Waters
Source: Calculated based on 2017 TAC Council Regulations and BEMEF modelling

Areas included for each species (Figure 4.57):

- Anglerfish: 7; 6; Union and international waters of 5b; international waters of 12 and 14
- Hake: 6 and 7; Union and international waters of 5b; international waters of 12 and 14
- Norway lobster: 7; 6; Union and international waters of 5b
- Blue Whiting: Union and international waters of 1, 2, 3, 4, 5, 6, 7, 8a, 8b, 8d, 8e, 12 and 14 ; Faroese waters
- Herring: 6 Clyde; 7a; Union, Faroese, Norwegian and international waters of 1 and 2; Union and international waters of 5b, 6b and 6aN; 6aS, 7b, 7c; 7e and 7f; 7g, 7h, 7j and 7k
- Horse Mackerel: Union waters of 2a, 4a; 6, 7a-c,7e-k, 8a, 8b, 8d and 8e; Union and international waters of 5b; international waters of 12 and 14
- Mackerel: 6, 7, 8a, 8b, 8d and 8e; Union and international waters of 5b; international waters of 2a, 12 and 14

Landing obligation

The introduction of the landing obligation may be implemented with little extra effort in the pelagic sector as well as in the saithe fisheries as these fisheries traditionally have had low bycatch rates. However, more challenges are to be expected for demersal fisheries. Fishers fear that the discard ban will have a large impact on their profitability, mainly due to increased costs. Another concern is related to potential choke species. Particularly, in a mixed fishery this could be an issue as many species are caught at the same time and multiple choke species may occur. Whiting, haddock, ray, plaice, dab, turbot and brill are potential choke species candidates in mixed demersal fisheries. Therefore, to continue fishing throughout

the year, it will be vital to have either enough quota available or adapt fishing strategies (optimal solution has not been discovered thus far).

Description of relevant fisheries in the region

Large-scale fleet

There were nine MS large-scale fleets operating in the Northeast Atlantic region totalling 2 093 active vessels. The UK and France have the largest number of active vessels in the area with 867 vessels and 654 vessels, respectively. However, the area is more important to the Irish fleets with 96% of their large-scale fleet active in the area. Total employment for the LSF is highest for the UK and France totalling 3 658 and 2 819, respectively, reflecting the high number of active vessels in these MS.

Overall the LSF was profitable in 2017, totalling EUR 814 million in GVA and EUR 352 million in gross profit. The French NWW LSF, generated the highest revenue (EUR 483 million), followed by the UK (EUR 452 million), and Ireland (EUR 223 million). At MS level, all large-scale fleets generated gross profits in 2017. Additionally, two distant water fleets (Lithuanian and Spanish fleets) were also active in the region in 2017. Note: Data on the EU distant water fleets operating in the region is limited and the economic indicators are to be interpreted with caution.

MS can be classed into different categories according to their dependency which is representative of their large-scale fleet landings composition in the NWW

- In Ireland the main value species are *Nephrops* and mackerel totalling 38% of the total value. These two species have landing values of EUR 54 million and EUR 34 million, respectively.
- The UK LSF landings in the Northeast Atlantic, like Ireland, is dominated by mackerel and *Nephrops*, with landing values of EUR 116 million and EUR 65 million, respectively.
- For Spain and France, there is a more diverse landing composition, with hake playing a key role for both countries. The main species by landing value for France were Tangle (12%), hake (9%), monkfish (6%), and scallop (10%).

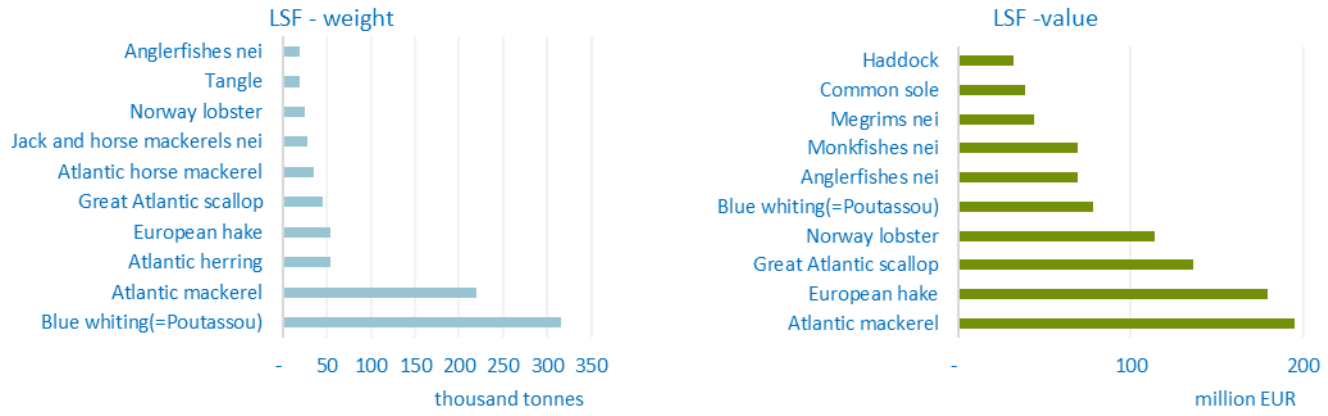


Figure 4.58 Top 10 species landed by LSF operating in the North Western Waters, 2017
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Small-scale coastal fleet

There were small-scale coastal fleets from four Member States operating in the NWW. While 100% of Irish and 68% for the UK SSCF fished in the NWW in 2017, it represented only part of the SSCF fishing activity for France (48%), and the Netherlands (<1%) as they were also active in the Mediterranean Sea and/or in the North Sea. In terms of vessel numbers, the UK have the highest number of active SSCF vessels with 2 274 vessels followed by Ireland and France with 634 and 664 vessels, respectively.

Total employment for the SSCF is highest for the UK and France totalling 3 662 and 1 261, respectively, reflecting the high number of active vessels in these MS. All MS in the NWW demonstrate a significant lower FTE figure in comparison with total employed indicating that a large majority of those employed in the SSCF are part-time or casual workers.

Overall the SSCF was profitable in 2017, totalling EUR 134 million in GVA and EUR 44 million in gross profit. The most profitable in terms of gross profit margin was the Dutch SSCF but as this has the least

activity the most relevant SSCF fleet with high profitability was the Irish and French SSCF with gross profit margin of 24% and 22% respectively. In terms of productivity, the Gross Value Added per FTE varied from EUR 103 thousand (France) to EUR 27 thousand (Ireland).

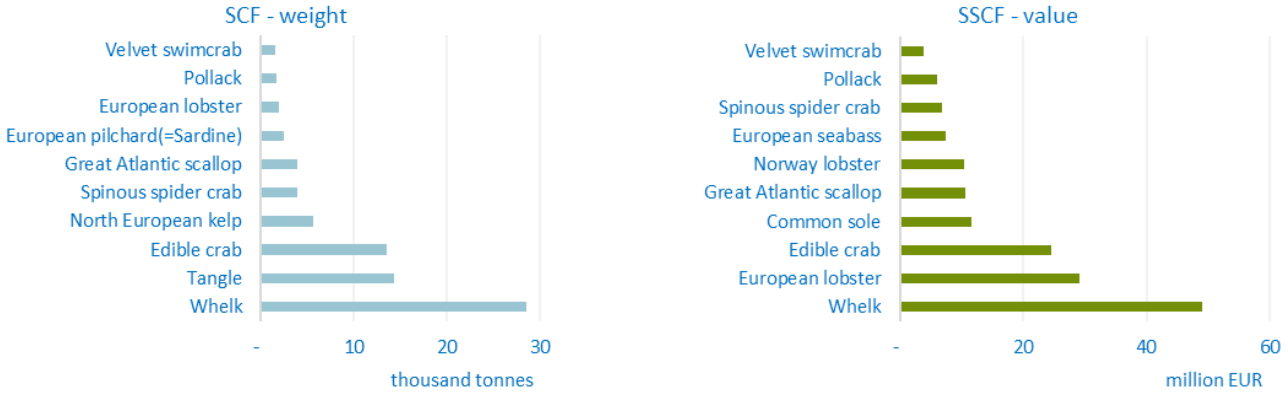


Figure 4.59 Top 10 species landed by SSCF operating in the North Western Waters, 2017
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Performance by fleet segments

Table 4.19 provides results for MS fleet segments in terms of landed value operating in the NWW region in 2017. There were an estimated 111 segments operating in the NWW region. At fleet segment level, the UK pelagic demersal trawlers over 40m generated the most revenue in 2017 (EUR 130 million), followed by the French demersal trawlers between 24 and 40m (EUR 105 million) and French demersal trawlers between 18 and 24m (EUR 102 million). The Spanish polyvalent passive gears between 24 and 40m also generated one of the highest revenues, estimated at EUR 86.7 million.

There were 32 MS fleet segments that operated 80% or more in the NWW region in 2017, accounting for 49% of the number of vessels, 37% of the days-at-sea deployed, 36% of the FTE, 14% of the landed weight and 27% of the landed value. Collectively, these 'resident' fleets have a relatively small share of landed value and weight as they are mostly SSCFs.

For the five segments with the highest revenue their economic indicators were as follows:

- The UK pelagic over 40m segment has a GVA of EUR 95 million, gross profit of EUR 67 million and GVA per FTE (labour productivity) of EUR 2.2 million.
- The French demersal 24 to 40m segment has a GVA of EUR 56 million, gross profit of EUR 24 million, net profits of EUR 14 million and GVA per FTE (labour productivity) of EUR 152 007.
- The French demersal 18 to 24m segment has a GVA of EUR 48.9 million, gross profit of EUR 14 million and GVA per FTE (labour productivity) of EUR 116 726.
- The Spanish polyvalent 24 to 40m segment has a GVA of €54.5 million, gross profit of EUR 16 million and GVA per FTE (labour productivity) of EUR 70 393.
- The Irish demersal 24 to 40m segment has a GVA of EUR 26 million, gross profit of EUR 12 million and GVA per FTE (labour productivity) of EUR 85 731.

Table 4.15 Key parameter estimates by MS fleets operating in the North Western Waters, 2017

NWW	Estimated no. of vessels	% of total active vessels	Total vessel tonnage	Total vessel power	Engaged crew	FTE national	Days at sea	as a % of total sea days	Energy consumption	Live weight of landings	as a % of total weight landed	Value of landings	as a % of total value landed	Revenue	Gross Value Added	GVA to revenue	Gross profit	Gross profit margin	Net profit	Net profit margin	Average GVA	GVA per FTE (labour productivity)
	number	(%)	GT	kW	number	number	day	(%)	litre	kg	(%)	euro	(%)	€	€	%	€	%	€	%	€	€
BEL	26	0.5%	6,662	22,114	155	99	5,832	1.1%	18,843,444	12,595,899	1.2%	42,630,378	2.7%	44,457,598	23,903,113	53.8	8,832,283	19.9	5,632,742	12.7	917,914	240,409
DEU	6	0.1%	4,733	6,419	113	94	1,347	0.3%	6,183,835	8,132,006	0.7%	20,606,515	1.3%	22,692,093	12,898,679	56.8	5,915,156	26.1	- 986,364	- 4.3	2,150,927	137,814
DNK	2	0.0%	2,641	4,616	12	20	357	0.1%	3,267,127	81,209,979	7.4%	28,330,708	1.8%	28,729,639	25,090,618	87.3	20,838,186	72.5	17,313,675	60.3	12,542,800	1,263,686
ESP	60	1.1%	16,734	25,476	930	1,074	12,788	2.5%	31,760,995	36,056,272	3.3%	133,359,321	8.5%	142,796,293	95,743,616	67.0	37,429,334	26.2	32,380,625	22.7	1,591,568	89,114
FRA	1,318	23.3%	58,622	253,629	4,080	2,888	180,959	35.1%	137,224,714	260,926,422	23.9%	537,124,429	34.1%	589,799,145	339,911,885	57.6	123,999,016	21.0	76,099,351	13.7	257,908	117,707
GBR	3,142	55.4%	97,016	409,154	7,321	4,322	233,611	45.3%	145,364,852	352,639,430	32.3%	516,414,975	32.8%	537,933,035	286,806,316	53.3	136,340,824	25.3	109,511,984	20.4	91,292	66,362
IRL	1,100	19.4%	47,797	134,664	2,672	2,294	78,171	15.2%	85,541,603	192,356,257	17.6%	224,931,013	14.3%	256,156,724	127,376,717	50.1	46,085,357	18.1	8,143,829	3.8	117,321	56,419
LTU	0	0.0%	1,323	1,183	9	10	68	0.0%	1,775,444	6,210,852	0.6%	3,207,949	0.2%	3,127,737	933,697	29.9	455,168	14.6	265,519	8.5	3,459,420	94,284
NLD	12	0.2%	26,381	29,008	210	207	2,284	0.4%	27,758,680	140,579,095	12.9%	66,542,843	4.2%	69,612,518	36,094,143	51.9	17,199,684	24.7	10,570,580	15.2	3,085,418	174,337
PRT	0	0.0%	25	49	1	1	32	0.0%	28,538	21,132	0.0%	78,904	0.0%	78,867	40,233	51.0	11,614	14.7	1,715	2.2	297,580	29,237
-	**5,666**		**261,935**	**886,311**	**15,503**	**11,009**	**515,449**		**457,749,232**	**1,090,727,343**		**1,573,227,035**		**1,695,383,650**	**948,799,017**		**397,106,623**		**258,933,656**			

Table 4.16 Key parameter estimates by fishing activity for MS fleets operating in the North Western Waters, 2017

NWW	Estimated no. of vessels	% of total EU active vessels	Total vessel tonnage	Total vessel power	Engaged crew	FTE national	Days at sea	% of total days at sea	Energy consumption	Live weight of landings	as a % of total weight landed	Value of landings	as a % of total value landed	Revenue	Gross Value Added	GVA to revenue	Gross profit	Gross profit margin	Net profit	Net profit margin	Average GVA	GVA per FTE (labour productivity)
	GT	(%)	kW	number	number	number	day	(%)	day	litre	(%)	euro	(%)	€	€	%	€	%	€	%	€	€
SCF	3,573	63.1%	15,398	227,270	5,828	2,377	226,482	43.9%	33,077,153	90,481,413	8.3%	191,679,598	12.2%	225,457,605	134,324,760	59.6	44,242,478	19.6	22,892,214	11.3	37,638	56,686.3
LSF	2,093	36.9%	245,196	657,835	9,666	8,621	288,885	56.0%	422,859,470	994,005,229	91.1%	1,378,273,633	87.6%	1,466,741,840	813,544,904	55.5	352,425,320	24.1	235,796,117	16.6	390,681	94,683.0
DWF			1,341	1,207	10	11	83		1,812,610	6,240,702	0.6%	3,273,804	0.2%	3,184,206	929,352	29.2	438,825	13.8	245,324	7.7	2,784,158	84,442.8
-	**5,666**		**261,935**	**886,311**	**15,503**	**11,009**	**515,449**		**457,749,232**	**1,090,727,343**		**1,573,227,035**		**1,695,383,650**	**948,799,017**		**397,106,623**		**258,933,656**			

Table 4.17 Key parameter estimates by MS and fishing activity operating in the North Western Waters, 2017

NWW		Estimated no. of vessels	% of total EU active vessels	Total vessel tonnage	Total vessel power	Engaged crew	FTE national	Days at sea	as a % of total DAS	Energy consumption	Live weight of landings	as a % of total weight landed	Value of landings	as a % of total value landed	Revenue	as a % of total revenue	Gross Value Added	GVA to revenue	Gross profit	Gross profit margin	Net profit	Net profit margin	Average GVA	GVA per FTE (labour productivity)
		number	(%)	GT	kW	number	number	day	(%)	litre	kg	(%)	euro	(%)	€	(%)	€	%	€	%	€	%	€	€
SCF	FRA	664	11.7%	4,158	69,180	1,261	678	77,616	15.1%	10,848,610	49,352,719	4.5%	91,409,151	5.8%	106,933,459	6.3%	70,320,131	65.8	23,935,985	22.4	16,414,235	15.4	105,847	103,718
	GBR	2,274	40.1%	9,126	138,802	3,662	1,000	121,022	23.5%	15,493,503	31,907,074	2.9%	81,704,446	5.2%	85,650,579	5.1%	44,972,969	52.5	12,403,829	14.5	6,372,323	7.4	19,775	44,952
	IRL	634	11.2%	2,113	19,251	904	698	27,837	5.4%	6,734,321	9,220,613	0.8%	18,557,665	1.2%	32,866,503	1.9%	19,026,722	58.0	7,899,134	24.1	103,417	1.1	30,202	27,534
LSF	BEL	26	0.5%	6,662	22,114	155	99	5,832	1.1%	18,843,444	12,595,899	1.2%	42,630,378	2.7%	44,457,598	2.6%	23,903,113	53.8	8,832,283	19.9	5,632,742	12.7	917,914	240,409
	DEU	6	0.1%	4,733	6,419	113	94	1,347	0.3%	6,183,835	8,132,006	0.7%	20,606,515	1.3%	22,692,093	1.3%	12,898,679	56.8	5,915,156	26.1	- 986,364	- 4.3	2,150,927	137,814
	DNK	2	0.0%	2,641	4,616	12	20	357	0.1%	3,267,127	81,209,979	7.4%	28,330,708	1.8%	28,729,639	1.7%	25,090,618	87.3	20,838,186	72.5	17,313,675	60.3	12,542,800	1,263,686
	ESP	60	1.1%	16,716	25,452	929	1,073	12,773	2.5%	31,723,829	36,026,422	3.3%	133,293,466	8.5%	142,739,824	8.4%	95,747,961	67.1	37,445,677	26.2	32,400,820	22.7	1,593,332	89,210
	FRA	654	11.5%	54,464	184,449	2,819	2,210	103,342	20.0%	126,376,104	211,573,703	19.4%	445,715,278	28.3%	482,865,686	28.5%	269,591,754	55.8	100,063,031	20.7	59,685,116	13.3	412,471	121,998
	GBR	867	15.3%	87,891	270,352	3,658	3,321	112,589	21.8%	129,871,350	320,732,355	29.4%	434,710,529	27.6%	452,282,456	26.7%	241,833,347	53.5	123,936,995	27.4	103,139,661	22.8	278,804	72,811
	IRL	466	8.2%	45,685	115,413	1,768	1,595	50,334	9.8%	78,807,282	183,135,644	16.8%	206,373,347	13.1%	223,290,221	13.2%	108,349,995	48.9	38,186,224	17.2	8,040,412	3.9	237,754	69,160
	NLD	11	0.2%	26,380	28,971	210	207	2,278	0.4%	27,757,961	140,578,089	12.9%	66,534,508	4.2%	69,605,454	4.1%	36,089,204	51.8	17,196,154	24.7	10,568,340	15.2	3,168,082	174,413
		5,666		261,935	886,311	15,503	11,009	515,449		457,749,232	1,090,727,343		1,573,227,035		1,695,383,650		948,799,017		397,106,623		258,933,656			

Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Table 4.18 Key parameter estimates for the top 40 fleet segments operating in the North Western Waters, 2017

North-Western waters	Estimated no. of vessels	% of total EU active vessels	Total vessel power	Engaged crew	FTE national	Days at sea	% of total sea days	Fishing days	as a % of total fishing days	Energy consumption	Live weight of landings	as a % of total weight landed	Value of landings	as a % of total value landed	Revenue	Gross Value Added	GVA to revenue	Gross profit	Gross profit margin	Average GVA	GVA per FTE (labour productivity)
	GT	(%)	kW	number	number	day	(%)	day	(%)	day	kg	(%)	kg	(%)	€	€	%	€	%	€	€
,	27	0.3%	67,203	234	43	888	0.2%	521	0.1%	19,793,859	195,110,712	17.9%	130,396,927	8.3%	129,669,505	95,085,315	73.3	67,377,113	52.0	7,051,923	2,200,448
FRA NAO DTS2440 NGI*	58	0.6%	33,120	382	370	12,719	2.5%	12,719	2.7%	34,465,922	31,468,875	2.9%	98,055,900	6.2%	104,909,291	56,247,888	53.6	24,396,557	23.3	1,070,471	152,007
FRA NAO DTS1824 NGI*	137	1.4%	38,260	453	419	18,526	3.6%	18,526	3.9%	37,459,419	33,987,028	3.1%	95,120,897	6.0%	101,762,551	48,936,032	48.1	14,002,722	13.8	546,015	116,726
ESP NAO PGP2440 NGI*	55	0.6%	15,770	654	775	8,142	1.6%	8,142	1.7%	14,678,049	19,937,034	1.8%	80,369,493	5.1%	86,750,443	54,549,463	62.9	16,100,177	18.6	1,420,470	70,393
IRL NAO DTS2440	46	0.5%	22,421	352	307	10,633	2.1%	8,270	1.7%	21,065,371	20,009,605	1.8%	54,625,440	3.5%	57,295,944	26,351,522	46.0	12,677,369	22.1	578,355	85,731
GBR NAO DTS2440 NGI	93	0.9%	18,601	250	320	5,963	1.2%	5,189	1.1%	14,857,353	22,116,531	2.0%	54,142,249	3.4%	56,515,735	29,196,695	51.7	14,404,278	25.5	973,460	91,295
IRL NAO DTS1824	67	0.7%	26,184	405	394	14,585	2.8%	11,410	2.4%	22,559,947	19,790,476	1.8%	55,582,907	3.5%	56,030,178	26,563,624	47.4	8,213,186	14.7	401,746	67,435
NLD NAO TM 40XX NGI*	8	0.1%	24,915	163	163	888	0.2%	710	0.1%	24,629,416	136,140,192	12.5%	51,953,037	3.3%	54,933,272	26,417,014	48.1	12,184,558	22.2	7,657,105	162,057
FRA NAO HOK2440 NGI*	24	0.2%	9,558	224	215	3,480	0.7%	3,480	0.7%	5,948,750	9,277,360	0.9%	32,625,543	2.1%	50,513,178	34,006,925	67.3	17,604,269	34.9	2,059,378	157,903
ESP NAO DTS2440 NGI	108	1.1%	7,536	216	234	3,973	0.8%	3,973	0.8%	14,355,021	11,398,648	1.0%	45,650,492	2.9%	50,135,209	38,691,079	77.2	20,634,070	41.2	2,099,273	165,627
GBR NAO FPO0010 NGI	1,842	18.8%	64,725	1,592	471	64,732	12.6%	53,528	11.3%	8,383,334	16,715,040	1.5%	43,022,308	2.7%	44,151,980	21,717,148	49.2	4,999,275	11.3	20,759	46,111
GBR NAO DTS1824 NGI	163	1.7%	29,619	489	466	12,887	2.5%	10,397	2.2%	17,279,584	14,009,550	1.3%	37,467,340	2.4%	42,609,881	15,276,741	35.9	4,624,849	10.9	202,647	32,817
FRA NAO DRB1218 NGI*	85	0.9%	22,320	353	228	11,840	2.3%	11,840	2.5%	9,343,362	15,992,079	1.5%	40,679,931	2.6%	42,537,706	23,697,258	55.7	7,011,817	16.5	279,002	103,741
IRL NAO TM 40XX	20	0.2%	29,361	132	121	950	0.2%	392	0.1%	9,056,388	94,446,595	8.7%	37,977,322	2.4%	39,223,076	21,226,090	54.1	6,478,733	16.5	1,627,705	174,787
GBR NAO DTS1218 NGI*	196	2.0%	29,479	596	505	21,347	4.1%	18,154	3.8%	13,099,738	13,648,876	1.3%	35,825,050	2.3%	38,330,378	17,854,050	46.6	6,663,130	17.4	125,436	35,332
BEL NAO TBB2440 NGI	28	0.3%	19,327	120	82	4,418	0.9%	4,487	0.9%	16,685,462	9,932,374	0.9%	33,965,297	2.2%	35,503,049	17,889,205	50.4	6,061,134	17.1	999,749	218,696
FRA NAO FPO0010 NGI	305	3.1%	19,841	370	177	26,360	5.1%	26,360	5.6%	2,721,360	7,979,479	0.7%	23,917,395	1.5%	29,874,823	19,911,618	66.7	6,919,476	23.2	85,983	112,606
GBR NAO TBB2440 NGI*	36	0.4%	22,826	207	256	5,967	1.2%	5,301	1.1%	20,488,205	7,746,301	0.7%	28,213,179	1.8%	28,267,707	9,434,182	33.4	1,962,905	6.9	337,289	36,899
IRL NAO FPO0010	543	5.5%	11,775	713	530	19,917	3.9%	19,917	4.2%	3,626,956	4,239,308	0.4%	9,393,427	0.6%	23,313,108	13,842,697	59.4	7,266,433	31.2	25,493	26,097
DNK NAO TM 40XX NGI	11	0.1%	3,270	8	14	243	0.0%	102	0.0%	2,523,567	59,536,447	5.5%	22,946,268	1.5%	23,186,994	20,407,370	88.0	17,209,051	74.2	16,333,737	1,445,373
FRA NAO DFN2440 NGI	18	0.2%	5,855	158	152	2,445	0.5%	2,445	0.5%	3,331,813	10,202,047	0.9%	25,310,307	1.6%	22,850,294	15,219,869	66.6	7,577,261	33.2	1,271,788	100,378
FRA NAO FPO1012 NGI	70	0.7%	9,422	188	141	10,354	2.0%	10,354	2.2%	2,471,817	7,546,410	0.7%	18,589,391	1.2%	22,754,097	14,819,514	65.1	5,661,065	24.9	244,772	104,859
GBR NAO FPO1218 NGI	77	0.8%	10,724	251	282	8,711	1.7%	7,317	1.5%	5,342,848	10,322,826	0.9%	19,837,063	1.3%	22,744,951	12,553,539	55.2	4,928,153	21.7	256,343	44,587
GBR NAO DRB1218 NGI	117	1.2%	18,749	316	277	11,741	2.3%	10,245	2.2%	7,899,888	8,116,020	0.7%	20,444,657	1.3%	21,006,059	6,458,248	30.7	518,380	2.5	67,107	23,322
DEU NAO DTS40XX NGI	7	0.1%	4,940	65	54	502	0.1%	398	0.1%	4,609,620	7,362,331	0.7%	18,048,726	1.1%	18,702,982	11,313,674	60.5	5,152,130	27.5	5,144,918	210,611
FRA NAO DFN1012 NGI	162	1.7%	11,534	222	137	10,365	2.0%	10,365	2.2%	2,120,858	5,592,101	0.5%	18,206,815	1.2%	18,531,648	11,768,258	63.5	3,402,376	18.4	169,174	86,110
FRA NAO DTS1218 NGI	149	1.5%	7,796	106	91	5,882	1.1%	5,882	1.2%	5,097,680	7,066,778	0.6%	18,037,440	1.1%	18,153,753	10,471,145	57.7	3,042,818	16.8	342,880	114,501
FRA NAO MGP1218 NGI*	34	0.3%	7,340	121	76	4,268	0.8%	4,268	0.9%	3,857,548	4,851,827	0.4%	12,132,102	0.8%	17,908,546	11,407,627	63.7	4,160,019	23.2	352,538	150,847
GBR NAO FPO1012 NGI	179	1.8%	15,501	331	236	16,645	3.2%	13,854	2.9%	2,630,219	6,819,519	0.6%	16,088,878	1.0%	17,754,497	10,757,303	60.6	4,315,789	24.3	96,044	45,607
FRA NAO TM 40XX NGI	4	0.0%	5,807	63	68	286	0.1%	286	0.1%	5,617,563	31,000,837	2.8%	17,035,423	1.1%	17,122,130	8,676,866	50.7	3,798,758	22.2	3,878,102	126,859
GBR NAO TBB1824 NGI	17	0.2%	3,978	110	86	4,226	0.8%	3,668	0.8%	5,422,498	4,182,272	0.4%	16,812,739	1.1%	16,824,309	9,708,591	57.7	4,830,236	28.7	571,094	113,221
FRA NAO DRB1012 NGI	81	0.8%	10,836	200	90	8,814	1.7%	8,814	1.9%	2,616,365	8,441,782	0.8%	14,534,643	0.9%	16,411,046	9,907,318	60.4	3,302,423	20.1	123,602	110,591
FRA NAO DTS40XX NGI	10	0.1%	7,346	71	69	892	0.2%	892	0.2%	7,254,394	10,111,466	0.9%	22,024,800	1.4%	15,817,306	4,634,998	29.3	128,437	0.8	1,202,365	66,909
IRL NAO TM 2440	12	0.1%	5,169	57	49	888	0.2%	354	0.1%	2,670,633	28,502,541	2.6%	13,874,432	0.9%	15,565,547	8,398,608	54.0	4,972,502	31.9	1,149,140	170,339
GBR NAO DRB2440 NGI*	23	0.2%	9,084	89	125	2,993	0.6%	2,596	0.5%	4,103,925	6,693,503	0.6%	15,009,913	1.0%	15,085,177	8,644,854	57.3	3,743,302	24.8	610,827	68,982
NLD NAO DTS2440 NGI*	27	0.3%	3,998	45	43	1,349	0.3%	1,151	0.2%	3,075,667	4,380,868	0.4%	14,425,652	0.9%	14,514,890	9,621,877	66.3	5,013,882	34.5	1,256,809	222,992
FRA NAO DFN1218 NGI*	69	0.7%	5,168	107	86	4,262	0.8%	4,262	0.9%	1,374,625	4,258,006	0.4%	14,766,691	0.9%	14,285,032	9,260,607	64.8	2,786,952	19.5	399,574	107,698
IRL NAO DRB0010	156	1.6%	5,031	202	152	1,482	0.3%	1,482	0.3%	1,951,368	959,108	0.1%	3,530,108	0.2%	14,254,350	9,718,428	68.2	7,054,540	49.5	62,298	63,804
FRA NAO MGP1012 NGI*	54	0.6%	6,262	105	66	6,519	1.3%	6,519	1.4%	2,237,808	15,269,081	1.4%	13,910,259	0.9%	13,486,050	8,809,184	65.3	3,236,654	24.0	220,424	134,450
FRA NAO DTS1012 NGI*	167	1.7%	7,439	126	83	9,638	1.9%	9,638	2.0%	3,364,736	4,264,605	0.4%	12,700,936	0.8%	12,951,946	7,125,109	55.0	2,032,546	15.7	124,925	86,106

Data source: MS data submissions under the DCF 2018 Fleet Economic (MARE/A3/AC(2018)); All monetary values have been adjusted for inflation; constant prices (2015).

4.5 Southern Western Waters

Regional Details

The Southern Western Waters covers the Atlantic zone running from the tip of Brittany in the North, to the Strait of Gibraltar in the south and including the outermost regions of Madeira, the Azores and the Canary Islands (zones ICES VIII, IX and X, and the COPACE divisions 34.1.1., 34.1.2, 34.2.0). For simplicity EU vessels operating in the aforementioned fishing areas are referred to as the EU Southern Western Waters (SWW) fleet.

The main fishing nations in the SWW are France, Portugal and Spain.

Ten MS fleets operated in the region in 2017; Belgium, Denmark, France, Germany, Ireland, Lithuania, the Netherlands, Portugal, Spain, and the United Kingdom, yet most of these fleets have limited fishing activity in the region (effort and landings shares in the region were less than 20% of the total). Therefore, according to the available data, the main fleets operating in the region were the Spanish, French, and Portuguese. Some effort data by FAO fishing area (division) are missing for France in 2008 and 2009.

Based on the value of landings, the Spain produces the most from the region, followed by France and then Portugal. However, Portugal has the highest total percentage of national landed value from the sub-region at 77%, followed by Spain (28%) and France (26%). None of the remaining countries in the area are fishing more than 6% of their national percentage in SWW (Figure 4.60).

As in most fishing regions, the SSCF dominates in number of vessels while the LSF is the main segment in terms of fishing activity and production (Figure 4.61).

Tables at the send of this section contain a summary of the economic performance of the Southern Western Waters fleet by Member State, main type of fishing activity and fleet segment.

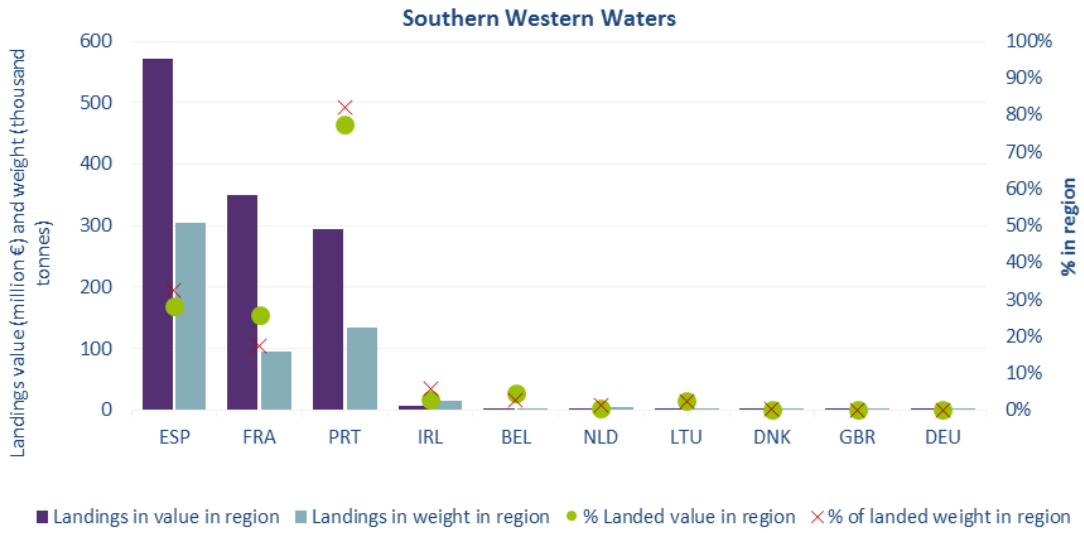


Figure 4.60 Importance of the Southern Western Waters for MS fleets in terms of landings in weight and value, 2017
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

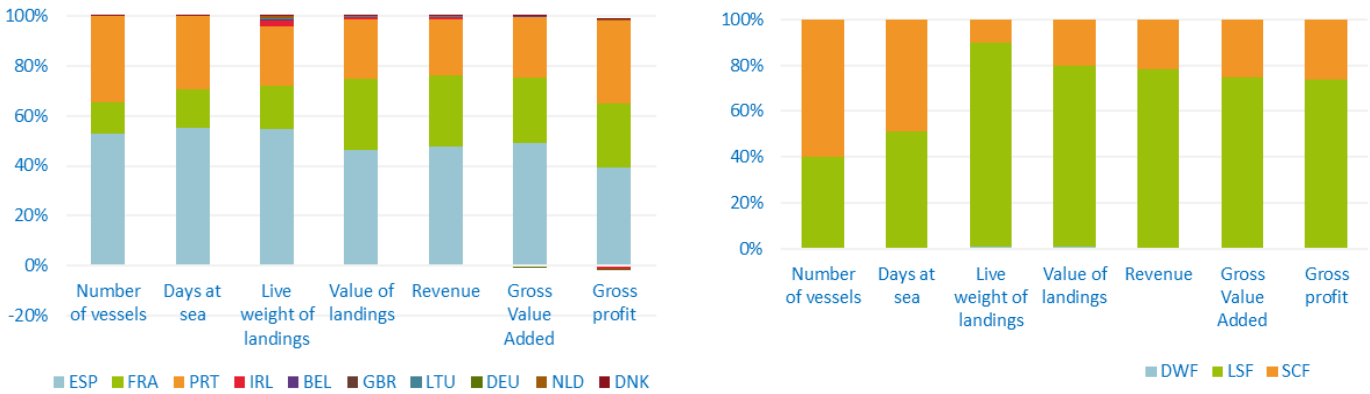


Figure 4.61 Share of MS fleets and fishing activity in the Southern Western Waters, 2017
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Overview of the main results for EU fleets in the SWW

Fishing effort and landings

Fishing effort has tended to decrease over the period analysed while landings have tended to stagnate in volume while smoothly growing in value, from 2014 onwards. The value of landings increased by 13% and by 5% in volume between 2014 and 2017 (Figure 4.62). For certain species it is particularly clear the inverse relationship between volume and prices, as in the case of the blue shark, which landings decreased by 23% from 2016, while prices increased by 88%. On the contrary, the increase in sardine or anchovy landings was accompanied by a reduction in prices.

Fishing opportunities and prices are major drivers of revenues, but also operational costs, as fuel, whose prices averaged EUR 0.38 per litre signalling a growing path that continues in 2018.

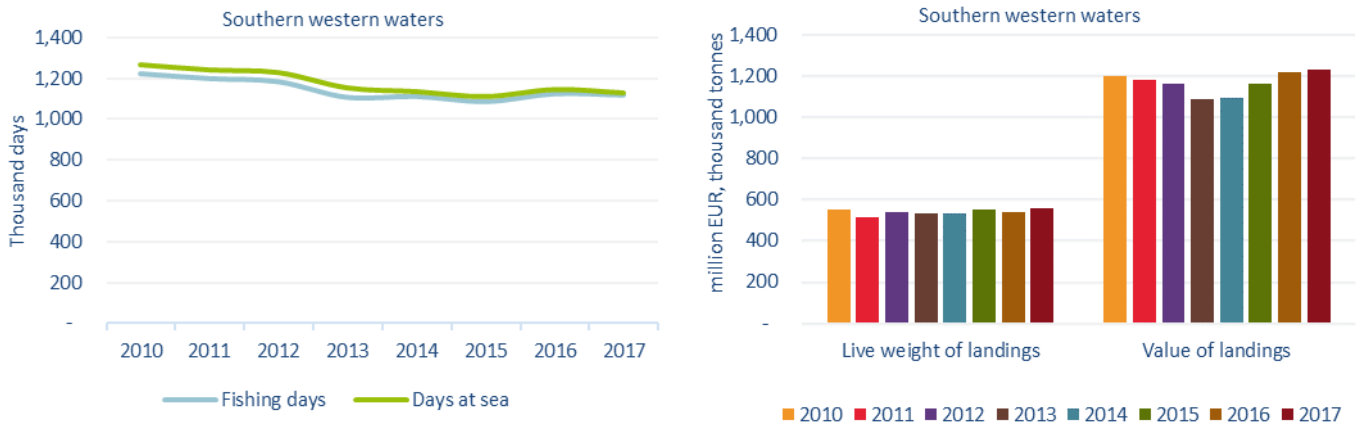


Figure 4.62 Trends on effort and landings for MS fleets operating in the Southern Western Waters
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Employment

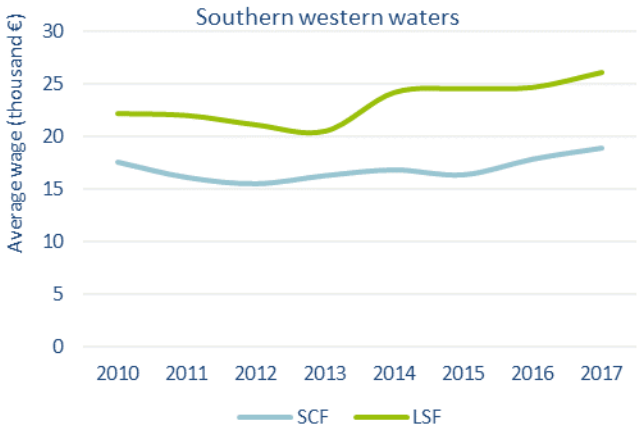
Total employment in the region is estimated at 37 thousand with the number of Full Time Equivalent (FTE) employees at 24.6 thousand. Employment in this region has followed a decreasing trend (-3.7% in FTE compared to 2010), even though yearly variations may oscillate. The bulk of the reduction stems from the Portuguese fleet, while employment in the Spanish fleet increased slightly (+2%). The most important fleets in terms of overall employment correlate to the same fleets with the highest dependencies on the region. Spain employs the most fishers with 15 035 thousand FTE, followed by Portugal (7 307) and then France (2 205). Together, these MS fleets cover 99% of the employment.

Employment for the LSF is highest for Spain and Portugal, totalling 12 698 and 6 629 respectively, reflecting the high number of active vessels in these MS. These numbers have decreased slightly in Portugal from their 2016 position, while they have increased by 10% in Spain.

The SSCF, for all MS, demonstrates a marked difference between the numbers of total employed and total FTE indicating that a large number of those employed are part-time or casual workers. Total employed for the SSCF was highest in Spain and Portugal reflecting their high number of SSCF vessels. LSF figures for total employed and FTEs are closer in value indicating a high level of full time employment.

Wages and Salaries

Average wages per FTE in the SSCF has tended to grow, increasing by 8% since 2010. Nevertheless, this growth is not equally distributed along the years, in fact, salaries started to grow from 2013 onwards and in particular after 2015. For LSF wages also decreased until 2013 but have grown since, registering an 18% increase compared to 2010. The gap in salaries between SSCF and LSF has increased since 2010, with the average wage in 2017 being around EUR 19 000 and EUR 26 000, respectively (Figure 4.63). Similarly, the gap between productivity (GVA per FTE) in the SSCF and LSF has tended to increase.



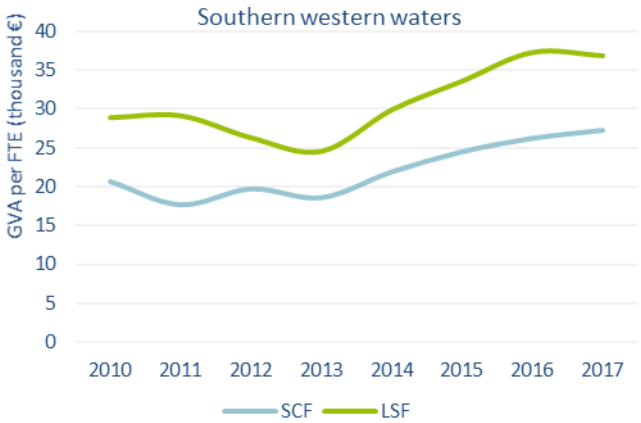
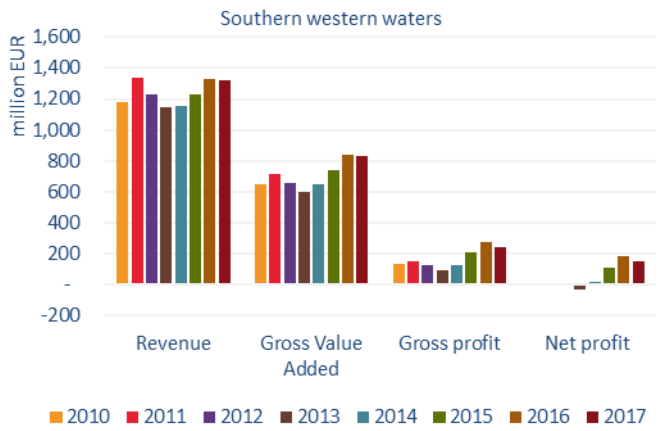


Figure 4.63 Trends on average wage and labour productivity (GVA per FTE) by fishing activity for MS fleets operating in the Southern Western Waters
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Revenue and profits

In 2017, the fleet operating in the SWW generated over EUR 1.3 billion in revenue, EUR 832 million in GVA and EUR 243 million in gross profits. Overall, revenue and profits have recovered since 2013, going from a loss making position to posting net profits. The fleet as a whole was profitable in 2017, posting a net profit of over EUR 152 million (and a 12% profit margin) (Figure 4.64).



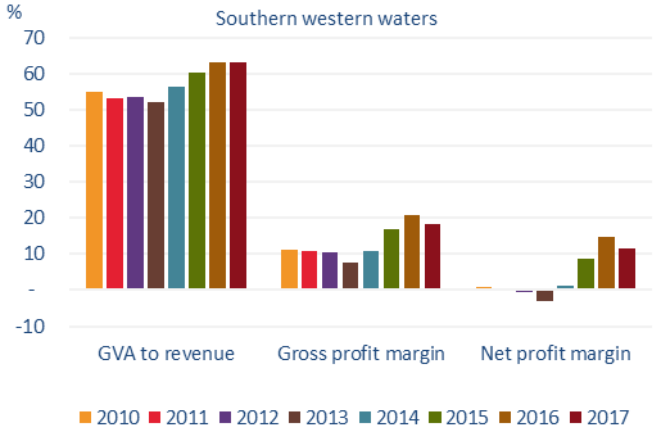


Figure 4.64 Trends on revenue and profits for MS fleets operating in the Southern Western Waters
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Main drivers affecting fleet performance in the region

Factors that may have contributed to the positive situation include:

- Most of the stocks have generally progressed towards MSY and, particularly, key stocks such as the case of the Northern hake stock, which continues to follow a positive trend.
- Increased TACs for a number of stocks, e.g. hake, blue whiting or mackerel and subsequently, higher landings.
- Prices have been generally stable with certain species particularly contributing to boost revenues as is the case of hake, albacore and blue shark.

Factors that may have hampered economic performance in the region include:

- Lower average prices for European pilchard, European anchovy, blue whiting and chub mackerel.
- Moderate increase in fuel prices resulting in slightly higher energy costs, especially for pelagic fisheries. This trend will continue in the next years.

On the other hand, crew wages have tended to grow in real terms in 2017, thus, achievements in environmental and economic sustainability could also be contributing to social sustainability.

Trends by Member State fleet and fishing activity

Fleet capacity and employment

According to the figures estimated at the regional level, the ten Member State fleets operating in the SWW collectively numbered over 10 940 vessels even though Spain, Portugal and France represent 99% of the total. This makes the SWW the second largest region after the Mediterranean (22 748 vessels) in terms of vessel number. The Spanish fleet comprised the largest fleet in number (around 5 805 active vessels in the region), followed by Portugal (3 755) and France (1 367) (Figure 4.65).

The SSCF accounted for 59% of the number of vessels and 49% of the days-at-sea, while LSF generated by far the highest landed weight, with 88,8% of the total and 79% of the value in 2017. I should be noticed that the participation of the SSCF in the total value of the landings has remained stable (about 20%) along the period.

While the SSCF covered 60% of the number of vessels, employment estimated for this group amounted to more than 15 460 jobs and around 7 660 FTE in 2017, representing respectively around 427% of the total jobs and 31% of the total FTEs and indicating the predominate part-time nature of this fishing fleet.

Fleet capacity and employment in the region have followed a general decreasing trend over most of the period analysed, apart from a slight increase in FTE in 2015-2016 (Figure 4.65).

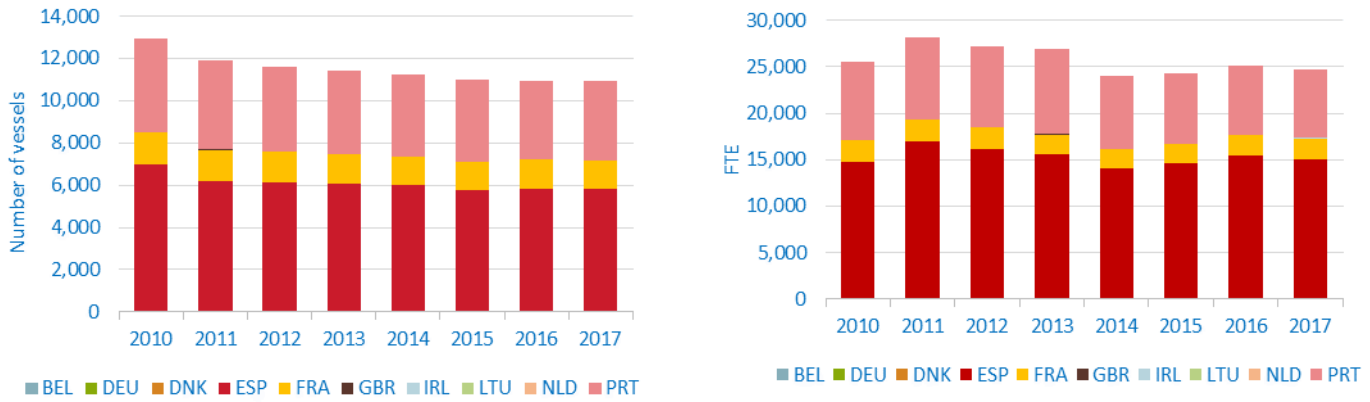


Figure 4.65 Trends on the number of vessels and employment (in FTE) for MS fleets operating in the Southern Western Waters regions
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019))

Fishing effort

The latest official data suggests that the SWW fleet spent over 1.1 million days-at-sea in 2017; 55% of which were deployed by the Spanish fleet (Figure 4.66).

The number of days-at-sea per fishing activity has remained quite balanced in recent years. In 2017, SSCF vessels accounted for 49% of the total number of days-at-sea but only 10% of the landed weight and 20% of the value.

Fishing effort has decreased much in line with capacity, with a 15.5% decrease in the number of vessels from 2010 and a 11% decrease in days-at-sea. Between 2010 and 2015, almost 2 000 vessels ceased activity in the region, 60% of which were Spanish vessels. This decreasing trend in vessel number and also in engine power and gross tonnage is expected to continue for the coming years.

Energy consumption has also followed a general decreasing trend from 2013 to 2015. In 2016, a slight increase in energy consumption reflects the increase in effort and fuel prices in 2017.

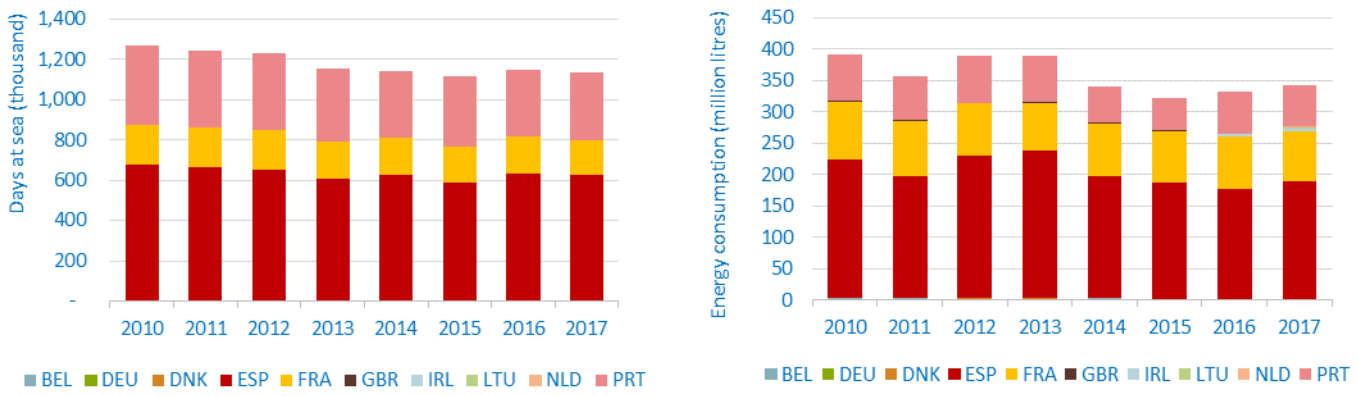


Figure 4.66 Trends on fishing effort (in days-at-sea) and energy consumption for MS fleets operating in the Southern Western Waters
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019))

Landings and top species

The weight and value of landings generated by the SWW fleet amounted to approximately 557 600 tonnes and EUR 1.23 billion, respectively. In terms of landed weight, the Spanish (304 000 tonnes, EUR 570 million), Portuguese (133 300 tonnes, EUR 294 million) and French (96 172 tonnes, EUR 349 million) were the leading national fleets, together accounting for over 96% of the total

Landings in weight increased by 3.3% in 2017 compared to 2016, while the value increased by just 1% (Figure 4.67). Landings are mainly generated by the large-scale fleet, making up 89% of the live weight and 79% of the landed value.

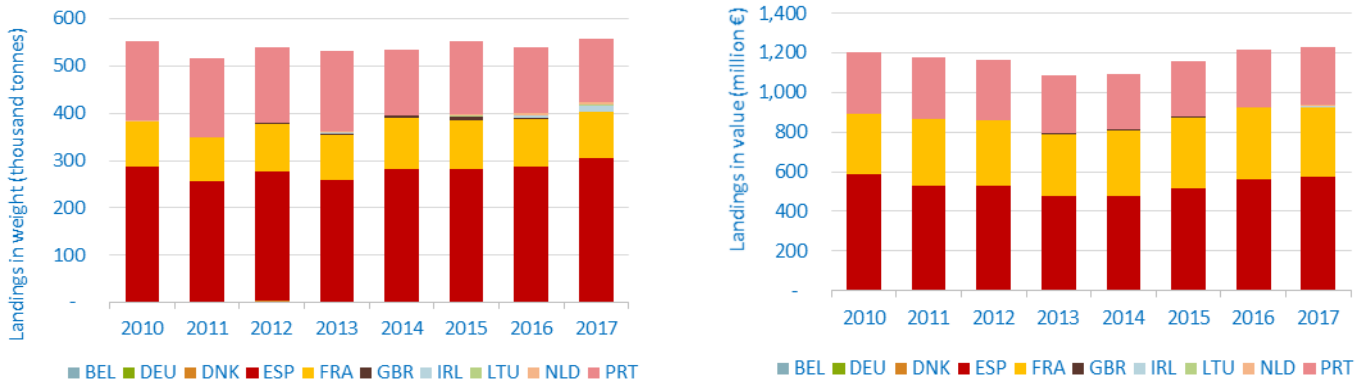


Figure 4.67 Trends on landings in weight and value from MS fleets operating in the Southern Western Waters
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

In 2017, the main species landed by the SWW fleet in terms of weight were small pelagic species, including chub mackerel (79 800 tonnes), sardine (51 600 tonnes), followed by European Atlantic mackerel (42 255 tonnes) and anchovy (39 700 tonnes). In terms of value, European hake (EUR 116 million) was the most important species in 2017, followed by albacore (EUR 79 million) and European anchovy (EUR 67 million) (Figure 4.68).

The top species can be seen as drivers for MS fleets. The share of landed value of European hake is dominated by Spain and France (92%). Norway lobster, common sole, and European seabass landings values, are dominated by France, with 85%, 80% and 68% of total landings. Albacore landings are dominated by Spain (83%). Regarding small pelagic fishes, European pilchard landings are led by Portugal (47% share) and Spain (39%). For European anchovy and Atlantic mackerel Spain is the main MS dependent on this species with 78% and 75% of the share. Finally, blue shark is shared between the Spanish (50%) and the Portuguese (49%) fleets, as well as, common octopus (35% and 65% respectively).

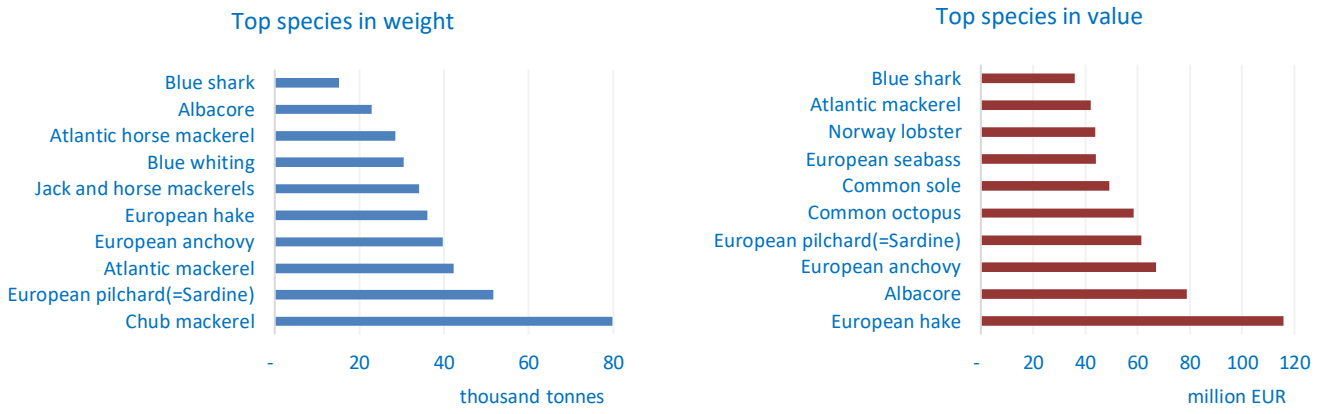


Figure 4.68 Top 10 species in landed weight and value for MS fleets operating in the Southern Western Waters, 2017
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Temporal trends in the value and weight of landings have been significantly influenced by fluctuations in TAC and quotas for Atlantic mackerel, blue whiting and hake. Mackerel went through a significant increase in 2014 followed by a decrease after 2015, which impacted the total value of landings for MS targeting this species. European pilchard area is of particular importance in the region, the biomass of which has been declining and, consequently, landings, even though there is a certain increase in catches in 2017 (Figure 4.69).

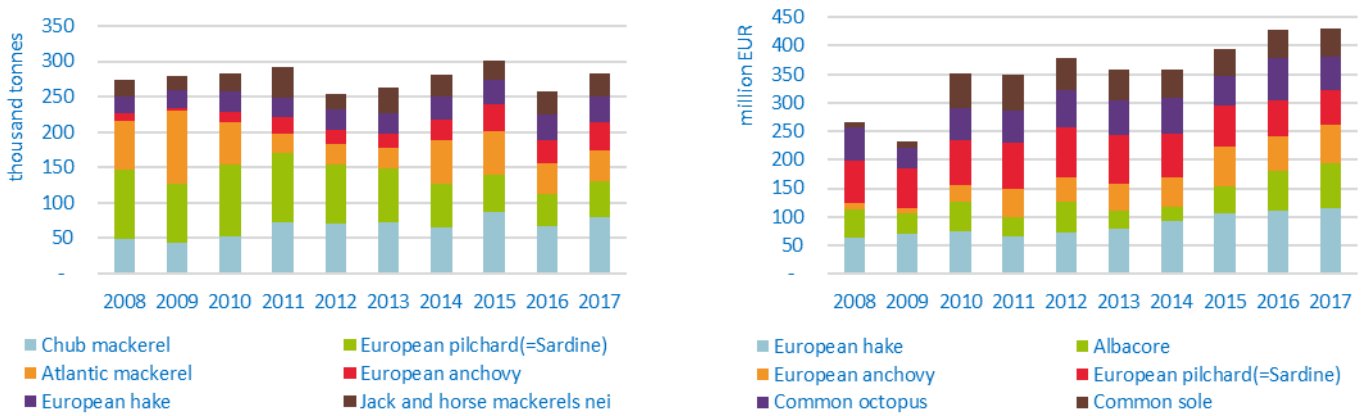


Figure 4.69 Trends on landings of the top species in landed weight and value for MS fleets operating in the Southern Western Waters
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Socio-Economic performance

The revenue (income from landings and other income) generated by the SWW fleet covered in the analysis in 2017 was estimated at EUR 1.3 billion, 99% produced by three MS fleets: Spain (EUR 631.9 million), France (EUR 375.5 million) and Portugal (EUR 296.4 million). Revenue decrease by 0.7% compared to 2016 (Figure 4.70).

The GVA generated amounted to EUR 832 million, an overall decrease of 1% compared to 2016. GVA increased 1.5% for the Spanish and 0.1% for the Portuguese fleets while France saw a 7.4% reduction.

After accounting for operating costs, the fleet made EUR 243 million in gross profit, a decrease of 11.6% compared to 2016. By country, the Spanish fleet produced the highest gross profit (EUR 98 million), followed by the Portuguese fleet (EUR 82 million) and then the French fleet (ERU 64 million).

By fishing activity, the SWW SSCF generated EUR 287 million in revenue in 2017, while the large-scale fleet generated EUR 969.6 million in revenue.

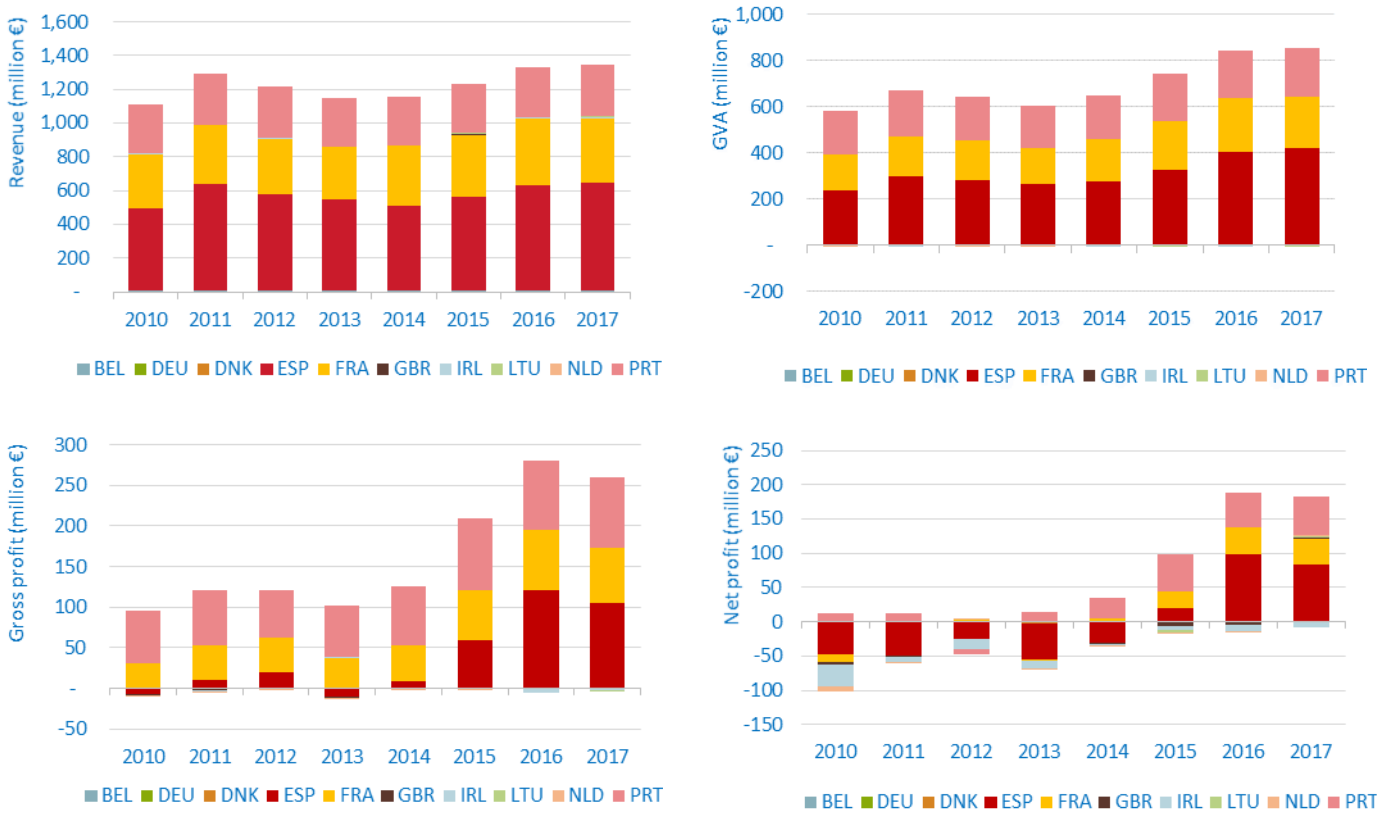


Figure 4.70 Trends on revenue and profit for MS fleets operating in the Southern Western Waters fishing regions
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Main factors affecting the performance of the fleet

The impact of changes in TACs and prices at MS level varies as their species composition and species dependency can differ considerably. In SWW, the main fishing nations, Spain, France and Portugal, relay on a diversified group of species, while less relevant countries in this area, such as Belgium, Germany, Denmark, the UK, Ireland, Lithuania or the Netherlands are strongly oriented to one specific species. In the case of Spain the most relevant species are hake (21% of the top ten species in value), Atlantic mackerel (17%), albacore (16%), European anchovy (14%) and sardine (12%); in the case of France, common sole (25%), hake (20%), Norway lobster (20%), and European seabass (17%). As for Portugal, main species amongst the top ten are common octopus (33%) and sardines (31%). On the other hand, Belgium strongly targets common sole (99.6%), Ireland on albacore (95%), Germany (100%), Denmark (99%), the UK (80%) and The Netherlands (61%) on Atlantic mackerel and, finally, Lithuania on chub mackerel (82%).

Regulation and fisheries management in the region

- Council Regulation (EC) No 1300/2008 established a multi-annual plan for the herring stock distributed to the west of Scotland and the fisheries exploiting that stock in international and EU waters in ICES zones Vb and VIb, and the northern part of ICES zone VIa excluding the Clyde. The UK and Irish fleets were the most important fleet segment for this fishery. Most herring stocks (North Sea, Irish Sea and Celtic Sea) are fished in accordance with MSY, with corresponding 2016 TAC for these stocks. The situation is also positive for southern and western horse mackerel and the TAC allows fishing at levels corresponding to MSY in 2016.
- Long-term plan for cod stocks and the fisheries exploiting those stocks (Council Regulation (EC) No 1342/2008). The long-term plan for cod has an impact on the North-eastern Member States. The French, Belgian, German, UK, Irish, Dutch, Spanish and Portuguese fleets all have quota for cod and thus interact with the cod fisheries. As days-at-sea restrictions are becoming more constraining, it may have an effect on the economic performance of the fleets. Nevertheless, the catches of cod in SWW are reduced.

- Council Regulation (EC) No 388/2006 established a multiannual plan for the sustainable exploitation of the stock of sole in the Bay of Biscay covering ICES areas VIIIa and VIIIb. The French DFN segments are the most important fleets in term of sole landings in weight in this area.
- Council Regulation (EC) No 2166/2005 established measures for the recovery of the Southern hake and Norway lobster stocks in the Cantabrian Sea and Western Iberian Peninsula and amending Regulation (EC) No 850/98 for the conservation of fishery resources through technical measures for the protection of juveniles of marine organisms. This has been very successful.
- Council Regulation (EU) No 713/2013 establishing the fishing opportunities for anchovy in the Bay of Biscay for the 2013/14 fishing season. This management plan concerns mainly Spanish and French fleets.
- Measures for the recovery of eel. Area covered includes EU estuaries and rivers that flow into seas in ICES areas III, IV, VI, VII, VIII, IX and the Mediterranean (Council Regulation (EC) No 1100/2007 of 18 September 2007). In the region, this management plan applies mainly to France.
- Council Regulation (EC) No 302/2009- 500/2012 Measures concerning a multiannual recovery plan for bluefin tuna in the eastern Atlantic and Mediterranean. Three national fleets have been operating this fishery: the French, the Portuguese and the Irish fleet.
- Council Regulation (EC) No 811/2004 to increase the quantities of mature fish in the Northern hake stock to at least 140 000 tonnes. This management plan concerns Spanish, French, Portuguese, Irish, UK, Dutch and Belgian fleets and has been successful.

Other management measures that may affect economic performance of the fleets operating in SWW include marine protected areas and other legislation that has a multispecies impact.

In 2016, the landings obligation for demersal fisheries in the North Sea and the Atlantic EU waters came into force, bringing an important part of the EU fleet in SWW under the obligation to bring and retain on board, and to land all catches. Fishing opportunities for stocks falling under the landing obligation are fixed taking into account catches rather than landings, based on biological advice and in the understanding that this should not jeopardise the MSY objective or increase the fishing mortality.

Status of important stocks

Fishing has generally progressed towards MSY (fishing at or below MSY) in all areas of the Northeast Atlantic since 2006 and specifically in SWW. Although, certain important stocks in the AREA: hake, mackerel and whiting are overfished (but inside safe biological limits or managed under LTMP). One of the main horse mackerel stocks (IX), the main anchovy stocks, and since 2017, anglerfish are fished in correspondence with MSY. Only one Horse mackerel stock (VIIIc) and Sardine (VIIIc and IXa) is still outside safe biological limits. Sole (VIIIc and IXa) status of stocks is unknown.

TAC development of main species

In 2017, there were quotas for 18 fish species defined for the sub-region, 13 of them were demersal species, four pelagic species and one deep-sea species. There was in increase in the total TAC from 2016 to 2017 Figure 4.71).

Demersal species:

- This total TAC increase is mainly due to the positive development of hake stocks TAC (+18% in SWW from 2014 to 2017). In 2018 there is a slight reduction in hake TAC. Many hake stocks in divisions VI, VII and VIIIabd are exploited below MSY. Southern stocks are overfished but managed under technical measures for the conservation of fishery resources. French and Spanish fleets were the most impacted by this trend.
- In SWW anglerfish TAC increased slightly in 2017 and 2018. In 2018, the French TAC represented 59% of the SWW TAC.
- TAC of Common sole is stable in the SWW, after a 10% reduction in 2016.
- Norway lobster TAC in SWW remained quite stable, with a slight increase in 2017-2018. The main stock of Norway lobster (northern and central Bay of Biscay) is sustainably exploited being the French fleet the more active in this fishery. In the Cantabrian Sea TAC is 0 and in Atlantic Iberian waters the fishing possibilities are currently reduced.

Pelagic Species:

TACs for pelagic species in SWW have varied since 2001 especially for blue whiting and mackerel with very high values in 2005 and then again in 2014.

- TAC for mackerel is a major determinant of fishing opportunities, peaking in 2014 and, from then on it has tended to decrease, with the exception of 2017, impacting mainly the Spanish and Portuguese fleets.
- TAC for horse mackerel increased in areas 8c to 9 in 2014, positively impacting the Portuguese and Spanish fleets.
- TAC for anchovy increased significantly from 2014 to 2017. Spain, Portugal and to a lesser extent France shared this TAC.
- TAC for blue whiting increased each year from 2014 to 2018 in both sub-regions of the Northeast Atlantic. This increase positively affected the five most important MS fleets in the region.

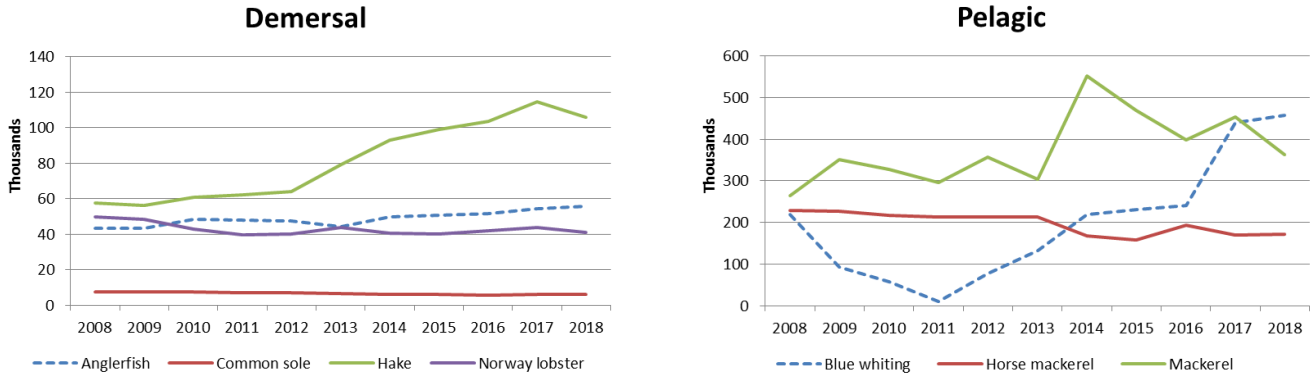


Figure 4.71 Trends on TACs for major demersal (left) and pelagic (right) stocks in the Southern Western Waters
Source: Calculated based on 2017 TAC Council Regulations and BEMEF modelling

Landing obligation

The discard ban for pelagic stocks came into effect on 1 January 2015, was extended to certain demersal species as of 1 January 2016 and applies to all regulated stocks as of 2019. In 2017, no major problems have yet been detected. Nevertheless, certain potential economic and social impacts have been identified, such as additional handling time in sorting and storing of unwanted catches, the role of choke species in mixed fisheries or, specifically, the loss of quota and low prices for fish sold for non-direct human consumption. In this area whiting, horse mackerel and alfonsinos are the most likely species to become choke and Spain and France, the MS most likely to be affected.

For the moment there is no quantitative evidence of economic and social impact but as MS are required to report annually on the impact of the LO on their fleets, data gathered in the next years should provide insights on eventual impacts.

Description of relevant fisheries in the region

Small-scale coastal fleet

There were small-scale coastal fleets from five Member States operating in SWW, even though apart from the Spanish, the French and the Portuguese fleets, the activity of the other MS SSCF in the area is negligible. The dependency of these fleet of this area its quite different. While 100% of the Portuguese SSCF fished in the area in 2017, it represented a part of the SSCF fishing activity for Spain (71%) and France (45%) as these also have SSCFs operating in the Mediterranean Sea. In terms of vessel numbers Portugal and Spain have the highest number of active SSCF vessels with 3 004 vessels and 2 811 vessels, respectively.

Overall the SSCF was profitable in 2017, totalling EUR 209 million in GVA and EUR 64 million in gross profit. The most profitable in terms of gross and net profit margins was the Portuguese SSCF with 40% and 30%, respectively. In terms of productivity, the Gross Value Added per FTE varied from EUR 19 000 (Spain) to EUR 87 000 (France).

Total employment for the SSCF is highest for Spain and Portugal, totalling 6 831 and 7 412, respectively, reflecting the high number of active vessels in these MS. All MS in the SWW demonstrate a much lower FTE figure in comparison with total employed indicating that a large majority of those employed in the SSCF are part-time or casual workers.

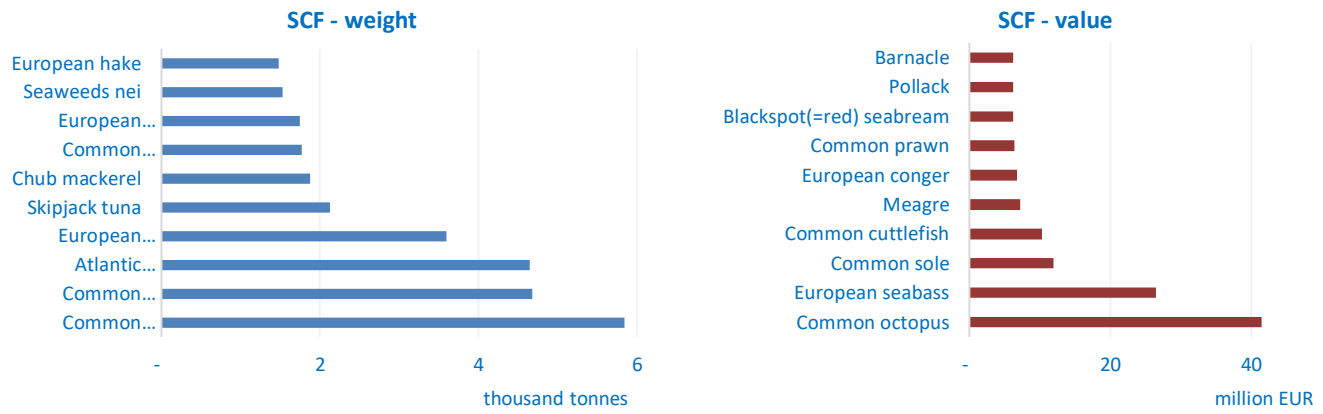


Figure 4.72 Top 10 species landed by SSCF operating in the Southern Western Waters, 2017
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Large-scale fleet

There were nine MS large-scale fleets operating in SWW totalling 4 410 active vessels. Spain, Portugal and France have the largest number of active vessels and together account for 99.7% of the total number of vessels in the region.

Overall the LSF was profitable in 2017, totalling EUR 832 million in GVA and EUR 243 million in gross profit. Gross profit for the Spanish LSF amounted to EUR 84 million, EUR 49.3 for the French and EUR 47.3 for the Portuguese LSF. As for profitability, gross and net profit margins were 23% and 13% for the Portuguese fleet, 17% and 9% for the French and 16% and 13% for the Spanish fleet, respectively. When considering average GVA per vessel, differences are also noticeable; EUR 246 326 for the French fleet, EUR 178 714 for the Portuguese fleet and EUR 107 602 for the Spanish fleet.

Additionally, two distant water fleets (Portuguese and Spanish fleets) had some activity in the region in 2017, as well as minor activity by the Lithuanian fleet. Note: Data on the EU distant water fleets operating in the region is limited and the economic indicators are to be interpreted with caution.

Total employment for the LSF is highest for Spain and Portugal totalling 12 698 and 2 079, respectively, reflecting the high number of active vessels in these MS. While the SSCF, for all MS, demonstrates a considerable difference between the numbers of total employed and total FTE, the LSF figures for total employed and FTE are closer in value indicating the high level of full-time employment in this segment.

MS can be classed into different categories according to their dependency which is representative of their large-scale fleet landings composition in SWW:

- Five MS have a high dependency on one or two species in the region. For the Belgian fleet common sole constitutes 79% of landing value, Atlantic mackerel represents 88% of landing value for the German fleet, for Denmark Atlantic horse mackerel constitutes 94% of total landings from the region, albacore represents 76% of the landing value of the Irish fleet and European pilchard constitutes 77% of the Dutch landings.
- One MS, the UK, has medium-high dependency on two species: anglerfishes, which constitutes 60% of its landing value from the region and Atlantic mackerel that constitutes 37%.
- For Spain, France and Portugal, the landing composition is more diverse, with hake playing a key role. The main species by landing value for Spain were hake (20%), albacore (16%), anchovy (16%), Atlantic mackerel (9%) and jack and horse mackerels (8%). As for France, hake (20%), Norway lobster (18%), common sole (13%) monkfishes (11%) and sardine (8%). Finally, the main species by landing value for Portugal were sardine (20%), Atlantic horse mackerel (15%), anchovy (12%), common octopus (9%) and blue shark (8%).

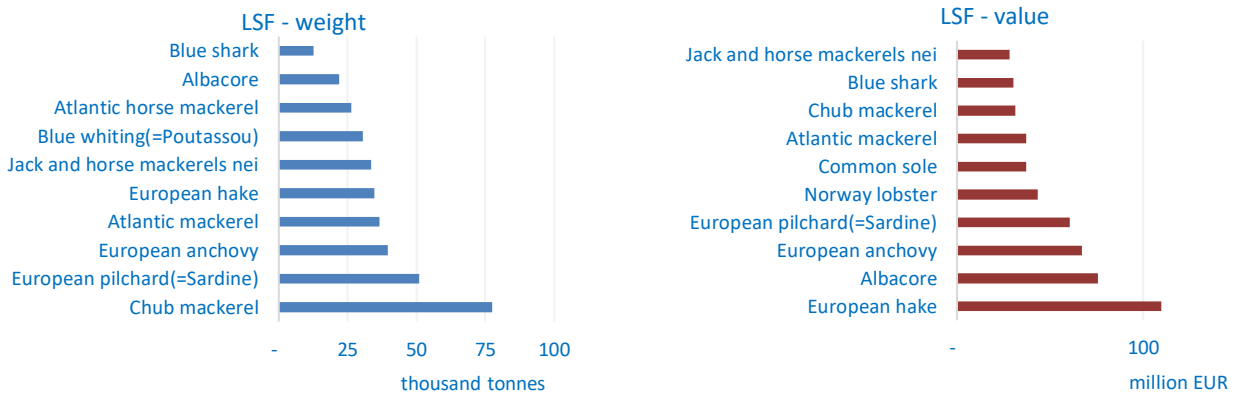


Figure 4.73 Top 10 species landed by LSF operating in the Southern Western Waters, 2017
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Performance by fleet segments

Table 4.23 provides results for the top 40 MS fleet segments in terms of landed value operating in the SWW region in 2017. These 40 MS fleet segments, out of the 150 fleet segments identified in the area, represented over 78% of the vessels (8 521 vessels), 81% of the landed weight (450 000 tonnes) and 80% of the value (EUR 980 million) generated by fleets in the region in 2017.

At fleet segment level, the Spanish demersal trawlers between 24 and 40m generated the most revenue (EUR 104 million), followed by the Spanish purse seiners between 24 and 40m (EUR 83 million) and the Spanish vessels with less than 10m using active and passive gears (EUR 65 million). All of the top 40 fleet segments were profitable except for one fleet that suffered gross losses (Spanish hook and lines 24-40m based in the Canaries) and another fleet that suffered net losses (Spanish passive and active gears <10m also based in the Canary Islands).

Considering labour productivity, 13 top positions are occupied by French fleets, being the first one purse seiners between 12-18m (EUR 177 thousand GVA per FTE), followed by less than 10m vessels using hooks (EUR 126 thousand GVA per FTE) and demersal trawlers between 18-24m (EUR 112 thousand GVA per FTE). There is a wide gap between the most and the least efficient fleets, the latter occupied by the Portuguese drift netters between 12 and 18m, the Spanish vessels using active and passive gears of less than 10m and the Spanish drift netters between 10 and 12m, that also is the fleet with lower profitability.

Table 4.19 Key parameter estimates by MS fleets operating in the South Western Waters, 2017

SWW	Estimated no. of vessels	% of total EU active vessels	Total vessel tonnage	Total vessel power	Engaged crew	FTE national	Days at sea	as a % of total fishing days	Energy consumption	Live weight of landings	as a % of total weight landed	Value of landings	as a % of total value landed	Revenue	as a % of total revenue	Gross Value Added	GVA to revenue	Gross profit	Gross profit margin	Net profit	Net profit margin	Average GVA	GVA per FTE (labour productivity)
	number	(%)	GT	kW	number	number	day	(%)	litre	kg	(%)	euro	(%)	€	(%)	€	%	€	%	€	%	€	€
ESP	5,805	53.1%	91,062	302,820	19,600	15,035	624,045	55.1%	188,240,849	304,037,879	54.5%	570,322,704	46.4%	631,855,689	47.8%	410,276,904	64.9	98,308,045	15.6	74,508,532	11.8	70,682	27,288
FRA	1,367	12.5%	31,861	200,930	3,297	2,205	174,312	15.4%	79,639,609	96,172,152	17.2%	348,773,877	28.4%	375,502,556	28.4%	214,963,488	57.2	64,035,856	17.1	32,545,842	8.7	157,206	97,469
IRL	9	0.1%	5,393	10,869	74	66	1,001	0.1%	4,134,096	14,404,365	2.6%	7,245,939	0.6%	8,497,756	0.6%	- 582,375	- 6.9	- 2,747,457	- 32.7	- 6,585,304	- 78.5	- 70,093	- 9,112
PRT	3,755	34.3%	44,379	236,713	14,054	7,307	331,784	29.3%	66,344,400	133,311,553	23.9%	293,871,950	23.9%	296,377,254	22.4%	204,125,189	68.9	82,614,893	27.9	51,769,336	17.5	54,354	27,934
-	10,940		175,843	756,364	37,059	24,649	1,131,895		342,992,662	557,561,767		1,228,830,232		1,321,151,761		832,106,909		243,219,788		152,356,893			

Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).
MS fleets with less than 3 vessels are not shown

Table 4.20 Key parameter estimates by fishing activity for MS fleets operating in the South Western Waters, 2017

SWW	Estimated no. of vessels	% of total EU active vessels	Total vessel tonnage	Total vessel power	Engaged crew	FTE national	Days at sea	% of total days at sea	Live weight of landings	as a % of total weight landed	Value of landings	as a % of total value landed	Revenue	as a % of total revenue	Labour costs	as a % of total labour costs	Energy costs	as a % of total energy costs	Gross Value Added	GVA to revenue	Gross profit	Gross profit margin	Net profit	Net profit margin	Average GVA	GVA per FTE (labour productivity)
	GT	(%)	kW	number	number	number	day	(%)	litre	(%)	euro	(%)	€	(%)	€	(%)	euro	(%)	€	%	€	%	€	%	€	€
SCF	6,524	59.6%	19,070	244,118	15,460	7,660	554,896	49.0%	56,295,755	10.1%	248,711,888	20.2%	287,093,622	21.7%	145,098,726	24.6%	19,941,653	13.3%	208,922,520	72.8	63,823,795	22.2	43,605,341	15.2	32,024	27,274.6
LSF	4,410	40.3%	153,902	508,579	21,509	16,882	575,671	50.9%	495,394,917	88.9%	969,570,240	78.9%	1,024,550,265	77.5%	441,928,547	75.0%	128,710,081	85.5%	621,036,778	60.6	179,111,405	17.5	109,166,531	10.7	140,847	36,792.4
DWF	6	0.1%	2,870	3,668	90	107	1,328	0.1%	5,871,095	1.1%	10,548,103	0.9%	9,507,873	0.7%	1,863,022	0.3%	1,800,377	1.2%	2,147,611	22.6	284,589	3.0	- 414,980	- 4.4	378,187	20,014.3
-	10,940		175,843	756,364	37,059	24,649	1,131,895		557,561,767		1,228,830,232		1,321,151,761		588,890,294		150,452,111	100.0%	832,106,909		243,219,788		152,356,893			

Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Table 4.21 Key parameter estimates by MS and fishing activity operating in the South Western Waters, 2017

SWW		Estimated no. of vessels	% of total EU active vessels	Total vessel tonnage	Total vessel power	Engaged crew	FTE national	Days at sea	as a % of total DAS	Energy consumption	Live weight of landings	as a % of total weight landed	Value of landings	as a % of total value landed	Revenue	as a % of total revenue	Gross Value Added	GVA to revenue	Gross profit	Gross profit margin	Net profit	Net profit margin	Average GVA	GVA per FTE (labour productivity)
		number	(%)	GT	kW	number	number	day	(%)	litre	kg	(%)	euro	(%)	€	(%)	€	%	€	%	€	%	€	€
SCF	ESP	2,811	26%	7,755	70,304	6,831	4,530	260,941	23%	14,202,671	24,089,572	4%	83,360,640	7%	113,260,680	9%	86,269,522	76.2	13,705,536	12.1	10,089,866	8.9	30,685	19,043
	FRA	708	6%	4,033	72,746	1,217	606	76,900	7%	9,984,416	12,658,772	2%	76,641,046	6%	85,004,459	6%	52,648,655	61.9	14,734,815	17.3	7,472,694	8.8	74,315	86,936
	PRT	3,004	27%	7,282	101,066	7,412	2,524	217,053	19%	7,997,351	19,545,739	4%	88,707,645	7%	88,825,854	7%	70,002,645	78.8	35,382,992	39.8	26,042,447	29.3	23,303	27,735
LSF	BEL	2	0%	620	2,072	13	9	474	0%	1,789,020	642,847	0%	3,826,852	0%	3,991,730	0%	2,103,168	52.7	776,702	19.5	474,488	11.9	1,096,199	239,798
	ESP	2,989	27%	81,773	230,314	12,698	10,417	362,071	32%	171,139,826	276,265,438	50%	478,499,905	39%	511,155,873	39%	321,573,703	62.9	83,711,546	16.4	63,956,760	12.6	107,602	30,870
	FRA	659	6%	27,828	128,185	2,079	1,600	97,413	9%	69,655,193	83,513,380	15%	272,132,830	22%	290,498,097	22%	162,314,833	55.9	49,301,041	17.0	25,073,148	8.6	246,326	101,456
	GBR	1	0%	364	790	6	9	131	0%	238,660	348,153	0%	577,025	0%	582,942	0%	30,256	5.2	- 102,626	- 17.6	- 137,691	- 23.6	47,958	3,402
	IRL	9	0%	5,393	10,868	74	66	1,000	0%	4,133,678	14,403,060	3%	7,244,009	1%	8,495,772	1%	- 583,774	- 7.0	- 2,747,859	- 32.8	- 6,585,638	- 78.5	- 70,355	- 9,137
	PRT	751	7%	36,827	135,135	6,629	4,772	114,491	10%	58,007,067	113,545,538	20%	204,592,091	17%	206,979,458	16%	134,137,270	64.8	47,341,129	22.9	25,953,794	12.5	178,714	28,109
DWF	ESP	5	0%	1,535	2,202	70	88	1,033	0%	2,898,351	3,682,869	1%	8,462,160	1%	7,439,136	1%	2,433,679	32.7	890,963	12.0	461,906	6.2	537,331	27,685
	PRT	1	0%	270	512	12	11	240	0%	339,982	220,276	0%	572,214	0%	571,942	0%	- 14,725	- 2.6	- 109,228	- 19.1	- 226,905	- 39.7	- 15,800	- 1,290
-	-	10,940		175,843	756,364	37,059	24,649	1,131,895		342,992,662	557,561,767		1,228,830,232		1,321,151,761		832,106,909		243,219,788		152,356,893			

Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

MS fleets with less than 3 vessels are not shown

Table 4.22 Key parameter estimates for the top 40 fleet segments operating in the South Western Waters, 2017

Southern Western waters and CECAF (Madeira & Canary islands)	Estimated no. of vessels	% of total EU active vessels	Total vessel tonnage	Total vessel power	Engaged crew	FTE national	Days at sea	as a % of total fishing days	Energy consumption	Weight of landings	as a % of total weight landed	Value of landings	as a % of total value landed	Revenue	Gross Value Added	GVA to revenue	Gross profit	Gross profit margin	Net profit	Net profit margin	Average GVA	GVA per FTE (labour productivity)
	number	(%)	GT	kW	number	number	day	(%)	litre	kg	(%)	€	(%)	€	€	%	€	%	€	%	€	€
ESP NAO DTS2440 NGI	89	0.8%	23,002	36,579	1,049	1,134	19,284	1.7%	69,675,869	57,745,241	10.4%	90,173,533	7.3%	103,611,137	48,064,043	46.4	12,395,972	12.0	7,689,563	7.4	537,281	42,390
ESP NAO PS 2440 NGI	81	0.7%	11,344	28,484	1,268	1,439	9,522	0.8%	14,532,396	51,288,534	9.2%	78,712,245	6.4%	83,005,535	61,394,618	74.0	20,075,479	24.2	17,983,836	21.7	758,117	42,671
FRA NAO DTS1218 NGI	118	1.1%	5,832	30,238	411	355	22,813	2.0%	19,771,657	11,979,519	2.1%	64,506,165	5.2%	65,004,873	35,207,421	54.2	8,641,958	13.3	2,921,014	4.5	297,243	99,261
ESP NAO PMP0010 NGI	1,954	17.9%	3,861	40,829	4,616	3,066	184,837	16.3%	7,567,114	10,369,711	1.9%	49,414,584	4.0%	64,991,583	48,678,054	74.9	7,455,217	11.5	5,830,542	9.0	24,913	15,877
FRA NAO DTS1824 NGI*	45	0.4%	5,867	19,012	225	208	9,206	0.8%	18,613,928	11,205,727	2.0%	45,760,634	3.7%	48,989,173	22,739,192	46.4	5,933,521	12.1	1,784,334	3.6	510,591	109,154
PRT NAO DTS2440 NGI	56	0.5%	11,882	28,981	461	440	13,806	1.2%	24,948,722	30,813,209	5.5%	43,089,937	3.5%	44,342,314	21,394,363	48.2	7,242,172	16.3	2,637,344	5.9	382,125	48,634
ESP NAO PS 1824 NGI	101	0.9%	5,779	20,821	1,180	997	11,047	1.0%	10,305,290	59,279,237	10.6%	47,268,925	3.8%	42,690,160	30,327,770	71.0	8,552,496	20.0	5,611,054	13.1	301,063	30,410
ESP NAO DRB0010 NGI	1,814	16.6%	2,048	29,545	3,493	1,820	205,337	18.1%	3,851,153	4,800,624	0.9%	35,761,060	2.9%	40,269,954	33,380,140	82.9	825,215	2.0	624,940	1.6	18,401	18,337
PRT NAO PGP0010 NGI	1,485	13.6%	2,793	42,549	3,724	1,317	120,811	10.7%	3,081,698	11,291,194	2.0%	38,214,729	3.1%	38,214,494	30,623,400	80.1	16,024,957	41.9	12,255,827	32.1	20,622	23,252
ESP NAO PGP2440 NGI*	17	0.2%	4,350	6,816	282	335	3,519	0.3%	6,343,903	6,847,050	1.2%	28,362,110	2.3%	30,663,582	16,746,209	54.6	3,177,570	10.4	1,776,782	5.8	1,008,954	49,999
ESP NAO PS 1218 NGI	112	1.0%	2,282	11,679	1,156	825	11,627	1.0%	5,070,392	32,647,951	5.9%	24,637,754	2.0%	30,321,783	22,060,834	72.8	6,901,190	22.8	5,432,337	17.9	196,972	26,727
FRA NAO DTS1012 NGI*	110	1.0%	1,622	14,342	244	160	18,582	1.6%	6,487,315	5,539,006	1.0%	27,725,090	2.3%	28,246,242	17,011,919	60.2	5,895,276	20.9	3,239,907	11.5	154,703	106,630
FRA NAO DFN1824 NGI	25	0.2%	3,091	9,052	183	169	4,981	0.4%	2,734,240	5,756,190	1.0%	24,641,923	2.0%	27,010,119	16,355,069	60.6	6,471,678	24.0	4,934,415	18.3	647,874	96,554
PRT NAO PS 1824 NGI	53	0.5%	2,984	15,283	954	713	8,523	0.8%	4,600,361	25,724,904	4.6%	26,636,022	2.2%	26,664,089	19,116,422	71.7	5,144,791	19.3	2,660,980	10.0	360,814	26,821
ESP NAO DTS1824 NGI	75	0.7%	4,331	13,857	445	386	11,636	1.0%	13,651,102	5,868,963	1.1%	20,889,140	1.7%	25,568,698	11,987,533	46.9	4,102,750	16.0	3,300,531	12.9	159,847	31,087
ESP NAO PMP0010 IC	465	4.3%	954	9,750	1,124	726	33,938	3.0%	2,843,153	3,396,101	0.6%	9,581,417	0.8%	24,324,873	19,432,657	79.9	285,442	1.2	- 84,254	- 0.3	41,791	26,776
ESP NAO DFN1218 NGI	139	1.3%	2,583	10,367	695	592	21,380	1.9%	5,230,939	5,190,759	0.9%	16,582,942	1.3%	22,532,908	15,867,943	70.4	5,047,635	22.4	4,466,480	19.8	114,163	26,802
FRA NAO DFN1218 NGI*	43	0.4%	1,886	9,672	200	161	7,975	0.7%	2,572,405	3,509,537	0.6%	22,568,377	1.8%	21,877,927	12,475,464	57.0	2,581,583	11.8	616,958	2.8	287,647	77,530
FRA NAO DFN1012 NGI	79	0.7%	1,019	13,042	251	155	11,720	1.0%	2,398,233	3,353,254	0.6%	20,511,345	1.7%	20,877,764	13,229,830	63.4	3,805,036	18.2	1,985,127	9.5	168,188	85,608
FRA NAO HOK0010 NGI	176	1.6%	731	17,074	229	99	17,494	1.5%	2,229,907	2,394,601	0.4%	16,885,860	1.4%	18,984,905	12,228,493	64.4	4,007,530	21.1	2,851,144	15.0	69,319	123,529
ESP NAO HOK2440 NGI	25	0.2%	3,427	8,842	265	376	3,196	0.3%	3,259,597	9,086,795	1.6%	20,172,887	1.6%	18,942,743	15,046,758	79.4	6,417,321	33.9	6,367,334	33.6	602,246	40,036
FRA NAO TM 1824 NGI*	20	0.2%	2,361	7,669	109	99	3,596	0.3%	5,610,315	10,237,283	1.8%	18,493,201	1.5%	18,859,405	9,371,177	49.7	2,504,072	13.3	830,070	4.4	472,164	94,236
ESP NAO HOK2440 LLD*	19	0.2%	3,897	5,437	214	255	4,148	0.4%	9,132,951	10,127,539	1.8%	27,972,525	2.3%	18,815,047	8,329,339	44.3	2,465,507	13.1	1,529,187	8.1	444,915	32,712
ESP NAO HOK1218 NGI	81	0.7%	1,651	7,070	396	380	9,740	0.9%	2,819,770	5,201,468	0.9%	12,381,387	1.0%	18,119,889	12,227,593	67.5	4,099,597	22.6	3,643,127	20.1	151,066	32,181
FRA NAO PS 1218 NGI*	15	0.1%	630	3,596	92	64	2,515	0.2%	1,007,487	14,517,012	2.6%	13,839,626	1.1%	15,132,035	11,105,283	73.4	3,537,119	23.4	2,834,503	18.7	753,222	174,222
PRT NAO FPO0010 NGI	331	3.0%	880	13,350	711	215	24,105	2.1%	1,017,269	2,105,250	0.4%	14,335,043	1.2%	14,393,353	11,597,020	80.6	5,707,163	39.7	4,554,646	31.6	35,036	53,940
PRT NAO HOK2440 P3 *	28	0.3%	3,915	10,938	455	267	4,140	0.4%	3,931,432	5,306,678	1.0%	13,917,778	1.1%	13,971,208	9,590,826	68.6	3,312,281	23.7	1,309,481	9.4	342,860	35,955
FRA NAO DFN0010 NGI	192	1.8%	714	16,968	264	111	18,570	1.6%	1,531,619	1,950,182	0.3%	11,822,506	1.0%	13,619,509	8,548,272	62.8	2,008,830	14.7	797,341	5.9	44,529	77,262
PRT NAO PS 2440 NGI	20	0.2%	1,693	7,344	422	320	3,437	0.3%	2,557,989	11,776,169	2.1%	13,312,894	1.1%	13,331,260	9,290,018	69.7	2,338,063	17.5	830,662	6.2	464,501	29,031
PRT NAO DFN1218 NGI	77	0.7%	1,935	10,194	557	459	14,575	1.3%	2,457,939	2,939,869	0.5%	11,882,362	1.0%	11,900,365	8,238,478	69.2	3,058,047	25.7	1,313,450	11.0	106,993	17,949
FRA NAO DFN2440 NGI	6	0.1%	1,383	2,952	80	76	1,233	0.1%	1,679,558	5,169,489	0.9%	13,011,575	1.1%	11,746,926	7,900,448	67.3	3,971,521	33.8	3,260,511	27.8	1,309,604	103,363
PRT NAO HOK2440 NGI	17	0.2%	3,040	5,958	182	168	3,916	0.3%	3,492,358	2,876,003	0.5%	11,441,165	0.9%	11,427,064	6,699,237	58.6	2,549,493	22.3	1,338,054	11.7	404,842	39,782
FRA NAO HOK2440 NGI*	6	0.1%	1,386	3,197	75	72	1,164	0.1%	1,989,601	1,771,893	0.3%	7,073,847	0.6%	10,952,331	5,431,701	49.6	1,875,289	17.1	1,130,491	10.3	983,487	75,408
FRA NAO TM 1218 NGI	13	0.1%	797	3,974	58	55	2,525	0.2%	2,793,973	4,670,062	0.8%	10,451,342	0.9%	10,117,023	5,430,014	53.7	1,676,934	16.6	1,150,914	11.4	429,220	98,220
FRA NAO HOK1012 NGI	46	0.4%	477	6,777	104	64	6,875	0.6%	1,140,674	1,906,687	0.3%	10,397,922	0.8%	10,075,516	6,673,847	66.2	2,303,392	22.9	1,275,288	12.7	144,932	103,665
ESP NAO HOK2440 IC *	21	0.2%	2,203	6,039	249	235	2,380	0.2%	3,818,912	3,380,602	0.6%	7,139,566	0.6%	10,032,302	5,038,366	50.2	- 546,244	- 5.4	- 1,147,381	- 11.4	239,024	21,426
ESP NAO HOK1824 NGI	29	0.3%	2,233	5,937	195	244	4,039	0.4%	2,774,482	3,655,647	0.7%	9,054,962	0.7%	9,836,268	6,545,852	66.5	1,740,659	17.7	1,171,635	11.9	226,390	26,875
PRT NAO HOK1824 NGI	17	0.2%	1,464	4,147	198	187	3,844	0.3%	1,423,201	2,375,663	0.4%	8,986,707	0.7%	9,318,175	6,100,325	65.5	2,507,284	26.9	1,801,998	19.3	358,843	32,622
PRT NAO HOK0010 P3	360	3.3%	979	15,215	805	226	20,352	1.8%	776,120	1,302,972	0.2%	9,190,163	0.7%	9,192,737	7,149,795	77.8	3,650,022	39.7	2,328,138	25.3	19,861	31,636
FRA NAO MGO0010 NGI*	163	1.5%	482	11,118	181	50	11,030	1.0%	802,541	377,193	0.1%	3,260,389	0.3%	8,302,939	5,870,816	70.7	1,932,771	23.3	290,691	3.5	36,044	118,041

Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

4.6 Mediterranean Sea

Regional Details

The Mediterranean region covers FAO fishing areas 37.1, 37.2 and 37.3 and nine EU Member States: Croatia, Cyprus, France, Greece, Italy, Malta, Portugal, Slovenia and Spain. Due to incomplete datasets however, Greece, one of the main fishing nations in the region, is excluded from most of the analysis. Time-series analysis is from 2010 onwards due to missing French and Spanish data in 2008 and 2009. Data for Croatia is available from 2012 onwards only (Croatia entered EU in 2013).

The Mediterranean fleet, excluding Greece, accounted for 43% of all EU vessels and for 36% of the EU employment in 2017. The Mediterranean fleet also contributed to 7% of the EU landing in weight and 19% of the landed value.

According to data submitted for 2017, most MS fleets were totally dependent on the Mediterranean basin for their primary fishery production. Almost all landings by the Cypriot, Croatian, Italian, Maltese and Slovenian fleets originated from the region. For Spain and France, the percentage of landings in weight originating from Mediterranean waters is less than 10%, and marginal for Portugal (Figure 4.74).

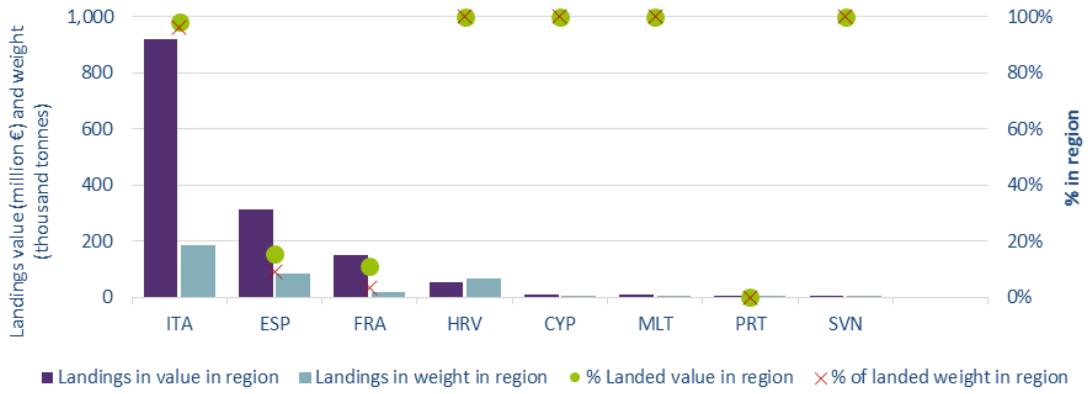


Figure 4.74 Importance of the Mediterranean Sea for MS fisheries in terms of landings in weight and value, 2017
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Excluding Greece, the Italian fleet accounted for 51% of landings weight and for 63% of the value, contributing to 64% and 74% of the revenue and gross profit, respectively. In terms of landed weight, Spain caught 24% of the Mediterranean landings, followed by Croatia (19%) and then France (5%)

Also excluding Greece, half of the Mediterranean fleet is concentrated in Italy, which accounted for 55% of the engaged crew (66% of the FTE) in the region, followed by Croatia with 27% of the vessels and Spain 10%. Spain and Croatia also accounted for around 18% and 17% of the employment, respectively.

Figure 4.75 shows the proportion of production, capacity, employment and activity by fishing activity in 2017, with the exclusion of Greece.

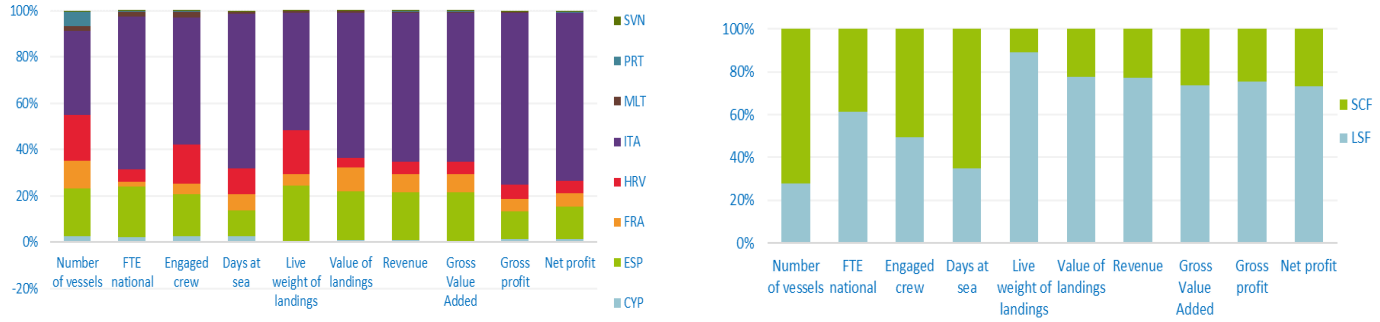


Figure 4.75 Share by MS fleets and fishing activity in the Mediterranean Sea, 2017
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

The economic performance has been mostly driven by the large-scale fleets, which contributed to 78% of the landings value from the Mediterranean and to 89% of landings weight in 2017. In contrast, 72% of the vessels operating in the region belong to small-scale coastal fleets.

Around 65% of the days-at-sea were undertaken by small-scale coastal vessels using passive gears. Large-scale fisheries (LSF) accounted for 35% of the days-at-sea, of which most were undertaken by the demersal fleet.

The Mediterranean SSCF generated 23% of the revenue in 2017, which remained stable compared to 2016. LSF generated EUR 1.1 billion in revenue, an estimated 7% increase compared to 2016.

The main SCF fleet segments in terms of number of vessel are the Italian polyvalent passive gears less than 6m LOA (2 193 vessels) and between 6 and 12m (5 154 vessels) and the Croatian polyvalent passive gears less than 6m LOA (2 786 vessels), which combined accounted for 47% of the Mediterranean fleet (excluding Greece) in 2017.

The main LSF fleet segments are the Italian demersal trawlers 12-18m, 18-24, 24-40m and the Spanish demersal trawlers 24-40m, which altogether represented around 40% of total landings from the area and 10% of the fleet covered.

Tables at the send of this section contain a summary of the economic performance of the Mediterranean fleet by Member State, main type of fishing activity and fleet segment.

Overview of the main results for EU Mediterranean Sea fleet

Fishing effort and landings

Fishing effort decreased in 2017, reaching a ten-year minimum (less than 2.09 million days-at-sea and 2.07 million fishing days). However, this reduction has not affected landings, in weight and value, both of which marginally increased compared to 2016 (Figure 4.76).

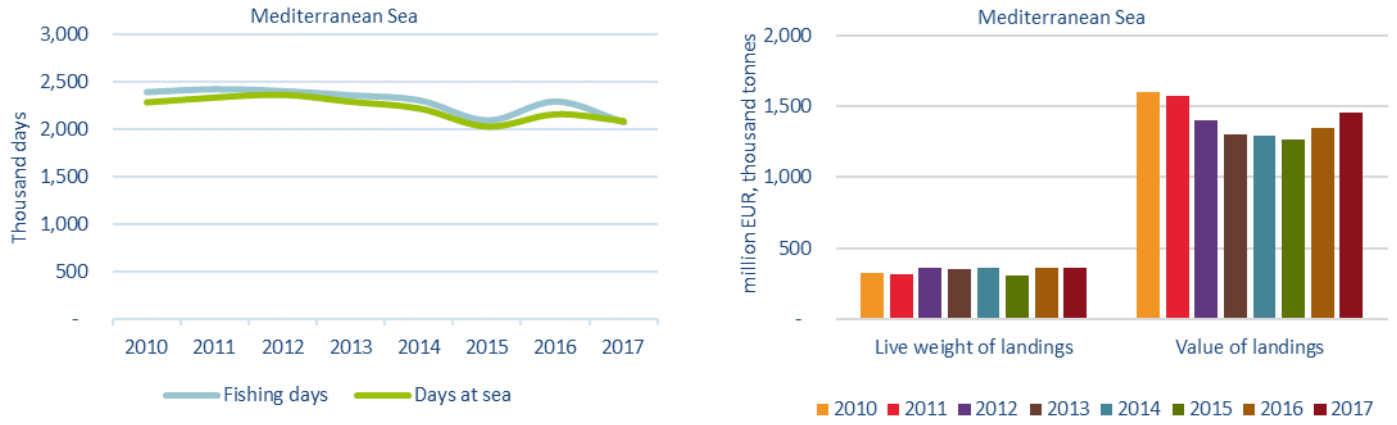


Figure 4.76 Trends on effort and landings for MS fleets operating in the Mediterranean Sea
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Employment

Employment in the Mediterranean fishing fleet (excluding Greece) in 2017 was estimated at 46 217 jobs, corresponding to 30 630 FTEs. Employment (measured as full-time equivalents, FTE) has decreased by about 7% relative to 2016. More than half of the employment is created by the SSCF (23 467 jobs corresponding to 11 885 FTEs) where the average employment per vessel is about 1.4. Additional information on capacity and employment are provided in the sections on trends and social aspects.

Wages and Salaries

Annual wages and salaries in 2017 for fishers in the small- and large-scale fleets were on average around EUR 11 490 and EUR 19 000, respectively. After 2015, average wages for both segments follow a similar increasing trend. More specifically, average wages in the SSCF increased by 6.5% relative to 2016 and 20% relative to 2015. The corresponding percentages for the LSF were 6.7% and 13%, respectively (Figure 4.77).

Labour productivity

For both LSF and SSCF, the labour productivity (GVA per FTE) has increased by about 14% compared to 2016, reaching EUR 36 260 and EUR 20 420, respectively. The two sectors follow the same trend since 2015, and therefore the gap between them is almost constant (Figure 4.77).

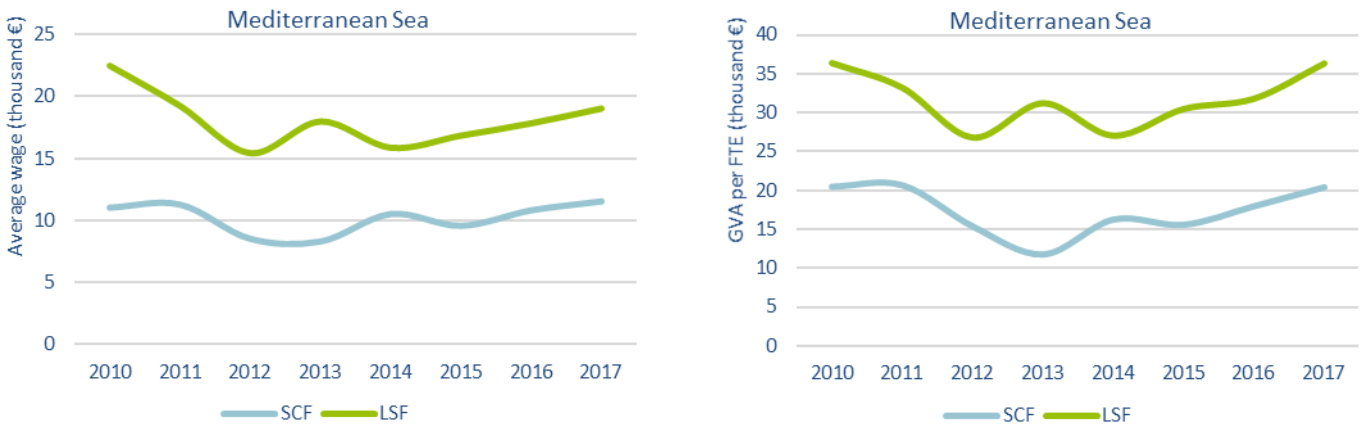


Figure 4.77 Trends on average wage and labour productivity by fishing activity for MS fleets operating in the Mediterranean Sea
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Economic performance

In 2017, the Mediterranean fleet (excluding Greece) continued to improve on all the economic performance indicators analysed, and in line with the previous year's trend. The revenue (income from landings and other income), generated by the Mediterranean fleet in 2017 is estimated at EUR 1.46 billion, increasing by 5% compared to 2016. GVA produced by the fleets covered in the analysis amounted to EUR 922.4 million, representing an overall increase of 7% compared to 2016. After accounting for all operating costs, the Mediterranean fleets made almost EUR 430 million in gross profit, an increase of 14% compared to 2016. Finally, Net profit is EUR 227.7 million (increased by 29% relative to 2016) (Figure 1.6).

In addition, GVA to revenue as well as gross and net profit margin continued to improve, respectively presenting 2%, 11% and 32% increase relative to 2016 (Figure 4.78).

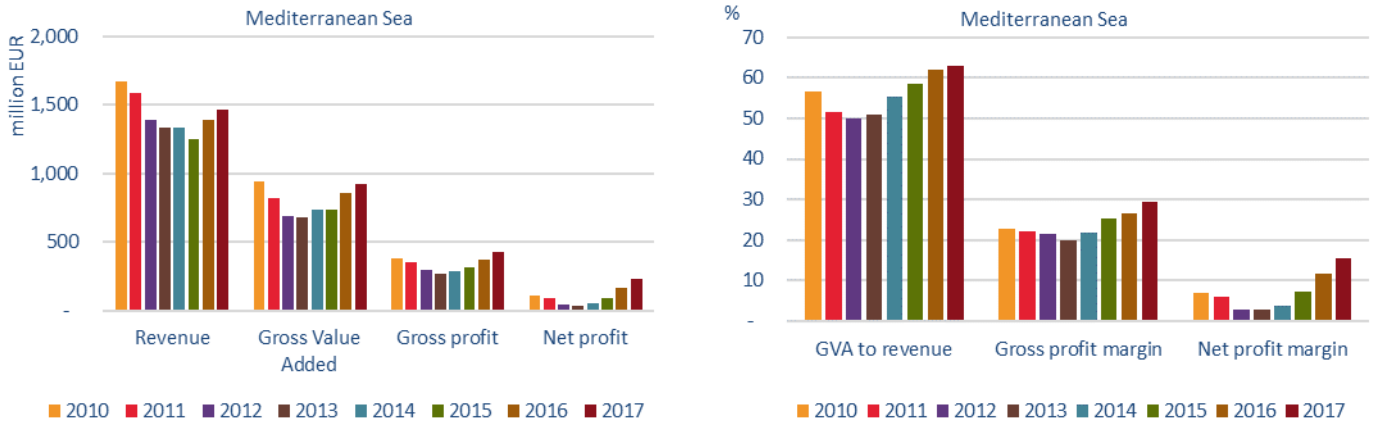


Figure 4.78 Trends on revenue and profits for MS fleets operating in the Mediterranean Sea
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Main drivers affecting fleet performance in the region

In 2017, the regional fishing fleet's economic performance registered an improvement with increased gross profit and net profit (both in absolute values and in terms of margins) even if variation across MS can be observed (the Spanish Med fleet shows an improving pattern in the net profit over the period and some fleets still show losses). The overall positive trend was mainly driven by the Italian fleet, the largest fleet after Greece (not included in the economic analysis for lack of data).

The overall economic situation has improved for different reasons.
Energy consumption, after several years, has decreased leading to proportionally lower energy costs per landed tonne and total income raised thanks to the positive trend in fish prices for some key species. The fleet appears to be returning to levels of profitability not achieved for many years.

Initial investments (that will be likely higher in the next years with the full implementation of EMFF) that add value to fishery products, i.e. allowing fishers to carry out the processing, marketing and direct sale of their own catches, have met great interest among Mediterranean fishers. In some local harbours, new marketing approaches have been experimented: fish basket schemes or digital tools are providing opportunities for fishers to inform directly their customers and to promote and sell their products. Furthermore, in the last years commercial strategies have been implemented aiming at improving traceability and quality of local seafood. An example is the "Venetian Wild Harvested Striped Clam fishery" that has become the first Italian and Mediterranean fishery to achieve an MSC certification in 2018. This is likely to impact the future trend in the landings value of clams, considering the impact that certification has on some foreign markets.
On the other hand, the increase of the EU quota for bluefin tuna (for details see management section) has impacted positively the profitability of vessels involved in tuna fisheries.
Nevertheless, according to GFCM (FAO 2018.a and b) only 38% of the stocks are at biologically sustainable levels even if there are examples of fisheries where stocks are being exploited at rates consistent with achieving MSY (STECF, 2019) and fleets are showing positive trends, particularly in landings.
The overall level of overfishing, however, remains generally too high. Indeed, the marine resources and ecosystems of this region have come under increasing pressure in recent years, driven by diversification and intensification of marine and maritime activities. While the fishing capacity has been frozen or reduced in EU countries since the mid '90s, the trend in non-EU Mediterranean countries is probably following a different pattern, and an increase in effort and capacity is likely to still occur in some areas.

Outlook for 2018 and beyond

There have been a number of specific actions taken for the Mediterranean towards tackling overfishing improving control and enforcement and aligning Mediterranean strategy with the CFP. The most important for the Mediterranean Sea are the approval of the Multiannual plans for shared stocks: small pelagics in Adriatic and demersal fisheries in the Western Med. The Management of resources at EU level, by mean of a more strategic and long-term approach would, for sure, be beneficial for the improvement of the state of the stocks in the forthcoming years and will likely contribute to the reduction of fishing effort (in parallel with the effect of some National Management Plans, like the Italian ones for demersal species, updated by Italian authority in 2018, that provide for a reduction in fishing effort of 10% in 2019 and 7% in 2020 compared to the average fishing days in the period 2015-2017).

In parallel, in latest years the collaboration between EU and GFCM has determined the definition of high-level objectives. The GFCM has recently launched mid-term strategy (2017–2020) towards the sustainability of Mediterranean and Black Sea fisheries to improve, by 2020, the sustainability of Mediterranean and Black Sea fisheries and ensure that the alarming trend in the status of commercially exploited stocks is reversed. Other objectives include important threats in the region, such as illegal, unreported and unregulated (IUU) fishing, the effects of climate change and the support to livelihoods for coastal communities through sustainable small-scale fisheries.

It has to be taken into account that, the 2018 and beyond economic performance will be likely influenced by EMFF funds planned for the period 2014-2020. In particular, EMFF funds foresee measures, among others, for investments to improve selectivity of the gears or for technical adjustments as well as investments that add value to fishery products, i.e. allowing fishers to carry out the processing, marketing.

Trends by Member State fleet and fishing activity

Fleet capacity and employment

The EU fleet fishing in the Mediterranean, excluding Greece, consisted of 22 301 active vessels. The SSCF comprised 16 116 vessels (72% of the regional fleet). Total employment in 2017 was estimated at 46 217 jobs, corresponding to 30 630 FTEs (Figure 4.79).

Trends on the number of vessels have remained relatively stable, increasing in 2012 with the entry of the Croatian fleet. The decrease in 2015 was mainly due to a misreporting in the number of Spanish vessels.

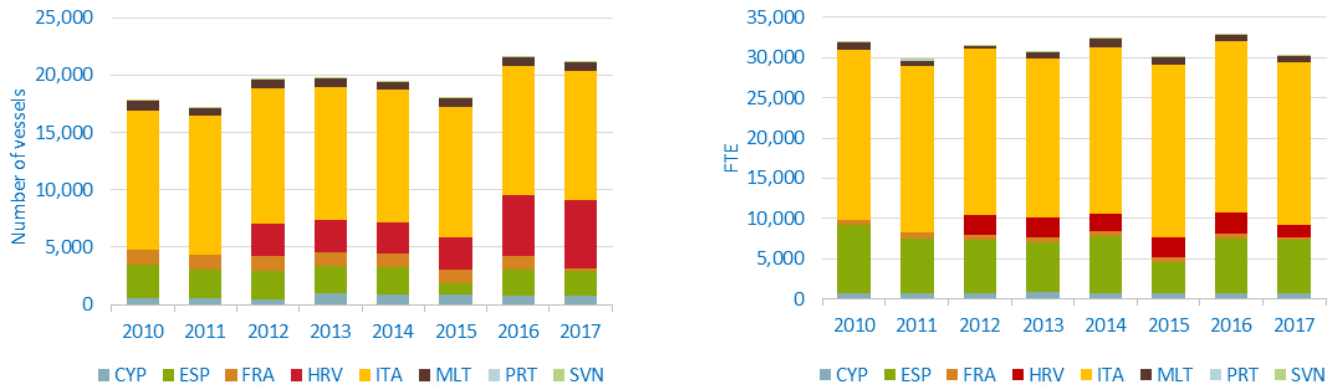


Figure 4.79 Trends on the number of vessels and employment (in FTE) for the MS fleets operating in the Mediterranean Sea, excluding Greece.
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)).

When including Greece, the Mediterranean fishing fleet numbered 35 738 active vessels. The SSCF comprised 28 704 vessels (80% of the regional fleet). Among them, 44% belonged to the Greek fleet. Total employment with Greece was estimated at 68 688 jobs (one third belonging to the Greek fleet), corresponding to 50 504FTEs (Figure 4.80).

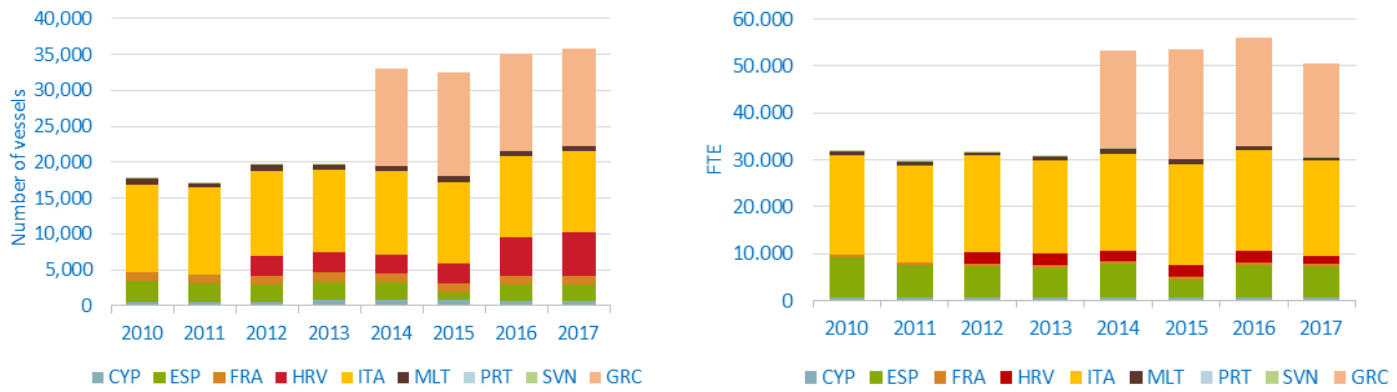


Figure 4.80 Trends on the number of vessels and employment (in FTE) for the MS fleets operating in the Mediterranean Sea, including Greece.
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)).

Fishing effort

The Mediterranean fleet (excluding Greece) spent almost 2.1 million days-at-sea in 2017. The Italian fleet accounted for about 67% of the number of days, followed by Croatia and Spain (both around 11% of the overall activity) (Figure 4.81). The SSCF accounted for 65% of the days-at-sea

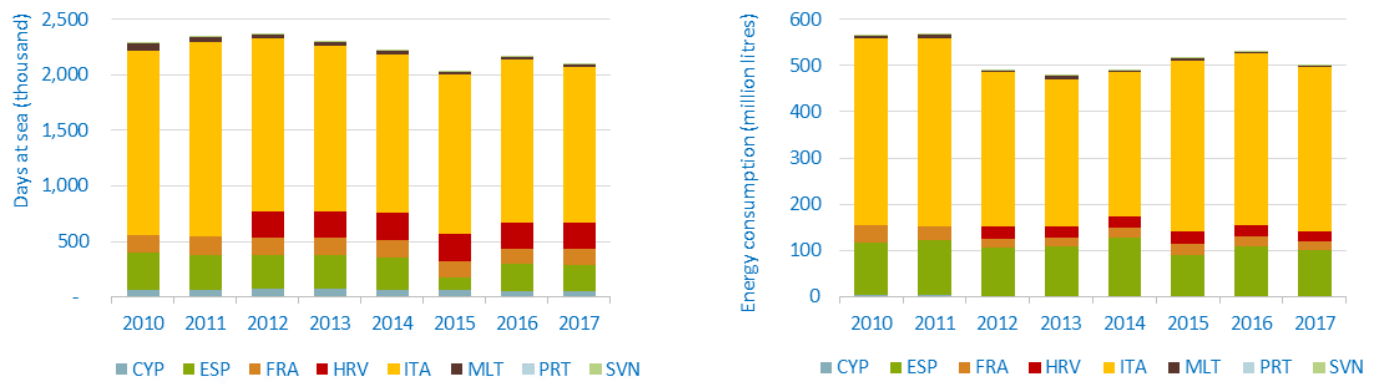


Figure 4.81 Trends on fishing effort (in days-at-sea) and energy consumption for MS fleets operating in the Mediterranean Sea, excluding Greece
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019))

Energy consumption in 2017 (505 million litres) declined by 5% compared to 2016 (-10% compared to 2010). Effort (in days-at-sea) deployed in the region has followed a general decreasing trend, a slight increase between 2013 and 2016 and stabilising somewhat in 2017 (Figure 4.81).

When including data energy consumption for Greece (available from 2014 onwards only), the energy consumed by the regional fleet amounted to 598 million litres in 2017, a 6% decline compared to 2016 (Figure 4.82).

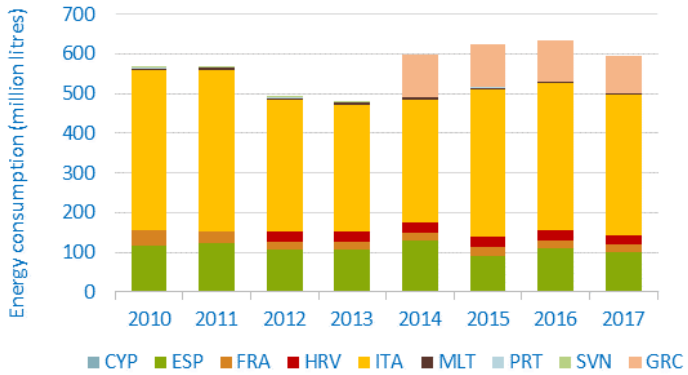


Figure 4.82 Trends on energy consumption for MS fleets operating in the Mediterranean Sea, including Greece.
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019))

Landings and top species

The weight and value of landings generated by the regional fleet (excluding Greece) in 2017 amounted to approximately 363 thousand tonnes (+1% compared to 2016) and EUR 1.46 billion (+8% compared to 2016), respectively.

Regarding landed weight, Italy (184 778 tonnes), Spain (86 169 tonnes) and Croatia (69 874 tonnes) were again the leading countries, together accounting for 94% of the total weight and 88% of the value of landings from the EU Mediterranean basin, excluding Greece.

The Croatian fleet landed 19% of the seafood in weight but only generated 4% of the value, indicating the predominance of low valued species composition of the catch (i.e., small pelagics). On the other hand, the Italian fleet landed 51% of the weight and generated 63% of the value (Figure 4.83).

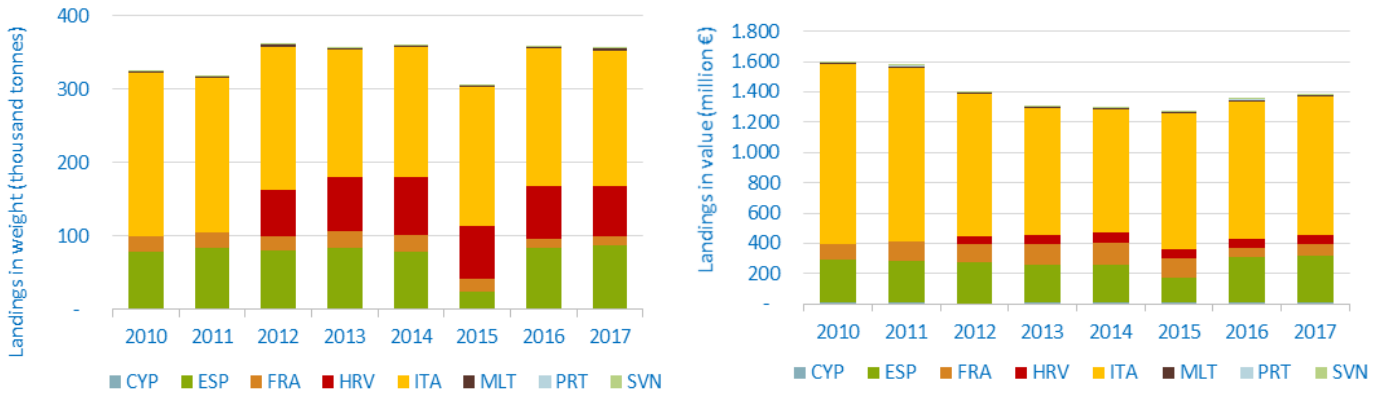


Figure 4.83 Trends on landings in weight and value by MS fleets operating in the Mediterranean Sea
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

In 2017, the main species (by weight) - excluding Greek LSF landings - were pilchard (=sardine, 83 272 tonnes), followed by European anchovy (74 927 tonnes), striped venus (11 832 tonnes), hake (11 509 tonnes) and deep-water rose shrimp (10 999 tonnes).

By value, the most landed species were anchovy (EUR 128 million), bluefin tuna (EUR 92 million), hake (EUR 90 million), deep-water rose shrimp (EUR 73 million) and common cuttlefish (EUR 66 million) (Figure 4.84).

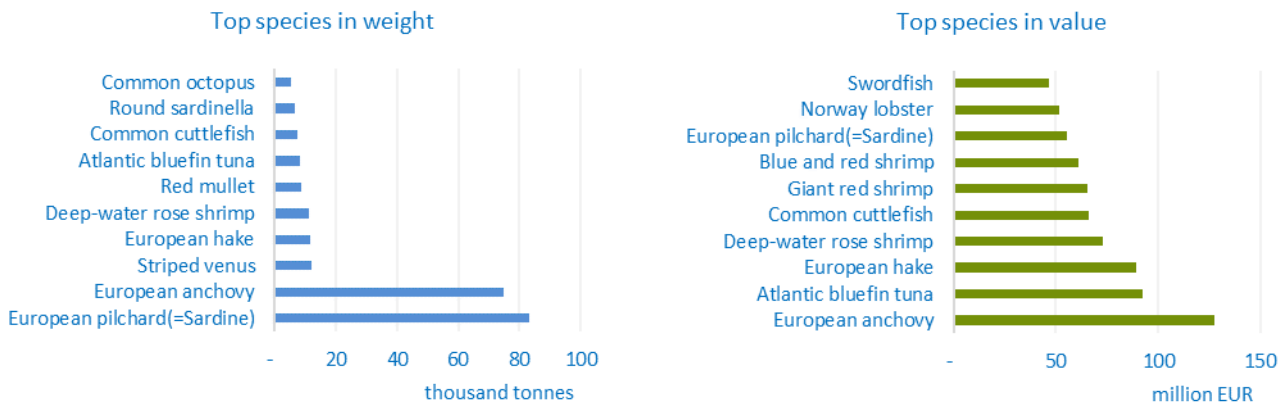


Figure 4.84 Top 10 species in landed weight and value for MS fleets operating in the Mediterranean Sea, 2017. Excluding Greek LSF landings

Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

When including Greek LSF landings, the situation changes somewhat with some demersal species (e.g. deep-water rose shrimp and hake) climbing the ranking of the top species. Indeed, including Greek LSF the main species in 2017 (by weight) for the EU Mediterranean fleet were: pilchard (=sardine, 95 199 tonnes), followed by European anchovy (88 744 tonnes), deep-water rose shrimp (13 932 tonnes) and hake (13 451 tonnes). By value, the most landed species were anchovy (EUR 173 million), hake (EUR 109 million), pilchard (EUR 94 million) and bluefin tuna (EUR 92 million) (Figure 4.85).

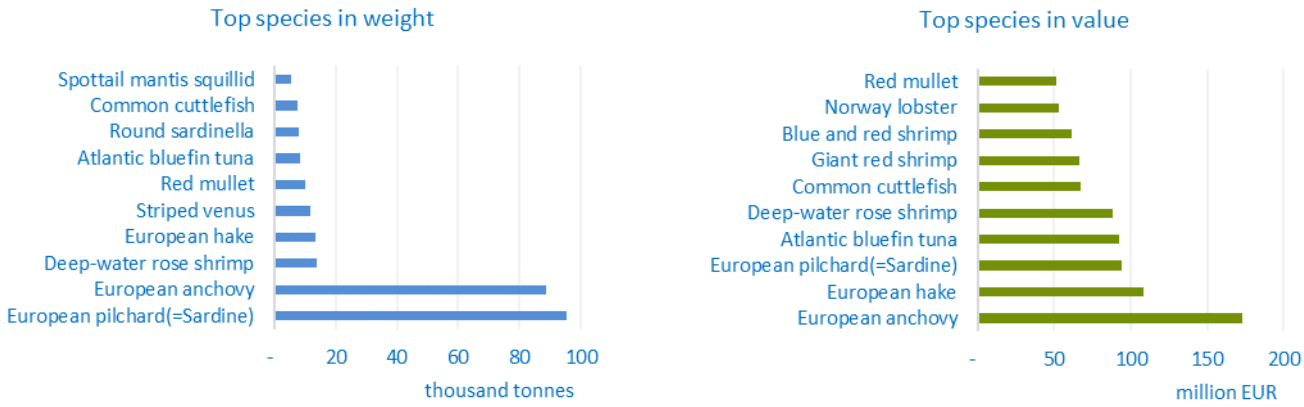


Figure 4.85 Top 10 species in landed weight and value for MS fleets operating in the Mediterranean Sea, 2017. Including Greek LSF landings

Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Landings of small pelagics have increased in the last decade. Considering 2012 for sake of homogeneity being that the first year of the Croatian data submission (and excluding Greece), anchovy landings increased 15% in weight and 16% in value. Deep water-rose shrimp landings also increased substantially (+26% in weight and 22% in value) while, on the other hand, a decrease in the total weight of landings for striped Venus was detected (-41% in weight and 35% in value).

Prices for sardines and anchovies show a high variability between countries. In Croatia in 2017 the average price was 0.37 EUR /kg for sardine and 0.92 EUR /kg for anchovies while in Italy it was 0.61 EUR /kg and 1.93 EUR /kg, respectively. These price differences are partly explained by the respective markets in each country; in Croatia small pelagic are used by the processing, salting and marinating industries, as well as for fish feed for tuna farms while in Italy fish are sold fresh for local consumption and in minor quantities for export (mainly for processing in Spain).

A very large increase also for the overall value of bluefin tuna landings, mostly due to the increase in the overall Mediterranean quota – details in the section on management measures, quota and TAC.

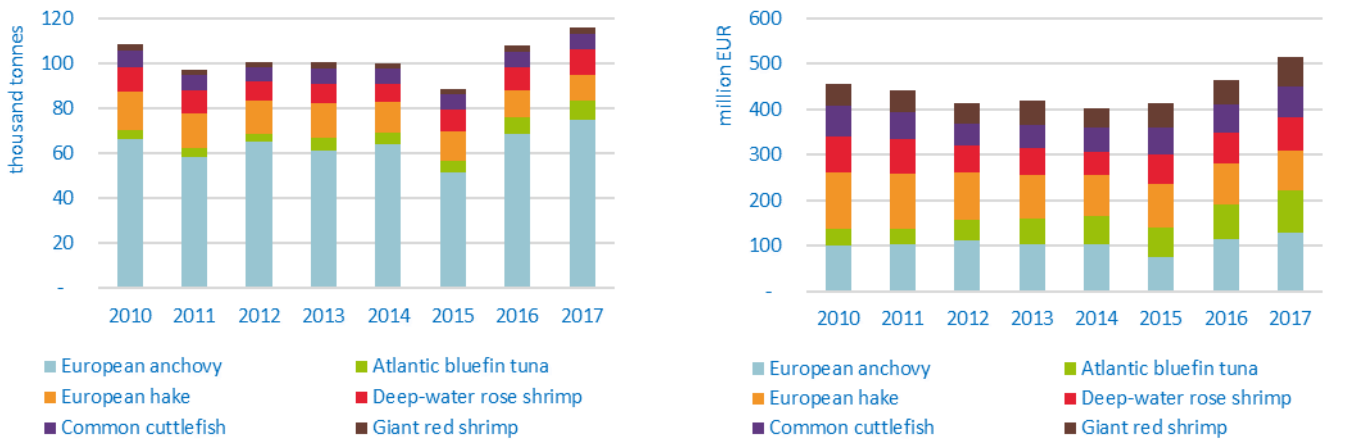


Figure 4.86 Trends on landings for the top six species in landed value for MS fleets operating in the Mediterranean Sea, 2017 (excluding Greece)

Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

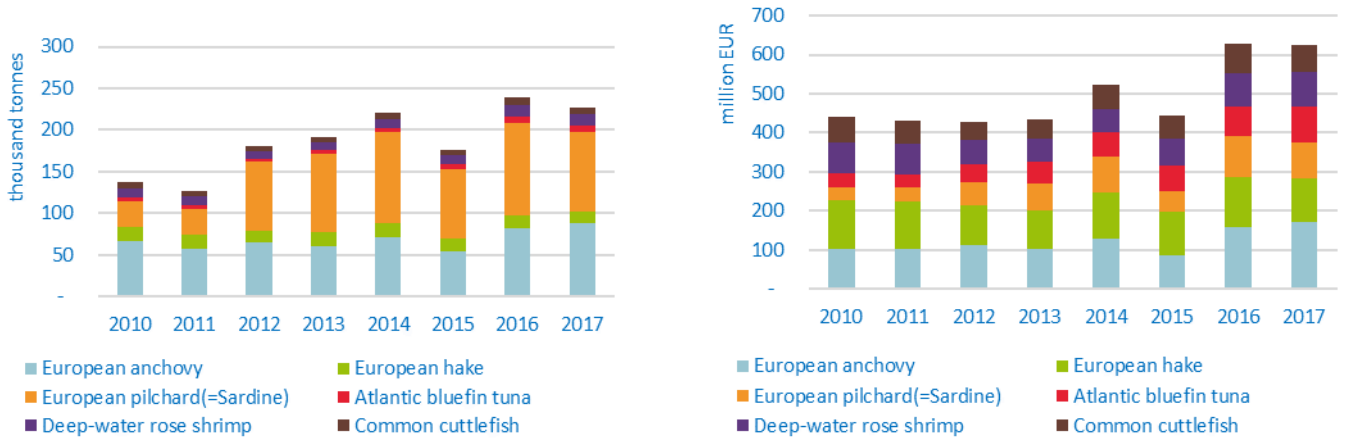


Figure 4.87 Trends on landings of the top six species in landed value for MS fleets operating in the Mediterranean Sea, 2017 (including the Greek LSF)

Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Socio-Economic performance

The analysis excludes Greece due to incomplete information submitted.

The revenue (income from landings and other income) generated by the Mediterranean fleet in 2017 was estimated at almost EUR 1.5 billion, 98% of which was provided by 4 Member States: Italy (EUR 939 million), Spain (EUR 307 million), France (EUR 111 million) and Croatia (EUR 81 million) (Figure 4.88).

Revenue increased in 2017 by 5% compared to 2016: only Slovenia and Portugal suffered a decrease compared to the previous year, where the other Member States have seen revenues grow. In particular, France has seen an increase of 34%, Cyprus +28% and Croatia +23%.

GVA produced by Mediterranean fleet covered in the analysis was estimated at over EUR 922 million in 2017, with an overall improvement of 7% compared to 2016, as the GVA of all MSs increased, apart from Slovenia (-6%) and Spain (remaining the same). After accounting for operating costs, the fleets operating in the region made almost EUR 430 million in gross profit, an estimated 16% increase compared to 2016 and also a record high over the period analysed.

According to the available data, the Mediterranean fleet generated net profits in 2017 of about EUR 227 million with an improvement of 40% compared to 2016. All MS reported net profits in 2017, with the exception of Malta.

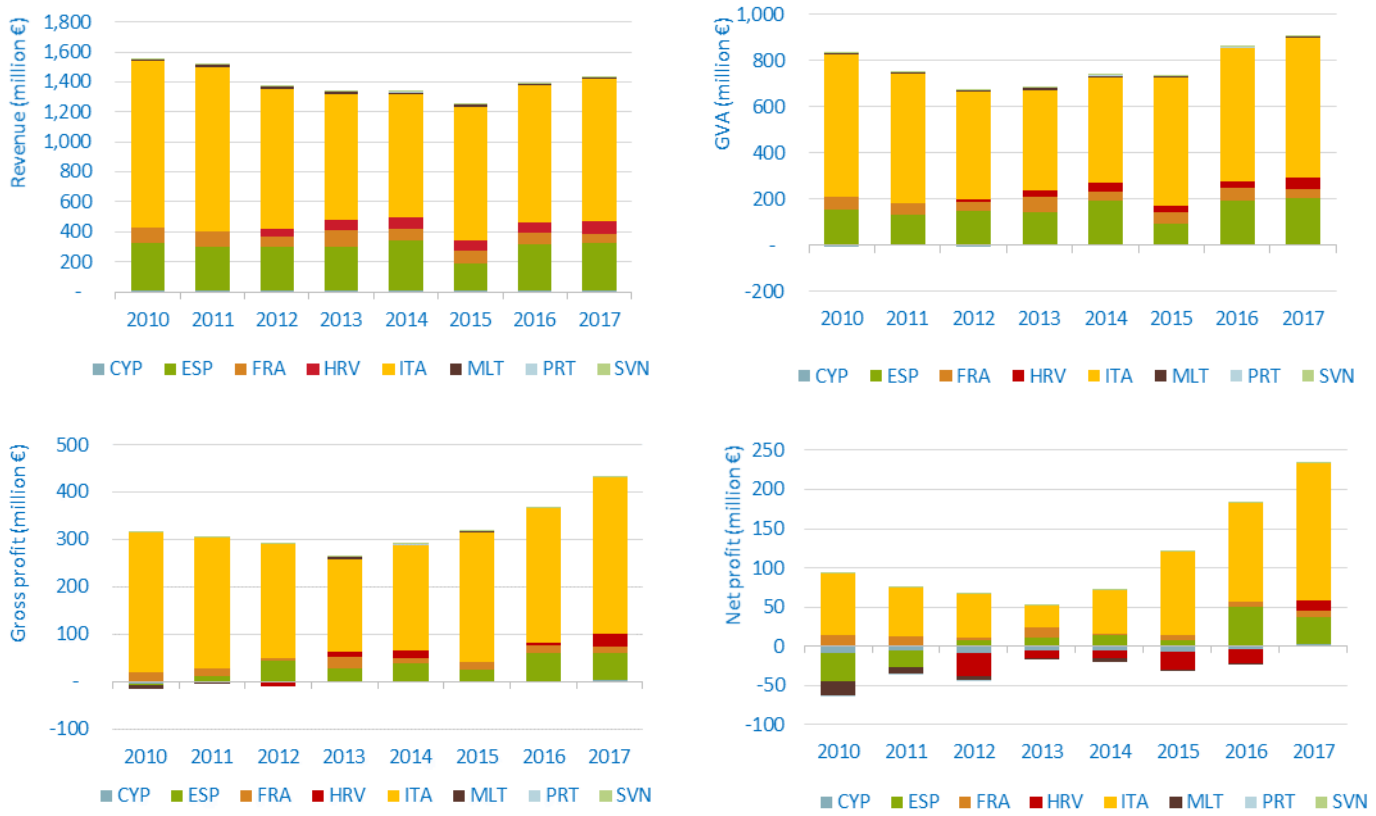
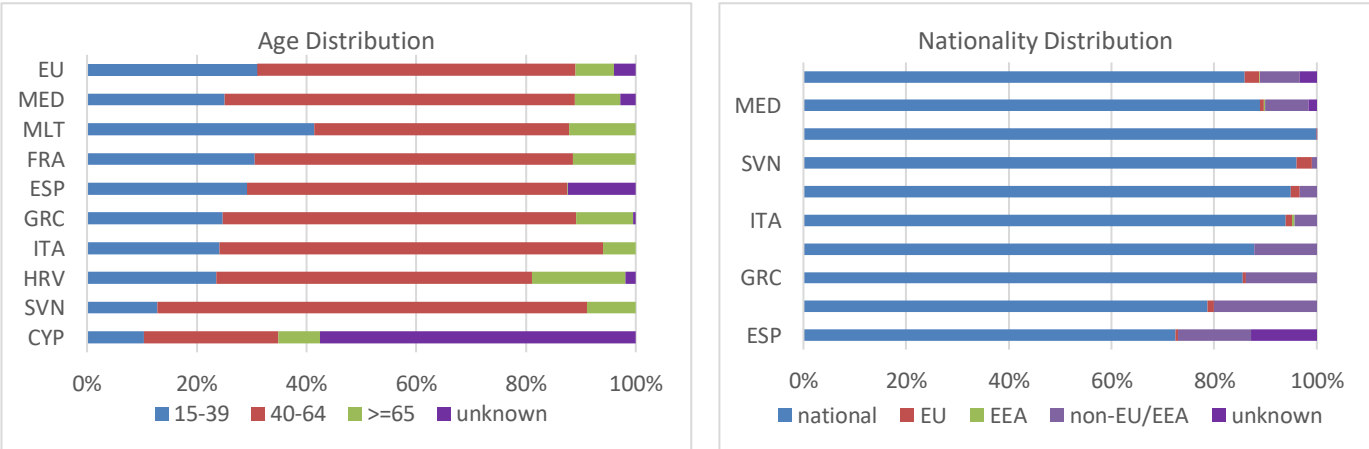


Figure 4.88 Trends on revenue and profits for MS fleets operating in the Mediterranean Sea
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Social structure

In the Mediterranean fishers are for mostly (96%) men. Among MS, this share ranges from 91% (Greece) to 99% (Cyprus). The age, education and nationality distributions look quite similar between EU and Mediterranean (Figure 4.89), however some marginal differences can be highlighted. On average, employees in the area are slightly older and with a slightly lower education level, compared to the EU average. In addition, the proportion of employment made up by MS nationals is marginally higher than the EU average. Finally, it is important to emphasize that in contrast to the EU average, in the Mediterranean the majority of fishers are owners. The high importance of the SSCF sector seems to be the driver for the abovementioned differences.

Figure 4.89 also shows that there are important deviations among MSs in the Mediterranean Sea, therefore MS fishing fleets are not homogeneous in terms of specific social aspects. Among the most heterogeneous figures is the share of the age class '15-39' which ranges from 10% to 41%, and the share of employee from 12% to 100%. Similarly, Low education level ranges from 13% to 82%. On the other hand, some similarities can also be identified. For example, in most cases the share of >65 years old is around 6% to 10%, and the share of 'high' education level is around 5%.



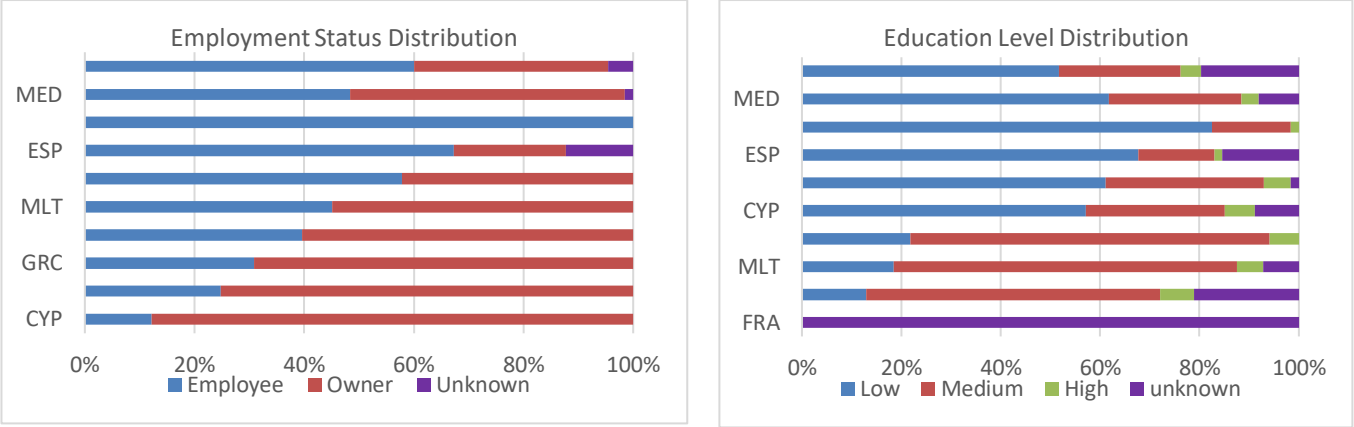


Figure 4.89 Employment by age, nationality, employment status and education level in the EU, Mediterranean and MS.
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019))

Main factors affecting the performance of the fleet

Regulation and fisheries management in the region

The Mediterranean fishery management is based on a number of management tools. First of all, it includes a number of important **technical measures**, which were introduced by Regulation (EU) No 1967/2006 (Mediterranean Regulation), entered into force in 2010.

Over the last years the EU has accelerated the development and introduction of **multiannual plans** under the CFP, essential management tools in the context of shared stock. Considering the importance and the poor state of shared stocks as small-pelagics in the **Adriatic**, GSA 17 and 18, the current regulations implement GFCM (General Fisheries Commission for the Mediterranean, RFMO for the Med) recommendation GFCM 37/2013/1 regarding a multi-annual management plan for the exploitation of small pelagic stocks in GSA 17 (Northern Adriatic) and transitional conservation measures for the exploitation of small pelagics in GSA 18 (Southern Adriatic) and the subsequent ones establishing further precautionary and emergency measures for small pelagics in GSA 17 and 18, namely GFCM/38/2014/1, GFCM/39/2015/1, GFCM 40/2016/3 and GFCM/42/2018/8.

In this context a multi-annual plan for the management of **small pelagic stocks** (anchovy, sardine, mackerel, and horse mackerel) in the Adriatic, was proposed by the EC in 2016 and adopted on 24 February 2017 by the European Commission with the proposal (COM(2017)97). With the new plan for Adriatic small pelagic stocks, the Commission proposed to introduce a major shift in fisheries management in this area, currently based on fishing effort, by framing a system of setting total allowable catches (TACs).The plan has substantially been modified in its objectives by the European Parliament by a vote taken in 2018 (European Parliament, 2018). The PECH report, indeed, supports maintaining the current fishing effort regime and opposes the introduction of TACs or a regulation establishing a multiannual plan for small pelagic stocks (sardine and anchovy) in the Adriatic Sea and the fisheries exploiting those stocks.

As far as the **Adriatic** part of the Mediterranean basin, in 2015 Italy and Croatia adopted joint management measures at the national level establishing **no-take zone** for bottom trawls in the area of Jabuka/Pomo pit. This regime was introduced from July 2015 to October 2016 after which it was modified with a more stringent regime established for the next three-year period. In addition, the new regime was transposed into GFCM Recommendation 41/2017/3, *on the establishment of a restricted fisheries area in the Jabuka/Pomo Pit in the Adriatic Sea*. The new regime includes three control zones: a middle zone where all demersal (trawls and longlines) and sport fishing is prohibited, and two side zones where only a limited number of authorized vessels may operate for up to two days per week. This is the first fishery restricted area (FRA) in the Adriatic and an important measure for demersal fisheries. The Jabuka/Pomo pit area had been an important fishing ground for both fleets and, short-term losses aside, it is expected that the positive effects of FRA will influence it and the surrounding area bringing longer term benefits to the fleets operating there.

In March 2018, the European Commission proposed a multiannual plan for demersal fisheries in the **Western Mediterranean** (COM/2018/0115 final - 2018/050 (COD) and the European Parliament and Council reached an agreement on February 4th, 2019. The proposal concerns the following geographical

sub-areas of France, Italy and Spain: Northern Alboran Sea, Alboran Island, Balearic Islands, Northern Spain, Gulf of Lions, Corsica, Ligurian and North Tyrrhenian Sea, South Tyrrhenian Sea, and Sardinia. The proposal is aimed at dealing with the high levels of overfishing in the western Mediterranean Sea, by tackling the excessive fishing effort. More than 90 % of the commercial fish stocks under the scope of the plan are overexploited well beyond safe biological limits, according to STECF. The main target of the plan is Maximum Sustainable Yield MSY. The plan states that "The target fishing mortality, in line with the ranges of FMSY defined in Article 2, shall be achieved on a progressive, incremental basis by 2020 where possible, and by 1 January 2025 at the latest, for the stocks concerned, and shall be maintained thereafter within the ranges of FMSY." Fishing fleets from Italy, Spain and France are affected by the proposal with around 13 000 fishing vessels altogether, a large part of them belong to Italy and the great majority represented by passive gears.

In 2016, the GFCM approved a multi-annual management plan for trawling activities that exploit European hake (*Merluccius merluccius*) and deep-water rose shrimp (*Parapenaeus longirostris*) in the **Strait of Sicily** (from GSA 12 to GSA 16, the latest falling under EU jurisdiction and being one of the most important demersal fishing areas in the Mediterranean). The plan involves the creation of three Fisheries Restricted Areas (FRAs), a gradual reduction of the fishing effort, and international monitoring, control, and surveillance of fishing activities (Recommendation GFCM/40/2016/4 integrated by Recommendation GFCM 42/2018/5). FRAs aim at improving the management of areas where European hake and deep-water rose shrimp are overexploited and to allow the recovery of their stocks to levels that are in line with MSY goals. The plan bans trawling with any gear in FRAs. It should have been adopted on 1 October 2016 and should have been implemented by the Member States by this date[10]. Yet, FRAs have not yet been set up, and several vessels are consistently exploiting these areas (Greenpeace, 2018; Oceana, 2018).

The EU has also recently submitted to the CFCM a proposal for a multi-annual management plan for trawling activities targeting giant red shrimp (*Aristeomorpha foliacea*) and blue and red shrimp (*Aristeus antennatus*) in the **Ionian Sea** (GSAs 19, 20, and 21, mainly exploited by the Italian and Greek fleets and, to a lesser extent by the Maltese one). The proposal, which was accepted by the GFCM with Recommendation GFCM/42/2018/4, had to come into force at the end of April 2019. The multi-annual management plan aims at achieving trawling sustainability in the Ionian Sea and lays the basis for the future management of the two species in this area, which, as stressed in the proposal, has considerable economic and social importance. The recommendation also provides for transitional measures, to be applied until the adoption of the definitive measures, which will be based on the scientific opinion provided by CFCM Scientific Advisory Committee (SAC). The multi-annual management plan will be in line with the precautionary approach and the MSY goals and will aim at preventing stock collapse while at the same time ensuring fishery sustainability and stability. While awaiting the definition of the biological reference points consistent with the MSY goals, the general objectives of the plan shall be pursued by maintaining the fleet capacity / fishing effort, employed for the exploitation of the key Ionian Sea species, at the levels authorised or adopted in 2014-2017.

Status of important stocks

The Mediterranean is facing significant challenges in terms of resources' sustainability.

The total landings in the Mediterranean and Black Sea reached a maximum of about 2 million tonnes in the mid-1980s, then declined to a low of 1.1 million tonnes in 2014 and showed a slight recovery to 1.3 million tonnes in 2015. In 2015, the area had 38 percent of the assessed stocks at biologically sustainable levels, the lowest among all sea basins all over the world (FAO, 2018.a). Nevertheless, the recent trend is a decreasing one, especially since 2014 when the percentage of overexploited stocks decreased from 88 percent to 78 percent in 2016 (FAO, 2018.b). Demersal resources such as hake (*Merluccius merluccius*), red mullets (*Mullus spp*.), turbot (*Psetta maxima*), common sole (*Solea vulgaris*), sea breams (*Pagellus spp.*) and small pelagic resources such as anchovy (*Engraulis encrasicolus*) and sardine are overfished. Most stocks of sardinellas (*Sardinella spp*.), deep-water shrimps (*Parapenaeus longirostris, Aristeus antennatus* and *Aristaeomorpha foliacea*) and cephalopods are probably maximally sustainably fished to overfished.

Looking specifically to assessment of stocks falling under EU jurisdiction, according to the monitoring of CFP carried out by STECF (STECF, 2019), in evaluating the F status for 2016 (last year in Mediterranean stock assessments), out of 47 stocks (area/species combinations), only around 13% (6 stocks) are not overfished, the majority are overfished.

[10] Art. 13, Basic texts of the General Fisheries Commission for the Mediterranean of the FAO.

The F/FMSY indicator has remained at a very high level during the whole 2003-2016 period for a great number of stocks; on the other hand, it is important to stress that after the observed peak in 2011 where F/FMSY has reached its highest historical level, there is a somewhat decreasing trend in overexploited stocks (STECF, 2019).

TAC development of main species

The current management approach to **highly migratory species** in the Mediterranean concerns bluefin tuna (*Thunnus thynnus*), swordfish (*Xiphias gladius*), and albacore (*Thunnus alalunga*). Since these species are shared highly migratory stocks, they are managed by the International Commission for the Conservation of Atlantic tunas (ICCAT), which issues management recommendations that can regard, for instance, catch quotas and technical measures, MLS, fishing areas, closed areas, effort restrictions, and monitoring, control, and surveillance of fishing activities. EU participates in the annual ICCAT meeting and negotiates on behalf of the Member States (Cyprus, France, Greece, Croatia, Italy, Malta, Portugal and Spain) and the Council. Prior to 2016 this was the only stock regulated by TAC. The reduction of **bluefin tuna** stock biomass in the Eastern Atlantic and the Mediterranean has led the ICCAT to adopt in 2010 a multi-annual recovery plan that is subject to continuous revision based on stock status data. The current 2018-2020 recovery plan (Recommendation 2017-07) involves for 2018 a TAC of 28 200 tonnes (an increment to 36 000 tonnes, envisaged for 2020, will be shared among ICCAT members) and an electronic monitoring and control plan for captures. In 2014 ICCAT endorsed a 20% annual TAC increase for the next three years and the EU quota (that has been regularly set at a lower level) increased from 7 938.65 tonnes in 2014 to 9 372.92 tonnes in 2015 (20%), to 11 203.54 tonnes in 2016 and to 13 451.36 tonnes in 2017. In 2018 it has again increased to 15 850 and furthermore in 2019 (17 536 tonnes).

In 2016, recognizing the outcome of the stock assessment conducted by SCRS (Standing Committee on Research and Statistics) that year and, in particular, the overfished status of the **swordfish** stock ICCAT decided (Recommendation 16-06) to implement a 15-year recovery plan starting in 2017 and continuing through 2031, with the goal of achieving BMSY with at least 60% probability. A Total Allowable Catch (TAC) of 10 500 tonnes for swordfish for the year 2017 was identified. The TAC should be reduced by 3% a year starting in 2018, to achieve a reduction of 15% in 5 years. Indeed, in 2019 the TAC is 9 870. The plan also envisages a number of measures such as bans in some periods of the year, MLS, technical gear specifications, the gradual reduction of fishing capacity, and a control and monitoring plan.

In 2017 ICCAT decided to implement management measures for Mediterranean **albacore** (*Thunnus alalunga*), starting in 2018, with the objective of preventing any increase in fishing effort or catch levels until the SCRS can deliver more accurate advice. ICCAT has introduced a limit on the number of the fishing vessels authorised to fish for Mediterranean albacore to the number of vessels that were authorized in 2017 and has also imposed a closure period.

In December 2016, for the first time, the EU Council agreed on setting a catch limit for the EU concerning **small pelagic species** in the Adriatic Sea for 2017 (set at 2014 level, namely 112 700 tonnes of anchovy plus sardine - Annex IL of Regulation 2017/0127). The same catch limit was agreed for the 2018 fishing opportunities). Except the indication that the catch for Slovenia should not exceed 300 tonnes, the Council did not however define the share (quotas) of the total fishing opportunities between Croatia and Italy. This catch limits was set, for 2019 (Regulation 2019/124, Annex IL of Regulation 2018/120) at 107 065. The latest also recalls previous effort limitations, such as a maximum number of days-at-sea per year (180) and a fixed number of days for fishing anchovies or sardines (no more than 144 per year, for each species).

Landing obligation

For small-pelagic species (anchovy, sardine, mackerels, horse mackerels) the Commission adopted a three-year discard plan for certain small pelagic fisheries in the Mediterranean Sea (No 1392/2014), which provided for a derogation to the landing obligation, by allowing the discard of small amounts of sardine and anchovy. The discard plan expired at the end of 2017, and was replaced by Delegated Regulation No 2018/161, applicable until the end of 2020. The CFP Basic Regulation envisages that measures concerning discards should be incorporated in multiannual plans. Recently, the EU Parliament (2017/0043(COD), also proposed a number of measures to be included in multiannual plans, such as a maximum number of fishing days, catch limits, spatial-temporal closures each year to protect spawning and nursery areas, additional closures for vessels of an overall length of over 12 metres, separately for each type of fishing gear.

Regarding large pelagic fish, there is a derogation for bluefin tuna, as its management is regulated by the International Commission for the Conservation of Atlantic Tunas (ICCAT). For the implementation of

the ICCAT measures, the European Commission adopted the delegated Regulation 98/2015, according to which it is allowed to land and use for human consumption of up to 5% of undersized individuals of between 8 and 30 Kg, or length between 75 and 115 cm, by vessels targeting tuna and have fishing license for this. The same percentage is allowed as incidental catches by vessels not fishing actively bluefin tuna and having no fishing license.

In the case of demersal species, in 2018, the Commission Delegated Regulation (EU) No 2018/2036 (amending Delegated Regulation (EU) 2017/86 establishing a discard plan for certain demersal fisheries in the Mediterranean Sea) extended current survivability and *de minimis* exemptions for various single species or introduced new *de minimis* exemptions for some groups of species until 31 December 2021.

Although the implementation of the LO has not yet been fully implemented, some Regional actors in Mediterranean fisheries (MEDAC) consider that the implementation of the LO would benefit from more fundamental changes in the longer term, i.e. strategies directed to reduce capture of unwanted catches instead of redefining the *de minimis* exemptions periodically. The *de minimis* exemptions will not produce any improvement in the situation, on the contrary, it will increase bureaucracy and the on-board work required to register discards eligible for *de minimis* exemptions in the logbooks (DiscardLess, 2018).[11]

Description of relevant fisheries in the region

Small-scale coastal fleet (SSCF) (excluding GRC)

The small-scale coastal fleet (vessels under 12m using passive gears) in the Mediterranean is of vital importance as it represent 72% of the total fleet by number of vessels and 51% of the employment (39% of the FTE). In 2017, there are an estimated 16 116 small-scale vessels, with a combined gross tonnage of 32 525 GT and a total power of 519 453 kW, active in the region.

Although over 65% of the effort (fishing days) was deployed by the SSCF, these vessels landed only 11% by weight and 22% by value. This segment is more important from a social point of view. In 2017, 23 467 fishers were directly employed in the Mediterranean small-scale fishing fleet, corresponding to 11 885 FTEs (excluding Greece).

When including Greece, the SSCF represents 80% of the total fleet by number and 60% of all employment (55% of total FTEs). Specifically, there were 28 704 small-scale vessels with a combined gross tonnage of 57 thousand GT and a total power of 758 thousand kW.

When including Greece, 41 211 fishers were directly employed in the Mediterranean small-scale fishing fleet in 2017, corresponding to 28 098 FTEs. The majority of them are family-based enterprises. Two Member States, in particular, represent major employers: Greece with 16 213 FTEs and Italy with 8 599 FTEs, respectively. Also, in some Member States, (e.g., Greece and Cyprus) women play a key role in many SSCFs, very often through the provision of unpaid labour.

The SSCF in the Mediterranean involves a significant number of fishing techniques (static nets like trammel nets, gillnets, set longlines, pots, and traps) targeting a variety of species including common sole (mainly Croatia and Slovenia), common cuttlefish (mainly Italy, Croatia, Greece and Spain) and surmullet (mainly Cyprus, Greece, Italy, France, Malta and Spain). Other target species include common octopus (mainly Italy, Croatia, Greece, Spain, France and Malta) and European hake (mainly Italy, Croatia, Spain and France)

The higher value achieved by the SSCF (compared to the LSF) appears to reflect higher prices linked to differences in quality, freshness, product size and the use of different marketing channels. The SSCF generally operates through very short supply-chains.

Top species in 2017 included demersal species like common cuttlefish and octopus as well as hake and gilthead seabream in terms of volume and value (Figure 4.90).

The Mediterranean SSCF (excluding Greece) generated a revenue of EUR 335.5 million in 2017. Gross Value Added was estimated at around EUR 243 million and gross profit at around EUR 106 million. Labour productivity (GVA per FTE) was estimated at EUR 20 420.

Overall, the economic performance of the SSCF improved in 2017: +6% the gross profit margin overall and +5% gross profit per vessel. Only Malta reported gross and net losses but at lower level than in

[11] DiscardLess, 2018. Strategies for the gradual elimination of discards in European fisheries. Grant agreement No: 633680. Project co-funded by the European Commission within the Horizon 2020 Programme. Deliverable D7.7. Fourth policy brief on guidelines for the implementation of the discard policy in European regions: The Landing Obligation in EU Demersal fisheries in the Mediterranean, Western waters and the North Sea – status, approaches and looking ahead towards the next CFP reform.

2016 while Cyprus and Croatia reported net profits (they reported net losses in 2016). Factors that may have contributed to the positive situation include mainly the increase in the overall value of landings and the reduction of labour costs. Energy costs have increased slightly but the trend shows an improvement lead by the overall decrease in energy consumption.

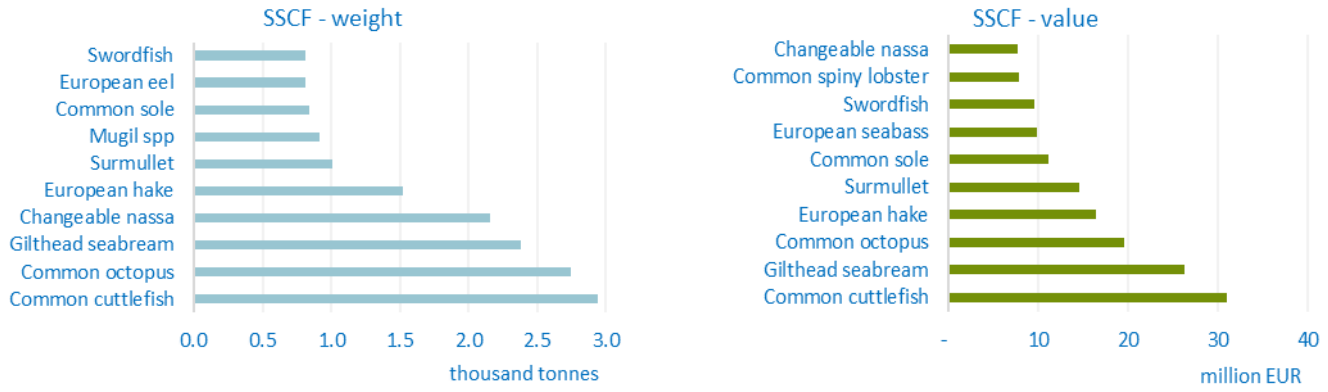


Figure 4.90 Top 10 species landed by SSCF, 2017. Excludes Greece
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

The higher value of landings were mainly driven by higher average price thanks to the use of other market channels, short supply chains and new attractive ways to contact consumers (e.g. the use of an interactive websites connected with mobile technologies to inform consumers in real time of the direct sales possibilities in their local area).

Among problems that negatively still affect the economic performance of small-scale fishers there are:

- Competition with an increasing number of recreational fishers, who usually fish in coastal areas and sometimes illegally sell their catch at low prices.
- Conflict between the small-scale and large-scale fleets.
- Older age profile, if compared with LSC employment: there, is , indeed, a low generational change because small-scale fisheries, being less rewarding than large-scale ones, are less attractive.

Large-scale fleet (LSF)

In 2017, the large-scale fleet fishing in the Mediterranean (excluding Greece) consisted of 6 186 vessels (28% of the overall Mediterranean fleet), with a total tonnage of 223 069 GT and engine power of 1.1 million kW. Italy, Spain and Croatia had the largest number of active vessels in the region. Compared to 2016, the number of vessels remained constant while days-at-sea decreased by 4% in 2017.

When including Greece, the large-scale fleet consisted of 7 035 vessels (20% of the overall Mediterranean fleet), with a total tonnage of 262 thousand GT and engine power of 1.20 million kW. Italy, Spain, Croatia and Greece had the largest number of active vessels in the region with numbers of 3 901, 1 068, 967 and849, respectively. Between 2016 and 2017, the number of vessels and days-at-sea decreased by 5% and 7% respectively.

Total employment for the LSF is highest for the Italian demersal trawlers 12-18m and 18-24 m, totalling 3 381 and 2 472 respectively reflecting the high number of active vessels in these MS. The other main fleet segments in terms of number of employees were the Spanish demersal trawlers 12-18m.

In 2017, large-scale vessels generated, by far, the highest landed weight (89% of the total) and 78% of the landed value. The total weight landed by the LSF (excluding Greece) was 323 804 tonnes, confirming the positive trend of the previous years. With an estimated value of EUR 1.13 billion these fleets recorded almost EUR 680 million in GVA and a gross profit of EUR 323.5 million.

Small pelagics accounted for 57% of total landings weight of the area and for 23% of landings value in 2017. In particular, small pelagics are the main fisheries resources of the Adriatic Sea, accounting for bulk of the total catch. In the eastern part, Croatian vessels mainly target sardines, while anchovies are mainly landed by the Italian pelagic fleet.

The Mediterranean LSF is also heavily dependent on some demersal species as European hake, deep-water rose shrimp, Atlantic bluefin tuna, giant red shrimp, combined accounted for 23% of total landings value in 2017 (Figure 4.91).

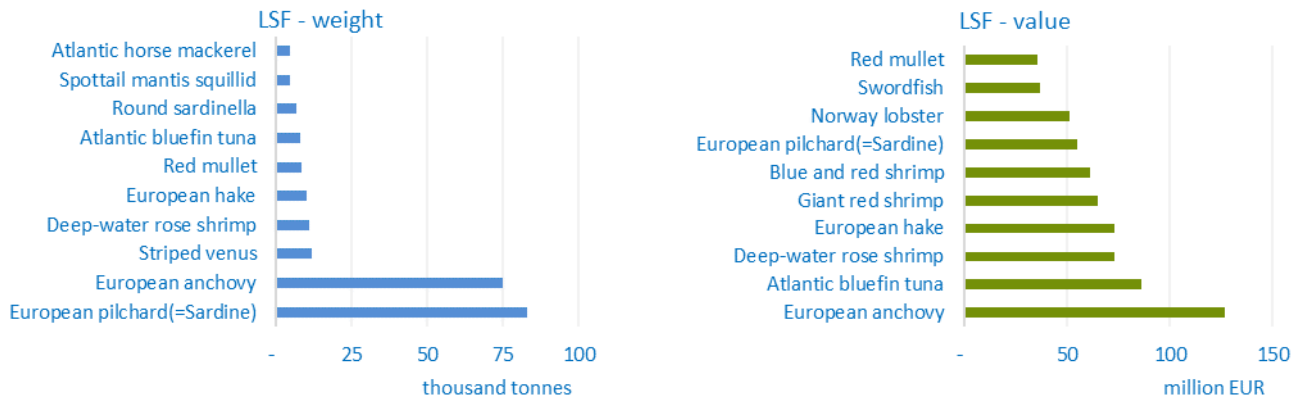


Figure 4.91 Top 10 species landed by LSF operating in the Mediterranean 2017, excluding Greece
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

When including Greece some species become more important, as hake (both in weight and value) and sardines (in value), highlighting the importance of these species in that country (Figure 4.92).

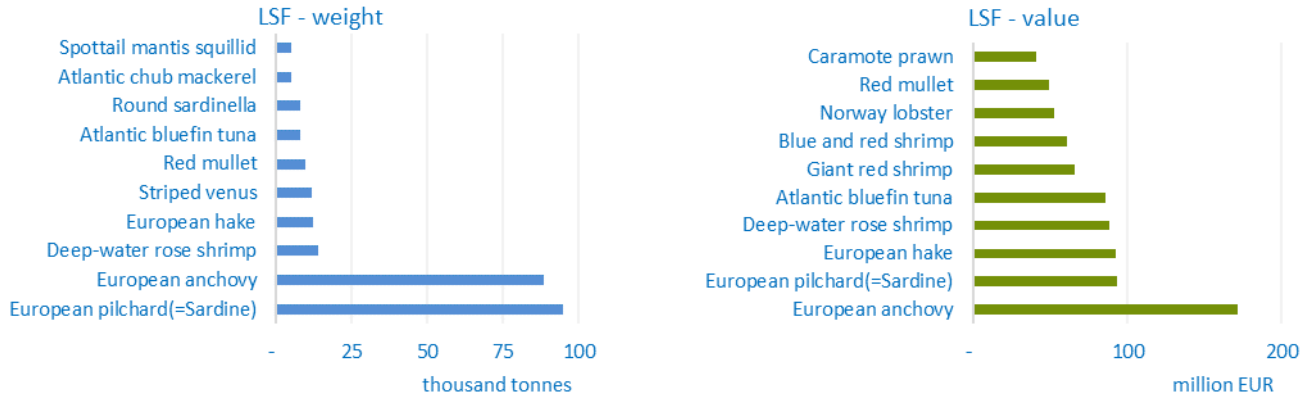


Figure 4.92 Top 10 species landed by MS LSF operating in the Mediterranean 2017, including Greece
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Performance by fleet segment

The 40 most important fleet segments out of the 112 active ones in the region (excluding the Greek fleets), represented 68% of the number of vessels; covered 86% of the effort deployed (in days-at-sea); generated 93% of the revenue (EUR 1.4 billion); 3% of the GVA (EUR 861 million); and 94% of the gross profit (EUR 405 million). The top ten segments alone generated 63% of the revenue, but only 36% of total landed weight (Table 4.27).

At the fleet segment level, the Italian demersal trawlers 12-18m, with 5.5% of the number of vessels generated the most revenue, EUR 189 million, or 13% of the total from the Mediterranean region in 2017. The Italian demersal trawlers 18-24m followed with 12% of the total revenue produced (EUR 176.5 million) and then by the Italian polyvalent/passive gear segment 6-12m, with 11% of the revenue (EUR 166 million). The same fleet segments also generated the highest GVA, EUR 325 million combined, or 35% of the total GVA generated by the regional fleet and gross profit (EUR 172 million, or 40% of the total).

In terms of GVA per vessel, the Italian purse seiners over 40m produced the highest value, on average EUR 1.8 million per vessel (targeting mainly bluefin tuna), followed by the French purse seiners 24-40m (EUR 1.2 million per vessel) and then the Spanish purse seiners 24-40 m (EUR 691.6 million per vessel).

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Table 4.23 Key parameter estimates by MS fleets operating in the Mediterranean Sea, 2017

Mediterranean	Estimated no. of vessels	% of total EU active vessels	Total vessel tonnage	Total vessel power	Engaged crew	FTE national	Days at sea	as a % of total fishing days	Energy consumption	Live weight of landings	as a % of total weight landed	Value of landings	as a % of total value landed	Revenue	as a % of total revenue	Gross Value Added	GVA to revenue	Gross profit	Gross profit margin	Net profit	Net profit margin	Average GVA	GVA per FTE (labour productivity)
	number	(%)	GT	kW	number	number	day	(%)	litre	kg	(%)	euro	(%)	€	(%)	€	%	€	%	€	%	€	€
CYP	765	3.4%	3,417	35,798	1,134	689	50,589	2.4%	2,195,126	1,736,417	0.5%	10,381,491	0.7%	9,883,980	0.7%	6,218,134	62.9	5,111,640	51.7	2,515,225	25.4	8,139	9,025
ESP	2,214	9.9%	53,646	209,067	8,507	6,709	236,108	11.3%	99,011,982	86,169,684	23.8%	312,134,474	21.4%	306,895,401	21.0%	193,494,785	63.0	51,701,242	16.8	32,093,270	10.7	87,404	28,841
FRA	1,255	5.6%	14,651	128,842	2,013	582	145,047	6.9%	22,301,232	18,895,609	5.2%	149,675,174	10.3%	111,080,226	7.6%	71,565,718	64.4	23,936,959	21.5	13,347,102	12.0	57,018	122,972
HRV	6,052	27.1%	34,582	263,408	7,890	1,665	236,444	11.3%	23,341,713	68,874,717	19.0%	55,912,795	3.8%	81,380,141	5.6%	48,510,279	59.6	26,127,946	32.1	12,663,905	15.6	8,016	29,131
ITA	11,247	50.4%	143,741	920,912	25,415	20,184	1,398,732	66.7%	354,143,542	184,778,034	50.9%	918,606,832	63.0%	938,666,908	64.2%	594,698,478	63.4	319,643,282	34.1	165,572,615	17.6	52,874	29,463
MLT	686	3.1%	4,829	51,947	1,134	719	22,306	1.1%	3,748,995	2,152,700	0.6%	10,360,660	0.7%	10,880,940	0.7%	5,350,336	49.2	1,531,677	14.1	- 174,476	- 1.60	7,799	7,441
PRT	2	0.0%	389	910	24	19	361	0.0%	332,099	57,033	0.0%	1,256,159	0.1%	1,256,336	0.1%	834,364	66.4	397,489	31.6	319,672	25.4	419,489	44,157
SVN	80	0.4%	340	4,806	101	63	7,327	0.3%	227,835	128,083	0.0%	872,597	0.1%	2,153,354	0.1%	1,726,713	80.2	1,135,796	52.7	1,076,975	50.0	21,584	27,495
GRC	447		33,368	110,187	3,427		80,382		51,854,232	49,173,174		215,934,205		215,934,206		147,152,966	68.1	114,739,549	53.1	93,592,599	43.3	329,201	
Total excl GRC	**22,301**		**255,594**	**1,615,689**	**46,217**	**30,630**	**2,096,914**		**505,302,525**	**362,792,277**		**1,459,200,183**		**1,462,197,287**		**922,398,806**		**429,586,030**		**227,414,288**			

Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).
* Incomplete and questionable data for Greece.

Table 4.24 Key parameter estimates by fishing activity in the Mediterranean Sea, 2017

Mediterranean	Estimated no. of vessels	% of total EU active vessels	Total vessel tonnage	% of total EU GT	Total vessel power	% of total EU kW	Engaged crew	% of total jobs	FTE national	% of total FTE	Days at sea	% of total days at sea	Live weight of landings	as a % of total weight landed	Value of landings	as a % of total value landed	Revenue	as a % of total revenue	Gross Value Added	GVA to revenue	Gross profit	Gross profit margin	Net profit	Net profit margin	Average GVA	GVA per FTE (labour productivity)
	GT	(%)	kW	(%)	number	(%)	number	(%)	number	(%)	day	(%)	litre	(%)	euro	(%)	€	(%)	€	%	€	%	€	%	€	€
SCF	16,116	72.3%	32,525	12.7%	519,453	32.2%	23,467	50.8%	11,885	38.8%	1,363,136	65.0%	38,988,463	10.7%	323,548,104	22.2%	335,547,565	22.9%	242,702,183	72.3	106,134,944	31.6	60,532,680	18.1	15,060	20,420.3
LSF	6,186	27.7%	223,069	87.3%	1,096,237	67.8%	22,750	49.2%	18,745	61.2%	733,778	35.0%	323,803,813	89.3%	1,135,652,079	77.8%	1,126,649,722	77.1%	679,696,624	60.3	323,451,086	28.7	166,881,608	14.9	109,901	36,260.1
Total excl. GRC	**22,301**		**255,594**		**1,615,689**		**46,217**		**30,630**		**2,096,914**		**362,792,277**		**1,459,200,183**		**1,462,197,287**		**922,398,806**		**429,586,030**		**227,414,288**			

Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Table 4.25 Key parameter estimates by MS and fishing activity operating in the Mediterranean Sea, 2017

Mediterranean		Estimated no. of vessels	% of total EU active vessels	Total vessel tonnage	Total vessel power	Engaged crew	FTE national	Days at sea	as a % of total DAS	Energy consumption	Live weight of landings	as a % of total weight landed	Value of landings	as a % of total value landed	Revenue	as a % of total revenue	Gross Value Added	GVA to revenue	Gross profit	Gross profit margin	Net profit	Net profit margin	Average GVA	GVA per FTE (labour productivity)
		number	(%)	GT	kW	number	number	day	(%)	litre	kg	(%)	euro	(%)	€	(%)	€	%	€	%	€	%	€	€
SCF	CYP	728	3%	1,692	29,016	962	517	47,492	2%	1,158,786	796,717	0%	6,314,048	0%	6,314,048	0%	4,713,359	74.6	4,479,014	70.9	3,071,277	48.6	6,474	9,117
	ESP	1,146	5%	3,593	37,837	2,833	1,659	115,100	5%	7,950,117	5,628,624	2%	36,309,881	2%	48,481,557	3%	35,186,605	72.6	4,034,083	8.3	2,256,227	4.8	30,716	21,208
	FRA	1,118	5%	2,926	86,586	1,436	381	130,883	6%	4,349,216	6,817,626	2%	74,043,177	5%	44,725,613	3%	31,982,197	71.5	8,869,430	19.8	5,701,964	12.7	28,603	83,865
	HRV	5,085	23%	8,529	120,752	5,290	217	135,667	6%	2,525,180	1,241,568	0%	7,430,142	1%	20,423,196	1%	14,358,527	70.3	10,970,680	53.7	7,750,829	38.0	2,824	66,268
	ITA	7,346	33%	14,100	205,945	11,996	8,599	909,153	43%	33,176,143	23,857,127	7%	195,188,552	13%	210,161,961	14%	153,671,723	73.1	77,077,344	36.7	41,663,336	19.8	20,919	17,870
	MLT	624	3%	1,498	36,199	872	459	18,280	1%	1,515,614	579,379	0%	3,679,792	0%	3,713,263	0%	1,288,981	34.7	-465,307	-12.5	-1,047,543	-28.2	2,066	2,808
	SVN	69	0%	186	3,118	79	53	6,561	0%	76,695	67,423	0%	582,512	0%	1,727,927	0%	1,500,791	86.9	1,169,702	67.7	1,136,590	65.8	21,751	28,317
LSF	CYP	37	0%	1,724	6,782	172	172	3,097	0%	1,036,341	939,700	0%	4,067,443	0%	3,569,932	0%	1,504,774	42.2	632,626	17.7	-556,052	-15.6	41,799	8,749
	ESP	1,068	5%	50,053	171,230	5,674	5,050	121,008	6%	91,061,866	80,541,060	22%	275,824,593	19%	258,413,844	18%	158,308,181	61.3	47,667,159	18.4	29,837,043	11.8	148,194	31,349
	FRA	137	1%	11,725	42,256	577	201	14,164	1%	17,952,016	12,077,983	3%	75,631,998	5%	66,354,613	5%	39,583,521	59.7	15,067,529	22.7	7,645,138	11.5	288,900	197,311
	HRV	967	4%	26,053	142,656	2,600	1,449	100,777	5%	20,816,533	67,633,149	19%	48,482,653	3%	60,956,945	4%	34,151,752	56.0	15,157,266	24.9	4,913,076	8.1	35,317	23,576
	ITA	3,901	17%	129,641	714,967	13,419	11,585	489,579	23%	320,967,399	160,920,908	44%	723,418,280	50%	728,504,947	50%	441,026,755	60.5	242,565,938	33.3	123,909,280	17.0	113,044	38,068
	MLT	62	0%	3,330	15,748	262	260	4,026	0%	2,233,381	1,573,321	0%	6,680,868	0%	7,167,678	0%	4,061,355	56.7	1,996,984	27.9	873,067	12.2	65,506	15,621
	PRT	2	0%	389	910	24	19	361	0%	332,099	57,033	0%	1,256,159	0%	1,256,336	0%	834,364	66.4	397,489	31.6	319,672	25.4	419,489	44,157
	SVN	11	0%	154	1,688	22	10	766	0%	151,140	60,660	0%	290,085	0%	425,427	0%	225,922	53.1	-33,906	-8.0	-59,615	-14.0	20,538	23,053
	GRC	447		33,368	110,187	3,427		80,382		51,854,232	49,173,174		215,934,205		215,934,206		147,152,966	68.1	114,739,549	53.1	93,592,599	43.3	329,201	
Total excl. GRC		**22,301**		**255,594**	**1,615,689**	**46,217**	**30,630**	**2,096,914**		**505,302,525**	**362,792,277**		**1,459,200,183**		**1,462,197,287**		**922,398,806**		**429,586,030**		**227,414,288**			

Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Table 4.26 Key parameter estimates for the top 40 fleet segments operating in the Mediterranean Sea, 2017

Mediterranean	Estimated no. of vessels	% of total EU active vessels	Total vessel tonnage	% of total EU GT	Total vessel power	% of total EU kW	Engaged crew	FTE national	Days at sea	as a % of total sea days	Energy consumption	as a % of total energy consumed	Weight of landings	as a % of total weight landed	Value of landings	as a % of total value landed	Revenue	Gross Value Added	GVA to revenue	Gross profit	Gross profit margin	Net profit	Net profit margin	Average GVA	GVA per FTE (labour productivity)
	number	(%)	GT	(%)	kW	(%)	number	number	day	(%)	litre	(%)	kg	(%)	€	(%)	€	€	%	€	%	€	%	€	€
ITA MBS DTS1218 NGI	1,236	5.5%	22,991	9.0%	169,693	10.5%	3,381	3,358	169,959	8.1%	85,641,957	16.9%	30,732,819	8.5%	189,369,840	13.0%	189,401,848	113,437,115	59.9	63,757,003	33.7	44,751,703	23.6	91,778	33,776
ITA MBS DTS1824 NGI	638	2.9%	39,192	15.3%	178,893	11.1%	2,472	2,471	105,539	5.0%	106,879,049	21.2%	24,384,547	6.7%	176,397,484	12.1%	176,527,445	91,777,848	52.0	48,908,675	27.7	15,281,070	8.7	143,852	37,137
ITA MBS PGP0612 NGI	5,154	23.1%	11,904	4.7%	191,659	11.9%	8,834	6,366	641,772	30.6%	28,466,012	5.6%	19,070,463	5.3%	154,091,830	10.6%	165,737,545	120,060,169	72.4	59,918,760	36.2	28,852,191	17.4	23,295	18,860
ITA MBS DTS2440 NGI	173	0.8%	23,431	9.2%	74,627	4.6%	1,083	1,078	36,485	1.7%	59,363,375	11.7%	9,990,408	2.8%	106,780,192	7.3%	107,728,100	62,416,709	57.9	33,002,621	30.6	13,414,808	12.5	360,790	57,916
ESP MBS DTS1824 NGI	303	1.4%	18,356	7.2%	56,281	3.5%	1,352	1,405	28,683	1.4%	38,774,516	7.7%	13,677,731	3.8%	91,044,148	6.2%	84,697,216	47,449,281	56.0	15,274,056	18.0	9,210,133	10.9	156,604	33,781
ESP MBS DTS2440 NGI	132	0.6%	13,012	5.1%	40,910	2.5%	763	720	16,049	0.8%	25,587,683	5.1%	5,371,772	1.5%	45,526,645	3.1%	44,520,959	24,316,786	54.6	6,444,211	14.5	2,396,793	5.4	184,241	33,760
ITA MBS PGP0006 NGI	2,192	9.8%	2,196	0.9%	14,285	0.9%	3,161	2,233	267,381	12.8%	4,710,132	0.9%	4,786,664	1.3%	41,096,722	2.8%	44,424,416	33,611,554	75.7	17,158,584	38.6	12,811,145	28.8	15,334	15,050
ESP MBS PMP0612 NGI	907	4.1%	2,682	1.0%	29,049	1.8%	1,943	1,200	91,441	4.4%	6,600,982	1.3%	4,336,079	1.2%	28,157,587	1.9%	38,861,056	28,410,941	73.1	2,592,347	6.7	886,864	2.3	31,325	23,681
ITA MBS PGP1218 NGI*	390	1.7%	5,128	2.0%	57,103	3.5%	1,268	1,035	42,094	2.0%	7,985,964	1.6%	4,669,120	1.3%	35,989,330	2.5%	36,450,770	24,683,792	67.7	13,243,957	36.3	5,455,247	15.0	63,292	23,860
ITA MBS DRB1218 NGI*	704	3.2%	9,263	3.6%	76,207	4.7%	1,520	404	39,643	1.9%	5,422,900	1.1%	13,005,941	3.6%	32,544,886	2.2%	32,553,931	24,496,401	75.2	12,241,884	37.6	686,277	2.1	34,796	60,616
FRA MBS PS 2440 NGI*	18	0.1%	4,842	1.9%	15,028	0.9%	195	1	140	0.0%	564,714	0.1%	3,320,190	0.9%	39,690,454	2.7%	28,824,811	22,419,485	77.8	10,427,422	36.2	8,209,726	28.5	1,245,527	28,742,930
ESP MBS PS 1824 NGI	88	0.4%	4,219	1.7%	18,720	1.2%	1,010	801	12,516	0.6%	4,910,056	1.0%	26,253,940	7.2%	38,249,632	2.6%	28,260,646	19,610,484	69.4	3,906,069	13.8	2,904,315	10.3	223,203	24,478
ITA MBS PS 40XX NGI	13	0.1%	3,197	1.3%	9,647	0.6%	169	84	283	0.0%	1,746,184	0.3%	2,857,538	0.8%	25,124,732	1.7%	26,194,953	23,621,717	90.2	16,583,652	63.3	12,520,070	47.8	1,817,055	282,523
ESP MBS DTS1218 NGI	147	0.7%	3,600	1.4%	10,837	0.7%	454	438	16,754	0.8%	8,886,229	1.8%	4,287,856	1.2%	23,562,160	1.6%	24,306,138	14,052,379	57.8	5,303,203	21.8	4,072,061	16.8	95,612	32,076
ITA MBS PS 1824 NGI	74	0.3%	3,763	1.5%	19,171	1.2%	645	488	8,285	0.4%	4,844,664	1.0%	11,049,310	3.0%	22,564,828	1.5%	22,564,828	14,931,544	66.2	8,288,613	36.7	5,124,245	22.7	201,778	30,574
ESP MBS PS 2440 NGI*	26	0.1%	3,134	1.2%	11,427	0.7%	328	221	3,106	0.1%	2,214,583	0.4%	7,482,745	2.1%	21,180,322	1.5%	22,339,686	17,981,658	80.5	7,464,358	33.4	5,449,976	24.4	691,602	81,258
FRA MBS DFN0612 NGI	529	2.4%	1,658	0.6%	45,967	2.8%	681	194	64,270	3.1%	2,085,460	0.4%	2,637,507	0.7%	31,677,775	2.2%	21,510,201	14,906,732	69.3	3,649,831	17.0	1,846,015	8.6	28,179	77,033
ITA MBS TM 1824 NGI	46	0.2%	3,535	1.4%	15,403	1.0%	256	256	7,349	0.4%	7,217,342	1.4%	18,916,985	5.2%	20,566,048	1.4%	20,640,387	12,508,543	60.6	6,204,489	30.1	4,032,444	19.5	271,925	48,838
FRA MBS DTS2440 NGI*	32	0.1%	3,913	1.5%	10,094	0.6%	136	109	5,989	0.3%	10,586,564	2.1%	5,148,536	1.4%	18,967,487	1.3%	20,470,603	8,421,863	41.1	2,193,679	10.7	- 1,528,885	- 7.5	263,183	77,243
ITA MBS HOK1218 NGI	135	0.6%	2,198	0.9%	20,610	1.3%	500	493	18,284	0.9%	5,074,495	1.0%	2,695,137	0.7%	19,602,730	1.3%	19,623,015	13,085,738	66.7	7,378,776	37.6	4,827,270	24.6	96,931	26,535
HRV MBS PS 2440 NGI	73	0.3%	11,620	4.5%	41,434	2.6%	640	515	11,578	0.6%	5,455,010	1.1%	37,148,517	10.2%	17,548,801	1.2%	18,914,240	10,882,799	57.5	2,402,938	12.7	- 1,856,369	- 9.8	149,079	21,132
ITA MBS TM 2440 NGI	35	0.2%	3,477	1.4%	17,137	1.1%	226	226	6,026	0.3%	10,070,296	2.0%	11,543,959	3.2%	17,133,839	1.2%	17,170,115	9,544,417	55.6	5,484,200	31.9	3,340,806	19.5	272,698	42,139
ITA MBS PS 1218 NGI	116	0.5%	1,482	0.6%	13,505	0.8%	653	515	13,369	0.6%	3,738,144	0.7%	6,777,456	1.9%	16,607,842	1.1%	16,702,005	11,849,888	70.9	6,593,526	39.5	5,011,962	30.0	102,154	22,994
ITA MBS PS 2440 NGI	29	0.1%	3,356	1.3%	12,521	0.8%	323	318	3,380	0.2%	3,019,097	0.6%	8,651,421	2.4%	13,258,979	0.9%	15,061,425	11,584,819	76.9	7,155,942	47.5	3,555,300	23.6	399,477	36,457
ESP MBS PS 1218 NGI	84	0.4%	1,995	0.8%	10,762	0.7%	690	537	10,673	0.5%	2,270,597	0.4%	17,046,031	4.7%	23,493,851	1.6%	14,926,162	10,854,626	72.7	2,909,495	19.5	2,300,611	15.4	129,718	20,199
ITA MBS TBB1824 NGI	38	0.2%	3,204	1.3%	16,151	1.0%	188	188	5,657	0.3%	8,225,544	1.6%	2,457,048	0.7%	13,662,454	0.9%	13,681,129	5,387,250	39.4	2,460,331	18.0	66,588	0.5	141,770	28,656
FRA MBS DTS1824 NGI*	32	0.1%	1,984	0.8%	9,347	0.6%	99	69	4,675	0.2%	6,421,055	1.3%	2,308,143	0.6%	11,221,151	0.8%	13,648,476	6,248,641	45.8	1,636,246	12.0	701,165	5.1	195,270	90,560
ITA MBS HOK1824 NGI*	36	0.2%	2,533	1.0%	11,599	0.7%	223	223	5,488	0.3%	2,747,295	0.5%	1,768,627	0.5%	10,313,001	0.7%	10,313,001	7,459,256	72.3	4,178,136	40.5	1,211,860	11.8	207,202	33,434
HRV MBS PS 1824 NGI	49	0.2%	3,933	1.5%	17,147	1.1%	372	278	7,856	0.4%	2,474,905	0.5%	19,796,245	5.5%	9,554,590	0.7%	10,153,654	6,423,305	63.3	2,700,888	26.6	1,220,750	12.0	131,088	23,111
ITA MBS TM 1218 NGI*	32	0.1%	872	0.3%	6,844	0.4%	116	106	4,180	0.2%	2,261,275	0.4%	7,882,597	2.2%	8,927,060	0.6%	8,965,970	5,099,506	56.9	2,217,888	24.7	1,882,346	21.0	159,360	48,123
HRV MBS DTS1218 NGI*	169	0.8%	3,221	1.3%	26,459	1.6%	361	147	18,731	0.9%	4,346,000	0.9%	1,776,506	0.5%	5,678,959	0.4%	8,748,710	4,533,266	51.8	2,901,692	33.2	1,723,511	19.7	26,824	30,855
ESP MBS HOK1218 LLD*	42	0.2%	983	0.4%	3,123	0.2%	210	173	3,434	0.2%	1,454,492	0.3%	1,087,853	0.3%	6,692,839	0.5%	8,423,723	4,595,330	54.6	1,180,307	14.0	739,794	8.8	109,413	26,571
HRV MBS DFN0612 NGI*	667	3.0%	2,372	0.9%	42,688	2.6%	852	106	62,683	3.0%	1,261,315	0.2%	599,949	0.2%	3,666,251	0.3%	8,084,883	4,987,776	61.7	3,467,645	42.9	2,408,001	29.8	7,478	47,133
ESP MBS FPO1218 NGI*	31	0.1%	824	0.3%	3,261	0.2%	175	149	4,323	0.2%	1,674,192	0.3%	446,521	0.1%	4,524,472	0.3%	7,479,452	4,278,622	57.2	932,932	12.5	498,182	6.7	138,052	28,696
ESP MBS HOK1824 LLD*	17	0.1%	1,537	0.6%	2,856	0.2%	128	94	1,949	0.1%	1,189,196	0.2%	904,547	0.2%	6,205,721	0.4%	7,463,271	4,891,660	65.5	1,533,388	20.5	1,053,656	14.1	283,497	52,272
HRV MBS HOK0612 NGI*	233	1.0%	1,045	0.4%	26,402	1.6%	242	39	15,254	0.7%	669,028	0.1%	247,294	0.1%	1,501,818	0.1%	7,340,257	5,912,948	80.6	5,168,365	70.4	4,394,222	59.9	25,377	151,297
HRV MBS MGO0006 NGI	268	1.2%	212	0.1%	4,362	0.3%	268	68	18,784	0.9%	74,135	0.0%	358,484	0.1%	1,914,150	0.1%	5,741,436	3,965,353	69.1	3,296,827	57.4	2,897,237	50.5	14,796	58,418
FRA MBS PGP0612 NGI	93	0.4%	289	0.1%	10,384	0.6%	133	46	15,695	0.7%	678,064	0.1%	948,370	0.3%	10,164,919	0.7%	5,739,813	4,032,793	70.3	1,075,859	18.7	708,627	12.3	43,363	87,860
ITA MBS DTS0612 NGI	117	0.5%	674	0.3%	8,999	0.6%	192	138	10,919	0.5%	1,877,316	0.4%	1,016,226	0.3%	5,361,567	0.4%	5,712,558	3,722,485	65.2	1,888,460	33.1	1,058,155	18.5	31,816	26,938
ITA MBS TBB2440 NGI	10	0.0%	1,026	0.4%	3,717	0.2%	62	62	1,906	0.1%	3,772,534	0.7%	1,356,427	0.4%	5,593,028	0.4%	5,593,028	2,894,236	51.7	1,574,776	28.2	683,190	12.2	289,424	46,865

Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)); All monetary values have been adjusted for inflation; constant prices (2015

4.7 Black Sea

Regional Details

The Black Sea region covers FAO fishing area 37.4. Two EU Member States were involved in the Black Sea fisheries in 2017: Bulgaria and Romania. Both fleets operate mainly in waters under their respective national jurisdictional. All landings by the Bulgarian and Romanian fleets originate from the Black Sea.

A comprehensive economic analysis, including both coastal MS fishing fleets, was completed using data on the structure, activity and production for all vessels collected by Bulgaria and Romania. The data collection programme in place includes all economic and social variables.

A trend analysis is provided for the period 2008-2017 because consistent datasets for the entire period were available for both MS fleets. Tables at the end of this section contain a summary of the economic performance of the Black Sea fleet by Member State, fishing activity and fleet segment, respectively.

There are two species under TAC management in the Black Sea - turbot and sprat. The quota for turbot is divided equally between Bulgaria and Romania. For sprat, Bulgarian and Romanian national quotas are set at 70% and 30% of the total EU quota, respectively.

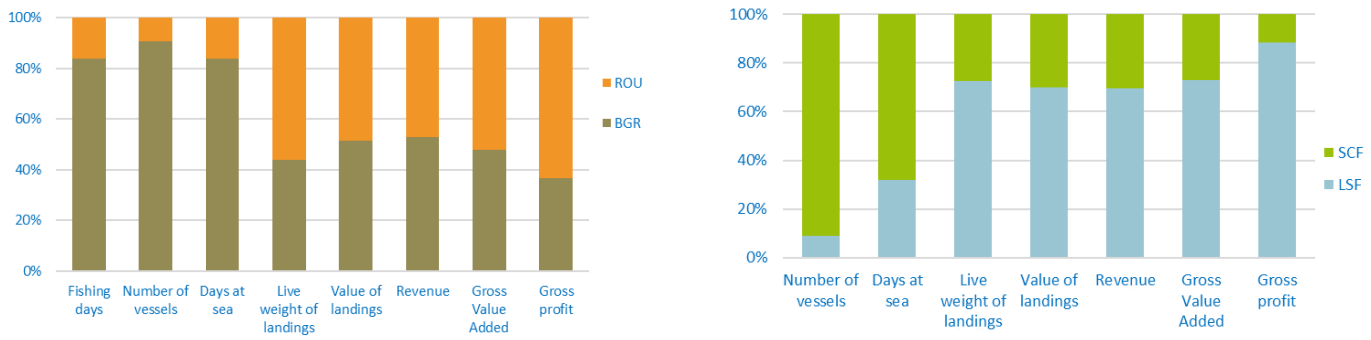


Figure 4.93 Share of MS and fishing activity in the Black Sea, 2017
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Overview of the main results for EU Baltic Sea fleet

Fishing effort and landings

The fishing effort of the Black Sea fleet remained stable between 2016-2017. The increase in the number of days-at-sea during the period 2014-2016 corresponds to the gradually growing weight of the landings in the same years. Surprisingly landings in weight and value increased in 2017, but the days-at-sea remained unchanged (Figure 4.94). This might be explained with the reduction in the days-at-sea in which vessels targeted not so commercially important species and concentrating their effort in the Rapa whelk fishery.

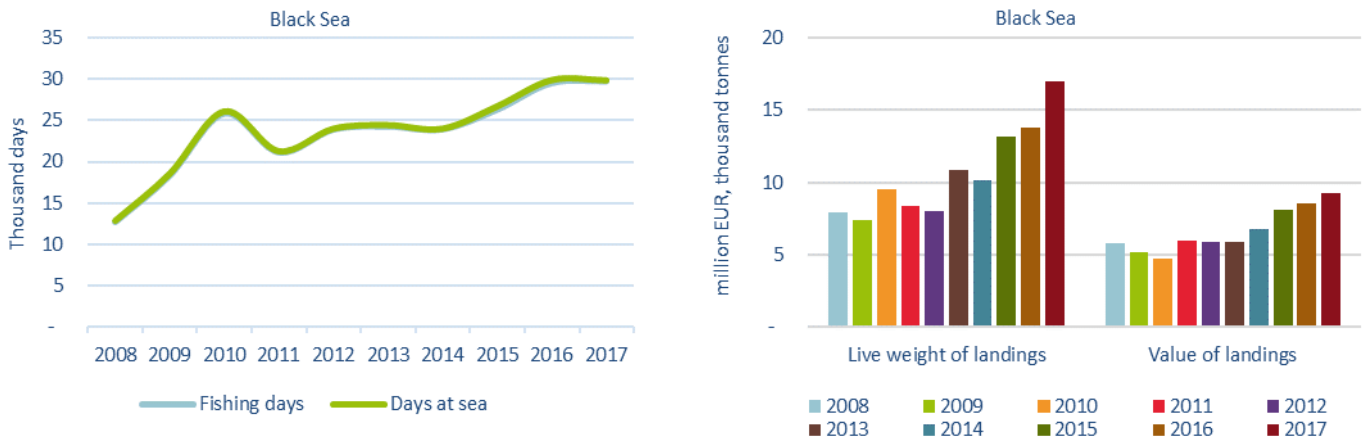


Figure 4.94 Trends on effort and landings for MS fleets operating in the Black Sea
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Wages and Salaries

In 2017 the average wage per FTE in the small-scale coastal fleet (SSCF) fell by 20%, fluctuating between EUR 3 009 and EUR 2 413.

Wages for the large-scale fleet (LSF) fell 13% in 2017 compared to 2016. The average wage in 2017 was EUR 4 238, some 40% lower compared to the highest level seen in 2014 (Figure 4.95). The values of the average wages in 2017 for both LSF and SSCF were the lowest for the whole period 2008-2017.

Labour productivity

Labour productivity (GVA/FTE) in the large-scale fleet segment was stable over the last three years. GVA per FTE was EUR 17 193, the highest value for the period 2008-2017 was in 2016. Unfortunately, the situation for the SSCF is totally different, the labour productivity decreased by 31% from 2016 to 2017, reaching its lowest value at just EUR 3 276 (Figure 4.95).

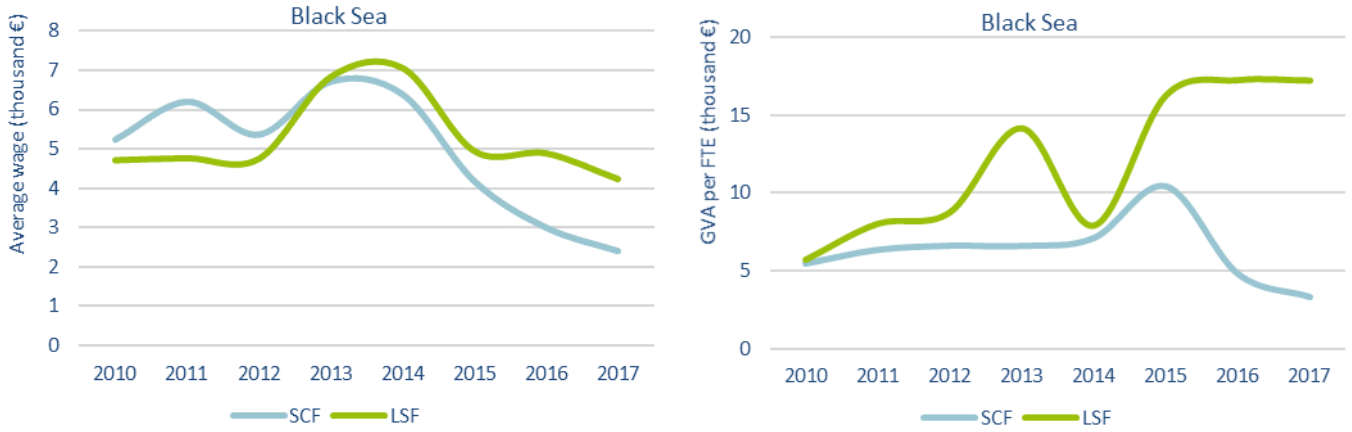


Figure 4.95 Trends on average wage and labour productivity (GVA per FTE) by fishing activity for MS fleets operating in the Black Sea

Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Economic performance

The revenue (income from landings and other income) generated by the Black Sea fleet in 2017 was estimated at EUR 9.6 million, increasing by 4% compared to 2016 and 19% more than the average for the period 2008-2016.

GVA produced by the fleets covered in the analysis was estimated at EUR 6.2 million, representing an overall increase of 4% compared to 2016 and 34% higher than the average for the period 2008-2016. After accounting for all operating costs, the fleets operating in the region made EUR 3.9 million in gross profit, an estimated 7% increase compared to 2016 (Figure 4.96).

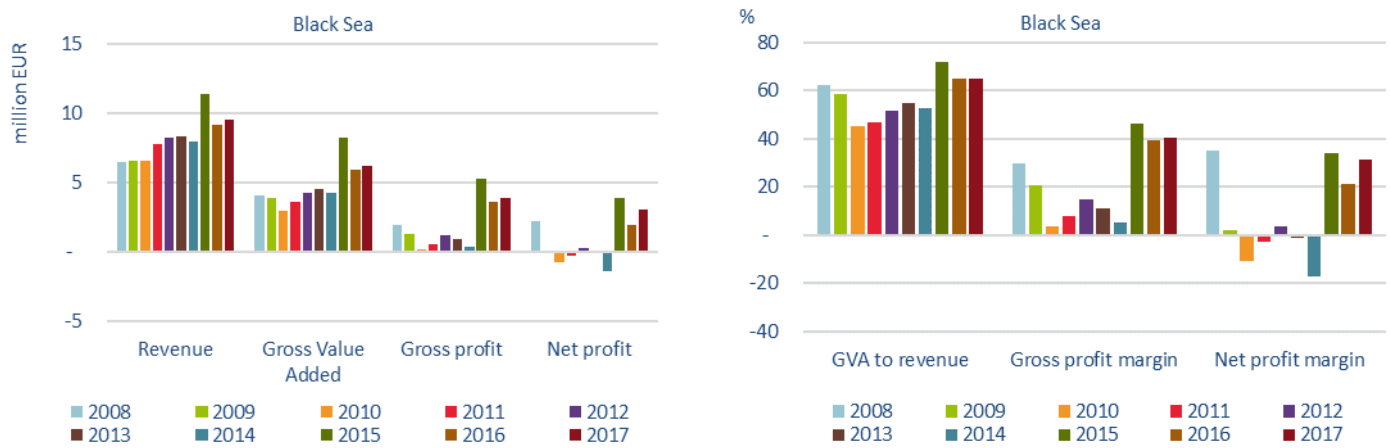


Figure 4.96 Trends in revenue and profits for MS fleets operating in the Black Sea

Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Social structure

In regards to the age distribution, there are no significant differences between the Black Sea and EU fleet as a whole. Yet, at the national level, some differences stand out: while more than 60% of the fishers in Romania are between 15-39 years old, more than 80% of Bulgarian fishers are over 40 years old.

The nationality of the crew in the Black Sea fleet are less diverse than at the EU level. While in Romania 4% of the crew are non-nationals, in Bulgaria this percentage was 0.1 %. This could be explained with the low average salaries in the region, which are not attractive enough for foreigners.

Education level in the Black sea region seems to be higher than the EU level. Based on the provided social data, 53% of Romanian fishers have a low education, while the percentage for Bulgarian fishers is 11%. At regional level and in both countries the percentage of fishers with high education is higher than at EU level (Figure 4.97).

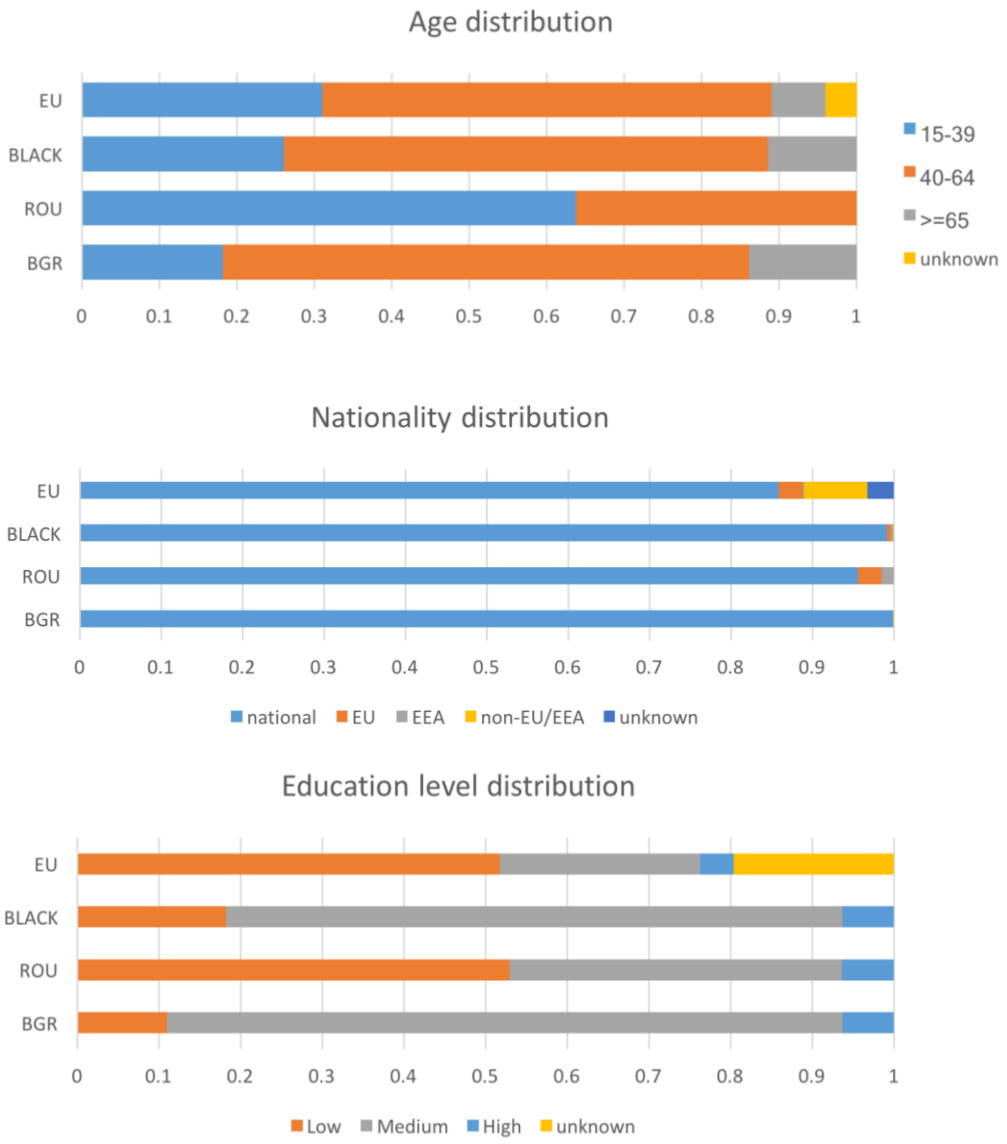


Figure 4.97 Demographic profile of the Black Sea fleet
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Main drivers affecting fleet performance in the region

After the visible improvement of the fleet's economic performance in 2015 with an increase in both gross and net profits, there was a small decrease in 2016 and in 2017. Factors that may have contributed to an improved situation include:

- An increase in the turbot quota for both Bulgaria and Romania in 2018 and 2019 together with fixed quotas for third countries fishing in the Black Sea.

- A small increase in the average prices for some of the species with significant landings and maintaining the average prices for the other species.
- The sea snails stock in GSA 29 is fished below F_{MSY}, which means that fishing vessels and processing plants utilising this species will continue to provide employment in the region.
- Keeping the trend with lower fuel costs at regional level.

Factors that may affect negatively the fleet performance in the region:

- The weather conditions in the Black Sea, including strong winds and large temperature differences between winter and summer, significantly affect fishing activities.
- As trawling is typically fuel intensive, fluctuations in fuel consumption and increase in fuel prices may lead to a significant increase in the energy costs.

Other factors that affected fleet performance in the region include:

- The Black Sea fishery is highly dependent on very few species, and, according to the scientific assessments, some of the commercially important stocks are currently being exploited above F_{MSY}.
- The GFCM has established a set of emergency measures for stocks in the Black Sea region in order to align the implementation of management measures by all countries operating in the region.

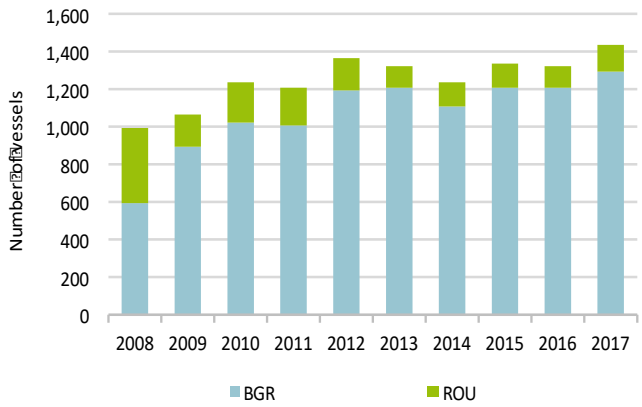
Trends by Member State fleet and fishing activity

Fleet capacity and employment

The EU fleet fishing in the Black Sea consisted of 1 430 active vessels in 2017. The small-scale fleet comprised 1 302 vessels or 91% of the regional fleet. The ratio between SSCF and LSF remained stable for the period analysed and no major changes are expected. With 1 295 vessels, the Bulgarian fleet makes up 91% of the Black Sea fleet.

Total employment in 2017 was estimated at 2 353 jobs, corresponding to 776 FTEs (Figure 1.6). Total employment in both countries is higher in the SSCF due to the larger number of vessels, but the FTE per vessel ratio is lower, due to the seasonal nature of small-scale fishery.

Trends in the number of vessels have remained relatively stable, the lowest number of vessels was registered in 2008 and the highest in 2017. While the number of vessels for the period 2012-2017 has not undergone any significant change, the days-at-sea for the same period increased by 25% (Figure 4.98). The total employment and FTE were also consistent for this period, with a small decrease only in 2013.



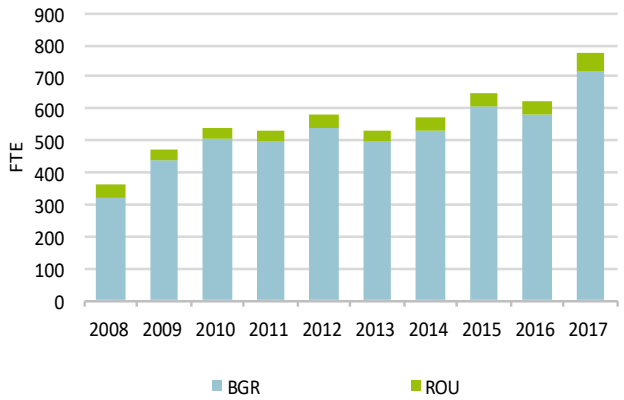


Figure 4.98 Trends in the number of vessels and employment (in FTE) for the MS fleets operating in the Black Sea
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019))

Fishing effort

The EU Black Sea fleet spent almost 30 thousand days-at-sea in 2017. While Bulgarian days decreased by 800 compared to 2016, the days spent by the Romanian fleet increased by 766 days, so in total the

days remain almost the same as in 2016. The Bulgarian fleet accounted for 84% of the days, while the Romanian contribution was 16%. The SSCF accounted for 68% of the days-at-sea (Figure 4.99).

While the number of days-at-sea was stable in the period 2010-2014, without any significant fluctuations, there has been a gradual increase in 2015 and 2016. The consistent number of days-at-sea in 2016 and 2017 can be explained by the growing interest in harvesting sea snails.

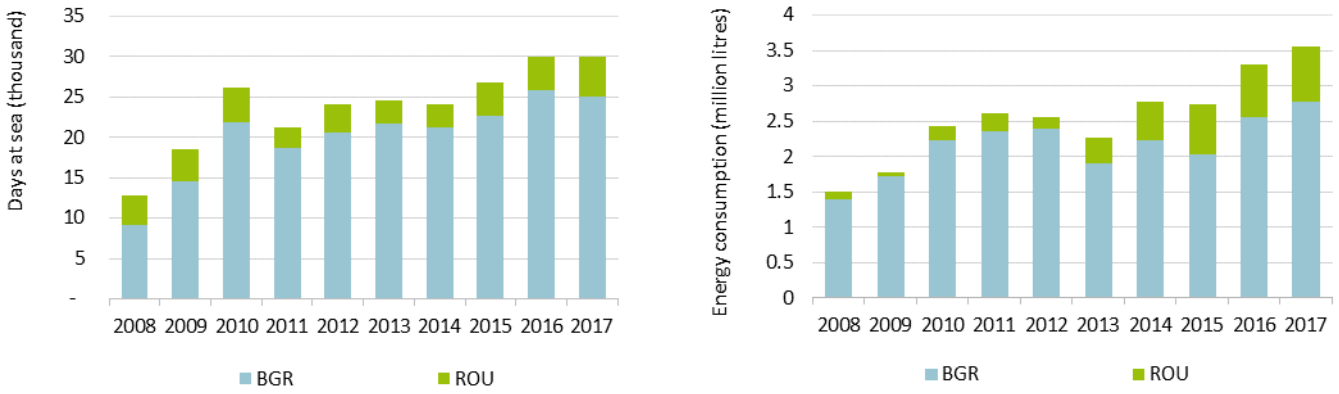


Figure 4.99 Trends on fishing effort (in days-at-sea) and energy consumption for MS fleets operating in the Black Sea
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)).

Landings and top species

The weight and value of landings generated by the Black Sea regional fleet in 2017 amounted to approximately 17 thousand tonnes and EUR 9.22 million, respectively.

In terms of landed weight, Bulgaria landed 7.47 thousand tonnes and Romania 9.55 thousand tonnes with the value of landings being EUR 4.76 million and EUR 4.52 million respectively. The percentage distribution of both the value and weight of landings, by country, is shown in Figure 4.100.

In 2017, large-scale vessels accounted for 73% of all landings by weight, equivalent to 70% of the landed value. Although over 68% of the effort was deployed by the SSCF, these vessels landed only 27% by weight and 30% by value. However, the small-scale coastal fleet is more important from a social point of view as it represents almost 84% of the total employment and 66% of FTE employment.

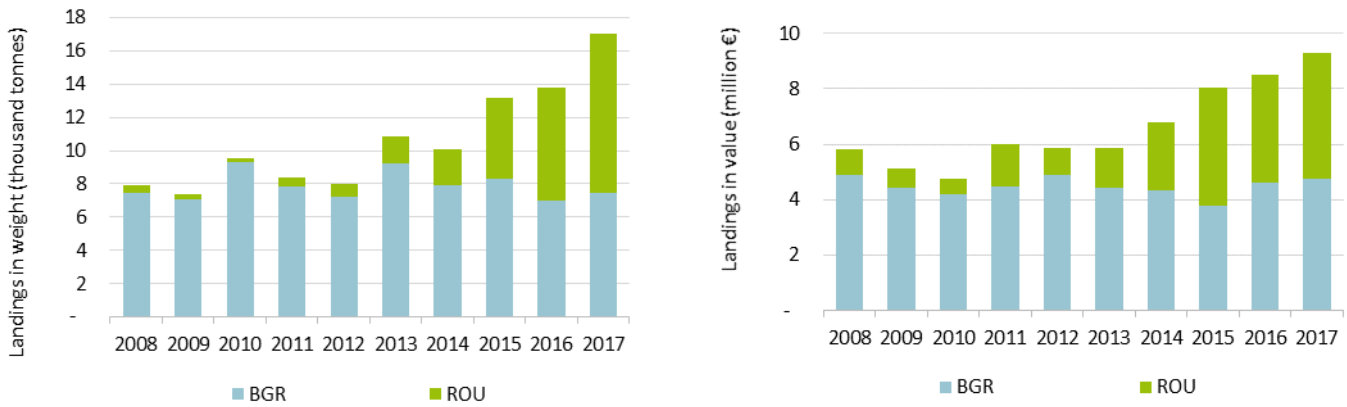


Figure 4.100 Trends on landings in weight and value by MS fleets operating in the Black Sea
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

In 2017, the main species (by weight) were sea snails (12.9 thousand tonnes), followed by European sprat (3.22 thousand tonnes), red mullet (0.38 thousand tonnes) and Mediterranean horse mackerel (0.2 thousand tonnes) (Figure 4.101).

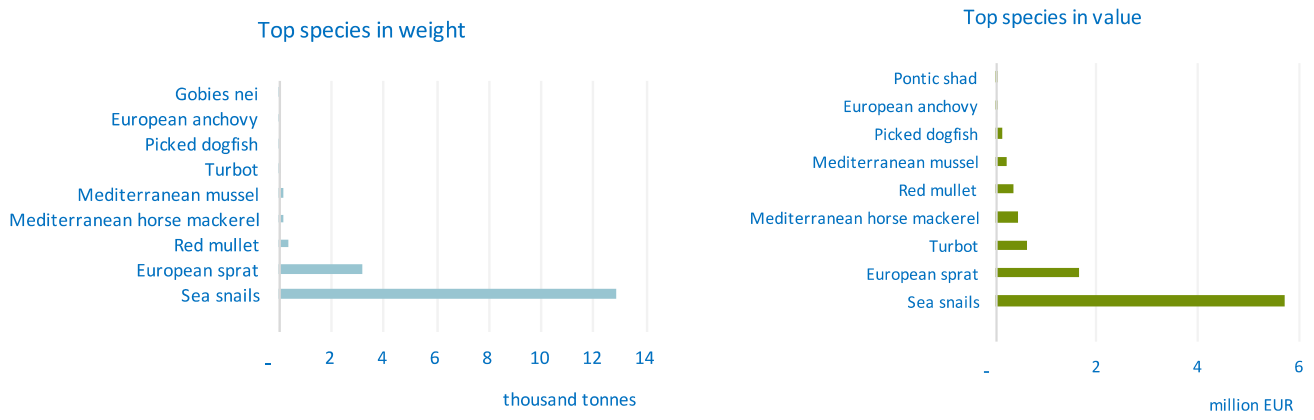


Figure 4.101 Top 10 species in landed weight and value for MS fleets operating in the Black Sea, 2017
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

By value, the most important species were sea snails (EUR 5.7 million), European sprat (EUR 1.7 million) and turbot (EUR 0.6 million) (Figure 4.102).

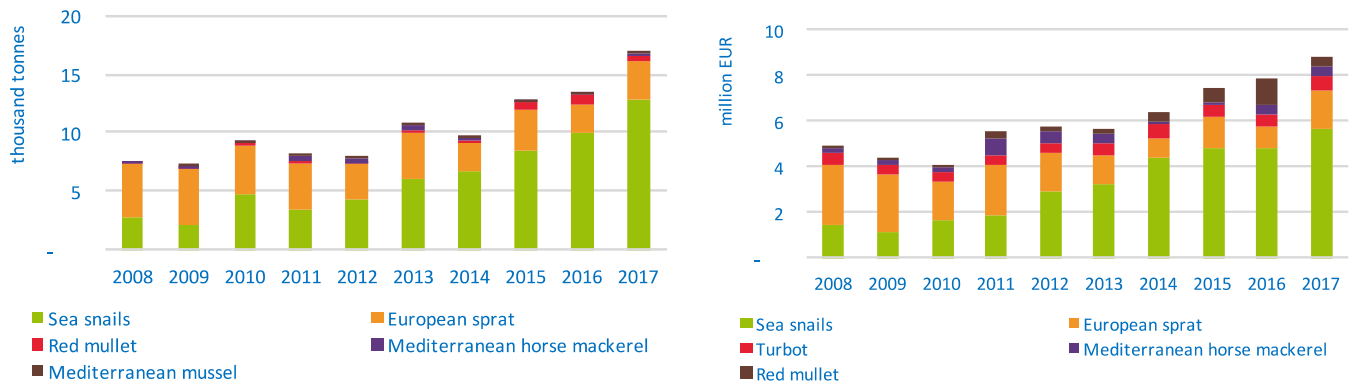


Figure 4.102 Trends in landings of the top six species in terms of landed value for MS fleets operating in the Black Sea, 2017
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Socio-Economic performance

The revenue (income from landings and other income) generated in 2017 was an estimated EUR 9.6 million, 53% of which was generated by the Bulgarian fleet (EUR 5 million). In terms of economic performance, the amount of Gross Value Added (GVA) was EUR 6.2 million of which EUR 3.2 million was added by Romanian and EUR 3 million by the Bulgarian fleets.

Total gross profit for the region was estimated at EUR 3.8 million. The Romanian fleet generated the largest gross profit in 2017 amounting to EUR 2.4 million (Figure 4.103).

Seven of Bulgaria's small-scale coastal fleet segments reported gross losses in 2017: vessels under 6 meters using drift and/or fixed nets; vessels under 6 meters using hooks; vessels under 6 meters active and passive gears; vessels under 6 meters using polyvalent passive gears only; vessels 6-12m using drift and/or fixed netters, vessels 6-12m hooks and vessels 6-12m using polyvalent gears only. These amounted to -EUR 378 thousand.

Overall net profit amounted to EUR 3 million in 2017, but this includes seven segments that recorded a net loss (-EUR 482 thousand).

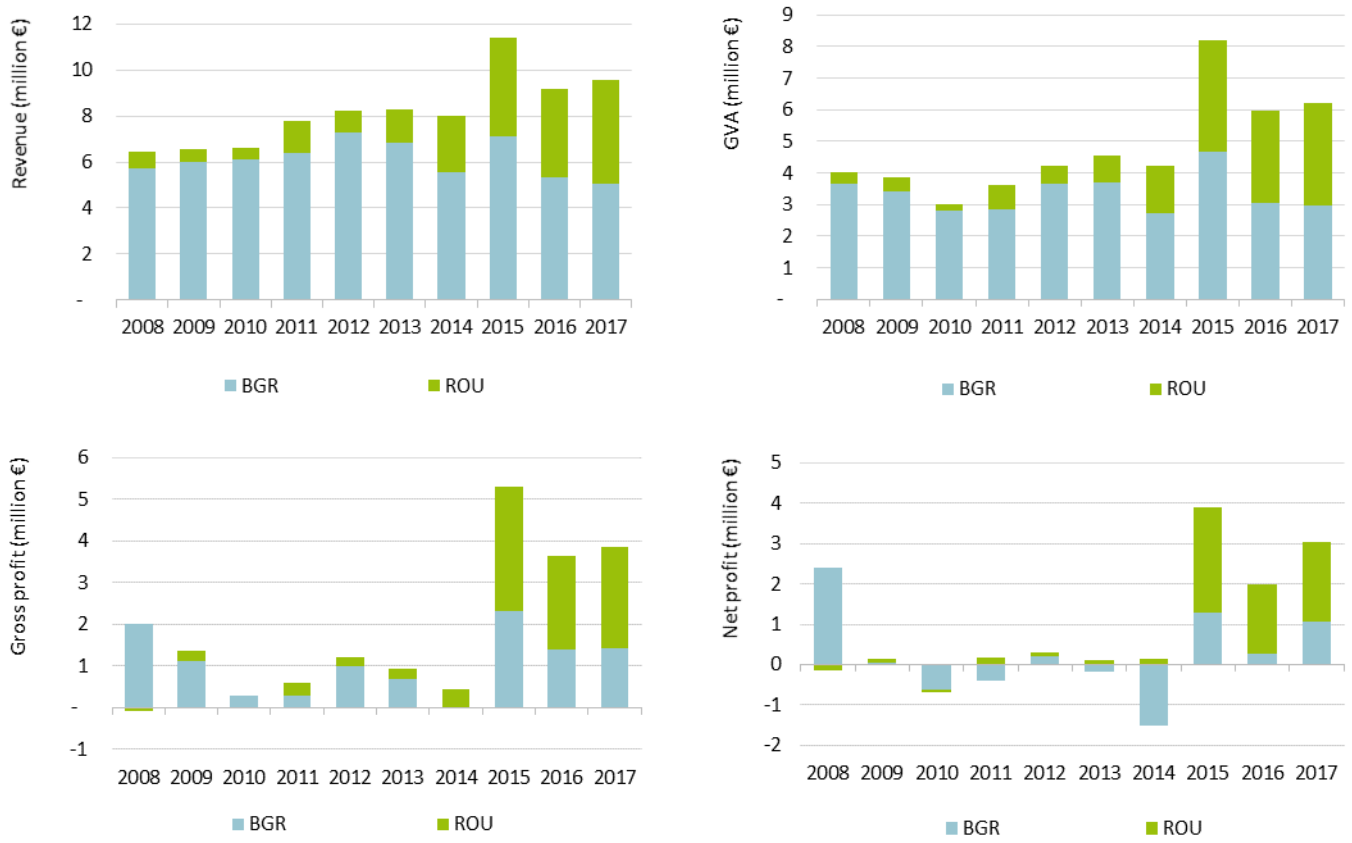


Figure 4.103 Trends in revenue and profit by MS fleets operating in the Black Sea
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

As in previous years, amongst the operating costs, the two major expenses remain crew wages costs and energy costs, accounting for EUR 2.2 and EUR 1.7 million respectively. In terms of crew costs, Bulgaria was leading with EUR 1.4 million and Romanian costs were EUR 0.8 million. Regarding the energy costs, the situation was similar EUR 1.1 million for Bulgaria and EUR 0.6 million for Romania.

While the SSCF accounts for 91% of the total fleet by number (1 302 vessels) and accounts for 68% of the effort (20 336 days) it landed only 27% of the total by weight (4 658 tonnes) and 30% by value (EUR 2.8 million).

Overall, the large-scale fleets of both countries were profitable, with gross profit margins estimated at 59.1% for the Romanian LSF and 44.8% for the Bulgarian LSF. For the SSCF the situation was a bit different, while the Romanian SSCF recorded a 44.8% gross margin, the Bulgarian SSCF generated a negative gross margin (-21%).

Net profit margins were estimated at 40.5% for the Romanian SSCF but -32.4% for Bulgarian SSCF while for the LSF the Romanian fleet reported a 45% margin and the Bulgarian LSF 40.2%.

The most profitable year for both countries over the period analysed was 2015 - revenue and GVA reached their highest values, followed by a decrease in 2016 and small increase in 2017 (Figure 4.103).

Main factors affecting the performance of the fleet

Regulation and fisheries management in the region

The recommendations adopted by the GFCM in 2015, 2016, 2017 and 2018 have established a set of emergency measures that look to align the implementation of management measures by all countries operating in the region.

During the 42th session of the GFCM in 2018, one Recommendation was applicable for the Black Sea: Recommendation GFCM/42/2018/9 on a regional research programme for rapa whelk fisheries in the Black Sea (geographical subarea 29). The aim of the Recommendation is to improve scientific, technical and socio-economic knowledge of the fisheries exploiting rapa whelk by establishing a regional research programme.

In 2017, at the initiative of the EU, the GFCM adopted recommendation GFCM/41/2017/4 which provides a multiannual management plan for turbot fisheries in the Black Sea and lays down a list of measures and total allowable catch for 2018-2019. The specific objectives of the multiannual management plan and transitional measures are to maintain fishing mortality (F) for turbot within agreed precautionary reference points with a view to achieving or maintaining fishing mortality at MSY. The recommendation established fleet management measures, management of fishing effort and monitoring, control and surveillance (MCS) programme (Note: Recommendation GFCM/41/2017/4 also repeals Recommendation 40/2016/6 see above).

Recommendation GFCM/41/2017/7 introduced a regional plan of action to combat IUU fishing. The objective of this plan is the prevention, deterrence and elimination of IUU fishing in the Mediterranean and the Black Sea by providing CPCs with comprehensive, effective and transparent measures through which to take action, thereby contributing to ensure the long-term conservation and sustainable use of marine living resources and marine ecosystems in the region.

In 2016 a further two recommendations were adopted by the 40th session of the GFCM. Recommendation GFCM/40/2016/1 introduced a regional scheme of port-state measures to combat illegal, unreported and unregulated (IUU) activities in the GFCM area of application, while Recommendation GFCM/40/2016/6 introduced scientific monitoring, management and control of turbot fisheries in the Black Sea (GSA 29). Both recommendations contribute to the long-term conservation and sustainable use of living marine resources in the region, counteract turbot overfishing and seek to restore, to the extent possible, the size of the Black Sea turbot stock, with a view to providing high long-term yields and to ensuring the sustainability of the fishery.

In 2015, during the 39th session of the GFCM, two Recommendations applicable to the Black Sea were adopted. Recommendation GFCM/39/2015/3 introduced a set of measures to prevent, deter and eliminate illegal, unreported and unregulated fishing in the Black Sea turbot fishery. This requires Contracting Parties and Cooperating non Contracting Parties (CPCs) to implement specific measures to ensure: authorization for vessels targeting turbot; marking and identification of bottom-set gillnets operating in the turbot fishery; to designate, where possible, landing points in which landings of turbot in GSA 29 shall take place, and to develop specific monitoring, control and surveillance plans. Management measures for fisheries exploiting picked dogfish were introduced with Recommendation GFCM/39/2015/4 which prohibits the retention, landing, storage, sale, or display of picked dogfish smaller than 90 cm.

Status of important stocks

Commercially important stocks for the Black Sea fisheries in 2017 and 2018 remain the same as in the past decades - turbot, sea snails, sprat and picked dogfish.

Turbot in GSA 29 is considered to be overexploited and management measures (following GFCM recommendations) are in place. In terms of landing weight and value, the sea snail is the most profitable species and since there was no stock assessment in 2018, according to the most recent available stock assessment from 2017, its stock in GSA 29 is fished below F_{MSY}. Sprat, which is the second most important fishery in economic terms, is evaluated as sustainably exploited. Both countries are fishing less quantity than their quotas. In 2018 Bulgarian fleet landed 34% of the TAC, while Romanian fleet landed less than 1%. The picked dogfish in the Black Sea is not managed by quota, but there is an established catch limit. While for the Romanian fleet it's mainly bycatch, for the Bulgarian fleet it is a target fishery. Both however limit their 2017 catches to 2015 catch levels and inform the Commission on a quarterly basis of the actions taken to meet this objective.

In order to ensure sufficient scientific data for the assessment of the commercially important species, Bulgarian and Romanian, fishery-independent, pelagic and demersal surveys are carried out twice yearly (in spring and autumn) and scientists from both countries are actively participating in the relevant stock assessment meetings.

TAC development of main species

Quotas for turbot and sprat TAC were introduced in 2008 following the accession of Bulgaria and Romania to the European Union. The quota for turbot is divided equally between both EU member states - Bulgaria (50%) and Romania (50%), while Bulgaria is allocated 70% of the EU sprat TAC and Romania 30%. In the period 2011 - 2017, the EU TACs were 86.4 tonnes for turbot and 11 475 tonnes for sprat per year.

GFCM Recommendation GFCM/401/2017/4 sets a total allowable catch (TAC) for turbot for 2018 and 2019 with a temporary allocation of quotas. The EU share of this TAC is set at 114 tonnes in each of the two years.

Council Regulation (EU) 2018/2058 sets the EU TAC and quotas for turbot (*Psetta maxima*) and sprat (*Sprattus sprattus*). The quota for sprat was fixed at the same level as 2018 and the quota for turbot, as recommended by GFCM/401/2017/4, was 114 tonnes, 32% more than 2017.

Description of relevant fisheries in the region

Small-scale coastal fleet (SSCF)

The Black Sea fishery is dominated by small-scale coastal vessels dispersed across 73 landing places (15 in Romania and 58 in Bulgaria). They utilise a large number of fishing techniques including set gillnets, hand-lines, pole-lines (mechanised or hand-operated), set longlines, drifting longlines, pots and traps, and vessels without gear (divers) all adapting to fishing seasons and fluctuations in species abundance.

The 1 302 vessels that comprise the SSCF have a combined capacity of 2 154 GT and 26 175 kW. These are of vital importance to the region where they make up 91% of the total fleet by number and 84% of the total employment (66% of FTE). In 2017, 1 967 fishers were directly employed, corresponding to 512 FTEs. In the majority of cases vessels are operated by the owner or a family member.

Landings by the Black Sea SSCF amount to 27% of the total landed weight in the region and 30% of the total value. The lower value achieved by the SSCF (compared to the LSF) appears to reflect also the use of different marketing channels. The SSCF generally operates through very short supply-chains.

Despite the fact that SSCF vessels are small they are locally very important in the Black Sea. Besides generating revenue for the owner, there are a lot of vessels with low activity where the catch is not intended for the market, but it is consumed directly by the owners and their families.

The SSCF accounted for 68% of the total days-at-sea in the Black Sea region and generated revenues of EUR 2.9 million. Gross Value Added was estimated to be around EUR 1.7 million, Gross Profit EUR 442 thousand and Net Profit EUR 222 thousand. Although seven of the segments from the Bulgarian SSCF generated net losses, two Bulgarian SSCF segments together with the two Romanian SSCF generated a net profit that compensated the situation for the general view of the Black Sea SSCF. Labour productivity (GVA per FTE) was estimated to be EUR 3.28 thousand.

The SSCF target a number of species including sea snails, Mediterranean mussel, European sprat and Mediterranean horse mackerel along with turbot, European anchovy and red mullet (Figure 4.104). In terms of value, the most profitable species for the small-scale fleet were sea snails, followed by turbot, Mediterranean mussel and Mediterranean horse mackerel.

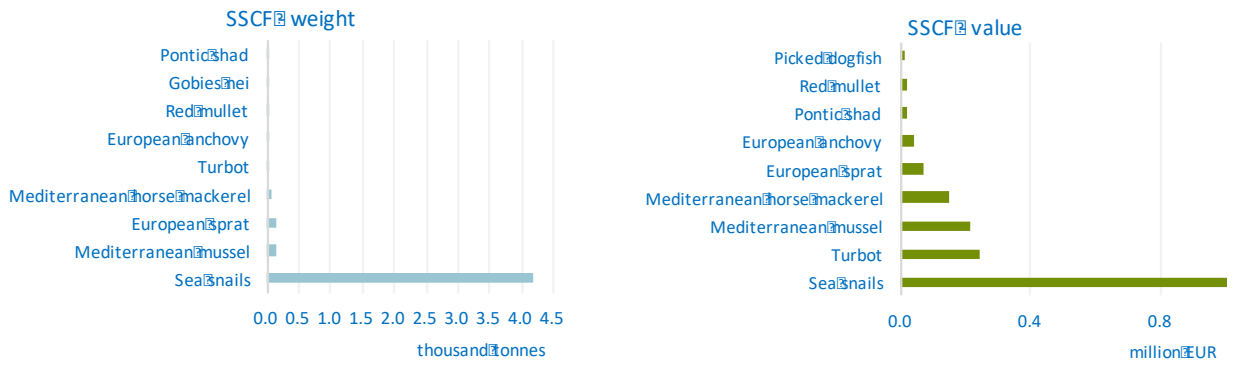


Figure 4.104 Top 10 species landed by SSCF operating in the Black Sea, 2017
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Large-scale fleet (LSF)

In 2017, the large-scale fleet in the Black Sea consisted of 128 vessels or 9% of the entire fleet. These had a total capacity of 4 182 GT and 21 088 kW. The Bulgarian LSF represents 81% of the EU Black Sea large-scale fleet with 104 vessels while the Romanian LSF consists of 24 vessels. The main gears used remained pelagic trawls. There were also vessels using passive and active gears during the year and vessels using beam trawls.

The LSF employs a total of 386 people, corresponding to 264 FTE. Total labour costs in 2017 were EUR 1.1 million and the labour productivity (GVA per FTE) was the same as in 2016 - EUR 17.2 thousand.

Over the period 2011- 2017 the LSC accounted for 30-37% of the total days-at-sea for the entire Black Sea fleet. However, while the proportion remained relatively constant the total number of days increased form 6.3 thousand days to 10.4 thousand in 2016 and decreased to 9 559 in 2017.

The LSF targets the same species as the SSCF with sea snails making up the highest proportion (by value) for both fleets. Other important species for the LSF were European sprat, turbot, European anchovy and red mullet (Figure 4.105).

The LSF landed 73% (12.4 thousand tonnes) of the total landed weight in the region in 2017 valued at EUR 6.5 million or 70% of the total value. This generated EUR 4.5 million in GVA and a net profit of EUR 2.8 million; none of the LSF segments have reported net loss in 2017. The LSF generally operates through longer supply-chains than the SSCF, but the marketing channels are better developed. In 2017 the highest landings in terms of weight and value were polyvalent vessels with both active and passive gears, followed by the pelagic trawlers. Pelagic trawlers consumed more energy than polyvalent vessels and also consumed mire energy per tonne landed (litres/tonne).

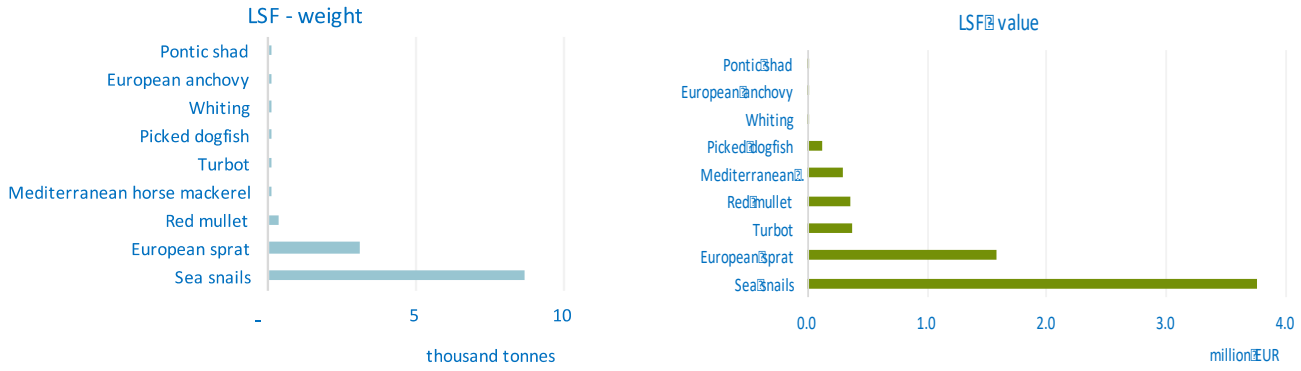


Figure 4.105 Top 10 species landed by LSF operating in the Black Sea, 2017
Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Performance by fleet segment

In terms of revenue, live weight and value of landings the top five fleet segments operating in the Black Sea (out of 20 active fleet clustered segments) represented only 11% of the total number of vessels; but these five segments (4 LSF segments and 1 SSCF segment) landed 77% of the fish, corresponding to 72% of the value of landings and it generated 70% of the revenue. These segments provide work to 500 employees, corresponding to 169 FTEs.

On the other hand, there are 5 more segments (all of them are from the SSCF) which are with the largest number of vessels (70% of the active fleet – 995 vessels), which spent almost half of the total days-at-sea for the fleet, but landed 8% of the fish, corresponding to 9% of the value. For sure these 5 segments were not so profitable, but they provided work to 1403 employees or 413 FTEs.

At a fleet segment level, Romanian 12-18m polyvalent active and passive gears again generated the highest revenue from the Black Sea region in 2017 (EUR 2.2 million), followed by the Romanian 06-12m segment with vessels using passive gears only (EUR 1.6 million) (Table 4.31).

Table 4.27 Key parameter estimates by MS fleets operating in the Black Sea, 2017

Black Sea	Estimated no. of vessels	% of total EU active vessels	Total vessel tonnage	Total vessel power	Engaged crew	FTE national	Days at sea	as a % of total fishing days	Energy consumption	Live weight of landings	as a % of total weight landed	Value of landings	as a % of total value landed	Revenue	as a % of total revenue	Gross Value Added	GVA to revenue	Gross profit	Gross profit margin	Net profit	Net profit margin	Average GVA	GVA per FTE (labour productivity)
	number	(%)	GT	kW	number	number	day	(%)	litre	kg	(%)	euro	(%)	€	(%)	€	%	€	%	€	%	€	€
BGR	1,295	90.6%	4,958	41,160	1,947	716	25,071	83.8%	2,780,045	7,471,578	43.9%	4,761,763	51.3%	5,049,084	52.8%	2,960,169	58.6	1,414,360	28.0	1,072,486	21.2	2,286	4,135
ROU	135	9.4%	1,377	6,104	406	60	4,859	16.2%	768,375	9,553,182	56.1%	4,520,497	48.7%	4,520,497	47.2%	3,253,514	72.0	2,445,207	54.1	1,961,791	43.4	24,100	54,045
-	**1,430**		**6,335**	**47,263**	**2,353**	**776**	**29,930**		**3,548,420**	**17,024,760**		**9,282,260**		**9,569,581**		**6,213,683**		**3,859,567**		**3,034,277**			

Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Table 4.28 Key parameter estimates by fishing activity in the Black Sea, 2017

Black Sea	Estimated no. of vessels	% of total EU active vessels	Total vessel tonnage	Total vessel power	Engaged crew	FTE national	Days at sea	% of total days at sea	Fishing days	as a % of total fishing days	Live weight of landings	as a % of total weight landed	Value of landings	as a % of total value landed	Revenue	as a % of total revenue	Gross Value Added	GVA to revenue	Gross profit	Gross profit margin	Net profit	Net profit margin	Average GVA	GVA per FTE (labour productivity)
	GT	(%)	kW	number	number	number	day	(%)	day	(%)	litre	(%)	euro	(%)	€	(%)	€	%	€	%	€	%	€	€
SCF	1,302	91.0%	2,154	26,175	1,967	512	20,336	67.9%	20,282	68.0%	4,657,810	27.4%	2,803,972	30.2%	2,924,160	30.6%	1,678,188	57.4	442,000	15.1	222,048	7.6	1,289	3,275.7
LSF	128	9.0%	4,182	21,088	386	264	9,594	32.1%	9,559	32.0%	12,366,950	72.6%	6,478,288	69.8%	6,645,421	69.4%	4,535,496	68.2	3,417,567	51.4	2,812,228	42.3	35,434	17,193.6
-	1,430		6,335	47,263	2,353	776	29,930		29,841		17,024,760		9,282,260		9,569,581		6,213,683		3,859,567		3,034,277			

Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Table 4.29 Key parameter estimates by MS and fishing activity operating in the Black Sea, 2017

BKS		Estimated no. of vessels	% of total EU active vessels	Total vessel tonnage	Total vessel power	Engaged crew	FTE national	Days at sea	as a % of total DAS	Energy consumption	Live weight of landings	as a % of total weight landed	Value of landings	as a % of total value landed	Revenue	as a % of total revenue	Gross Value Added	GVA to revenue	Gross profit	Gross profit margin	Net profit	Net profit margin	Average GVA	GVA per FTE (labour productivity)
		number	(%)	GT	kW	number	number	day	(%)	litre	kg	(%)	euro	(%)	€	(%)	€	%	€	%	€	%	€	€
SCF	BGR	1,191	83%	1,939	24,861	1,660	490	17,019	57%	523,505	1,939,663	11%	1,198,852	13%	1,319,040	14%	579,973	44.0	- 277,462	- 21.0	- 427,422	- 32.4	487	1,183
	ROU	111	8%	215	1,314	307	22	3,317	11%	231,464	2,718,147	16%	1,605,120	17%	1,605,120	17%	1,098,215	68.4	719,462	44.8	649,471	40.5	9,894	49,693
LSF	BGR	104	7%	3,019	16,299	287	226	8,052	27%	2,256,540	5,531,915	32%	3,562,911	38%	3,730,044	39%	2,380,197	63.8	1,691,822	45.4	1,499,908	40.2	22,887	10,546
	ROU	24	2%	1,162	4,790	99	38	1,542	5%	536,911	6,835,035	40%	2,915,377	31%	2,915,377	30%	2,155,299	73.9	1,725,745	59.2	1,312,320	45.0	89,804	56,570
-	**-**	**1,430**		**6,335**	**47,263**	**2,353**	**776**	**29,930**		**3,548,420**	**17,024,760**		**9,282,260**		**9,569,581**		**6,213,683**		**3,859,567**		**3,034,277**			

Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Table 4.30 Key parameter estimates for the fleet segments operating in the Black Sea, 2017

Black Sea	Estimated no. of vessels	% of total EU active vessels	Total vessel tonnage	Total vessel power	Engaged crew	FTE national	Days at sea	as a % of total fishing days	Energy consumption	Weight of landings	as a % of total weight landed	Value of landings	as a % of total value landed	Revenue	as a % of total revenue	Gross Value Added	GVA to revenue	Gross profit	Gross profit margin	Net profit	Net profit margin	Average GVA	GVA per FTE (labour productivity)
	number	(%)	GT	kW	number	number	day	(%)	litre	kg	(%)	€	(%)	€	(%)	€	%	€	%	€	%	€	€
ROU MBS PMP1218 NGI*	20	1.4%	686	3,572	81	26	1,131	3.8%	362,217	5,217,203	30.6%	2,236,174	24.1%	2,236,174	23.4%	1,713,068	76.6	1,408,860	63.0	1,130,358	50.5	85,653	65,887
ROU MBS PG 0612 NGI*	99	6.9%	206	1,124	278	21	3,113	10.4%	227,514	2,686,635	15.8%	1,567,248	16.9%	1,567,248	16.4%	1,071,435	68.4	708,607	45.2	644,497	41.1	10,823	51,021
BGR MBS TM 2440 NGI	11	0.8%	1,193	3,289	58	54	1,618	5.4%	625,821	2,333,124	13.7%	1,278,890	13.8%	1,276,972	13.3%	826,599	64.7	588,180	46.1	529,054	41.4	75,145	15,350
BGR MBS PMP1218 NGI*	25	1.7%	557	3,899	65	56	2,338	7.8%	599,483	1,301,483	7.6%	898,894	9.7%	899,696	9.4%	605,277	67.3	452,211	50.3	423,132	47.0	24,211	10,808
ROU MBS PMP2440 NGI*	4	0.3%	476	1,217	18	12	411	1.4%	174,694	1,617,832	9.5%	679,203	7.3%	679,203	7.1%	442,231	65.1	316,885	46.7	181,962	26.8	110,558	36,548
BGR MBS PMP0612 NGI	195	13.6%	486	6,203	283	112	6,868	22.9%	290,480	1,070,436	6.3%	612,439	6.6%	621,966	6.5%	315,318	50.7	78,516	12.6	37,853	6.1	1,617	2,828
BGR MBS TM 1218 NGI*	23	1.6%	407	3,657	63	45	1,699	5.7%	438,112	688,069	4.0%	521,599	5.6%	551,167	5.8%	283,681	51.5	142,238	25.8	103,344	18.8	12,334	6,264
BGR MBS TM 1824 NGI	8	0.6%	416	1,912	29	25	900	3.0%	325,756	756,551	4.4%	440,773	4.7%	448,407	4.7%	219,711	49.0	152,158	33.9	124,395	27.7	27,464	8,780
BGR MBS PMP0006 NGI	82	5.7%	64	764	120	47	2,584	8.6%	73,704	606,531	3.6%	334,511	3.6%	334,009	3.5%	209,021	62.6	-109,179	-32.7	-115,833	-34.7	2,549	4,425
BGR MBS DFN1218 NGI*	12	0.8%	241	2,130	26	21	633	2.1%	154,952	80,776	0.5%	113,788	1.2%	217,135	2.3%	160,911	74.1	103,819	47.8	99,619	45.9	13,409	7,535
BGR MBS TBB1218 NGI*	9	0.6%	164	1,030	20	15	605	2.0%	95,798	316,744	1.9%	186,444	2.0%	214,328	2.2%	164,027	76.5	135,373	63.2	105,141	49.1	18,225	11,170
BGR MBS DFN0612 NGI	400	28.0%	776	10,407	531	142	3,574	11.9%	77,860	51,954	0.3%	69,841	0.8%	157,435	1.6%	-23,435	-14.9	-172,313	-109.5	-228,498	-145.1	-59	-166
BGR MBS PS 0006 NGI*	16	1.1%	42	382	26	9	259	0.9%	16,618	55,167	0.3%	122,523	1.3%	122,339	1.3%	119,991	98.1	117,844	96.3	115,224	94.2	7,499	12,657
BGR MBS FPO0612 NGI*	42	2.9%	124	1,082	124	33	547	1.8%	9,200	140,655	0.8%	105,701	1.1%	105,901	1.1%	77,112	72.8	21,943	20.7	17,150	16.2	1,836	2,329
BGR MBS DFN0006 NGI	260	18.2%	194	2,359	344	92	2,102	7.0%	38,838	53,208	0.3%	34,690	0.4%	50,676	0.5%	-6,355	-12.5	-63,827	-126.0	-86,876	-171.4	-24	-69
BGR MBS HOK0612 NGI*	98	6.9%	172	2,472	121	35	813	2.7%	23,194	13,104	0.1%	33,582	0.4%	38,038	0.4%	16,507	43.4	-13,657	-35.9	-23,230	-61.1	168	474
ROU MBS PG 0006 NGI*	12	0.8%	9	190	29	1	204	0.7%	3,950	31,512	0.2%	37,872	0.4%	37,872	0.4%	26,780	70.7	10,855	28.7	4,974	13.1	2,232	24,345
BGR MBS PGP0612 NGI	38	2.7%	64	875	43	10	158	0.5%	3,483	2,233	0.0%	5,400	0.1%	5,392	0.1%	-727	-13.5	-3,220	-59.7	-4,345	-80.6	-19	-74
BGR MBS HOK0006 NGI	50	3.5%	37	484	63	14	293	1.0%	5,566	1,354	0.0%	2,397	0.0%	4,237	0.0%	-5,316	-125.5	-11,378	-268.6	-16,994	-401.1	-106	-377
BGR MBS PGP0006 NGI	26	1.8%	21	216	31	6	80	0.3%	1,180	188	0.0%	291	0.0%	1,386	0.0%	-2,151	-155.2	-4,345	-313.5	-6,648	-479.7	-83	-344
-	**1,430**		**6,335**	**47,263**	**2,353**	**776**	**29,930**		**3,548,420**	**17,024,760**		**9,282,260**		**9,569,581**		**6,213,683**		**3,859,567**		**3,034,277**			

Data source: MS data submissions under the 2019 Fleet Economic data call (MARE/A3/AC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

4.8 Other Fishing Regions (OFR)

Although the main fishing grounds for the EU fishing fleet are located in FAO fishing areas 27 (Northeast Atlantic, Baltic and North seas) and FAO 37 (Mediterranean and Black seas), part of the EU fleet operates in fishing areas much further afield. These areas, including the EU outermost regions, are collectively termed "*Other Fishing Regions"* or OFR.

STECF EWG 1709 strongly recommended that MS make an effort to collect and recover economic data on their outermost region fishing fleets, including, where possible, historical time-series. STECF EWG 1803 agreed to analyse OFR activities in two distinct parts, separating the distant water fisheries from the outermost region fisheries (OMR). As part of this revision, STECF EWG 1807 agreed that the OMR "local" fleet should include "all vessels below 24 metres LOA fishing inside the EEZ of the Canary Islands, Guadeloupe, Martinique, French Guiana, La Reunion, Mayotte, Saint-Martin, Azores or Madeira".

Thus, the criteria to define the 'local' OMR fishing fleet include those fishing vessels with a LOA below 24m operating within the EEZs of one of the seven EU OMR. There are a few exceptions, such as, the tuna longliners below 24m LOA with flag from Reunion but fishing in the EEZ of Madagascar and the tuna longliners from the Canaries with port of call in Las Palmas but operating under the SFPA with Morocco.

The distant water fleet (DWF), as analysed in other chapters of the AER - by scale of operation in the EU overview and national chapters - is defined as "all EU registered vessels above 24 metres LOA operating predominately in non-EU waters". This covers all DCF fleet segments over 24m allocated to the supra-region "OFR" by MS in accordance with the dominance criteria, i.e. more than 50% of their effort (by days at sea) occurring in non-EU waters.

However, from a regional perspective this definition is not appropriate for analysing the activity of the EU distant water fleet as most of these fisheries are carried out under the umbrella of Regional Fisheries Bodies (RFBs), which differ widely in scope, species and geographical coverage.

Thus, for clarity the distant water fleet analysed here in **Other Fishing Regions is termed LDF** for long distant fisheries, and should not be considered as the same fleet analysed as DWF (defined as all vessels over 24m operating predominately in OFR).

In view of the above, the EWG 1807 agreed to restructure the OFR region section into two distinct sections: (1) the Outermost Region (OMR) and (2) Long Distant Fisheries (LDF) both pertaining to Other Fishing Regions.

Geographical scope

The areas collectively grouped and termed "*Other Fishing Regions*" (OFR) are divided into two main parts:

1) **EU Outermost Region** (OMR) waters, located in the EEZs of the Canary Islands (Spain); the Azores and Madeira (Portugal); French Guiana, Martinique, Guadeloupe, Reunion, Mayotte and Saint-Martin (France);

2) **Other Regions**, including all fishing areas outside EU waters and in Areas Beyond National Jurisdiction (ABNJ), covered by Regional Fisheries Bodies (RFBs), such as, the Northwest Atlantic Fisheries Organization (NAFO, FAO 21), the International Commission for the Conservation of Atlantic Tunas (ICCAT, FAO 21, 27, 31, 34, 37, 41, 47 and 48), the Indian Ocean Tuna Commission (IOTC, FAO 51 and 57), International waters of the Mediterranean Sea (FAO 37), the North-East Atlantic Fisheries Commission (NEAFC, FAO 27), the Western Central Atlantic Fishery Commission (WECAFC, FAO 31 and 41) and the Fishery Committee for the Eastern Central Atlantic (CECAF FAO 34); as well as, fishing areas within the EEZ of third countries regulated under the framework of EU sustainable fisheries partnership agreements (SFPAs) and private agreements /direct authorisations between fishing operators and third countries.

4.8.1 EU Outermost Regions (OMR)

The term "Outermost Region" refers to the nine remote territories belonging to EU Member States: six French territories - Guadeloupe, French Guiana, Martinique, Mayotte, La Reunion, and Saint-Martin[12]; one Spanish territory - Canary Islands; and two Portuguese autonomous regions - Azores and Madeira.

At a glance

Combined, the EU OMR fleet numbered 3034 vessels in 2017 (4437 included inactive vessels). With 1737 vessels, the French OMR fleet was the most numerous, accounting for 57.5% of all reported vessels. The Portuguese fleets comprised 673 vessels (22%) and the Spanish fleet 624 vessels (20.5%).

- Martinique, with 662 active vessels, was the largest OMR fleet (by number), followed by Guadeloupe (611), the Canary Islands (583), the Azores (557), La Reunion (203), Mayotte (122), French Guiana (128), Madeira (82), Canaries vessels operating in Mauritania (19) and St Martin (11).
- About 91% of the vessels in OMR belong to the small-scale coastal fleet (SSCF).
- The OMR fleet spent 125 thousand days-at-sea in 2016, to land approximately 20 thousand tonnes of seafood valued in EUR 89 million (NB Data for Martinique and Mayotte are not included in these totals).
- Tuna and other large pelagic species represent a significant part of the landings with skipjack, bigeye, yellowfin, and albacore tuna the largest components by weight.
- The Canaries fleet was the most important (by landed weight and value), generating an income of some EUR 34 million (66% of the total by weight and 56% by value), followed by the French (EUR 19.6 million) and Portuguese (EUR 18.5 million) OMR fleets.
- GVA was estimated at EUR 82 million in 2016 (not including Mayotte and Martinique), representing an overall increase of 39% compared to 2014, and a GVA to revenue of 45%.
- Overall, the OMR fleet generated a gross profit EUR 26 million, while net profit was estimated at just over EUR 18 million.
- The Azores fleet saw an 6% increase in revenue compared to 2016, reaching one of the best values in all the time series.
- In 2017, only one OMR fleet recorded an overall gross and net loss (based on the available information).
- The Reunion fleet recorded EUR 0.4 million in GVA but suffered a gross loss of - EUR 1.5 million and a net loss of - EUR 2.1 million.

Key trends and drivers of change

- OMR fleets mostly supply local markets with fresh fish. The exceptions are tunas and other large pelagics which are often processed (canned or frozen) and exported to the EU mainland. It is noteworthy that the price obtained for these species is very dependent on the international market price while landings depend on the status of stocks.
- Some OMR fleets, in particular the SSCF, have relatively old vessels.
- The economic performance of most OMR fleets has improved (even if these vessels do not seem very dependent on fuel prices and recorded relatively low fuel consumption).

Outlook for 2018 and beyond

Given the lack of OMR data submitted by Spain and France it is not possible to provide a comprehensive outlook for the OMR fleets. However, given the current trends in fish prices and fuel costs, it seems that these fleets will continue to be generally profitability in the coming year.

[12] Since the adoption of the Lisbon Treaty, Mayotte is included in the list of EU Outermost Regions (Article 349 TFEU) as of 01.01.2014. Saint-Barthélemy changed status in 2012 to become part of the Overseas Countries and Territories (OCT) within the meaning of the TFEU.

EU fleet activity in OMR: situation in 2017 and recent trends

The most important OMR by landed weight are the Canary Islands and the Azores while by value the OMRs of Guadeloupe, the Canary Islands and the Azores are the most relevant (Figure 4.106). In terms of number of vessels, Martinique, Guadeloupe, Canarias and Azores comprise each around 20% of the OMR fleet; while in terms the fishing effort, Guadeloupian, Canaries and Azorean fleets dominate (Figure 4.107).

This analysis remains incomplete as long as data on landings are provided for all fleet segments. Overall the situation provided for 2017 in terms of coverage as data was made available for Martinique, Guadeloupe and Mayotte.

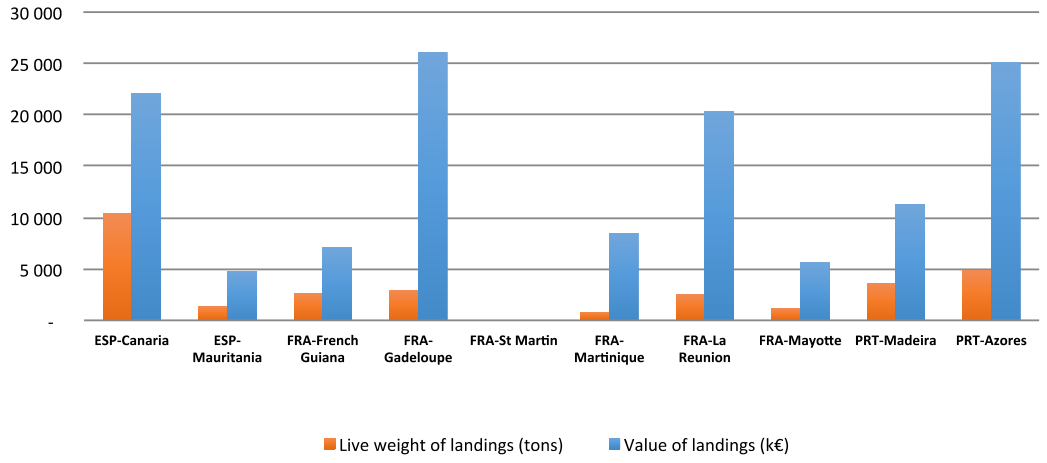


Figure 4.106 Importance of the Outermost regions fisheries in terms of landings in weight and value for 2017

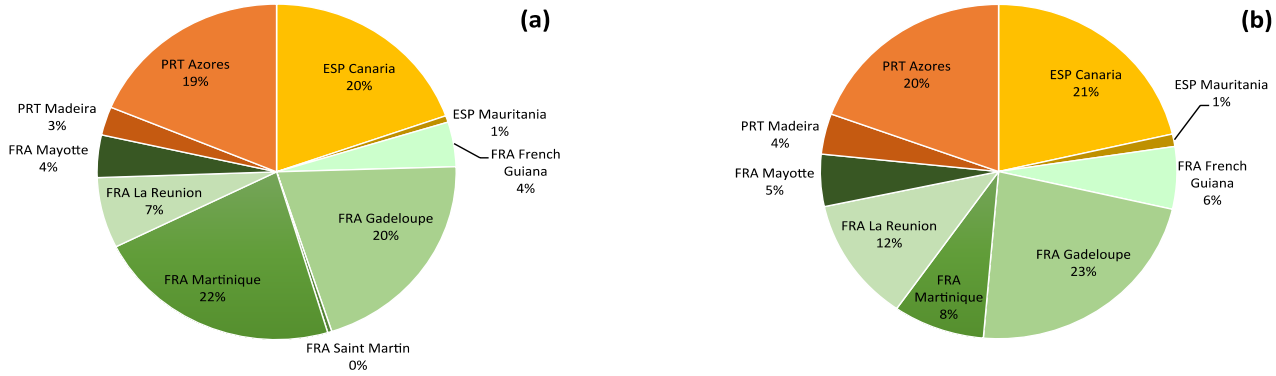


Figure 4.107 Share of capacity (number of vessels) (a) and effort (days-at-sea) (b) by Outermost regions in 2017

Azores

The Azorean OMR fleet, comprising 557 active vessels, operates exclusively in the Portuguese Exclusive Economic Zone (EEZ). The fleet is dominated by longliners (HOK) which made up 85% of the active vessels in 2017. The majority (77%) of the fleet measured less than 10 metres in length (VL0010) (Figure 4.108).

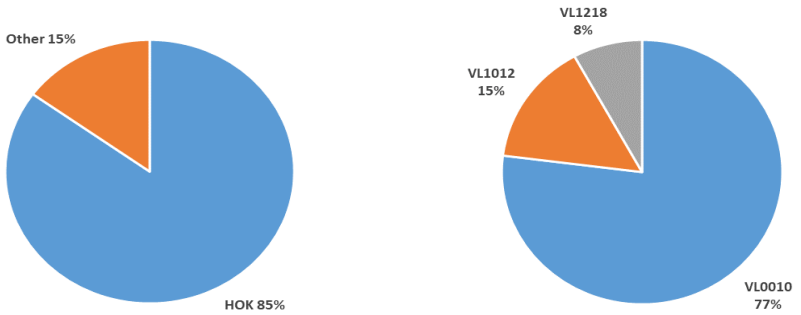


Figure 4.108 Structure of the Azores OMR fleet by main gear type (a) and vessel length group (b), 2017

The Azores OMR is very rich in biodiversity and fishing fleets target both demersal and large pelagic species. The main species landed, by weight, were: albacore (21%), bigeye tuna (20%), skipjack tuna (13%) and blue jack mackerel (6%) and blackspot seabream (5%). In terms of value, 18% of the landings are from red seabream, followed by albacore (14%), bigeye tuna (13%), and wreckfish and blackbelly rosefish (5% each) (Figure 4.109).

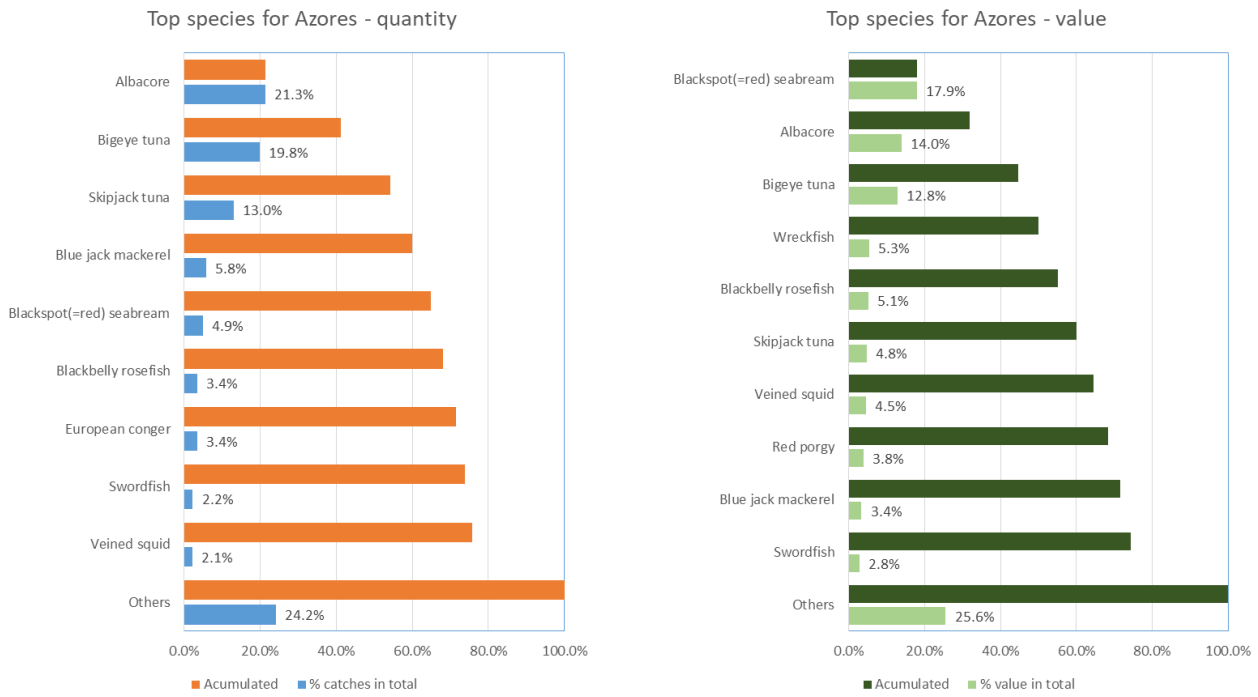


Figure 4.109 Top ten species in landed weight and value for the Azores OMR fleet in 2017

Total employment peaked in 2013 with 3 119 persons employed full and part time, equivalent to 1 601 FTEs but has fallen by 39% in the years to 2017 (the number of FTEs fell 49% in the same period). Like many other fleets, the Azorean OMR fleet today finds it difficult to attract sufficient crew (Table 4.32).

Between 2010 and 2017 the fleet fell by 14% in number and 7% in kW, while days-at-sea fell by 45% and energy consumed by 66%. Landings were down 50% during the period by volume and 10% by value.

Crew wages and salaries represent the biggest cost to operators (60% of the operating costs). Generally, the unpaid labour value is very small when compared to paid labour (wages), however, the reported figure in 2015 and 2017, EUR 512 thousand, was considerably higher than the rest of the time-series.

Amongst other important cost items were energy costs (19%) and other variable costs (11%). As with the OMR of Madeira, the three main cost items for the Azorean fleet make-up 90% of the total operating costs (Figure 4.110).

The profitability of the Azorean OMR fleet as a whole has been positive and relatively stable for the whole period 2010-2017.

In 2017, the GVA margin was 73%, the gross profit margin 34% and the net profit margin 22%.

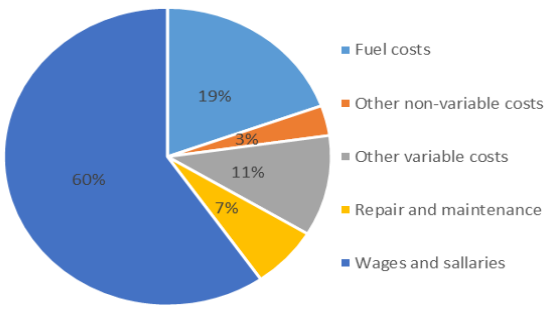


Figure 4.110 Cost structure of the Azores OMR fleet in 2017

Table 4.31 Overview and trends for the Azores OMR fleet, 2010 -2017

			2010	2011	2012	2013	2014	2015	2016	2017
Capacity	Number of vessels	(#)	650	630	592	573	563	550	537	557
	Total vessel tonnage	(GT)	2 791	2 822	2 888	2 865	2 845	2 794	2 808	2 916
	Total vessel power	(kW)	32 796	32 775	31 786	31 219	30 733	29 881	29 424	30 650
Effort	Days at sea	(days)	73 565	74 194	66 508	67 995	43 961	48 586	40 827	40 296
	Energy consumption	(thousand litres)	9 026	7 934	8 821	6 990	3 398	0	3 078	3 041
Employment	Engaged crew	(person)	2 002	3 093	2 316	3 119	2 183	2 012	1 929	1 890
	FTE national	(#)	992	1 487	1 092	1 601	1 084	1 053	843	824
Expenditure	Crew and sallaries	(thousand €)	11 155	9 970	9 953	9 291	9 552	8 981	8 627	9 188
	Value of unpaid labour	(thousand €)	201	195	149	304	52	976	98	512
	Energy costs	(thousand €)	2 610	3 027	2 623	2 778	2 107	2 139	2 641	3 165
	Other non-variable costs	(thousand €)	1 434	1 146	1 005	1 127	1 037	534	760	531
	Other variable costs	(thousand €)	1 639	1 596	1 335	1 429	1 717	1 615	2 097	1 780
	Repair & maintenance costs	(thousand €)	1 070	1 074	938	963	1 025	945	999	1 089
Income	Gross value of landings	(thousand €)	27 075	24 775	23 742	22 977	25 283	24 090	23 232	24 525
	Other income	(thousand €)	872	269	459	97	0	2	22	3
Indicator	Average depreciation costs	(thousand €)	46	45	45	45	40	43	41	43
	Gross profit	(thousand €)	9 838	8 037	8 199	7 183	9 793	8 903	8 032	8 264
	Gross Value Added	(thousand €)	21 194	18 201	18 302	16 778	19 398	18 859	16 757	17 964
	Net profit	(thousand €)	5 743	3 387	3 316	2 820	6 126	5 780	5 499	5 301
	Opportunity cost of capital	(thousand €)	1 057	1 720	1 930	1 410	900	430	329	305
Landings	Live weight of landings	(tonne)	9 773	7 713	7 181	7 778	8 043	6 583	4 734	4 882
	Value of landings	(thousand €)	27 143	24 701	23 822	22 656	25 134	23 997	22 909	24 523

Madeira

The Madeiran OMR fleet operates exclusively in the Portuguese Exclusive Economic Zone of CECAF 34.1.2 and is composed of 94 vessels, the majority being small scale. This fleet is dominated by longliners (HOK), which represented 91% of the active vessels in 2017. On the whole, 69% of the vessels are less than 10m LOA and 90% are less than 18 meters LOA (Figure 4.111).

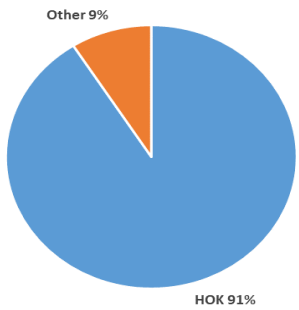


Figure 4.111 Fleet structure by main gear type, 2017

The most important species are: black scabbardfish (45% of the total landed weight), followed by bigeye tuna (16%) and blue skipjack tuna (9%). Combined, these three top species represent 70% of the total landings in weight. Other important species include: albacore (8%), blue jack mackerel (5%) and chub mackerel. In terms of value, black scabbardfish and bigeye tuna remain the two most important species (53% and 17% of the total value landed, respectively), followed by albacore (7%) and swordfish (Figure 4.112).

Despite the total number of jobs reached its lowest value in 2017, the FTE shows a relative increase, meaning the fishers are working more time.

Fuel (energy) consumption has increased while effort (days-at-sea) has decreased, suggesting that some change in the activity pattern has occurred. This can be explained for higher activity of bigger vessels operating with longer round trips. Comparing to 2016 fuel costs remains practically the same due to lower average fuel prices.

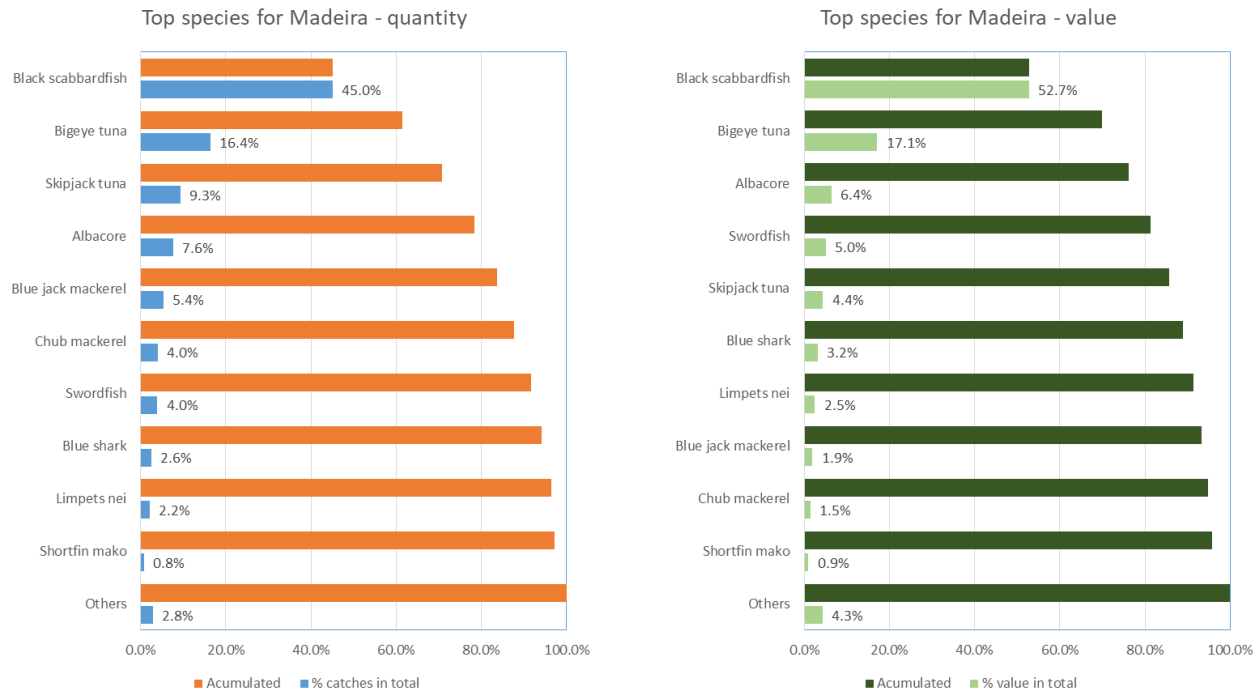


Figure 4.112 Top ten species in landed weight and value for the Madera OMR fleet, 2017

The profitability of the Madeiran OMR fleet has been positive for the whole period 2010-2017. In 2017, the GVA to revenue was 76%, the gross profit margin 20% and the net profit margin 15% (Table 4.33).

Table 4.32 Overview and trends for the Madeira OMR fleet, 2010 - 2017

			2010	2011	2012	2013	2014	2015	2016	2017
Capacity	Number of vessels	(#)	108	99	90	83	80	84	85	82
	Total vessel tonnage	(GT)	1 399	1 170	1 035	912	923	932	928	931
	Total vessel power	(kW)	8 783	7 490	7 166	6 320	6 447	6 573	6 645	6 563
Effort	Days at sea	(days)	8 475	8 214	8 268	7 461	8 466	9 179	10 136	8 141
	Energy consumption	(thousand litres)	1 963	1 987	1 873	1 639	1 670	1 533	1 567	1 685
Employment	Engaged crew	(person)	639	585	555	513	475	436	466	470
	FTE national	(#)	429	398	411	348	323	301	324	389
Expenditure	Crew and sallaries	(thousand €)	3 140	4 254	4 670	3 727	4 388	4 728	4 638	6 043
	Value of unpaid labour	(thousand €)	1	21	64	34	58	65	85	95
	Energy costs	(thousand €)	1 364	1 517	1 503	1 258	1 209	899	852	890
	Other non-variable costs	(thousand €)	386	302	305	194	190	182	319	356
	Other variable costs	(thousand €)	699	700	599	507	1 284	1 125	1 020	1 029
	Repair & maintenance costs	(thousand €)	493	379	497	385	420	326	462	415
Income	Gross value of landings	(thousand €)	8 636	9 417	9 332	8 661	8 884	9 719	10 095	11 052
	Other income	(thousand €)	16	25	85	67	15	31	32	0
Indicator	Average depreciation costs	(thousand €)	101	95	96	69	72	27	64	63
	Gross profit	(thousand €)	2 567	2 269	1 778	2 623	1 350	2 425	2 751	2 224
	Gross Value Added	(thousand €)	5 708	6 544	6 512	6 383	5 796	7 218	7 474	8 362
	Net profit	(thousand €)	1 298	1 111	676	1 901	749	1 995	2 089	1 712
	Opportunity cost of capital	(thousand €)	290	380	396	266	161	79	100	52
Landings	Live weight of landings	(tonne)	3 457	3 795	3 986	3 324	3 367	3 556	3 529	3 626
	Value of landings	(thousand €)	8 583	9 358	9 245	8 641	8 810	10 929	9 971	11 047

Average crew wages and salaries have increased since 2010. This cost, together with other variable costs (12%), related to the activity of longliners (bait, ice, etc.) and fuel costs (10%), correspond to 92% of the total operating cost structure of the Madeira OMR fleet (Figure 4.113).

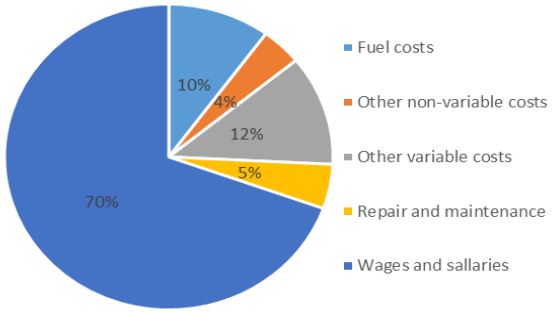


Figure 4.113 Cost structure of the Madera OMR fleet in 2017

Canary Islands

Fishing activity in the Canaries OMR takes place in FAO Area 34.1.2.

Landings (by weight) are dominated by large pelagic species: skipjack tuna (22%), bigeye tuna (22%) and albacore (17%), but also Atlantic pomfret (5%). In terms of value, the most representative species are bigeye tuna (21%), albacore (18%), skipjack tuna (9%) and Atlantic pomfret in 2016 (Figure 4.115).

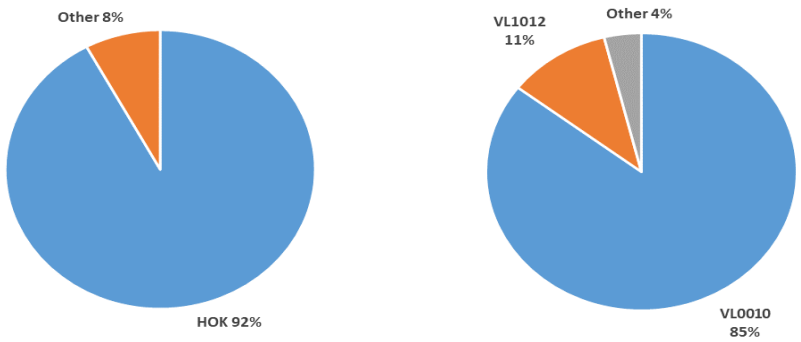


Figure 4.114 Fleet structure by main gear type and vessel length group, 2017

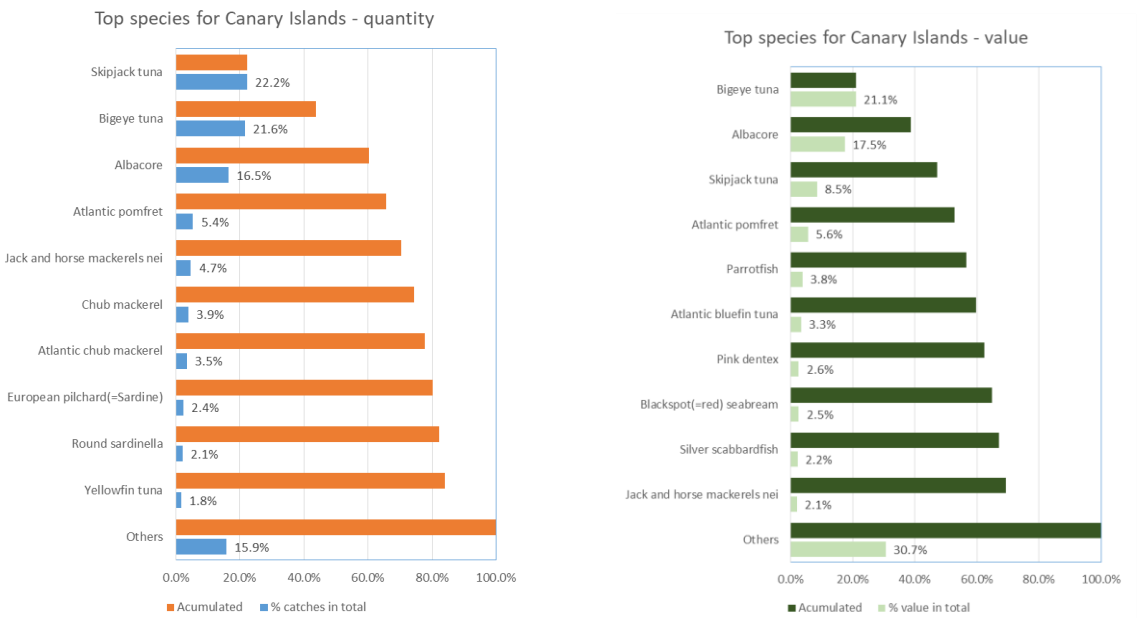


Figure 4.115 Top 10 landed species in term of weight (a) and value (b) for the Canary Islands OMR, 2017

The cost structure of the Canary fleet is dominated by wages and salaries (69%) followed by other variable costs (11%) and repair and fuel costs (7%) (Figure 4.116).

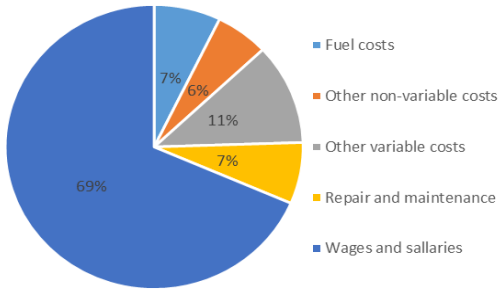


Figure 4.116 Cost structure for the Canary Islands OMR fleet, 2017

In 2017 the GVA was EUR 37.8 million, while the GVA margin, gross profit margin and net profit margin reached 71%, 87.5%, and 6%, respectively (Table 4.34).

Table 4.33 Overview for the Canary Islands OMR fleet, 2017

Capacity	Number of vessels	(#)	624
	Total vessel tonnage	(GT)	5 221
	Total vessel power	(kW)	26 084
Effort	Days at sea	(days)	51 163
	Energy consumption	(thousand litres)	10 477
Employment	Engaged crew	(person)	1 987
	FTE national	(#)	1 362
Expenditure	Crew and sallaries	(thousand €)	23 314
	Value of unpaid labour	(thousand €)	10 456
	Energy costs	(thousand €)	3 573
	Other non-variable costs	(thousand €)	2 841
	Other variable costs	(thousand €)	5 660
	Repair & maintenance costs	(thousand €)	3 436
Income	Gross value of landings	(thousand €)	53 277
	Other income	(thousand €)	0
Indicator	Average depreciation costs	(thousand €)	60
	Gross profit	(thousand €)	3 997
	Gross Value Added	(thousand €)	37 767
	Net profit	(thousand €)	2 174
	Opportunity cost of capital	(thousand €)	- 42
Landings	Live weight of landings	(tonne)	14 477
	Value of landings	(thousand €)	32 096

French outermost regions

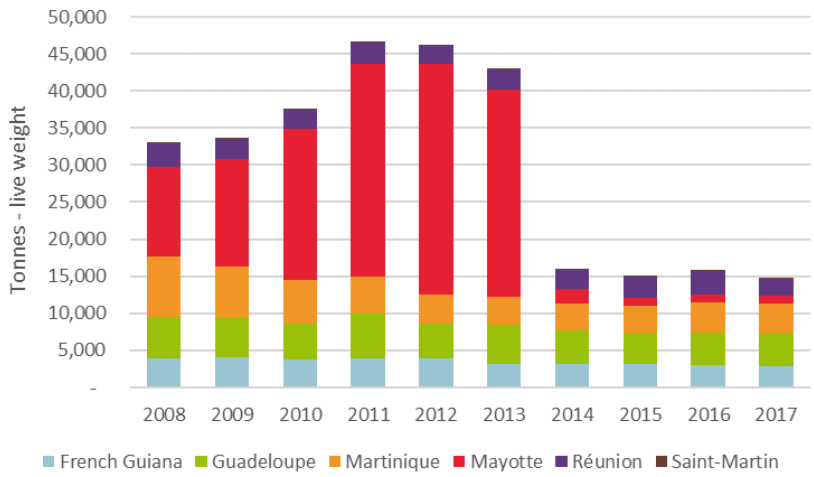


Figure 4.117 Trends in landings (live weight, tonnes) by French OMR

Source: FAO http://www.fao.org/figis/geoserver/factsheets/rfbs.html

French Guiana

Fishing activity is located in FAO area 31 and 41.1. The following description excluded two fleet segments for which economic data were not provided DTS1824 and HOK0010; these two segments combined were estimated to contribute 375 thousand tonnes of landing and EUR 1 313 thousand in value.

The French Guiana OMR fleet comprised 113 vessels in 2017, mainly coastal, 10-12 metres, units fishing with drift nets. The number of vessels has declined in recent years (down 15% since 2005: Ifremer, 2017). Employment in 2017 was estimated to be 330 persons, corresponding to 65 FTE.

Shrimp landings from the trawlers operating on the shelft have strongly decreased in recent years. The main species landed is now acoupa weakfish (36% in weight and 45% in value) and green weakfish (20% in weight and 14% in value) (Figure 4.119).

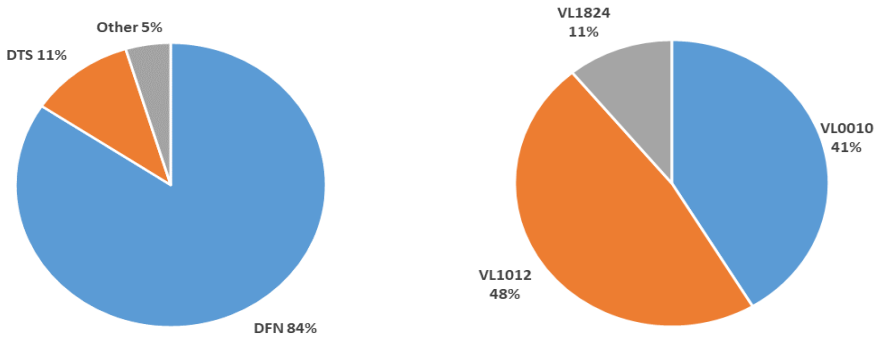


Figure 4.118 Fleet structure by main gear type and vessel length group

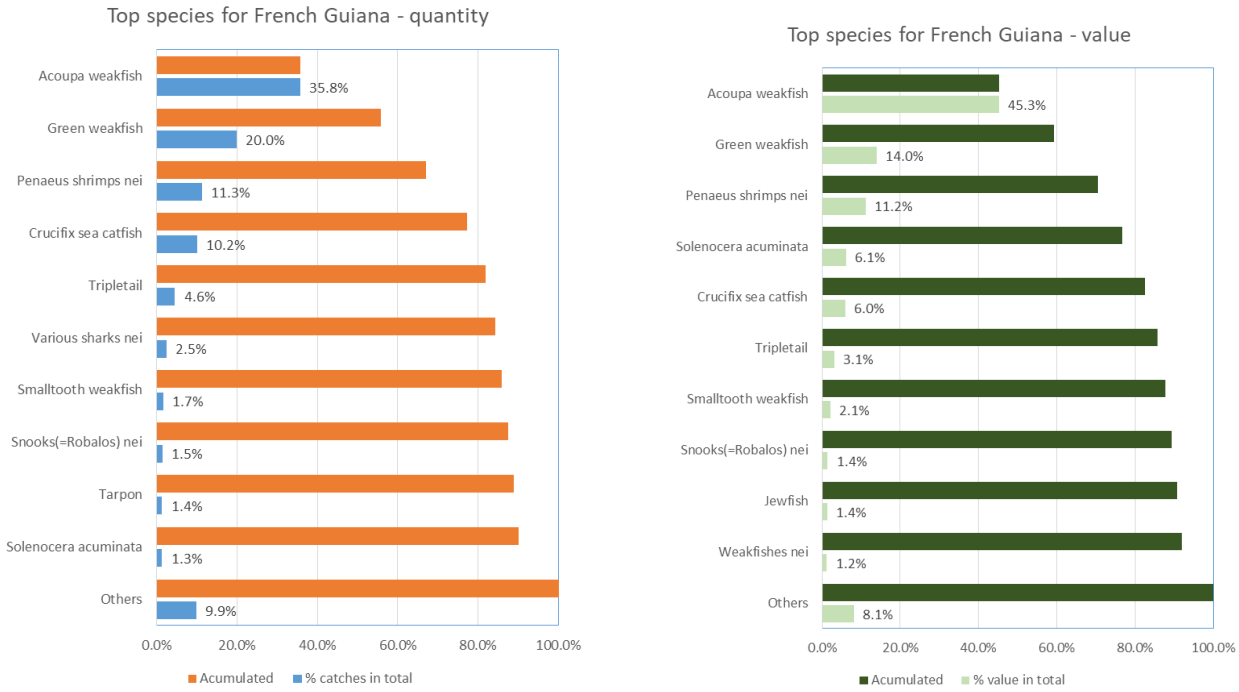


Figure 4.119 Top 10 landed species in term of weight and value of French Guiana OMR, 2017

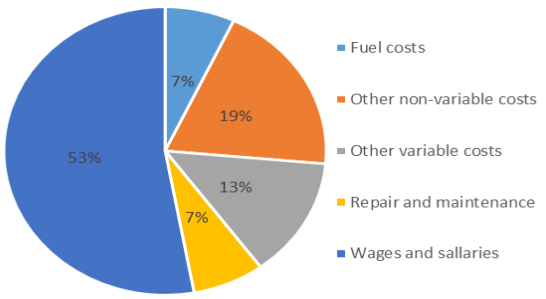


Figure 4.120 Cost structure of the French Guiana OMR fleet, 2017

In 2017 income from landings was EUR 5.7 million. The cost structure was dominated by wages and salaries (53%) followed by other non-variable (fixed) costs (19%) and other variable costs (13%); fuel costs represented 7% of the total (Figure 4.120). In 2017, the fleet generated almost EUR 4.6 million in GVA and a gross profit of EUR 1.356 million (Table 4.35).

Table 4.34 Overview of the French Guiana OMR fleet, 2017

			2017
Capacity	Number of vessels	(#)	113
	Total vessel tonnage	(GT)	601
	Total vessel power	(kW)	8 174
Effort	Days at sea	(days)	11 238
	Energy consumption	(thousand litres)	0
Employment	Engaged crew	(person)	330
	FTE national	(#)	65
Expenditure	Crew and sallaries	(thousand €)	3 222
	Value of unpaid labour	(thousand €)	0
	Energy costs	(thousand €)	427
	Other non-variable costs	(thousand €)	1 184
	Other variable costs	(thousand €)	821
	Repair & maintenance costs	(thousand €)	439
Income	Gross value of landings	(thousand €)	5 690
	Other income	(thousand €)	1 763
Indicator	Average depreciation costs	(thousand €)	8
	Gross profit	(thousand €)	1 359
	Gross Value Added	(thousand €)	4 582
	Net profit	(thousand €)	1 035
	Opportunity cost of capital	(thousand €)	- 14
Landings	Live weight of landings	(tonne)	2 264
	Value of landings	(thousand €)	5 675

Guadeloupe

The Guadeloupe OMR fleet is composed of 611 vessels. The majority of the vessels are below 10 metres LOA using mainly pelagic long lines and traps.

The following description excludes four fleet segments for which economic data were not provided: DFN1012 (4 vessels), FPO1012 (3 vessels), HOK1012 (10 vessels) and PGO0010 (8 vessels); these 25 vessels combined were estimated to contribute for 158 thousand tonnes of landings and EUR 1 077 thousand. Employment in 2017 was estimated to be 1 093 persons, corresponding to 121 FTE.

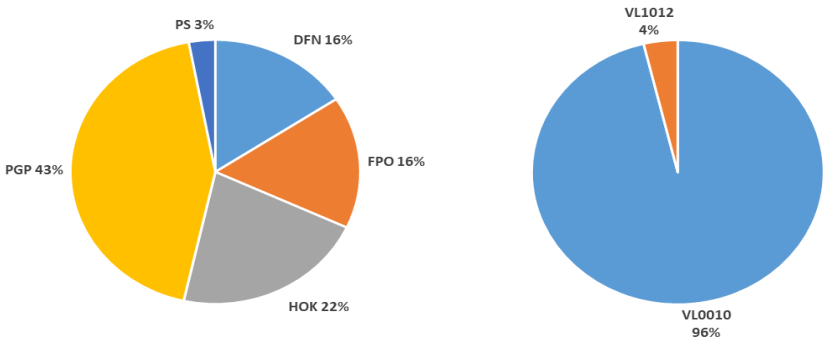


Figure 4.121 Fleet structure by main gear type and vessel length group, 2017

The most important species fished were common dolphin fish (39% by weight and value), parrot fishes and yellowfin tuna (Figure 4.122).

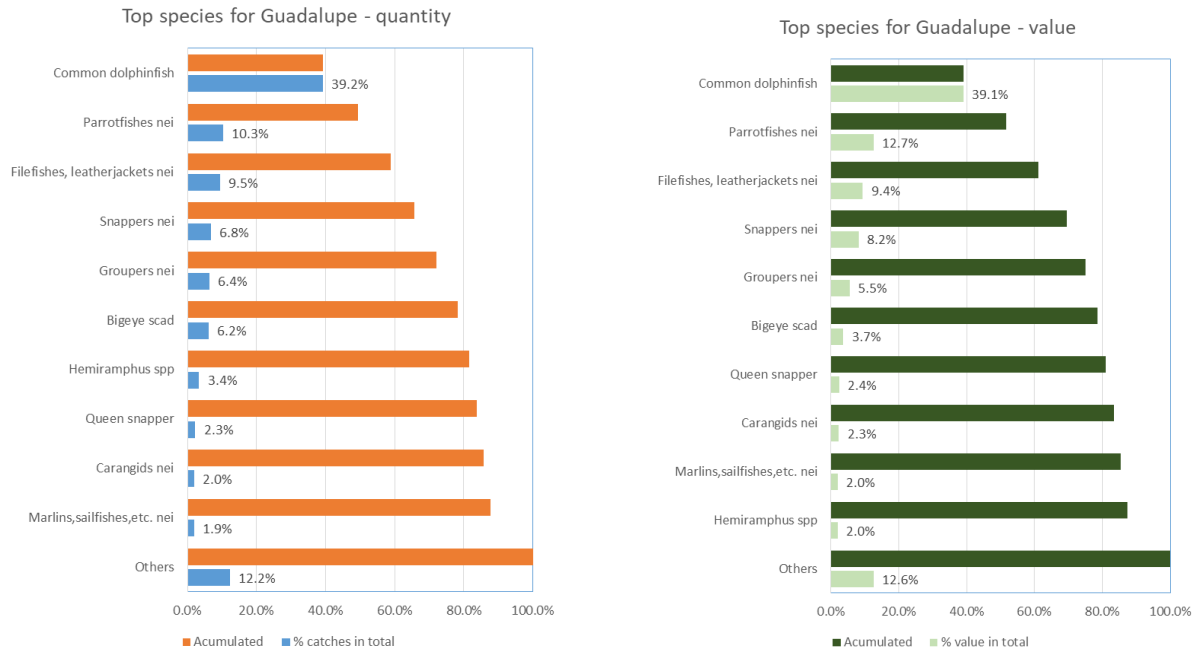


Figure 4.122 Top 10 landed species in term of weight in Guadeloupe OMR, 2017

Table 4.35 Overview of the Guadeloupe OMR fleet, 2017

			2017
Capacity	**Number of vessels**	(#)	586
	Total vessel tonnage	(GT)	1 750
	Total vessel power	(kW)	96 517
Effort	**Days at sea**	(days)	45 397
	Energy consumption	(thousand litres)	0
Employment	**Engaged crew**	(person)	1 093
	FTE national	(#)	121
Expenditure	**Crew and sallaries**	(thousand €)	12 456
	Value of unpaid labour	(thousand €)	0
	Energy costs	(thousand €)	3 016
	Other non-variable costs	(thousand €)	3 305
	Other variable costs	(thousand €)	851
	Repair & maintenance costs	(thousand €)	1 719
Income	**Gross value of landings**	(thousand €)	25 683
	Other income	(thousand €)	0
Indicator	**Average depreciation costs**	(thousand €)	64
	Gross profit	(thousand €)	4 335
	Gross Value Added	(thousand €)	16 791
	Net profit	(thousand €)	1 304
	Opportunity cost of capital	(thousand €)	- 71
Landings	**Live weight of landings**	(tonne)	2 768
	Value of landings	(thousand €)	24 616

The cost structure is dominated by wages and salaries (58%) followed by fixed costs (15%) and fuel costs (14%) (Figure 4.123).

In 2017 the GVA was EUR 16.8 million and the gross profit EUR 4.3 million (Table 4.36).

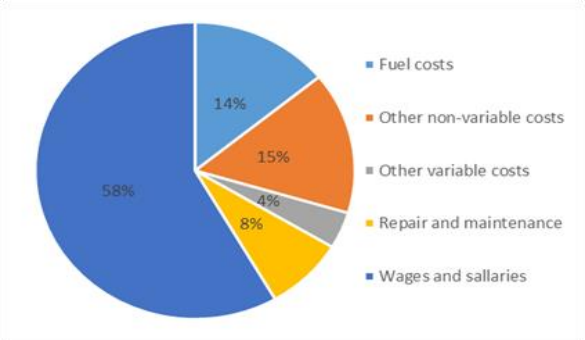


Figure 4.123 Cost structure of the Guadeloupe OMR fleet, 2017

Reunion

The OMR fleet of Reunion Island is composed of 203 vessels, employing 358 persons for a FTE of 112. Fishing activity takes place in FAO areas 51.6 and 51.7. The most important species for these fleets are large pelagics (90% by weight) consisting of common dolphinfish (22%), albacore (21%) bigeye tuna (19%) and blue marlin (10%) (Figure 4.125).

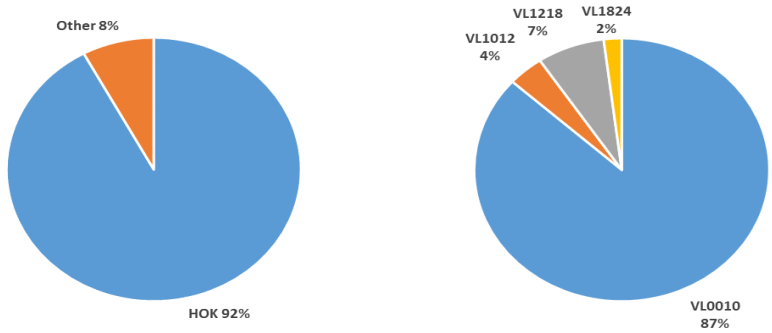


Figure 4.124 Fleet structure by main gear type and vessel length group, 2017

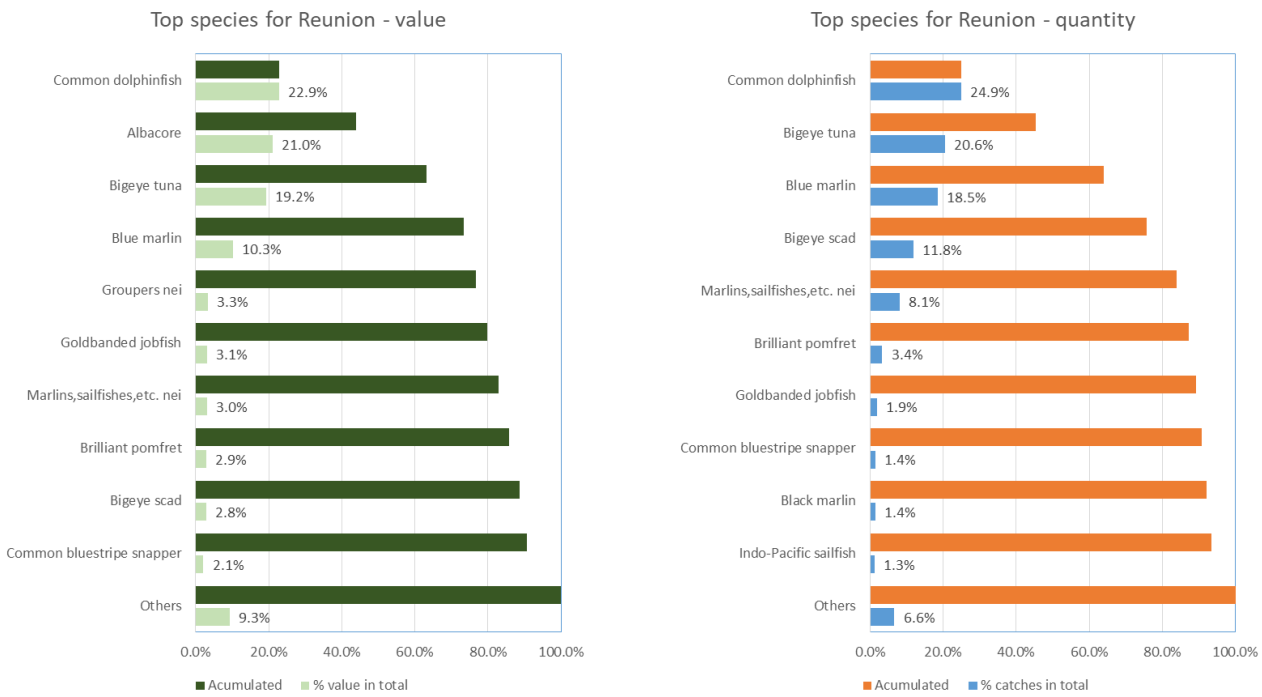


Figure 4.125 Top 10 species, by weight, landed by the La Reunion Island OMR fleet, 2017

The following description excludes most of the fleet segments for which economic data were not provided DFN VL0010 (1 vessel), HOK VL0010 (160 vessels), HOK VL1824* (4 vessels), PGO VL0010 (7 vessels) and PGP VL0010 (8 vessels).

The overview of La Reunion is considerate very incomplete and the cost structure information are presented for the 19 vessels from segments HOK VL1218 and HOK VL1824 only.

The most important costs in 2017 were 'other' variable cost (38%), followed by wages and salaries (28%), repair and maintenance and fuel costs (Figure 4.126). The fleet covered was reported to have generated EUR 391 thousand in GVA (Table 4.37).

Inconsistencies in the economic data were highlighted during the EWG without possibility to correct or provide an explanation.

Table 4.36 Overview of the Reunion Island OMR fleet, 2017

			2017	
			HOK1218 AND HOK1824	OTHERS
Capacity	Number of vessels	(#)	19	184
	Total vessel tonnage	(GT)	1 061	500
	Total vessel power	(kW)	4 918	16 661
Effort	Days at sea	(days)	3 683	21 105
	Energy consumption	(thousand litres)	1 486	
Employment	Engaged crew	(person)	98	260
	FTE national	(#)	73	39
Expenditure	Crew and sallaries	(thousand €)	1 887	
	Value of unpaid labour	(thousand €)	0	
	Energy costs	(thousand €)	803	
	Other non-variable costs	(thousand €)	591	
	Other variable costs	(thousand €)	2 534	
	Repair & maintenance costs	(thousand €)	846	
Income	Gross value of landings	(thousand €)	4 843	
	Other income	(thousand €)	322	
Indicator	Average depreciation costs	(thousand €)	87	
	Gross profit	(thousand €)	- 1 497	
	Gross Value Added	(thousand €)	391	
	Net profit	(thousand €)	- 2 126	
	Opportunity cost of capital	(thousand €)	- 17	
Landings	Live weight of landings	(tonne)	3 128	1 271
	Value of landings	(thousand €)	11 719	10 360

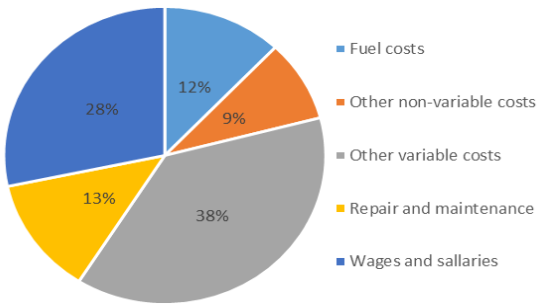


Figure 4.126 Distribution of cost structure for Reunion OMR fleets HOK1218 and HOK1824, 2017

Martinique

In 2017 the total number of active vessels in the Martinique OMR fleet was estimated to be 662 units employing 1114 persons. The fleet is composed mainly of coastal vessel less than 10 meters LOA using traps and lines (SIH IFREMER, 2017) (Figure 4.127). Fishing activity takes place in FAO area 31.

Landings (by weight) are dominated by blue marlin (28%), which account for approximately 30% of the landed value, followed by common dolphinfish (20% in weight and value) mixed composition of marine fishes nei (13% by weight) (Figure 4.128).

Income and cost data are not available at all for the Martinique OMR fleet, so that description of the annual situation was impossible (Table 4.38).

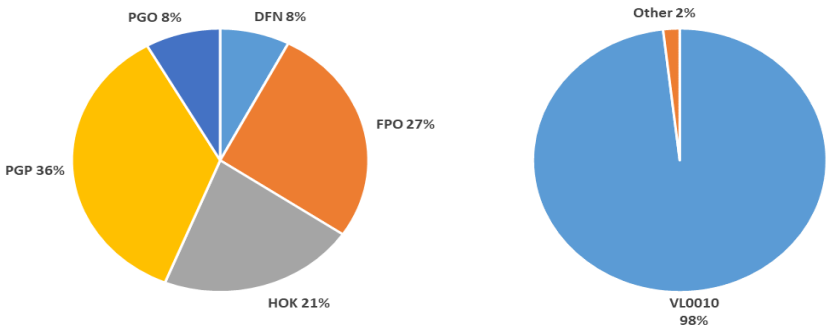


Figure 4.127 Fleet structure by main gear type and vessel length group, 2017

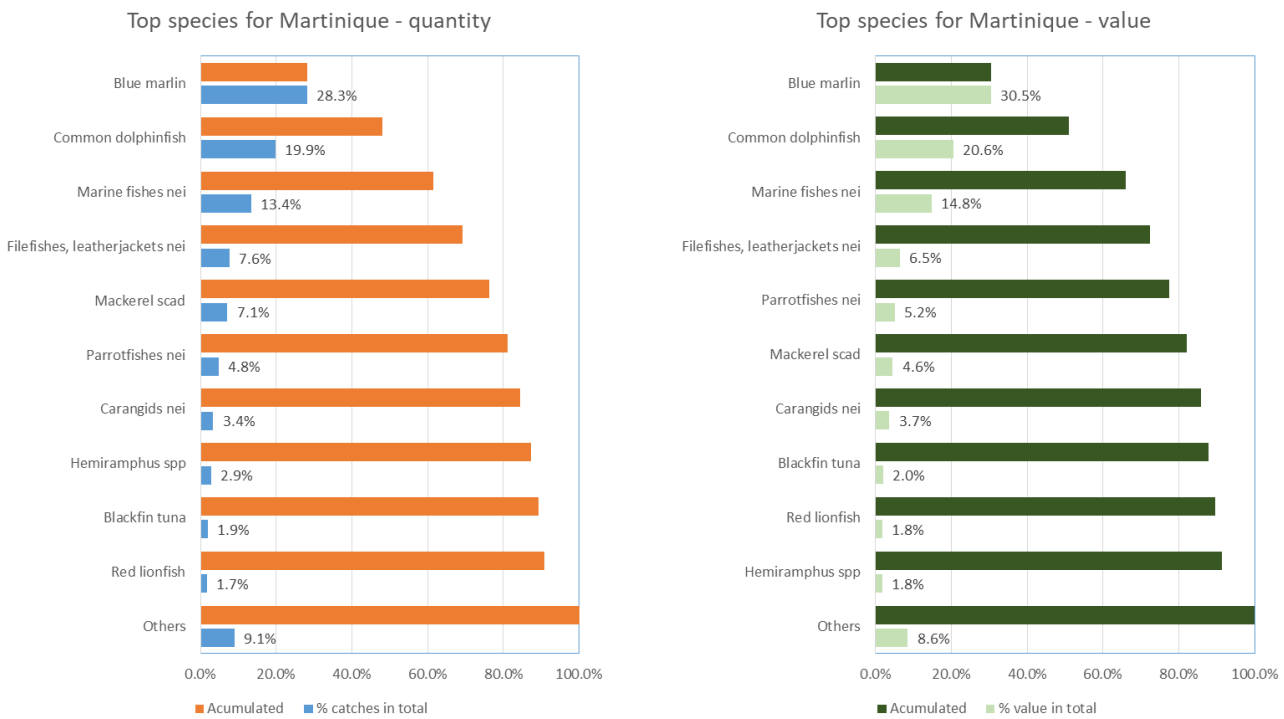


Figure 4.128 Top 10 landed species in landing weight in Martinique OMR fleet in 2017

Table 4.37 Overview of the Martinique OMR fleet, 2017

			2017
Capacity	**Number of vessels**	(#)	1 009
	Total vessel tonnage	(GT)	2 123
	Total vessel power	(kW)	100 525
Effort	**Days at sea**	(days)	17 266
	Energy consumption	(thousand litres)	
Employment	**Engaged crew**	(person)	1 114
	FTE national	(#)	
Landings	**Live weight of landings**	(tonne)	755
	Value of landings	(thousand €)	8 357

Mayotte

The Mayotte archipelago is located in the northern Mozambique Channel (Indian Ocean) off the coast of Southeast Africa, between North-western Madagascar and North-eastern Mozambique.

The available data indicate that there were 122 fishing vessels in the Mayotte fleet in 2017 (Table 4.39). However, according to IFREMER (SIH IFREMER, 2017) there were some 700 vessels operating there in 2015. These are, mainly, small-scale coastal vessels less than 6 meters LOA targeting reef and demersal species.

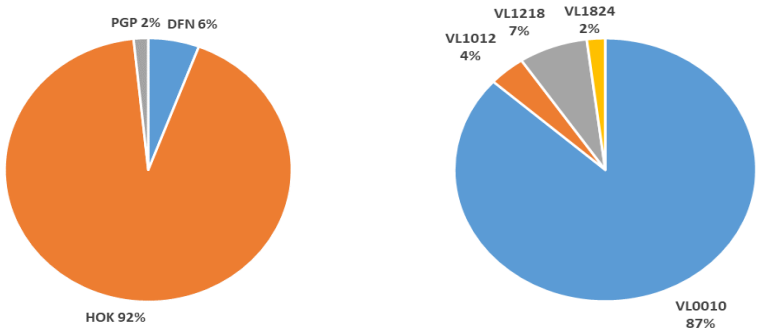


Figure 4.129 Fleet structure by main gear type and vessel length group, 2017

Total landings value reported was 1 138 tonnes valued at EUR 5.525 million in 2017. Landings (by weight) are dominated by the category marlins, sailfishes nei (32%), which account for approximately 36% of the landed value, followed by carangids (10% in weight and value) mixed composition of marine fishes nei (13% by weight). The main species were marine fish species without identification (49%), followed by skipjack tuna (28%) and yellowfin tuna (17%). Fishing activity takes place in the Western Indian Ocean (FAO area 51).

Income and cost data are not available for none of the three fleet segments DFN VL0010 (7 vessels), HOK VL0010 (113 vessels) and PGP VL0010 (2 vessels) from the Mayotte OMR fleet so that description of the annual situation was impossible.

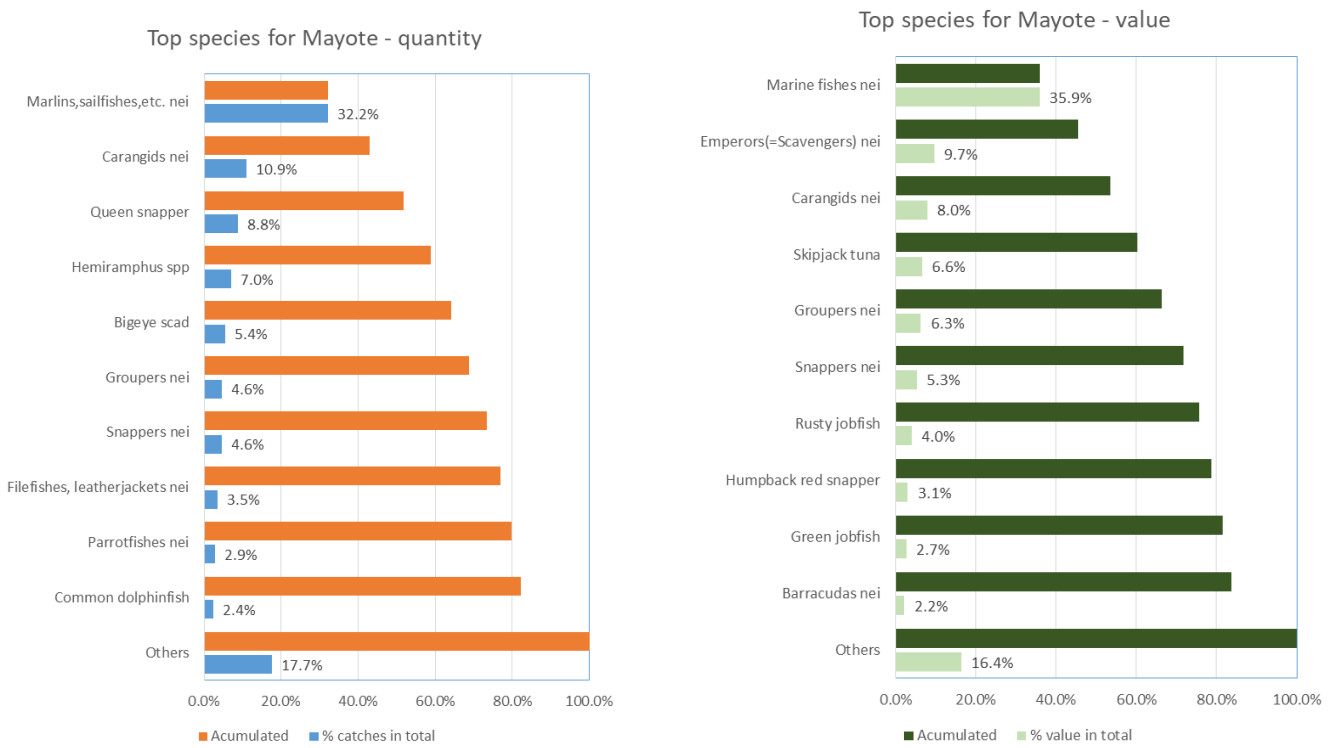


Figure 4.130 Top 10 landed species in landing weight in Mayotte OMR fleet in 2017

Income and cost data are not available for the Mayotte OMR fleet.

Table 4.38 Overview of the Mayotte OMR fleet in 2017

			2017
Capacity	Number of vessels	(#)	122
	Total vessel tonnage	(GT)	244
	Total vessel power	(kW)	4 876
Effort	Days at sea	(days)	10 460
	Energy consumption	(thousand litres)	
Employment	Engaged crew	(person)	288
	FTE national	(#)	39
Landings	Live weight of landings	(tonne)	1 138
	Value of landings	(thousand €)	5 525

Saint-Martin

Saint-Martin is situated in the Lesser Antilles archipelago of the West Indies, in the Caribbean Sea. Information about the Mayotte OMR fleet and fisheries is sparse, the EU fleet register mentioned four fleet segments for 2017: FPO VL0010 (2 vessels), HOK VL0010 (2 vessels), PGP VL0010 (6 vessels) and PS VL0010 (1 vessels). The all segments combined employs 16 persons for a FTE of 1.5.

According to FAO estimates, in 2017 90 tonnes of marine fishes were landed, and all were taken in the Western Central Atlantic (FAO area 31).

Landings and economic data were not available.

Table 4.39 Overview of the Saint Martin OMR fleet, 2017

			2017
Capacity	Number of vessels	(#)	11
	Total vessel tonnage	(GT)	45
	Total vessel power	(kW)	1 882
Effort	Days at sea	(days)	
	Energy consumption	(thousand litres)	
Employment	Engaged crew	(person)	16
	FTE national	(#)	2

4.8.2 Long Distant Fisheries (LDF)

ICCAT - International Commission for the Conservation of Atlantic Tunas

Area of competence

International Commission for the Conservation of Atlantic Tunas (ICCAT) is responsible for the conservation of tunas and tuna-like species in the Atlantic. Its area of competence covers all waters of the Atlantic Ocean, including adjacent seas (FAO areas 21, 27, 31, 34, 37, 41, 47 and 48). There are currently fifty ICCAT members or Contracting Parties.

Regional details

According to official statistics, ICCAT nominal catches in the Atlantic, excluding Mediterranean stocks (MED and A+M stocks), amounted to 590 801 tonnes in 2017[13].

Ten EU MS reported catches in 2017, amounting to 213 100 tonnes. Spain ranked first with 139 819 tonnes, or almost 24% of the global catch, followed by Ghana (13.4%) and France (49 580 tonnes and 8.4%). Portugal, with 3.5% of the catch, ranked ninth and Ireland with 0.4%, ranked 22nd (Figure 4.131).

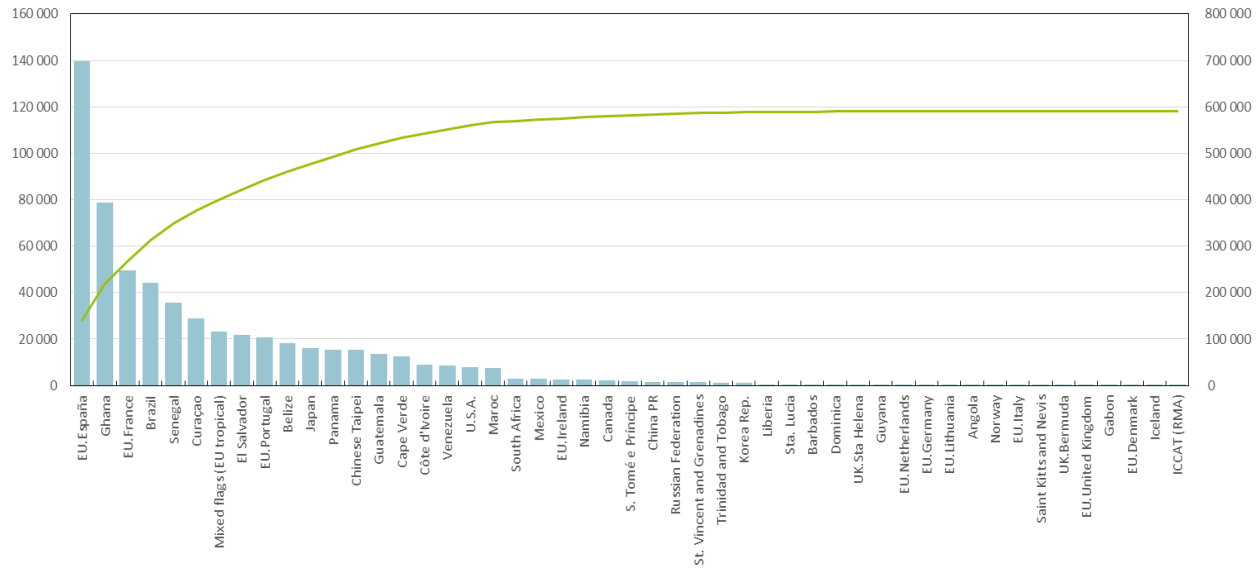


Figure 4.131 ICCAT catches (nominal, t) for Atlantic stocks by flag country, 2017
Source: https://www.iccat.int/en/accesingdb.html

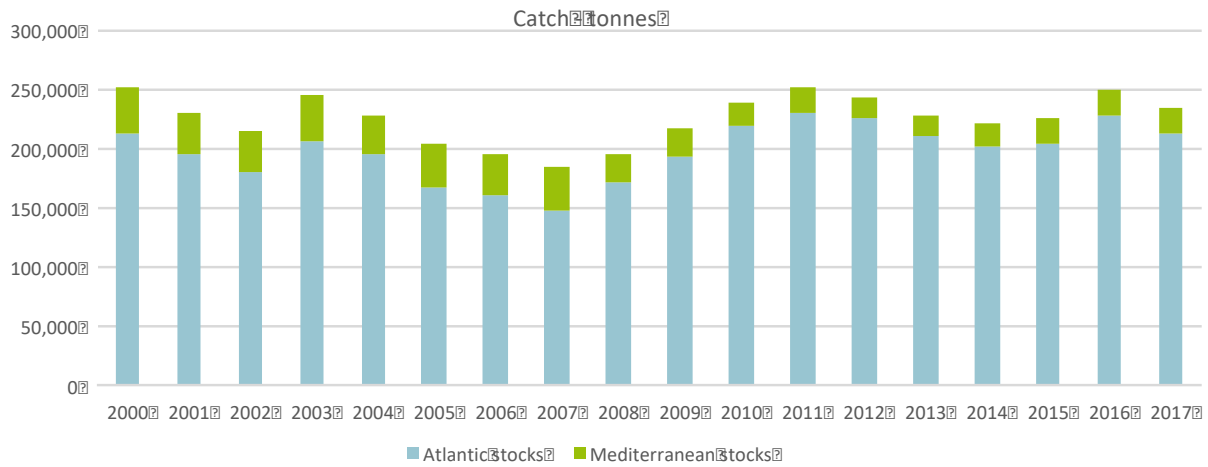


Figure 4.132 Historical ICCAT catches (nominal, t) for Atlantic and Mediterranean stocks, 2000-2017
Data source: https://www.iccat.int/en/accesingdb.html

[13] https://www.iccat.int/en/accesingdb.html

EU catches peaked in 2011 at 230 500 tonnes with seven MS fleets reporting activity. Over the period 2010-2017, EU catches remained stable at around 200 000 to 230 000 tonnes, in part due to more stability in quota allocation among contracting parties, as well as, more homogeneous fishing patterns and catch distributions of the Atlantic tuna stocks, such as the tropical tuna stocks (bigeye, yellowfin and skipjack), bluefin tuna, albacore, swordfish and blue shark. In the preceding years, 2000 to 2007, EU catches followed a negative trend with the exception of an increase in 2003-04, hitting a low in 2007. Catches started to recover again in 2008, reaching a high in 2011, thereafter fluctuating around the above-mentioned levels (Figure 4.132).

The top EU producers in 2017 were Spain, with 65% of the EU total, followed by France (23%), Portugal (10%) and Ireland (1%).

Spain reached its highest level of catches in 2012, with 168 572 tonnes. France has generally increased its volume of catch, moving from around 25 000 tonnes in 2008 to 55 382 tonnes in 2016 (the highest in the period) and with 49 580 tonnes in 2017 (Figure 4.133).

Portugal has shown some fluctuations, starting in 2008 with 21 000 tonnes, peaking in 2010 with 32 358 tonnes, hitting its lowest point in 2015 (11 000 tonnes), followed by increases in 2016 and 2017 (20 762 tonnes).

Ireland's catches increased suddenly from 924 tonnes in 2010 to 3 700 tonnes in 2011-2012, stabilising thereafter at levels between 2 350 and 2 500 tonnes (Table 4.41).

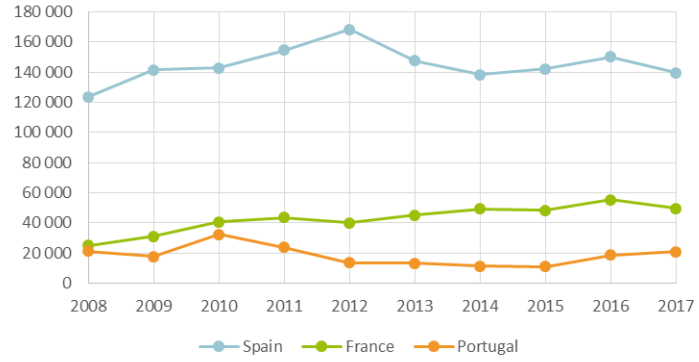


Figure 4.133 Trends on nominal catches (tonnes) by Member state
Source: https://www.iccat.int/en/accesingdb.html Atlantic stocks, all species, excludes live discards, DL (MS with less than 1% are not shown)

Table 4.40 Nominal catch (t) by MS, 2010-2017 (Atlantic stocks, all species, excludes live discards)

Quantity (tonnes)								
	2010	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**
Spain	142 732	154 682	168 572	147 695	138 420	142 234	150 093	139 819
France	40 669	43 590	40 085	45 296	49 313	48 470	55 382	49 580
Portugal	32 358	23 692	13 585	13 359	11 214	10 998	18 686	20 762
Ireland	924	3 696	3 702	2 348	2 508	2 420	2 383	2 525
Netherlands		2 257	110	1 169	54	17	217	130
Germany					6		4	91
Lithuania					95			84
Italy							47	57
United Kingdom	236	251	124	145	146	44	20	12
Denmark	0		2					1
Malta					1			
Latvia	1 219	2 374	49	48	30	192	528	
TOTAL	**218 138**	**230 543**	**226 229**	**210 058**	**201 785**	**204 375**	**227 360**	**213 060**

Source: https://www.iccat.int/en/accesingdb.html

The majority of EU catches are taken from the East Atlantic stock (55%), followed by the North Atlantic (30%) and then the South Atlantic (12%) stocks. Spain predominates in all stocks/areas, with 62% of the East Atlantic stock, 73% of the North Atlantic and 70% of the South Atlantic.

France takes a 36% of the EU catches in the East Atlantic, 7% in the North Atlantic (no catch reported in the South Atlantic). Portugal's presence in the East Atlantic is small (2% of the total catch), increasing activity in the North Atlantic (from 3% in 2016 to 16% in 2017) but most of its catches are still from the South Atlantic (30% of the total).

EU fleet activity in the ICCAT Convention area based on EU-MAP

Fleet selection

Recalling that the ICCAT convention area embraces the entire Atlantic Ocean and covers more than 20 tuna and tuna-like species or stocks, EWG 1906 decided to follow the same criteria used by EWG 1807 - fleet segments over 24m LOA and with a high degree of dependency on the ICCAT RA, to analyse the performance of the EU fleet in the region.

High dependency was set at 40% of the value of landings of ICCAT species in the convention area (see annex). This is a slight deviation on the previous AER report, where high dependency was set at 60%.

Hence, to assess the performance of the EU fleet operating in the ICCAT regulatory area (RA) using DCF/EU-MAP data, the following criteria were used to identify the fleet segments for analysis:

- Vessel length: 24-40 metres and above 40 metres LOA
- Target species: highly migratory tuna and tuna like stocks (see Table XX)
- Geographical coverage: ICCAT Regulatory Area covering waters in the Atlantic Ocean only
- High degree of dependency: at least 40% of a fleet segment's total landed value taken from the ICCAT RA in 2017 or for the most part of 2014-2017.

EWG 19-06 agreed that a *high degree of dependency* was compatible with reducing the percentage of the total value of catch landed composed of ICCAT species from 60 to 40% in 2017 or, for the most part of the period 2014-2017.

Reducing to 40% allowed for the inclusion of the 22 French purse seine vessels over 40m, as well as:

- The newly defined Spanish segments of hook, pole and longline vessels (LLD) based in Canarias (IC) operating in ICCAT RA, composed of 22 vessels.
- The Spanish purse seine vessels between 24 and 40m operating in the North Atlantic (Bay of Biscay and NWW) which did not meet the criteria last year as their landings value ranged 22-29%; targeting albacore and tropical tuna stocks in FAO 27.

Excluded are 26 vessels from the Spanish purse seine fleet targeting tropical tuna in the Atlantic, with an estimated 16 000 tonnes of landings, for not meeting the dependency criteria. The bulk of these vessel's catches (over 71%) take place in the Indian Ocean and, to a lesser extent, in the Pacific Ocean. Even though this segment also operates in the ICCAT Convention area it was well below the threshold of 40% of the share of value. The values of ICCAT species landed ranged between 27-32% over the period 2014-2016; and was only 21% of their total catch in 2017. It may be that there are individual vessels within these fleet segments where the share is much higher but with the level of aggregation provided through the DCF data, these cannot be identified. Without disaggregated information, a comprehensive assessment is not possible.

The analyses for Portugal, Spain and France are all based on DCF/EU-MAP data, submitted by MS.

As the effort deployed is 100% in many cases, seeing that the ICCAT RA covers the Atlantic Ocean, the value of landings (provided by sub-region) is used to disaggregate the economic data provided by fleet segment (by supra-region), instead of a combination of effort and landings variables (as is the case with other regional analyses).

As a result of this methodology, not all fleet segments are included in the performance analysis due to the low levels of activity. Furthermore, results on capacity (number of vessels, GT, kW) economic (revenue, GVA, etc.) and employment (FTE, etc.) may be over or under-estimated.

According to ICCAT, the only other MS fleet with noteworthy catches besides France, Portugal and Spain is Ireland, with 2 525 tonnes reported in 2017. However, when analysing the EU-MAP data for 2017, three Irish fleet segments and one from the UK met the criteria for inclusion. These were:

- Irish Demersal trawlers/seiners between 24-40m (IRL NAO DTS 2440)
- Irish Pelagic trawlers 24m-40m and over 40m LOA (IRL NAO TM 2440 and 40XX)

- UK Pelagic trawlers over 40m (GBR NAO TM40XX NGI).

However, further analysis showed that the bulk of landings for these fleets were made up of demersal (e.g. black hake, cephalopods…) and/or small pelagic (sardinella, mackerel…) species and should rather be analysed under the CECAF (for the mid and south Atlantic) and NEAFC (for the North East Atlantic), sections.

Description of relevant fisheries in the region

Based on the criteria described above, 12 fleet segments were identifies for analysis: six Spanish, five Portuguese and one French, namely:

1. Spanish surface (drifting) longliners 24-40m LOA fishing predominately in the North Atlantic (ESP NAO HOK2440 LLD)
2. Spanish surface (drifting) longliners 24-40m LOA fishing predominately in Other Fishing Regions (ESP OFR HOK2440 LLD)
3. Spanish hook, pole and line vessels 24-40m LOA based in the Canarias (ESP NAO HOK2440 IC)
4. Spanish purse seiners 24-40m LOA operating predominately in the North Atlantic (ESP NAO PS 2440 NGI)
5. Spanish hook, pole and line vessels 24-40m LOA fishing in the North Atlantic (ESP NAO HOK2440 NGI)
6. Spanish hook, pole and line vessels 24-40m LOA fishing predominately in Other Fishing Regions (OFR HOK 2440 NGI)
7. Portuguese hook, pole and line and surface longliners 24-40m LOA operating in the North Atlantic (PRT NAO HOK2440 NGI)
8. Azorean (Portuguese) pole and line vessels 24-40m LOA operating in the North Atlantic (PRT NAO HOK2440 P3)
9. Portuguese pole and line and surface longliners 24-40m LOA fishing exclusively in international waters (PRT OFR HOK2440 IWE);
10. Portuguese pole and line and surface longliners over 40m LOA fishing in international waters (PRT OFR HOK40XX IWE)
11. Madeiran (Portuguese) pole and line 24-40m LOA operating in Other Fishing Regions (OFR HOK 2440 P2)
12. French purse seiners over 40m LOA operating exclusively in international waters (FRA OFR PS 40XX IWE)

Country	Vessel length group	Main fishing technique	Main gear		Main fishing region	ICCAT share of landings value	No of vessels	kW	GT
ESP	VL2440	HOK	LHP	Canaries	NAO	93%	21	5,951	2,171
				Mainland		75%	19	6,750	2,616
					OFR	67%	8	4,811	2,587
			LLD		NAO	100%	31	8,860	6,351
					OFR	65%	41	15,690	11,410
		PS	PS		NAO	49%	40	14,098	5,614
FRA	VL40XX			Non EU	OFR	41%	9	31,301	19,024
PRT	VL2440	HOK	LHP	Madeira	NAO	59%	4	1,682	528
				Azores		86%	25	9,617	3,442
			LLD	Mainland		97%	17	6,078	3,101
				Non EU	OFR	69%	8	4,663	2,453
	VL40XX					61%	4	3,501	2,492

General Overview of the EU fleet active in the ICCAT Convention area

Tables at the end of this section provide summary results of the main activity and profitability indicators, including estimates for the selected fleet segments and by MS (all disaggregated to reflect ICCAT activity based on the 40% landed value threshold) in 2017.

Below is a brief description of the EU ICCAT fleets covered as whole, followed by an account of the main drivers affecting performance in the region. This is then followed by a more in depth analysis of the performance by Member State and fleet segment.

Fleet capacity, fishing effort and landings

In 2017, based on the EU-MAP data, the 12 selected fleet segments spent an estimated 56 000 days-at-sea, to land around 151 500 tonnes in weight, valued at about EUR 298 million (only landings of ICCAT species are included) (Figure 4.134).

The estimated number of vessels amounted to 226 in 2017, a significant increase compared to the 186 vessels analysed based on the performance criteria (including degree of dependency) applied in 2016.

Fleet capacity, fishing effort and landings have all increased compared to 2014 but have generally fallen when compared to 2016: the number of vessels increased 6% but GT and kW decreased by 11% and 10% respectively. Even though the number of days spent at sea increased by 4%, landings in weight fell by 12% but only by 1% in value, mainly thanks to substantial rise in blue shark landings and higher average prices. Landings in weight and value peaked in 2016.

Figure 4.134 Trends on capacity, effort (days-at-sea) and landings for MS fleets with high dependency on ICCAT activity, 2004-2017

The most important species landed in terms of weight were blue shark (44 491 tonnes); yellowfin (27 317 tonnes) and skipjack (25 209 tonnes). In terms of landed value, the most important species were again blue shark (EUR 89.3 million); yellowfin (EUR 44.4 million) and albacore (EUR 42.9 million), closely followed by swordfish (EUR 42.8 million) (Figure 4.135).

While the volume of blue shark landings has remained rather stable over the period, the value has almost tripled; from EUR 31 million in 2014 to EUR 89 million in 2017.

Landings, in weight and value, of yellowfin and skipjack tuna increased substantially in 2016, falling back to normal levels in 2017; the main cause for the sharp decline in volume in 2017 (Figure 4.136).

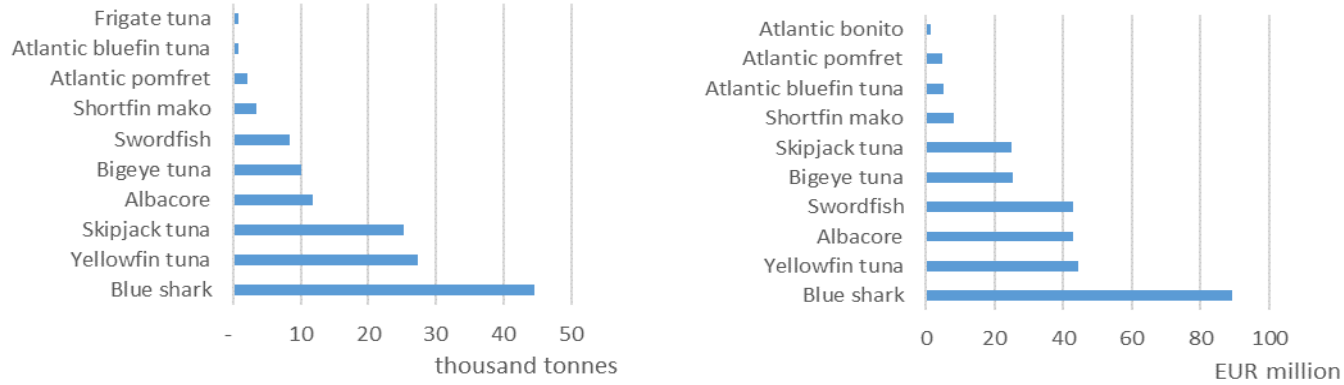


Figure 4.135 Landings of the top ten species for MS fleets with high dependency on ICCAT activity, 2017

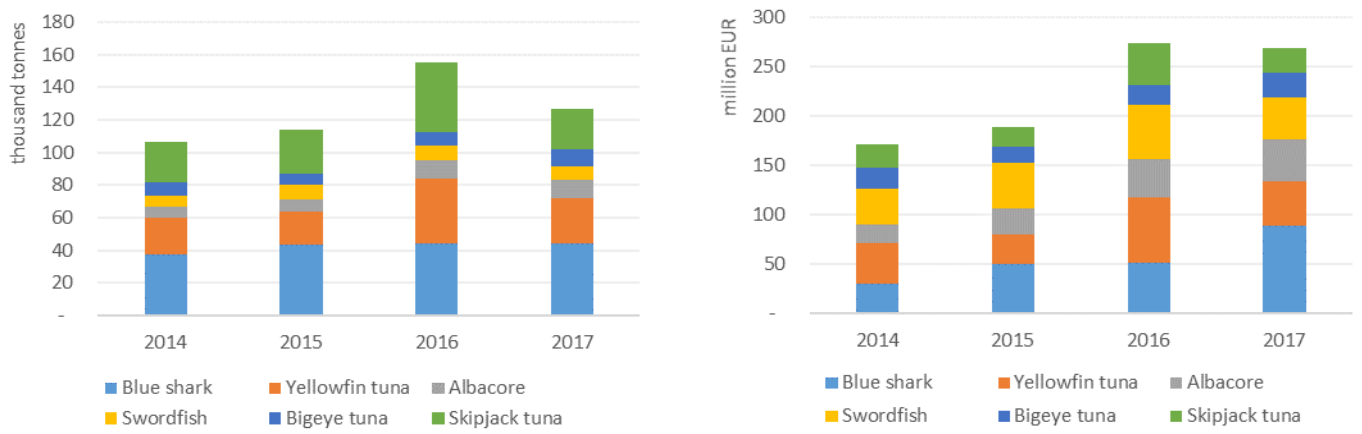


Figure 4.136 Trends on landings for the top ten species for MS fleets with high dependency on ICCAT activity, 2014-2017

Employment and average wages

Employment figures increased in 2016 and 2017; in line with the increase in the number of vessels. The overall average wage for crew on the fleets covered was estimated at EUR 28 000 per FTE or EUR 28 800 per employee in 2017, a slight decrease on 2016 but improvement on 2014-2015 (Figure 4.137).

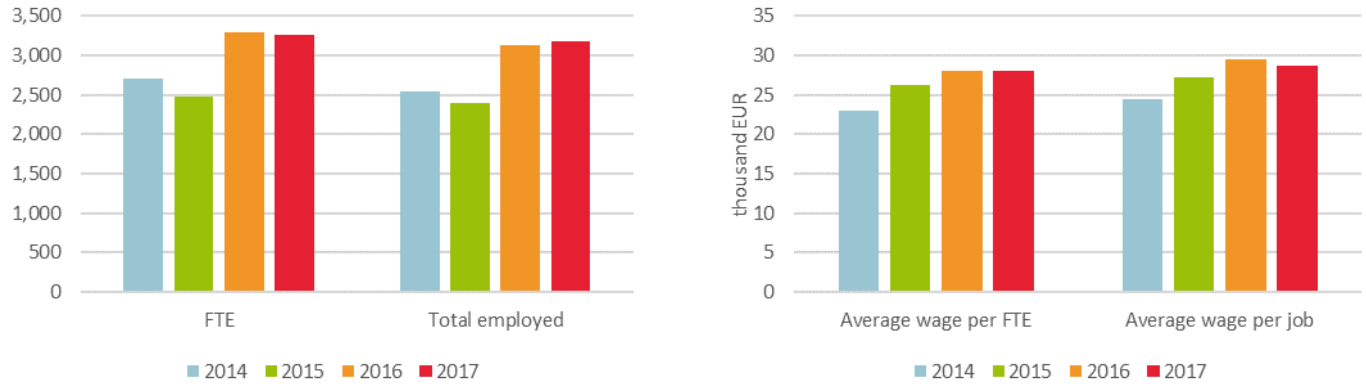


Figure 4.137 Trends on employment and average wage for MS fleets with high dependency on ICCAT activity, 2014-2017

Labour productivity

The overall labour productivity, seen as GVA per FTE and GVA per employed has steadily increased over the period albeit a slight drop in 2017 compared to 2016 (Figure 4.138).

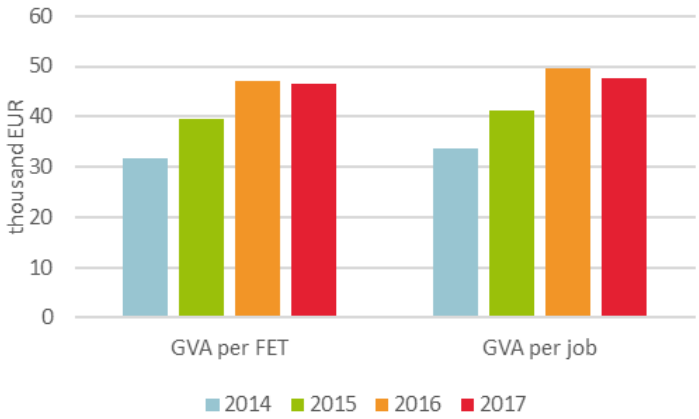


Figure 4.138 Trends on labour productivity for MS fleets with high dependency on ICCAT activity, 2014-2017

Economic performance

The revenue (income from landings and other income) generated by the EU 'ICCAT' fleet in 2017 was estimated at almost EUR 283 million, a decrease of 6.5% compared to 2016 but an increase of 40% compared to 2014 (Figure 4.139).

GVA produced by the fleets covered was estimated at over EUR 151.5 million and compared to 2016, decreased by 2%. After accounting for operating costs, the fleets operating in the region made EUR 60.2 million in gross profit, a 4% decline from the record high profits (EUR 62 million) in 2016 (Figure 0.6).

In relative terms, the combined fleet produced a GVA to revenue of 54%, gross profit margin of 21% and a net profit margin of 16% (Figure 4.139).

Overall, the MS fleets analysed generated gross profits in 2017. Only the Spanish hook and line 24-40m segment based in the Canary Islands suffered gross losses.

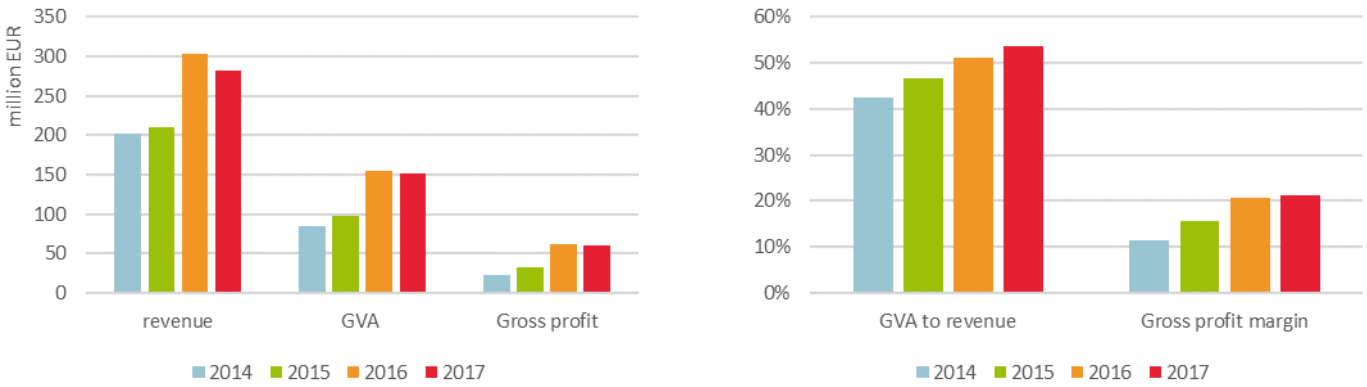


Figure 4.139 Trends on revenue, profits and margins for MS fleets with high dependency on ICCAT activity, 2014-2017

Main drivers affecting fleet performance in the region

- The better economic performance (profit margin) reported for hook and line and (to a lesser extent) surface longliners over purse seiners can be partially explained by the higher fuel efficiency of these vessels resulting in lower average fuel consumed per day at sea, and, the average price paid for much of their catch, in particular swordfish and blue shark.
- Tropical tuna stocks (yellowfin, skipjack and bigeye), albacore, swordfish and blue shark are the main fisheries in the area, in terms of both volume and value of landings. For some of these species, particularly swordfish and blue shark, the average market price remains high.
- Both low fuel costs and high average prices (for key stocks) remained relatively stable in 2017 and this has contributed positively to the economic performance of this fleet generally and surface longliners and purse seiners in particular.
- In 2016 ICCAT adopted Recommendation 16/01 establishing management measures for tropical tuna including catch and effort limits and technical measures for tropical tuna fisheries, which affects both EU purse seiners and longliners. There were some proposals for revising this recommendation in the Annual Meeting held in September 2018 but no agreement was reached. In view of this, the recommendations remains in force and an assessment of effectiveness and levels of compliance with this recommendation (by all ICCAT CPC fleets) will take place in the coming years. In 2019 it will be important to get reliable data on the impact of the various technical conservation measures applied such as the moratorium (seasonal closed area) and the limit on the number of FADs in the Gulf of Guinea.
- A full assessment of Atlantic bigeye tuna stock was conducted in 2018 with worrying results in terms of biomass. Now efforts are being made to gather and collect missing datasets particularly from non-European longliners and purse seiners. However, the lack of a comprehensive and periodic control system to monitor quota uptake and the unilateral increase of capacity by many CPCs could hamper the process.

Outlook for 2018 and beyond

- To facilitate appropriate analysis, it is recommended that MS provide landings data (as required by ICCAT) and disaggregated catch data broken down by fishing area.
- Better knowledge of the cost structure and improved information on landings (value and weight) for comparable fleets across Member States is required if the AER is to gain a deeper understanding of the fleet dynamics and their economic drivers.
- Due to the relatively poor situation of the Atlantic bigeye stock, it is possible that the overall TAC for tropical tuna might be reduced and ICCAT may adopt more stringent management measures for all three tropical species (skipjack, yellowfin and bigeye); this might include temporary closures or limits in the number of FAD deployed. Such measures could have economic consequences in the performance of the EU fleet in the medium-term. They might also bring about unintended shifts in fishing pattern and, potentially, displace fishing effort towards the Indian and the Pacific Oceans.
- As was the case for bluefin and albacore, developing a Management Strategy Evaluation (MSE) for the tropical tuna species (yellowfin, skipjack and bigeye) is key to setting clear objectives and improving the effectiveness of management measures currently in place. There are also significant information gaps for some parts of these fisheries (in particular longliners, pole and lines, etc.) and specific allocation keys cannot be set for yellowfin or skipjack for this reason.
- The adoption of further management measures for FADs will also, potentially, have an impact on the way FAD dependant fisheries are conducted. Such management measures on FADs might include inter alia a limit on the number of deployed FADs, the use of non-entangling and further research on biodegradable ones, monitoring and tracking systems for lost or abandoned FADs, etc. Such measures can be expected to impact the economic performance and profitability of the purse seiners and could, once again, bring about changes to fishing patterns and/or displacement of effort.
- The introduction of a Harvest Control Rule for Northern Atlantic Albacore Tuna in 2018, together with a 20% TAC increase has given increased certainty to EU operators, particularly in Spain and France, around future management of this stock using a set of clear rules. This could bring about increased landings by Spanish and French purse seiners and longliners from 2018 onwards.
- Further scientific work is needed to get more reliable and robust data for both the North and South Atlantic swordfish stocks. While total catches are below the EU TAC, at least one EU MS (Spain) is near full exploitation of its individual quota. In addition, the EU fleet may retain, as by-catch, up to 15% of individuals below the minimum landing size (by number) within its declared catches thereby reducing the degree of discarding.
- The adoption, in 2017, of measures designed to reduce fishing pressure and rebuild the northern stock of shortfin mako stock, including enhanced reporting of catch, release of alive individuals and survivability and catch composition, will likely have a short term economic impact. This could see lower landings in 2018 and beyond.
- An amendment to the ICCAT Convention, extending its scope to sharks, has been discussed in the last two Annual meetings in 2016, 2017 and 2018 with the decision postponed. If adopted in 2019, sharks will become a directed, regulated fishery subject to management measures. This will likely result in better accountability and reporting of catch and landings data along with improved control systems for these species.

Trends by Member State and fleet segments

Fleet capacity and fishing activity

Overall, the fishery is dominated by Spain. In terms of fishing capacity by MS, Spain deployed the most, with around 30 800 GT followed by France with 19 000 GT and then Portugal with around 12 000 GT. Spain also led in engine power, with 56 160 kW, followed by France with 31 300 kW, and Portugal with 25 540 kW. Spain was also the top employer, deployed to most fishing effort and landed the most catch (Figure 4.140).

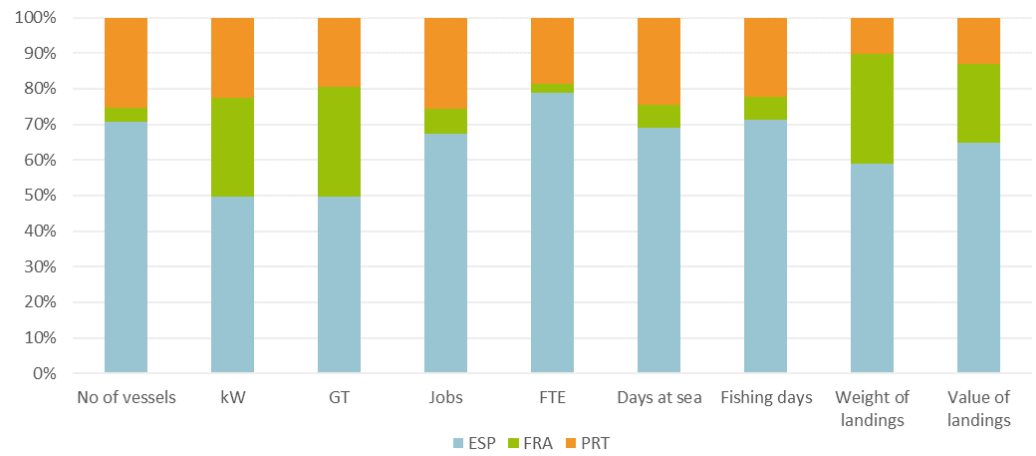


Figure 4.140 Share of capacity, employment, fishing activity and landings for fleets with high dependency on ICCAT activity, 2017
Source: Estimated from MS data submissions under the DCF 2018 Fleet Economic (MARE/A3/AC(2018))
Note: French data on employment and effort may be incomplete

By fleet segment, the 22 French purse seiners over 40m led by far, with a total tonnage of 11346 GT (43% of the total) and total vessel power of 75 700 kW (40% of the total). They were followed by the Spanish surface longliners VL2440 and VL40XX with a combined total vessel tonnage of 23 557 GT (22%) and total vessel power of 32 518 kW (17%). The Spanish purse seiners VL2440m came in third place with 11 346 GT (11%) and 28 489.5 kW (15%).

In terms of landings by weight, the Spanish surface longliners landed around one third of the total (selected fleets only) amounting to 49 381 tonnes. They were closely followed by the French purse seiners, with approximately 31% of total landings and 46 700 tonnes. The remaining volume was assigned to the Spanish purse seine between 24 and 40m in NAO, with 20 355 tonnes (13%), and the Spanish and Portuguese hook and line fleets, in particular the Spanish segment between 24 and 40m in OFR, with near 7% of the total landings and over 10 000 tonnes.

Looking at landings by value, the Spanish surface longliners landed 41% of the total (selected fleets only) amounting to more than EUR 120 million. The French purse seiners over 40 m recorded EUR 66 million (22% of total); while the Spanish Purse seiners 24-40m reported EUR 38 million of value (13%). The Portuguese hook and line fleets 24-40 m combined (included Azores and Madeira) accounted for 13% of total landings, with a value of over EUR 39 million. The Spanish hook and line vessels 24-40 m combined (including Canaries) made up 11% of the value for a total of more than EUR 33 million

Landings and top species

Landings of ICCAT species in the region by the fleets covered amounted to over 151 500 tonnes with a value of almost EUR 298 million. The Spanish fleet dominated with over 59% of the landings in weight and 65% of the value. The French fleet accounted for 31% of the landings in weight and 22% in value. Portuguese vessels took 10% of the landed weight and 13% of the value.

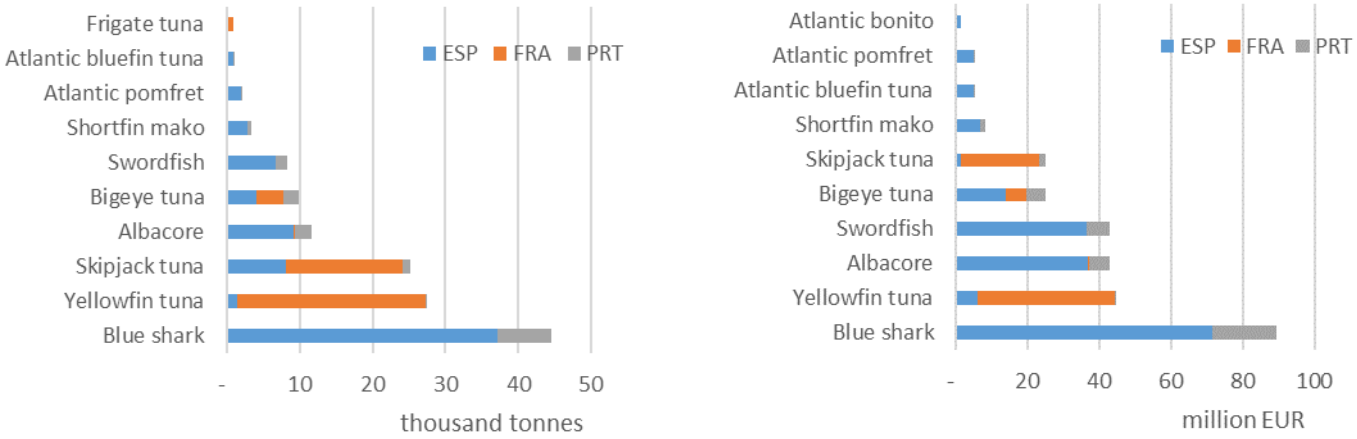


Figure 4.141 Top ten species, in weight and value, for MS fleets with high dependency on ICCAT activity 2017
Source: Estimated from MS data submissions under the DCF 2018 Fleet Economic (MARE/A3/AC(2018))

The most important species landed in terms of weight for those MS fleets operating in the region were blue shark (44 491 tonnes); yellowfin (27 317 tonnes); skipjack (25 209 tonnes); albacore (11 712 tonnes); bigeye tuna (9 959 tonnes) and swordfish (8 321 tonnes) (Figure 4.141).

In terms of landed value, the most important species were again blue shark (EUR 89.3 million); yellowfin (EUR 44.4 million); followed by albacore (EUR 42.9 million); swordfish (EUR 42.8 million); bigeye tuna (EUR 25.1 million) and skipjack (EUR 24.9 million).

Spain landed the bulk of blue shark (80% of the total weight and 84% of the value), albacore (86% weight and 79% in value), swordfish (85% in weight and 80% in value) and bigeye (55% in weight and 41% in value) catches.

France led in landings of the tropical species yellowfin tuna (38 132 tonnes) and skipjack (22 140 tonnes), representing 86% and 89% of total EU landings in weight and 94% and 64% in value, respectively. Portuguese landings consisted mainly of blue shark, swordfish, albacore and bigeye tuna (Tables 4.42 and 4.43).

Table 4.41 Landings by species in weight (kg) for the MS fleets with high dependency on ICCAT activity

Species / country		ESP	FRA	PRT	Total (kg)
Blue shark	BSH	37,197,676		7,294,077	44,491,753
Yellowfin tuna	YFT	1,443,337	25,765,143	108,103	27,316,583
Skipjack tuna	SKJ	8,041,305	16,043,359	1,124,714	25,209,378
Albacore	ALB	9,257,014	98,865	2,355,962	11,711,841
Bigeye tuna	BET	4,127,252	3,665,934	2,166,210	9,959,396
Swordfish	SWO	6,661,385		1,659,215	8,320,600
Shortfin mako	SMA	2,804,324		587,758	3,392,082
Atlantic pomfret	POA	2,022,639		35,887	2,058,526
Atlantic bluefin tuna	BFT	822,922		8,672	831,594
Frigate tuna	FRI	48997.9	771558		820,556
Total top 10 ICCAT species		**72,426,852**	**46,344,859**	**15,340,598**	**134,112,309**

Source: DCF Data and EWG Experts

Table 4.42 Landings by species in value (Euro) for MS fleets with high dependency on ICCAT activity

Species / country		ESP	FRA	PRT	Total (EUR)
Blue shark	BSH	71,477,824		17,804,066	89,281,890
Yellowfin tuna	YFT	6,035,433	38,132,412	231,345	44,399,189
Albacore	ALB	36,691,984	248,151	5,960,768	42,900,903
Swordfish	SWO	36,499,884		6,332,340	42,832,224
Bigeye tuna	BET	13,889,423	5,682,198	5,523,105	25,094,726
Skipjack tuna	SKJ	1,155,975	22,139,835	1,581,508	24,877,318
Shortfin mako	SMA	6,616,981		1,456,090	8,073,071
Atlantic bluefin tuna	BFT	4,961,808		69,195	5,031,003
Atlantic pomfret	POA	4,756,610		107,208	4,863,818
Atlantic bonito	BON	1,446,791		2	1,446,793
Total top 10 ICCAT species		**183,532,712**	**66,202,596**	**39,065,627**	**288,800,935**

Source: DCF Data and EWG Experts

Employment

An estimated 3 174 persons were employed by the fleets covered in 2017, corresponding to 3 260 FTE. Spain was the main employer with 2 569 FTE representing 79% of the total, followed by Portugal with 812 (19%) and France with 225 (3%).

The hook and line segment (Spanish and Portuguese vessels) had the greatest number of vessels (n=117), people employed in FTE (2 465) and days-at-sea (42 888 days), as shown in Table 1.5. The Spanish surface longliners combined employed the greatest number of crew, with over 936 fishers and around 1 120 FTE.

Wages and salaries

With personnel costs amounting to EUR 90.4 million and EUR 917 208 in unpaid labour, average wage per FTE was estimated at EUR 28 000 per FTE in 2017 (or EUR 28 770 per employed).

Crew on the French purse seiners were the highest paid, earning on average EUR 86 523, followed by the Spanish purse seiners (EUR 35 589) and Spanish longliners (EUR 25 481). Crew on the Portuguese hook and line vessels earned on average EUR 16 103 (Figure 4.142).

Labour productivity

Labour productively also generally improved in 2017 compared to 2014, with all MS fleets gaining more outputs from their labour inputs (Figure 4.142). The French fleet suffered a drop in 2015, as with most of the other performance indicators.

The French purse seiners achieved the highest GVA per FTE (EUR 396 100) and on average, each vessel generated EUR 1.5 million in gross profits in 2017.

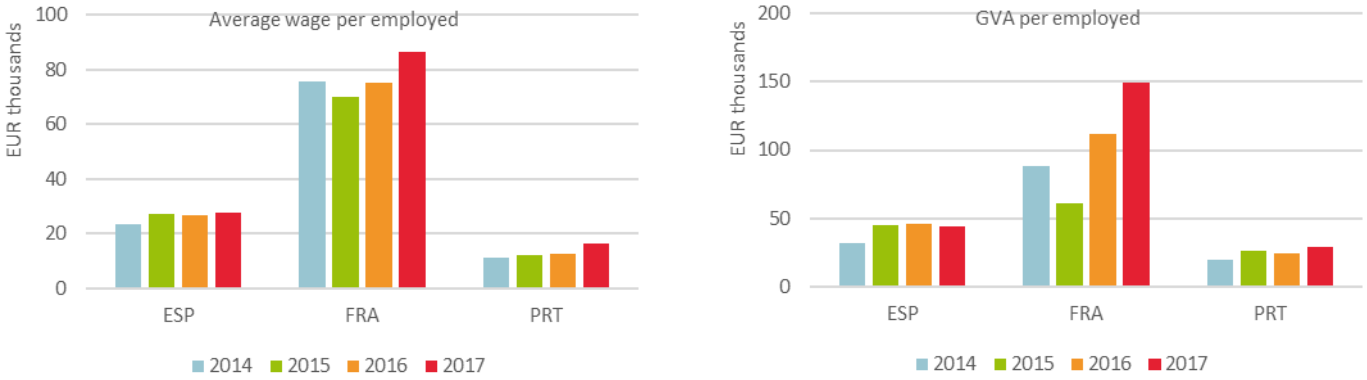


Figure 4.142 Trends on average wage and labour productivity for MS fleets with high dependency on ICCAT activity
Source: Estimated from MS data submissions under the DCF 2018 Fleet Economic (MARE/A3/AC(2018))

Economic performance

Overall, the Spanish fleets generated around EUR 175 million in revenue, EUR 94 million in GVA and EUR 35 million in gross profits and EUR 29 million in net profit in 2017. This represents 59% of the total gross profits.

The French fleet accounted for 31% of the landings in weight and 22% in value. They generated EUR 67 million in revenue, EUR 33.5 million in GVA and EUR 14 million in gross profit.

Portuguese vessels took 10% of the landed weight, 13% of the value and collectively generated almost EUR 40.9 million in revenue, EUR 23.8 million in GVA, and EUR 10.7 million in gross profits.

France has recovered from gross losses in 2015 and Portugal from net losses in 2014. Due to incomplete data, it is not possible to calculate net profit for the French fleet (Figure 4.143).

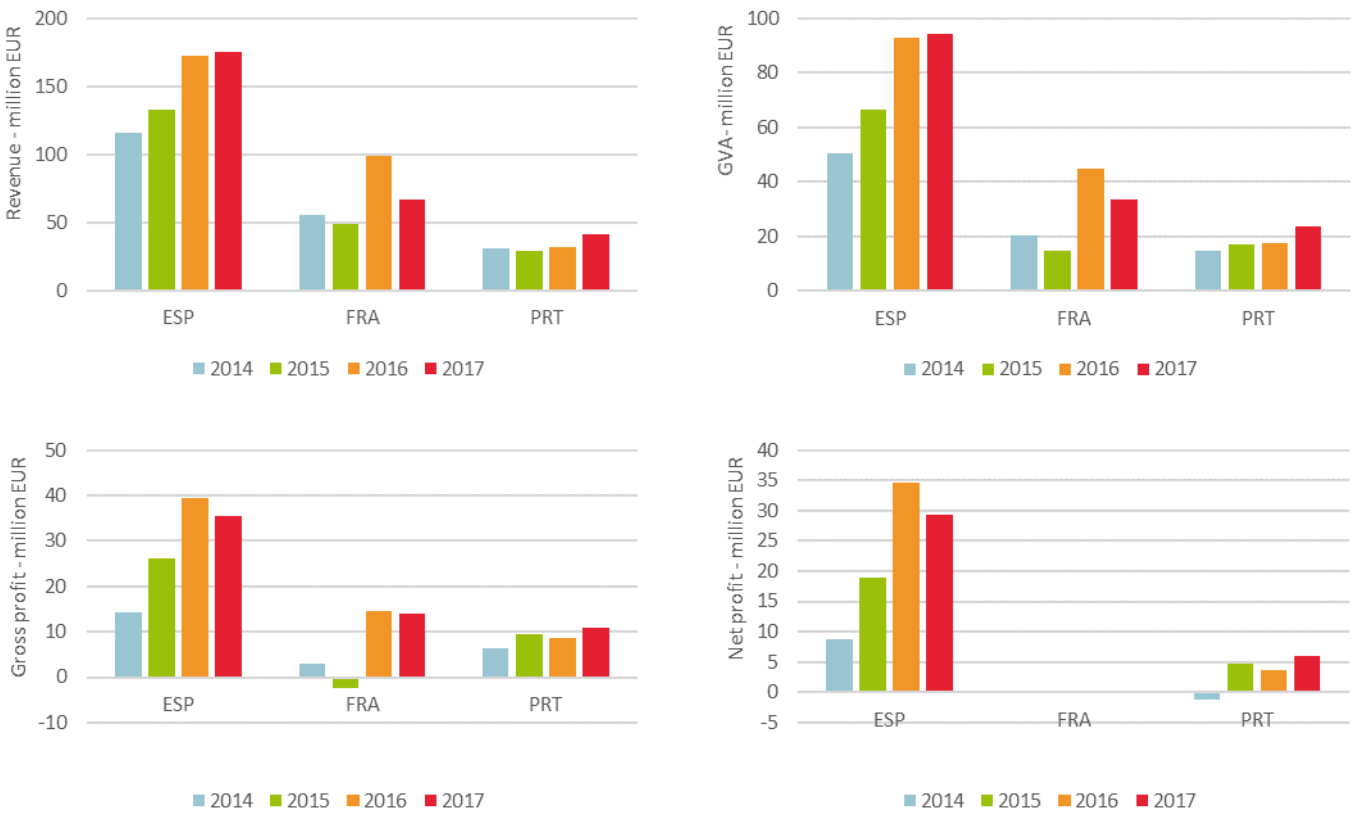


Figure 4.143 Trends on revenue and profit for MS fleets with high dependency on ICCAT activity
Source: Estimated from MS data submissions under the DCF 2018 Fleet Economic (MARE/A3/AC(2018))

In relative terms, Portugal achieved the highest GVA to revenue (58%) and the highest profit margin (26%), suggesting that this fleet is more efficient in transforming inputs into profits, for both crew and vessels owners. Spain achieved a GVA to revenue of 54% and 20% profit margin, while France, with its more fuel intensive purse seiner fleet, obtained a GVA to revenue of 50% and a 21% profit margin. (Figure 4.144).

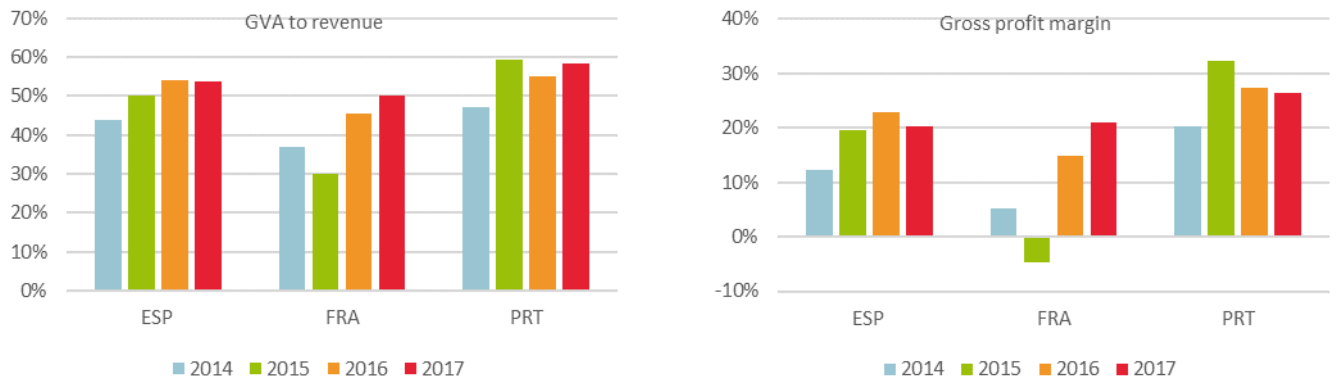


Figure 4.144 Trends on profit margins for MS fleets with high dependency on ICCAT activity
Source: Estimated from MS data submissions under the DCF 2018 Fleet Economic (MARE/A3/AC(2018))

In 2016 ICCAT adopted Recommendation 16/01 establishing management measures for tropical tuna including catch and effort limits and technical measures for tropical tuna fisheries, which affects both EU purse seiners and longliners.

Due to the relatively poor situation of the bigeye stock (an analytical assessment is scheduled for 2018), it is possible that the tropical tuna combined TAC might be reduced or ICCAT may adopt management measures for all three tropical species (skipjack, yellowfin and bigeye).

Such measures could have economic consequences in the medium-term. They might also bring about unintended shifts in fishing pattern and, potentially, displace fishing effort towards the Indian and the Pacific Oceans.

Main factors affecting the performance of the fleet

SFPAs, Regulation and fisheries management - Scope, Basic regulations, structure, publications and functioning

The International Commission for the Conservation of Atlantic Tunas is responsible for the conservation of tunas and tuna-like species in the Atlantic Ocean and adjacent seas. The organization was established at a Conference of Plenipotentiaries, which prepared and adopted the International Convention for the Conservation of Atlantic Tunas signed in Rio de Janeiro, Brazil, in 1966. After a ratification process, the Convention entered formally into force in 1969. The official languages of ICCAT are English, French and Spanish.

The Commission's work requires the collection and analysis of statistical information relative to current conditions and trends of the fishery resources in the Convention. About 30 species are covered by the Convention. Southern bluefin tuna (*Thunnus maccoyii*) is also covered, although currently the primary responsibility for assessing and managing this species rests with the Commission for the Conservation of Southern Bluefin Tuna (CCSBT). Other species, although not explicitly mentioned in the Convention, are also of interest to ICCAT that used to be caught incidentally by tuna fleets and that are not managed directly through other international arrangements. These currently include pelagic oceanic sharks such as shortfin mako (*Isurus oxyrinchus*) and blue shark (*Prionace glauca*). There is a process of amendment of ICCAT Convention to include within its scope of target species the commercial species of sharks.

ICCAT publications: ICCAT produces several periodic publications documenting the work of the Commission, including the SCRS scientific papers and assessments, as well as the basic data compiled for each species. All ICCAT publications can be found on the ICCAT web page: http://www.iccat.int Commission publications are typically available in English, French and Spanish.

Stock assessment reports are available in the three languages. ICCAT also produces reports of special research programs (e.g., the Yellowfin Year Program) and special meetings (e.g. ICCAT Symposium, Second World Meeting on Bigeye Tuna), containing meeting reports and peer-reviewed contribution papers.

Status of important stocks

Stock assessments are quantitative estimates of the status (abundance) of the fish stocks and of the intensity of fishing upon them. Assessments underpin the scientific advice for management that is provided by the Standing Committee on Research and Statistics to the Commission: They aim at evaluating the sustainability of current and proposed future harvest practices in light of the Commission's objective to maintain the populations at a level that permits their maximum sustainable catch. The species Executive Summaries and Detailed Reports of stock assessments prepared by the SCRS can be downloaded from the ICCAT website: www.iccat.int

Landing obligation

The Commission adopted in 18 November 2014 a Delegated Regulation (EU) 2015/98 establishing a number of derogations to the landing obligation as defined under art 15.1 of CFP Regulation for RFMOs such as ICCAT and NAFO. This was coherent with on the implementation of the Union's international obligations, as referred to in Article 15(2) of Basic CFP Regulation (EU) No 1380/2013, under the International Convention for the Conservation of Atlantic Tunas and the Convention on Future Multilateral Cooperation in the Northwest Atlantic Fisheries.

This legislative act was subsequently amended by the Commission Delegated Regulation (EU) 2018/191, of 30 November 2017, to also establish a specific derogation to the landing obligation for the Mediterranean stock of swordfish.

As a result, a number of specific derogations apply to the following stocks:

- Bigeye tuna (*Thunnus obesus*) in the Atlantic Ocean.
- Bluefin tuna (*Thunnus thynnus*) in the eastern Atlantic and the Mediterranean.
- Swordfish (*Xiphias gladius*) in the North Atlantic Ocean.
- Swordfish (*Xiphias gladius*) in the Mediterranean Sea.

Table 4.43 Key parameter estimates for MS fleets with high dependency on ICCAT activity, 2017

	No of vessels	kW	GT	Persons employed	FTE	Days at sea	Fishing days	Weight of landings (kg)	Value of landings (€)	Revenue (€)	Income from landings (€)	Personnel costs (€)	Unpaid labour (€)	Energy costs (€)	GVA (€)	GVA to revenue (%)	GVA per FTE (€)	Gross profit (€)	Gross profit margin (%)	Average gross profits per vessel (€)	Net profit (€)	Net profit margin (%)	Average wage per employed (€)	Average wage per FTE (€)
ESP	159	56,161	30,749	2,137	2,569	38,658	38,658	89,119,023	192,495,858	174,996,372	174,143,222	57,886,245	917,208	20,787,870	94,217,026	54%	36,672	35,413,574	20%	222,098	29,326,331	17%	27,519	22,888
FRA	9	31,301	19,024	225	85	3,566	3,566	46,699,158	65,975,817	67,069,478	67,069,478	19,428,424	-	8,271,514	33,494,125	50%	396,106	14,065,701	21%	1,546,089	-		86,523	229,763
PRT	57	25,541	12,017	812	608	13,754	12,117	15,698,867	39,080,666	40,880,135	40,614,491	13,082,996	-	6,596,146	23,837,207	58%	39,183	10,754,211	26%	187,789	5,987,428	15%	16,103	21,506
Total fleets ICCAT	**226**	**113,002**	**61,790**	**3,174**	**3,262**	**55,978**	**54,341**	**151,517,048**	**297,552,341**	**282,945,985**	**281,827,192**	**90,397,664**	**917,208**	**35,655,529**	**151,548,358**	54%	46,457	**60,233,486**	21%	**266,738**	**35,313,759**	16%	28,771	27,993

Table 4.44 Key parameter estimates for MS fleets with high dependency on ICCAT activity, 2017

		No of vessels	kW	GT	Persons employed	FTE	Days at sea	Fishing days	Weight of landings (kg)	Value of landings (€)	Revenue (€)	Income from landings (€)	Personnel costs (€)	Unpaid labour (€)	Energy costs (€)	GVA (€)	GVA to revenue (%)	GVA per FTE (€)	Gross profit (€)	Gross profit margin (%)	Average gross profits per vessel (€)	Net profit (€)	Net profit margin (%)	Average wage per employed (€)	Average wage per FTE (€)
ESP	Purse seiners	40	14,098	5,614	627	712	9,524	9,524	20,354,788	38,306,335	41,141,604	41,016,517	19,991,482	456,896	3,072,814	30,445,480	74	42,754	9,997,103	24	249,418	8,961,863	22%	32,589	28,715
	Longliners	71	24,550	17,761	936	1,120	21,197	21,197	49,381,378	121,075,568	95,990,415	95,801,783	23,850,315	36	14,721,097	40,022,978	42%	35,738	16,172,627	17%	226,597	12,184,481	13%	25,481	21,297
	Hooks	48	17,512	7,374	573	737	7,937	7,937	19,382,857	33,113,954	37,864,352	37,324,923	14,044,449	460,276	2,993,959	23,748,569	63%	32,215	9,243,844	24%	192,595	8,179,987	22%	25,299	19,676
PRT	Hooks	57	25,541	12,017	812	608	13,754	12,117	15,698,867	39,080,666	40,880,135	40,614,491	13,082,996	-	6,596,146	23,837,207	58%	39,183	10,754,211	26%	187,789	5,987,428	15%	16,103	21,506
FR	Purse seiners	9	31,301	19,024	225	85	3,566	3,566	46,699,158	65,975,817	67,069,478	67,069,478	19,428,424	-	8,271,514	33,494,125	50	396,106	14,065,701	21	1,546,089	-	-	86,523	229,763
Total fleets ICCAT		**226**	**113,002**	**61,790**	**3,174**	**3,262**	**55,978**	**54,341**	**151,517,048**	**297,552,341**	**282,945,985**	**281,827,192**	**90,397,664**	**917,208**	**35,655,529**	**151,548,358**	**54%**	**46,457**	**60,233,486**	**21%**	**266,738**	**35,313,759**	**16%**	28,771	27,993

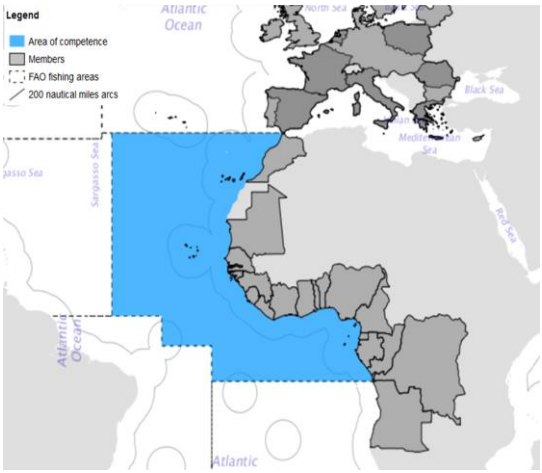
Table 4.45 Key parameter estimates for MS fleets with high dependency on ICCAT activity, 2017

MS	Fleet segment	Share of value from ICCAT	No of vessels	kW	GT	Persons employed	FTE	Days at sea	Fishing days	Weight of landings (kg)	Value of landings (€)	Revenue (€)	Income from landings (€)	Personnel costs (€)	Unpaid labour (€)	Energy costs (€)	GVA (€)	GVA to revenue (%)	Average GVA per vessel (€)	GVA per FTE (€)	Gross profit (€)	Gross profit margin (%)	Net profit (€)	Net profit margin (%)	Average wage per employed (€)	Average wage per FTE (€)
ESP	ESP NAO PS 2440 NGI	49%	40	14,098	5,614	627	712	9,524	9,524	20,354,788	38,306,335	41,141,604	41,016,517	19,991,482	456,896	3,072,814	30,445,480	74.0	759,584	42,754	9,997,103	24.3	8,961,863	21.8	32,589	28,715
	ESP NAO HOK2440 LLD*	100%	31	8,860	6,351	349	415	6,647	6,647	19,034,981	50,861,252	34,787,214	34,777,172	10,842,143	-	4,857,699	17,700,436	50.9	580,213	42,659	6,858,293	19.7	5,332,530	15.3	31,085	26,130
	ESP OFR HOK2440 LLD*	65%	41	15,690	11,410	587	705	14,550	14,550	30,346,396	70,214,316	61,203,201	61,024,611	13,008,171	36	9,863,399	22,322,542	36.5	546,252	31,665	9,314,335	15.2	6,851,951	11.2	22,150	18,452
	ESP NAO HOK2440 NGI	75%	19	6,750	2,616	202	287	3,198	3,198	5,853,248	15,135,389	14,452,623	14,452,623	6,123,973	460,218	1,112,997	11,478,541	79.4	601,844	40,009	4,894,350	33.9	4,856,191	33.6	32,568	22,950
	ESP NAO HOK2440 IC *	93%	21	5,951	2,171	245	232	2,484	2,484	3,444,095	6,976,263	9,968,501	9,968,501	5,549,037	58	923,071	5,047,245	50.6	242,982	21,780	- 501,849	- 5.0	- 1,094,237	- 11.0	22,604	23,946
	ESP OFR HOK2440 NGI*	67%	8	4,811	2,587	126	219	2,255	2,255	10,085,514	11,002,302	13,443,228	12,903,799	2,371,439	-	957,891	7,222,782	53.7	886,014	33,049	4,851,343	36.1	4,418,032	32.9	18,869	10,851
FRA	FRA OFR PS 40XX IWE	41%	9	31,301	19,024	225	85	3,566	3,566	46,699,158	65,975,817	67,069,478	67,069,478	19,428,424	-	8,271,514	33,494,125	49.9	3,681,644	396,106	14,065,701	21.0	-	-	86,523	229,763
PRT	PRT NAO HOK2440 NGI	97%	17	6,078	3,101	186	172	4,023	3,660	2,931,635	11,609,676	11,850,008	11,801,748	4,303,503	-	1,843,300	7,026,766	59.3	416,233	40,901	2,723,264	23.0	1,487,376	12.6	23,175	25,050
	PRT NAO HOK2440 P2	59%	4	1,682	528	53	47	1,021	877	845,838	2,051,010	2,980,355	2,963,721	1,188,316	-	268,312	2,347,192	78.8	653,086	50,238	1,158,877	38.9	961,782	32.3	22,544	25,434
	PRT NAO HOK2440 P3 *	86%	25	9,617	3,442	400	235	4,144	3,173	5,001,244	11,961,250	12,278,621	12,219,078	5,514,632	-	1,615,342	8,427,485	68.6	342,675	35,936	2,912,853	23.7	1,152,034	9.4	13,799	23,515
	PRT OFR HOK2440 IWE*	69%	8	4,663	2,453	113	104	3,090	2,949	3,968,050	8,543,360	8,707,886	8,603,788	1,442,006	-	1,728,362	3,369,378	38.7	397,271	32,430	1,927,372	22.1	856,547	9.8	12,752	13,879
	PRT OFR HOK40XX IWE*	61%	4	3,501	2,492	61	51	1,476	1,458	2,952,100	4,915,371	5,063,265	5,026,157	634,539	-	1,140,831	2,666,385	52.7	717,310	51,854	2,031,845	40.1	1,529,689	30.2	10,346	12,340
	Total fleets ICCAT		**226**	**113,002**	**61,790**	**3,174**	**3,262**	**55,978**	**54,341**	**151,517,048**	**297,552,341**	**282,945,985**	**281,827,192**	**90,397,664**	**917,208**	**35,655,529**	**151,548,358**	**54%**	**671,117**	**46,457**	**60,233,486**	**21%**	**35,313,759**	**16%**	**28,771**	**27,993**

CECAF - Fishery Committee for the Eastern Central Atlantic

Area of Competence - High seas, National waters

CECAF is an advisory body and hence has no mandate on fisheries management in its area of competence. Figure 4.145 shows the area of the Committee. The Committee covers all living marine resources within its area of competence.



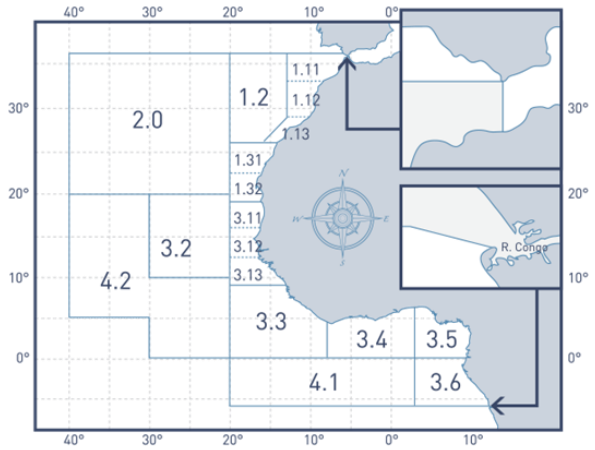


Figure 4.145 Map of the CECAF Area of Competence
Source: FAO http://www.fao.org/figis/geoserver/factsheets/rfbs.html

A large part of the activity in the CECAF region is related to the tuna fishery, which is covered under the ICCAT section. **This section aims to report on the activity of other fleets operating in the region targeting mainly small pelagic and demersal species**.

Most of the activity in this area falls under the framework of six tuna SFPAs in West Africa (Cape Verde, Ivory Coast, Gabon, Liberia, Sao Tomé e Principe, and Senegal) and three Multi-species SFPAs (Guinea-Bissau, Mauritania and Morocco) (see section of SFPAs below).

Tuna (and swordfish) agreements allow EU vessels to catch different species of large tuna and tuna-like species, as they migrate along the shores of Africa using purse seines, pole and line, and surface longlines.

The mixed or multi-species agreements offer fishing opportunities for demersal and pelagic species, tuna, cephalopods and shrimp, mainly involving trawlers, purse seiners and longliners.

Due to data limitations, it was not possible to assess fleet activity by SFPA individually, nor undertake an economic performance analysis of these fleets.

Hence, this analysis set out to identify the main EU fleet segments with activity in the region targeting non tuna and tuna-like species, providing a baseline for future developments. **Due to time constraints, however, the EWG was unable to produce an in-depth assessment of these fleets.**

Short description by the MS fleet segments active in the CECAF CA (FAO 34) in 2017

Table 4.47 lists the main fleet segments operating in the CECAF area in 2017 targeting species other than tuna and tuna-like species. A short description follows.

Note: due to spatial data limitations it is not possible to accurately determine the dependency of these fleets on activity in the CECAF regulatory area, i.e., some activity may be in the Canaries and Madeira (as well as a small part of the Azores) EEZs, which are located in FAO 34.

Table 4.46 Landings by MS fleet segments operating in CECAF area, 2017

Member State	Fleet Segment	Share of value (%)	Number of vessels	Live weight of landings	Value of landings
POL	POL DFR TM40XX	100	1	12 500 000	10 000 000
LAV	LAV DFR TM40XX NEU	100	4	49 592 380	17 850 517
ITA	ITA DFR DTS40XX WE	100	7	1 382 667	8 745 413
ESP	ESP NAO HOK2440 IC*	100	22	8 557 693	7 513 509
DEU	DEU DFR TM40XX	100	1	25 000 000	9 116 613
ESP	ESP DFR HOK2440 NGI*	86	12	11 429 273	14 127 388
ESP	ESP DFR DTS2440 NGI	83	41	21 348 030	74 276 949
PRT	PRT NAO HOK2440 P2	59	6	845 838	2 051 010
LTU	LTU DFR TM 40XX NEU*	56	6	43 152 588	29 961 762
PRT	PRT NAO HOK2440 P3*	56	28	8 347 971	7 812 394
PRT	PRT DFR HOK2440 WE*	39	12	1 911 173	4 780 053
FRA	FRA DFR PS 40XX WE	36	22	41 596 511	58 374 806
ESP	ESP DFR HOK2440 LLD*	33	62	14 870 381	35 508 065
ESP	ESP NAO HOK2440 LLD*	18	30	8 515 003	9 014 831
ESP	ESP DFR PS 40XX NGI	18	26	54 004 506	81 798 402
ESP	ESP DFR DTS40XX NGI	10	33	13 608 193	19 746 786
PRT	PRT NAO HOK2440 NGI	5,1	17	156 623	613 455
NLD	NLD NAO TM 40XX NGI*	2,7	8	9 002 746	8 097 402
ESP	ESP NAO PS 2440 NGI	1,6	81	481 362	1 236 836
ESP	ESP NAO DTS2440 NGI	0,2	108	84 412	252 765
ESP	ESP DFR HOK40XX LLD*	0,2	25	26993	83694
TOTAL			**552**	**811 414 343**	**387 346 037**

Germany

The German fleet, composed of one vessel TM VL40XX operating mainly in 34.1.3 (Coastal Sahara), targets mainly European pilchard (82% in weight and 86% in value) (Figure 4.146).

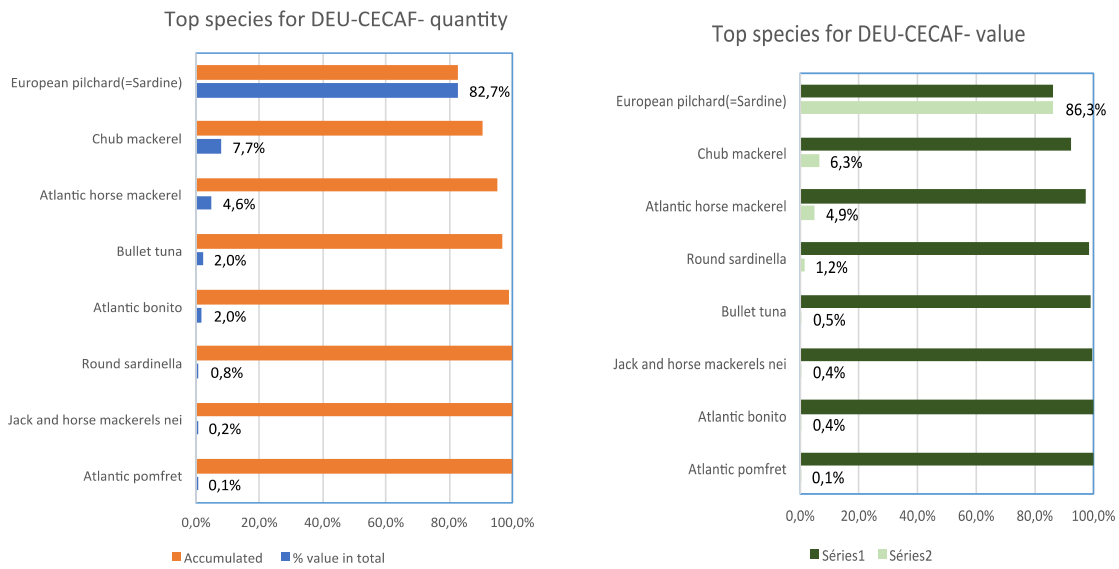


Figure 4.146 Top landed species in term of weight by the German fleet operating in CECAF, 2017

Latvia

Overall, the Latvian fleet has four active distant-water vessels; one vessel operated predominately in the NEAFC area targeting beaked redfish. Three vessels operated in the CECAF in 2017.

In 2017 the total weight for the Atlantic catches was 50.2 thousand tonnes of fish with an estimated value of EUR 18.7 million and reported income from landing EUR 11.5 million. The main landing ports for these vessels were Hafnarfjordur, Reykjavik (NEAFC), Dakhla and Nouadhibou (CECAF).

Landings from the CECAF area amounted to around 49 500 tonnes in 2017. The Latvian CECAF fleet targets small pelagic species, mainly Atlantic horse mackerel, Atlantic mackerel, Madeiran sardinella and sardine (Figure 4.147).

The fleet segment was profitable but due to confidentiality reasons, economic data cannot be reported.

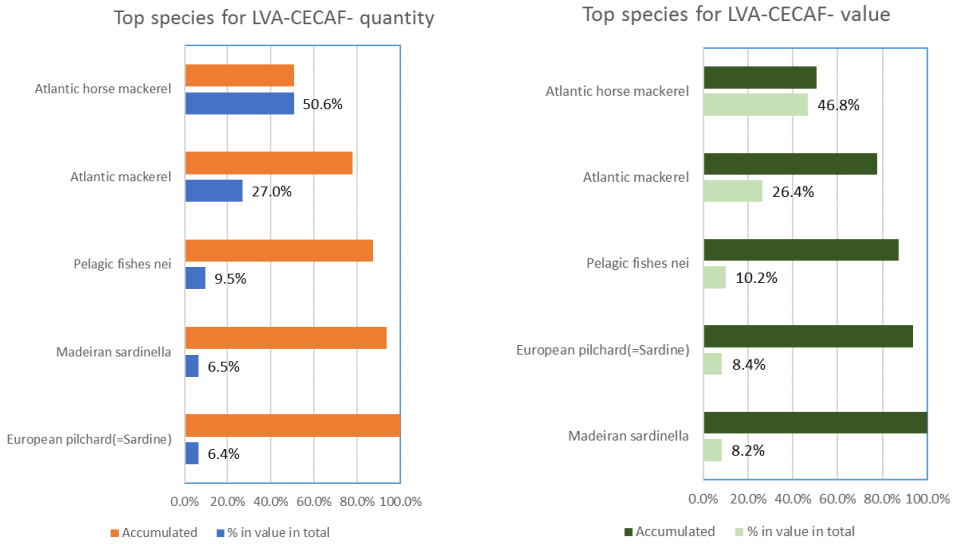


Figure 4.147 Top landed species in term of weight by the Latvian fleet operating in CECAF, 2017

Lithuania

In 2017, the national fleet segment mainly operated in FAO areas 27, 34 and 47. One vessel operated in Pacific Ocean (16 536 tonnes landed in 2017). The Atlantic fleet consisted of six vessels operating predominantly in CECAF (FAO 34) with some activity in NAFO and NEAFC: two vessels operating in CECAF area (43 152 tonnes landed in 2017) and three vessels in North East Atlantic (10 121 tonnes landed in 2017). Overall, performance of the Lithuanian high sea fleet deteriorated in 2017, with revenues declining almost 23% to EUR 52.1 million. In terms of landings from the CEACF area, the fleet targeted mainly small pelagic species, such as Atlantic horse mackerel, Chilean jack mackerel and chub mackerel (Figure 4.148).

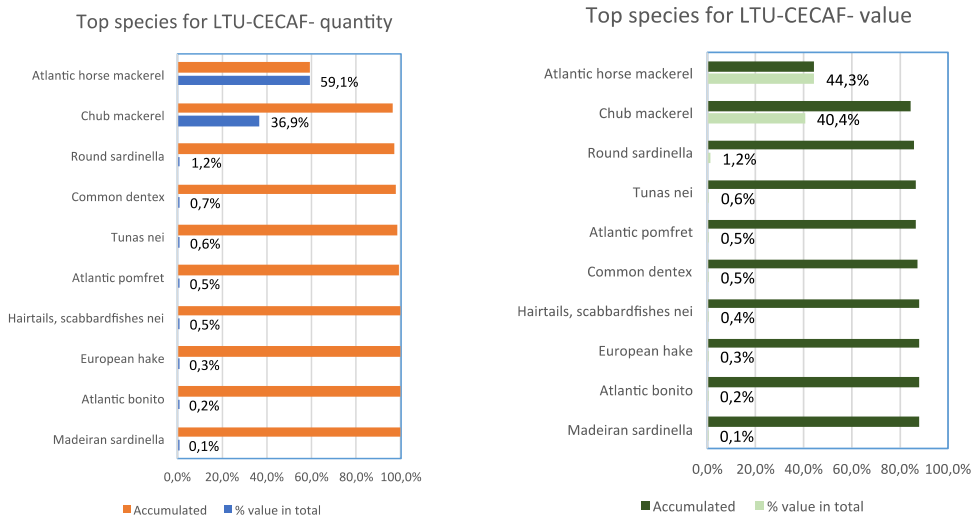


Figure 4.148 Top landed species in term of weight by the Lithuania fleet operating in CECAF, 2017

Portugal

Assessment of these fleets were not possible due to time constraints.

Poland

One Polish vessel operated in the CECAF area in 2017, belonging to the TM VL40XX segment, deployed for 172 sea days (150 fishing days). This vessel, according to FAO statistics for Poland reported 12 500 tonnes out of which 5 800 tonnes were horse mackerel and 5 700 tonnes Atlantic chub mackerel. Horse and Atlantic chub mackerel amounted for over 90% of total landings. An estimated value of catches (based on average prices) amounted to about EUR 10 million.

Spain

Spain has several fleet segments operating in FAO 34, mostly targeting tuna and tuna-like species (analysed in the ICCAT section). Around ten fleet segments also catch other demersal and pelagic species.

Further analyses on these fleets were not possible due to time constraint and the absence of an expert during the EWG meeting.

IOTC - Indian Ocean Tuna Commission

Area of competence

Under article II of the IOTC Agreement "The area of competence of the Commission (hereinafter referred to as the "Area") shall be the Indian Ocean (defined for the purpose of this Agreement as being FAO statistical areas 51 and 57 as shown on the map set out in Annex A to this Agreement) and adjacent seas, north of the Antarctic Convergence, insofar as it is necessary to cover such seas for the purpose of conserving and managing stocks that migrate into or out of the Indian Ocean."

Species under IOTC management

The species listed below in Table 4.48 are under the management mandate of IOTC. In addition, the Commission's Secretariat collates data on non-target, associated, and dependent species affected by tuna fishing operations, i.e. marine turtles, marine mammals, seabirds, sharks and fish species caught incidentally (bycatch).

Table 4.47 Species under IOTC management

FAO English name	FAO French name	Scientific name	FAO Code
Yellowfin tuna	Albacore	*Thunnus albacares*	YFT
Skipjack	Listao; Bonite à ventre rayé	*Katsuwonus pelamis*	SKJ
Bigeye tuna	Patudo; Thon obèse	*Thunnus obesus*	BET
Albacore tuna	Germon	*Thunnus alalunga*	ALB
Southern Bluefin tuna	Thon rouge du sud	*Thunnus maccoyii*	SBT
Longtail tuna	Thon mignon	*Thunnus tonggol*	LOT
Kawakawa	Thonine orientale	*Euthynnus affinis*	KAW
Frigate tuna	Auxide	*Auxis thazard*	FRI
Bullet tuna	Bonitou	*Auxis rochei*	BLT
Narrow barred Spanish Mackerel	Thazard rayé	*Scomberomorus commerson*	COM
Indo-Pacific king mackerel	Thazard ponctué	*Scomberomorus guttatus*	GUT
Blue Marlin	Makaire bleu	*Makaira nigricans*	BUM
Black Marlin	Makaire noir	*Makaira indica*	BLM
Striped Marlin	Marlin rayé	*Tetrapturus audax*	MLS
Indo-Pacific Sailfish	Voilier de l'Indo-Pacifique	*Istiophorus platypterus*	SFA
Swordfish	Espadon	*Xiphias gladius*	SWO

General overview of the EU fleet in IOTC Convention area

Five EU Member States were active in the IOTC Convention region in 2017: France, Italy, Portugal, Spain and the United Kingdom. Owing to data limitations stemming from confidentiality issues, it was not possible to produce a complete overview of the EU IOTC fleet.

Detailed analyses for the Italian and UK vessels operating in the region could not be performed as: (1) only one Italian vessel was active in 2017 and hence, only capacity and landings in weight are provided and (2) reduced activity and negligible catches reported for the UK fleet.

According to IOTC data, the EU industrial fleet active in 2016 (latest year available) consisted 49 longliners and 30 purse seiners (Table 4.49):

- Longliners: 22 from France (including 19 from Reunion), 7 from Portugal, 19 from Spain and 1 from the UK
- Purse seines: 12 from France and 18 from Spain

Table 4.48 EU industrial fleet operating in IOTC, 2016 (latest data available)

Fleet	Fishery type	Gear	LOA	no. vessels
FRANCE	Industrial Fishing	Longline targeting swordfish	0m-15m	3
FRANCE.REUNION			15m-24m	19
PORTUGAL			24m-40m	5
			40m-60m	2
SPAIN			24m-40m	15
			40m-60m	4
UK				1
FRANCE	Industrial Fishing	Purse seine	60m-80m	4
			80m-100m	8
SPAIN			40m-60m	2
			60m-80m	2
			80m-100m	7
			100m-120m	7

Source: IOTC https://iotc.org/

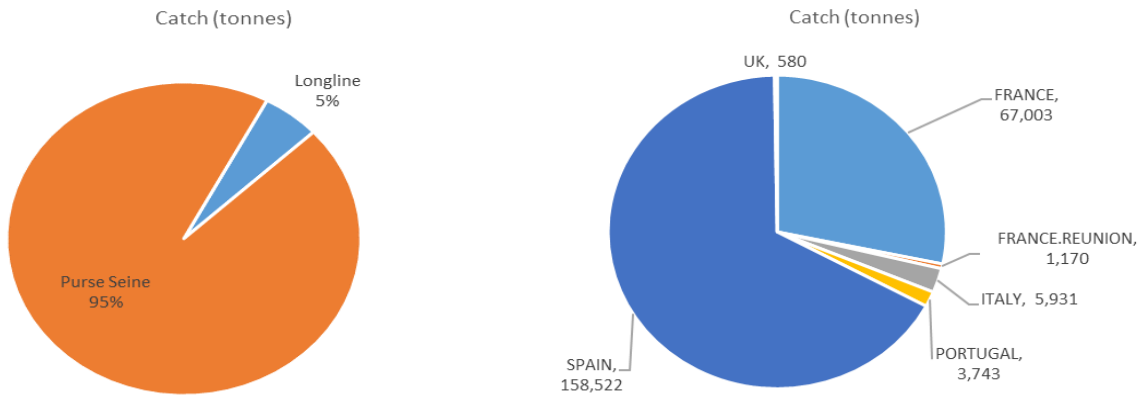


Figure 4.149 Catch composition (in tonnes) by main fishing gear type and MS fleet, 2017
Source: IOTC https://iotc.org/

MS fleets and segments operating in the IOTC region, 2016

Spanish purse seiners fleet over 40m LOA (ESP OFR PS VL40XX):

- IOTC: 151 509 tonnes in 2017 (+11% compared to 2016)
- The most important EU fleet in the IOTC area.
- In 2017, around 70% of this fleet's activity (in landed value) took place in the IOTC area.
- Landings were estimated at around EUR 332 million.
- Main target species consist of skipjack tuna, yellowfin tuna and bigeye.
- The fleet was profitable, with an estimated GVA of EUR 106 million, gross profit of EUR 48 million and net profit of EUR 5.8 million.

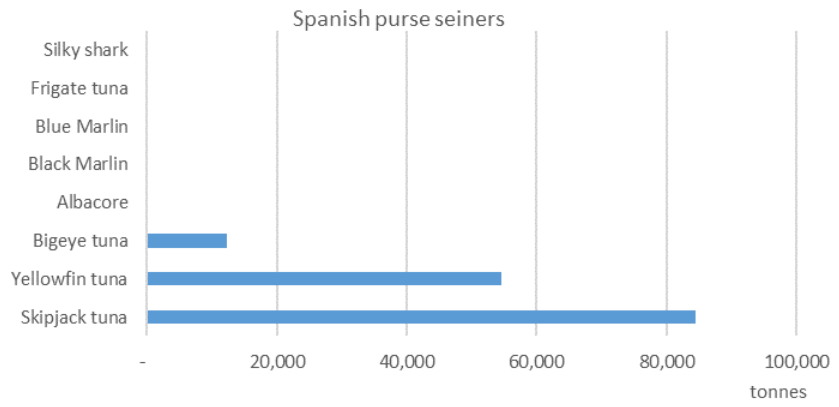


Figure 4.150 Catch (in tonnes) by Spanish purse seiners operating in IOTC, 2017
Source: IOTC https://iotc.org/

Spanish longliners:

- IOTC: 7 013 tonnes in 2017 (-15% compared to 2016)
- The fleet consists of vessels between 24 and 40 m LOA.
- Less than 10% of the activity of these vessels were in the IOTC area, hence, no economic performance estimates were made.
- Main target species consist of blue shark and swordfish

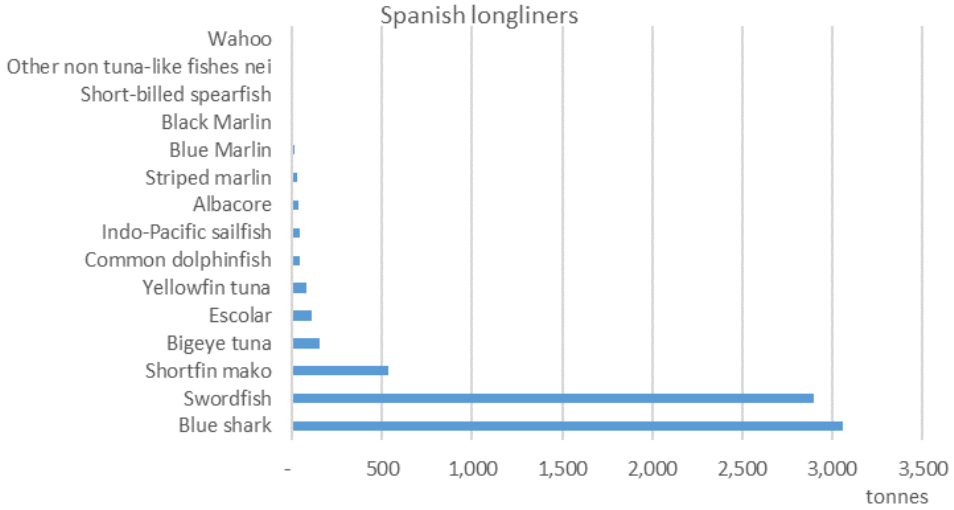


Figure 4.151 Catch (in tonnes) by Spanish purse seiners operating in IOTC, 2017
Source: IOTC https://iotc.org/

French industrial purse seiners

- IOTC: 66 946 tonnes (-2% compared to 2016)
- The second most important EU fleet operating in the region.
- Around 60% of the fleet's activity occurred in the IOTC area in 2017
- Landings were estimated at around EUR 93 million.
- Main target species consist of skipjack tuna, yellowfin tuna and bigeye.
- While revenue was estimated at EUR 95 million and the fleet generated a GVA of EUR 14 million, it suffered a gross loss of EUR 13 million.

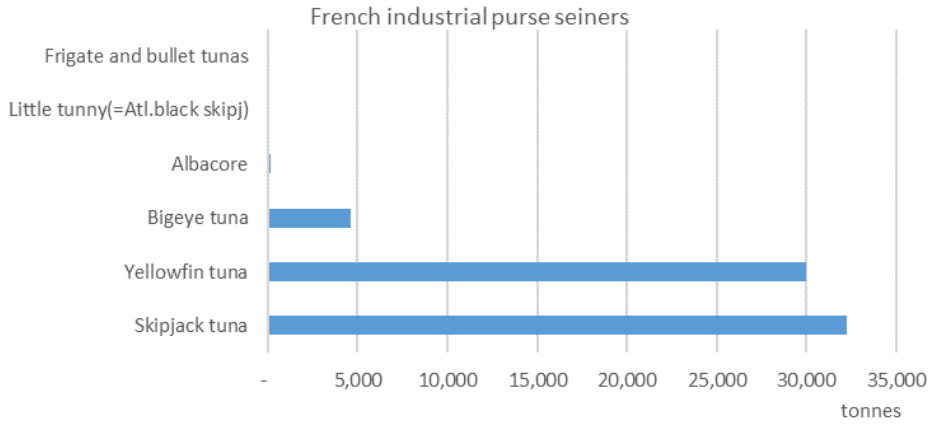


Figure 4.152 Catch (in tonnes) by French purse seiners operating in IOTC, 2017
Source: IOTC https://iotc.org/

French industrial longliners

- IOTC: 57 tonnes (-2% compared to 2016)
- Limited activity in the area

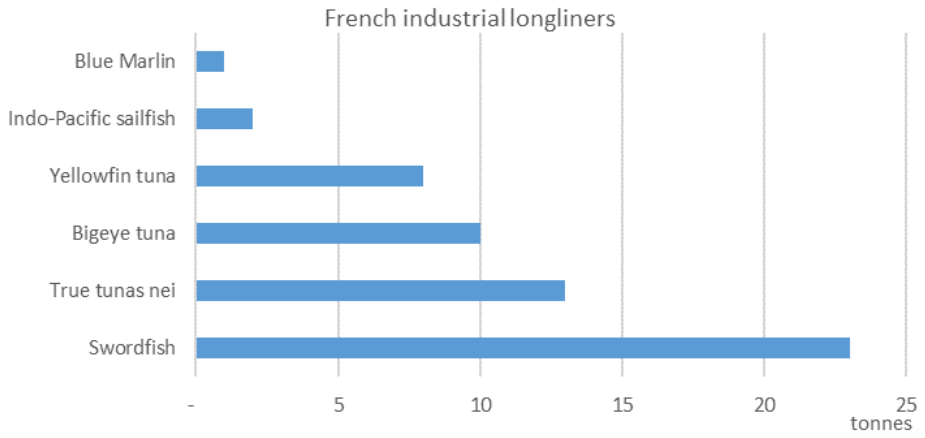


Figure 4.153 Catch (in tonnes) by French longliners operating in IOTC, 2017
Source: IOTC https://iotc.org/

French Reunion industrial longliners

- IOTC: 1 170 tonnes (-38% compared to 2016)
- Limited data available

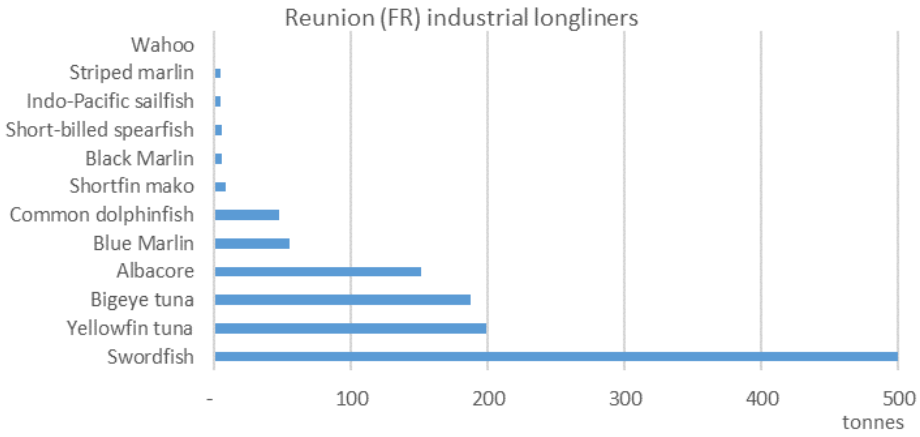


Figure 4.154 Catch (in tonnes) by French Reunion longliners operating in IOTC, 2017
Source: IOTC https://iotc.org/

Portuguese longliner fleet:

- IOTC: 3 743 tonnes in 2017 (+10% compared to 2016)
- Composed of the Madeira longliners between 24-40m LOA, mainland longliners between 24-40m and above 40m LOA fishing exclusively in international waters (PRT OFR HOK VL2440 and VL40XX).
- Activity of each of these fleet segments was less than 25% of the landed value.

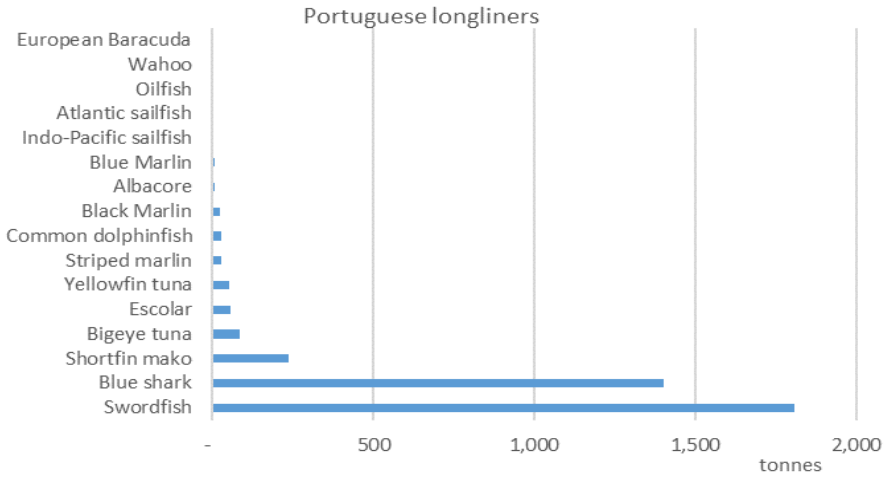


Figure 4.155 Catch (in tonnes) by Portuguese longliners operating in IOTC, 2017
Source: IOTC https://iotc.org/

Italian purse seiner:

- IOTC: 5 931 tonnes in 2017 (+57% compared to 2019)
- 1 vessel over 40m LOA (ITA PS VL40XX) fishing exclusively in IOTC
- Limited economic data available

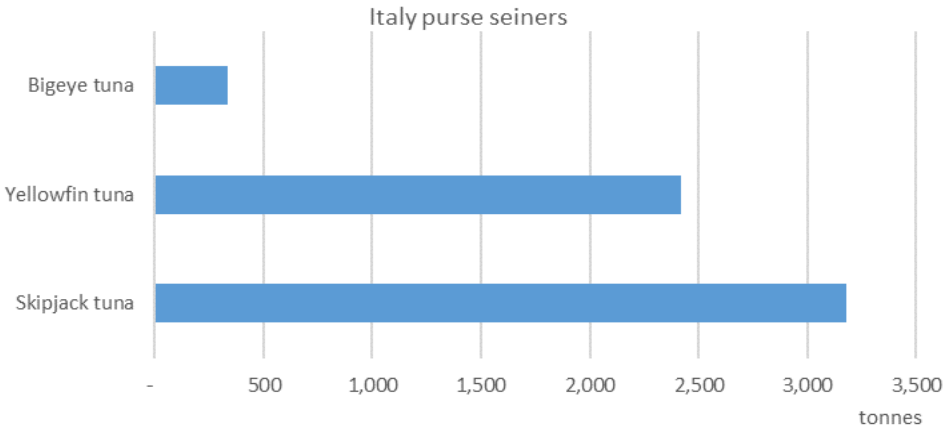


Figure 4.156 Catch (in tonnes) by the Italian purse seiner operating in IOTC, 2017
Source: IOTC https://iotc.org/

UK longliner: 1 longline vessel (40-60m) targeting swordfish

- IOTC: 580 tonnes in 2017 (+24% compared to 2016)
- Limited activity

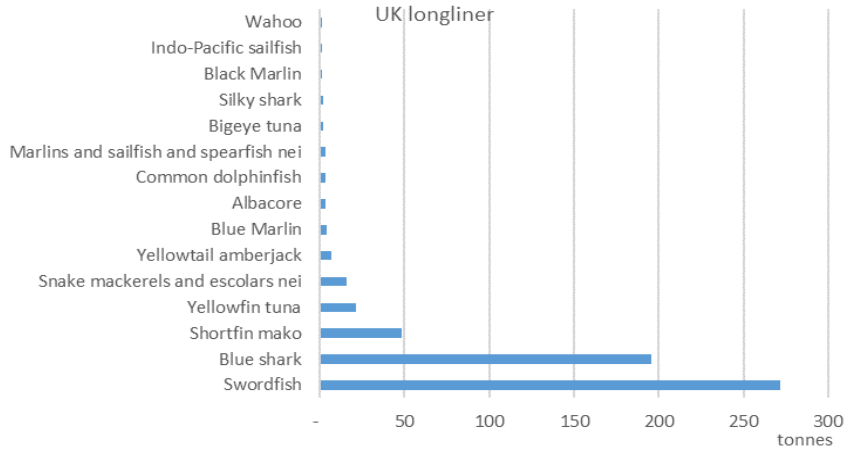


Figure 4.157 Catch (in tonnes) by the UK longliners operating in IOTC, 2017
Source: IOTC https://iotc.org/

Due to time constraints further analyses on these fleets were not possible during the EWG meeting.

Some notes on key trends and drivers of change

- Yellowfin and skipjack tuna are the two main fisheries in this area, in terms of volume and value of landings. The stability of fuel costs and market prices have contributed to the overall gross profit and positive economic performance of the EU fleet targeting these species, mainly purse seiners.
- In recent years, the IOTC adopted management measures including catch and effort limits for purse seine and other fisheries. For tropical tunas, the measures adopted include Harvest Control Rules for skipjack tuna (Resolution 16/02 On harvest control rules for skipjack tuna in the IOTC area of competence), catch limits for yellowfin tuna (Resolution 17/01 On an interim plan for rebuilding the Indian Ocean yellowfin tuna stock in the IOTC area of Competence), and measures to limit fishing effort for purse seine fisheries as a whole (plan to reduce support vessels in Resolution 17/01; Resolution 17/08 Procedures on a fish aggregating devices (FADs) management plan, including a limitation on the number of FADs, more detailed specifications of catch reporting from FAD sets, and the development of improved FAD designs to reduce the incidence of entanglement of non-target species). In addition, the IOTC adopted other measures including a ban on the use of lights to attract fish (Resolution 16/07 On the use of artificial lights to attract fish) and a ban on the use of manned or unmanned aircraft to assist in the search for tuna schools (Resolution 16/08 On the prohibition of the use of aircrafts and unmanned aerial vehicles as fishing aids).
- The catch limits for yellowfin tuna were set using a 15% reduction in catches as a baseline and 2014 as reference year, meaning that in 2017 and subsequent years the EU fleet must maintain catches at those levels.
- The existing FAD limit was further reduced to a maximum of 350 active FADs per vessel at any given time (500 in 2015 and 425 in 2016).
- In addition, the EU adopted different levels of reduction for the Spanish, French and Italian purse seine fleets, with lower TACs for Italy and France and Spain. The implementation of the catch limits had serious consequences on the Spanish fleet, which was obliged to remain in port for the last two months of 2017 having reached its quota. For that reason, in 2018, some vessels decided to voluntarily stop fishing in May and remain in port.
- The reduced purse seiner activity is having serious socio-economic consequences not only for the fleet but also for the economies and livelihoods of some coastal countries in the Indian Ocean through reduced access fees, lack of raw material at canning factories, and economic loss due to a drop of services and economic activity in several coastal countries.

5 EU National Chapters

A brief summary of the performance results in 2017 by Member States' national fleet:

BELGIUM: overall a positive but deteriorated performance, operating at a net profit of EUR 10.1 million (-40%). Revenue decreased by 7%, amounting to EUR 88.6 million; GVA estimated at EUR 46.6 million (-14%) and gross profit EUR 16.4 million (-31%).

BULGARIA: overall positive with slight deterioration. Revenue decreased 7%, amounting to EUR 5.1 million; GVA estimated at EUR 3 million (-5%), gross profit EUR 1.4 million (-2%), while net profit increased to EUR 1.1 million (+377%).

CROATIA: performance improved and positive after years of losses. Revenue amounted to EUR 81.4 million (+23%); GVA estimated at EUR 48.5 million (+58%), gross profit EUR 26.1 million (+385%) and a net profit of EUR 11.3 million (+150%).

CYPRUS: performance improved and positive after years of losses. Revenue increased 62%, amounting to EUR 10.4 million; GVA estimated at EUR 6.7 million (+414%), gross profit EUR 5.6 million and net profit EUR 3 million (+162%).

DENMARK: overall positive but deteriorated performance. Revenue decreased 7%, amounting to EUR 448 million; GVA decreased by 11%, amounting to EUR 302 million, gross profit decreased 17%, amounting to EUR 177 million and net profit decreased by 20%, amounting to EUR 104 million.

ESTONIA: overall situation remained positive with some deterioration. Revenue stable, amounting to EUR 14.7 million; GVA estimated at EUR 9.7 million (-2%), gross profit EUR 4.4 million (-4%) and net profit EUR 2.7 million (+17%).

FINLAND: overall deteriorated performance. Revenue unchanged at EUR 35.8 million; GVA was EUR 15.9 million (-8%). Gross profit decreased (-15%) to EUR 9.3 million but was not high enough to cover the estimated capital costs of the fleet, in particular very high depreciation costs (possibly over-estimated), resulting in a net loss of -EUR 5.3 million (-35%). The Finnish fleet has suffered net losses throughout the period analysed while posting gross profits.

FRANCE: improved performance. Revenue increased 2%, amounting to EUR 1.35 billion; GVA estimated at EUR 769 million (+2%), gross profit EUR 268 million (+4%) and net profit EUR 177 million (+10%).

GERMANY: overall deteriorated performance; operating at a net loss. Revenue remained at EUR 162 million (excluding the pelagic trawler fleet); GVA estimated at EUR 75.4 million (-23%), gross profit EUR 26.7 million (-42%) and net profit -EUR 3.9 million (-115%)

GREECE: limited analysis possible. Landings data refer to large-scale fleet segments only. Available data indicate that the activity yields a positive income for fishers since the value of landings covers all expenses.

IRELAND: overall positive but deteriorated performance. Revenue (EUR 310 million) up 1%, GVA (EUR 163.3 million) down 1% and gross profit (EUR 64.2 million) -9% and net profit down 5% (EUR 34 million).

ITALY: overall improved performance with revenue increasing 4%, amounting to EUR 955 million; GVA estimated at EUR 607.7 million (+5%), gross profit EUR 330 million (+16%) and net profit EUR 172.4 million (+41%).

LATVIA: overall improved performance, the fleet operated at a profit. Revenue increased by 20%, amounting to EUR 21.1 million; GVA estimated at EUR 9.1 million (+27%), gross profit EUR 5.1 million (+22%) and net profit EUR 2.9 million (-4%).

LITHUANIA: further deterioration to a fleet already operating at a loss. Revenue decreased by 18%, GVA was estimated at EUR 5.1 million (-67%), gross profit at -EUR 4.9 million (-176%). Net loss amounted to -EUR 10.8 million (-141%).

MALTA: overall performance improved, moving from gross losses to profits but still operating at a negative net margin. Revenue increased 5%, amounting to EUR 10.9 million; GVA EUR 5.4 million (+27%), gross profit EUR 1.5 million (+869%) with a net loss of -EUR 0.2 million (+93%).

NETHERLANDS: overall performance decreased but remained positive. Revenue fell 7%, amounting to EUR 440 million; GVA estimated at EUR 238.6 million (-16%), gross profit EUR 103.6 million (-21%) and net profit EUR 74.8 million (-22%).

POLAND: overall performance decreased but remained positive. Revenue decreased 8%, amounting to EUR 47.7 million; GVA estimated at EUR 25.9 million (-17%), gross profit EUR 7.7 million (-54%) and net profit EUR 3.2 million (-59%).

PORTUGAL: overall positive but deteriorated performance. Revenue decreased 3%, amounting to EUR 383 million; GVA estimated at EUR 257 million (-4%), gross profit EUR 115 million (-6%) and net profit EUR 75.2 million (-2%).

ROMANIA: overall performance improved. Revenue increased 16%, amounting to EUR 4.5 million; GVA estimated at EUR 3.3 million (+10%), gross profit EUR 2.4 million (+8%) and net profit EUR 2.0 million (+14%).

SLOVENIA: positive performance with mixed results. Revenue decreased 3%, amounting to EUR 2.2 million; GVA estimated at EUR 1.7 million (-6%), gross profit EUR 1.1 million (+5%) and net profit EUR 1.1 million (+17%).

SPAIN: overall performance slightly decreased but remained positive, even if it varied significantly by fishery. Although revenue increased by 2%, amounting to EUR 2.02 billion and GVA increased by 6% (EUR 1.15 billion), gross profit decreased by 4% (EUR 445 million) and net profit decreased by 13% (EUR 333 million).

SWEDEN: overall improved performance. Revenue increased 2%, amounting to EUR 134.7 million; GVA estimated at EUR 72.8 million (+4%), gross profit EUR 44.1 million (+8%) and net profit remained stable at EUR 25.3 million.

UNITED KINGDOM: overall performance remained strong. Revenue decreased by 4%, amounting to EUR 1.13 billion; GVA estimated at EUR 651 million (same as 2016), gross profit EUR 343 million (-2%) and net profit EUR 293 million (same as 2016).

5.1 Belgium

Short description of the national fleet

Fleet capacity

Throughout 2017 there were 73 vessels registered in the Belgian national fleet with a gross tonnage (GT) of 14 thousand tonnes and an engine power of 47 thousand kW; 67 (92%) of these vessels were active. Throughout 2018 there were 66 active vessels.

Fleet structure

As the Belgian fleet is small, fleet segment aggregation (clustering) has been inevitable. The Belgian fleet is mainly composed of demersal trawlers and beam trawlers. Only a few other fishing gears were in use (seiners, dredges, gill nets and trammel nets). As the number of vessels using these as their main gear has been very low throughout the years, they were grouped in a separate fleet segment (PMP VL1824). However, analysing this very small and heterogeneous fleet segment is senseless. Three important fleet segments as defined in the Data Collection Framework were identified after clustering: DTS VL2440, TBB VL1824 and TBB VL2440. Belgium does not have vessels of more than 40 meters.

Employment

Total number of crew on board was estimated around 357 in 2017, without taking into account rotation, corresponding to a total employment of 214 FTEs. Employment was relatively highest in TBB VL2440 (60%) with an average of 5 FTE per vessel. In DTS VL2440 there were 2.9 FTE per vessel, while in TBB VL1824 there were 2.7 FTE per vessel.

Effort

Belgian vessels operate mainly in the North Sea, the English Channel, the Bristol Channel and other areas of the North Atlantic. In 2017, a total of 13.7 thousand days were spent at sea; 4% less than in 2016.

Production

Despite a declining fleet in terms of number of vessels, total landed weight showed an increasing trend since 2008, remaining relatively steady since 2014. The value of landings does not follow this trend illustrating the volatile nature of fish prices.

In 2017, 24.3 thousand tonnes of seafood were landed by the fleet, with a value of EUR 84.8 million. The fleet targets mainly demersal species. Sole remained the dominant species, generating the highest landed value (EUR 23.5 million) and representing about 30% of the total landings value. In terms of weight, European plaice remained the top landed species (7.9 thousand tonnes or 33% of the total landed weight) and generated the second highest landed value (EUR 14.3 million).

The North Sea (27.IV) was the most important area in terms of total landed value (45%), followed by the Eastern Channel (27.VII.d) with 27%, the Bristol Channel (27.VII.f) and the Celtic Sea (27.VII.g,h) (together 18%) and the Bay of Biscay (27.VIII) (4.5%).

Economic results for 2017 and recent trends

National fleet performance

The economic performance of the fleet remained in an improved state compared to most previous years. After years of being in a loss making position, net profit was positive in 2015, 2016 and 2017. Gross Value Added (GVA), gross profit and net profit in 2017 were estimated at EUR 46.6 million, EUR 16.4 million and EUR 10.1 million, respectively. GVA increased by 30%, gross profit and net profit increased by 141% and by 431% respectively. These results indicate a significantly improved economic situation.

Total income (no income from fishing rights) decreased considerably, amounting to EUR 89.3 million. Revenue, estimated at EUR 88.6 million, a decrease by 7% as income from landings decreased. Other income remained comparable to 2016. Direct income subsidies decreased by 51%. However, this is likely a result of the implementation of the new regulation. The questionnaire was adjusted in 2017 to meet the needs of the New 2016 EU Decision. Definitions were clarified in the questionnaire, most likely leading to different interpretations.

Total variable costs – excluding unpaid labour, increased by 3%. Energy costs increased by 8% compared to 2016, but only represented 38% of what they were in 2008 (EUR 13.4 million). Personnel costs remained stable, while repair and maintenance costs further increased by 34%. Overall, energy and crew costs represent the largest operating costs. However, the share of energy costs decreased considerably in 2015, 2016 and 2017. The share of labour costs on the other hand increased over these years.

Contrary to the situation in some other European countries, the crew share is a direct percentage of the gross value of landings (without subtracting variable costs first). The crew share usually amounts to about 30% of the value of landings. Value of landings decreased by 7%, however personnel costs remained similar to those in 2016 while the number of total FTE decreased. This indicates that average crew costs have increased. Caution must be used when translating this into what the crew earned as pay related social insurance taxes are not taken into account. In 2017, personnel costs represented 33% of the value of landings.

The value of physical capital of the Belgian fleet was estimated at EUR 41.6 million. The average age of the vessels is high and increases by one unit every year. Newly built or younger vessels rarely enter the fleet to replace older ones. Investments increased enormously, however, this may also be an anomaly as a result of a different interpretation of this variable.

Resource productivity and efficiency indicators

The gross profit margin in 2017 was 18%, still indicating a much improved operating efficiency of the sector. This was lower than in 2016, but comparable to 2015. Since 2013 gross profit margin shows an increasing trend. Net profit margin was estimated at 11.4% in 2017. This is still contributes to an increasing trend compared to previous years and indicates a more positive outlook. Between 2008 and 2013, profit margins were generally low and even negative in some years. The Rate of Return on Fixed Tangible Assets (RoFTA) also highly increased in 2015 (13%) and 2016 (52%) compared to previous years. In 2017 it was not as high as in 2016, however still higher than in all other years.

The **landings per unit of fishing effort** (kg per day at sea) has followed an increasing trend since 2009.

Fuel consumption per active vessel drastically decreased between 2008 and 2009, however it has been slowly increasing again since 2011, with the exception of 2017. In general, efforts have been made since the fuel crisis to use more fuel-efficient engines and fishing techniques. Fuel prices were particularly high in 2008 and 2012. In 2017, the total amount of energy consumed by the fleet decreased by 2% compared to 2017, while energy costs increased by 8%. **Fuel consumption per day at sea** steeply decreased between 2008 and 2011, stagnated until 2013, increased slightly again in 2014 and 2015, but decreased in 2016 and 2017.

Energy consumption per landed tonne has followed an overall decreasing trend since 2008 (-22%), with the lowest estimated value in 2016 of 1.3 thousand litres per landed tonnes. In the period 2013-2017 it has stagnated around 1.5 thousand litres. One of the reasons behind this still relatively high fuel consumption is that the fishing grounds are spread out and sometimes far away from the Belgian coast. Another explanation is related to the use of trawling gear, as the focus remains on catching demersal species. Despite this, the fleet still seems to be making efforts to reduce their fuel consumption and improve their overall efficiency.

Labour productivity (GVA/FTE) also increased significantly over the years, peaking in 2016 and still remaining high in 2017. Overall income from landings has increased or remained similar while energy costs decreased (other operational costs included in GVA are less important). FTE on the other hand shows a decreasing trend. This indicates that a unit of labour input is producing more output or that the same amount of output is being produced with fewer units of labour. Labour productivity may also provide an indicator of worker's wellbeing or living standards, assuming that increases in productivity are matched by wage increases.

Performance by fishing activity

Small-scale coastal fleet

In 2014, there was only one active fishing vessel under 12 meters long, but there were no vessels belonging to a SSCF according to the European definition. Since 2016, one vessel was introduced that meets the SSCF requirements (vessel under 12 meters using passive gears).

Performance of selected fleet segments

The Belgian fleet is dominated by trawlers (beam, shrimp and otter). In 2017, the larger beam trawlers (TBB VL2440) appear to perform better than the smaller ones (TBB VL1824) in terms of GVA, revenue, profit and profit margins. The demersal trawlers (DTS VL2440) also have lower profits than the larger beam trawlers, but their profit margins are higher. This fleet segment seems to be relatively performing the best. It must be noted that this is a clustered fleet segment containing a wide range of length categories.

This national division of fleet segments based on engine power forms the basis for management measures such as effort limitations and quota distribution. Roughly TBB VL2440 corresponds to the nationally defined "*large-fleet segment*" (engine power of >221 kW), consisting of vessels that make longer trips and visit the faraway fishing grounds. On the other hand, TBB VL1824 is a clustered segment and more or less corresponds to the "*small-fleet segment*" (engine power of ≤221 kW). These are the coastal vessels and *Eurocutters* that are allowed to fish within 12 nautical miles of the coast.

Beam Trawl 24-40m

28 active vessels operating in FAO fishing area 27, predominantly in ICES area 27.VII, but also in the North Sea (27.IV) and Bay of Biscay (27.VIII), employing close to 60% of total FTE. With fishing rights in the distant North Sea and the Northeast Atlantic, many vessels fish in campaigns. In between two fishing trips, these vessels do not return home, but land fish in foreign harbours. In 2017, the value of landings amounted to EUR 55 million, representing 66% of total landed value. The vessels in this fleet segment target a variety of species, particularly common sole (23% total value of landings), European plaice (12%) and anglerfish (6%).

This fleet segment reported a positive gross profit of EUR 11.4 million and a net profit of EUR 7 million in 2017, still an improved situation to 2012, 2013, 2014 and 2015. Average crew wage per FTE was highest in this fleet segment. Labour productivity was also relatively high. The profitability of this fleet segment was reasonable both in 2016 and 2017. The gross and net profit margin were 20% and 12%. Two major external factors had an influence on this outcome: a favourable fish price combined with relatively low fuel prices. The price of sole increased between 2014 and 2016. It was lower in 2017, but still relatively high compared to other years. The price of plaice increased further in 2017.

Beam trawl 18-24m

23 active vessels operating predominantly in the North Sea, Eastern and Western English Channel, employing almost 20% of total FTE. Value of landings amounted to EUR 11.1 million, 13% of total national landings. These vessels target a variety of species including common shrimp (6% of total value of landings), common sole (3%) and European plaice (1%).

Gross profit was positive in 2017 (EUR 1.3 million) and decreased compared to 2016. A net profit of EUR 0.6 million was generated in 2017 and the GVA was EUR 5.7 million. While the profitability of this fleet segment was reasonable in 2016, it was esteemed weak in 2017. The gross and net profit margins were 11% and 5% in 2017. Common shrimp and sole prices increased between 2014 and 2016. Prices decreased in 2017, but still relatively high compared to other years. Energy consumed per landed tonne was highest for this fleet segment (1 700 litre/tonne).

This fleet segment represents the smaller scale section of the Belgian fleet as a part of the coastal fleet is included. This part of the fleet is less efficient as they make short coastal trips, landing low volumes, but is likely more vulnerable than the larger fleet segment.

Demersal trawlers

This segment included 6 active vessels between 18 and 24 meters, 6 active vessels between 24 and 40 meters, and 1 active vessel under 18 meters, operating predominantly in the North Sea (27.IV) and Eastern Channel (27.VII.d). This segment employed 18% of total FTE. Value of landings amounted to EUR 16.0 million (19% totals). Targeted species include *Nephrops* or Norway lobster (7% of value of landings), European plaice (3%) and common sole (1%).

Profitability in 2017 was reasonable with a net profit of EUR 2.7 million and an improved economic development trend. The gross and net profit margin were 22% and 16%. Prices for Norway lobster, sole increased considerably between 2014 and 2016. Prices decreased in 2017, but still relatively high compared to other years. Energy consumed per landed tonne was lowest for this fleet segment (1 172 litre/tonnes). This fleet segment seems to have performed the best both in 2016 and 2017.

Drivers affecting the economic performance trends

Higher average fish prices together with lower fuel costs were the main driving forces behind the overall improvement in the profitability of the fleet.

Markets and Trade (including fish price)

The average landed fish price of some important species such as sole and plaice increased by 9% and 10% respectively between 2015 and 2016. Prices of sole decreased in 2017, but remained high throughout 2017. Plaice prices have been increasing since 2013 and reached the highest yearly average in 2017: EUR 1.85 per kg. This in part accounts for the profitability of TBB2440.

Furthermore, average landed prices of common shrimp increased by 50% in 2016 compared to 2015. This led to an increase by 146% in the value of landings of shrimp, making the fleet segment targeting common shrimp (TBB1824) profitable for the first time in the time series. As prices remained high in 2017, this fleet segment was also profitable in 2017. Average landed prices of Norway lobster also remained high in 2017, contributing to the positive economic situation of the demersal trawlers. The average income from landings per active vessel was never as high as in 2016 and remained high in 2017.

The dependency on the Netherlands is significant. Over 90% of landings in foreign harbours occurred in the Netherlands. About a third of the fleet is also owned by Dutch nationals. These tend to land in their home ports, where the price for plaice is generally higher (more demand). In 2016, the Belgian fleet landed and sold 3.6 thousand tonnes of plaice in Dutch harbours, representing about 40% of the total landed plaice. In addition, about 58% of total landed shrimp and 84% of Norway lobster were landed in Dutch harbours in 2016 (Devogel & Velghe, 2017). Sole tends to remain more valuable on internal Belgian markets. Belgium is a net exporter of plaice. France (shellfish) and the Netherlands (fish) are important trading partners, representing 60% of the seafood exported to other EU-countries in value.

Management instruments and regulation (policy)

The fleet is managed mainly through total allowable catches (TACs) for some species together with a range of additional effort limitations. Fishing rights are collectively managed by the Flemish authorities in Belgium. Several rather complex mechanisms have been put into place to manage catches. They usually use species, area and the nationally defined fleet segment (mainly based on engine power) as parameters. Sometimes gear is an additional specification and there exist a number of exceptions, especially for passive gears. It may be interesting to note that quota allocation and effort restrictions are on a vessel level and not on a company level. Leasing or hiring fishing rights is not possible.

The Landing Obligation

There is much concern about discarding in mixed fisheries, especially in terms of sustainability of fish populations which is in turn a threat to the future of fisheries. This led to the implementation of a landing obligation (or discard ban) for European fisheries in the latest CFP reform in 2013. The landing obligation will prohibit discarding all species with a TAC by 2019, with a gradual implementation. The aim is to incentivise fishers to avoid non-target species, juvenile fish and catches that exceed quota. Measures were put into place to allow for some flexibility, such as quota uplifts. In Belgium, a *de minimis* exemption was set in the sole fisheries. This exemption allowed for a 10% discard of the catch in the North Sea, 5% in Western waters and 8% in the Bay of Biscay in 2017 (MD 2016).

Stock status, TACs and quotas

Initial quota for sole, cod, ray and Norway lobster increased in 2017. Quota for plaice decreased, however was still relatively high as it is esteemed that its stock status positive.

The total quota for **sole**, which is especially important for the Belgian fleet, was initially 2.7 thousand tonnes and 3.3 thousand tonnes after swaps (81% of this was caught). The sole stocks in the North Sea (27.4), Western English Channel (27.7.e) and in the Bay of Biscay (27.8ab) are currently exploited at sustainable levels. The spawning stock biomass of sole in the Celtic Sea (27.7.fg) is perceived sustainable, but the fishing mortality is still too high. In contrast, fishing mortality for sole in the Eastern English Channel (27.7.d) is below Fmsy, but the stock biomass remains too low.

Spawning stock biomass of sole in the Irish Sea (27.7.a) has been below sustainable levels since 2003, reaching a historical low point in 2014. Due to repeated quota restrictions, reducing the fishing mortality way below sustainable levels, the stock was able to slowly recover, resulting in an spawning stock biomass just below Blim.

The quota for **plaice** was 11.3 thousand tonnes after swaps in 2017; 70% of this was caught. Plaice stocks have developed favourably under the current management plans. Plaice stocks in the North Sea, the Irish Sea, the Eastern English Channel, the Western English Channel and the Bristol Channel (27.VII.f,g) were exploited at sustainable levels according to ICES advice. Caution must still be applied as discard rates for plaice were estimated to be high. However, this information points towards a healthy stock status.

The quota for **cod** was 1.1 thousand tonnes after swaps in 2017; North Sea cod was harvested unsustainably for many years. Despite the implementation of the cod management plan since 2003 and some signs of stock recovery, cod in the North Sea and Eastern English Channel remains a point of concern. Fishing mortality declined since 2000, and is slowly achieving sustainable exploitation levels (ICES advice, 2016).

Operational costs (external factors)

Crew costs and fuel costs represent the most important operational costs. Minimum crew shares have been legally set and are therefore not as variable as energy costs. The only possibility for vessel owners to save on crew costs is by taking-on less crew. However, this option is also very limited, as a minimum number of members on board has been nationally defined for safety reasons.

The average fuel price remained relatively low in 2017. Average fuel prices have been decreasing since 2013. The Belgian fleet is dominated by trawlers, both beam and demersal trawlers. Therefore, as trawling is typically fuel intensive, even slight decreases of the fuel price might make a difference. Fluctuations in fuel prices are therefore a key driver for the profitability of the fleet.

Innovation and Development

Research on technical innovations and alternatives for the beam trawler in the flatfish and shrimp fishery is on-going. The fuel crisis of 2008 forced the fleet to adjust to the rapidly increasing fuel costs. A number of vessels changed from traditional beam trawling to alternative beam trawling methods. For example, to reduce drag forces, a beam on wheels was introduced (Ecoroll) or the beam was replaced by a wing (SumWing). Some vessels even adopted a combination of both. Other adjustments were to reduce the overall weight of the used gears and replace old engines, nozzles and propellers. Subsidies were granted to encourage taking these measures.

Facing the implementation of the landing obligation, research on gear selectivity has been on-going as well. Selectivity can be improved by using more selective gears (or by reallocating activities to areas with a different catch composition). Therefore, devices such as cut-away top panels, square mesh top panels, benthos release panels, T-90 cod-ends, square mesh cod-ends, narrow cod-ends and tunnels in square meshes are being developed and tested in Belgium. Furthermore, collaborative projects on technological innovations with the aim to reduce the bottom impact of trawling are ongoing.

Socioeconomic impact

Specific programmes of the EU CFP oriented to decommissioning lead to an exponential decline in the number of active vessels. In 1992, there were 205 fishing vessels, while in 2002 there were 130 (-37%). This number remained relatively stable for some years. The fuel crisis in 2008 led to a further large decrease in the capacity and to poor economic performances. Furthermore, the commercial market plays an important role in determining fish prices. These have been low, leading to relatively lower revenue from landings. The decreasing number of vessels has had an impact on the number of jobs on board, presumably making the fishing profession much less attractive.

Since 2013, fuel prices have been decreasing and efforts have been made to reduce average fuel consumption leading to proportionally lower energy costs. Fish prices have increased leading to lucrative wages for the crew members. Economic performance has been improving since and it appears that the remaining fleet is now slowly recovering. Figures for 2015, 2016 and 2017 are finally positive. At first sight, the future looks bright. However, there are a number of big challenges with uncertain outcomes that will play a role in the near future and the question will be whether the fleet will be resilient enough to overcome these challenges.

Nowcasts for 2018-19 and outlook

Higher average fish prices, together with lower fuel costs were the main driving forces behind the overall improvement in the profitability of the fleet between 2015-2017. In 2018, 22 thousand tonnes of seafood were landed by the Belgian fleet, with a value of EUR 79.2 million. The fish prices for some important target species such as sole and plaice remain favourable in 2018, while prices for common shrimp

decreased. Fuel prices increased, but remain low compared to the situation prior to 2014. No dramatic changes were observed in the TAC.

Model forecast

Overall, it is expected that 2018 and 2019 will be less profitable than in 2017. However, the forecast still indicates a positive and better outcome than performance between 2008 and 2014.

Preliminary results indicate a decrease of 8 % in landed weight compared to 2017, with a 7% decrease in landed value. As a result, projections suggest a 7% decrease in the revenue in 2018 compared to 2017. Fuel costs will increase by 18%, while other costs remain similar. GVA is estimated to reach EUR 37.8 million, gross profit EUR 8.3 million and net profit only EUR 2 million. Estimated economic performance indicators are positive, with a GVA to revenue of 46%, EUR 178 thousand of GVA per FTE and gross profit margin of almost 10% and net profit margin of 2.5%.

For 2019, the model forecasts a 8% increase in revenue compared to 2018, while labour costs will increase by 8% for the crew and 11% for unpaid labour. All other costs remain comparable to 2018. It is estimated GVA will reach EUR 44.7 million, gross profit EUR 12.6 million and net profit EUR 6.3 million. Estimated economic performance indicators are also positive, with a GVA to revenue of 50%, EUR 206 thousand of GVA per FTE and gross profit margin of almost 14% and net profit margin of 6.9%.

Outlook

With the full implementation of the **landing obligation** in 2019, the previous positive situation may alter. Even though there is justifiable concern about the amount of discarding in mixed fisheries, the socioeconomic impact that the landing obligation may entail, is not negligible. Fishers fear that the discard ban will have a large impact on their profitability and that they may have more difficulty to find crew. It is furthermore expected that the concerns related to **choke species**[14], will become apparent as of 2019. Dab and brill are potential choke species for the Belgian fleet.

On the other hand some exemptions were put into place. High survivability. In Belgium, for example a temporary exemption for plaice, rays and Norway lobster was obtained for beam trawlers with mesh sizes 80-19mm. Furthermore a *de minimis* exemption was set in the sole and shrimp fisheries.

Data issues

The data comes from the Department of Agriculture and Fisheries of the Flemish Government who conducts the data collection. The questionnaire was adjusted in 2017 and fine-tuned in 2018 to meet the needs of the New 2016 EU Decision. This may have an impact on the time series of certain variables requested in this data call. For example, investments increased enormously, however, this may be an anomaly as a result of interpreting this variable differently. Furthermore subsidies were now split into different variables and definitions annexed to the questionnaire were clarified, leading to some unusual trends. Direct income subsidies decreased by 51%. Response rate with regards to number of unpaid labour was also too low to make sensible estimations.

- The calculation of days-at-sea and fishing days was thoroughly investigated and the methodology was adjusted in this data call to be in line with the proposed methodology in the workshop on transversal variables held in Nicosia

(https://datacollection.jrc.ec.europa.eu/documents/10213/978339/2ndWorkshopTransversalVariables.pdf).

It was acknowledged that fishing days are based on an entry date in the logbook, one entry is 1 (calendar) day. Days-at-sea are based on continuous 24-hour period (as stated in the legislation). In the Belgian case, there are many short trips where a vessel leaves port in the evening and returns the next day, fishing on both "calendar dates", but returning to port after less than 24 hours. In this scenario, the outcome is 2 fishing days and only 1 day-at-sea. This explains why it is possible that fishing days exceed days-at-sea.

[14] A choke species is a term used to describe a species with a low quota that can cause a vessel to stop fishing even if they still have quota for other species.

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Table 5.1 Belgium: National fleet statistics and economic performance results. Nowcast figures for 2018 and 2019

		2008	2009	2010	2011	2012	2013	2014	2015	2016	*2017*	*2018*	2019	Trend 2008-2018	Δ 2017 to 2016	Δ 2017 to avg. 08-16
Capacity	Number of vessels	101	101	90	89	87	82	79	78	76	73	70	68		-4%	-16%
	Total vessel power	61,941	62,876	52,079	51,100	50,835	47,407	46,286	47,414	46,179	47,103	45,049			2%	-9%
	Total vessel tonnage	19,203	19,358	15,995	15,706	15,693	14,953	14,545	14,456	13,997	14,040	13,615			0%	-12%
Employment	Engaged crew	472	421	394	382	376	345	345	336	318	357	356	345		12%	-5%
	Unpaid labour															
	FTE national	353	305	317	312	312	228	293	255	231	214	212	217		-7%	-26%
	Total hours worked per year (engaged crew)										736,480					
Effort	Days at sea	18,709	18,239	16,900	15,975	15,409	15,031	15,096	14,082	14,341	13,724	13,557	13,847		-4%	-14%
	Fishing days	19,598	19,641	18,671	17,612	17,158	16,970	16,861	15,722	15,769	14,875	14,462			-6%	-15%
	kW fishing days	12,368,689	12,533,870	11,368,877	10,554,525	10,543,499	10,505,084	10,792,569	10,078,263	10,458,103	10,070,951	9,989,079			-4%	-9%
	GT fishing days	3,966,804	3,968,022	3,549,262	3,364,521	3,333,676	3,353,344	3,411,680	3,216,897	3,234,228	3,082,719	2,979,958			-5%	-12%
	Number of fishing trips	4,346	4,623	5,054	4,763	4,699	4,783	4,743	4,302	4,570	4,307	4,318			-6%	-7%
	Energy consumption	60,635,220	54,632,661	47,804,528	40,638,284	39,748,212	38,483,496	39,831,653	39,005,152	37,501,935	36,674,016	36,203,145	37,239,344		-2%	-17%
Landings	Live weight of landings	21,800,551	19,353,903	21,665,726	22,191,644	24,180,404	25,172,485	26,216,142	24,523,220	26,914,769	24,291,849	22,346,276	22,554,409		-10%	3%
	Value of landings	84,277,630	71,797,412	82,809,350	83,263,584	77,991,250	74,044,685	81,464,911	82,031,813	91,866,722	84,775,334	79,227,018	83,095,300		-8%	5%
Income	Gross value of landings	84,319,166	71,755,094	82,323,741	83,460,128	78,164,104	73,892,791	81,773,763	81,814,732	91,631,502	84,775,334	79,227,018	86,536,609		-7%	5%
	Other income	2,714,799	4,865,059	3,932,163	3,647,043	4,190,655	3,814,291	3,616,859	3,367,293	3,173,809	3,794,624	3,712,799	3,685,813		20%	2%
	Operating subsidies	1,602,611	1,030,952	1,531,664	2,824,187	1,862,224	1,751,347	1,802,887	1,546,314	1,595,355	775,957				-51%	-55%
	Income from leasing out quota	-	-	-	-	-	-	-	-	-	-					
Expenditure	Personnel costs	28,106,502	25,493,115	27,654,761	26,358,732	25,066,580	24,320,470	27,054,202	26,550,420	28,432,340	28,065,332	27,403,768	29,712,475		-1%	6%
	Value of unpaid labour	3,246,018	2,506,957	2,487,724	2,381,376	2,687,417	2,111,269	2,111,650	2,028,131	1,840,064	2,113,548	2,097,880	2,365,574		15%	-11%
	Energy costs	37,879,871	21,593,267	24,242,970	26,282,628	28,060,508	25,076,347	23,532,863	16,161,102	13,441,195	14,514,501	17,760,326	17,864,993		8%	-40%
	Repair & maintenance costs	5,675,321	5,497,350	5,508,968	5,144,161	5,715,348	5,229,905	5,932,369	6,582,957	8,819,220	12,843,401	12,727,718	12,635,069		46%	114%
	Other variable costs	12,671,499	11,406,015	11,071,525	10,934,043	11,160,999	10,118,776	11,318,312	11,938,112	11,752,317	8,586,355	8,587,899	9,013,924		-27%	-25%
	Other non-variable costs	7,205,273	8,175,686	7,951,113	6,929,798	7,049,230	8,533,498	8,019,260	7,414,968	6,757,529	6,071,558	6,087,442	6,043,676		-10%	-20%
	Consumption of fixed capital	11,209,879	9,626,033	9,579,140	9,101,467	9,561,600	8,860,536	9,670,825	7,704,607	7,400,541	6,900,062	6,856,211	6,808,401		-7%	-25%
	Lease/rental payments for quota	-	-	-	-	-	-	-	-	-	-					
Indicator	Opportunity cost of capital	- 45,766	3,284,499	846,322	476,182	232,155	742,023	697,906	126,015	- 410,606	- 602,751	- 614,487	- 483,147		-47%	-191%
	Gross Value Added	23,602,001	29,947,835	37,481,328	37,816,542	30,368,675	28,748,556	36,587,818	43,084,886	54,035,050	46,554,144	37,776,432	44,664,760		-14%	30%
	Net Value Added	12,437,888	17,037,303	27,055,867	28,238,894	20,574,919	19,145,998	26,219,087	35,254,265	47,045,115	40,256,832	31,534,708	38,339,505		-14%	55%
	Gross profit	- 7,750,519	1,947,763	7,338,844	9,076,434	2,614,678	2,316,817	7,421,966	14,506,335	23,762,647	16,375,264	8,274,783	12,586,710		-31%	141%
	Net profit	- 18,914,632	- 10,962,769	- 3,086,618	- 501,215	- 7,179,078	- 7,285,741	- 2,946,765	6,675,714	16,772,711	10,077,953	2,033,059	6,261,456		-40%	431%
	Net profit subsidised	- 17,312,021	- 9,931,817	- 1,554,954	2,322,972	- 5,316,854	- 5,534,395	- 1,143,878	8,222,028	18,368,067	10,853,910	2,033,059			-41%	922%
	Net profit rights	- 17,312,021	- 9,931,817	- 1,554,954	2,322,972	- 5,316,854	- 5,534,395	- 1,143,878	8,222,028	18,368,067	10,853,910	2,033,059			-41%	922%
Capital	Value of physical capital	59,781,677	84,217,930	74,636,806	59,321,915	59,547,872	62,060,072	57,966,538	52,821,130	31,666,429	41,622,408	41,908,038	41,593,530		31%	-31%
	Value of quota and other fishing rig	-	-	-	-	-	-	-	-	-	-					
	Investments	4,415,367	11,962,691	12,849,514	14,822,442	12,232,434	5,410,271	4,898,352	7,126,944	60,980,166	101,810,587				67%	580%
	Total assets										97,407,985					
	Long/short debt										55,350,071					
	Subsidies on investments										1,482,133					

Data source: MS data submissions under the DCF 2019 Fleet Economic (MARE/A3/ASC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Table 5.2 Belgium: National fleet statistics and economic performance results by fleet segment, 2017

	Number of vessels	FTE national	Days at sea	Energy consumed per landed tonne	Live weight of landings	Value of landings	Revenue	Gross Value Added	GVA to revenue	Gross profit	Gross profit margin	Net profit	Net profit margin	Average wage per FTE	GVA per FTE (labour productivity)	Return on fixed tangible assets	Profitability (2017)	Net profit margin %Δ 2017 - average (2008-16)	Economic development trend	As a % of total revenue
BEL NAO TBB2440 NGI	28	128	6,913	1,577	16,558,627	55,975,710	58,381,983	30,819,859	52.8	11,421,521	19.56	7,010,944	12.01	151,550	240,780	33.0	Reasonable	43211%	Improved	66%
BEL NAO DTS2440 NGI*	13	38	2,470	1,172	4,527,168	16,005,125	16,525,464	9,302,881	56.3	3,631,765	21.98	2,671,518	16.17	149,240	244,813	25.8	Reasonable	315%	Improved	19%
BEL NAO TBB1824 NGI*	23	40	3,792	1,714	2,716,946	11,111,144	11,897,468	5,724,928	48.1	1,325,469	11.14	579,385	4.87	109,303	142,234	4.8	Weak	130%	Improved	13%
BEL NAO PMP1824 NGI*	3	8	549	1,236	489,109	1,683,355	1,765,043	706,476	40.0	- 3,490	- 0.20	- 183,894	- 10.42	88,746	88,310	- 9.9	Weak	-603%	Deteriorated	2%

Data source: MS data submissions under the DCF 2019 Fleet Economic (MARE/A3/ASC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Table 5.3 Belgium: Landed value, weight and average price of principal species

	Value of landings (real) (thousand €)										Live weight of landings kg										Average landed price (real) (€)										% over total	
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	in EUR	in weight
Common sole	38.9	38.3	42.6	39.4	30.8	26.2	32.6	30.7	27.8	23.5	3,727,082	3,910,047	3,862,749	3,544,317	3,057,031	2,886,903	3,595,406	3,083,086	2,582,799	2,224,567	10.4	9.8	11.0	11.1	10.1	9.1	9.1	9.9	10.8	10.6	27%	9%
European plaice	10.0	6.4	7.0	8.8	8.7	9.8	10.8	11.6	15.1	14.3	5,228,747	4,586,275	5,355,862	6,356,258	6,687,975	8,193,192	8,829,948	7,786,761	9,417,743	7,934,357	1.9	1.4	1.3	1.4	1.3	1.2	1.2	1.5	1.6	1.8	16%	33%
Norway lobster	1.0	0.6	0.9	1.8	1.9	1.9	2.4	3.9	6.0	6.9	208,531	145,899	183,066	294,480	370,193	342,290	420,580	624,462	883,948	1,110,544	4.7	3.8	4.8	6.3	5.1	5.7	5.8	6.2	6.8	6.2	8%	5%
Anglerfishes	3.8	3.1	3.7	4.5	5.7	5.5	3.8	4.0	5.0	5.3	976,296	848,652	1,038,981	1,281,929	1,715,137	1,653,648	999,839	1,117,747	1,449,539	1,597,343	3.9	3.7	3.6	3.5	3.3	3.3	3.8	3.6	3.5	3.3	6%	7%
Turbot	4.3	3.8	3.8	4.1	3.5	3.8	4.4	4.3	5.0	4.9	370,134	380,586	345,938	386,007	416,958	402,762	435,749	454,506	582,604	564,162	11.6	10.0	11.0	10.6	8.5	9.4	10.0	9.5	8.5	8.7	6%	2%
Common shrimp	3.3	2.1	4.5	2.0	4.1	5.3	4.1	2.9	7.2	4.8	817,653	672,474	1,705,214	758,512	873,338	1,202,150	1,162,729	668,817	1,114,724	743,023	4.0	3.1	2.7	2.7	4.7	4.4	3.5	4.4	6.5	6.4	5%	3%

Data source: MS data submissions under the DCF 2019 Fleet Economic (MARE/A3/ASC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

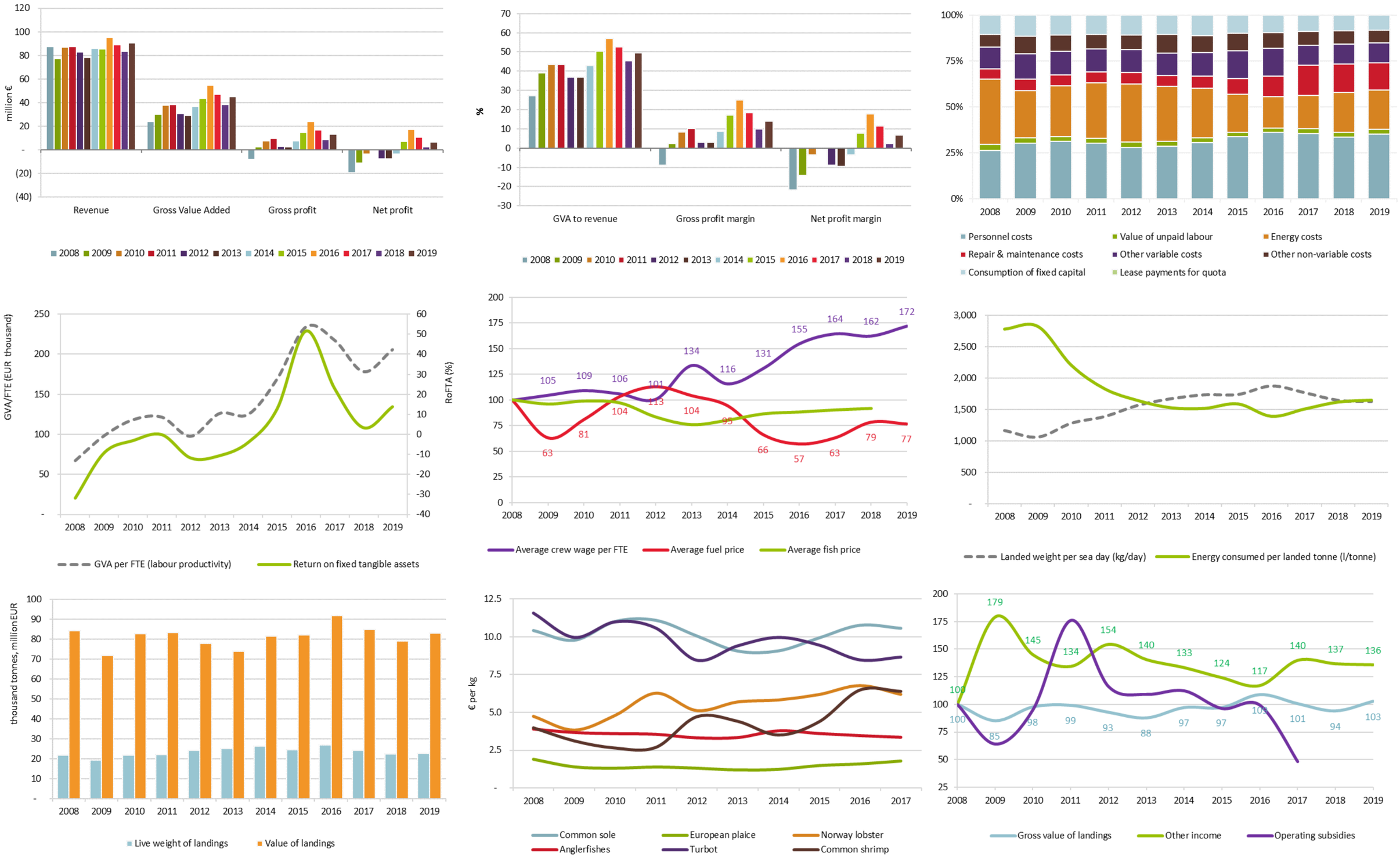


Figure 5.1 Belgium: Main trends in economic performance indicators (absolute value, panel 1a/top left and relative value, (panel 1b/top middle); cost structure (panel 1c, top right); productivity (panel 2a); key input/outputs (panel 2b); efficiency (panel 2c); landings (panel 3a); average price (EUR /kg) of top species (panel 3b) and income (panel 3c). Nowcast figures for 2018 and 2019

Data source: MS data submissions under the DCF 2019 Fleet Economic (MARE/A3/ASC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

5.2 Bulgaria

Short description of the national fleet

Fleet capacity

In 2018, the Bulgarian fishing fleet consisted of 1 864 registered vessels, of which 1 205 were active and the remaining 659 vessels were inactive. The active fleet had a combined gross tonnage (GT) of 4.78 thousand tonnes, engine power of 39.1 thousand kilowatts (kW) and an average age of 23 years.

Fleet structure

The Bulgarian fishing fleet is divided into a small-scale segment (91.3% in 2018) with an engine power of 22.8 kW and a large-scale fleet segment (8.7% in 2018) with an engine power of 16.3 kW. The overall size of the Bulgarian fishing fleet decreased 1% between 2016 and 2017, and by 14% compared with the average for the period 2008-2016. Between 2016 and 2017 the inactive vessels decreased by 15%. Compared to 2016 in 2017, the active SSCF increased by 10%, while the active large-scale fleet decreased by 13%. In the active SSCF, GT and kW increased by 6% and 7%, and in the active large-scale fleet, GT and kW decreased by 7% and 6%, respectively.

Employment

Total employment in 2017 was estimated at 1 947 jobs, corresponding to 716 FTEs with an average of 0.55 FTE per active vessel. The level of employment increased between 2016 and 2017 with 21%, and the total employed for 2017 increased by 41%, compared to the average total employed for the period 2008-2016. When including the unpaid labour (485 jobs) to total employment the number of jobs grows up to 2 432 and in this case, unpaid labour represents 20% of the grand total of employment. The increase in employment might be because of the increasing of active SSCF vessels and slightly increase in wages and salaries of the crew in the coastal communities. Moreover, the unpaid labour in SSCF represents 93.4% of the total number of unpaid labour in the fleet which shows some interest from family workers to this activity.

Effort

The Bulgarian fleet spent over 25.1 thousand days-at-sea in 2017, a 3% decrease compared to 2016 and a 28% increase over the period 2008-2016. While the days-at-sea remained steady in the period 2013-2015, data for 2016 indicate a 19% increase compared to the period. If in 2017 the days-at-sea are stable compared to 2016 they are not in 2018 and compared to 2017 they decreased by 10% and return to the same level as in 2015.

The quantity of fuel consumed in 2016 totalled 2.56 million litres, increase by 9% in 2017, totalling 2.78 million litres. According to preliminary data, the increasing trend seems reliable in 2017 compared to the trend over the years and the expectations are to raise further in next years, which is reasonable when engines of the vessels are old.

Production

The total landed weight in 2017 was 7.47 thousand tonnes of seafood, with a landed value of €4.76 million. Compared to the period analysed (2008-2016) the total weight of landings decreased by 6% while the value increased by 7% and compared to 2016 the total weight increased by 7% while the value increased by 3%.

Regarding the top species in terms of value, the average first sale price for 2017 for European sprat increase compared to 2013-2016 and remain stable compared to the period 2008-2016. The price of sea snails for 2017 increased by 4% compared to 2016 and compared to the period 2008-2016, increase by 15%. The price of turbot has decreased since 2012, and in 2016 achieved an average price of 5.0 €/kg while in 2017 increase by 19% compared to 2016 and 21% compared to the period 2008-2016 and achieved an average price of 5.9 €/kg. The price of Mediterranean horse mackerel and Picked dogfish for 2017 is increased by 61% and 35% respectively while the price of red mullet decrease by 10% over the period 2008-2016. The main landed species for the Bulgarian fleet as a percentage of over the total are sea snails with 42% in value and 49% in weight, European sprat with 34% in value and 43% in weight and Red mullet with 8% in value and 5% in weight.

Economic results for 2017 and recent trends

National fleet performance

The amount of income from landings generated in 2017 was EUR 4.76 million while non-fishing income amounted to a further EUR 0.29, and the total amount of income EUR 5.05 million. In 2017 the income from landings decreased by 10% from 2016 but the non-fishing income increased by 105%. The other income decreased significantly in the last two years compared to the period 2008-2015 and in 2017 decrease with 83% compared to 2008-2016 while the income from landing increase by 4% to the same period. Mainly the other incomes are coming from tourism activities and when fishers spend more days for fishing, the decrease of other income is explicable. The decrease in income from landings could be explained by the decrease of days-at-sea by 13% in 2017 compared to 2016 in the LSF.

In general, all costs decreased by 13% between 2016 and 2017. Only 'Repair & maintenance costs' increase by 14%. The 'wages and salaries of the crew in 2017 decreased by 5% compared to 2016 and 24% to the period 2008-2016.

The operating costs in 2017 amounted to EUR 3.64 million. Crew cost and energy costs were the two major cost items (EUR 1.46 million and EUR 1.12 million, respectively). However, EUR 0.09 million of crew cost were estimated for the unpaid labour which remained in the hands of the fishers as working capital. Between 2016 and 2017, operating costs decreased by 8%.

In terms of economic performance, the total amount of Gross Value Added (GVA), gross profit and net profit in 2017 were estimated at EUR 3 million, EUR 1.4 million and EUR 1.1 million, respectively. In the past, the economic performance is constantly negative, the economic situation for 2015 has improved and in 2016 was going down again, but in 2017 it looks like the situation is better in terms of net profit.

In 2017, the Bulgarian fleet had an estimated Value of physical capital of EUR 13 million and investments amounted to EUR 0.07 million, which is 30% decreasing of the Value of physical capital and 84% of investments, compared to 2016. The estimated value of Total assets in 2017 is EUR 27.5 million.

The distribution of the fleet has not changed over time. According to the number of vessels, SSCF is the main fleet in Bulgaria, with 1 191 active vessels in 2017. They spent 17 thousand days-at-sea and landed 1.94 thousand tonnes of fish for EUR 1.2 million. The LSF spent 8.1 thousand days-at-sea and landed 5.3 thousand tonnes of fish for EUR 3.6 million.

The very low value of investments in 2017 could be explained whit low interest mainly from SSCF fishers and difficult access to funding by the Operational Program under EMFF and they spent their own funds or use additional funding and generate debts amounted near EUR 0.1 million. This also might be the reason for bad economic performance in SSCF.

Resource productivity and efficiency indicators

In 2017, the gross profit margin was 28.1%, indicating a slight improvement in operating efficiency of the sector, when we compared to 2016 but compared to the period 2008-2016 increase by 70%. This is also seen in the net profit margin for 2017 which increase significantly compared to 2016 and over the period 2008-2016. The Rate of Return on Fixed Tangible Assets (RoFTA) of near 9%, in 2017, confirms an improvement from 2016 and compared to previous years.

In 2016 labour productivity decrease by 30% compared to 2015 and drop down near to the level of 2014. In 2017 decrease by 23% more compared to 2016. This is due to the fact that GVA decreased in 2017 by 5% and the number of FTE increased by 23% thus indicating a decrease in efficiency.

Fuel consumption per landed tonne has followed an overall increasing trend since 2008. In 2017, it is estimated of 372 litres per landed tonne which is a 39% increase compared to the amount of 267 litres per landed tonne during the period 2008-2016. Taking into account the average age of the fleet this is a standard consumption for a typical fishing vessel in the Black Sea region.

Landings in weight per unit of effort (in days-at-sea) followed a decreasing trend since 2008 but in last year increased slightly.

Socioeconomic impact

Market and trades as a key factor is affecting the activity, especially for the level of prices. The domestic market has not increased the demand for the local fishery so that the catches are similar/comparative levels for small pelagic, as well as for demersal species.

In Bulgaria, the local products are facing the competition of imported fish, especially from the supermarket chains. These supermarkets are offering a large variety of species, oceanic fish mainly, also salmon (even it is from aquaculture), especially mackerel, bream, and others seafood, trout with a very competitive price, well presented and in large quantities. The lack of organization measures of the fisher associations in this respect is another major factor affecting the level of fish prices and the capacity to increase the number of fishers in the sector. That would be a future task in order to maintain the possibilities to consolidate the evolution of the sector.

Young people have no motivation to work in the sector or to invest money, because of the low level of interest from local authorities to ensure minimum conditions for developing activities for the fishery. That's why the technical level on board on the small boats is quite impossible to be done, also to the position of the financial sector which is not friendly with this kind of investors. After we also notice the drop in wages and salaries of the crew in 2016 and 2017 where they are under the minimum of the salary for the country, the sector is even more unattractive for newcomers.

Performance by fishing activity

Large-scale

The Bulgarian large-scale fleet consisted of 104 vessels in 2017: 23 of them were under 12 metres, but with active gears; 12 of them were between 0-6m using beach seines, 3 were between 6-12m using beach seines, 6 were between 6-12m using mid-water trawls and 2 vessels between 6-12m were with beam trawls. 226 FTEs (represented 287 total employed) were employed in the LSF segment.

This LSF had 5.53 thousand tonnes landings, which is 74% of the landings of the whole fleet and value of the landings €3.56 million, which represents 74.8% of the value of all landings.

The income from landings increased 1% and the other income increased vastly but the value is still far away to form the biggest value for other income in 2013. In 2017 wages and salaries of crew decreased by 12% compared to 2016 which is reasonable when the value of salaries decrease. The number of unpaid labour in LSF is 32 or 6.6% of the total in the fleet and value of unpaid labour also decrease as wages and salaries of the crew. Costs generally decreased, except the repair & maintenance costs which increased by 9% in 2017 compared to 2016 and by 3% compared to the period 2008-2016.

Small-scale coastal fleet

The majority of the vessels in 2017 (1 191 from 1 295 active vessels) are with a total length under 12 meters, using only passive gears and are carrying out mainly small-scale coastal, seasonal fishing. Their preferred fishing gear is gillnet (anchored) and for catching of sea snail they use the diving manual method. The total employees were 1 660, which is 25% more than the employees in 2016. For the majority of people involved in this type of fishing, this is a seasonal activity closer to a small family business. Most of the small-scale fishers use the catches for private consumption by themselves and their families or they sell it in their own restaurant. The live weight of landings is 1.94 thousand tonnes, decreased by 1% compared to 2016 and by 11% to the period 2008-2016. The value of the landings in 2017 increased by 1% to 2016 and it is almost on the same level to the average for the 2008-2016. The net profit and net profit margin remained negative with a high decrease compared to 2016 and over the period 2008-2016. The reason for the negative profitability of this part of the fleet is lack of other income during the year which cannot compensate even decreased costs. Furthermore, most of the people are medium or low educated and do not have the knowledge and ability to use opportunities that EMFF bring to the sector.

Performance results of selected fleet segments

The fleet is diverse with a broad range of vessel types targeting different species predominantly in the Black Sea. The national fleet consisted of 25 (DCF) fleet segments in 2017, with a further 602 inactive vessels. Since the clustering scheme was changed in 2017 consistency in clusters remains and the provision of data is shown more detailed.

In 2017, the Bulgarian fleet was clustered in 7 segments: drift net 12-18 (12 vessels), purse seiners 0-6 (16 vessels), vessels using active and passive gears 12-18 (25 vessels), vessels beam trawls 12-18 (9 vessels), vessels using p*ots and traps* 6-12 (42 vessels), vessels using hooks and lines 6-12 (98 vessels) and pelagic trawls 12-18 (23 vessels).

Three fleet segments obtained more than 1 000 tonnes in live weight of landings:

Pelagic trawlers 24-40m

In 2017, 11 vessels made up this segment that targets a variety of species but in particular European sprat and sea snail exploited by some beam trawlers in the segment. In 2017, the total live weight of landings was 2 333 thousand tonnes with a value EUR 1 279 thousand (increased 52% compared to 2016) and around 54 FTEs were employed in this fleet segment. The profitability of the segment is high, and according to the net profit margin is improved. In 2017 the net profit margin increased by 38% compared over the period 2008-2016.

Polyvalent active and passive gears 12-18m

In 2017, 25 vessels made up this clustered segment that targets a variety of species but in particular red mullet, sea snails and turbot. In 2017, the total live weight of landings was 1 301 thousand tonnes with a value EUR 899 thousand (increased significantly compared to 2016) and the fleet segment employed around 56 FTEs.

Polyvalent active and passive gears 6-12m

In 2017, 195 vessels made up this segment that targets mainly sea snails, Red mullet and Mediterranean horse mackerel. In 2016, the total live weight of landings was 1 070 tonnes with a value EUR 612 thousand (increased 40% compared to 2016) and the fleet segment employed around 112 FTEs. The profitability of the segment is a week and the net profit margin in 2017 decreased by 68% compared to the period 2008-2016.

Pelagic trawlers 12-18m

In 2016 the segment was with the biggest volume of landings but in 2017 23 vessels (51% less than 2016) made up this clustered segment that targets a variety of species but in particular European sprat, red mullet and sea snails exploited by some beam trawlers falling into this segment. In 2017, the total live weight of landings was 688 thousand tonnes with value € 522 thousand (decreased 65% compared to 2016) and around 45 FTEs were employed in this fleet segment. Even with less number of vessels the profitability of the segment is reasonable economic development trend shows improvement.

The profitability of more than the half of the fleet segments remains weak for 2017, except drift netters 12-18m, polyvalent active and passive gears 12-18m, pelagic trawlers 12-18, pelagic trawlers 18-24m and pelagic trawlers 24-40m, beam trawls 12-18, pots and traps 6-12 but we should also mention that these week segments include 1 149 vessels or 88% of the whole active fleet.

Drivers affecting the economic performance trends

The income from landings during last years and prices of fish and fuel were the main driving forces behind the overall sustainability of the fleet.

The stable average price of some important species as European sprat and increase of the average price of sea snail, Mediterranean horse mackerel, turbot, red mullet and European anchovy, had a positive impact on the profitability of some segments of the fleet.

When we look at the other segments, the reason for their weakness is an increase in energy consumption and a significant decrease in other income which mainly is generated by tourism activities. This part from the fleet is mainly small coastal fleet which is dependent also from tourism and other activities.

Markets and Trade

According to the weight and value of landings, the most important species in Bulgaria remain sea snails and European sprat. In terms of TAC species, the important species is turbot. The price of most species increased more or less in the last year while the prices of Red mullet only have decreased. The prices in 2017 for the important species as sea snails, European sprat and turbot increased by 15%, 10% and 21% respectively over the analysed period 2008-2016.

According to the data from the National Statistical Institute, in 2017, total imports of fish and fishery products in Bulgaria amounted to 43 379 tonnes. The volume of import increased by 15% compared to 2016.

Over 75% of the total quantities of imported fish and fisheries products in 2017 are from Member States of the EU. Quantities from the Member States reached 32 459 tonnes, 16% more than in the previous year. The most significant amounts were supplied by Romania (6.6 thousand tonnes) and Spain (4.8 thousand tonnes).

On the other hand, in 2017 imports of fish and fisheries products from third countries increased by 13% annually. Major exporters to Bulgaria were Canada (1.9 thousand tonnes) and China (1.4 thousand tonnes).

The total Bulgarian export of fish, aquatic and fishery products in 2017 amounted to 16 741 tonnes, 38% higher than the previous year, which is explained by the increase in catches of species of fish and aquatic organisms with export orientation, as well as the realization of re-export of imported and processed fish.

Nearly 80% of the total export of fish and fish products during 2017 was for the EU. The amount of 13 452 tonnes allocated to the Member States of the EU increased by 42.4% compared to 2016. The most significant dispatches were for Romania (5.7 thousand tonnes), Sweden (2.7 thousand tonnes) and Italy (1.5 thousand tonnes).

Exports of fish and fishery products to third countries increased by 22.5% compared to 2016 to 3 289 tonnes, realised mainly to the Republic of Korea, Serbia, and Japan.

The situation in front of Bulgarian fleet is complicated because the big quantity of imported fish and fish products are imported in the country with a lower price than the price of Bulgarian catches from the Black Sea and for the fishers is impossible to compete in this respect, even after processing and added value.

Management instruments

Bulgaria is currently applying a set of measures to increase the control and monitoring of landings of all species and especially of turbot, which have a positive impact on reducing IUU-fishing, including:

- Designated ports to land turbot;
- Equipment of all turbot fishing vessels with a tracking device;
- Introduced minimum size for turbot.

Bulgaria has introduced extremely stringent requirements, ensuring a low risk of IUU-fishing, to all fishing vessels who receive a permit to catch turbot. Under national legislation, all vessels fishing turbot are required to be equipped with tracking devices regardless of their length. The fleet is managed mainly through TACs, together with a range of input controls. With the Recommendation GFCM/41/2017/4 was accepted multiannual management plan for turbot fisheries in the Black Sea which lay down a list of measures and total allowable catch for 2018-2019.

TACs and quotas

There are two species with quotas in Bulgaria. Turbot and sprat TAC for the Black Sea (quota system) was introduced in 2008 following the accession of Bulgaria and Romania to the European Union (EU).

In regards to negotiation during forming of TAC regulation for Black sea and to prevent IUU fisheries, the total number of vessels engaged in fishing for turbot is reduced year by year. In 2016 and in 2017 also, a total of 116 fishing vessels were engaged in fishing for turbot, but in 2018, their number decreased to 115. Maintaining of levels of landings of turbot by Bulgarian fishing vessels in recent years as a result of compliance with the level of the total allowable catch of turbot set by the Council in the amount of 43.2 tonnes and a strict regime for fishing of turbot. From 2013 to date, approximately 50% of the total number of vessels fishing for turbot are fishing vessels with an overall length of less than 12 meters. During the same period, more than 50% of all active fishing vessels with an overall length of over 12 meters were involved in the turbot fishery.

In 2017, quotas were 43.2 tonnes of turbot and 8 032.5 tonnes of sprat and landings were 41.8 tonnes of turbot and 3 189 of tonnes sprat, respectively.

At its 41st Annual Meeting in 2017, the General Fisheries Commission for the Mediterranean (GFCM) adopted Recommendation GFCM/41/2017/4 on a multiannual management plan for turbot fisheries in the Black Sea. The recommendation a total allowable catch (TAC) for turbot for 2 years (2018-2019) with a temporary allocation of quotas.

In order to avoid interruption of fishing activities and to ensure the livelihood of Union fishers, it was important to open the fisheries concerned in the Black Sea on 1 January 2018. For reasons of urgency was adopted Council Regulation (EU) 2017/2360 of 11 December 2017 fixing for 2018 the fishing opportunities for certain fish stocks and groups of fish stocks in the Black Sea. The Regulation fixed the fishing opportunities by Union fishing vessels flying the flag of Bulgaria and of Romania for 2018 for certain fish stocks in the Black Sea: turbot (*Psetta maxima*) and sprat (*Sprattus sprattus*). The quota for sprat was fixed at the same level as in 2017 while the quota for turbot was allocated to 57 tonnes for Bulgaria which is 32% more than in 2017.

Even after increasing of the turbot quota for the Member States of the EU, the TAC for Union represent less than 20% of the total TAC (644 tonnes) in the Black Sea, where the other quotas are fixed to 374 tonnes for Turkey, 101 tonnes for Ukraine, 50 tonnes for Russia and 5 tonnes for Georgia.

In 2019 allocated TACs for turbot and sprat remain the same as in 2018 which definitely will be beneficial for the fishers which target species are sprat and turbot. Even with fixed turbot quotas some of the third countries in the Black sea basin established their own quotas with a bigger amount of TAC which brings negative effect for EU fleet in the region.

Operational costs (external factors)

The costs for wages and salaries is the major cost item in the analysed period but in 2017 decreased by 24% compared to 2008-2016 which can be explained with a huge number of small coastal vessels and the big number of unpaid workers. The value of the variables Wages and salaries and Unpaid labour decreased between 2016 and 2017 and decreased also as a percentage of the operating costs by 6% to the period 2008-2016. The energy cost was the second major cost item during the years. The price of fuel is not particularly constant, but from 2014 up to 2016 decreased year by year when in 2017 stay almost stable and in 2018 increased. Between 2016 and 2017, operating costs decreased by 8%. Unfortunately, due to the specifics of the fishing activities in Bulgaria and the seasonal fishing, the sector continues to offer relatively low wages, compared to the other sectors in the country. This is why the larger percentage of vessels` owners perceive fishing as a family work for livelihood, not as a business.

Innovation and Development

In the last years, the basic development in the Bulgarian fleet is based on the gear or engine reparation, as well as on improving terms of fish preservation or processing aiming at increasing product quality and value.

In compliance with the Operational Programme for support from the European Maritime and Fisheries Fund for the development of the Bulgarian fisheries sector for a Programming period 2014-2020, with the aim to ensure the viability and sustainable development of the Bulgarian fisheries sector as well as the protection of its fishing/marine resources. EUR 25 514.5 thousand, i.e., 22.47% of the total OP allocation, aims at ensuring the viability and sustainable development of the Bulgarian fisheries sector as well as the protection of its fishing/marine resources. This includes investments in the modernisation of fishing infrastructure, protection and restoration of marine biodiversity, promotion of innovation, a collection of marine litter, and development of complementary activities /new forms of income for fishers. It could also cover permanent cessation of fishing activities and on board - investments to increase gear selectivity.

Unfortunately, there are still no data for payments to fishers from the Programming period 2014-2020, which is a serious difficulty for those willing to invest in innovations or other activities that they would not be able to achieve with their own funding.

Nowcasts for 2018-19 and outlook

The increasing of average fish prices, together with the decrease in fuel costs are the main driving forces behind the sustainability of the fleet in 2017.

In 2018, 7.6 thousand tonnes of seafood were landed by the Bulgarian fleet, with a value of EUR 5.3 million which is more than the highest value from 2012.

Model forecast

Bear in mind that the model for this year it does not include non-active vessels unlike the forecast from previous years. Preliminary results for 2017 suggest a 7% increase in landed weight and the value increased by a 3%. The price of sea snails for 2017 increased by 4% compared to 2016 which is good for fishers according to the constant demand on the fish market. Other good news for fishers is that the average first sale price for 2017 for the species under quotas, European sprat and turbot also increased by 24% and 19% respectively.

Projections and 2017 preliminary data suggest that increased fuel consumption and a decrease in operating costs (but energy costs increase 5%), together with a reduction in capital costs, does not foster very well the further economic performance improvements in 2017 compared to 2016: gross profit (-28%), and decrease of GVA (-13%). Projections suggest that overall, the fleet operated at a gross profit (EUR 1 million) and generate net profit (EUR 0.7 million) in 2017. The preliminary data shows that

Net profit and net profit margin increased compared to 2016. This situation could be explained by the reduction of cost and the increasing of average fish prices.

Despite the fuel prices increase while fish prices for important species and TAC remain stable, the outcome for 2018 seems favourable. 2017 gains are improved in 2018 with decreasing operating costs and landings could be stable compared to projected 2017 figures. With fuel costs decreasing 4% in 2018, the fleet retains a positive gross profit and net profits of about EUR 1 million due to also lower capital costs.

Data issues

No major data issues were identified during the meeting, and part of them was corrected. Only the differences between the value of landings and the total income still exist as an issue but this is well explained below.

The reason for differences between the value of landings and the total income for some fleet segments in previous years is the use of different data sources. The income from landings is from questionnaires that the owner of every vessel is obliged to provide every year and the value of landings is estimated as multiplied the total weight that was landed by the vessels in the fleet segment by the average price per kilogram. The differences are presented mainly in SSCF segment where a big part of the catch is for self or family consumption and fishers declare very low prices. In the last two years, Bulgaria was working to align the discrepancy between the data from both sources and collected data for 2017 and 2018 is without discrepancies.

Table 5.4 Bulgaria: National fleet statistics and economic performance results. Nowcast figures for 2018 and 2019

		2008	2009	2010	2011	2012	2013	2014	2015	2016	*2017*	*2018*	2019	Trend 2008-2018	Δ 2017 to 2016	Δ 2017 to avg. 08-16
Capacity	Number of vessels	2,548	2,207	2,344	2,345	2,387	2,066	2,011	1,979	1,918	1,897	1,864	1,972		-1%	-14%
	Total vessel power	65,871	60,396	63,525	62,050	62,938	59,088	56,569	55,964	55,983	57,016	54,695			2%	-5%
	Total vessel tonnage	8,276	7,604	7,938	7,512	7,365	6,890	6,443	6,394	6,304	6,284	6,098			0%	-13%
Employment	Engaged crew	811	1,195	1,368	1,344	1,541	1,331	1,517	1,728	1,603	1,947	1,967	1,979		21%	41%
	Unpaid labour										485					
	FTE national	319	441	504	501	544	496	532	608	580	716	717	733		23%	42%
	Total hours worked per year (engaged crew)										522,121					
Effort	Days at sea	9,065	14,491	21,815	18,648	20,618	21,635	21,265	22,709	25,871	25,071	22,624			-3%	28%
	Fishing days	9,065	14,491	21,815	18,648	20,618	21,635	21,265	22,709	25,871	25,071	22,624			-3%	28%
	kW fishing days	5,236,194	8,152,267	8,182,032	7,379,425	6,995,914	8,257,750	7,426,173	16,423,902	27,809,690	1,993,989	2,054,809			-93%	-81%
	GT fishing days	2,316,093	3,229,007	3,370,093	2,889,352	2,569,031	2,784,786	2,548,256	3,716,048	5,088,333	382,137	402,035			-92%	-88%
	Number of fishing trips	9,065	14,491	21,815	18,648	20,618	21,635	21,265	22,709	25,871	25,071	22,624			-3%	28%
	Energy consumption	1,398,828	1,728,468	2,235,251	2,354,298	2,385,986	1,909,690	2,225,345	2,021,024	2,560,042	2,780,045	2,809,752	3,018,078		9%	33%
Landings	Live weight of landings	7,463,493	7,099,834	9,322,344	7,813,166	7,224,627	9,208,137	7,896,514	8,309,019	6,956,588	7,471,578	7,567,603	7,958,870		7%	-6%
	Value of landings	4,870,438	4,416,745	4,192,797	4,475,004	4,904,036	4,424,376	4,334,178	3,773,203	4,628,999	4,761,763	5,281,915	5,551,545		3%	7%
Income	Gross value of landings	4,870,438	4,416,745	4,192,797	4,475,004	4,904,036	4,149,334	3,952,115	4,918,955	5,272,382	4,761,763	5,281,915	5,552,797		-10%	4%
	Other income	1,286,248	1,841,376	2,049,962	1,892,841	2,258,295	2,597,574	1,535,835	2,201,393	143,310	294,464	281,448	294,843		105%	-83%
	Operating subsidies	23,955	48,389	44,762	59,011	41,697	49,920	103,020	35,790	-	-					-100%
	Income from leasing out quota	-	-	-	-	-	-	-	-	-	-					
Expenditure	Personnel costs	1,406,889	1,910,411	2,063,006	2,064,000	2,064,778	2,166,600	2,195,624	1,978,369	1,539,973	1,460,130	1,381,008	1,413,834		-5%	-24%
	Value of unpaid labour	337,703	499,039	549,449	507,315	582,385	816,440	540,197	380,151	141,372	87,869	86,037	85,998		-38%	-82%
	Energy costs	723,144	866,466	1,423,928	1,770,731	1,786,865	1,696,537	1,508,065	1,370,962	1,270,262	1,119,518	1,104,841	1,076,350		-12%	-19%
	Repair & maintenance costs	455,687	564,135	622,832	585,986	611,399	701,562	555,900	550,672	529,116	604,286	598,982	629,174		14%	5%
	Other variable costs	769,066	936,470	1,013,150	941,671	967,987	555,862	492,393	243,573	201,331	158,350	154,954	160,060		-21%	-77%
	Other non-variable costs	154,209	206,831	225,476	215,389	230,375	190,160	244,134	267,315	292,565	206,761	217,769	226,334		-29%	-8%
	Consumption of fixed capital	334,120	408,030	432,841	402,872	458,309	399,623	723,689	425,593	547,338	290,742	305,928	320,171		-47%	-37%
	Lease/rental payments for quota	-	-	-	-	-	-	-	-	-	-					
Indicator	Opportunity cost of capital	-1,432,954	1,066,489	685,793	418,879	448,417	618,278	1,003,068	734,268	667,765	51,132	-218,924	-183,132		-92%	-89%
	Gross Value Added	4,054,580	3,684,219	2,957,374	2,854,067	3,565,706	3,602,788	2,687,458	4,687,826	3,122,419	2,967,312	3,486,817	3,755,722		-5%	-14%
	Net Value Added	5,153,414	2,209,700	1,838,739	2,032,317	2,658,980	2,584,887	960,700	3,527,964	1,907,316	2,625,438	3,399,813	3,618,684		38%	3%
	Gross profit	2,309,988	1,274,768	344,918	282,752	918,543	619,747	-48,363	2,329,306	1,441,075	1,419,313	2,019,771	2,255,891		-2%	35%
	Net profit	3,408,822	-199,751	-773,716	-538,999	11,817	-398,153	-1,775,121	1,169,444	225,972	1,077,438	1,932,767	2,118,852		377%	758%
	Net profit subsidised	3,432,777	-151,362	-728,954	-479,987	53,514	-348,234	-1,672,101	1,205,235	225,972	1,077,438	1,932,767			377%	531%
	Net profit rights	3,432,777	-151,362	-728,954	-479,987	53,514	-348,234	-1,672,101	1,205,235	225,972	1,077,438	1,932,767			377%	531%
Capital	Value of physical capital	24,243,329	23,159,989	23,467,336	22,097,999	21,865,667	20,219,895	19,939,785	20,228,172	18,461,749	12,936,395	13,135,415	13,760,225		-30%	-40%
	Value of quota and other fishing rig	-	-	-	-	-	-	-	-	-	-					
	Investments	3,887,002	5,452,073	6,111,457	5,520,497	5,918,161	7,853,252	3,914,571	5,657,934	457,440	72,395	82,145	89,176		-84%	-99%
	Total assets										27,533,683	25,850,285	26,816,326			
	Long/short debt										96,196					
	Subsidies on investments										-	-	-			

Data source: MS data submissions under the DCF 2019 Fleet Economic (MARE/A3/ASC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

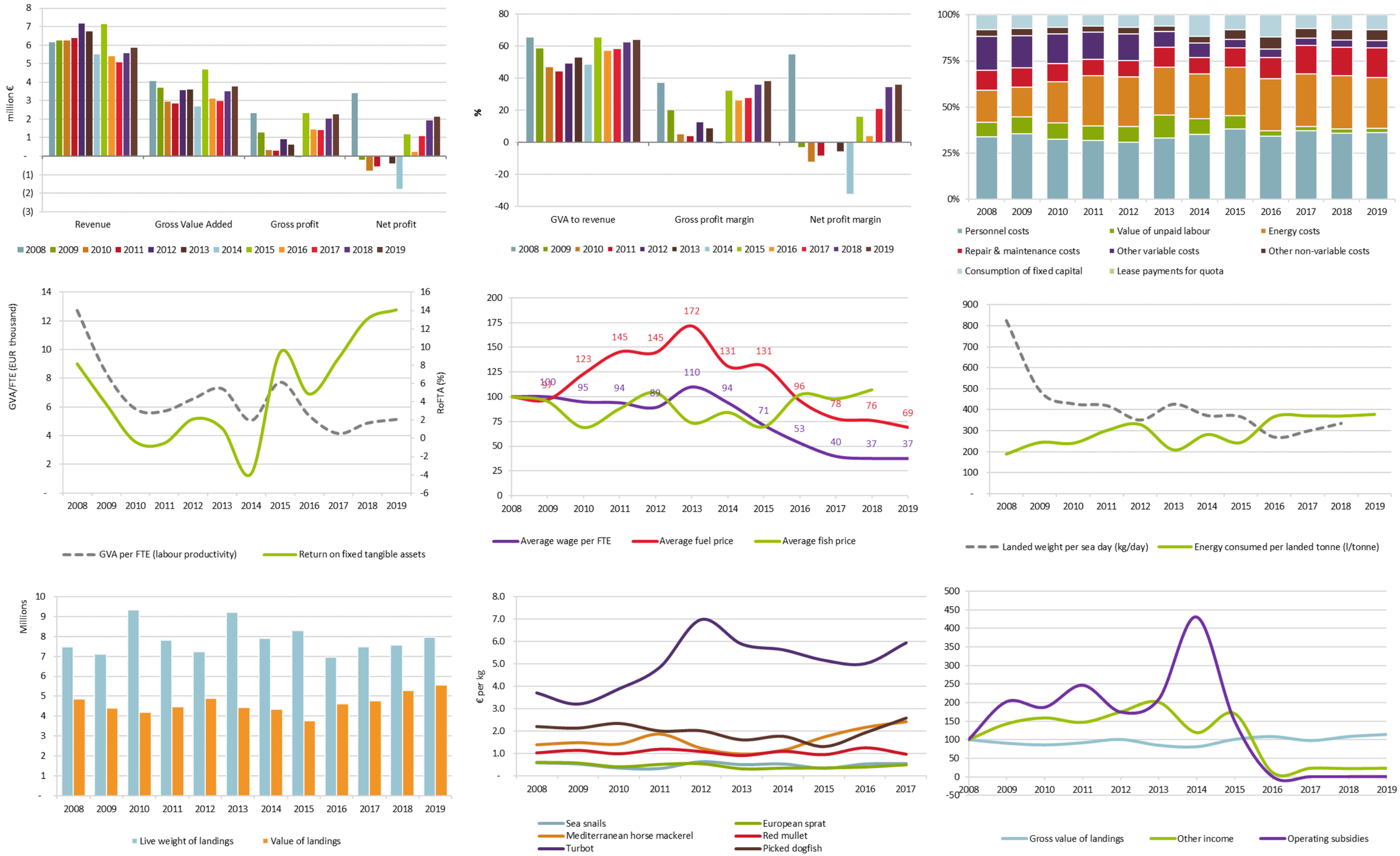


Figure 5.2 Bulgaria: Main trends in economic performance indicators (absolute value, panel 1a/top left and relative value, (panel 1b/top middle); cost structure (panel 1c, top right); productivity (panel 2a); key input/outputs (panel 2b); efficiency (panel 2c); landings (panel 3a); average price (EUR /kg) of top species (panel 3b) and income (panel 3c). Nowcast figures for 2018 and 2019

Data source: MS data submissions under the DCF 2019 Fleet Economic (MARE/A3/ASC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Table 5.5 Bulgaria: National fleet statistics and economic performance results by fleet segment, 2017

	Number of vessels	FTE national	Days at sea	Energy consumed per landed tonne	Live weight of landings	Value of landings	Revenue	Gross Value Added	GVA to revenue	Gross profit	Gross profit margin	Net profit	Net profit margin	Average wage per FTE	GVA per FTE (labour productivity)	Return on fixed tangible assets	Profitability (2017)	Net profit margin %Δ 2017 - average (2008-16)	Economic development trend	As a % of total revenue
BGR MBS TM 2440 NGI	11	54	1,618	268	2,333,124	1,278,890	1,278,890	828,517	64.8	589,744	46.11	530,619	41.49	4,434	15,386	23.7	High	38%	Improved	25%
BGR MBS PMP1218 NGI*	25	56	2,338	461	1,301,483	898,894	901,044	606,626	67.3	453,330	50.31	424,251	47.08	2,737	10,832	24.2	High			18%
BGR MBS PMP0612 NGI	195	112	6,868	271	1,070,436	612,439	622,885	316,236	50.8	79,101	12.70	38,438	6.17	2,126	2,836	3.4	Weak	-68%	Deteriorated	12%
BGR MBS TM 1218 NGI*	23	45	1,699	637	688,069	521,599	551,949	284,463	51.5	142,818	25.88	103,924	18.83	3,128	6,281	6.5	Reasonable	144%	Improved	11%
BGR MBS TM 1824 NGI	8	25	900	431	756,551	440,773	449,068	220,372	49.1	152,718	34.01	124,954	27.83	2,703	8,806	13.0	High	66%	Improved	9%
BGR MBS PMP0006 NGI	82	47	2,584	122	606,531	334,511	334,511	209,522	62.6	- 109,150	- 32.63	- 115,804	- 34.62	6,746	4,435	- 50.9	Weak	-19%	Deteriorated	7%
BGR MBS DFN1218 NGI*	12	21	633	1,918	80,776	113,788	217,306	161,081	74.1	103,909	47.82	99,708	45.88	2,677	7,543	17.2	High	170%	Improved	4%
BGR MBS TBB1218 NGI*	9	15	605	302	316,744	186,444	214,608	164,307	76.6	135,614	63.19	105,381	49.10	1,954	11,189	32.6	High			4%
BGR MBS DFN0612 NGI	400	142	3,574	1,499	51,954	69,841	157,540	- 23,330	- 14.8	- 172,395	- 109.43	- 228,580	- 145.09	1,053	- 165	- 10.5	Weak	-5150%	Deteriorated	3%
BGR MBS PS 0006 NGI*	16	9	259	301	55,167	122,523	122,523	120,175	98.1	118,024	96.33	115,405	94.19	227	12,677	772.2	High	393%	Improved	2%
BGR MBS FPO0612 NGI*	42	33	547	65	140,655	105,701	106,060	77,271	72.9	22,035	20.78	17,242	16.26	1,668	2,334	6.7	Reasonable			2%
BGR MBS DFN0006 NGI	260	92	2,102	730	53,208	34,690	50,728	- 6,303	- 12.4	- 63,842	- 125.85	- 86,891	- 171.29	626	- 69	- 12.5	Weak	-177%	Deteriorated	1%
BGR MBS HOK0612 NGI*	98	35	813	1,770	13,104	33,582	38,088	16,557	43.5	- 13,649	- 35.84	- 23,222	- 60.97	868	476	- 5.6	Weak			1%
BGR MBS PGP0612 NGI	38	10	158	1,560	2,233	5,400	5,400	- 719	- 13.3	- 3,215	- 59.54	- 4,340	- 80.37	255	- 73	- 2.9	Weak			0%
BGR MBS HOK0006 NGI	50	14	293	4,111	1,354	2,397	4,240	- 5,313	- 125.3	- 11,381	- 268.40	- 16,996	- 400.84	430	- 377	- 13.2	Weak	45%	Improved	0%
BGR MBS PGP0006 NGI	26	6	80	6,277	188	291	1,386	- 2,151	- 155.1	- 4,348	- 313.59	- 6,650	- 479.67	351	- 344	- 11.1	Weak			0%

Data source: MS data submissions under the DCF 2019 Fleet Economic (MARE/A3/ASC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Table 5.6 Bulgaria: Landed value, weight and average price of principal species

	Value of landings (real) (thousand €)										Live weight of landings kg										Average landed price (real) (€)										% over total	
	2008	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**in EUR**	**in weight**
Sea snails	1.7	1.2	1.7	1.0	2.4	2.4	2.5	1.4	1.8	2.0	2,863,438	2,211,281	4,824,626	3,116,743	3,793,255	4,819,007	4,732,411	4,100,585	3,435,348	3,653,149	0.6	0.5	0.4	0.3	0.6	0.5	0.5	0.3	0.5	0.6	42%	49%
European sprat	2.7	2.7	1.7	2.1	1.6	1.2	0.8	1.2	0.9	1.6	4,299,720	4,533,824	4,026,918	3,954,515	2,830,413	3,784,682	2,279,108	3,296,994	2,295,494	3,188,950	0.6	0.6	0.4	0.5	0.6	0.3	0.4	0.4	0.4	0.5	34%	43%
Mediterranean horse	0.2	0.3	0.2	0.7	0.5	0.3	0.1	0.2	0.4	0.4	160,789	176,814	164,995	394,736	381,486	268,000	113,074	87,178	166,160	153,482	1.4	1.5	1.4	1.9	1.3	1.0	1.2	1.7	2.2	2.4	8%	2%
Red mullet	0.0	0.1	0.1	0.3	0.2	0.2	0.4	0.6	1.1	0.4	18,681	72,116	110,408	208,978	144,163	256,192	328,816	635,749	880,227	374,621	1.0	1.1	1.0	1.2	1.1	0.9	1.1	1.0	1.3	1.0	8%	5%
Turbot	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.3	54,369	52,107	46,243	37,726	36,378	39,360	39,450	43,006	42,432	41,771	3.7	3.2	3.9	4.9	7.0	5.9	5.6	5.2	5.0	5.9	5%	1%
Picked dogfish	0.0	0.0	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.1	20,258	9,210	77,133	81,037	28,673	30,964	34,010	133,042	83,479	50,451	2.2	2.1	2.3	2.0	2.0	1.6	1.8	1.3	1.9	2.6	3%	1%
Whiting	-	-	0.0	-	-					-	450	2,292	14,663	1,380	1,444					5,571	1.4	0.8	1.1	0.8	0.6					0.7	0%	0%
European anchovy	0.0	0.1	0.1	0.0	0.0	0.0	0.2	0.0	0.1	-	27,663	42,191	57,357	18,051	8,816	9,932	369,646	12,466	53,447	3,583	0.7	1.1	1.2	0.8	0.9	0.5	0.6	0.7	1.1	1.1	100%	100%

Data source: MS data submissions under the DCF 2019 Fleet Economic (MARE/A3/ASC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

5.3 Croatia

Short description of the national fleet

Fleet capacity

Croatian national fleet, which operates solely in the Adriatic Sea, in 2018 consisted of 7 731 vessels with a combined gross tonnage (GT) of 46 thousand tonnes, a total power of 360.88 thousand kilowatts (kW) and an average age of 37.7 years. The average length of the fishing vessels was 6.89 metres in the same year. Compared to its highest values in 2015 capacity of the fleet decreased between 2015 and 2018; the number of vessels by 2% and GT and kW by 14% and 16%, respectively. The major factors causing the fleet to decrease is the scrapping of PS, DTS and DRB vessels.

Fleet structure

The Croatian fleet is divided to the main commercial fleet and a category of small-scale artisanal coastal fisheries for personal needs consisting of some 3 500 vessels, and defined by national legislation. Pursuant to the accession negotiations, 3 500 small-scale vessels were transferred into the commercial SSCF in 2015. Although in the commercial fleet, the vessels are mostly operating for personal needs and are kept as a separate category, with specific requirements and constrains. Out of 6 052 active vessels in 2017, 5 085 vessels are small-scale and 967 large-scale vessels. While the active small-scale vessels constitute 84% of the active fleet, their contribution in gross tonnage is less than 25% and in engine power 46%.

Employment

In 2017, the number of fishing enterprises totalled 6 288, with the majority (88%), owning a single vessel. Almost 12% of the enterprises owned two to five fishing vessels and only 5 enterprises owned six or more vessels.

Total number of crew on board was estimated at 7 890 in 2017, corresponding to 3 330 FTEs. The level of employment is steadily increasing since 2012 to 2017, and compared to 2016 employment increased by 9%. As the need for labour is increasing, especially during the tourist season, an annual quota of 540 licenses for the employment of foreigners workers was approved for 2019 according to the Government Decision from December 2018.

Effort

In total 236 thousand days were spent at sea in 2017. In line with the limitation of effort for purse seiners for small-pelagic fish and temporal cessation in pelagic and demersal fishery a significant decrease of days-at-sea compared to 2014 is evident in LSF segment which is continued in 2018 (-9%). The quantity of fuel consumed in 2017 totalled 23.34 million litres, decreasing by 6% compared to 2016, in correlation to the decrease in the number of days at sea. The fleet operates exclusively in the Northern Adriatic, GSA 17.

Production

The overall landing of seafood has been slowly decreasing since 2014 due to management measures. While compared to 2014 when at its highest landings decreased 13% to 68.87 thousand tonnes of seafood in 2017, at the same time landed value has decreased by 9% amounting to EUR 55.91 million in 2017. Preliminary results indicate that a similar situation is continued in 2018, where landings remained below 70 thousand tonnes but the landing value increased to EUR 59.4 million.

Small pelagic species targeted in purse seine fisheries, of which sardine and anchovy are most important, by far dominate the overall structure and account for 87% of total landing weight in 2017. Small pelagic species are also the most important species in terms of value, accounting for over 50% of total landing value. On the other hand, species targeted by demersal trawling, red mullet, Norway lobster and hake, account for less than 2,6% in terms of quantity, but 12.6% in terms of the value. In 2017 the most important fleet segment in terms of contribution to total landings is purse seines from 24 to 40 meters LoA. This fleet segment accounts for 57% of landings in 2017. Overall, purse seine segments make up 91% of Croatian landings, and are managed under the provisions of a multiannual management plan for small pelagic in GSA 17 as adopted under the GFCM. As of October 2014, further restrictions apply in this regard, with limitations of days-at-sea and increased provisions on recording, and from 2017 catch limitations.

Economic results for 2017 and recent trends

National fleet performance

In 2017, the economic performance of the overall fleet improved compared to previous years.

The total amount of Gross Value Added (GVA) and gross profit increased to EUR 48.5 million and EUR 26.1 million, respectively while net profit increased to EUR 11.3 million.

In 2017, revenue was estimated at EUR 81.38 million, an increase of 23% since 2015 confirming a positive trend in the last year.

Total expenditures amounted to EUR 73.76 million in 2017, with the change in the cost structure where there is significant decrease in fixed costs related primarily to small scale PGP segment. Wages and salaries remained most important with 34% and followed by energy costs with 22% of all costs.

The tangible asset value of the fleet continued to decrease in 2017, amounting to EUR 370.3 million. Investments decreased by 15% in 2017 and amounted to EUR 8.2 million.

Resource productivity and efficiency indicators

The gross profit in 2017 was EUR 26.13 million, net profit margin was estimated at 14%. The Rate of Return on Fixed Tangible Assets (RoFTA) increased in 2017 to 4,5%.

Labour productivity (GVA/FTE) increased to EUR 29 thousand, FTE decreased by 36%, and GVA increased by 58% to EUR 48.5 million.

Energy consumption per landed tonne remained stable with value of 339 litres/tonne in comparison to 344 in 2016, while landed weight per sea day decreased to 291 kg/day in 2017.

Performance by fishing activity

Although more than 110 species are caught commercially in Croatia, six species account for more than 90% of the total landing weight: European pilchard, European anchovy, European hake, Norway lobster, Deep-water rose shrimp and Common sole. European pilchard has the highest landing value (EUR 18.1 million), followed by European anchovy (EUR 10.1 million), European hake (EUR 3.6 million) and Norway lobster (EUR 2.9 million). This fact indicates very high dependency of fleet segments targeting these species and also high sensitivity on any management measures related to these species.

Small-scale coastal fleet

Small-scale coastal fleet of vessels of less than 12 metres' length overall consisting mainly of vessels using passive gears, is not economically significant, however it is of significant social importance due to the large number of vessels and corresponding FTE. Small-scale coastal fleet segments, with 5 085 active vessels cover 84% of active vessels in 2017 and 1.8% of landings in 2017. Average length of these vessels is only 7m and average age 35 years, which limits their fishing activities to fishing grounds near the port and to one-day fishing trips. Days-at-sea have a distinct seasonal character, especially for passive gears, depending on migration of target species to the inner sea during the warmer period, but also depending on other integrated activities – tourism, transport or agriculture.

In 2017, the total value of landings of small-scale fishery was EUR 7.43 million, covering 13% of total value of landings. Most of small-scale fisheries catch is sold on the local market, and income is often used as the addition to the home budget. This is the main reason for negative economic indicators in these segments, but for some fishers in these segments, commercial benefit in not even a priority since they have other sources of income.

The most prominent fleet segments with an important traditional and social character within the small-scale fisheries are the segments using fixed nets.

Even though low profitability is indicated for the fleet, with very low landing values, fixed nets segments are considered to be primarily highly artisanal and important in terms of social and economic elements for local population and communities.

Performance results of selected fleet segments

In 2017, the most important fleet segment in terms of landing percentage was purse seiners (PS, over 91% of total landings), whereas the largest number of vessels were active in fixed nets segment (DFN, in Croatia fixed nets – gill nets and trammel nets, 998 active vessels). In terms of landing of demersal

fish most important segment is DTS VL1218 with 41% of total DTS landing. In PS segments, most significant are PS VL2440 with 59% and PS VL1824 with 32% of total PS landings.

Purse seine 24-40m

73 active vessels targeting sardine and anchovy and operating predominantly in GSA 17. This segment is employing 31% of total FTE, and it has value of landing amounted to EUR 17.5 million, 23% of total national revenue. It reported a gross profit of EUR 2.4 million and a net loss of EUR 1.8 million in 2017. Its GVA is EUR 10.8 million, and it has average wage per FTE of EUR 16.4 thousand.

Purse seine 18-24m

49 active vessels operating predominantly in GSA 17, and targeting mostly sardine and anchovy. This segment is employing 17% of total FTE, and its landings amounts to EUR 9.5 million, representing 12% of total revenue. Positive gross profit of EUR 2.7 million is reported with net profit of EUR 1.2 million in 2017. Average crew wage per FTE was EUR 13.4 thousand.

Demersal trawl 12-18m

169 active vessels, operating in GSA 17 and targeting different demersal species, mostly European hake, Norway lobster, Red mullet and Deep-water rose shrimp. This segment is employing 9% of total FTE, and it has EUR 5.6 million value of landing, representing 11% of total of total revenue. It reported a positive gross profit of EUR 2.9 million, and a net profit of EUR 1.7 million in 2017. Average crew wage per FTE was EUR 11 thousand.

Drift and fixed nets 6-12m

667 active vessels, operating predominantly in coastal areas, targeting different species and using fixed nets and longlines. This segment is employing 6% of total FTE, and in 2017 it had value of landing of EUR 3.6 million, representing 10% of total revenue. It reported a positive gross profit of EUR 3.4 million and a net profit of EUR 2.4 million in 2017. Average crew wage per FTE was EUR 14.3 thousand.

Drivers affecting the economic performance trends

Markets and Trade

Market is mostly domestic, with an important influence of the Italian market on domestic prices. In 2017, the average price remained stable at 0.81 EUR/kg; of the top six commercially most important species Norway lobster and Common sole have the highest prices (respectively 14.6 and 7.9 EUR/kg), while European pilchard and European anchovy are sold at relatively low prices (respectively 0.4 and 0.9 EUR /kg). The domestic market is still slow to adapt to the EU market in terms of competitiveness and prices, however higher prices are achieved in direct sales activities in local markets.

A high influence on fish prices of small pelagic species has the product destination. As Croatia is a bluefin tuna farming country, meaning that all bluefin tuna caught by purse seiners is transferred to cages for farming, and a large quantity of small pelagic fish landed on the landing sites is designated for tuna feeding. The small pelagics intended for tuna feeding are declared with low prices in the sales notes. These low prices have a minimizing effect on the average price of small pelagic fish. For the purpose of tuna feeding Croatia has a pronounced import of haring from other countries.

Operating costs

It can be noticed that trends from the five-year period are followed in the terms of share of wages and salaries, and energy costs in total costs. In 2017, share of energy cost of 22% remained stable compared to the average in the period 2012-2016 of 23%. At the same time share of wages and salaries increased to 34%, compared to 31% in 2016. This is in line with trend of increase of average wage and increase of efficiency of vessels. Other costs such as repair and maintenance, unpaid labour and other variable cost have been stable over period accounting for 9%, less than 1% and 13%, respectively, in 2017.

Management instruments

Croatian fleet in managed through the capacity and effort limitations, as well as though time and spatial restrictions. Effort regulations is related to restrictions on issuing fishing licences and transfer of fishing rights from one license to other in terms of permitted fishing gears or fishing zones as well as through issuing additional authorisations for fisheries under management plans. This system is preventing

increase of fishing effort related to fishing gear or fishing zone, or even subzone. Capacity limitation is related to increase of vessel power and length in terms of total national fleet capacity and total capacity for specific fisheries. Besides that, by the national regulations there are restrictions related to transfer of effort between fishing zones of inner and outer fishing sea preventing increase of effort in the most vulnerable areas of inner sea. Spatial and temporal closures have been used in the past years for management of purse seine and trawling fishery. In the recent period this has become effective measure in preventing catch of smaller categories of small pelagic as well as in protection of areas important for recruitment of target species.

In addition to the aforementioned, from 2014 GFCM management plan for small pelagic fish in GSA 17 has been in force. By the provisions of this plan maximum number of fishing days for targeting sardine and anchovy has been set, as well as temporal closure period. Given the full implementation of these measures and additional national restrictions implemented for protection of small pelagic, the total number of days-at-sea will probably decrease further in the future.

In 2015, Italy and Croatia adopted joint management measures at the national level establishing no-take zone for bottom trawls in the area of Jabuka/Pomo pit. This regime was introduced from July 2015 to October 2016 after which regime was modified and more stringent regime has been established for the three-year period. On the top of national legislations this new regime was also transposed into GFCM Recommendation 41/2017/3 on the establishment of a fisheries restricted area in the Jabuka/Pomo Pit in the Adriatic Sea.

Status of key stocks, TACs and quotas

Having in mind that fishery in Croatia is based on effort management, only bluefin tuna and swordfish fishery is restricted by TAC. Annual quota has been set by ICCAT and allocated by the national allocation key. At the national level total quota is allocated to purse seine fishery for farming purposes, hand lines and recreational fishery. Total Croatian quota for 2016 was 551.2 tonnes and 661.8 tonnes for 2017 with an increasing trend. Since almost all BFT catch is intended for farming purposes it has very limited influence on the economics of PS fleet.

In terms of landing weight most important stock for Croatian fishery are sardine and anchovy which contribute with 67% (sardine) and 15% (anchovy) to total landing weight in 2017.

Improvements and Development

After Croatian accession to the EU in 2013, and changes that followed due to a full implementation of Mediterranean regulation, number for 2017 still cannot be considered as stabile. In first order this is because of the process of permanent cessation which is ongoing by the end of 2017 and which will affect large scale fleet of purse seins and bottom trawlers, but also due to a process of inclusion of large number of vessels in the small scale PGP segment. It should be noted that economic and fishing activity data analysis for the PGP segment should be taken with caution, as the fleet was mostly inactive in 2015 and with limited activity in 2016 and 2017. It is expected that in 2017, after all remaining licences have been issued, and entire fleet segment shows its activity potential, the real potential of the segment shall be known. It is expected that economic and fishing activity data analysis of the segment shall be improved in the following years. In connection to the progressive, but still limited, increase of the fishing activities, an overall increasing trend is expected in the values of fishing activity and economic data. Nevertheless, these vessels due to a large number have visible impact on the performance of the all fleet.

Investments over the segments are based on the gear or engine reparation, as well as on improving terms of fish preservation or processing aiming at increasing product quality and value. This trend can be expected in the future as well in line with EMFF and Operational program. In 2016 GFCM adopted Recommendation GFCM/40/2016/3 with additional restricting measures for 2017 and 2018 for small pelagic fisheries in Adriatic. It should also be mentioned that in 2017 EC presented a proposal for Multiannual plan for small pelagic stocks in the Adriatic Sea and the fisheries exploiting those stocks. This plan is still in the pipeline but it can be expected that it will have significant impact on Croatian national fleet and fisheries. As for the demersal fleet, it can be expected that adoption of FRA in the Jabuka/Pomo pit will have limited impact on the large scale DTS fleet.

Socio-economic impact

Overexploitation and management measures implemented as a result of the stocks status remains to have a significant influence on the economic performance of the sector. This is truth primarily for small pelagic fleets which have been under strong restrictions from 2015. These were also followed with appropriate measures from the EMMFF which compensate their effect to certain level. As the sector is heavily dependent on small-pelagic fish the effects of management measures, mainly temporary and

permanent cessation of fishing activities, is expected to have a positive impact as Croatia intends to continue with the measures provided within the framework of the EMFF. In addition, Croatia intends to reduce fishing effort through diversification of activities. Same measures have been implemented in the demersal fishery. Assuming that fuel prices remain fairly constant and fish prices continue to increase, the effects of conservation measures are expected to have a positive long-term impact on the general recovery of the sector.

Nowcasts for 2018-19 and outlook

Preliminary results for 2018 suggest that total landed weight remained constant, but followed by an increase of value of landing compared to 2017. Effort restrictions in the purse seine fishery continue to yields results according to preliminary data and projections for 2018 which indicate a significant drop in energy consumption and energy costs, same as in cost of crew wages and salaries. At the same time projections of economic indicators are showing similar results to 2017. However, this needs to be taken with caution since they are under significant influence by the small scale non-commercial fleet.

Concerning the future period, beyond 2019, status of stocks and MSY obligation, it can be expected that the main characteristic of fishery will be reduction of fishing effort in PS and DTS fleets. Regarding the process of introduction of multiannual management plan for small pelagic species in the Adriatic it can be assumed that PS segments will be affected the most.

Data issues

All fleet segments with major contribution to the total catches of the Croatian fleet have been sampled with satisfactory response rates.

As regards to the 3 500 small-scale vessels which were transferred into the commercial SSCF in 2015, all these vessels fall under the polyvalent passive gears segment (PGP), but these fishers are not full-time engaged in the fishery and most of them had very limited activity in 2015-2017. It should be noted that economic and fishing activity data analysis for 2015 and 2016 for the PGP segment should be taken with caution, as the fleet was mostly inactive in 2015 and with limited activity in 2016 and 2017. It is expected that for 2018, after all remaining licences have been issued, and entire fleet segment shows its activity potential, the real potential of the segment shall be known. Therefore, it is expected that economic and fishing activity data analysis of the segment shall be improved in the following years.

Table 5.7 Croatia: National fleet statistics and economic performance results. Nowcast figures for 2018 and 2019

		2012	2013	2014	2015	2016	*2017*	*2018*	2019	Trend 2012-2018	Δ 2017 to 2016	Δ 2017 to avg. 12-16
Capacity	Number of vessels	4,211	4,358	4,385	7,849	7,746	8,349	7,731	7,504		8%	46%
	Total vessel power	329,694	346,247	347,927	429,746	387,602	386,831	360,883			0%	5%
	Total vessel tonnage	45,204	46,034	46,104	53,812	49,158	48,840	46,049			-1%	2%
Employment	Engaged crew	4,904	4,962	4,800	4,728	7,227	7,890	7,507	7,432		9%	48%
	Unpaid labour						4,135					
	FTE national	2,467	2,448	2,151	2,591	2,611	1,665	1,504	1,454		-36%	-32%
	Total hours worked per year (engaged crew)						3,470,343					
Effort	Days at sea	235,504	240,354	241,236	241,992	234,806	236,444	249,280			1%	-1%
	Fishing days	201,105	204,038	206,058	206,701	204,320	205,660	213,507			1%	1%
	kW fishing days	23,177,249	24,597,085	24,726,975	23,685,713	24,826,071	24,757,377	23,908,599			0%	2%
	GT fishing days	3,946,895	4,221,286	4,183,566	3,879,720	4,236,116	4,079,747	3,813,674			-4%	0%
	Number of fishing trips	194,296	198,954	202,752	204,772	222,006	224,298	242,710			1%	10%
	Energy consumption	24,521,310	24,566,458	24,199,782	25,468,532	24,891,269	23,341,713	22,117,393	21,001,521		-6%	-6%
Landings	Live weight of landings	63,137,593	74,918,170	79,407,848	72,906,818	72,323,646	68,874,717	69,360,297	65,985,152		-5%	-5%
	Value of landings	48,880,103	60,556,561	61,529,263	60,995,290	58,418,537	55,912,795	59,368,110	56,622,588		-4%	-4%
Income	Gross value of landings	48,880,103	60,556,561	61,529,263	60,995,290	58,418,537	55,912,795	50,053,939	48,863,495		-4%	-4%
	Other income	5,518,635	12,410,946	15,637,672	6,541,117	7,768,428	25,467,346	24,087,418	23,697,004		228%	166%
	Operating subsidies	9,924,439	2,695,289	8,036,279	5,503,705	17,181,598	5,493,124				-68%	-37%
	Income from leasing out quota	583,620	407,825	348,840	636,103	441,169	285,150				-35%	-41%
Expenditure	Personnel costs	18,314,392	19,144,622	20,587,748	26,878,310	22,961,728	22,078,724	20,141,094	19,651,361		-4%	2%
	Value of unpaid labour	703,751	1,341,879	2,197,402	3,076,383	2,440,480	303,609	287,721	285,041		-88%	-84%
	Energy costs	20,430,963	19,818,683	19,194,101	16,145,486	13,150,860	14,388,871	13,017,857	13,038,922		9%	-19%
	Repair & maintenance costs	6,902,476	6,220,901	6,453,558	8,777,878	7,550,963	5,734,880	5,181,920	5,018,353		-24%	-20%
	Other variable costs	8,306,172	10,338,222	7,224,368	8,778,063	7,969,319	8,234,464	7,531,013	7,342,787		3%	-3%
	Other non-variable costs	6,739,865	5,817,637	7,011,161	6,474,599	6,726,256	4,511,647	4,117,808	4,001,611		-33%	-31%
	Consumption of fixed capital	14,348,433	12,942,721	14,169,465	10,745,688	12,501,545	9,463,225	8,521,328	8,253,030		-24%	-27%
	Lease/rental payments for quota	205,707	92,229	347,266	284,400	462,304	203,538				-56%	-27%
Indicator	Opportunity cost of capital	9,919,748	8,295,337	15,117,153	16,182,313	15,457,912	5,373,926	1,929,146	3,639,614		-65%	-59%
	Gross Value Added	12,019,262	30,772,065	37,283,746	27,360,381	30,789,569	48,510,279	44,292,759	43,158,826		58%	75%
	Gross profit	- 6,998,882	10,285,564	14,498,597	- 2,594,312	5,387,361	26,127,946	23,863,944	23,222,424		385%	535%
	Net profit	- 31,267,063	- 10,952,495	- 14,788,022	- 29,522,313	- 22,572,096	11,290,794	13,413,471	11,329,780		150%	152%
	Net profit subsidised	- 21,342,624	- 8,257,206	- 6,751,743	- 24,018,608	- 5,390,498	16,783,917	13,413,471			411%	228%
	Net profit rights	- 20,964,712	- 7,941,610	- 6,750,170	- 23,666,905	- 5,411,633	16,865,529	13,413,471			412%	230%
Capital	Value of physical capital	375,715,013	356,560,088	393,438,640	419,058,870	375,676,390	370,325,677	343,861,736	331,919,662		-1%	-4%
	Value of quota and other fishing rights						-					
	Investments	6,705,628	9,115,724	7,430,798	7,770,534	9,655,795	8,169,409	7,496,100	7,313,265		-15%	0%
	Total assets						152,613,902	139,690,521	136,137,300			
	Long/short debt						32,433,203					
	Subsidies on investments						-	-	-			

Data source: MS data submissions under the DCF 2019 Fleet Economic (MARE/A3/ASC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Figure 5.3 Croatia: Main trends in economic performance indicators (absolute value, panel 1a/top left and relative value, (panel 1b/top middle); cost structure (panel 1c, top right); productivity (panel 2a); key input/outputs (panel 2b); efficiency (panel 2c); landings (panel 3a); average price (EUR /kg) of top species (panel 3b) and income (panel 3c). Nowcast figures for 2018 and 2019

Data source: MS data submissions under the DCF 2019 Fleet Economic (MARE/A3/ASC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Table 5.8 Croatia: National fleet statistics and economic performance results by fleet segment, 2017

	Number of vessels	FTE national	Days at sea	Energy consumed per landed tonne	Live weight of landings	Value of landings	Revenue	Gross Value Added	GVA to revenue	Gross profit	Gross profit margin	Net profit	Net profit margin	Average wage per FTE	GVA per FTE (labour productivity)	Return on fixed tangible assets	Profitability (2017)	Net profit margin %Δ 2017 - average (2008-16)	Economic development trend	As a % of total revenue
HRV MBS PS 2440 NGI	73	515	11,578	147	37,148,517	17,548,801	18,914,240	10,882,799	57.5	2,402,938	12.70	-1,856,369	- 9.81	16,466	21,132	- 0.5	Weak			23%
HRV MBS PS 1824 NGI	49	278	7,856	125	19,796,245	9,554,590	10,153,654	6,423,305	63.3	2,700,888	26.60	1,220,750	12.02	13,393	23,111	5.3	Reasonable	181%	Improved	12%
HRV MBS DTS1218 NGI*	169	147	18,731	2,446	1,776,506	5,678,959	8,748,710	4,533,266	51.8	2,901,692	33.17	1,723,511	19.70	11,105	30,855	8.4	Reasonable			11%
HRV MBS DFN0612 NGI*	667	106	62,683	2,102	599,949	3,666,251	8,084,883	4,987,776	61.7	3,467,645	42.89	2,408,001	29.78	14,365	47,133	15.1	High			10%
HRV MBS HOK0612 NGI*	233	39	15,254	2,705	247,294	1,501,818	7,340,257	5,912,948	80.6	5,168,365	70.41	4,394,222	59.86	19,052	151,297	60.2	High	435%	Improved	9%
HRV MBS MGO0006 NGI	268	68	18,784	207	358,484	1,914,150	5,741,436	3,965,353	69.1	3,296,827	57.42	2,897,237	50.46	9,849	58,418	176.5	High	706%	Improved	7%
HRV MBS DTS0612 NGI*	166	101	16,332	2,127	905,536	2,889,080	5,092,621	3,051,379	59.9	2,260,296	44.38	1,799,249	35.33	7,797	30,073	18.0	High			6%
HRV MBS DTS1824 NGI	30	79	4,981	2,905	950,202	3,350,114	3,641,616	1,327,625	36.5	520,093	14.28	- 25,163	- 0.69	10,198	16,766	1.3	Weak	98%	Improved	4%
HRV MBS PS 1218 NGI	31	87	4,052	121	5,188,947	2,421,353	2,519,920	1,446,306	57.4	440,824	17.49	- 60,656	- 2.41	11,512	16,559	0.3	Weak	91%	Improved	3%
HRV MBS DTS2440 NGI	13	39	2,240	2,670	678,032	2,461,830	2,461,830	763,677	31.0	198,244	8.05	- 637,332	- 25.89	14,549	19,650	- 3.4	Weak	50%	Improved	3%
HRV MBS FPO0612 NGI*	112	7	10,540	3,584	67,449	744,253	1,530,245	983,877	64.3	766,751	50.11	582,748	38.08	30,300	137,300	23.4	High	171%	Improved	2%
HRV MBS HOK0006 NGI	81	1	3,745	1,614	19,237	117,747	1,414,232	1,326,270	93.8	1,270,565	89.84	1,179,374	83.39	54,849	1,305,898	333.3	High	153%	Improved	2%
HRV MBS DFN0006 NGI	313	26	27,154	616	181,036	797,546	1,314,842	876,210	66.6	457,039	34.76	300,285	22.84	15,845	33,122	13.8	High	138%	Improved	2%
HRV MBS DRB1218 NGI*	30	50	3,560	2,276	305,160	1,244,648	1,264,862	448,418	35.5	- 174,847	- 13.82	- 375,402	- 29.68	12,410	8,929	- 7.1	Weak	-557%	Deteriorated	2%
HRV MBS MGO0612 NGI	72	40	6,611	1,887	109,221	434,744	996,764	527,612	52.9	239,478	24.03	83,458	8.37	7,272	13,317	5.8	Weak	113%	Improved	1%
HRV MBS PS 0612 NGI*	35	24	3,413	507	300,174	388,957	689,190	428,124	62.1	212,811	30.88	108,073	15.68	9,113	18,119	7.9	Reasonable	125%	Improved	1%
HRV MBS DFN1218 NGI	18	10	1,314	2,570	42,077	283,367	420,043	218,060	51.9	96,910	23.07	16,342	3.89	12,549	22,587	2.5	Weak	107%	Improved	1%
HRV MBS PMP0612 NGI	41	22	3,900	1,704	68,611	243,243	379,454	207,507	54.7	79,393	20.92	- 4,253	- 1.12	5,738	9,294	1.0	Weak	99%	Improved	0%
HRV MBS DRB0612 NGI	13	11	1,325	2,464	74,046	312,059	312,059	135,826	43.5	61,112	19.58	19,377	6.21	6,896	12,537	3.4	Weak	-74%	Deteriorated	0%
HRV MBS FPO0006 NGI	43	2	3,088	2,067	19,237	142,784	142,784	67,294	47.1	- 23,940	- 16.77	- 45,571	- 31.92	43,856	32,348	- 9.9	Weak	-324%	Deteriorated	0%
HRV MBS PGP0612 NGI*	780	1	3,841	2,529	17,243	121,755	121,755	39,244	32.2	- 38,539	- 31.65	- 330,177	- 271.18	122,032	61,569	- 0.9	Weak			0%
HRV MBS PMP0006 NGI	29	2	1,561	691	9,999	57,180	57,180	44,267	77.4	- 13,058	- 22.84	- 26,589	- 46.50	37,406	28,886	- 16.4	Weak	82%	Improved	0%
HRV MBS PGP0006 NGI*	2,786	11	3,901	297	11,512	37,565	37,565	- 86,866	- 231.2	- 163,541	- 435.36	- 707,212	- 1,882.66	7,264	- 8,229	- 2.1	Weak			0%

Data source: MS data submissions under the DCF 2019 Fleet Economic (MARE/A3/ASC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Table 5.9 Croatia: Landed value, weight and average price of principal species

	Value of landings (real) (thousand €)						Live weight of landings kg						Average landed price (real) (€)						% over total	
	2012	2013	2014	2015	2016	2017	2012	2013	2014	2015	2016	2017	2012	2013	2014	2015	2016	2017	in EUR	in weight
European pilchard(=Sa	18.2	22.9	23.6	19.5	20.9	18.1	46,643,893	56,896,350	60,974,451	51,729,582	54,368,332	48,333,440	0.4	0.4	0.4	0.4	0.4	0.4	32%	67%
European anchovy	6.6	8.9	7.7	10.8	7.8	10.0	9,025,811	10,059,960	10,122,849	12,785,111	8,235,780	10,880,350	0.7	0.9	0.8	0.9	1.0	0.9	18%	15%
European hake	3.3	3.9	3.3	2.9	2.8	3.6	899,937	1,125,975	897,493	771,105	753,026	927,994	3.6	3.5	3.6	3.8	3.7	3.9	6%	1%
Norway lobster	2.8	3.6	3.7	3.6	3.0	2.9	240,976	299,831	344,547	303,102	237,207	200,965	11.8	12.0	10.9	11.8	12.7	14.6	5%	0%
Deep-water rose shrin	0.9	1.7	1.7	1.8	2.0	2.3	168,749	314,859	370,093	534,575	655,001	834,328	5.5	5.2	4.5	3.4	3.1	2.7	4%	1%
Common sole	1.5	1.9	1.5	2.3	1.7	1.8	189,260	251,837	193,617	276,548	189,591	230,942	7.7	7.6	7.9	8.4	8.8	7.9	3%	0%

Data source: MS data submissions under the DCF 2019 Fleet Economic (MARE/A3/ASC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

5.4 Cyprus

Short description of the national fleet

Cyprus is an island in the Mediterranean Sea. The Mediterranean, an oligotrophic semi-enclosed sea is exposed to severe pressures from climate change, environmental pollution, intensive coastal development, depletion of fish stocks and overfishing leading to degradation and destruction of important habitats and species.

The Cypriot fishery is dominated by small-scale vessels dispersed across many landing places that use a variety of fishing gears, usually on the same fishing trip. Fisheries in the Mediterranean Sea are of mixed-species type, where more than one species are present in the area being fished and caught by the fishing gear no matter if these species are not the targeted ones.

Another important issue about the Mediterranean is that with the exception of bluefin tuna (*Thunnus thynnus*) none of the other species had catch quotas until 2016. However, in 2017 a Total Allowable Catch (TAC) was set for the first time for the Mediterranean swordfish (*Xiphias gladius),* based on the ICCAT Recommendation (16-06) regarding the Multiannual recovery plan of this species and thus it becomes the second species to have catch quotas in the region.

A new fleet segment was introduced in the national fleet in 2017: the purse seiner segment targeting BFT (bluefin tuna). This fleet segment includes only one vessel and despite the fact that it was taking into account for data collection purposes it was not included in the economic analysis for confidentiality reasons. Cyprus has provided landings and effort information regarding this vessel.

Fleet capacity

Fleet capacity in 2017 was reduced compared to last year. Actually, it continued its declining trend in 2017. On average there was a reduction of 23% in the number of vessels of the period 2008-2016 compared to 2017. As a result, the combined gross tonnage (GT) was decreased by 4% to 3.24 thousand tonnes in 2017 (3.4 thousand tonnes in 2016). However, the total engine power was slightly increased by 1% in 2017 to 36.9 thousand kilowatts (KW) compared to 36.4 thousand kilowatts in 2016, meaning that larger vessels were introduced in the Fleet Vessel Register or some vessels have substituted their engines with higher engine power. This is strengthened by the fact that the reduction in the number of vessels was only for the small-scale fleet. The Large-scale fleet was slightly increased by 2 vessels compared to last year.

It is noted that the vessels which ceased their fishing activities were scrapped in 2013 and end of 2015 through structural aid within the framework of the EFF 2007-2013 and EMFF 2014-2020. All of these vessels were belonging in the small-scale fleet.

Fleet structure

In Cyprus, the fishing fleet related with the active vessels can be divided into a large-fleet segment consisting of vessels over 12 metres length overall with a total engine power of 6.78 thousand KW in 2017 (a small increase of 3% compared to 2016) and a small-fleet segment consisting of vessels of less than 12 metres length overall with total engine power of 29 thousand KW in 2017, a significant increase of 8% in compared to last year's total engine power (26.85 KW).

The large-fleet segment is mainly composed of polyvalent vessels with passive gears and few trawlers fishing in international and territorial waters. The large-fleet segment represents about 19% of the overall engine power for 2017 (18% for 2016) and 50% of the overall GT for 2017 (45% for 2016). Cypriot vessels, including the trawlers fishing in international waters, operate only in the Mediterranean Sea.

The vessels using *Polyvalent 'passive' gears with length ≥12m* range from 12-26m. The large majority of the vessels belong in the length group 12-18m and thus, for sampling purposes, as well as for confidentiality reasons due to small number of vessels all the polyvalent vessels were regrouped in the 12-<18m length group. It is noted that all the groups of vessels using polyvalent passive gears with length>12m are engaged in the same metiers since these vessels target the same group of species with the same gears despite their vessels length. The vessels of this fleet segment are engaged in two fisheries; mainly in the large pelagic fishery using drifting longlines and operating around Cyprus waters and the eastern Mediterranean (targeting swordfish, bluefin tuna and albacore), but also in the inshore demersal fishery using mostly set nets and set longlines. A limited number of licenses are provided for this segment annually.

Demersal trawlers range from 22-27 m. The demersal trawlers fleet segment below 24m is only 1 vessel and thus, for confidentiality reasons as it is impossible to report data without identifying this company it was regrouped in the >24m length group (up to 28m). It is emphasised though that both groups are engaged in the same metier and they target the same group of species with the same gear despite their vessels length. The licensed trawlers are categorised, based on their type of license, in those fishing in the territorial waters of Cyprus and those fishing in international waters (eastern and central Mediterranean). For the trawlers fishing in territorial waters a limited number of licenses is provided every year, and an extended closed season (from 1st of June until the 7th of November) is employed.

The SCF segment is mainly operated with bottom set nets and bottom longlines, targeting demersal species. Cyprus Fisheries Law[15] provides for a limited number of licenses for this segment annually and divides it into three (3) subcategories: vessels with fishing license category A' (full-time activity in fisheries), vessels with fishing license category B' (part-time activity in fisheries) and vessels with fishing license category C' (periodic activity in fisheries). The professional fishing license category (C') was introduced by a new national law and based on this law their fishing activity is performed on a periodic basis since they are allowed to fish only a total of 70 days each year. Consequently, their income from fisheries activities is too low. Thus, this new professional licence category with the low fishery activity was not grouped in the same category with the professional licences of category A' and B'. The vessels with fishing licence categories A' and B' belong to the fleet segment PG 0-6m and PG 6-12m whereas the vessels with fishing licence category C' belong to the fleet segment PGO 0-6m and PGO 6-12m.

Employment

Employment was estimated at 1 134 jobs in 2017, a 2% increase from the 1 117 jobs in 2016. Even if the increase is small it is an important sign for employment if taking into account that the previous three years it was reducing. Furthermore, it shows a 7% reduction compared to the period 2008-2016. The declining trend is not expected to continue in near future because no scrapping of any vessels was taken place in 2018 and nor it is foreseen for 2019.

In 2017, the total jobs corresponded to 689 FTEs, an increase of 3% compared to 2016 (668 FTEs), or about an average of 2 fishers per vessel or 1 FTE per vessel in 2017.

Effort

An estimated 50.6 thousand days were spent at sea in 2017, a significant decrease of 13% compared to 2016, continuing its declining trend. The fishing days were reduced by 33% compared to the period 2008 to 2016. Unsurprisingly, the amount of energy consumed decreased as well by 3% to 2.2 million litres in 2017. There was a great reduction in energy consumption of over 30% since 2008. This is mainly due to the decrease in the days spent at sea for the Cyprus fleet. The reduction in fishing days for large–scale vessels was less significant but the large-scale fleet performs longer trips and consequently, it consumes higher amount of fuels. Regarding the national fleet the total hours worked for 2017 was 250 757.

Energy cost followed the declining trend of energy consumption for the period 2008 – 2016 to. The reduction for this period (2008-2016) reached almost 40% compared to current year. However, the energy cost for the current was increased by 10% compared to last year reaching EUR 1.46 million, as a result of higher fuel prices and total engine power.

Production

The weight of seafood landed reached 1.74 thousand tonnes a significant increase of 19% , with a value of EUR 10.38 million in 2017 representing an amazing rise of 34% compared to 2016. However, two important events took place in 2017, the introduction of a new fleet segment -the purse seiner targeting BFT and the fact that Cyprus changed its sampling strategy.

The bottom trawl fishery in the territorial waters and the inshore fishery with polyvalent passive gears target a mix of demersal species, as it is the case in all Mediterranean demersal fisheries. The exploited stocks are not shared with other countries' fleets. Landings of both fisheries are mainly composed by picarel (*Spicara smaris)*, bogue (*Boops boops)*, red mullet *(Mullus barbatus)*, surmullet *(M. surmuletus)*, common pandora *(Pagellus erythrinus)* and cephalopods: common octopus (*Octopus vulgaris)*, musky octopus (*Eledone moschata)*, European squid (*Loligo vulgaris)* and common cuttlefish *(Sepia officinalis*).

15 Basic Fisheries Law Cap. 135 and subsequent amendments of 1961 to 2007, Fisheries Regulations of 1990 to 2012 based on Article 6 of the Basic Law.

The inshore fishery with polyvalent passive gears catches also relatively large quantities of parrotfish (*Sparisoma cretense),* blotched picarel *(Spicara maena)* and spinefeet or rabbitfishes *(Siganus* spp.).

Concerning the large pelagic fishery, polyvalent vessels operate in the Eastern Mediterranean, catching basically swordfish (*Xiphias gladius)*, albacore (*Thunnus alalunga)* and Atlantic bluefin tuna (*Thunnus thynnus)* with drifting longlines. For first time in 2017 Atlantic bluefin tuna caught by the purse seiner.

Economic results for 2017 and recent trends

National fleet performance

The Cypriot national fleet for the first time since 2008 is in a net profit making position in 2017 (EUR 3 million) and its economic performance was significantly improved not only when compared to the previous year 2016 but also since 2008.

The rise in total value of landings in 2017, reaching the EUR 10.38 million, is the main reason driving the positive economic results. In 2016, the value of landings was only around EUR 7.7 million. The income from landings was slightly increased by 2% compared to 2015. Notice should also be given to the important increase in operating subsidies from EUR 85 thousand in 2016 to EUR 809 thousand in 2017. Reduction in Revenue was due to the significant reduction in direct subsidies; de minims aid given to *Polyvalent 'passive' gears vessels with length ≥12m* and also to small-scale coastal vessels (fishers of category A' and B' fishing licenses) was reduced from EUR 278 thousand to EUR 85 thousand.

A considerable rise in Gross Value Added (GVA) was shown in 2017, which was estimated at EUR 6.7 million (EUR 1.3 million in 2016). Gross profit and net profit in 2017 were estimated at EUR 5.6 million and -EUR 3 million, respectively, showing a significant improvement in the economic performance compared to the previous year 2016 (Gross Profit estimated at EUR 0.12 million and Net Profit being negative at -EUR 4.8 million).

The Consumption of fixed capital (annual depreciation) and energy (fuel) cost are the main cost items for the Cyprus national fleet for 2017 of 27% and 22% respectively. In 2017, the Consumption of fixed capital (annual depreciation) reached the EUR 1.7 million showing an important decrease compared last year when it reached the EUR 2.6 million. On the other hand, energy cost with EUR 1.46 million was increased in 2017 (EUR 1.32 million in 2016). Another operating cost item, Other Variable costs, representing the 18% of the total operating costs in 2017, was significantly reduced at EUR 1.18 million (EUR 2.76 million in 2016). Repair & maintenance with EUR 0.85 million was slightly increased in 2017 (EUR 0.81 million in 2016). The personnel costs (wages and salaries) reached the EUR 0.84 million showing a decrease of around 10% compared to last year. This variable is related only to the large–scale fleet and thus it does not affect the economic results of the small-scale fleet segments. Value of unpaid labour, which is mostly related to the small-scale fleet, was more or less steady the last years estimated at EUR 0.23 million in 2017 (EUR 0.27 million in 2016).

The significant reduction in some of the most important for the fleet costs (Consumption of fixed capital and Other Variable costs) is one of the reasons for the positive economic performance in 2017 for the Cypriot national fleet. Yet, the incredible rise in value of landings was the main factor that driven the profitability for the year. The main reasons behind it was the recovery of some of the most commercially-exploited stocks (see status of key stocks below) and the introduction of a new fleet segment with the inclusion of one purse seiner targeting BFT. Moreover, Cyprus allowed small-scale fishers to use nets of up to 600 m length of lower mesh sizes for targeting the species for the period 25 February to end of April 2017. The increase of average fish price also played an important role in the increase in revenue. This had a very positive effect on the value of landings for the small-scale fleet segments. The positive economic results explain the incorporation of new vessels in the fleet for 2017 for the large- scale vessels. It is noted that there was not any cessation of the activity of vessels in 2017.

Resource productivity and efficiency indicators

The gross profit margin in 2017 was positive (54%), indicating operating efficiency of the fisheries sector. It shows great improvement compared to the previous year 2016 where the gross profit margin was positive but much less (2%) and the national fleet was facing losses. In addition, the Net Profit margin in 2017, estimated at 29%, was for the first time since many years positive showing a considerable improvement in comparison to 2016 which was negative estimated at -75,4%.

The Return on Fixed Tangible Assets (RoFTA) is turned positive for 2017 at 8.4%, being a tremendous increase compared to the negative one for 2016 at -5.4%. It has been negative for the whole period 2008 to 2016.

It is clear that there is an overall improved development trend since 2008 in all indicators and this is also shown in labour productivity (GVA/FTE) which after being negative for the period 2008-2012 it has become positive the last five years and it has increased greatly in 2017 at EUR 9.7 thousand per FTE (EUR 9.7 thousand per FTE in 2016). In addition, in 2017 GVA estimated at EUR 6.7 million and GVA to revenue estimated at 64.7% were both increased significantly compared to 2016 (EUR 1.3 million and 20.35% respectively) strengthening the economic performance. Moreover, the number of total employed increased at 1 134 persons (1 117 in 2016) as well as the number of FTE which increased by 3% at 689. No more reduction in crew members.

Average fuel consumption for the whole fleet dropped down at its lowest point in 2017, continuing its declining trend for the whole period 2008-2017. The same picture stands for the fuel consumption per landed tonne which also continued its decreasing trend in 2017 at 1.26 thousand litres per landed tonne (1.5 thousand litres per landed tonne in 2016) reaching the lowest value of the whole period 2008- 2017.

Landings in weight per unit of effort (in weight per days-at-sea) followed a decreasing trend for the period 2008-2012 and an increasing one for the period 2013-2017. In 2017, landed weight per sea day increased by 10% compared to 2015 and by 41% compared to the period 2008-2015.

Performance by fishing activity

Small-scale coastal fleet

The Cyprus fleet is dominated by small-scale-vessels. The small-scale fleet (vessels under 12m using passive gears) is by far the most significant segment of the Cyprus fleet since it represents around the 95% of the total fleet both in 2017 and in 2018 in terms of number of vessels and thus, employment. In addition, it represents 40% in regards to total weight of landings and 54.5% regarding to value of landings in 2017. The higher percentage in relation to value of landings compared to weight of landings is that SSCF generally improves production price to a higher degree than the Large-scale Fleet (LSF), and the gap between prices at first sale can be very high. These gaps may be explained by both the differences in quality linked to freshness and the size of the products but also the marketing channels. The selling prices of SSCF are really high. The same species caught by SSCF are much higher than the ones caught by demersal trawlers. This is evident if looking two of the main commercial species surmullet (*Mullus surmuletus*) and red mullet (*Mullus barbatus*) of the Cyprus fishery. The wholesale price of surmullet when caught by SSCF was around EUR 20.5 for 2016 whereas the same species caught by demersal trawlers was sold only for EUR 14.8. More or less the same picture applies for red mullet whose wholesale price from SSCF was about EUR 18 but only EUR 10.6 when caught by demersal trawlers.

Apart from the high quality of the landings and high selling prices the main patterns of this part of the Cyprus fleet are the small family–owned businesses usually of one physical person, area of operation closest to landing points (operated in Cyprus waters i.e., less than 12 n.m.), use of one or more passive gears even to the same fishing trip and very limited daily landings. The main gears used are trammel nets (GTR), set gillnets (GNS) and set longlines (LLS).

Polyvalent 'passive' gears 6-12m

The most important SSCF segment is the *Polyvalent 'passive' gears with length 6-12m.* In 2016, there were 290 active vessels operating in territorial waters, i.e., less than 12 n.m., a reduction of 32% compared to the average number of vessels during the period 2008-2015 and a decrease of 20% compared to 2015. During 2015, 66 vessels from this fleet category were permanently withdrawn and their licences were cancelled through structural aid within the framework of the EMFF 2014-2020. The value of landings amounted to EUR 3.61 million. Despite the decrease in value of landings and as a result revenue, there is an improvement of the economic performance of this fleet segment. The fleet segment is in a net loss making position of EUR 0.25 million but it is much improved in comparison to last year when the segment faced EUR 2.1 million losses. Furthermore, the Gross Profit shows an important increase reaching the EUR 1.43 million.

The improved economic performance was mainly due to the decrease in fuel prices and the significant reduction in the overall operating costs. Although there was a reduction in the overall days-at-sea of the segment since they the vessels spent 48 027 days-at-sea in 2015 but only 39 633 days in 2016, in reality the days spent by each vessel increased in 2016 to 137 compared to 133 in 2015. The reason of this difference is the significant reduction in the number of vessels in 2016. A downfall in fuel consumption together with a reduction in fuel prices from 0.578 EUR /l in 2015 to 0.578EUR /l in 2016 have driven the significant reduction in fuel cost. The energy (fuels) consumed per landed tonne decreased from 1.941 litre/tonne in 2015 to 1.763 litre/tonne in 2016. The GVA reached the amount of EUR 1.626 million in 2016 a significant improvement of nearly 65% compared to 2015 (EUR 0.988 million). Also the GVA

to Revenue was increased from 25.4% in 2015 to 45% in 2016. In 2016 the FTEs have been decreased to 397 from 508 in 2015. In overall, the main economic indicators improved during 2016, but still the economic performance is in net loss position showing low productivity.

Large-scale fleet

The large –scale fleet composes of Polyvalent passive gears vessels and trawlers with length ≥ 12m.

Vessels using Polyvalent 'passive' gears with length ≥12m

Vessels using *Polyvalent 'passive' gears with length ≥12m* range from 12-26m (the large majority from 12-18m) are engaged in two fisheries; mainly in the large pelagic fishery using drifting longlines and operating around Cyprus waters and the eastern Mediterranean (targeting swordfish, bluefin tuna and albacore), but also in the inshore demersal fishery using mostly set nets and set longlines. A limited number of licenses are provided for this segment annually.

The fleet segment was operating at a net loss making situation in 2016 (EUR 0.54 million). However, its economic development trend is improved if compared the economic indicators with the previous year. The factors behind the improvement of economic performance were the decrease of all expenditures (repairs & maintenance, energy costs, other variable costs) except for the slight increase in Wages and salaries (EUR 0.651 million in 2015 but EUR 0.676 million in 2016) and at the same time the significant increase in the value of landings from EUR 1.521 million in 2015 to EUR 2.84 million in 2016. A rise of the GVA took place in 2016 since it was estimated to EUR 1.2 million compared to the GVA in 2015 which was negative and reached the amount of -EUR 0.079 million. Both the Gross Profit margin and the Net Profit margin were significantly increased compared to the previous year indicating improvement of the economic performance. Specifically, the Gross Profit was positive and amounted to EUR 0.524 million in 2016 whereas the Net Profit was negative and amounted to -EUR 0.541 million. The respective estimations for 2015 were both negative with the Gross profit being -EUR 0.079 million and the Net Profit being -EUR 0.73 million.

Drivers affecting the economic performance trends

The good condition of some of the main commercially exploited fish stocks can have a positive impact on the revenue of the sector. Indeed, there is a positive message coming from the 2016, 2017 and 2018 stock assessments. In 2018, Cyprus has performed stock assessment for one of the main commercially important demersal stocks in GSA 25, Common Pandora (*Pagellus erythinus*) which was found in sustainable exploitation status with high spawning stock biomass. Moreover, in 2017 the stock assessment for two of the main commercially important demersal stocks in GSA 25, Bogue (*Boops boops*) and Stripped red mullet (*Mullus surmuletus*) were both found in low overexploitation status. In 2016, the stock assessment of picarel (*Spicara smaris*) and red mullet (*Mullus barbatus*) found both species sustainably exploited.

On the other hand, in 2017 the lessepsians species like *Lagocephalos sceleratus* and the recently reported in Cyprus waters lionfish greatly affect the biodiversity and thus, the economic performance of the fisheries sector.

The attacks to the fisher's nets and catch by some of the protected species mainly by dolphins and sea turtles can have a negative impact on the limited fishing income and as a result, put at a risk the economic sustainability of the fleet segments especially the one of the small-scale inshore fishery fleet and of the polyvalent *'passive' gears* vessels *with length ≥12m*.

Recreational fishery is another driver that can negatively affect the economic performance of the professional fishers. The sport fishers are many in numbers and can have important production in some species even in overfished species.

A significant reduction in the number of small-scale fishery vessels, 107 in 2013 and 66 in the end of 2015, after decommissioning schemes through structural funds have become a driving force for the improvement of the economic performance of the Cyprus fleet overall but especially for the SSCF. As shown above, the national fleet and especially the small-scale fleet segment belonging to the length category 6-12m has been greatly improved its economic performance in 2017.

The only species managed in the Mediterranean by quotas until 2016 was the bluefin tuna. From 2017 swordfish is the second species that it is managed by quotas. The allocation of quotas between the EU countries is already known and the recovery plan for the species has already started been implemented from the beginning of 2017. This fact is expected to have a negative impact on the activities and economic performance of the *Polyvalent 'passive' gears with length ≥12m* fleet segment at least in the

short-run. This fleet segment is mainly engaged in the large pelagic fishery (targeting swordfish, bluefin tuna and albacore) using drifting longlines.

Cyprus after many years has issued a purse seiner license for bluefin tuna. Thus, from 2017 a new fleet segment will exist.

Markets and Trade (including fish prices)

In Cyprus the fish is mostly sold fresh. The processing fishing industry in Cyprus is at its early stages.

Cyprus has a negative trade balance in fresh fishery products both in value and weight. The average fishing prices are indicating a decreasing trend since 2011 mainly due to the financial crisis where the purchase power of the customers was significantly reduced. However, they are relatively high compared to other Mediterranean countries and the main reason must be the Cyprus trade deficit of fresh products.

It is noted that the small-scale fishery has limited daily landings that are of high quality and thus they can enjoy higher selling prices compared with the ones enjoyed by trawlers for the same species caught.

Management instruments

The fleet in Cyprus is managed mainly through effort limitations and technical measures. A limited number of licenses are provided for each segment annually. Furthermore, closed seasons, restriction measures on the use of gears and minimum landing sizes are employed, in accordance to national and European regulations.

In regards to the SSCF, the fleet segments *Polyvalent passive gears with length 0-< 6m and 6-< 12m* (category license A' and B') are allowed to operate every day all year round, with a number of restriction measures on the use of fishing gears and minimum landing sizes, according to the national and community law. In 2015, 66 vessels of A' and B' category of small-scale fleet segment were scrapped with public aid within the framework of the Scheme of Permanent Cessation, co-funded by the European Maritime and Fisheries Fund 2014-2020 and their licences were cancelled, resulting in a significant reduction in the number of licenced vessels. The positive news for these two fleet segments were the recent decision of the Cyprus Department of Fisheries and Marine Research to allow the fishers belonging in these groups to use nets of up to 600 m length of lower mesh sizes (....) for targeting the species for the period 25 February to end of April 2017, increasing their value of landings and as a result, their income.

The fleet segments *Polyvalent passive gears with length 0-< 6m and 6-< 12m* (vessels with license category C') have a limited fishing, with a maximum of 70 working days and stricter measures on the use of fishing gears.

For the trawlers fishing in territorial waters a limited number of licenses (two) is provided every year, and an extended closed season (from 1st of June until the 7th of November) is employed. Furthermore, restriction measures on the use of trawl nets and minimum landing sizes are employed for all licensed trawlers, in accordance with national and community law.

As for the Polyvalent passive gears with length ≥12m, a closed period for the swordfish is employed based on European law.

TACs and quotas

In 2016, the only species managed in the Mediterranean by quotas was the bluefin tuna and the total initial available quotas (TAC) for the Cyprus fleet in 2016 amounted to around 98 tonnes. The quota was distributed only on the *Polyvalent 'passive' gears with length ≥12m* fleet segment operating with drifting longlines. The bluefin tuna TAC for 2017, 2018 and 2019 increased and Cyprus is entitled to 117.7 tonnes, 138.65 tonnes and 153.4 tonnes respectively. For the first time in 2017 Cyprus has distributed part of the quota, 60 tonnes, to a purse seiner targeting BFT leaving the rest of the quota for the *Polyvalent 'passive' gears with length ≥12m* vessels. Thus, since 2017 there is a new national fleet segment, the purse seiner, which includes only one vessel. The quota distributed to this vessel for 2018 is 75t and 85t for 2019.

From 2017, swordfish is the second species in Mediterranean that it is having TAC within the recovery plan of this species adopted by ICCAT. Cyprus based on the allocation key between the EU Member States is entitled to 59 tonnes in 2017, 57.2 tonnes in 2018 and 55.5 tonnes for 2019. The implementation of such a management measure is expected to negatively affect the *Polyvalent 'passive' gears with length ≥12m* fleet segment at least in the short-run.

Status of Key Stocks

In 2018, Cyprus has performed stock assessment for one of the main commercially important demersal stocks in GSA 25, Common Pandora (*Pagellus erythinus*) which was found in sustainable exploitation status with high spawning stock biomass. The time series used was 1975-2017. It was presented and endorsed by GFCM relevant scientific group.

In 2017, Cyprus has performed stock assessment for two of the main commercially important demersal stocks in GSA 25, Bogue (*Boops boops*) and Stripped red mullet (*Mullus surmuletus*) and both were found in low overexploitation status. It is noted that the assessment of Stripped red mullet has been endorsed as 'accepted with qualitative advice', therefore, only qualitative information is given for the status of the stock. The time series used was 2005-2016 for both stock assessments performed. They were presented and endorsed by GFCM relevant scientific group.

Operational costs (external factors)

One of the most important operational costs are the wages and salaries of the crew members and the fuel cost. Personnel costs include all the expenditures paid by the employers, including social security. The SSCF employs only individuals and their assistants. Neither the vessels owners-fishers nor their assistants are paid any wages and salaries. They get share of the value of landings. Consequently, for the SSCF the value of the unpaid labour (for example the vessel owner's own labour) is estimated based on a minimum wage. Thus, this amount per vessel is fixed according to the number of assistants. On the other hand, the large-scale vessels fleet owners (trawlers and *Polyvalent passive gears with length ≥12m)* employ crew from third countries and these crew members are paid based on an agreed salary. It includes temporary crew as well as rotation crew. These wages can vary from year to year but not remarkably.

Fuel prices are following a decreasing trend since 2012. There was a significant reduction in fuel prices from 0.94 EUR /l in 2012 to 0.578EUR /l in 2016. These were happy news for the vessel owners, especially for the trawlers fishing in territorial waters and for those *Polyvalent passive gears with length ≥12m* which perform long trips when targeting large pelagics. However, this was not the case for 2017 where the average fuel price increased to 0.EUR /l. Any fluctuations in fuel prices can drive positive or negative the profitability of a fleet.

Innovation and Development

The small-scale coastal fleet is not very technical advanced and neither the polyvalent segment. Only the trawlers segment does it use more advanced technology but even in this case not at a great extent. Investing in new technology needs much capital and the return is not assured.

The vessels can get funding for modernisation of their vessel for specific purposes such as hygiene from the EMFF 2014-2020. However, an action plan for the small-scale inshore fleet (0-12m with category license A&B) was implemented in 2015, based on the conclusions of the annual report on efforts to achieve a sustainable balance between fishing capacity and fishing opportunities. The target of the action plan has been to achieve balance of the fleet by 2020, with basic tool for achieving it the permanent cessation of fishing activities, through the withdrawal of a number of fishing vessels from this fleet. As long as the action plan is implemented no funding can get for modernisation through structural funds. No action plan was needed for 2017.

The owners of all the vessels have greatly expressed the need to modernise their vessels. Unfortunately, there was no funding for modernisation through the EMFF 2014-2020 for 2017.

Socioeconomic Impact

The fishery sector does not contribute much (less than 0.5%) to the Cyprus Gross National Product. However, it is an important sector for the fisheries dependent areas for direct employment (vessel owners and crew members) and auxiliary services such as fish taverns and restaurants, fishmongers, gear repair, vessel repair and construction and families of fishers who help them in getting the fish out of the nets and fishery tourism especially during the summer season.

Nowcasts for 2018-19 and outlook

Model forecast

Preliminary results for 2018 forecast that the landed weight will be 5% higher than in 2016, while the landed value will increase 6%. Projections suggest operating costs increase (labour and energy costs

both by 8%). The increase in value of landings will foster economic performance improvements in 2017, and estimated GVA would reach EUR 2.9 million (+11%), and gross profit EUR 1.6 million (+13%), while net profit would also improve but remain negative (-EUR 2 million).

Positive economic developments can also be seen in performance indicators GVA to revenue (+4%), and GVA per FTE, estimated at EUR 4 155 in 2017 (+6%).

Forecast for 2018 consider that the economic performance will worsen compared to 2017 to reach levels similar to 2016. Landings would slightly increase (+1%) compared to 2017, but landings value would decrease (-2%). Moreover, main cost would also increase (labour and energy costs by 4% and 11%, respectively).

Data issues

No major issues that need reporting.

Table 5.10 Cyprus: National fleet statistics and economic performance results. Nowcast figures for 2018 and 2019

		2008	2009	2010	2011	2012	2013	2014	2015	2016	*2017*	*2018*	2019	Trend 2008-2018	Δ 2017 to 2016	Δ 2017 to avg. 08-16
Capacity	Number of vessels	1,197	1,177	1,013	1,079	1,082	1,001	951	905	908	799	812	813		-12%	-23%
	Total vessel power	52,782	49,526	44,380	45,881	45,908	41,515	41,111	41,227	36,393	36,915	39,101			1%	-17%
	Total vessel tonnage	6,246	5,091	4,400	4,101	4,043	3,384	3,511	3,625	3,390	3,241	3,656			-4%	-23%
Employment	Engaged crew	1,085	909	1,329	1,344	1,301	1,347	1,219	1,285	1,117	1,134	1,178	1,180		2%	-7%
	Unpaid labour										996					
	FTE national	875	777	871	839	810	830	729	794	668	689	728	730		3%	-14%
	Total hours worked per year (engaged crew)										250,757					
Effort	Days at sea	100,202	81,255	75,606	66,398	85,112	80,694	65,637	65,152	58,274	50,647				-13%	-33%
	Fishing days	100,202	81,255	75,578	66,398	85,112	80,249	65,637	65,152	58,274	50,647				-13%	-33%
	kW fishing days	4,607,838	3,956,559	3,895,117	3,346,665	3,650,565	3,890,243	3,475,219	3,496,172	3,242,978	2,889,013				-11%	-23%
	GT fishing days	490,973	382,511	407,242	331,348	246,804	283,698	326,976	341,236	305,957	2,051,002				570%	492%
	Number of fishing trips	99,567	80,617	74,235	65,537	84,657	79,544	64,744	64,179	57,229	49,527				-13%	-34%
	Energy consumption	3,125,723	4,287,695	4,332,051	3,197,715	3,226,803	2,686,767	2,707,805	2,818,739	2,255,665	2,195,126	2,712,046	2,590,174		-3%	-31%
Landings	Live weight of landings	1,994,736	1,396,967	1,381,925	1,116,302	1,048,179	1,146,707	1,320,879	1,479,998	1,455,815	1,736,410	1,934,447	1,923,302		19%	27%
	Value of landings	13,720,085	9,767,973	10,735,270	8,081,449	6,614,132	7,459,192	7,511,960	7,557,269	7,724,996	10,381,484	11,942,962	11,230,859		34%	18%
Income	Gross value of landings	13,720,083	9,767,973	10,735,269	8,081,449	6,614,124	7,459,183	7,496,319	7,630,740	6,423,105	10,381,491	11,235,491	10,621,056		62%	20%
	Other income	-	-	-	-	-	-	-	-	-	-	-	-			
	Operating subsidies	572,588	521,873	2,017,493	549,712	999,677	294,432	18,372	277,500	85,588	809,695				846%	37%
	Income from leasing out quota	-	-	-	-	-	-	-	-	-	-					
Expenditure	Personnel costs	1,123,250	890,502	969,390	486,692	486,850	551,177	552,732	838,447	943,020	837,960	1,036,919	995,076		-11%	10%
	Value of unpaid labour	421,394	338,960	407,862	345,721	491,170	331,302	278,524	291,569	235,725	268,534	278,122	270,471		14%	-23%
	Energy costs	2,593,793	2,404,921	2,961,229	2,664,762	2,956,796	2,400,784	2,232,557	1,992,198	1,319,876	1,456,796	1,832,058	1,794,203		10%	-39%
	Repair & maintenance costs	865,427	964,320	2,022,486	1,225,012	1,633,773	1,301,727	988,551	1,050,084	815,540	846,562	1,016,968	984,249		4%	-30%
	Other variable costs	5,369,160	6,919,036	9,625,953	4,615,269	4,450,917	3,405,658	3,144,505	3,159,643	2,767,541	1,178,345	1,383,103	1,367,283		-57%	-76%
	Other non-variable costs	171,273	146,729	391,789	125,008	142,874	115,972	101,803	254,202	213,246	184,143	244,412	231,970		-14%	0%
	Consumption of fixed capital	4,592,979	4,188,014	4,055,017	4,802,019	6,808,500	2,774,517	2,789,490	3,065,484	2,642,891	1,721,539	2,013,274	1,961,398		-35%	-57%
	Lease/rental payments for quota	-	-	-	-	-	-	-	-	-	-					
Indicator	Opportunity cost of capital	107,600	2,680,960	752,133	1,567,949	2,228,746	2,701,362	3,246,245	3,521,311	2,330,239	880,763	1,077,947	496,757		-62%	-59%
	Gross Value Added	4,720,430	- 667,032	- 4,266,188	- 548,603	- 2,570,237	235,042	1,028,903	1,174,613	1,306,902	6,715,645	6,758,950	6,243,352		414%	14505%
	Net Value Added	19,851	- 7,536,006	- 9,073,339	- 6,918,571	- 11,607,483	- 5,240,837	- 5,006,832	- 5,412,182	- 3,666,228	4,113,342	3,667,729	3,785,196		212%	168%
	Gross profit	3,175,786	- 1,896,494	- 5,643,441	- 1,381,015	- 3,548,257	- 647,437	197,647	44,597	128,158	5,609,151	5,443,909	4,977,804		4277%	627%
	Net profit	- 1,524,793	- 8,765,468	- 10,450,591	- 7,750,984	- 12,585,503	- 6,123,316	- 5,838,088	- 6,542,198	- 4,844,972	3,006,849	2,352,688	2,519,649		162%	142%
	Net profit subsidised	- 952,206	- 8,243,595	- 8,433,098	- 7,201,271	- 11,585,826	- 5,828,883	- 5,819,716	- 6,264,698	- 4,759,384	3,816,543	2,352,688			180%	158%
	Net profit rights	- 952,206	- 8,243,595	- 8,433,098	- 7,201,271	- 11,585,826	- 5,828,883	- 5,819,716	- 6,264,698	- 4,759,384	3,816,543	2,352,688			180%	158%
Capital	Value of physical capital	56,167,245	61,052,760	38,584,440	70,865,830	58,918,911	44,461,754	51,373,118	57,425,348	46,323,454	46,194,194	53,003,459	52,075,651		0%	-14%
	Value of quota and other fishing rig	-	-	-	-	-	-	-	-	-	-					
	Investments	343,612	210,845	426,559	512,103	441,709	222,899	164,071	125,000	10,124	187,328	201,091	211,367		1750%	-31%
	Total assets										1,721,539	2,013,274	1,961,398			
	Long/short debt										-					
	Subsidies on investments										-	-	-			

Data source: MS data submissions under the DCF 2019 Fleet Economic (MARE/A3/ASC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

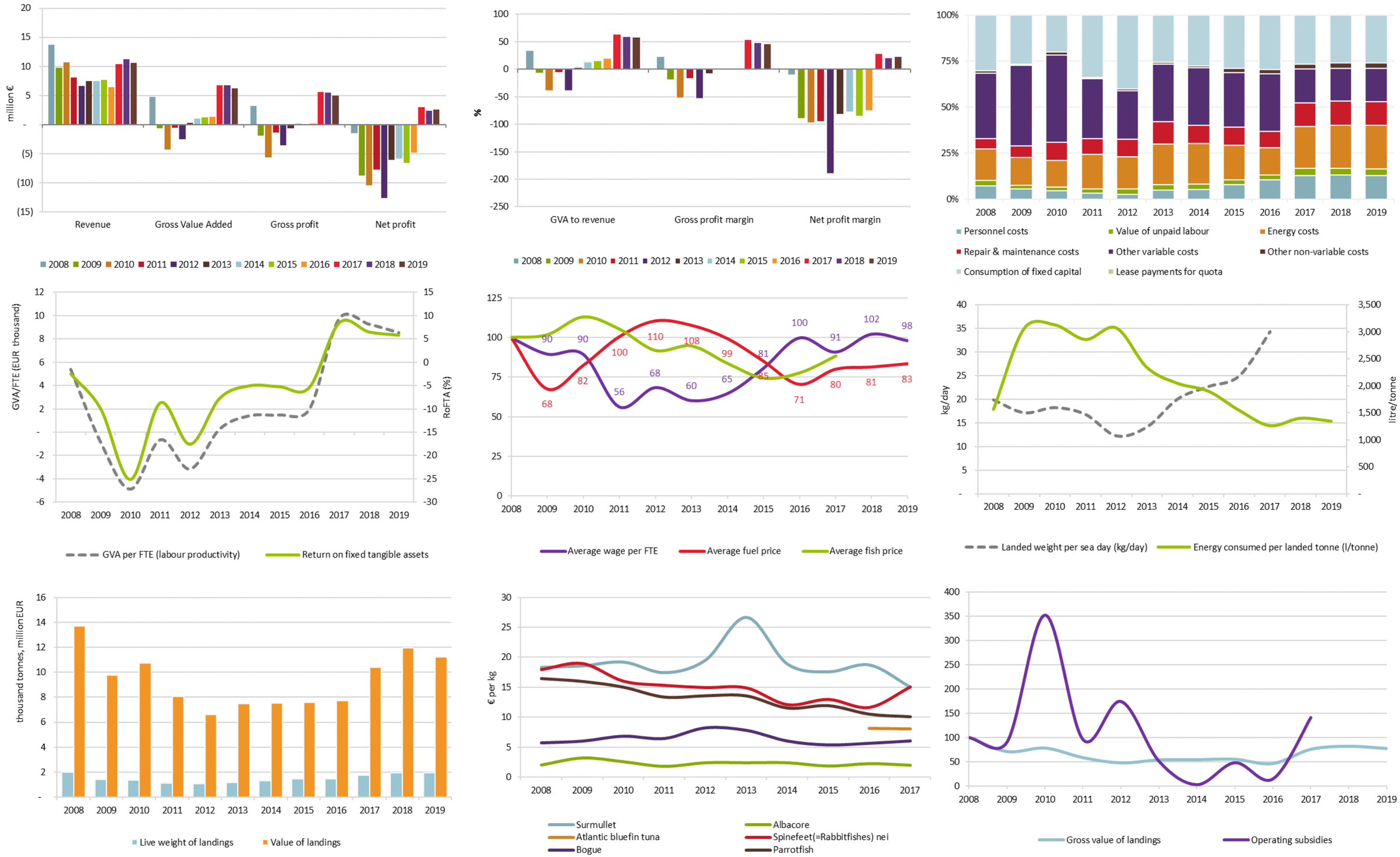


Figure 5.4 Cyprus: Main trends in economic performance indicators (absolute value, panel 1a/top left and relative value, (panel 1b/top middle); cost structure (panel 1c, top right); productivity (panel 2a); key input/outputs (panel 2b); efficiency (panel 2c); landings (panel 3a); average price (EUR /kg) of top species (panel 3b) and income (panel 3c). Nowcast figures for 2018 and 2019

Data source: MS data submissions under the DCF 2019 Fleet Economic (MARE/A3/ASC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Table 5.11 Bulgaria: National fleet statistics and economic performance results by fleet segment, 2017

	Number of vessels	FTE national	Days at sea	Energy consumed per landed tonne	Live weight of landings	Value of landings	Revenue	Gross Value Added	GVA to revenue	Gross profit	Gross profit margin	Net profit	Net profit margin	Average wage per FTE	GVA per FTE (labour productivity)	Return on fixed tangible assets	Profitability (2017)	Net profit margin %Δ 2017 - average (2008-16)	Economic development trend	As a % of total revenue
CYP MBS PG 0612 NGI	293	401	32,630	1,344	648,277	4,764,491	4,764,491	3,588,684	75.3	3,387,326	71.10	2,483,660	52.13	503	8,961	17.5	High	199%	Improved	48%
CYP MBS PGP1218 NGI	31	138	1,656	637	674,472	2,110,565	2,110,565	943,102	44.7	271,150	12.85	-438,103	-20.76	4,869	6,834	-1.3	Weak			21%
CYP MBS DTS2440 NGI	5	34	1,454	2,987	203,114	1,459,367	1,459,367	561,672	38.5	361,476	24.77	-117,949	-8.08	5,888	16,520	0.4	Weak			15%
CYP MBS PG 0006 NGI	25	35	3,279	796	115,099	1,182,190	1,182,190	1,069,628	90.5	1,052,353	89.02	1,026,616	86.84	501	31,004	238.0	High	770%	Improved	12%
CYP MBS PGO0006 NGI	338	68	9,570	6,062	27,547	303,515	303,515	78,488	25.9	65,452	21.56	-231,978	-76.43	193	1,161	-2.8	Weak	78%	Improved	3%
CYP MBS PGO0612 NGI	72	14	2,013	4,949	5,794	63,852	63,852	-23,440	-36.7	-26,118	-40.90	-207,020	-324.22	186	-1,628	-4.5	Weak	64%	Improved	1%
CYP MBS PS 2440 NGI	1		45		62,114	497,511	-													0%

Data source: MS data submissions under the DCF 2019 Fleet Economic (MARE/A3/ASC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Table 5.12 Cyprus: Landed value, weight and average price of principal species

	Value of landings (real)										Live weight of landings										Average landed price (real)									
	(thousand €)										kg										(€)									
	2008	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**
Surmullet	2.2	1.3	1.7	0.8	0.7	1.2	0.9	1.0	0.9	1.3	119,407.0	69,762.0	89,871.0	46,462.0	34,790.0	46,654.0	45,268.0	53,864.0	48,897.4	86,911.0	18.4	18.6	19.2	17.5	19.5	26.7	18.9	17.6	18.8	15.1
Albacore	0.5	0.8	0.6	0.4	0.8	0.9	1.1	1.0	1.3	1.2	239,961.0	240,211.0	209,882.0	243,169.0	317,302.0	352,604.0	456,693.0	511,503.0	573,063.0	570,892.0	2.1	3.2	2.6	1.8	2.4	2.4	2.4	1.9	2.3	2.0
Atlantic bluefin tuna	0.7					0.2			0.5	0.9	130,861.0					18,857.0			58,815.0	110,128.0	5.6					8.5			8.1	8.0
Spinefeet(=Rabbitfishes) nei	1.0	0.9	0.8	0.8	0.4	0.4	0.1	0.1	0.1	0.9	52,914.0	45,081.0	47,092.0	49,379.0	26,287.0	26,276.0	8,282.0	9,944.0	9,272.0	57,740.0	18.0	19.0	16.1	15.4	15.0	14.9	12.1	13.0	11.7	15.1
Bogue	1.9	1.5	1.8	0.7	0.7	0.6	0.7	0.7	0.6	0.8	338,335.0	253,340.0	256,375.0	109,290.0	88,813.0	74,735.0	114,032.0	120,310.0	104,372.6	137,543.0	5.7	6.0	6.8	6.4	8.2	7.8	6.0	5.4	5.6	6.0
Parrotfish	0.6	0.8	0.8	0.3	0.3	0.3	0.3	0.3	0.4	0.4	37,099.0	49,637.0	52,025.0	24,972.0	24,034.0	19,566.0	29,356.0	28,585.0	39,788.0	41,577.0	16.4	16.0	15.0	13.3	13.6	13.5	11.5	11.9	10.5	10.1

Data source: MS data submissions under the DCF 2019 Fleet Economic (MARE/A3/ASC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

5.5 Denmark

Short description of the national fleet

In 2017, the Danish fishing fleet consisted of 1 726 registered vessels, with a combined vessel tonnage of 67 thousand gross tonnages (GT) and engine power (kW) of 199 thousand kW.

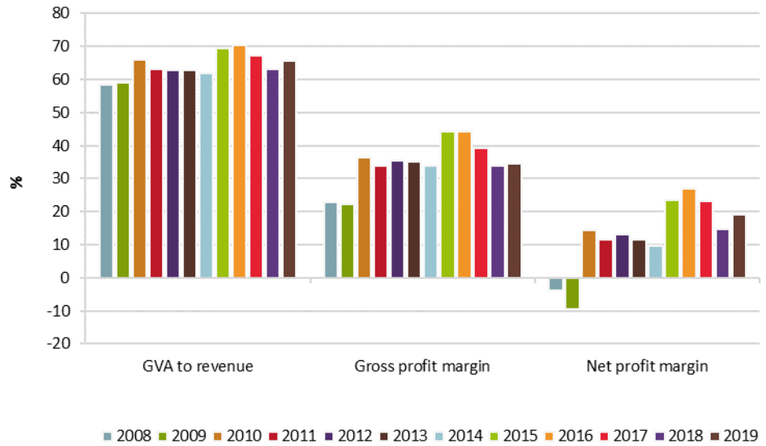
In 2017, the Danish fishing fleet landed 904 thousand tonnes of fish with a value of EUR 438 million.

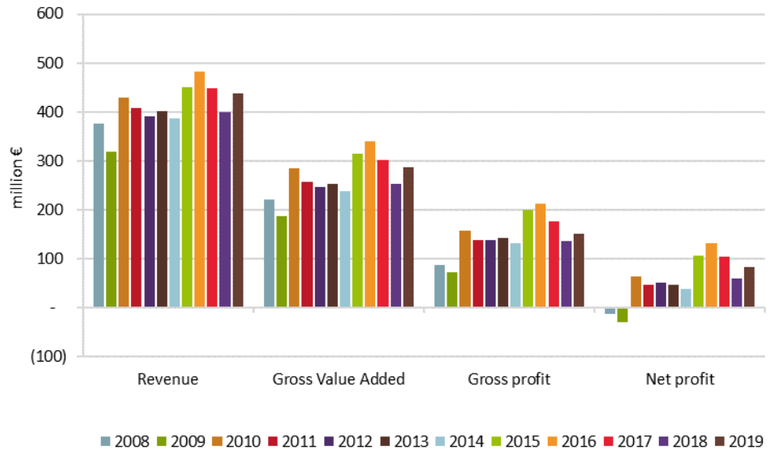
A more detailed account of the Danish fishing fleet was not conducted as no expert with expertise on the Danish fishing fleet attended any of the two working groups.

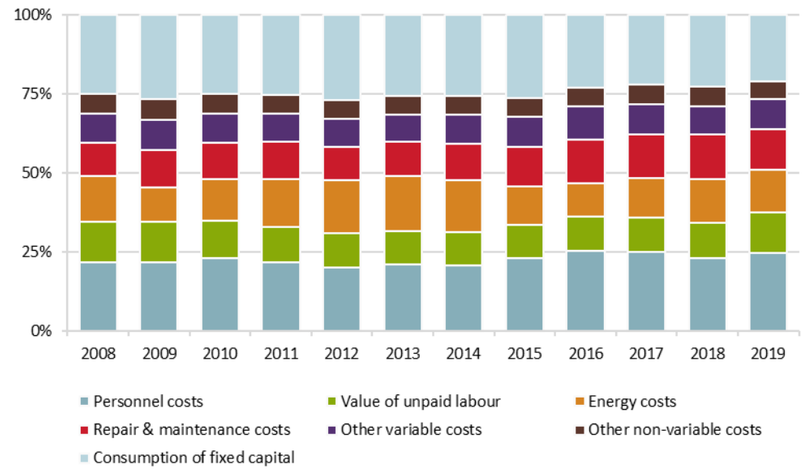
Table 5.13 Denmark: National fleet statistics and economic performance results. Nowcast figures for 2018 and 2019

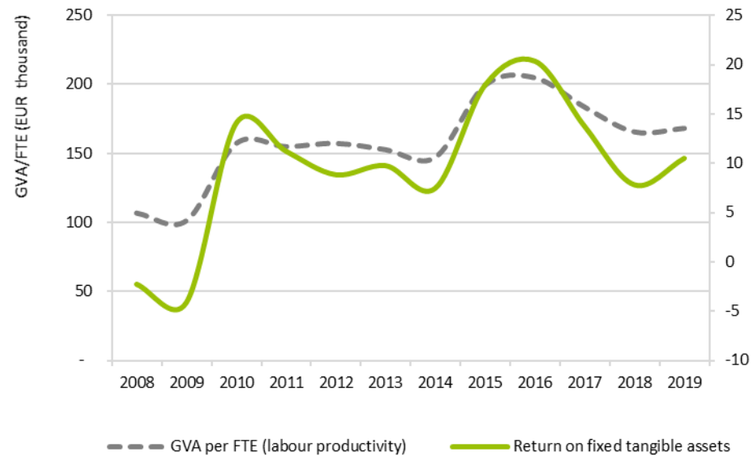
		2008	2009	2010	2011	2012	2013	2014	2015	2016	*2017*	2018	2019	Trend 2008-2018	Δ 2017 to 2016	Δ 2017 to avg. 08-16
Capacity	Number of vessels	2,813	2,786	2,682	2,663	2,019	2,002	1,925	1,851	1,793	1,726	1,668	1,606		-4%	-24%
	Total vessel power	282,918	269,231	247,432	238,849	210,653	210,107	210,354	208,186	204,846	198,576				-3%	-14%
	Total vessel tonnage	78,774	74,360	67,962	67,543	61,978	63,551	68,088	66,331	66,484	66,822				1%	-2%
Employment	Engaged crew	1,801	1,694	1,528	1,460	1,532	1,475	1,421	1,346	1,355	1,306	1,277	1,233		-4%	-14%
	Unpaid labour					588	541	507	464	431	443				3%	-12%
	FTE national	2,061	1,854	1,804	1,661	1,558	1,652	1,619	1,570	1,657	1,644	1,522	1,707		-1%	-4%
	Total hours worked per year (engaged crew)					2,554,456	2,749,871	2,695,063	2,613,947	2,759,263	2,737,137				-1%	2%
Effort	Days at sea	129,237	127,501	119,370	115,963	109,435	106,158	103,761	96,819	94,993	88,296	86,437	98,482		-7%	-21%
	Fishing days	122,520	120,603	112,514	108,495	101,777	100,054	97,701	89,937	88,686	82,274				-7%	-21%
	kW fishing days	23,541,366	24,295,597	24,285,322	22,617,118	20,402,562	23,339,533	22,489,035	22,006,202	21,182,591	22,055,783				4%	-3%
	GT fishing days	7,035,938	7,630,063	7,950,124	7,503,456	6,805,142	8,555,720	8,340,812	8,237,066	7,803,408	8,690,668				11%	12%
	Number of fishing trips	98,793	95,985	89,319	87,667	82,138	78,740	77,393	71,653	69,975	63,521				-9%	-24%
	Energy consumption	94,122,766	94,536,990	94,653,608	88,061,548	79,762,619	90,690,699	90,912,988	92,201,363	92,254,240	97,837,526	82,875,776	88,714,170		6%	8%
Landings	Live weight of landings	690,465,579	773,028,726	822,291,020	710,977,179	499,305,360	665,041,334	741,854,725	865,905,387	666,822,272	903,640,013	754,335,337	698,803,984		36%	26%
	Value of landings	366,769,526	310,287,155	408,346,776	427,372,337	382,825,476	395,309,166	379,967,820	440,270,995	475,330,080	437,748,104	385,307,194	418,980,561		-8%	10%
Income	Gross value of landings	361,925,837	306,087,080	411,483,057	399,483,573	381,925,039	394,872,417	380,080,259	440,260,741	474,592,237	437,359,093	387,717,233	427,126,841		-8%	11%
	Other income	14,591,953	11,728,217	18,504,088	8,945,514	8,110,612	7,384,270	5,476,570	10,670,743	7,131,726	10,857,680	11,010,244	10,733,325		52%	6%
	Operating subsidies	210,868	48,914	74,217	249,578	537,856	47,073	125,906	8,059	-	1,515,365					947%
	Income from leasing out quota				8,310,389	9,137,203	25,867,271	16,479,634	22,244,801	22,814,510	25,565,425				12%	46%
Expenditure	Personnel costs	84,711,437	73,449,521	83,953,493	78,054,455	69,574,759	73,101,068	71,308,882	79,222,042	87,966,983	87,393,211	78,802,457	89,408,563		-1%	12%
	Value of unpaid labour	48,570,660	43,039,991	43,076,854	40,592,808	37,113,963	37,070,112	35,800,459	35,033,874	38,689,646	37,973,650	38,028,215	46,733,336		-2%	-5%
	Energy costs	56,755,013	36,811,925	47,941,294	55,114,723	57,045,615	60,880,766	56,353,668	42,686,266	36,083,147	43,668,983	47,155,789	49,263,061		21%	-13%
	Repair & maintenance costs	40,682,606	38,814,373	41,539,370	42,348,943	36,583,885	38,244,930	39,498,470	41,642,888	48,899,688	48,133,867	47,967,070	46,634,370		-2%	18%
	Other variable costs	35,440,215	32,439,778	34,077,920	32,216,811	30,298,612	30,070,305	30,923,947	33,167,553	35,828,831	33,101,400	30,261,303	34,107,343		-8%	1%
	Other non-variable costs	23,823,414	22,318,035	22,672,595	21,263,061	20,936,067	20,782,371	20,420,331	19,978,388	21,202,349	21,341,995	21,183,314	20,608,247		1%	-1%
	Consumption of fixed capital	97,276,519	89,740,068	90,817,564	91,713,123	92,680,879	89,242,679	88,201,895	90,344,752	80,409,676	77,218,606	78,096,918	76,072,085		-4%	-14%
	Lease/rental payments for quota	7,753,371	7,138,673	12,270,577	17,558,675	17,684,645	19,100,829	18,253,044	32,142,001	29,675,783	24,571,888				-17%	37%
Indicator	Opportunity cost of capital	3,164,277	11,286,469	3,353,050	122,919	- 5,074,898	6,751,861	5,927,068	2,972,995	2,090,034	- 4,449,103	- 1,750,754	- 8,411,781		-313%	-231%
	Gross Value Added	219,816,542	187,431,186	283,755,965	257,485,548	245,171,473	252,278,315	238,360,414	313,456,388	339,709,948	301,970,528	252,159,999	287,247,146		-11%	16%
	Net Value Added	119,375,746	86,404,649	189,585,351	165,649,506	157,565,492	156,283,775	144,231,450	220,138,641	257,210,238	229,201,024	175,813,835	219,586,842		-11%	38%
	Gross profit	86,534,445	70,941,673	156,725,619	138,838,285	138,482,750	142,107,134	131,251,072	199,200,472	213,053,319	176,603,666	135,329,327	151,105,248		-17%	24%
	Net profit	- 13,906,351	- 30,084,863	62,555,005	47,002,243	50,876,769	46,112,594	37,122,109	105,882,725	130,553,609	103,834,162	58,983,163	83,444,944		-20%	114%
Capital	Value of physical capital	475,100,161	458,257,842	469,427,030	420,793,651	519,669,594	542,849,633	577,169,821	607,947,105	653,135,772	725,490,753	734,587,197	716,061,666		11%	38%
	Value of quota and other fishing rig	381,776,777	918,881,956	785,662,947	763,797,069	772,991,042	797,414,962	1,008,145,570	1,060,795,183	1,609,498,174	2,119,073,453				32%	135%
	Investments	63,422,141	75,859,449	24,700,275	20,380,201	136,186,301	87,300,256	73,496,381	40,142,108	110,074,484	31,037,189				-72%	-56%
	Total assets					1,390,719,661	1,421,609,102	1,586,703,080	1,686,688,201	2,333,164,537	2,827,386,762				21%	68%
	Long/short debt					978,070,557	1,009,843,523	1,087,015,946	1,092,311,153	1,292,089,797	1,576,171,584				22%	44%
	Subsidies on investments					-	-	-	-	-	-					

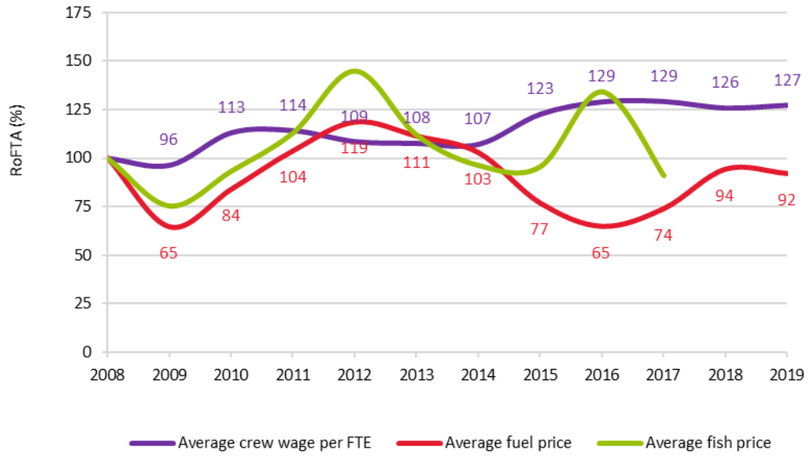
Data source: MS data submissions under the DCF 2019 Fleet Economic (MARE/A3/ASC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

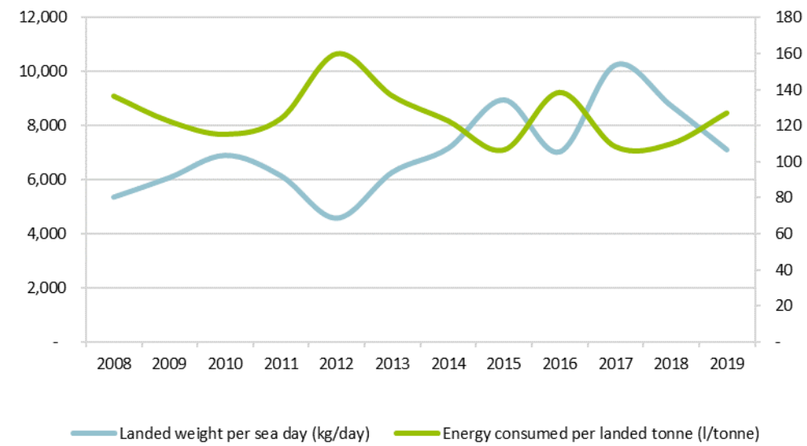


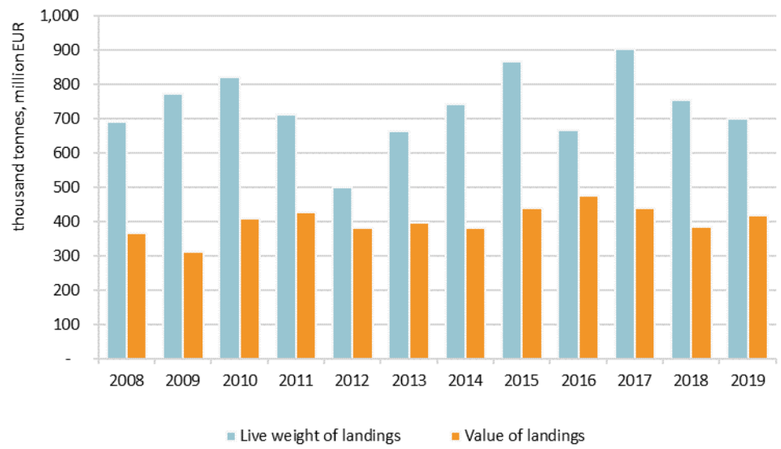


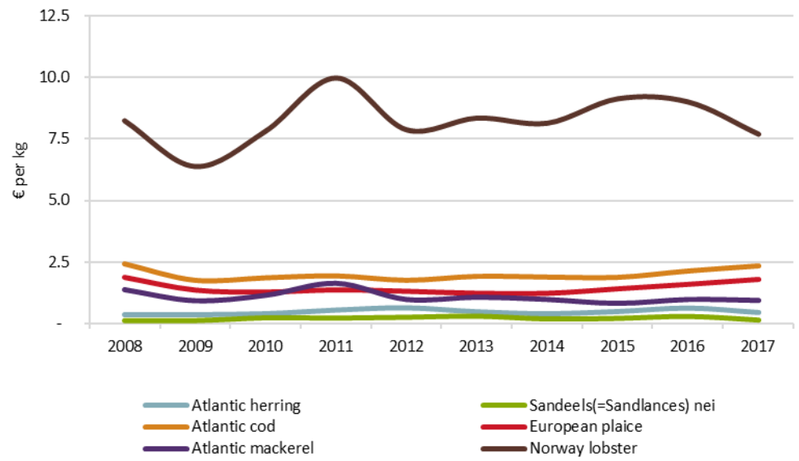












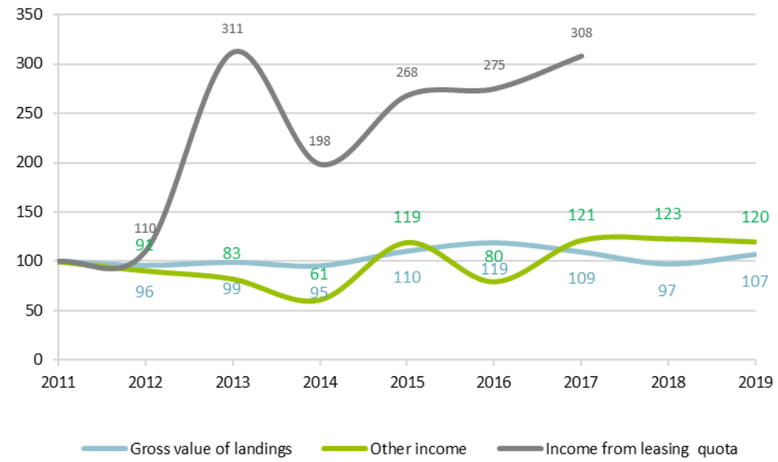


Figure 5.5 Denmark: Main trends in economic performance indicators (absolute value, panel 1a/top left and relative value, (panel 1b/top middle); cost structure (panel 1c, top right); productivity (panel 2a); key input/outputs (panel 2b); efficiency (panel 2c); landings (panel 3a); average price (EUR /kg) of top species (panel 3b) and income (panel 3c). Nowcast figures for 2018 and 2019

Data source: MS data submissions under the DCF 2019 Fleet Economic (MARE/A3/ASC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Table 5.14 Denmark: National fleet statistics and economic performance results by fleet segment, 2017

	Number of vessels	FTE national	Days at sea	Energy consumed per landed tonne	Live weight of landings	Value of landings	Revenue	Gross Value Added	GVA to revenue	Gross profit	Gross profit margin	Net profit	Net profit margin	Average wage per FTE	GVA per FTE (labour productivity)	Return on fixed tangible assets	Profitability (2017)	Net profit margin %Δ 2017 - average (2008-16)	Economic development trend	As a % of total revenue
DNK NAO TM 40XX NGI	11	124	2,139	65	341,828,249	115,542,371	117,729,555	93,256,726	79.2	75,905,278	64.47	49,936,881	42.42	139,582	750,195	17.7	High	27%	Improved	28%
DNK NAO DTS2440 NGI	35	326	9,074	365	67,158,143	77,988,355	78,901,016	49,931,422	63.3	26,254,537	33.28	15,915,183	20.17	72,552	153,003	14.7	High	191%	Improved	19%
DNK NAO DTS40XX NGI	20	153	3,036	66	301,173,882	67,162,418	71,788,819	48,901,693	68.1	33,896,945	47.22	18,583,243	25.89	98,225	320,125	13.8	High	12%	Improved	17%
DNK NAO DTS1824 NGI	43	224	8,118	176	57,508,240	46,118,538	46,852,313	29,151,127	62.2	12,912,063	27.56	6,255,715	13.35	72,470	130,093	12.7	Reasonable	206%	Improved	11%
DNK NAO DTS1218 NGI	114	241	13,673	271	29,177,737	35,410,423	35,665,393	19,884,868	55.8	5,404,804	15.15	1,502,349	4.21	60,006	82,403	2.4	Weak	342%	Improved	8%
DNK NAO PMP1824 NGI	11	90	2,371	465	6,337,880	17,427,248	17,434,156	11,359,630	65.2	4,926,077	28.26	2,840,247	16.29	71,798	126,772	18.1	Reasonable	204%	Improved	4%
DNK NAO DRB1218 NGI	30	31	2,071	11	46,480,706	11,754,035	11,754,033	9,368,235	79.7	6,712,266	57.11	5,462,244	46.47	84,910	299,497	40.0	High	11160%	Improved	3%
DNK NAO TBB1824 NGI	16	52	2,623	1,673	1,457,392	10,084,376	10,207,542	6,823,463	66.8	3,291,296	32.24	2,455,889	24.06	67,929	131,225	21.5	High	810%	Improved	2%
DNK NAO PMP1218 NGI	32	60	3,617	459	3,984,408	8,303,284	8,403,069	4,706,604	56.0	1,309,461	15.58	260,394	3.10	56,921	78,861	1.8	Weak	162%	Improved	2%
DNK NAO TM 1218 NGI	7	23	802	31	28,518,053	6,413,439	6,817,510	5,060,618	74.2	2,944,929	43.20	2,032,232	29.81	93,322	223,221	22.2	High	70%	Improved	2%
DNK NAO TBB1218 NGI	10	28	1,478	1,914	626,435	4,985,715	5,031,659	3,221,900	64.0	1,380,143	27.43	856,941	17.03	65,822	115,147	14.2	Reasonable	384%	Improved	1%
DNK NAO PMP0010 NGI	114	32	5,200	429	1,228,068	3,553,814	3,703,755	1,308,604	35.3	- 612,336	- 16.53	- 1,111,117	- 30.00	59,252	40,364	- 13.4	Weak	14%	Improved	1%
DNK NAO PMP1012 NGI	30	20	2,606	347	1,838,834	3,098,028	3,157,964	1,242,208	39.3	- 53,633	- 1.70	- 507,736	- 16.08	64,114	61,460	- 12.2	Weak	42%	Improved	1%
DNK NAO DTS1012 NGI	18	12	1,736	181	2,834,131	2,355,113	2,444,838	1,179,019	48.2	452,353	18.50	214,488	8.77	58,216	94,456	6.8	Weak	148%	Improved	1%
DNK NAO DRB1012 NGI	4	5	218	22	5,154,169	2,047,880	2,047,880	1,562,268	76.3	1,125,161	54.94	1,006,875	49.17	82,534	294,985	36.9	High	324%	Improved	0%
DNK NAO DTS0010 NGI	7	5	588	403	289,856	798,704	820,804	463,176	56.4	137,539	16.76	167,864	20.45	68,784	97,836	1.1	High	165%	Improved	0%

Data source: MS data submissions under the DCF 2019 Fleet Economic (MARE/A3/ASC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Table 5.15 Denmark: Landed value, weight and average price of principal species

	Value of landings (real) (thousand €)										Live weight of landings kg										Average landed price (real) (€)										% over total	
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	in EUR	in weight
Atlantic herring	43.2	38.4	36.3	54.4	93.0	74.1	63.6	68.2	102.7	68.5	116,242,982.4	104,949,557.1	88,854,185.8	97,457,150.6	142,140,034.4	152,520,700.4	154,958,859.9	135,550,126.9	160,232,610.3	148,152,620.9	0.4	0.4	0.4	0.6	0.7	0.5	0.4	0.5	0.6	0.5	15%	16%
Sandeels(=Sandlances	34.0	37.3	65.6	62.5	13.6	61.3	29.7	36.2	8.2	52.8	255,161,115.5	293,923,611.3	284,747,179.4	279,251,337.3	53,709,824.5	209,441,473.1	156,092,312.2	169,510,670.7	29,318,225.8	356,536,510.6	0.1	0.1	0.2	0.2	0.3	0.3	0.2	0.2	0.3	0.2	12%	39%
Atlantic cod	57.2	41.7	49.5	51.9	50.1	39.1	41.9	49.1	49.5	43.5	23,627,391.9	23,769,662.3	26,702,830.9	26,854,179.8	28,564,941.2	20,486,394.9	22,308,886.9	26,218,037.3	23,241,745.7	18,626,163.3	2.4	1.8	1.9	1.9	1.8	1.9	1.9	1.9	2.1	2.3	10%	2%
European plaice	33.0	22.1	23.3	28.8	28.1	27.2	25.9	34.5	43.1	39.1	17,582,491.7	16,098,092.1	18,098,395.3	20,843,882.9	21,374,641.7	21,918,589.4	20,876,348.4	24,249,357.5	26,935,328.8	21,735,381.2	1.9	1.4	1.3	1.4	1.3	1.2	1.2	1.4	1.6	1.8	9%	2%
Atlantic mackerel	38.1	22.2	48.2	59.2	36.1	36.9	41.9	39.0	40.8	37.9	27,315,641.7	23,492,254.7	41,442,910.5	35,987,469.3	36,546,550.6	34,044,306.6	42,237,232.3	46,858,490.7	41,260,508.5	40,109,090.8	1.4	0.9	1.2	1.7	1.0	1.1	1.0	0.8	1.0	1.0	9%	4%
Norway lobster	35.3	28.5	34.3	37.7	29.2	25.4	28.3	25.4	37.7	33.1	4,290,379.8	4,469,083.8	4,384,265.8	3,774,912.9	3,706,130.3	3,034,662.9	3,472,375.4	2,780,065.6	4,189,388.8	4,298,567.7	8.2	6.4	7.8	10.0	7.9	8.4	8.1	9.1	9.0	7.7	7%	0.5%

Data source: MS data submissions under the DCF 2019 Fleet Economic (MARE/A3/ASC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

5.6 Estonia

Short description of the national fleet

Fleet capacity

In 2018, the Estonian Baltic Sea fishing fleet consisted of 1 713 registered vessels, with a combined gross tonnage of 5.9 thousand GT and engine power of 31.2 thousand kW. Total number of vessels continued to increase compared to previous years, but this concerns only small-scale coastal fleet (SSCF). If the number of open sea trawlers decreased by four active vessels, then 125 boats were added to the SSCF. Due to fishing capacity had been released in large-scale segments, the Ministry of Rural Affairs have decided to use that capacity to meet the additional need of small-scale fishing boat entry into the register.

Fleet structure

The Estonian Baltic Sea active fishing fleet is nationally divided into a large-scale fleet (26 vessels, forming 2% of total vessels in 2018) and a small-scale coastal fleet (1 557 vessels, forming 98% of total vessels in 2018). The large-scale fleet operates outside the coastal zone. The fleet is using mainly pelagic trawls and is divided into two size groups (12-18 meters and 24-40 meters). The SSCF operates in Estonian coastal waters using mainly passive gears and is also divided into two size groups (0-10 meters and 10-12 meters).

Employment

Employment was estimated at 2 100 jobs, corresponding to 460 FTEs in 2017. Total employment remained rather stable compared to 2016. The big difference between numbers of total employed and FTE refers that there are many persons in the sector for whom fishing is not the only source of income. It mainly concerns the small-scale fishery. The average age of employees is around 50 years.

Effort

An estimated 63 thousand days were spent at sea in 2017; decreasing 12% compared to 2016. However, the amount of energy consumed increased 20%. The reason for this contradiction was that in the fuel consuming large-scale fishing fleet the number of sea days increased, differently from total trend and this also led to the rise in total energy consumption.

Production

The live weight landed by the Estonian Baltic Sea fleet in 2017 was 64.5 thousand tonnes of seafood, with a landed value of EUR 14.5 million. Although the total weight of landings increased 7% the total value of landings decreased 1% in 2017 compared to 2016.

In 2017, Atlantic herring generated the highest value (EUR 6.3 million) landed by the Estonian Baltic Sea fleet, followed by European sprat (EUR 4.6 million) and European perch (EUR 2.5 million). In terms of landings weight, Atlantic herring landings were 35.2 thousand tonnes, European sprat 26.5 thousand tonnes and European perch 1.3 thousand tonnes.

Economic results for 2017 and recent trends

National fleet performance

The national fleet was profitable in 2017, despite of low first sales prices for key species as herring and sprat. Revenue, estimated at EUR 14.7 million in 2017, remained stable. The increase in the number of days-at-sea in the large-scale fleet led to 30% rise in total energy costs. However, repair & maintenance costs decreased 13%. Personnel costs of crew increased 3%. The total operating cost increased slightly compared to 2016. When including capital costs, total costs amounted to EUR 12 million.

Gross Value Added (GVA), gross profit and net profit were estimated at EUR 9.7 million, EUR 4.4 million and EUR 2.7 million, respectively. Compared to 2016, GVA and gross profit decreased 2% and 4%, respectively, but net profit increased 17%.

The (depreciated) replacement value of the Estonian fleet was estimated at EUR 17.5 million in 2017 and investments amounted to EUR 1.7 million, which was 6% lower compared to 2016.

Overall, the cost variables show falling trend over the years, with apparent decrease in energy costs. The main reason for this is decrease of vessels in the large-scale fleet.

Resource productivity and efficiency indicators

The gross profit margin in 2017 was 29.7%. Net profit margin was estimated at 18.5%, a 18% increase compared to 2016.

The Rate of Return on Fixed Tangible Assets (RoFTA) was estimated at 15.4% and increased 1% in comparison to 2016.

Labour productivity (GVA/FTE) decreased slightly (3%) compared to 2016.

Fuel consumption per landed tonne has followed rather decreasing trend compared to 2008, with 51 litres per tonne in 2017. Landings in weight per unit of effort (in days-at-sea) increased in 2017 with 1 019 kg per sea day.

Socioeconomic impact

Fishing has a major impact on the local fish processing industry which has been highly dependence on export (amounts to 60%). Historically the eastern market has been a most important destination for two key species as sprat and herring. Considering the average price trends for both species, there is no doubt that the loss of the Russian market in 2014 still has a socio-economic impact on the Estonian fisheries sector. The fall in the average first-sale prices directly affects the income of fishers and also the investment capability.

Performance by fishing activity

Large-scale fleet

The large-scale fleet operates outside the coastal zone using mainly pelagic trawls. The fleet targets pelagic species such a sprat and herring. The live weight landed by the large-scale fleet in 2017 was 53.6 thousand tonnes of seafood, with a landed value of EUR 9.2 million. The fleet has been profitable. In 2017, the weight of landings increased 10% compared to 2016. At the same time, the value of landings increased only 3%. The main reason of this was the fall in the first-sale prices for a herring. Total operating costs increased mainly due to the 49% rise in energy costs. The increase of this cost variable can be explained by the increase in the sea days and higher average fuel price. When including capital costs, total costs amounted to EUR 7.6 million in 2017. Gross Value Added (GVA), gross profit and net profit in 2017 were estimated at EUR 6.5 million, EUR 3 million and EUR 1.8 million, respectively. GVA remained stable compared to 2016. Gross profit decreased 4% and net profit increased 11%. The (depreciated) replacement value of the large-scale fleet was estimated at EUR 9.3 million and investments amounted to EUR 0.86 million, increased 8% compared to 2016.

Small-scale coastal fleet

The small-scale coastal fleet operates in Estonian coastal waters using mainly passive gears. The largest catches taken in 2017 were of herring, followed by perch, flounder, garfish and smelt. The live weight landed by the SSCF in 2017 was 10.8 thousand tonnes of seafood, with a landed value of EUR 5.3 million. The fleet has been profitable. Total operating costs decreased slightly mainly due to the 12% decrease in repair & maintenance costs. When including capital costs, total costs amounted to EUR 4.6 million in 2017. Gross Value Added (GVA), gross profit and net profit in 2017 were estimated at EUR 3.3 million, EUR 1.4 million and EUR 0.96 million, respectively. GVA and gross profit decreased 5% and 3%, respectively. However, the net profit increased 30%. The (depreciated) replacement value of the SSCF was estimated at EUR 8.2 million and investments amounted to EUR 0.84 million, a 17% decrease compared to 2016.

Performance results of selected fleet segments

Pelagic trawlers 24-40m

The 24-40 meter pelagic trawlers are the most important segment in the Estonian fishing fleet in the Baltic Sea. In 2017 this fleet segment consisted of 25 active vessels accounting for a total of 3 412 GT and 8 219 kW. The number of vessels remained stable compared to 2016. Employment in 2016 was estimated at 142 jobs. The segment targets pelagic species such as sprat and herring. The total value of landings was EUR 9.1 million in 2017. The fleet segment was profitable. GVA, gross profit and net

profit in 2017 were estimated at EUR 6.4 million, EUR 2.9 million and EUR 1.8 million, respectively. Economic development trend shows improved situation.

Passive gears <10m

The segment with the highest number of vessels and employment in the Estonian fleet is the 0-10 meter passive gears segment that operates in the coastal fishery. In 2017, this segment consisted of 1 480 vessels accounting for a total 1 675 GT and 17 965 kW. The number of vessels in this segment increased between 2016 and 2017. The employment in 2017 was estimated at 1 642 jobs. The fleet targets mostly freshwater species, such as perch, pikeperch, but also marine species such as flounder and herring. The total value of landings was EUR 3.8 million in 2017. The fleet segment was profitable. GVA, gross profit and net profit in 2017 were estimated at EUR 2.1 million, EUR 1 million and EUR 0.66 million, respectively. Economic development trend shows improved situation.

Drivers affecting the economic performance trends

Rise in quotas of key species (sprat, herring) and fall in the average price of herring were the main driving forces behind the economic performance for the large-scale fleet in 2017. Higher quotas increased the number of days-at-sea. The increase in the number of sea days and also the higher fuel price in 2017 led to the rise in total energy costs. The average price for herring fell further in 2017 and this affected the value of landings.

Markets and Trade

Key species as sprat and herring were mainly landed at Estonian ports, where the catch was sold to fish freezing or processing companies, unless the fishing company itself was engaged in the processing and marketing of fish. Fish was also landed at ports in Finland, Latvia and Sweden. The proportion of fish landed at foreign ports remained at roughly the same level as in 2016, representing 12% of the catch in 2017.

The export volume of frozen fish (sprat and herring) of Estonian origin has started to recover after the loss of the Russian market. The main export market for fish and fishery products continued to be Ukraine. Large quantities of fish were also sold to Belarus and Denmark.

Despite the recovery of exports, the loss of the Russian market still affected the first-sale prices of herring and sprat. In 2013, before Russia's embargo, the average first-sale prices of these species had been 23 and 22 cents per kilogram, respectively, but in 2017 an average of 18 cents per kilogram was paid for both herring and sprat.

Management instruments

The main management measures in Estonia are landings volume quotas (ITQs) in the open water fisheries (trawling) and gear usage quotas (ITE; individual transferable effort) in the coastal fisheries. Fishing quotas are allocated according to the historic fishing rights. The Estonian experience shows that ITQs can be considered an effective method for increasing the allocation of fishing rights to the most efficient enterprises and speeding the process of reducing excessive fleet capacity. The size of the large-scale fleet decreased 59% between 2008 and 2018 (from 64 to 26 vessels). The main reason for that change was capacity reduction to achieve balance between the size of the fishing fleet and fishing opportunities.

TACs and quotas

Herring, sprat and cod have been main internationally regulated/managed fish species targeted by the Estonian Baltic Sea fishing fleet. In 2017 the Estonian trawl fleet's final sprat and herring quotas were 29 631 and 28 466 tonnes, respectively. In 2016, the sprat catch quota dropped to the lowest level of the last decade, but was increased by 19% in 2017. The herring quota increased by 3%, reaching the highest level of the last decade. Considering the increase in sprat and herring quotas and the loss of the Russian market a few years ago, quota uptake rates remained high, amounting to 94% for herring and 90% for sprat. The final herring quota for the Estonian coastal fishers were 10 553 tonnes in 2017. Quota uptake rate amounted to 79%. Like in the preceding year, targeted fishing for cod was non-existent in 2017. Trawling companies explained the termination of cod fishing by the scarcity of fish, which makes fishing economically unviable.

Status of Key Stocks

International acoustic surveys of pelagic key fish stocks conducted in the Baltic Sea in recent years show that stocks have declined mainly in the southern part of the Baltic Sea and that the lion's share of stocks is now located in the central and north-eastern parts of the sea. Thus, the current status of the sprat stock in the economic zone of Estonia can still be regarded as relatively satisfactory. However, it should be noted that fishing prospects still depend on the overall status of the stock in the Baltic Sea, i.e., the relatively better situation in our waters does not automatically mean better fishing opportunities for our fishers.

Unlike sprat, which is treated as a single stock unit, i.e., population across the Baltic Sea, in the case of herring the state of stocks is assessed and advice for exploitation is given for four stock units in different subdivisions of the Baltic Sea. Only two stock units, Central Baltic herring and Gulf of Riga herring, are offering more interest to Estonian fishers. The current status of these herring stocks is regarded as relatively satisfactory. Perch is the most important species in coastal fishery. The perch catches have been relatively stable in recent years, although according to researchers estimate the perch stock is not managed in the most rational way.

Operational costs

Energy costs and repair & maintenance costs were two most affected categories of operational costs in 2017. Main changes took place in energy costs, increase 30%. Repair & maintenance costs decreased 13%. The total operating cost remained stable compared to 2016. The average fuel price in 2017 was EUR 0.55 per litre, which is EUR 0.05 per litre higher than in 2016.

Innovation and Development

Innovative and development activities are related to modernization of fishing vessels and ports, but also improvements of fishing gears. For example, in order to reduce fuel consumption old trawl nets are replaced with new ones which have lower resistivity. In order to enhance the protection of fish stocks through the implementation of technical measures, the selectivity and fishing capacity of various commercial fishing methods and types of gear are studied in collaboration with local scientists. A study has also been directed to the mitigation of negative impact of seals in the Estonian coastal fisheries using AHD's (Acoustic Harassment Device) and seal-proof netting material.

Nowcasts for 2018-19 and outlook

According to the preliminary data the economic performance may deteriorate in 2018 compared to 2017. Although the total weight of landings increased by 4% in 2018, the total value of landings remains stable. The main reason of this is the fall in the first-sale prices for herring. This reflects ongoing difficulties selling fish caused in part by the Russian embargo on EU food products. Total operating costs will be affected due to the increase in fuel price and in sea days.

Model forecast

Preliminary results for 2018 forecast a 4% increase in landed weight, matched by a 1% decrease in landed value. Projections suggest a 10% operating costs increase, most notably energy costs which are estimated to increase by 29%. Also other estimated cost variables show rather increasing trend. According to the model, GVA, gross profit and net profit have a decrease in 2018, 3%, 14% and 27% respectively.

Results indicate that the Estonian fleet operated at a profit in 2018: with an estimated net profit margin of 13%. However, the deterioration of economic developments can be seen in performance indicators GVA to revenue (-6%), gross profit margin (-18%) and GVA per FTE, estimated at €18 021 in 2018 (-15%). The fleet operates with profit also in 2019.

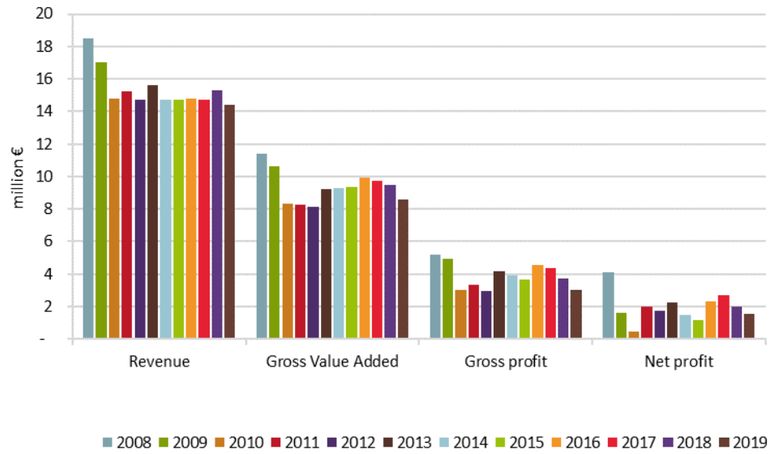
Data issues

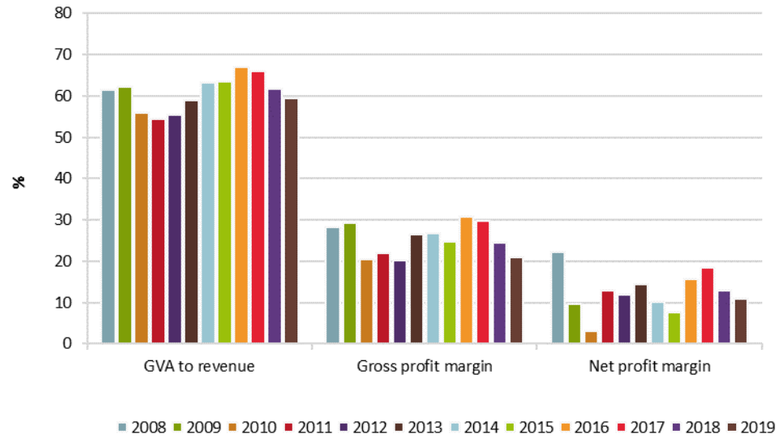
The data concerning economic variables were collected as listed and defined in Commission Decision (EU) 2016/1251. For economic variables included in the Estonian Fisheries Information System (EFIS) (which includes logbook data and the fishing vessel register) data were collected on all members of the population. For other economic variables questionnaires were sent out. It is important to mention that all these surveys have been carried out on a voluntary basis. Due to confidentiality issues, the data for the distant water fleet (DTS VL40XX) are not reported. There were only two owners operating with 5 vessels in this segment in 2017.

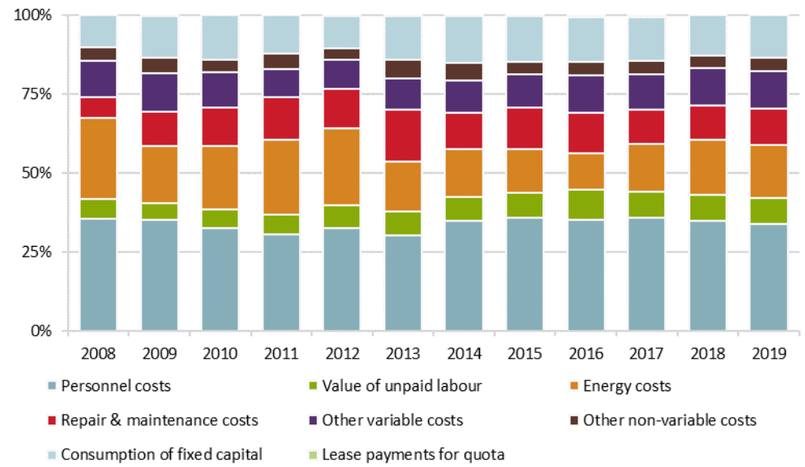
Table 5.16 Estonia: National fleet statistics and economic performance results. Nowcast figures for 2018 and 2019

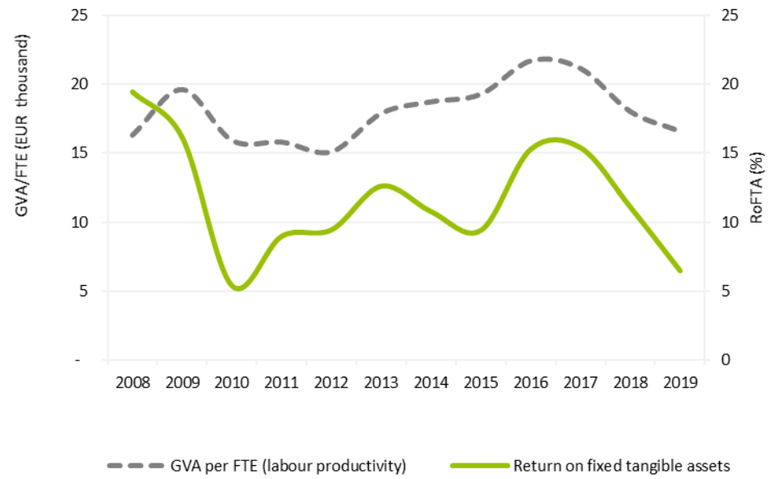
		2008	2009	2010	2011	2012	2013	2014	2015	2016	*2017*	*2018*	2019	Trend 2008-2018	Δ 2017 to 2016	Δ 2017 to avg. 08-16
Capacity	Number of vessels	954	955	939	928	917	1,343	1,514	1,534	1,552	1,589	1,713	1,776		2%	34%
	Total vessel power	30,348	30,428	28,722	26,931	26,121	30,616	32,082	31,807	31,460	31,286	31,154			-1%	5%
	Total vessel tonnage	7,580	7,587	7,018	6,388	6,002	6,134	6,006	5,897	5,784	5,734	5,935			-1%	-12%
Employment	Engaged crew	3,002	1,899	1,948	1,993	2,046	2,046	2,070	2,242	2,107	2,100	2,219	2,275		0%	-2%
	Unpaid labour										1,069					
	FTE national	699	541	521	524	540	514	497	485	457	460	525	518		1%	-13%
	Total hours worked per year (engaged crew)										861,324					
Effort	Days at sea	88,501	93,611	80,300	66,828	63,877	86,827	94,460	84,812	71,964	63,263	82,843	83,790		-12%	-22%
	Fishing days	135,703	147,546	125,511	104,212	100,179	142,988	162,891	151,631	148,242	119,482	158,903			-19%	-12%
	kW fishing days	1,693,242	1,552,435	1,358,506	1,212,294	1,213,823	932,452	969,223	1,057,644	877,115	2,780,979				217%	130%
	GT fishing days	700,638	635,986	541,024	484,389	487,070	375,986	394,702	435,607	365,816	607,069				66%	24%
	Number of fishing trips	87,034	92,652	79,721	65,767	63,074	86,406	94,159	84,529	71,697	62,985				-12%	-22%
	Energy consumption	5,446,492	5,026,021	4,323,160	3,910,221	3,653,333	2,690,428	2,795,277	3,299,606	2,770,980	3,314,527	3,479,978	3,306,800		20%	-12%
Landings	Live weight of landings	83,544,359	83,547,637	79,571,663	63,350,813	53,272,410	54,556,895	54,767,312	59,325,874	60,524,241	64,475,110	66,935,905	63,747,749		7%	-2%
	Value of landings	18,358,512	16,918,570	14,685,342	15,126,534	14,582,601	15,454,324	14,543,841	14,530,509	14,606,140	14,519,092	14,433,302	13,400,362		-1%	-6%
Income	Gross value of landings	18,358,511	16,918,570	14,685,364	15,126,998	14,582,600	15,454,325	14,543,841	14,530,519	14,606,142	14,519,086	15,075,242	14,188,512		-1%	-6%
	Other income	166,331	97,824	129,666	87,528	122,389	165,052	185,127	201,342	192,217	214,440	226,917	240,148		12%	43%
	Operating subsidies	10,880	7,651	9,344	-	-	-	-	-	-	-					-100%
	Income from leasing out quota	1,278	6,920	9,341	19,385	44,550	8,069	11,093	9,061	40,291	8,136				-80%	-51%
Expenditure	Personnel costs	5,235,699	4,902,857	4,483,288	4,123,260	4,275,917	4,055,054	4,420,757	4,669,239	4,217,314	4,358,404	4,619,591	4,480,549		3%	-3%
	Value of unpaid labour	948,913	741,208	788,931	835,430	927,409	988,022	958,770	1,021,111	1,148,644	994,483	1,095,489	1,091,898		-13%	7%
	Energy costs	3,781,508	2,513,055	2,765,031	3,232,264	3,198,403	2,114,761	1,943,264	1,771,881	1,385,963	1,806,623	2,329,422	2,198,531		30%	-28%
	Repair & maintenance costs	982,491	1,515,070	1,641,135	1,801,374	1,630,743	2,208,893	1,445,555	1,714,117	1,542,701	1,340,416	1,419,208	1,498,745		-13%	-17%
	Other variable costs	1,721,304	1,661,504	1,555,341	1,204,311	1,207,773	1,317,440	1,312,385	1,385,025	1,451,875	1,354,237	1,566,633	1,585,308		-7%	-5%
	Other non-variable costs	634,572	713,271	552,775	687,781	502,392	778,100	719,746	508,766	505,124	506,160	525,812	546,528		0%	-19%
	Consumption of fixed capital	1,502,913	1,824,345	1,915,396	1,629,869	1,334,658	1,848,010	1,868,945	1,878,894	1,720,715	1,679,199	1,734,211	1,802,550		-2%	-3%
	Lease/rental payments for quota	-	53,491	25,060	19,385	44,550	62,802	57,553	64,223	76,146	80,503				6%	80%
Indicator	Opportunity cost of capital	- 422,597	1,515,518	657,123	- 288,127	- 115,769	53,273	571,738	643,801	495,677	- 33,797	17,554	- 343,413		-107%	-110%
	Gross Value Added	11,404,968	10,613,493	8,300,748	8,288,795	8,165,677	9,200,183	9,308,018	9,352,072	9,912,695	9,726,089	9,461,084	8,599,547		-2%	4%
	Net Value Added	10,324,652	7,273,630	5,728,230	6,947,053	6,946,789	7,298,900	6,867,335	6,829,377	7,696,303	8,080,687	7,709,319	7,140,410		5%	10%
	Gross profit	5,220,356	4,969,429	3,028,529	3,330,105	2,962,351	4,157,107	3,928,491	3,661,722	4,546,737	4,373,202	3,746,005	3,027,101		-4%	10%
	Net profit	4,140,040	1,629,566	456,011	1,988,363	1,743,463	2,255,823	1,487,809	1,139,027	2,330,345	2,727,799	1,994,239	1,567,964		17%	43%
	Net profit subsidised	4,150,920	1,637,217	465,355	1,988,363	1,743,463	2,255,823	1,487,809	1,139,027	2,330,345	2,727,799	1,994,239			17%	43%
	Net profit rights	4,152,198	1,590,646	449,635	1,988,363	1,743,463	2,201,090	1,441,348	1,083,865	2,294,490	2,655,432	1,994,239			16%	41%
Capital	Value of physical capital	19,155,404	19,518,630	20,638,073	18,926,371	17,233,109	18,326,057	19,153,211	18,954,249	18,505,279	17,523,633	18,150,804	18,906,193		-5%	-7%
	Value of quota and other fishing rig	68,886,132	67,797,075	64,838,872	48,876,702	39,396,657	40,518,790	41,916,042	45,767,658	45,102,291	69,469,376				54%	35%
	Investments	979,572	1,120,593	1,875,144	2,374,674	1,637,178	2,111,898	1,576,232	2,636,283	1,812,154	1,702,012				-6%	-5%
	Total assets										58,200,977					
	Long/short debt										13,725,052					
	Subsidies on investments										97,170					

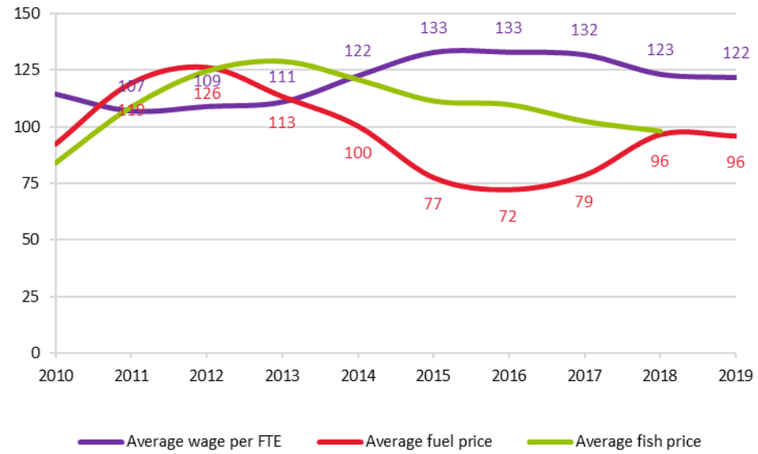
Data source: MS data submissions under the DCF 2019 Fleet Economic (MARE/A3/ASC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

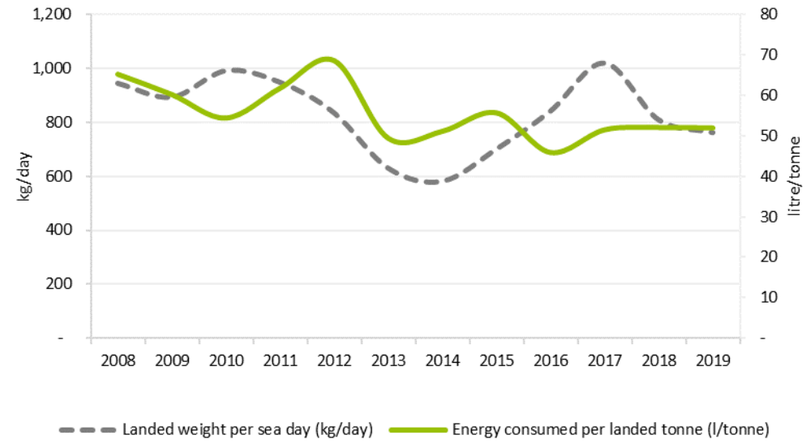


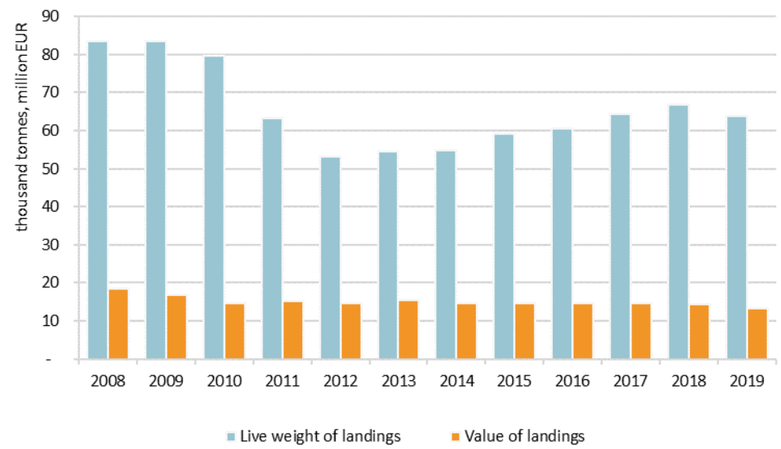


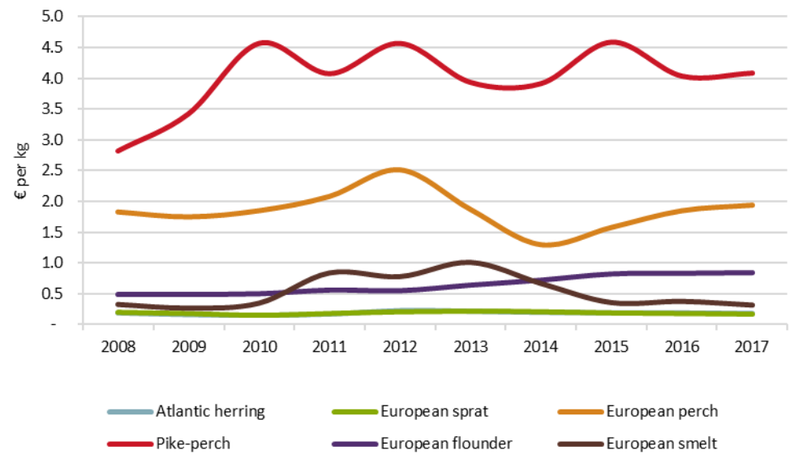












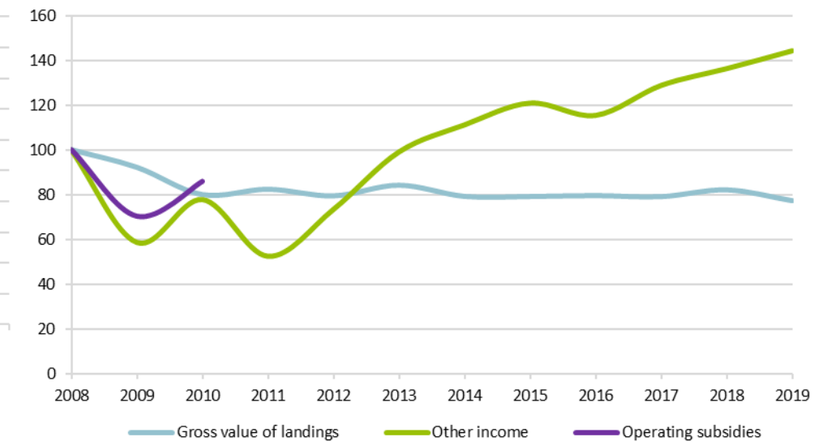


Figure 5.6 Estonia: Main trends in economic performance indicators (absolute value, panel 1a/top left and relative value, (panel 1b/top middle); cost structure (panel 1c, top right); productivity (panel 2a); key input/outputs (panel 2b); efficiency (panel 2c); landings (panel 3a); average price (EUR /kg) of top species (panel 3b) and capital values (panel 3c). Nowcast figures for 2018 and 2019

Data source: MS data submissions under the DCF 2019 Fleet Economic (MARE/A3/ASC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Table 5.17 Estonia: National fleet statistics and economic performance results by fleet segment, 2017

	Number of vessels	FTE national	Days at sea	Energy consumed per landed tonne	Live weight of landings	Value of landings	Revenue	Gross Value Added	GVA to revenue	Gross profit	Gross profit margin	Net profit	Net profit margin	Average wage per FTE	GVA per FTE (labour productivity)	Return on fixed tangible	Profitability (2017)	Net profit margin %Δ 2017 -	Economic development trend	As a % of total revenue
EST NAO TM 2440 NGI*	25	126	3,419	51	52,835,628	9,100,345	9,140,623	6,361,740	69.6	2,921,449	31.96	1,752,665	19.17	27,304	50,490	18.9	Reasonable	72%	Improved	62%
EST NAO PG 0010 NGI	1,480	221	58,733	110	3,655,044	3,783,597	3,933,250	2,109,957	53.6	988,411	25.13	656,512	16.69	5,075	9,547	11.1	Reasonable	18%	Improved	27%
EST NAO PG 1012 NGI	77	111	938	31	7,185,639	1,497,532	1,522,034	1,148,651	75.5	421,572	27.70	306,553	20.14	6,550	10,348	12.4	High	40%	Improved	10%
EST NAO TM 1218 NGI	5	2	173	25	798,799	137,619	137,619	105,741	76.8	41,770	30.35	12,023	8.74	31,986	52,870	13.4	Weak			1%

Data source: MS data submissions under the DCF 2019 Fleet Economic (MARE/A3/ASC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Table 5.18 Estonia: Landed value, weight and average price of principal species

	Value of landings (real)										Live weight of landings										Average landed price (real)										% over total	
	(thousand €)										kg										(€)											
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	in EUR	in weight
Atlantic herring	6.0	5.4	4.3	4.4	5.1	4.8	4.7	6.2	6.4	6.3	31,828,991	33,164,494	28,861,758	25,325,241	22,464,381	21,939,589	23,130,056	32,317,478	33,768,704	35,152,664	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	42%	55%
European sprat	9.7	8.3	7.1	6.4	5.9	6.6	6.0	4.6	4.2	4.6	48,581,688	47,298,425	47,861,669	34,976,300	28,342,150	29,805,065	28,498,263	23,953,571	23,686,938	26,545,950	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	30%	41%
European perch	1.3	1.4	1.6	1.7	1.4	2.3	2.2	2.4	2.6	2.5	703,252	809,495	878,762	796,183	549,764	1,216,993	1,708,525	1,522,815	1,405,709	1,289,265	1.8	1.8	1.9	2.1	2.5	1.9	1.3	1.6	1.9	1.9	16%	2%
Pike-perch	0.2	0.2	0.3	0.5	0.7	0.5	0.7	0.4	0.4	0.2	64,021	66,699	73,364	110,517	146,817	122,155	173,272	83,018	106,713	56,082	2.8	3.4	4.6	4.1	4.6	3.9	3.9	4.6	4.0	4.1	2%	0%
European flounder	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.2	284,144	287,706	285,020	280,146	242,953	283,946	312,923	239,335	200,610	186,534	0.5	0.5	0.5	0.6	0.6	0.6	0.7	0.8	0.8	0.8	1%	0%
European smelt	0.2	0.2	0.2	0.2	0.3	0.5	0.2	0.2	0.3	0.1	738,867	771,273	452,321	200,158	406,409	516,803	234,005	435,240	699,428	410,603	0.3	0.3	0.4	0.8	0.8	1.0	0.7	0.4	0.4	0.3	1%	1%

Data source: MS data submissions under the DCF 2019 Fleet Economic (MARE/A3/ASC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

5.7 Finland

Short description of the national fleet

Fleet capacity

The Finnish fishing fleet consisted of 3 217 registered vessels of which 1 748 were inactive in 2017; the active fleet consisted of 1 469 vessels, with a combined gross tonnage of 11.9 thousand GT and a total power of 92 thousand kW. The capacity of active fleet declined slightly with the number of active vessels from the previous year.

Fleet structure

The Finnish fishing fleet is dominated by small-scale vessels: 1 413 out of 1 469 (96%) active vessels were operating in small-scale coastal fisheries. However, the 56 trawlers accounted for majority (74%) of the total fleet capacity in terms of tonnage.

Employment

Total employment in 2017 was estimated at 1 359 jobs. The majority of the jobs (90%) are created by the SSCF that is a seasonal fishery. Therefore, the employment in that sector is usually only part-time and in terms of full time equivalent the total fleet added up to 271 FTE. The number of fishers has been dropping for a long time and the average age of fishers is high.

Effort

The total effort in 2017 was 99 thousand fishing days. The SSCF accounted for over 90% of the total effort and there has been declining trend during the past decade. At the same time the effort of LSF has been increasing. Finnish fleet operates exclusively in the Baltic Sea.

Production

The total weight landed by the Finnish fleet in 2017 amounted 155 thousand tonnes of seafood with value of EUR 36 million. The bulk of this catch consisted of Baltic herring and sprat caught by the trawler fleet. Catches of these pelagic species have been increasing during the past years due to strong herring stocks especially in the most important fishing grounds for Finnish fleet in northern Baltic Sea. The landed value of LSF has increased during the past years with increased catches. However there was a drop in value in 2017 due to a drop in prices. At the same time the development in SSCF has been the opposite. Catches has decreased significantly from the beginning of the decade but the drop in value has been compensated by an increase in average value.

Baltic herring accounted for the highest landed value (EUR 27.3 million), followed by European sprat (EUR 3.1 million). The Russian embargo on EU food stuff as a countermeasure to EU sanctions due to the Ukraine crisis led to a loss of the most important market for pelagic fish that resulted in drop in pelagic fish prices.

Unfavourable weather conditions together with increase of seal population continued to hamper the small-scale costal fishing: temperate winter together with cold summer lead to a drop in catches. The landing weight of the SSCF continued to decline. However, the improved prices compensated the declining catches to some extent but not enough to prevent the decline in landing value. Small-scale coastal fleet target mostly various freshwater fish species: European whitefish and pike-perch were the most important species for the segment.

Economic results for 2017 and recent trends

National fleet performance

The amount of income generated by the Finnish fleet in 2017 was EUR 35.8 million, the same level as the previous year. Income consisted of EUR 33.9 million in landings income and EUR 1.8 million in other income.

Profitability of the national fleet decreased from previous year; gross value added was EUR 15.9 million, 8% lower than the year before. Gross profit decreased also to EUR 9.2 million and was not high enough to cover the estimated opportunity cost of capital of the fleet resulting in a negative net profit (-EUR 5.3 million).

Resource productivity and efficiency indicators

The Gross Value Added generated of Finnish national fleet in 2017 added up to EUR 15.9 million with a drop of 8% than previous year. The gross profit margin decreased to 26% and also net profit decreased. The decline of the profitability originated from decreased profitability in the trawler segments while the profitability improved in the small-scale coastal fishery. In the small-scale costal fishery there are a large number of low activity vessels and accounting the value of capital of all these vessels turned the segment net profit negative even the most active part of the segment is highly profitable.

Both LSF and SSCF make reasonable gross profits, however, they are not high enough to cover the opportunity cost of capital. Therefore the net profit margin remained negative indicating that the fleet is not economically sustainable in the long term.

Performance by fishing activity

Small-scale coastal fleet

The Finnish fishing fleet is dominated by small-scale vessels: 1 413 out of 1 469 (96%) active vessels were operating in small-scale coastal fisheries.

However, the segment account only one fourth of the national total value of landings that is dominated by the pelagic trawler fleet. At the same time the segment covers 90% of all fishers and the segment employs almost two thirds of total number of fishers in terms of FTE. Therefore, the segment is really important from the social point of view.

Catches of coastal fisheries continued to decline for fourth year in a road after peaking in 2013.

In 2017, landed weight of the segment decreased by 4% but the revenues increased slightly to EUR 9.6 million. The segment generated EUR 5.4 million of gross value added and gross profit of 3.6 million. However the large number of low activity vessels and accounting the value of capital of all these vessels turned the segment net profit negative.

The profitability of the most active part of the segment is significantly higher than those with low activity. In 2015, the new fishing law, commercial fishing enterprises are defined in two groups: the first category (I) consists of enterprises that are value added tax liable (annual turnover over EUR 10 000 in 2016); the rest are classified as the second category (II) fishers. The first category fishers are the priority in the fisheries management; and only these enterprises are eligible for EMFF funding.

In 2017 228 fishing units out of total of 1 089 in the coastal small-scale segment exceeded the VAT threshold and categorised to category I. These enterprises accounted for three-quarters of the total value of landings of the total SSCF segment. Therefore, the average size of a fishing unit in this category was over EUR 30 000; significantly higher compared to that for the whole small-scale segment: EUR 6 800. The increase in the average size has a significant impact on the economic performance. Profitability of the category I fishers is significantly higher compared to whole segment due to improve in gross profit margin together with the decrease in capital costs. Therefore, the net profit is significantly higher for this part of the segment: the net profit margin was in 2017 was incredible 50%; again significantly higher than that (-19%) on average in the whole small-scale segment. The result proves that the active part of the small-scale coastal fisheries is the most profitable of the Finnish fishing fleet.

Performance of fleet segments

The Finnish fleet operates exclusively in the Baltic Sea and is based on two main fisheries: pelagic trawlers and the small-scale coastal fleet. Pelagic trawlers are divided into three segments. The SSCF is highly diversified with a range of vessel types targeting various species in waters along the Finnish coastline.

Passive gears <10m and 10-12m

The small-scale coastal fleet is the biggest Finnish fleet segment in terms of number of boats with 1 413 vessels in 2017. The SSCF consists of diversified vessels targeting mainly freshwater fish species; European whitefish, pike-perch and perch. In 2017, the total revenue of the small-scale fishery was EUR 9.6 million making a positive gross value added of EUR 5.4 million. The profitability in terms of Gross profit margin was reasonable 37% but it was not high enough to cover the estimated capital costs: the SSCF made losses of EUR 1.8 million.

The coastal fleet is highly seasonal, and there is also a high variation in the activity of the vessels; the 228 most active fishing units make up 76% of the total landings. These most active vessels are

significantly profitable compared to the large number with low activity vessels; net profit margin of 50% generating resource rent of 3.4 million in 2017. Despite this significant contribution to profitability accounting for whole fleet segment with opportunity cost of all low active vessels the overall economic performance of the whole SSCF has been poor for years and continued making losses in 2017.

Pelagic trawlers 24-40m

This fleet is economically the most important. It targets herring and sprat in the Baltic Sea. In 2017 these 21 vessels accounted for more than half of the total value landed by the Finnish fleet and employed 75 FTE. The average vessel revenue was EUR 0.9 million, employing 4 FTEs. The fleet segment generated Gross Value Added of EUR 6.7 million. In 2017 the Gross profit margin was 20 % which was not high enough to cover the estimated capital costs and the fleet was making losses totalling EUR 3 million with a net profit margin of -16%.

Pelagic trawlers 18-24m

This fleet segment consisted of 13 vessels in 2017 also targeting Baltic herring and sprat. The average vessel revenue was EUR 340 thousand, second highest in the Finnish fleet and average on-board employment is 2 FTE. The segment generated EUR 2.8 million of Gross Value Added. The fleet made Gross profit of EUR 1 million with 23% margin. However it was not high enough to cover the estimated capital costs and the fleet was making losses of EUR 220 thousand with net profit margin of -5%.

Pelagic trawlers 12-28m

This is the smallest pelagic trawler segment in terms of individual vessel size and consists of 22 vessels. The average vessel revenue was significantly lower than that of the bigger vessels, EUR 100 thousand. An average vessel employed less than one FTE. Also this segment was making losses with net profit margin of -8%.

Drivers affecting the economic performance trends

Most important driver for fisheries is the state of stocks. Due to the strong status of the most important fish stocks for Finnish fleet – pelagic stocks - the total weight of landings have been record high for the past few years. However the new stock advice for Baltic Sea pelagic stocks suggests cuts in quotas. And particularly that proposes significant cuts in the most important Baltic herring stock in Bothnian Sea that will have marked impact on the fleet.

The most important driver for economic performance is the fish prices and inputs especially fuel price. Fish prices for pelagic species remained rather stable in 2017. However, the most important fish prices for coastal fishing increased compensating the low catches. Fuel costs are major cost item especially for the trawler fleet and fuel prices were at lowest level for decade in 2016 but have increased since and this had an impact on the profitability of the sector.

Markets and trade (including fish prices)

Russia has traditionally been an important market for Baltic herring and sprat. Therefore, Russian embargo on EU food products as a countermeasure to EU sanctions due to the Ukraine crisis has led to marked drop in prices of these pelagic species. On the other hand, prices of the most important species for the coastal fishery - European perch, pike-perch and whitefish – have been increasing recent year due to declining supply.

Management instruments and regulation (policy)

The offshore fleet is managed mainly through TACs that are shared between Baltic Sea countries. Apart from salmon and herring the coastal fleet target mostly on freshwater species that do not have quotas but are managed with licences and other time and gear restrictions.

From the beginning of 2017 ITQ regime was introduced in the Finnish pelagic fisheries and salmon fishery. The allocation of the fishing rights was based on grandfathering. The new management regime will most likely have a major impact to the trawler fleet structure and performance. In 2017 there were 56 active trawlers operating under ITQ. That is 7 vessels less than previous year and after the first year under ITQ in 2018 the number of active trawlers was down to 52. The final outcome of the impact of ITQ on Finnish trawler fleet will be realised in coming years.

Stock status, TACs and quotas

Pelagic fisheries are the most important for the Finnish fleet by terms of weight and value. Both Baltic herring and sprat stocks were at the MSY level in 2017. Baltic herring stocks have been exceptionally strong especially in the most important fishing grounds in the Bothnian Sea. In 2017, the catches of herring remained at the highest level recorded for fourth consecutive year. The TAC of Finnish Baltic herring has not been fully utilised for years. However, there was a cut in herring TAC in Bothnian Sea for 2018 and again for 2019. Furthermore the ICES advice for 2020 proposes significant 30% further cuts in quotas. This would imply a significant impact on the fleet economic performance and the depending downstream activities in the value chain.

The main quota species for the small-scale coastal fisheries is salmon. Salmon quotas have been decreasing during the latest years. However, the most important salmon rivers in the Baltic Sea – river Tornio and river Kalix – show that they are on the recovery path towards MSY.

Operational costs (external factors)

Fuel prices are the most important cost item especially for the larger pelagic trawlers. Fuel prices were at lowest level for decade in 2016 but started increase in autumn 2017 and continued to increase in 2018 indicating increasing costs for the fleet. The labour costs are the second most important cost item and follows the revenue.

Socioeconomic impact

The number of fishers has been dropping for a long time and the average age has been increasing. The decline in the number of fishers and vessels has been particularly true for the small-scale coastal fishing segment. However, labour input in terms of fulltime employment has remained relatively stable and has even slightly increased in the trawler segments.

Russia has traditionally been the main market for Baltic herring and sprat. Therefore, the continued Russian embargo for EU food stuff has forced Finnish fishers to find alternative markets for pelagic species. The average prices of these pelagic species have dropped significantly as landings are now more heavily used as feed.

ITQ system was introduced in the beginning of 2017. In other Nordic countries the implementation of ITQ led to a significant decrease in number of vessels and employment. Similar development may be expected in the Finnish pelagic segment. However in 2017 there were only a marginal decrease in number of vessels and full impact of ITQs will be realised in the future.

Nowcasts for 2018-19 and outlook

A total of 126 million kilos of Baltic herring and 16 million kilos of sprat were caught in 2018. The Baltic herring catch decreased by nearly eight million kilos from the previous year, while the sprat catch remained unchanged. Despite the drop of herring catch the quota was not fully utilised. There have been quota cuts during the past years in pelagic stocks and the ICES advice for 2020 proposed a significant quota cut for the Bothnian Sea herring that is the most important fishing ground for Finnish pelagic trawlers. This would imply a significant impact on the fleet economic performance and the depending downstream activities in the value chain.

The economic performance of the trawler fleet is projected to deteriorate in 2018 together with decreased catches and increased prices. However the net profit remained at same level as there was a drop in vessels but the fleet was making losses.

In the SSCF the development is projected to be opposite to that of LSF: 2018 landings increased despite a decrease in the number of boats and effort. The slight increase in revenues together with decrease in costs due to the lower effort is projected to improve the operational profitability. And furthermore the decrease in number of vessels and capital costs led to improved net profit even that remained still negative.

Overall economic performance for the Finnish fleet in 2018 is projected to remain at the same level as year before. While the Finnish fleet remains in negative net profits, gross profits margin is reasonable high in both SSCF and LSF. This indicates that in short term the fleet is performing well but is not sustainable in long term; the fleet is not profitable enough to cover the costs of investments required to maintain the current structure of the fleet.

Data issues

Capacity, logbook and landings data are derived from sources which are covered by different legislation. All these data are available exhaustively. The bigger vessels are covered by log-books and smaller vessels are covered by the coastal fishing report. However, in the small-scale coastal fisheries the method for correcting non-response was changed in 2014 based the response loss survey. Furthermore, the fishing law reform sanctioned the costal fishing reports mandatory for all small-scale coastal vessels from the beginning of 2015 and therefore the estimation of non-response has been abolished. Therefore, there is a break in the time series relating to the SSCF.

Economic data collection is based on a hierarchical multi-stage survey that combines information from different data sources. The main sources were the central control register on the commercial fishery (includes landings data, the vessel register, and first hand sales of quota species), the financial database in Statistics Finland (SF) and an additional account survey. Starting in 2016, the account data for the coastal fishers is collected by the Natural Resources Institute Finland.

Due to the good coverage of the data collection and an efficient estimation method the achieved precision of the economic variables is satisfactory. However, there is a break in the time series of the number of active vessels in small-scale fishing in 2012 when the recording of active vessels was re-specified and then again in 2014 and 2015 due to the methodological changes described above. Finland has modified the assumptions used in the Perpetual Inventory Method (PIM) regarding service life of each asset, depreciation rates and share of each asset in total value as well as the price per capacity used. These updates have greatly affected depreciated replacement values and the depreciation reported for the time series, affecting also the net profits of the sector.

Table 5.19 Finland: National fleet statistics and economic performance results. Nowcast figures for 2018 and 2019

		2008	2009	2010	2011	2012	2013	2014	2015	2016	*2017*	*2018*	2019	Trend 2008-2018	Δ 2017 to 2016	Δ 2017 to avg. 08-16
Capacity	Number of vessels	3,240	3,240	3,270	3,365	3,359	3,241	3,144	2,717	3,092	3,217	3,233	3,246		4%	1%
	Total vessel power	173,427	174,797	175,363	181,590	178,179	172,554	173,036	155,673	168,517	173,514	172,624			3%	1%
	Total vessel tonnage	16,440	16,930	16,728	18,096	17,036	16,489	16,832	15,796	16,152	16,392	15,853			1%	-2%
Employment	Engaged crew	1,428	1,447	1,512	1,490	1,437	1,418	1,461	1,412	1,524	1,359	1,206	1,202		-11%	-7%
	Unpaid labour										785					
	FTE national	264	229	274	338	354	377	355	358	300	271	216	191		-10%	-14%
	Total hours worked per year (engaged crew)										355,000					
Effort	Days at sea	129,529	143,013	149,663	148,169	137,593	137,819	126,410	106,022	109,927	99,065	78,028	71,332		-10%	-25%
	Fishing days	128,713	142,395	148,943	147,310	136,762	136,983	125,762	105,961	109,700	98,751	77,613			-10%	-25%
	kW fishing days	8,644,080	8,743,759	9,612,662	10,027,739	9,222,047	3,700,805	4,056,921	4,768,321	5,227,128	4,786,419	3,906,013			-8%	-33%
	GT fishing days	1,093,356	1,085,153	1,178,673	1,326,210	1,418,736	1,202,277	1,295,626	1,515,609	1,641,079	1,544,743	1,296,989			-6%	18%
	Number of fishing trips	127,337	141,188	147,536	145,561	134,519	134,696	123,119	102,828	106,217	95,843	75,081			-10%	-26%
	Energy consumption	11,153,199	15,667,802	13,415,774	13,905,110	14,190,225	16,070,963	15,808,513	19,174,806	20,286,127	18,662,176	15,826,801	12,850,442		-8%	20%
Landings	Live weight of landings	111,581,369	117,541,097	122,077,992	119,685,476	132,917,223	138,388,177	148,223,770	148,130,544	157,322,423	154,505,734	147,387,951	125,796,877		-2%	16%
	Value of landings	26,289,974	26,661,262	29,263,129	34,823,295	36,845,875	47,050,880	40,359,449	33,641,264	39,673,173	35,756,264	33,973,647	28,447,285		-10%	2%
Income	Gross value of landings	27,290,217	27,518,627	29,317,986	35,661,115	39,637,748	41,522,884	37,004,880	34,733,903	33,938,222	33,960,469	33,003,270	27,752,420		0%	0%
	Other income	2,444,091	3,510,545	3,090,217	3,064,086	5,063,096	2,552,508	2,273,487	1,360,951	1,794,502	1,843,668	1,679,509	1,655,145		3%	-34%
	Operating subsidies	2,668,547	1,674,618	1,484,395	1,382,922	1,282,581	1,141,655	1,041,414	1,358,255	927,907	706,235				-24%	-51%
	Income from leasing out quota	-	-	-	-	-	-	-	-	-	-					
Expenditure	Personnel costs	3,014,055	3,329,610	3,515,013	4,112,527	4,670,904	4,931,576	4,901,367	5,237,117	4,659,715	4,870,547	4,367,929	4,049,609		5%	14%
	Value of unpaid labour	3,798,018	3,480,143	4,255,754	5,483,247	5,857,036	3,929,088	2,503,402	1,865,115	1,744,414	1,736,260	1,787,942	1,561,856		0%	-53%
	Energy costs	7,969,992	7,421,747	8,231,732	10,742,410	11,461,967	12,075,357	10,674,575	9,532,166	8,419,518	9,086,420	9,506,476	7,536,521		8%	-5%
	Repair & maintenance costs	3,800,207	3,354,797	4,070,111	4,911,555	5,138,598	4,917,581	4,717,948	4,130,640	3,671,592	3,898,276	3,621,827	3,525,609		6%	-9%
	Other variable costs	1,723,193	2,018,953	2,322,064	2,881,149	3,004,056	3,323,838	3,148,147	2,681,181	2,252,256	2,479,135	2,074,675	1,750,048		10%	-4%
	Other non-variable costs	3,901,310	3,929,889	4,210,486	5,239,584	5,292,714	5,481,413	5,249,506	4,881,025	4,148,220	4,470,833	4,062,367	3,895,282		8%	-5%
	Consumption of fixed capital	12,268,052	14,279,210	15,751,632	15,581,489	12,643,267	12,399,727	14,853,735	15,344,700	15,037,006	14,697,433	13,478,430	13,088,016		-2%	3%
	Lease/rental payments for quota	213,969	248,896	317,873	301,554	368,313	276,425	210,872	253,397	219,023	283,240				29%	6%
Indicator	Opportunity cost of capital	238,643	1,529,356	1,000,204	-208,535	-778,509	-191,256	158,909	634,036	-246,718	-106,140	-209,117	-379,907		57%	-145%
	Gross Value Added	12,339,607	14,303,786	13,573,810	14,950,503	19,803,509	18,277,204	15,488,192	14,869,842	17,241,138	15,869,473	15,417,434	12,700,104		-8%	1%
	Net Value Added	-167,088	-1,504,779	-3,178,025	-422,451	7,938,751	6,068,733	475,548	-1,108,894	2,450,850	1,278,181	2,148,121	-8,005		-48%	9%
	Gross profit	5,527,534	7,494,033	5,803,044	5,354,729	9,275,569	9,416,540	8,083,424	7,767,610	10,837,009	9,262,666	9,261,564	7,088,639		-15%	20%
	Net profit	-6,979,161	-8,314,533	-10,948,791	-10,018,225	-2,589,189	-2,791,931	-6,929,220	-8,211,126	-3,953,279	-5,328,626	-4,007,750	-5,619,470		-35%	21%
	Net profit subsidised	-4,310,614	-6,639,914	-9,464,396	-8,635,303	-1,306,608	-1,650,276	-5,887,806	-6,852,871	-3,025,372	-4,622,391	-4,007,750			-53%	13%
	Net profit rights	-4,524,583	-6,888,810	-9,782,269	-8,936,857	-1,674,921	-1,926,701	-6,098,678	-7,106,268	-3,244,395	-4,905,631	-4,007,750			-51%	12%
Capital	Value of physical capital	63,577,076	72,608,664	77,649,392	74,281,505	61,329,881	57,489,248	64,326,166	68,779,116	61,926,210	42,795,637	39,190,022	38,141,187		-31%	-36%
	Value of quota and other fishing rig	-	-	-	-	-	-	-	-	-	-					
	Investments	10,687,665	17,423,490	16,362,327	11,712,712	8,465,781	11,962,318	17,676,535	17,621,286	13,450,545	15,895,832				18%	14%
	Total assets										54,568,929					
	Long/short debt										26,029,704					
	Subsidies on investments										64,211					

Data source: MS data submissions under the DCF 2019 Fleet Economic (MARE/A3/ASC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

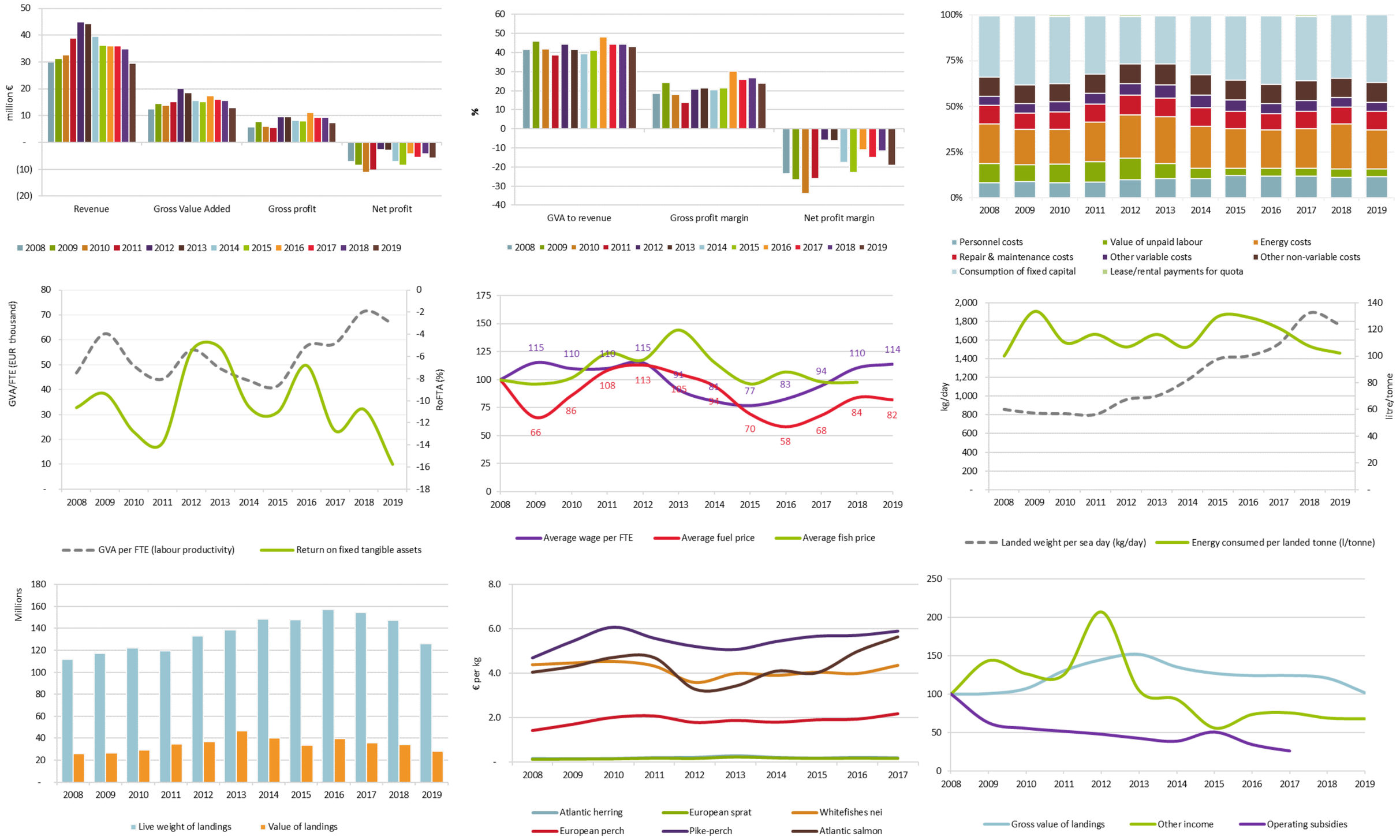


Figure 5.7 Finland: Main trends in economic performance indicators (absolute value, panel 1a/top left and relative value, (panel 1b/top middle); cost structure (panel 1c, top right); productivity (panel 2a); key input/outputs (panel 2b); efficiency (panel 2c); landings (panel 3a); average price (EUR /kg) of top species (panel 3b) and capital values (panel 3c). Nowcast figures for 2018 and 2019

Data source: MS data submissions under the DCF 2019 Fleet Economic (MARE/A3/ASC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Table 5.20 Finland: National fleet statistics and economic performance results by fleet segment, 2017

	Number of vessels	FTE national	Days at sea	Energy consumed per landed tonne	Live weight of landings	Value of landings	Revenue	Gross Value Added	Gross profit margin	Gross profit	GVA to revenue	Net profit	Net profit margin	Average wage per FTE	GVA per FTE (labour productivity)	Return on fixed tangible	Profitability (2017)	Net profit margin %Δ 2017 -	Economic development trend	As a % of total revenue
FIN NAO TM 2440 NGI*	21	75	3,837	146	108,102,170	20,160,332	19,585,715	6,652,605	20.63	4,040,482	34.0	-3,132,877	- 16.00	34,828	88,701	- 15.9	Weak	-29%	Deteriorated	55%
FIN NAO PG 0010 NGI	1,372	146	91,338	137	6,234,035	7,372,548	8,369,044	4,938,171	39.93	3,341,990	59.0	-1,353,858	- 16.18	10,933	33,823	- 9.3	Weak	43%	Improved	23%
FIN NAO TM 1824 NGI	13	24	1,520	39	28,153,170	5,278,543	4,408,569	2,814,888	23.15	1,020,775	63.9	- 222,088	- 5.04	74,755	117,287	- 6.7	Weak	51%	Improved	12%
FIN NAO TM 1218 NGI*	22	18	1,287	66	9,406,827	2,092,467	2,195,308	976,746	27.32	599,648	44.5	- 193,453	- 8.81	20,950	54,264	- 9.1	Weak	55%	Improved	6%
FIN NAO PG 1012 NGI*	41	8	1,083	118	2,609,529	852,377	1,245,502	487,063	20.86	259,771	39.1	- 426,351	- 34.23	28,412	60,883	- 19.8	Weak	55%	Improved	3%

Data source: MS data submissions under the DCF 2019 Fleet Economic (MARE/A3/ASC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Table 5.21 Finland: Landed value, weight and average price of principal species

	Value of landings (real) (thousand €)										Live weight of landings kg										Average landed price (real) (€)										% over total	
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	in EUR	in weight
Atlantic herring	13.5	13.4	14.9	19.7	24.0	34.4	27.5	23.1	28.7	25.1	83,137,034	90,252,910	92,400,137	97,644,692	117,163,683	121,615,695	130,414,095	131,443,850	136,307,867	134,133,229	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	69%	87%
European sprat	3.4	3.5	4.0	3.0	1.6	2.6	2.4	2.1	3.1	2.8	24,254,352	23,159,995	24,601,644	15,762,460	8,960,077	11,073,734	11,811,597	11,874,262	16,805,615	16,087,642	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	8%	10%
Whitefishes nei	2.9	3.1	2.9	3.0	2.4	2.8	2.6	2.3	2.0	1.9	669,177	691,585	646,601	680,713	661,783	687,001	656,353	569,712	500,909	437,407	4.4	4.5	4.6	4.3	3.6	4.0	3.9	4.1	4.0	4.4	5%	0%
European perch	1.2	1.1	1.5	2.0	1.8	1.6	1.9	1.4	1.4	1.3	826,484	633,224	741,448	936,180	1,020,342	832,738	1,062,790	725,776	704,646	569,572	1.4	1.7	2.0	2.1	1.8	1.9	1.8	1.9	2.0	2.2	3%	0%
Pike-perch	1.5	1.7	2.1	2.7	1.9	1.6	2.0	1.7	1.4	1.2	307,905	307,067	350,741	483,159	366,062	308,198	362,283	294,524	245,749	197,153	4.7	5.5	6.1	5.6	5.2	5.1	5.4	5.7	5.7	5.9	3%	0%
Atlantic salmon	1.3	1.4	1.0	1.1	1.1	0.9	1.0	0.8	1.0	0.9	312,295	313,663	214,833	227,479	330,374	259,040	249,322	191,615	192,082	158,919	4.1	4.3	4.7	4.7	3.3	3.4	4.1	4.0	5.0	5.7	2%	0%

Data source: MS data submissions under the DCF 2019 Fleet Economic (MARE/A3/ASC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

5.8 France

Short description of the national fleet

Fleet capacity

The national fleet capacity consisted of 6 970 vessels (including 1 231 of which were inactive), having a combined gross tonnage (GT) of 177 thousand tonnes and engine power of 1 026 thousand kilowatts (kW).

The slight increase of number of vessels was due to the new Commission regulation. In 2017, the population shall be all active and inactive vessels registered in the Union Fishing Fleet Register as defined in Commission Regulation (EC) No 26/2004 (2) on 31 December of the reporting year and vessels that do not appear on the Register at that date but have fished at least one day during the reporting year.

Fleet structure

The French fishing fleet is nationally divided into:

- a small-scale coastal fleet (73% of total active vessels, but only 9% of the whole gross tonnage) which was mainly composed of vessels less than 10 meters long with a large diversity of metiers and an important part of polyvalent vessels.

- a large-scale fleet (27% of total active vessels) which was mainly made up of vessels using active gears, especially demersal trawlers and dredgers with lengths ranging from less than 10 meters to more than 40 meters. Even though they were active in all the French regions, the major proportion of those vessels was based in North East Atlantic and North Sea regions. As they were most of time larger than SSCF vessels, they represented the major part of the fleet regarding the gross tonnage (65%).

- a distant water fleet[16] composed of 22 tropical purse seiners over 40 meters catching tuna in South Atlantic and Indian Oceans; even if they represented only a small part of the fleet in terms of number, these vessels generated approx. 12% of the national fleet's income.

In 2018, the number of fishing enterprises amounted to 5 335, with the vast majority (86%) owning a single vessel. The percentage of individual companies slightly decreased over the years, at an average rate of -1.5% between 2008 and 2018.

Employment

Employment was estimated at 13 540 jobs in 2017, distributed as follows: 52% to the small-scale coastal fleet, 44% to the large-scale fleet, and 4% to the distant water fleet. With smaller vessels, the small-scale coastal fleet only displayed an average of 2 jobs per vessel, comparing to 4 for large-scale fleet and 25 for distant water fleet, whose vessels were larger and had to navigate further into the ocean.

The level of employment is stable since 2014.

Effort

An estimated 651 thousand days were spent at sea[17], stable compared to 2016. Fishing days slightly decreased (-0.2%).

After growing in 2014, energy consumption decreased again slowly in 2017 (-1.2%). This was mainly due to distant water fleet and Small-scale coastal fleet, which a consumption declining respectively of 7% and 2%, while large-scale fleet remained stable, after a slightly decrease in 2016. The major part of fuel is however used by Large-scale Fleet, representing 76% of the whole fleet consumption.

After a decrease since 2012, fuel price increased in 2017, reaching an average price of 0.55EUR /l after 0.50EUR /l in 2016. This, combined with fuel consumption decreasing, allowed fishers to raise their energy costs, with a 7% increases in 2017.

[16] In the AER report, the French distant water fleet takes into account a vessel using hook measuring 33m long.

[17] It does not take into account days-at-sea for outermost regions (vessels less than 12 meters in overseas territories) and is not comparable to the rest of the fleet of vessels less than 12 meters fishing in the Mediterranean Sea.

Production

National production has been increasing over the period by 25% in value and increased a further 10.6% in 2017 reaching EUR 1.35 billion while landings in weight increased by 3% in 2017 at 556 thousand tonnes of seafood[18] after a constant increase since 2008 (except 2015).

In 2017, 'European hake' landings generated the highest value by the national fleet (EUR 133 million), increasing to 2016, with a higher weight of landings than in 2016 and an increase in price from EUR 2.8 to EUR 2.9. The hake is followed by 'monkfish' (EUR 101 million), 'yellowfin tuna' (EUR 90.6 million) 'Great Atlantic scallop' (EUR 86 million), and 'Skipjack tuna' (EUR 69 million). The high average landed price of 'European seabass' in 2017 allow to this specie to reach a value of EUR 64 million. Thanks to an increase price value, the 'Atlantic bluefin tuna' value of landing reached EUR 48.6 million in 2017.

Seafood production by the SSCF represented 78 thousand tonnes with a value of EUR 301 million, comprising respectively 14% and 22% of the national production.

The total production landed by the French large-scale fleet slightly increased in weight from 2016 to 2017 while the value increased by 2% reaching EUR 888 million in 2017. It represented 65% of the total landings weight and values of the national fleet.

Economic results for 2017 and recent trends

National fleet performance

At the national level, the French fleet has been reaching in 2017 its higher economic performances since 2008, mainly thanks to a high income from landings.

Revenue, estimated at EUR 1.35 billion, consisted mainly of landed values (98%) and other income (1.4%). Direct income subsidies amounted to EUR 6.4 million, which represented 0.5% of total revenues (no income from fishing rights in France).

Total operational costs represented 80% total income (excluding direct subsidies). Fuel costs represented only 11 % of revenue in 2017.

Aside from the increase in fuel dependence, the operating cost structure remained stable between 2016 and 2017.

Gross Value Added (GVA), gross profit and net profit in 2017 were estimated at EUR 769 million, EUR 268 million and EUR 177 million[19] respectively and all increased from 2016 to 2017.

These results indicated an upwards trend for economic performance of the French fleet in 2017 compared to the previous years.

Resource productivity and efficiency indicators

At the national level, the national landing weight has been increasing over the period 2008-2017.

In the same time, energy consumption per landed tonne decreased by 4% in 2017 compared to 2016.

Thanks to that, the gross profit margin in 2017 was 20%, indicating a reasonable operating profitability of the French fisheries sector.

The net profit margin was 13% in 2017, compared to 12% in 2016.

Performance by fishing activity

Small-scale coastal fleet

In this section, we focus on SSCF as defined by the European Commission. In 2017, it concerned 4 186 active vessels fishing: 1 391 vessels (33%) in the NE Atlantic, 1 118 vessels (27%) in the Mediterranean Sea and 1 677 vessels (40%) in Other Fishing Regions. In 2017, a vessel active in the NE Atlantic had an average income from landings about EUR 140 000, an average engaged crew less than 2 and an average days-at-sea about 115, with a lot of disparity depending on the fleet segments. A vessel active

[18] It does not take into account landings for outermost regions (vessels less than 12 meters in overseas territories) and it is not representative of the whole fleet of vessels less than 12 meters fishing in the Mediterranean Sea and in a less extent in the North Sea and the North East Atlantic.

19 Net profit is overestimated as capital costs are not available for distant water fleet.

in the Mediterranean sea had an average income from landings about EUR 40 000, an average engaged crew about 1 and an average days-at-sea about 117, with a lot of disparity depending on the fleet segments.
The revenue of the SSCF were about EUR 273 million (72% of which were realised in NE Atlantic, 16% in Mediterranean Sea and 12% in other regions) contributing to 20% to the total income generated from landings in the national fishing fleet. Economic performances remained stable in 2017 compared to 2016, with a GVA estimated at EUR 178 million (70% of which were generated by the fishing activity in the NE Atlantic, 18% in the Mediterranean Sea and 12% in other regions).

Distant water fleet

The French industrial fleet of Purse Seiners consisted of 22 vessels in 2017, including the 5 vessels registered on the island of Mayotte. The overwhelming majority of this fleet is made of freezer tuna seiners operating in the Indian Ocean (12 vessels) or Atlantic Ocean (10 vessels). The average age of those 22 vessels in this fleet segment was around 17 years in 2017. The average length reached by the vessels of this segment amounts to 78 meters. The average full time employment was around 25 employees by vessel in 2017 (fishers employed come both from France and foreign countries (mostly African)).

In 2017, total volumes of landings of tropical Seiners amounted more than 114 000 tons for the vessels of the fleet segment. Volumes of fish caught are made by seiners operating in the Indian or Atlantic Ocean. Tuna species caught were yellowfin tuna (YFT – 48.9% of the total volumes of landings), skipjack tuna (SKJ – 42.7%), big eye tuna (BET – 7.3%) and albacore (ALB – 0.2%).

Total values of landings for this fleet segment reached EUR 162 million in 2017. According to economic data collected, the three main cost items in 2017 were crew wage, repair and maintenance and fixed costs. They represented respectively 29.0%, 19.9% and 13.9% of the total income in 2017. Overall, operating profitability (gross profit margin) improved in 2017, compared to 2016, reaching almost 21%.

In a general way, 2017 was marked by an improvement in the economic performance of vessels in this fleet segment. Tropical tuna prices showed strong gains in 2017, having a significant positive impact on the values landed by vessels of this fleet segment.

Nevertheless, access to the territorial waters of coastal countries is still a cause for concern for the professionals. In addition, yellowfin tuna's quota in Indian Ocean, since 2017, had an impact on purse seine fishing activity. These new management measures will have to be carefully observed in the coming years.

Performance results of selected fleet segments

The French fleet is highly diversified with a broad range of vessel types targeting different species predominantly in the North East Atlantic, but also in the Mediterranean and in more distant fisheries.

Table contains a breakdown of key performance indicators for the active fleet segments in 2017. A short description of 5 important segments in terms of total landings value or employment is provided below. Some of these segments include one, two or three clustered small segments and economic indicators refer to these combined segments. Generally, these smaller segments only have a marginal impact on the indicators. Other segments are important to the economy of the national sector: the "tropical" purse seiners are discussed in the chapter dealing with long distant fisheries, some segments contain too few vessels (or a small number of companies that own these vessels), such as pelagic trawlers and demersal trawlers or seiners over 40 metres, others are very heterogeneous such as trawlers and seiners from 24 to 40 m.

Drift and fixed nets 10-12m

162 vessels and 516 engaged crew made up this segment which operates predominantly in the NE Atlantic. The fleet targeted a variety of species but in particular common sole, monkfish and spinous spider crab (respectively 36.4%, 9.4% and 7.5% of the total value of landings of this fleet segment). In 2017, the volume landed of European sea bass decreased about 20% compared to 2016 and become the 4th species in value, probably related to management measures implemented in 2017 for European sea bass. The average revenue per vessel decreased about 25% compared to 2016 (EUR 263 000 in

2017). Total income was EUR 42.6 million (landings income and other income) contributing to 3.2% to the total income generated from landings in the national fishing fleet. Total operating costs represented 82% of income generated by this fleet segment in 2017. This fleet segment produced a gross profit of around EUR 7.6 million in 2017 and the net profit represented 9% of the income.

Drift and fixed nets 06-12m

529 vessels and 681 engaged crew made up this segment which operates predominantly in the Mediterranean region. The fleet targeted a variety of species but in particular Gilthead seabream, Mugil, Spiny lobsters and hake (respectively 21.7%, 7.4% and 6.8% and 5.9% of the total value of landings of this fleet segment). The average revenue per vessel is about EUR 40 000 in 2017 and increased about 27% compared to 2015. Total income was EUR 21.5 million (landings income and other income) contributing to 1.6% to the total income generated from landings in the national fishing fleet. Total operating costs represented 83% of income generated by this fleet segment in 2017. This fleet segment produced a gross profit of around EUR 3.6 million in 2017 and the net profit represented 9% of the income.

Demersal trawlers / seiners 12-18m

149 vessels make up this segment in 2017 and they are predominantly based in the NE Atlantic (economic analysis exclude 4 vessels operated in Corsica). These vessels target a variety of species. The top three species in terms of value landed in 2017 were Norway lobster, monkfishes and Great Atlantic scallop (respectively 33.7%, 10.1% and 8.1% of the total value of landings of this fleet segment).

Total income was almost EUR 83.2 million were supported by this segment in 2017, accounting for 6.2% of the national fleet income. It decreased compared to 2016, in particular by a slightly worse season on Norway lobster (which had been particularly good on this species the year before).

Around 450 FTEs contributed to the segment in 2017. It generated a gross profit of EUR 11.7 million in 2017 (14.05% of the income), with a decrease compared to 2016, partly explained by a higher energy cost weight.

Demersal trawlers / seiners 18-24m

172 vessels made up this segment in 2017. The vast majority (75%) of these vessels operate in the Atlantic, North Sea and Channel, 15% of the vessels operate in the Mediterranean Sea and 9% in French Guyana (only landings data are available for this last Region). Considering the clusters made for this fleet segment, 183 vessels made up this fishing fleet in 2017.

Depending on the supra region, vessels have different fishing activities in terms of target species or number of days-at-sea. The vessels operating in the Atlantic, North Sea and the Channel target a variety of species, such as Monkfishes (21.8% of the total values of landings of this fleet segment), squids and common cuttlefish (respectively 11% and 7.8%). In terms of volumes landed, monkfishes and whiting represented respectively 16.6% and 11.6% of the total volumes of landings in 2017. In the Mediterranean Sea, vessels have targeted squids (13.3% of the total values of landings of this fleet segment), common octopus and hake (respectively 13.2% and 12.4%). In 2017, total income value for this fleet segment was EUR 169.7 million, contributing to 12.5% of the total income from landings generated in the national fishing fleet. This fleet segment produced a gross profit of around EUR 20.9 million in the Atlantic area and EUR 1.6 million in the Mediterranean in 2017.

Economic situation is different according to the supra-region observed. In the Atlantic area, landed values remained broadly stable between 2016 and 2017. The economic situation improved in 2017 for demersal trawlers in the Mediterranean Sea, with landed values increasing, compared to 2019 (but concerns remain about the situation of several fish stocks (hake, for example)).

Dredgers 12-18m

76 vessels, plus 8 dredgers between 18 and 24 m and 1 vessel between 24 and 40m, made up this segment in 2017 (cluster), which operates exclusively in the North Atlantic. The fleet mainly targets great Atlantic scallop (almost ¾ of the total value of landings of this fleet segment in 2017) but also a

variety of species as common cuttlefish or Queen scallop. Total income was around EUR 42.6 million in 2017 for all the vessel of the cluster, accounting for 3.2% of national fleet. Total turnover was reduced in 2017, compared to 2016, due in particular to the decrease in the number of vessels in this fleet segment (minus 8 vessels in 2017). The highly controlled management of the scallop fishery has produced good results in 2017, and the vessels targeting the species have improved their economic performance, thanks to a good abundance observed.

The fleet generated a gross profit of around EUR 5.8 million, which increased by almost 21% between 2016 and 2017. It reached 16.5% of the total income during the period. The scallop fishery is framed at both community, national and regional levels. In France the shell season generally begins around the month of October and ends in May of the following year. The fishing zones are open as the season advances. European fishers are all regulated in terms of size, and in France, they can be regulated by quotas distributed between vessels, or by suitable fishing times.

Drivers affecting the economic performance trends

Markets and Trade (including fish price)

In France, 34 auctions allowed the sale of fish (in 2018). The new conditions offered for sale, with new mechanisms (connected market places, remote sales) are rather positive in France for the fish prices. The top three species in terms of value landed in 2017, and sold in auctions, were monkfish, sole and European hake (they represent respectively 10.8%, 8.2% and 8.0% of the total landed values sold in auctions during year 2017). The quantities sold in auction sales in 2017 decreased by 3% compared to 2016, which is the lowest level observed in eight years. The 2% increase in the average price over the previous year did not offset the decline in volumes as the value of auction sales was slightly down by 1% in 2017.

In 2017, volumes and values landed in auctions sales of white fish (cod, haddock, etc.) and small pelagics (herring, anchovies, etc.) followed the same trend and decreased. The cephalopods and shellfish (Great Atlantic scallop in particular), on the other hand, experienced an improvement for both volumes and values landed in 2017. Evolutions are however contrasted according to the observed geographical situation.

Depending on the target species, destination markets (tropical tuna for example), vessel operating modes (freezer vessels) or historical patterns, all vessels do not use this sales method to sell their production. Direct sale is still particularly developed for species such as Great Atlantic scallop or some species of crustaceans. For some species such as whelks, horse mackerel or anchovies, the amounts sold off-auction represent more than half of the total amounts sold over the observed period.

Regarding foreign trade, France's trade deficit for all aquatic products continues to widen in 2017, from 7.3% in one year, to EUR 4.4 billion. France exported species like tuna (in Asia), smoked salmon, frozen shrimp, fresh species like cuttlefish, seabass or sole in Italy, Spain, United Kingdom, Belgium, etc. On the other hand, 4 species account for 55% of imports by value: salmon (Norway, Scotland,…), shrimp (Ecuador, India,...), tuna (Seychelles Ghana Ecuador Mauritius) and cod (Iceland).

Management instruments and regulations (policy)

The French fleet is managed through several management tools, as TACs and quotas related to the area and fishing stock, fishing license or multiannual management plans under national regulations. Each plan or fishing license (assigned to the pair "vessel*owner") target a particular species or a type of gear in a specific area. They specify the field of application and all the corresponding technical requirements as:

- Gear type and dimension (meshing);
- Vessel size;
- Depth;
- Exemptions (for instance if catches are below a threshold by year of meshing above a threshold);
- Fishing prohibition area or season (for instance spawning area for Eastern English Channel sole, spawning season for netters targeting sole in Bay of Biscay or season for swordfish in the Mediterranean Sea);
- Maximum catches by year

Concerning discard ban, there is still uncertainty on the impacts of this regulation in the medium term even though *de minimis* and high survivability exemptions were set. Fishers fear that the discard ban will have a large impact on their profitability in terms of lower revenue due to low value species, higher

operational costs (labour, storage, and ice), capacity problems on board and choke species in mixed fisheries, that is by-catch species for which available quota is insufficient to cover catches.

Stock status, TACs and quotas

Status of some Key Stocks

European hake (3 stocks, 1 main stock for France): **good news for North East Atlantic stocks**

The **main stock (IIIa,IV,VI,VII,VIIIabd)** was still exploited below Fmsy in 2017 with very high biomass.

Common sole (8 stocks, 4 main stocks for France): **good news for North East Atlantic stocks with still room for improvement.**

The **Eastern English Channel stock (VIId)** was exploited below Fmsy in 2017 with decreasing fishing mortality and increasing biomass, although the biomass was still below reference biomass. The **Western English Channel stock (VIIe)** was still in a good status in 2017 with fishing mortality below Fmsy and biomass above reference biomass. For the **Bay of Biscay stock (VIIIabd**), biomass was still above the reference biomass, and fishing mortality was below Fmsy for the first year in 2017 Biomass for the **North Sea stock** was both above the reference biomass in 2017 and fishing mortality, although decreasing, was still above Fmsy.

Gadoids in the Celtic Sea (**VII e-k,** 3 stocks): **worrying stock status**

None of the three gadoids stocks were exploited at fishing rates consistent with FMSY ranges. For whiting and haddock biomasses were still well above the reference points. The status for the **Cod stock** was most concerning: the fishing mortality was still above Fmsy and the biomass was still just below the reference biomass.

European seabass (2 stocks, 2 main stocks for France): **good news for the North East Atlantic stock**

The **North Sea / Irish Sea / English Channel / Celtic Sea stock (IVbc,VIIa,d-h)** was exploited at a fishing rate consistent with Fmsy in 2017, although biomass was still below reference biomass. For the **Bay of Biscay stock (VIIIab)** fishing pressure was estimated to be above Fmsy in 2017 and biomass was estimated to be above reference biomass.

Norway lobster: **good news for Bay of Biscay stock (VIIIabde)**

For the **Bay of Biscay (VIIIabde)** stock, the harvest rate in 2017 was assessed to be above Fmsy.

Bluefin tuna (1 stock): **recovery of the stock confirmed**

The evaluation for 2016 confirmed that **the stock (27+37)** was exploited below Fmsy. It was considered possible that the stock may have already rebuilt to the reference biomass, although considerable uncertainty remained.

TACs and quotas (source: FIDES)

Total available quota (TAC) for the French fleet in 2017 was 395 thousand tonnes (an increase of +5%/+ 20 000 tonnes compared to 2016). In 2018 there was also an increase of French TAC in a lesser extent (+2.5%/ + 10 000 tonnes).

Looking at the main species for France in terms of value of landings, the quota trends between 2016 and 2017 showed:

Among the 126 stocks under TAC exploited by the French fleet in 2017, 11 stocks (8 species) presented a quota uptake higher than 90% with an adapted quota higher than 1 000 tons:

- Blufin tuna (Atlantic)
- Sole (Bay of Biscay);
- Cod (I, IIb – Norwegian waters of I,II);
- Rays (VIa,b, VIIa-c, e-k – VIII, IX);
- Haddock (VIIb-k);
- Herring (IVa,b - IVc, VIId);
- Mackerel (IIa, IIIa,b,c, IV)
- Whiting (I to VIII, XII, XIV)

Species	Quota 2016 in t	Quota 2017 in t	Variation	2017 economic value in M€ (approximate)
Anglerfish (ANF)	30458	31354	+3%	112
Bluefin tuna (BFT)	3487	4187	+20%	46
Cod (COD)	13893	13601	-2%	42
European Hake (HKE)	60614	68364	+13%	147
Mackerel (MAC)	24486	25643	+5%	48
Norway Lobster (NEP)	10726	11210	+5%	60
Saithe (POK)	17829	29937	+68%	24
Common Sole (SOL)	6371	6336	-1%	74
Blue Whiting (WHB)	15013	13844	-8%	21
Whiting (WHG)	17992	22923	+27%	24

Operational costs (external factors)

The major cost items for the fleet of French fishing vessels were labour and other non-variable costs in 2017 (representing respectively 37.7% and 12.0% of the gross value of landings).

In 2017, although the weight of energy costs is higher than 2016 (11.1% against 10.6% in 2016 of the gross value of landings), the increase in landed values has improved the overall economic performance of the fleet. Operating profitability (Gross profit margin) thereby improved by 4.5% between 2016 and 2017, reaching almost 20%.

Socioeconomic impact

In 2017, number of active vessels, days-at-sea and engaged crew were stable comparatively to 2016. Fuel price increased in 2017, but the overall economic situation of French fishing sector continued to improve, leading in particular to better gross profit and better wages for the crew members. The remaining fleet appears to be returning to levels of profitability not achieved for many years. However, regional disparities are important, and economic performance differs significantly between fleet segments and supra regions. The activity of the French fishing fleet has a significant economic impact for the territories, whether coastal or not. Despite those favourable economic conditions, fishers are worried about the uncertainties surrounding their sector of activity, which can have a serious impact on their economic viability in the short term. Among them:

- Access and conditions for the sharing of fishing areas. The number of users of the sea is increasing, and requires professional fishers to adapt themselves to those new constraints (renewable marine energies like offshore wind farm, protected or prohibited fishing areas, access negotiations with other countries, etc.). Fishers will have to be able to adapt their fishing strategy, with the obvious socio-economic consequences.
- Quotas and fishing rights. Fishers are particularly concerned about quotas for common sole, European seabass or even whiting. Many of them would like to have a multiannual quota management for such strategic species, which would allow a better visibility for the sector.
- The landing obligation and the socioeconomic impact that it will likely entail, also worries fishers, who expect increased problems from her extension. Technical and behaviour adaptations may lead to a reduction in profitability (which reduces the incentive to focus on selectivity), but it is difficult to measure precisely today.
- The difficult renewal of vessels and generations of fishers. Investment in new vessels becomes a key element for the fisheries sector to ensure the economic sustainability of the fleet. The number of new vessels built has increased in recent years thanks to better economic prospects, but the difficulties encountered in building a new vessel (access to capital, fishing rights, etc.) sometimes push back initiatives. However, it is still difficult for many companies to recruit fishers. In some ports, the use of foreign labour (for example, African fishers) is the only way to reach the required number of workers on board.

Therefore, the sector has many challenges to overcome in the coming years, and fishers will have to adapt to ensure their sustainability in this uncertain economic environment.

Nowcasts for 2018-19 and outlook

Year 2018 should show the continuity of the renewal movement of new French fishing vessels, initiated in some regions in 2017. Access to funding or fishing rights remains a major challenge for future investors in the fishing industry. Another important challenge, linked to the point mentioned above: attract young fishers in the sector will be one of the important challenges in the coming years.

Finally, the sector must prepare and anticipate the landing obligation, which will come fully into effect in 2019, with adaptation difficulties that are hard to measure precisely today.

Data issues

Improvements achieved

It should be highlighted that a lot of improvements have been carried out this year. Indeed, all missing data from previous years have been completed. Moreover, economic data for less than 12 meters in Guadeloupe and French Guiana are available since 2016. Finally, the coverage of effort and landings data has been integrated for vessels less than 12 meters active in the Mediterranean Sea, for years 2008 to 2017.

Issues still remaining

Moreover, it should be highlighted that, apart from the Capacity table and employment, data on efforts and landings were not complete for all outermost region fleets. This concerned around 990 active fishing vessels based in the French islands of Reunion and Martinique.

Survey for economic data

A method of probability sampling has been applied to the 2017 data, on a similar way as previous years since it was set up in 2012: vessels have been selected by systematic random sampling, the fleet having been classified inside each segment by size and maritime quarter, to ensure a good representativeness of the overall diversity of the French fleet.

When vessels didn't answer, a statistical method was used to know the criteria (explanatory variables) that could explain the response rate, then vessels were merged into clusters according to that predicted response probability. Those clusters are then used to weight again responding vessels, by increasing their weight. Concerning the partial non-responses, imputations have been made.

Direct subsidies and other income are not available for few segments, in particular, segments of over 40m, and new segments in Guadeloupe and French Guiana, less than 12m.

We have data on total personnel costs for a sample of vessels. Currently, we consider that they represent wages and salaries of crew for all vessels and we do not disseminate data on the value of unpaid labour. It would be possible to estimate the value of unpaid labour considering that it represents the total personnel costs for vessels with only one job on board. For the other vessels, we would consider that, with the crew share system, the value of imputed labour is zero and there are only wages and salaries of crew.

Outermost fleet

Distant water fleet gathers 22 purse seiners over 40m length. All operating in the Indian Ocean and in the South Atlantic Ocean, but 14 amongst them are registered in a French metropolitan port. Data for purse seiners are provided only for 17 vessels, while the 5 other missing are based in Mayotte. Another source enables to get all landings for those 5 missing vessels, then values are computed with species' prices (mainly tuna) reported on other fleet segments.

For those of French hooks 12-18m and 18-24m in the Indian Ocean, economic data are available for 2011 to 2017. Economic data for less than 12 meters in Guadeloupe and French Guiana are available since 2016. In other fishing regions, consisting mainly of vessels less than 12 meters based in the French islands of Reunion and Martinique economic data are not collected.

It should be highlighted that a single 33 m longliner operating in other fishing regions should belong to distant water fleet according to European definitions, but is however clustered with other hooks 18-24 m and belongs actually to long scale fleet.

Table 5.22 France: National fleet statistics and economic performance results. Nowcast figures for 2018 and 2019

		2008	2009	2010	2011	2012	2013	2014	2015	2016	*2017*	*2018*	2019	Trend 2008-2018	Δ 2017 to 2016	Δ 2017 to avg. 08-16
Capacity	Number of vessels	7,919	7,290	7,234	7,211	7,144	7,125	7,069	6,911	6,835	6,970	6,437	6,301		2%	-3%
	Total vessel power	1,075,978	1,007,678	994,946	1,001,517	999,279	999,948	1,016,602	999,365	1,003,655	1,025,841				2%	1%
	Total vessel tonnage	197,181	185,261	174,173	171,005	168,339	164,195	175,576	171,945	173,534	176,689				2%	1%
Employment	Engaged crew	16,103	15,807	15,166	14,631	14,140	13,691	13,547	13,442	13,536	13,540	12,461	12,299		0%	-6%
	Unpaid labour										-					
	FTE national	8,629	7,644	7,819	7,464	7,196	6,900	7,026	6,569	7,138	6,623	5,969	6,394		-7%	-10%
	Total hours worked per year (engaged crew)										7,399,503					
Effort	Days at sea	839,132	677,379	704,824	718,931	693,254	669,084	664,437	639,011	650,133	650,612	368,477	390,056		0%	-6%
	Fishing days	741,948	653,302	679,291	693,822	664,575	636,651	631,722	603,870	621,776	620,632				0%	-6%
	kW fishing days	172,142,798	160,873,630	159,615,869	163,054,173	157,128,351	152,727,859	153,377,256	155,199,574	157,136,331	162,288,519				3%	2%
	GT fishing days	2,615,705,265	2,395,775,050	2,157,553,897	2,118,468,303	2,015,759,992	2,003,230,910	2,005,735,201	2,321,235,462	2,501,917,779	2,852,618,878				14%	28%
	Number of fishing trips	581,588	574,216	598,694	612,305	586,730	559,822	557,196	532,351	543,955	545,546				0%	-5%
	Energy consumption	294,585,257	383,502,311	357,256,359	341,596,632	306,153,177	302,298,660	322,705,419	316,652,316	314,432,374	310,613,050	238,085,339	260,693,794		-1%	-5%
Landings	Live weight of landings	447,943,090	446,992,577	461,975,310	478,388,903	520,482,584	527,899,867	543,132,515	527,641,827	540,224,373	555,891,099	418,255,140	440,940,671		3%	11%
	Value of landings	1,075,485,701	1,050,725,218	1,085,440,901	1,209,274,368	1,200,089,016	1,225,200,679	1,252,130,285	1,231,601,185	1,220,810,199	1,350,096,442	1,069,228,341	1,187,401,590		11%	15%
Income	Gross value of landings	1,018,682,445	1,089,950,765	1,075,345,594	1,179,738,188	1,083,225,949	1,127,556,628	1,147,431,424	1,178,674,742	1,305,004,845	1,329,944,038	1,065,363,816	1,198,554,998		2%	17%
	Other income	16,984,342	19,748,952	28,813,719	17,230,471	15,526,929	22,518,990	18,710,354	16,087,902	21,951,031	19,586,955	19,680,037	19,900,250		-11%	-1%
	Operating subsidies	29,740,445	11,522,118	6,300,758	8,733,659	14,143,024	13,301,846	12,076,632	13,591,959	10,673,968	6,464,698				-39%	-52%
	Income from leasing out quota	-	-	-	-	-	-	-	-	-	-					
Expenditure	Personnel costs	402,026,358	436,066,754	410,589,041	426,072,662	384,161,300	399,080,578	429,482,812	457,724,238	501,450,046	501,369,300	425,217,762	477,819,659		0%	17%
	Value of unpaid labour	-	-	-	-	-	-	-	-	-	-	-	-			
	Energy costs	194,354,779	167,287,556	191,074,133	223,145,012	225,399,206	214,118,430	209,098,997	161,748,161	137,742,662	147,685,295	133,725,455	144,261,022		7%	-23%
	Repair & maintenance costs	69,544,173	92,625,783	85,641,460	92,468,918	86,700,088	91,275,630	102,026,581	110,074,265	123,690,874	117,954,311	85,822,938	86,881,100		-5%	24%
	Other variable costs	60,867,516	143,459,677	110,759,314	133,147,136	117,758,375	136,269,430	145,159,803	139,550,247	156,578,341	154,489,271	137,563,467	151,896,152		-1%	22%
	Other non-variable costs	187,361,781	167,622,439	156,401,099	144,991,599	127,211,148	130,687,398	135,711,017	132,708,052	150,840,368	159,906,511	137,686,999	139,699,818		6%	8%
	Consumption of fixed capital	71,040,289	65,222,081	78,251,589	90,332,585	95,963,534	94,999,484	88,787,452	91,703,863	95,354,575	93,678,368	93,241,464	94,407,002		-2%	9%
	Lease/rental payments for quota	-	-	-	-	-	-	-	-	-	-					
Indicator	Opportunity cost of capital	-	-	9,369,021	6,289,041	2,316,838	8,254,846	7,016,504	4,792,893	1,128,537	- 2,523,463	- 8,206,369	- 5,044,334		-324%	-158%
	Gross Value Added	523,538,538	538,704,261	560,283,307	603,215,995	541,684,061	577,724,731	574,145,380	650,681,919	758,103,630	769,495,605	590,244,995	695,717,156		2%	30%
	Net Value Added	452,498,249	473,482,180	472,662,697	506,594,368	443,403,690	474,470,401	478,341,424	554,185,163	661,620,517	678,340,700	505,209,899	606,354,488		3%	35%
	Gross profit	121,512,180	102,637,508	149,694,266	177,143,333	157,522,762	178,644,153	144,662,567	192,957,680	256,653,583	268,126,305	165,027,233	217,897,497		4%	63%
	Net profit	50,471,891	37,415,427	62,073,656	80,521,707	59,242,390	75,389,823	48,858,612	96,460,924	160,170,471	176,971,400	79,992,137	128,534,828		10%	138%
	Net profit subsidised	80,212,336	48,937,545	68,374,414	89,255,365	73,385,415	88,691,670	60,935,244	110,052,883	170,844,439	183,436,098				7%	109%
	Net profit rights	80,212,336	48,937,545	68,374,414	89,255,365	73,385,415	88,691,670	60,935,244	110,052,883	170,844,439	183,436,098				7%	109%
Capital	Value of physical capital			671,006,646	630,753,807	696,414,168	694,782,903	659,682,498	648,335,975	665,837,124	654,806,267	634,750,177	640,741,057		-2%	-2%
	Value of quota and other fishing rights															
	Investments			113,083,458	76,198,314	62,240,527	61,626,332	64,414,777	28,119,597	34,375,558	71,322,351	2,108,354	2,080,217		107%	13%
	Total assets															
	Long/short debt										363,086,097					
	Subsidies on investments										2,395,807	178,867	177,787			

Data source: MS data submissions under the DCF 2019 Fleet Economic (MARE/A3/ASC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

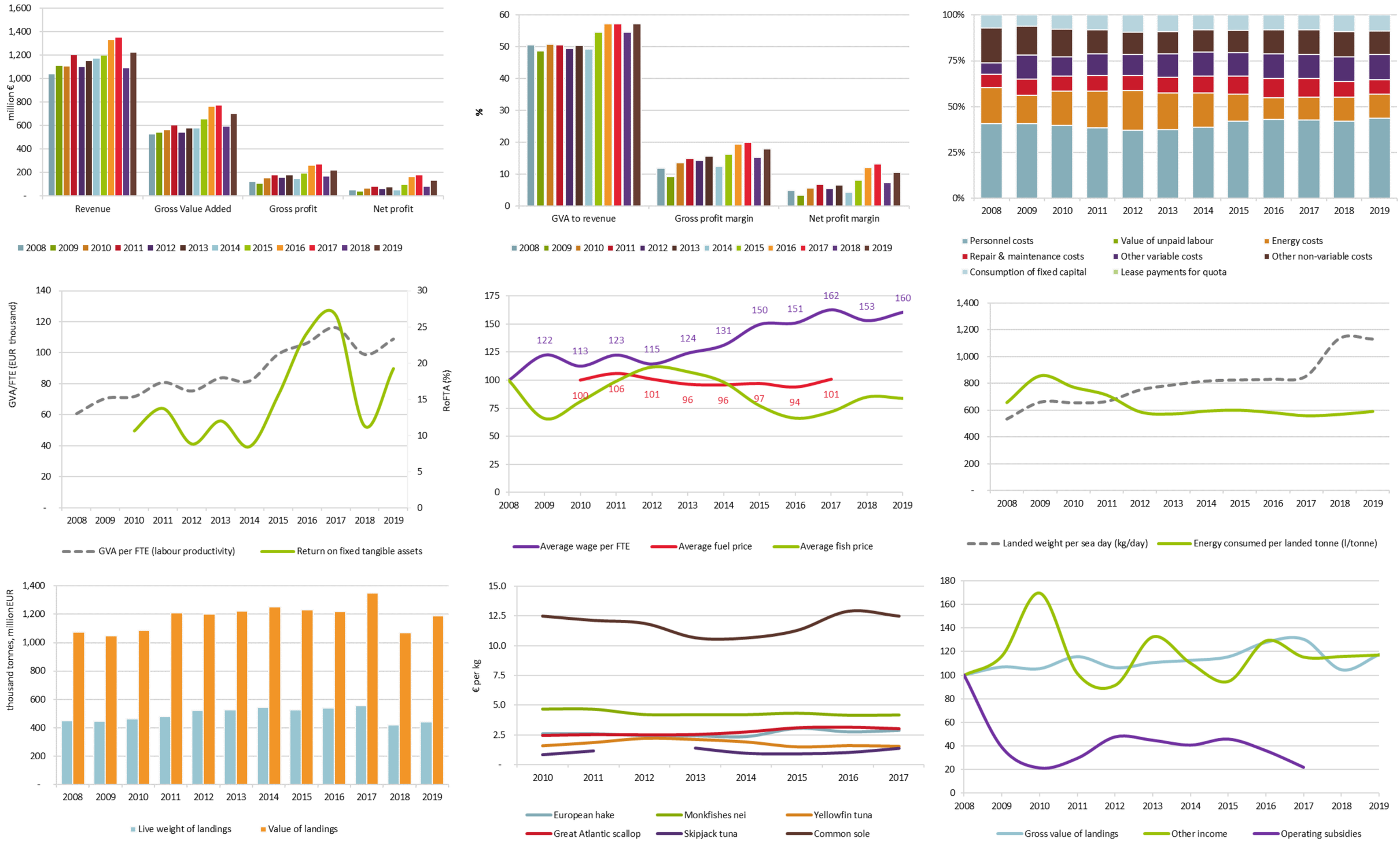


Figure 5.8 France: Main trends in economic performance indicators (absolute value, panel 1a/top left and relative value, (panel 1b/top middle); cost structure (panel 1c, top right); productivity (panel 2a); key input/outputs (panel 2b); efficiency (panel 2c); landings (panel 3a); average price (EUR /kg) of top species (panel 3b) and capital values (panel 3c). Nowcast figures for 2018 and 2019

Data source: MS data submissions under the DCF 2019 Fleet Economic (MARE/A3/ASC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Table 5.23 France: National fleet statistics and economic performance results by fleet segment, 2017

	Number of vessels	FTE national	Days at sea	Energy consumed per landed tonne	Live weight of landings	Value of landings	Revenue	Gross Value Added	GVA to revenue	Gross profit	Gross profit margin	Net profit	Net profit margin	Average wage per FTE	GVA per FTE (labour productivity)	Return on fixed tangible assets	Profitability (2017)	Net profit margin %Δ 2017 - average (2008-16)	Economic development trend	As a % of total revenue
FRA OFR PS 40XX IWE	22	204	5,925	438	114,350,636	161,888,602	162,188,015	80,995,795	49.9	34,013,805	20.97			229,763	396,106					12%
FRA NAO DTS1824 NGI*	137	641	34,549	1,212	47,225,826	144,728,523	154,848,888	74,097,841	47.9	20,946,045	13.53	8,182,180	5.28	82,940	115,624	10.2	Weak	3618%	Improved	11%
FRA NAO DTS2440 NGI*	58	408	16,379	1,107	34,376,960	107,732,590	115,264,649	61,551,425	53.4	26,556,832	23.04	15,394,219	13.36	85,677	150,695	19.8	Reasonable	434%	Improved	9%
FRA NAO DTS1218 NGI	149	446	32,702	1,306	19,050,634	82,558,593	83,173,616	45,689,834	54.9	11,689,870	14.05	4,493,194	5.40	76,201	102,400	10.5	Weak	78%	Improved	6%
FRA NAO HOK2440 NGI*	24	313	6,422	701	12,341,496	45,455,794	70,377,932	46,387,967	65.9	23,534,838	33.44	20,298,311	28.84	73,011	148,200	107.6	High	85%	Improved	5%
FRA NAO DTS40XX NGI	10	180	3,029	560	33,623,539	76,606,122	55,015,369	26,007,438	47.3	10,332,825	18.78			87,227	144,727					4%
FRA NAO DFN1012 NGI	162	318	24,484	522	9,455,643	41,850,224	42,600,260	26,849,532	63.0	7,619,698	17.89	3,871,641	9.09	60,420	84,361	17.4	Weak	-4%	Stable	3%
FRA NAO DRB1218 NGI*	85	229	13,652	584	15,998,308	40,697,526	42,556,287	23,701,618	55.7	7,008,961	16.47	2,935,621	6.90	73,021	103,682	13.1	Weak	242%	Improved	3%
FRA NAO DTS1012 NGI*	167	242	27,490	1,005	9,803,611	40,426,026	41,198,188	24,137,022	58.6	7,927,816	19.24	3,895,201	9.45	66,900	99,620	16.2	Weak	83%	Improved	3%
FRA NAO DFN1218 NGI*	69	256	14,035	517	7,915,042	38,364,919	37,164,026	22,205,342	59.7	5,386,326	14.49	2,260,740	6.08	65,699	86,740	12.8	Weak	-16%	Deteriorated	3%
FRA NAO FPO0010 NGI	305	233	35,462	417	8,589,109	28,851,398	36,080,262	22,958,066	63.6	7,285,730	20.19	5,388,171	14.93	67,295	98,579	44.3	Reasonable	21%	Improved	3%
FRA NAO DFN2440 NGI	18	228	4,887	326	15,371,536	38,321,881	34,597,221	23,120,310	66.8	11,548,775	33.38	9,427,302	27.25	50,739	101,378	84.7	High	46%	Improved	3%
FRA NAO DFN1824 NGI	29	195	7,101	422	7,435,037	30,213,433	33,100,547	20,860,254	63.0	8,742,240	26.41	6,976,266	21.08	62,275	107,201	69.1	High	181%	Improved	2%
FRA MBS PS 2440 NGI*	18	1	173	170	3,320,190	39,690,454	28,824,811	22,419,485	77.8	10,427,422	36.18	8,209,726	28.48	15,374,441	28,742,930	55.8	High	77%	Improved	2%
FRA NAO TM 40XX NGI	4	122	767	181	55,605,429	27,415,825	27,555,366	12,457,147	45.2	4,606,601	16.72			64,201	101,874					2%
FRA NAO FPO1012 NGI	70	163	12,033	356	8,026,814	20,951,198	25,648,089	16,474,281	64.2	6,152,239	23.99	4,493,142	17.52	63,170	100,822	43.0	Reasonable	92%	Improved	2%
FRA NAO HOK0010 NGI	251	141	24,980	1,017	3,120,604	22,657,534	25,491,012	15,877,749	62.3	4,846,818	19.01	3,201,472	12.56	78,317	112,728	30.9	Reasonable	6%	Improved	2%
FRA NAO TM 1824 NGI*	23	115	5,778	490	13,272,412	22,397,801	22,822,685	11,827,301	51.8	3,510,294	15.38	1,570,386	6.88	72,171	102,632	12.7	Weak	557%	Improved	2%
FRA NAO PS 1218 NGI*	27	117	4,698	82	22,593,703	20,530,599	22,447,982	15,073,835	67.2	3,846,729	17.14	2,560,037	11.40	96,180	129,134	31.8	Reasonable	12%	Improved	2%
FRA NAO DFN0010 NGI	270	156	26,618	603	3,574,919	18,740,589	21,576,627	14,444,198	66.9	4,078,123	18.90	2,374,227	11.00	66,616	92,823	21.7	Reasonable	36%	Improved	2%
FRA MBS DFN0612 NGI	529	194	64,270	791	2,637,507	31,677,775	21,510,201	14,906,732	69.3	3,649,831	16.97	1,846,015	8.58	58,172	77,033	16.5	Weak	-34%	Deteriorated	2%
FRA MBS DTS2440 NGI*	32	109	6,343	2,056	5,148,536	18,967,487	20,470,602	8,421,871	41.1	2,193,687	10.72	-1,528,873	-7.47	57,124	77,244	-7.1	Weak	36%	Improved	2%
FRA NAO MGP1218 NGI*	34	79	5,182	824	4,917,149	12,292,538	18,155,344	11,324,661	62.4	3,981,210	21.93	2,667,878	14.69	92,417	142,520	35.6	Reasonable	522%	Improved	1%
FRA NAO MGP1012 NGI*	54	89	8,391	156	19,346,019	18,313,838	17,766,009	11,446,668	64.4	4,110,039	23.13	2,739,830	15.42	82,872	129,297	31.1	Reasonable	37%	Improved	1%
FRA NAO DRB1012 NGI	81	91	8,384	304	8,691,809	15,213,650	17,166,204	10,593,895	61.7	3,680,442	21.44	2,054,005	11.97	76,366	117,021	21.6	Reasonable	58%	Improved	1%
FRA MBS DTS1824 NGI*	32	69	4,793	2,782	2,308,143	11,221,151	13,648,476	6,248,637	45.8	1,636,242	11.99	701,160	5.14	66,846	90,560	13.1	Weak	3133%	Improved	1%
FRA NAO PMP1012 NGI*	61	98	10,039	75	18,704,293	14,011,493	12,326,697	7,355,883	59.7	2,708,120	21.97	1,083,330	8.79	47,315	74,884	11.4	Weak	18%	Improved	1%
FRA OFR PGP0010 GP	252	40	21,794		1,323,740	11,806,103	11,888,587	7,571,549	63.7	1,868,501	15.72	591,076	4.97	142,185	188,770	7.3	Weak			1%
FRA NAO DTS0010 NGI	79	58	9,121	1,363	1,470,605	7,846,357	11,430,554	6,739,095	59.0	2,073,336	18.14	1,234,911	10.80	80,736	116,614	26.0	Reasonable	191%	Improved	1%
FRA NAO TM 1218 NGI	13	57	3,197	595	4,822,087	10,799,742	10,452,340	5,635,993	53.9	1,757,802	16.82	1,217,266	11.65	68,266	99,208	33.6	Reasonable	60%	Improved	1%
FRA NAO HOK1012 NGI	47	66	7,118	578	2,014,430	10,575,712	10,248,238	6,776,248	66.1	2,331,065	22.75	1,281,708	12.51	67,649	103,124	20.7	Reasonable	15%	Improved	1%
FRA NAO FPO1824 NGI*	19	78	3,287	495	3,202,179	9,075,347	10,006,060	5,806,323	58.0	1,825,526	18.24	827,576	8.27	50,769	74,051	13.9	Weak	225%	Improved	1%
FRA NAO MGO0010 NGI*	170	52	11,521	2,103	398,309	3,317,074	8,451,565	5,913,104	70.0	1,906,593	22.56	192,716	2.28	77,182	113,911	1.5	Weak	-58%	Deteriorated	1%
FRA NAO DRB0010 NGI	65	40	5,097	79	8,069,921	4,342,183	6,697,592	4,136,233	61.8	1,208,695	18.05	663,227	9.90	72,716	102,738	21.6	Weak	-30%	Deteriorated	0%
FRA NAO PGO0010 NGI*	96	29	3,449	62	4,304,758	2,116,564	6,057,160	4,964,750	82.0	1,437,313	23.73	806,640	13.32	121,720	171,316	20.1	Reasonable	3%	Stable	0%
FRA NAO PMP0010 NGI	51	37	5,853	206	3,023,244	3,958,164	5,922,417	3,500,605	59.1	1,164,056	19.66	642,911	10.86	62,375	93,449	21.1	Reasonable	73%	Improved	0%
FRA MBS PGP0612 NGI	93	46	15,695	715	948,370	10,164,919	5,739,813	4,032,793	70.3	1,075,859	18.74	708,627	12.35	64,421	87,860	29.2	Reasonable	65%	Improved	0%
FRA OFR DFN1012 GF	61	45	6,800		1,496,185	3,866,787	5,305,032	3,415,238	64.4	1,084,028	20.43	869,626	16.39	51,932	76,080	34.7	Reasonable			0%
FRA OFR HOK0010 GP	122	28	7,007		614,027	5,045,093	5,219,128	3,793,512	72.7	1,298,097	24.87	621,937	11.92	90,446	137,496	14.9	Reasonable			0%
FRA NAO PGP0010 NGI	64	37	6,948	873	667,345	4,007,972	5,169,073	3,315,505	64.1	1,003,209	19.41	639,254	12.37	62,242	89,246	26.7	Reasonable	80%	Improved	0%
FRA NAO PGP1012 NGI	14	37	2,563	498	1,160,545	4,182,873	4,843,919	2,879,946	59.5	651,777	13.46	346,924	7.16	60,565	78,281	18.9	Weak			0%
FRA OFR HOK1218 RE	15	56	2,983	1,184	1,053,837	8,309,965	4,479,816	402,564	9.0	-1,222,795	-27.30	-1,615,920	-36.07	28,962	7,173	-59.7	Weak			0%
FRA MBS HOK0612 NGI	68	19	3,863	964	423,785	7,531,780	4,259,253	2,974,971	69.8	1,030,707	24.20	753,683	17.70	104,418	159,773	45.8	Reasonable	39%	Improved	0%
FRA OFR DFN0010 GP	92	27	7,849		370,383	3,626,104	3,602,791	2,375,825	65.9	526,472	14.61	133,740	3.71	68,091	87,475	5.4	Weak			0%
FRA MBS DFN0006 NGI	119	35	12,484	536	651,131	6,066,039	3,379,849	2,568,832	76.0	670,814	19.85	568,718	16.83	54,919	74,330	95.1	Reasonable	-8%	Deteriorated	0%

Data source: MS data submissions under the DCF 2019 Fleet Economic (MARE/A3/ASC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

	Number of vessels	FTE national	Days at sea	Energy consumed per landed tonne	Live weight of landings	Value of landings	Revenue	Gross Value Added	GVA to revenue	Gross profit	Gross profit margin	Net profit	Net profit margin	Average wage per FTE	GVA per FTE (labour productivity)	Return on fixed tangible assets	Profitability (2017)	Net profit margin %Δ 2017 - average (2008-16)	Economic development trend	As a % of total revenue
FRA MBS FPO0612 NGI	62	26	8,621	567	501,073	4,247,066	3,030,200	2,148,536	70.9	620,114	20.46	400,732	13.22	58,944	82,859	29.4	Reasonable	50%	Improved	0%
FRA OFR FPO0010 GP	96	7	7,140		320,851	3,078,532	2,959,266	1,837,651	62.1	282,059	9.53	-87,081	-2.94	209,931	247,996	-4.4	Weak			0%
FRA MBS FPO0006 NGI	83	18	9,740	227	501,650	3,864,542	2,142,787	1,763,765	82.3	630,675	29.43	558,314	26.06	62,121	96,698	140.0	High	35%	Improved	0%
FRA OFR DFN0010 GF	47	20	3,961		689,492	1,609,705	1,981,733	1,076,343	54.3	252,851	12.76	152,879	7.71	42,187	55,140	15.8	Weak			0%
FRA NAO MGP0010 NGI*	19	10	1,592	86	2,614,733	1,340,299	1,756,436	1,049,193	59.7	503,989	28.69	344,732	19.63	55,976	107,720	37.1	Reasonable			0%
FRA MBS PMP0612 NGI*	16	10	2,373	373	362,448	2,287,032	1,561,958	1,226,969	78.6	426,541	27.31	359,953	23.05	77,938	119,471	81.8	High	242%	Improved	0%
FRA MBS PS 0612 NGI*	18	11	940	153	764,351	2,406,704	1,507,835	1,149,805	76.3	399,212	26.48	116,143	7.70	69,115	105,875	6.1	Weak	-56%	Deteriorated	0%
FRA OFR PGP1012 GP	6	9	344		18,164	176,712	1,142,644	529,156	46.3	10,675	0.93	-227,332	-19.90	59,527	60,753	-13.1	Weak			0%
FRA MBS PGP0006 NGI	48	13	7,660	144	359,725	4,230,576	1,052,135	846,930	80.5	293,127	27.86	248,793	23.65	41,483	63,440	102.2	High	30%	Improved	0%
FRA MBS DFN1218 NGI*	16	7	711	1,037	170,079	1,411,663	994,804	613,161	61.6	134,406	13.51	-27,167	-2.73	67,053	85,877	-2.7	Weak	-142%	Deteriorated	0%
FRA MBS MGO0612 NGI*	21	4	1,797	235	366,685	1,934,539	908,067	730,768	80.5	276,768	30.48	174,508	19.22	119,474	192,307	27.8	Reasonable	9%	Improved	0%
FRA OFR PS 0010 GP	18	9	1,263		120,651	882,395	870,197	683,434	78.5	349,432	40.16	271,937	31.25	36,423	74,529	72.7	High			0%
FRA MBS PGO0006 NGI	38	6	2,643	387	167,856	1,423,988	869,658	715,661	82.3	270,397	31.09	238,462	27.42	72,994	117,322	131.9	High	29%	Improved	0%
FRA MBS PGO0612 NGI	49	12	2,922	579	238,711	2,203,483	779,162	556,495	71.4	164,050	21.05	-7,209	-0.93	32,433	45,991	-1.1	Weak	64%	Improved	0%
FRA OFR HOK1824 RE *	4	17	700	115	2,074,206	3,409,139	684,900	-11,882	-1.7	-274,008	-40.01	-509,645	-74.41	15,275	-692	-33.1	Weak			0%
FRA MBS HOK0006 NGI	13	2	589	1,406	24,645	340,788	394,102	251,695	63.9	51,026	12.95	42,790	10.86	81,573	102,315	76.6	Reasonable	40%	Improved	0%
FRA OFR PGP0010 GF	5	1	477		78,197	198,941	166,558	90,049	54.1	22,380	13.44	12,054	7.24	76,033	101,178	14.8	Weak			0%
FRA OFR PGP0010 YT	2	0	194		6,094	32,861	-													0%
FRA OFR DFN0010 MQ	50	13	1,036		29,337	442,818	-													0%
FRA OFR HOK0010 RE	160	32	19,120		1,064,357	8,822,955	-													0%
FRA OFR DFN0010 RE	1	0	17		1,138	12,310	-													0%
FRA OFR PGP0010 MF	6	1					-													0%
FRA OFR FPO0010 MF	2	0					-													0%
FRA OFR FPO1824 MQ	1	4	27		5,590	55,090	-													0%
FRA OFR FPO1012 GP	3	4	135		29,572	152,288	-													0%
FRA OFR DFN0010 YT	7	4	999		95,072	375,446	-													0%
FRA OFR PS 0010 MQ	4	1	165		4,936	36,456	-													0%
FRA OFR PGP0010 MQ	235	34	9,194		334,914	3,983,231	-													0%
FRA OFR PGO0010 RE	7	0	137		38,258	114,778	-													0%
FRA OFR FPO1218 MQ	2	5	99		16,116	43,425	-													0%
FRA OFR HOK1012 RE	8	5	888		130,299	1,020,560	-													0%
FRA OFR PGO0010 MQ	54	1	810		29,097	239,023	-													0%
FRA OFR HOK1012 MQ	8	4	569		83,731	777,102	-													0%
FRA OFR HOK0010 MF	2	1					-													0%
FRA OFR PGO0010 GP	8	0	364		15,252	212,375	-													0%
FRA OFR HOK0010 YT	113	35	9,267		1,036,670	5,117,113	-													0%
FRA OFR PGP0010 RE	8	1	943		36,663	389,117	-													0%
FRA OFR HOK0010 MQ	133	29	2,893		190,530	2,003,971	-													0%
FRA OFR HOK1012 GP	10	4	1,190		101,486	636,291	-													0%
FRA OFR FPO0010 MQ	174	11	2,447		59,714	768,042	-													0%
FRA OFR DTS1824 GF	14	27	1,162		355,010	1,265,973	-													0%
FRA OFR DFN1012 GP	4	1	144		12,333	76,728	-													0%
FRA OFR HOK1218 MQ	1	1	26		957	8,217	-													0%
FRA OFR HOK0010 GF	1	0	118		20,729	47,894	-													0%
FRA OFR PS 0010 MF	1	0					-													0%

Table 5.24 France: Landed value, weight and average price of principal species

	Value of landings (real) (thousand €)								Live weight of landings kg								Average landed price (real) (€)								% over total	
	2010	2011	2012	2013	2014	2015	2016	2017	2010	2011	2012	2013	2014	2015	2016	2017	2010	2011	2012	2013	2014	2015	2016	2017	in EUR	in weight
European hake	54.3	61.9	69.0	78.7	98.5	129.9	125.6	131.6	20,734,462	23,770,628	28,018,039	32,294,421	41,602,991	42,487,602	45,267,886	45,584,949	2.6	2.6	2.5	2.4	2.4	3.1	2.8	2.9	9.6%	8%
Monkfishes nei	74.8	86.8	93.1	97.6	95.7	98.9	100.4	99.7	16,059,447	18,659,410	22,137,854	23,312,073	22,839,203	22,973,943	24,248,951	23,983,573	4.7	4.7	4.2	4.2	4.2	4.3	4.1	4.2	7.3%	4%
Yellowfin tuna	69.6	74.2	98.4	89.1	107.2	73.4	90.0	89.3	43,450,494	39,928,214	44,688,362	42,253,299	56,122,205	48,508,828	55,739,958	57,104,513	1.6	1.9	2.2	2.1	1.9	1.5	1.6	1.6	6.5%	10%
Great Atlantic scallop	58.8	70.5	66.6	71.7	61.2	69.8	78.8	85.1	23,865,548	27,866,541	26,584,108	28,282,301	22,202,321	22,340,299	24,870,682	28,027,583	2.5	2.5	2.5	2.5	2.8	3.1	3.2	3.0	6.2%	5%
Skipjack tuna	30.1	42.7		41.0	35.9	36.6	53.9	68.5	35,722,692	37,280,741		29,595,857	37,432,250	40,457,123	53,019,279	50,441,108	0.8	1.2		1.4	1.0	0.9	1.0	1.4	5.0%	9%
Common sole	94.4	100.4	96.9	90.6	84.6	72.1	67.4	62.9	7,556,169	8,270,494	8,150,760	8,482,661	7,942,799	6,375,263	5,217,626	5,029,449	12.5	12.1	11.9	10.7	10.7	11.3	12.9	12.5	4.6%	1%

Data source: MS data submissions under the DCF 2019 Fleet Economic (MARE/A3/ASC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

5.9 Germany

Short description of the national fleet

Fleet capacity

The national fleet capacity continued to decline, with a total of 1 362 vessels, 388 of which were inactive in 2018. The total fleet had a combined gross tonnage (GT) of 62.4 thousand tonnes and engine power of 129.8 thousand kilowatts (kW). In 2018, the total number of vessels decreased by 35 compared to 2017. Almost all inactive vessels (368) belong to the smallest length class (below 10 meters). In that length class about 36% of the registered vessels have reported no activity in 2018 – a figure similar to previous years. The percentage of inactive vessels decreases with increasing length – in the length classes above 18m only seven vessels were filed inactive.

Vessels which target blue mussels are not included in the analysis because they are defined as operating in the aquaculture sector and are therefore covered in the aquaculture report.

The German pelagic trawler fleet is excluded from the analysis except for capacity and weight and value of landings data as practically the entire segment is owned by one parent company. For confidentiality reasons the data cannot be published.

Fleet structure

In 2018, the German large-scale fishing fleet (length above 12 meters) consisted of 274 vessels (20%), whereas 708 active vessels (80%) were accounted for the small-scale coastal fleet (below 12 meters). Thus the decrease in number of vessels applied mainly to the small-scale fleet (-28) while the fleet of vessels above 12 meters remained constant in 2017. In contrast to the number of vessels, the total engine power of the German fleet decreased only slightly over the years, while the gross tonnage even increased slightly in 2018 (+2%), indicating a trend towards bigger vessels.

Employment

Employment was estimated at 1 668 jobs in 2017, corresponding to 1 207 FTEs. These figures remained stable or even increased compared to 2016, whereas the overall trend over time is decreasing.

Effort

About 101 476 days were spent at sea by the non-pelagic fleet in 2017, a slight decrease of 3% from 2016 (104 113 days). The energy consumed in 2017 amounted to an estimated 43 million litres and was thus slightly higher (+5%) than in 2016. Due to a slight increase in fuel prices the energy costs increased from about EUR 14.6 million in 2016 to EUR 17.3 million in 2017 (+19%).

German small-scale coastal vessels operate almost exclusively in the Baltic Sea, whereas cutters (<500 GT) above 12m fish in the North Sea and in the Baltic Sea. German high seas trawlers operate mainly in the North Atlantic and Eastern Arctic area, but to some extent also in African and Southern Pacific waters.

Total Production

Total production shows an increasing trend from 2012 to 2017 with a live weight of landings increasing from 198 thousand tonnes to 253 thousand tonnes. In 2017, the weight of landings increased considerably to 253 thousand tonnes, from 228 thousand tonnes in 2016. The main species are herring, cod, common shrimp, saithe and Greenland halibut. In terms of weight herring is by far the dominant species, whereas the highest revenue is generated through brown shrimp.

Economic results for 2017 and recent trends

National fleet performance

Overall the German non-pelagic fleet generated a net profit since 2010 (with the exception of 2011 when brown shrimp prices had dropped below a critical level). Its economic performance has significantly improved compared to 2015. In 2017 the overall fleet faced an overall loss which is almost exclusively due to the development in the high seas demersal trawler group: two vessels were replaced by newly built trawlers, resulting in high transaction and capital costs and some temporary decrease in effort. According to the available information from the industry, data on catches and revenues in 2018 and the stable fuel prices the overall performance in 2018 is expected to be positive.

The total revenue of the German fleet, excluding direct income subsidies, was estimated at EUR 232 million (EUR 162 million for the non-pelagic fleet) for 2017, thus remaining at the same level as in 2016.

Direct income subsidies accounted for about EUR 0.6 million in 2017.

Total operating costs of the non-pelagic fleet increased considerably. Most cost types increased slightly, but non-variable costs and consumption of fixed capital showed by far the highest increase. This is mainly due to a one-time effect: two high seas vessels were replaced by newly built trawlers, thus causing high transaction and depreciation costs and, due to the considerable increase in fixed capital, also high consumption of fixed capital. When including capital costs, total costs amounted to EUR 168 million.

For the non-pelagic fleet, GVA, gross profit and net profit in 2017 were estimated at EUR 75 million, EUR 26.7 million and -EUR 3.9 million, respectively.

The (depreciated) replacement value of the German fleet was estimated at EUR 175 million, a 63% increase compared to the 2016 value, while investments amounted to EUR 111 million (+465%). These figures also reflect the effect of the two newly constructed high seas trawlers.

Overall, the cost structure has remained relatively constant over the recent years; most cost items have increased compared to the low figures of 2014.

Resource productivity and efficiency indicators

The gross profit margin in 2017 was 16.5%. Net profit margin was estimated at -2.4%, due to the aforementioned circumstances. Consequently, the Rate of Return on Fixed Tangible Assets (RoFTA) also dropped significantly to -3.6%.

Labour productivity (GVA/FTE) for 2017 was estimated at EUR 62 510/FTE, a 23% decrease compared with 2016.

Fuel consumption per landed tonne has been fluctuating around 550-600 litres per tonne. Excluding the pelagic fleet, the weight of landings per unit of effort (in days-at-sea) decreased after 2009 and since then has fluctuated around 0.6-0.7 tonnes/DAS. In 2017, almost 0.6 tonnes were landed per day at sea on average.

Performance by fishing activity

Large-scale fleet

In 2017, 276 active vessels were assigned to the large-scale fleet. These vessels mainly operate in the North Sea and the Baltic Sea, while the large trawlers fish also in the North Atlantic, Eastern Arctic and in distant areas. The cutters (<500 GT) target mainly brown shrimp, cod and saithe while the high seas trawlers fish herring, cod, Greenland halibut and other small pelagic species like mackerel.

The value of landings of the large-scale fleet increased continuously from 2014 to 2017 by about 17% altogether. The weight of landings also increased substantially, with some decline in 2015, but noticeable increase since then. Cost variables increased on average from 2016 to 2017, except for personnel cost. Due to the overall increase in cost with income from landings remaining stable, both gross and net profit decreased. The overall figures for the large-scale fleet are somewhat biased by the one-time effect of two high seas trawlers being built and introduced to the fleet

The number or people employed in the large-scale fleet increased slightly.

It has to be born in mind that for confidentiality reasons these observations refer only to the non-pelagic fleet. Only the weight and value of landings include the pelagic segment.

Small-scale coastal fleet

In 2017, 736 active vessels were assigned to the small-scale fleet according to the EU definition (vessels under 12 meters using passive gears). These vessels almost exclusively operate in the Baltic Sea, targeting mainly herring and cod and also freshwater species which are not managed under a TAC regime.

The weight of landings of the SSCF decreased by about 10% from 2016 to 2017 while the value of landings remained almost at the same level. The estimated total effort in terms of days-at-sea decreased slightly from 2016 to 2017. All costs except depreciation costs increased between 2016 and 2017. In 2017, the small-scale fishery ended up with a gross profit of EUR 220 thousand and a net loss of EUR 938 thousand.

The number of people engaged on-board was estimated at 839 in 2017, corresponding to about 534 FTE.

Performance results of selected fleet segments

The German cutter fleet (below 500 GT) is dominated by beam trawlers and, to a lesser extent, demersal trawlers.

Beam trawlers

German beam trawlers operate in the North Sea. Vessels up to 27 metres target almost exclusively brown shrimp. There are a few large beam trawlers over 27 meters targeting mainly flatfish. Thus, the beam trawler segment 24-40 meters contains both types of vessels.

The owners of the shrimp beam trawlers are usually also the skippers. They operate in coastal waters: smaller vessels with shallow draught can fish in the tide-ways and the Wadden area between the islands and the coast. These vessels depend on the tide and return to the port daily. These vessels usually do not fish in winter as the target species migrates to deeper areas. Larger vessels operate in greater depths and can also fish year-round. They stay at sea for several days.

Shrimp prices and fuel costs are the crucial elements for the economic performance of shrimp beam trawlers. 2017 was regarded satisfactory: the weight of landings further increased slightly from a very low level while prices for brown shrimp remained almost stable with little decrease only. Thus the total value of landings further increased slightly from an already high level. Fuel costs creased slightly and the net profit of beam trawlers up to 24 meters dropped from about EUR 11.9 million in 2016 to EUR 5.5 million in 2017.

Six flatfish beam trawlers flying the German flag are owned and operated mainly by Dutch fishers. They target mainly sole, plaice, and turbot. All of them are equipped with pulse gear. The catch is landed exclusively in the Netherlands. In 2017, the value of landings was EUR 10.0 million for these vessels. The segment of beam trawlers >24m (including two shrimp trawlers) experienced a gross profit of EUR 2.3 million in 2017.

Demersal trawlers

The German demersal trawler fleet can be divided into high seas trawlers above 45m, large cutters between 23 and 45 meters and smaller cutters below 23 meters. The high seas trawlers target mainly Greenland halibut, cod and redfish in Eastern Arctic and Greenland waters, the large cutters target saithe, cod, hake and haddock, the ones around 24 meters (eurocutters) also fish *Nephrops*. These vessels fish almost exclusively in the North Sea and Skagerrak. Some eurocutters shift temporarily to shrimp beam trawling or pelagic trawling for herring. The vessels of 20 meters and below almost exclusively fish in the Baltic Sea, targeting mainly cod, flatfish and – seasonally switching to pelagic gear – herring and sprat.

This indicates that the DCF length thresholds divide the demersal fleet into segments with heterogeneous fishing patterns. Thus the performance indicators in most cases represent a mixture of different fisheries. The net loss of demersal trawlers over 40 meters was estimated at EUR 5.6 million, the net profit of demersal trawlers between 24 and 40 meters was estimated at EUR 14.2 million. This loss is mainly due to a one-time effect of two high seas trawlers being replaced by newly constructed vessels. This unique investment results in an increase in overall efficiency and is thus likely to result in increased profits on the longer run.

The vessel profits of the vessels >40m are partly estimated upon internal prices as the vessels are part of companies that also operate in fish processing. That means that the profit is not necessarily assigned to the vessels only, but may be made at an advanced stage of the value chain as well. One new high seas demersal trawler entered the fleet in 2015 and two more in 2017. Two newly built vessels around 40 meters will enter the fleet in 2019. These investment activities are a clear indication of profitable fisheries.

For the segments with medium sized demersal trawlers (18-24 meters) positive net profits were determined (EUR 2.0 million), but as described before, this is a mixture of North Sea and Baltic Sea vessels. For the vessels below 18 meters, net losses were estimated at EUR 335 thousand). In both cases, the poor status of Western Baltic cod has a negative impact on the profitability.

Vessels using fixed nets and other passive gear

Larger fixed netters and potters (between 26 and 31 m) operated almost exclusively in Western waters, targeting anglerfish or red crab. For the related segment a net profit of EUR 733 thousand was

determined. Smaller vessels using passive gear almost exclusively operate in the coastal areas of the Baltic Sea. Main target species are cod, herring, and to some extent freshwater species in the brackish Bodden areas. The segment of fixed netters 12-18m achieved net profits of EUR 787 thousand, net losses of EUR 404 thousand were calculated for the 10-12m length class. The passive gear segment with vessels below 10m achieved net profits of EUR 577 thousand. All these vessels fishing in the Baltic Sea suffered from the decreasing TAC of Western Baltic cod and herring.

Drivers affecting the economic performance trends

As the German fleet is dominated by trawlers, the fuel price always has a major impact on the overall economic performance. As fuel expenses increased (about 18%) from 2016 to 2017, the profitability of the fleet was influenced in a negative manner.

Prices for brown shrimp have a significant influence on the performance of the national fleet, as it is the most important species in terms of value. In 2017, landings increased slightly by about 16% from a very low level, while prices per kg dropped only slightly (-11%), and thus the total value of brown shrimp landings increased again, by about 3% compared to 2016.

For all other species with major importance stable or slightly decreasing prices could be observed.

The MSC certification gains importance for sales of fish. Certification results in stable or higher prices. In several cases it has become a prerequisite for sales due to market requirements. For the high seas fisheries, the most important pelagic fisheries (North Sea herring, Atlanto-Scandian herring, mackerel, blue whiting) are MSC-certified. Cod, haddock and saithe fisheries in Norwegian waters and around Svalbard are certified as well as saithe fisheries in the North Sea. All annual audits were finalized successfully. The certification of cod, haddock and saithe fisheries in the Barents Sea was extended for five more years. The cutter fishery on brown shrimp was certified in 2017. In 2018, certification of Greenland halibut was started.

Markets and Trade

Brown shrimp as most important species is mainly landed in Germany, to some extent also in the Netherlands. The wholesale market is dominated by two companies which have a huge influence on the price. However, as fishers formed a producer organisation to gain market power the detrimental results of 2011 did not repeat. Just to the contrary, prices for brown shrimp developed favourably, thus increasing the profitability of the related fishery.

Overall, in 2017 only about a quarter of the total catch was landed in German ports, corresponding to about half the total value. Almost half the catch was landed in the Netherlands, about 15% in Denmark. The degree of self-sufficiency for fish is rather low in Germany, about 16%. Thus, international trade plays a crucial role for the supply of the German market with fish products.

Management instruments

The predominant management measure was TAC. The limitation of quota changes to 15% was regarded positive for keeping prices stable.

The introduction of the landing obligation could be implemented with little extra effort in the pelagic as well as in the saithe fisheries as these fisheries traditionally have had low bycatch rates. In the case of cod and flatfish fisheries serious problems have been reported. In the Baltic Sea high amounts of undersized cod were observed. According to the industry no technical measures are available to solve that problem.

TACs and quotas, status of key stocks

Most stocks targeted by the German high seas fleet, e.g. Arctic and Greenland cod, Atlanto-Scandian herring, Arctic haddock and saithe, are managed at MSY level. Overall, the high seas industry regarded fisheries both in 2016 and 2017 as good.

Brown shrimp, the most important species of the German fleet, is not subject to TAC. Catches depend mainly on abundance, effort and prices. In 2016 were cut by more than half, which was overcompensated by very high prices. Catches increased slightly in 2017 with prices remaining high, thus resulting in further increase in total revenue.

Most relevant North Sea stocks (herring, saithe, plaice, haddock, sole and *Nephrops)* are managed at MSY level. North Sea cod and herring quota increased about 15% in 2016. The saithe and plaice quota remained stable in 2016. After a benchmarking of the North Sea saithe stock substantial quota uplifts

were applied for 2017. The plaice stock remained at a historically high level. The fishing mortality of North Sea cod is still above F_{MSY}, and the recovery did not occur as quick as expected. The spawning stock biomass was estimated to be slightly above MSY $B_{trigger}$ in the assessment of 2017 with high uncertainty. Further effort may be required to recover the stock to levels which can produce MSY.

With the exception of plaice all North Sea quota of major relevance for the German fleet were increased for 2018. However, for 2019 almost all increases were overcompensated by massive cuts between 26% (whiting) and 36% (herring). Only plaice (+11%) and saithe (+16%) quota were increased.

Both Eastern and Western Baltic cod quota further decreased. Eastern Baltic cod stock was only partly exploited Fishes are in poor condition (malnutrition) and show an unfavourable length distribution, thus the fishery has become less attractive. A substantial cut of more than 50% occurred in 2017 for the Western Baltic cod stock. This stock has provided substantial amounts to the income of coastal fisheries and the continuing decline of quota over the last years caused a tense economic situation. For 2018 the Western Baltic cod quota remained unchanged while the Eastern Baltic cod quota was cut by 8%. Alternative fishing options, e.g. on herring or freshwater species, are limited and do not allow for a full compensation of losses in the cod fishery. Moreover, the Western Baltic herring quota was cut by 39% in 2018, thus aggravating the critical situation of the artisanal fishers. The quota increase of 20% for Eastern Baltic herring could not compensate for the losses on the Western herring stock on which German fishers have a much bigger share. As the German quota on the Eastern cod stock can only be exploited by trawlers, it is not an alternative fishing opportunity for the small-scale fixed netters suffering from decreased Western quota.

For 2019 the Western Baltic herring quota was cut by another 48%, thus amounting to less than 5.000 tonnes, which is less than one third of the 2017 quota. Although the Western Baltic cod quota was increased by 70% for 2019 (about 2.000 tonnes), it is still way below quota of 2014-2016 (3.600-2.700 tonnes). Overall, the development of the Baltic Sea fisheries is getting more and more dramatic.

In 2017, management measures for the recreational cod fishery (western Baltic stock) were introduced in the Baltic Sea to share the burden of rebuilding the western Baltic cod stock. These included a bag limit of 3 cod per day and angler in the closed season (Feb + March) and 5 cod per day and angler during the rest of the year.

The introduced management measures had a strong adverse effect on the recreational sector in Germany, as the majority of anglers (65%) are tourists from inland states (non-resident) which lead to a decline in recreational fishing effort (resident anglers behave different that non-resident anglers). Apparently anglers perceived the 5-cod bag limit as very restricted (despite the fact that the limit is only reached by few anglers) as they value freedom higher than catch rate. The bag limit was continued in 2018.

German recreational cod catches are responsible for an additional 40-50% of catches compared to the German commercial landings in some years. An extrapolation using German, Danish and Swedish recreational cod catches estimated that recreational cod catches represented 27% of the total removals for this stock.

Nowcasts for 2018-19 and outlook

Data for 2018 show a small decrease in vessel number (-3%). Landed weight remained almost unchanged, while landed value increased by 6%. Given some increase in most cost items the economic situation of the German fishing fleet remained stable, as confirmed by the fishing industry.

Some performance drivers in 2018 can be explored in more detail. One high seas demersal trawler that had left the German fleet was replaced by a newly constructed trawler in 2015 which is equipped with latest technology, including energy-efficient engines. Two more high seas demersal trawlers were replaced by new vessels in 2017 and entered the fishery later in the year. Two cutters of the 40 meters class are under construction and are expected to enter the fleet in 2019, thus replacing four older vessels of similar size. The high level of investment activities that can be observed in the sector of larger demersal vessels is unpreceded in the recent past. Modernisation of on-board equipment was continued as in preceding years. Given the higher efficiency of new vessels an increase in profit can be expected in the near future. One pelagic high seas trawler was sold in 2018 and exited the German fleet. According to the industry investment in a new vessel is postponed due to uncertainties of fishing opportunities in the Brexit context.

High seas fleet

2018 was regarded positive by the high seas sector both for pelagic and demersal fisheries. Once again high seas trawlers achieved positive results in the cod fishery in Norwegian waters, Svalbard and the

Barents Sea. Saithe fishery of high seas trawlers in Norwegian waters took place from February to April and was regarded satisfactory. The high seas fleet also targeted saithe in the North Sea which was regarded mediocre. As in previous years Greenland halibut fisheries in Eastern and Western Greenland waters were highly efficient. The Greenland cod quota could be fully exploited. The 2018 season of pelagic redfish fishery in the Irminger Sea as well as the demersal redfish fisheries in Eastern Greenland waters were regarded successful as well. Fisheries agreements with Greenland and Norway remain a backbone of the performance of the German high seas demersal fleet.

High seas pelagic fisheries in European waters targeted herring, mackerel, horse mackerel and blue whiting and were overall regarded successful. While fisheries on blue whiting were successful due to quota exchanges, horse mackerel catches dropped further, and the quota could not be fully exploited. In 2018 one trip was assigned for catching smelt. Fisheries in Moroccan waters were finished early in 2018 as the four-annual treaty with Morocco had ended.

In 2018, European fisheries in the South Pacific under an EU-wide quota pooling were performed without a German trawler. The pelagic industry is striving for EU membership in the North Pacific Fisheries Commission in order to complement fishing activities in the Southern Pacific with fishing activities in the Northern Pacific and thus increase the overall efficiency.

In 2015, the landing obligation became effective for pelagic fisheries. As this fishery has always had low discard or bycatch rates the landing obligation caused no major problem. The total weight of bycatch landed by the high seas fleet amounted to 77t in 2018, mainly mackerel, saithe and cod.

Cutter and small-scale fleet

In 2017 the German cutter fisheries could keep landings stable overall while product prices increased on average. As a consequence, the economic situation was regarded satisfactory. The recovery of important stocks was perceived positive by the industry. However, once again the situation varied grossly by fishery.

In 2018, the brown shrimp fishery in the North Sea performed even more successfully than in preceding years. Landings recovered slightly from a very low level, but prices dropped only very slightly from a very high level so that total revenues were further increased. Thus the fishery remained highly profitable.

The quotas for the main target species of the North Sea flatfish fishery (plaice, sole, turbot) were increased as stocks grew further. Plaice landings decreased slightly while prices remained stable.

The demersal fishery targeting *Nephrops* is regarded successful. As the German quota is very low it is based almost entirely on extensive quota exchange, especially with the United Kingdom. Flatfish beam trawlers are all equipped with pulse gear.

The North Sea saithe quota was regarded satisfactory, the quota was increased by 6% in 2018. Two new vessels are under construction and will replace four older vessels in the saithe fishery in 2019. The spawning stock biomass of North Sea cod dropped under the sustainability target. Thus the quota for 2019 was reduced by 35%. According to the industry, this cut can be compensated.

In 2017 the Baltic cod fishery suffered grossly from a quota cut of 56% for the Western Baltic stock. This quota remained unchanged in 2018. There is hardly any alternative fishery. Payments for temporary and permanent cessation have been carried out by the German authorities. A strong recruitment of the 2016 age class gives hope for an improved situation in the future. For 2019 the Western cod quota was increased by 70%, which means that the quota is still below the 2016 level.

The plaice stock in the Baltic Sea shows an increasing trend, the quota was fully exploited and fisheries were regarded satisfactory, though they could not compensate for the loss of cod quota. Coastal herring fisheries in the Baltic suffered from a 39% quota cut for the Western Baltic stock. Losses in quantities were not compensated by higher prices.

Outlook for 2019

In general, the major factors influencing the profitability of the German fisheries are fuel price and revenues. With few exceptions (e.g. brown shrimp) fish prices do not fluctuate considerably. Thus the volume of catches is the main factor which determines the revenues. Most important species targeted by the German fleet are managed under a TAC regime. As there are no signs for a considerable change in fuel prices, the quotas for 2019 are the dominant factor in the context of an outlook for 2019.

High seas fisheries

Quota for 2019 dropped mainly for some pelagic stocks, herring north of 53º30'N (-36%), mackerel (-20%) and blue whiting (-20%). The demersal sector is mainly affected by reduced cod quotas in the North Sea (-35%) and in areas 1 and 2 (-6-7%). Quota on cod and redfish stocks targeted by the high seas fleet were changed only slightly. The quota for Greenland halibut remained unchanged.

In 2018 one out of four German pelagic high seas trawlers was sold outside the EU. A re-investment was postponed due to uncertainties concerning future fishing opportunities.

Cutter and small-scale fleet

The quotas for North Sea stocks relevant for the German cutter fishery underwent some changes in 2019. Haddock and cod quota were decreased by 31% and 33%, respectively, while the plaice quota increased by 11%. Saithe quota was increased by 16%. Brown shrimp being the most important species for the German cutter fishery is not managed by TAC. As there is no stock assessment the abundance and thus the catches of brown shrimp cannot be properly forecasted. In previous years the revenues from brown shrimp fisheries were at sufficient level, according to the industry. Changes in catch were compensated by price adjustments. In the autumn season of 2018 high catches were observed, thus giving a reason to assume higher catches in 2019 than in previous years. However, prices had dropped considerably from a very high level and the wholesalers reported fully stocked warehouses by end of 2018.

After a year with considerable quota cuts on Western Baltic herring (-39%) the Baltic fisheries faced another 48% quota cut in Western Baltic herring, the second important species. After a 56% quota cut in 2017 and no change in 2018 the Western Baltic cod quota was increased by 70% for 2019 which is still only one third of the 2014 and 2015 quota. Without a quick recovery of the Western cod and Western herring quota the coastal fishery is likely to further shrink. The 2016 class of Western Baltic cod was assessed very strong, thus giving hope for an improved quota situation when this class has achieved landing size.

Overall, the cutter fleet is expecting increasing problems from an increasing number of overaged vessels. The oldest vessel in the German fleet turned 100 years old in 2019. There has been almost no newly built cutter introduced to the German fleet, in contrast to the high seas fleet where a substantial share of the fleet is undergoing a replacement. The investment into a new vessel appears to be unfeasible for the usually family-owned businesses. Further concerns of the cutter industry refer to the lack of successors and potential area closures.

Model forecast

Landed weight increased by about 11% in 2017 compared to 2016, with a 1% decrease in landed value. Projections suggest that operating costs decreased slightly in 2017. Due to the rather stable level of costs and revenues economic performance remained at the high level of the preceding year also in 2017: GVA (-3%), gross profit (-3%) and net profit (-1%).

Projection results, suggesting that the German fleet operated at a profit also in 2017, are in line with recent statements from the industry. The estimate for net profit margin is 16%. Positive economic developments can also be seen in performance indicators GVA to revenue (61%), GVA per FTE (EUR 86 thousand) and gross and net profit margins.

The projections for 2018 suggest a stable level of revenues for the overall German fleet. Some losses in the pelagic sector due to expected decrease in prices are likely to be compensated by increased prices for other species. The overall days-at-sea are expected to decrease in 2018, mainly because of a further slight decrease in vessel numbers. This is going to result in slightly decreasing variable as well as fixed costs, with the exception of fuel costs. As the fuel price is assumed to increase sensibly, the total fuel costs are supposed to increase as well.

In 2018, the overall German fleet is forecasted to remain profitable with gross and net profit margins of 29% and 18%, respectively.

Data issues

Capacity, logbook and landings data are derived from sources which are covered by different legislations. All these data are available exhaustively. That means that all capacity, landings and effort data are represented at 100%.

The only exception is the group of vessels below 8 meters without logbook obligation. These vessels are sampled for effort data. The remaining variables (cost, employment, fuel consumption) are estimated based on results from an accountants' network and from surveys with questionnaires.

All data on the high seas fleet were collected exhaustively (100%).

The data basis for fleet segment level estimations has become broad over the years. All fleet segments with major contribution to the total catches of the German fleet have been sampled with satisfactory response rates. As segments are not necessarily homogeneous, the results can be quite variable which is reflected in higher coefficients of variation. Some leaps in time series might be due to an improvement in data coverage, with the latest data being most reliable as the raising procedure is based on more comprehensive information. The improvement of the estimation procedure is an on-going process.

The German fishing fleet contains a small number of pelagic vessels which are owned mainly by one company and therefore, for confidentiality reasons, it is impossible to publish this data by segment. Clustering the pelagic vessels with other vessels is not feasible as the pelagic vessels have unique characteristics that would completely bias "pure" segments when clustered. Therefore, the only pelagic fleet data in this report is capacity and weight and value of landings data, which is public, so please consider this when interpreting national totals; the German pelagic fleet accounts for a substantial part of the national fleets' costs and earnings.

All data have been collected, also for the pelagic fleet. As in previous years, confidentiality of most of the data on pelagic vessels affects regional analyses. The pelagic fleet mainly operates in the North Sea and North Atlantic (herring, mackerel, blue whiting). Data on pelagic fisheries in the Baltic are hardly affected, as they are performed on a seasonal basis, and vessels are assigned to the DTS segment, which reflects their major activity during the year.

Vessels which targeted blue mussels were excluded from the analysis because they are defined as operating in the aquaculture sector. Not all of the participating vessels can be identified by the first gear entry in the fleet register as some vessels are using beam trawls. Instead, the relative catch of blue mussel was used, thus allowing an unambiguous identification of aquaculture vessels.

It has to be pointed out that German employment data follow the approach of minimum requirement of activity, i.e., a person that goes fishing for twenty days or less during the year is not accounted for one employed person. Fulltime equivalents are estimated with reference to the days-at-sea and the crew size. The total number of jobs is then derived by the ratio of total number vs. FTE as observed in panel data. Due to this approach the data correspond to official employment statistics. If one day at sea would qualify for counting a "person employed" figures would exceed official statistics by about 30%.

Table 5.25 Germany: National fleet statistics and economic performance results. Nowcast figures for 2018 and 2019

		2008	2009	2010	2011	2012	2013	2014	2015	2016	*2017*	*2018*	2019	Trend 2008-2018	Δ 2017 to 2016	Δ 2017 to avg. 08-16
Capacity	Number of vessels	1,861	1,817	1,757	1,664	1,564	1,537	1,516	1,478	1,430	1,397	1,362	1,349		-2%	-14%
	Total vessel power	154,656	158,302	155,805	151,393	142,177	142,070	135,390	130,149	132,942	131,534	129,883			-1%	-9%
	Total vessel tonnage	66,612	67,881	65,850	64,635	62,122	62,158	58,186	56,494	60,696	60,445	62,432			0%	-4%
Employment	Engaged crew	2,068	1,529	1,744	1,639	1,752	1,647	1,605	1,532	1,539	1,668	1,656	1,654		8%	0%
	Unpaid labour										351					
	FTE national	1,615	1,238	1,365	1,258	1,372	1,281	1,253	1,202	1,204	1,207	1,173	1,241		0%	-8%
	Total hours worked per year (engaged crew)										2,172,600					
Effort	Days at sea	139,818	128,999	115,854	109,786	119,365	107,978	111,078	106,055	104,113	101,476	96,528	100,726		-3%	-12%
	Fishing days	142,746	132,947	118,527	112,464	123,391	111,784	114,374	110,744	106,425	104,017	97,268			-2%	-13%
	kW fishing days	13,951,370	14,674,215	13,594,505	11,509,656	12,531,445	12,007,183	11,566,124	11,882,718	12,102,003	13,843,819				14%	9%
	GT fishing days	5,293,851	5,780,661	5,433,499	5,064,646	4,936,642	4,697,553	4,360,180	4,818,656	5,114,542	5,485,862				7%	9%
	Number of fishing trips	48,295	44,064	39,628	34,686	37,336	34,803	33,928	33,341	30,609	28,468				-7%	-24%
	Energy consumption	48,301,047	46,105,565	47,115,568	41,599,890	46,577,076	37,184,987	38,125,208	40,191,942	41,137,263	43,320,470	44,302,842	48,417,169		5%	1%
Landings	Live weight of landings	257,991,945	228,458,087	220,631,498	207,766,041	198,480,631	218,985,981	226,872,228	238,491,943	228,243,601	252,835,427	261,214,485	231,080,226		11%	12%
	Value of landings	231,465,541	190,878,365	209,490,619	199,112,864	209,448,919	209,317,351	205,338,653	215,808,164	233,925,895	232,284,405	238,354,208	218,329,623		-1%	10%
Income	Gross value of landings	162,959,765	132,955,007	145,482,601	130,621,336	152,001,336	143,499,165	131,389,367	140,583,356	158,083,218	158,316,013	172,805,312	170,587,821		0%	10%
	Other income	2,885,761	3,440,482	4,854,833	2,913,113	2,621,403	3,607,295	3,201,696	6,603,332	3,522,438	3,718,409	3,702,711	3,786,288		6%	-1%
	Operating subsidies	879,810	1,163,194	1,321,594	1,452,554	1,323,167	1,125,893	1,801,041	947,773	567,465	612,468				8%	-48%
	Income from leasing out quota	-	-	-	-	-	-	-	-	-	-					
Expenditure	Personnel costs	33,425,440	38,352,654	38,613,151	36,362,766	39,622,657	36,268,945	37,534,560	40,523,442	41,971,422	38,578,403	44,291,245	42,825,497		-8%	1%
	Value of unpaid labour	12,221,132	10,129,474	10,186,067	8,663,746	10,865,095	10,635,951	9,733,559	9,531,159	10,333,810	10,122,214	10,782,204	10,951,737		-2%	-1%
	Energy costs	28,623,026	21,094,350	24,635,440	27,266,181	31,971,798	24,689,340	23,159,233	18,097,010	14,598,197	17,352,548	21,995,078	23,796,052		19%	-27%
	Repair & maintenance costs	20,423,872	20,336,996	20,060,492	19,382,585	18,242,490	15,711,760	15,115,884	17,390,951	18,908,882	20,192,988	20,900,438	21,329,135		7%	10%
	Other variable costs	26,479,100	13,522,548	10,744,681	11,398,739	11,587,953	9,621,617	10,735,521	12,933,539	12,871,178	16,657,794	16,949,595	18,717,385		29%	25%
	Other non-variable costs	24,086,705	16,364,217	15,348,445	17,210,966	17,080,603	15,828,129	14,565,556	16,619,381	16,910,738	32,382,092	33,778,745	34,215,006		91%	89%
	Consumption of fixed capital	27,404,235	25,416,986	24,524,764	22,038,832	19,632,724	21,046,721	17,037,477	24,550,992	20,352,363	33,036,927	33,412,644	35,033,711		62%	47%
	Lease/rental payments for quota	-	-	-	-	-	-	-	-	-	-					
Indicator	Opportunity cost of capital	1,384,659	3,614,747	1,623,241	110,016	- 535,358	- 29,457	297,175	479,586	- 331,588	- 2,377,004	- 2,583,363	- 2,653,341		-617%	-423%
	Gross Value Added	66,232,823	65,077,378	79,548,374	58,275,977	75,739,895	81,255,615	71,014,870	82,145,807	98,316,660	75,448,999	82,884,166	76,316,531		-23%	0%
	Net Value Added	37,443,928	36,045,645	53,400,370	36,127,128	56,642,529	60,238,350	53,680,218	57,115,229	78,295,886	44,789,076	52,054,885	43,936,162		-43%	-14%
	Gross profit	20,586,251	16,595,250	30,749,157	13,249,465	25,252,143	34,350,719	23,746,752	32,091,206	46,011,428	26,748,383	27,810,717	22,539,297		-42%	-1%
	Net profit	- 8,202,643	- 12,436,483	4,601,152	- 8,899,384	6,154,776	13,333,455	6,412,099	7,060,628	25,990,654	- 3,911,540	- 3,018,564	- 9,841,073		-115%	-203%
	Net profit subsidised	- 7,322,833	- 11,273,288	5,922,746	- 7,446,830	7,477,943	14,459,348	8,213,141	8,008,401	26,558,119	- 3,299,072	- 3,018,564			-112%	-167%
	Net profit rights	- 7,322,833	- 11,273,288	5,922,746	- 7,446,830	7,477,943	14,459,348	8,213,141	8,008,401	26,558,119	- 3,299,072	- 3,018,564			-112%	-167%
Capital	Value of physical capital	120,629,635	119,932,980	106,670,100	102,515,135	91,100,029	99,760,746	83,208,941	120,016,436	107,391,817	175,174,841	175,496,480	184,461,696		63%	66%
	Value of quota and other fishing rig	-	-	-	-	-	-	-	-	-	-					
	Investments	19,995,908	26,933,293	23,340,487	27,614,393	21,573,226	28,212,687	24,294,623	49,979,587	19,717,193	111,459,235				465%	315%
	Total assets										175,174,841					
	Long/short debt										118,629,500					
	Subsidies on investments										-					

Data source: MS data submissions under the DCF 2019 Fleet Economic (MARE/A3/ASC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

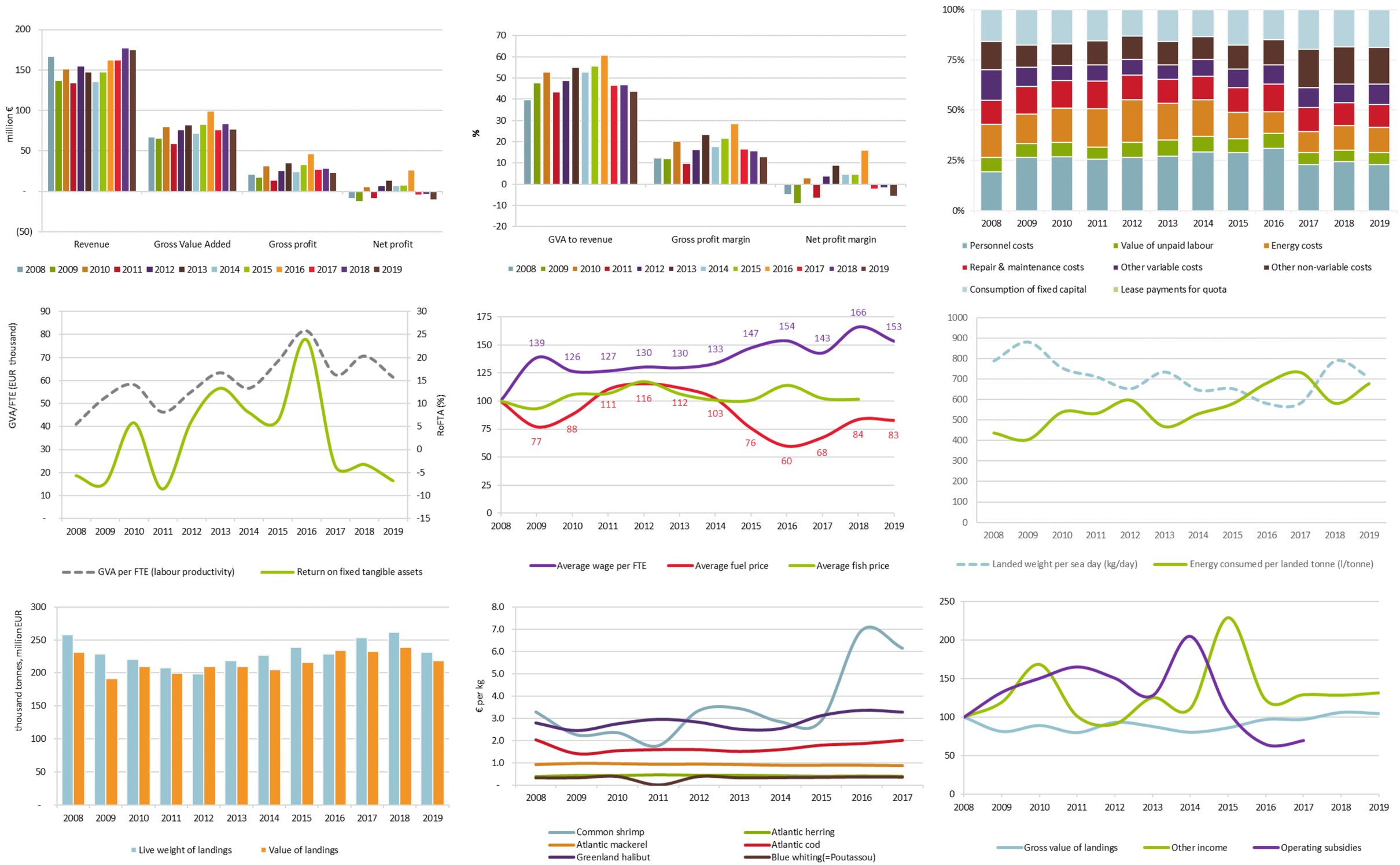


Figure 5.9 Germany: Main trends in economic performance indicators (absolute value, panel 1a/top left and relative value, (panel 1b/top middle); cost structure (panel 1c, top right); productivity (panel 2a); key input/outputs (panel 2b); efficiency (panel 2c); landings (panel 3a); average price (EUR /kg) of top species (panel 3b) and capital value (panel 3c). Nowcast figures for 2018 and 2019

Data source: MS data submissions under the DCF 2019 Fleet Economic (MARE/A3/ASC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Table 5.26 Germany: National fleet statistics and economic performance results by fleet segment, 2017

	Number of vessels	FTE national	Days at sea	Energy consumed per landed tonne	Live weight of landings	Value of landings	Revenue	Gross Value Added	GVA to revenue	Gross profit	Gross profit margin	Net profit	Net profit margin	Average wage per FTE	GVA per FTE (labour productivity)	Return on fixed tangible	Profitability (2017)	Net profit margin %Δ 2017 -	Economic development trend	As a % of total revenue
DEU NAO DTS40XX NGI	7	171	1,598	669	21,931,234	42,367,003	44,196,675	20,674,534	46.8	6,211,121	14.05	- 14,188,611	- 32.10	84,581	120,904	- 12.9	Weak	-392%	Deteriorated	27%
DEU NAO TBB1218 NGI	108	161	13,680	1,104	4,677,332	28,321,251	30,009,258	16,488,829	54.9	5,627,597	18.75	3,913,114	13.04	67,461	102,415	45.5	Reasonable	-13%	Deteriorated	19%
DEU NAO TBB1824 NGI	65	129	9,753	1,521	3,913,406	24,319,310	26,082,173	12,099,819	46.4	3,966,611	15.21	1,606,185	6.16	63,048	93,797	13.7	Weak	-21%	Deteriorated	16%
DEU NAO DTS2440 NGI	8	32	1,760	576	8,285,983	17,088,262	17,799,000	6,037,156	33.9	3,658,427	20.55	1,971,580	11.08	74,335	188,661	23.6	Reasonable	311%	Improved	11%
DEU NAO TBB2440 NGI*	9	44	1,806	2,259	2,678,072	11,744,963	11,789,993	5,601,825	47.5	2,252,904	19.11	1,166,311	9.89	76,112	127,314	22.3	Weak	9%	Improved	7%
DEU NAO DTS1824 NGI	13	39	2,531	581	4,511,906	10,072,842	10,319,109	5,808,866	56.3	2,539,483	24.61	1,525,510	14.78	83,830	148,945	33.6	Reasonable	33%	Improved	6%
DEU NAO PG 0010 NGI	678	495	59,868	116	4,763,543	6,663,657	7,256,942	3,526,066	48.6	1,158,759	15.97	347,967	4.80	4,782	7,123	7.3	Weak	163%	Improved	4%
DEU NAO DFN2440 NGI*	6	63	1,335	1,685	1,476,276	4,290,297	6,686,032	2,887,830	43.2	1,512,458	22.62	733,430	10.97	21,831	45,839	23.9	Reasonable	142%	Improved	4%
DEU NAO DTS1218 NGI	20	17	1,791	194	3,121,758	2,459,780	3,239,186	1,113,045	34.4	39,657	1.22	- 283,865	- 8.76	63,140	65,473	- 18.9	Weak	9%	Improved	2%
DEU NAO PG 1012 NGI	58	39	5,138	94	2,383,606	1,583,048	2,119,733	32,112	1.5	- 938,096	- 44.26	- 1,286,470	- 60.69	24,877	823	- 79.2	Weak	-162%	Deteriorated	1%
DEU NAO DFN1218 NGI	7	6	533	111	662,045	1,176,617	1,297,797	750,512	57.8	675,797	52.07	577,103	44.47	12,452	125,085	107.9	High	140%	Improved	1%
DEU NAO DTS1012 NGI*	6	4	448	92	672,222	488,860	643,000	245,475	38.2	- 5,359	- 0.83	- 52,804	- 8.21	62,709	61,369	- 21.7	Weak	53%	Improved	0%
DEU NAO TBB1012 NGI*	12	7	1,235	833	94,988	549,877	595,524	182,932	30.7	49,023	8.23	- 6,593	- 1.11	19,130	26,133	- 3.8	Weak	12%	Improved	0%
DEU NAO TM 40XX NGI*	15				193,663,056	81,158,639	-													0%

Data source: MS data submissions under the DCF 2019 Fleet Economic (MARE/A3/ASC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Table 5.27 Germany: Landed value, weight and average price of principal species

	Value of landings (real) (thousand €)										Live weight of landings kg										Average landed price (real) (€)										% over total	
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	in EUR	in weight
Common shrimp	58.6	39.0	43.3	29.9	54.7	55.5	45.0	40.0	53.4	55.0	17,901,961	17,314,908	18,379,432	17,035,671	16,359,682	16,165,267	15,851,595	13,925,238	7,690,569	8,953,154	3.3	2.3	2.4	1.8	3.3	3.4	2.8	2.9	6.9	6.1	23%	4%
Atlantic herring	18.2	15.9	12.8	17.1	22.8	31.4	22.2	27.0	27.3	27.2	46,659,677	37,452,626	29,555,327	37,022,625	51,209,547	71,840,349	53,423,424	67,121,648	67,152,896	67,977,837	0.4	0.4	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.4	11%	30%
Atlantic mackerel	16.2	21.9	18.2	22.7	18.0	19.4	25.6	25.4	21.0	21.8	17,477,175	22,408,206	18,879,784	24,085,231	18,947,145	20,934,648	28,458,012	28,261,538	23,422,686	24,751,614	0.9	1.0	1.0	0.9	1.0	0.9	0.9	0.9	0.9	0.9	9%	11%
Atlantic cod	35.4	26.5	30.1	26.3	30.2	22.0	24.4	28.0	26.1	21.2	17,388,510	18,629,501	19,477,205	16,383,142	18,882,283	14,533,787	15,221,010	15,559,763	13,955,089	10,513,336	2.0	1.4	1.6	1.6	1.6	1.5	1.6	1.8	1.9	2.0	9%	5%
Greenland halibut	17.8	16.0	19.6	22.6	18.2	14.8	14.3	17.8	21.2	20.6	6,367,860	6,531,404	7,119,686	7,667,861	6,443,295	5,879,521	5,603,270	5,720,280	6,318,640	6,293,956	2.8	2.5	2.8	3.0	2.8	2.5	2.5	3.1	3.4	3.3	9%	3%
Blue whiting(=Poutass	8.3	1.6	3.5		2.4	3.8	8.2	8.3	7.3	16.3	25,293,096	5,023,478	9,058,083		6,238,143	11,418,368	24,487,183	24,106,928	20,024,811	45,522,530	0.3	0.3	0.4		0.4	0.3	0.3	0.4	0.4	0.4	7%	20%

Data source: MS data submissions under the DCF 2019 Fleet Economic (MARE/A3/ASC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

5.10 Greece

Short description of the national fleet

Fleet capacity

In 2018, the Greek fishing fleet consisted of 14 234 registered vessels with a combined gross tonnage of 67 thousand GT and total power of 398 thousand kW. The average vessel age is 31 years. The overall capacity of the Greek fleet has a falling trend between 2008 and 2018. The size of the Greek fishing fleet decreased, with the number of vessels falling by 3% while total tonnage and power also decreased by 5% and 3%, respectively. The number of the vessels has decreased due to the application of EMFF Measure 6.1.10 under the Union Priority 1 for permanent cessation (851 vessels decided to exclude from the registry). Also, it is important to mention that the sector faces ageing of the population without any attractive motive for successors to stay in business.

Fleet structure

The majority of the active vessels (12 588) are small-scale vessels (less than 12 meters) with a combined gross tonnage of 25 thousand GT and total power of 239 thousand kW. On the other hand, there are 849 large-scale vessels (larger than 12 meters) with a combined gross tonnage of 39 thousand GT and total power of 146 thousand kW.

Employment

Employment was estimated at 22 471 jobs that correspond to 19 874 FTEs with a very low average wage per FTE and total employed (EUR 8.7 and EUR 7.6 thousand, respectively) in 2017.

Effort

In 2017, the Greek large-scale fleet spent 80 807[20] days-at-sea while there is no available data for the small-scale fleet. The amount of energy consumed was estimated at 93 million litres and thus was slightly lower than in 2016 (10%). The average amount of energy consumption was 6 216 litres per vessel. Due to lower fuel prices, the reduction of both the fishing fleet and the fishing effort, the energy costs decreased from about EUR 75.7 million in 2016 to EUR 67.3 million in 2017. The fishing effort is concentrated mainly in Aegean (GSA 22) approximately 73%, Ionian (GSA 20) 23.5% and Crete (GSA 23) 3.5%.

Production

The Greek fishing fleet targets a variety of species. The main Greek species regarding the landings weight are European anchovy, European pilchard (sardine), European hake, red mullet, common octopus, deep-water rose shrimp and surmulet. The core Greek species regarding landings value are Engraulis encrasicolus, *Sardina pilchardus*, *Merluccius merluccius*, *Mullus barbatus*, *Mullus surmuletus*, *Pargus pargus* and *Octopus vulgaris*.

Economic results for 2017 and recent trends

National fleet performance

The basic source of income of Greek fishing vessels is the income from landings, while some segments also receive direct subsidies, stemming from duties refunds. No other source of income appears (e.g. income from fishing rights, recreational fishing and tourism). The income generated from landings was enough to cover all expenses for the Greek fleet. The economic performance has improved the last 5 years (AGRERI, 2019). Moreover, the inclusion of the imputed value of unpaid labour provides the activity with a high positive income for fishers in 2017. As the majority of the Greek fishing vessels are mainly based on family labour, this figure provides a clearer picture of the sector economic sustainability improvement. It is also important to emphasize that this figure is estimated as the opportunity cost of labour, using the average daily wage per fisher. However, in many cases, due to the lack of labour demand in local economies, which is even more intense due to the on-going financial recession, the opportunity cost of labour is lower or even zero.

[20]It has to be mentioned that in 2017, the National Program was lately initiated and therefore, the transversal variables for the SSCF had not collected but for the LCF for the relative information derived for the whole year through the ERS.

The total expenses of the Greek fleet are EUR 362 million. The main expenses of the fishing vessels are personnel costs (wage and salaries and imputed value of unpaid labour), other variable costs, as well as energy costs. Energy costs account for 19% of total expenses and exceed a total of EUR 68 million. As far as personnel costs are concerned, they account for 47% of total costs. Specifically, wages and salaries are equal to EUR 72 million, and they derive mainly from large-scale vessels. On the other hand, imputed labour costs are estimated to EUR 97 million and derive mainly from small-scale vessels.

Other variable costs, including commercial costs and other operating costs, are also important. These costs are estimated at EUR 56 million. The non-variable costs are significantly lower (EUR 7 million), representing only 2% of total expenses, while repairs and maintenance costs reach around EUR 26 million. Finally, the annual depreciation costs account for 10% of total costs (EUR 36 million).

As far as the value of physical capital (depreciated replacement value) is concerned, it is equal to EUR 157 million. Moreover, the total investments in physical capital in 2017 are around EUR 27 million.

Performance by fishing activity

Small-scale coastal fleet

In Greece, the majority of vessels (94%) are small-scale vessels. Specifically, there are 12 588 small-scale vessels with a combined gross tonnage of 25 thousand GT and total power of 239 thousand kW in 2017. The number of small-scale vessels decreased by 5% from 2017 to the average 2008-2016, following the general trend of the Greek fishing fleet. The SSCF employs a total of 17 744 engaged crew, thus contributing to 79% of the total national employment of the sector. The majority of the engaged crew is unpaid labour. This result refers to the significant contribution of the SSCF to the local employment.

The SSCF mainly exploits the extensive Greek coastline, using polyvalent passive gears (mainly nets, longlines, pots, and traps). The vessels in this segment are primarily family-owned, and they are characterized by low invested capital. Moreover, their landings are sold at higher prices compared to the large-scale fleet, and they are mainly directed to the market through very short supply-chains. Despite the fact that the vessels of this segment are small, they are vital for the local economies regarding job opportunities and have strong ties to them. They usually offer income and employment to poor and isolated areas with very few alternative economic activities. Therefore, this segment highly contributes to the social and economic sustainability of the coastal communities.

The small-scale vessels consume 35 million litres fuel, and the corresponding energy costs are high. It is crucial to mention that the small-scale fishers due to their limited access to credit, they do not have the flexibility to buy their fuel in advance; instead, they buy a limited amount to cover only very short-term needs. This is the main factor that increases the energy cost because they do not gain the reduced price of fuel.

Large-scale fleet

The large-scale fleet contains 849 active vessels with a combined gross tonnage of 39 thousand GT and total power of 145 thousand kW. As larger vessels have higher levels of engine power, they can conduct more fishing operations in deeper fishing grounds. These vessels mainly use active gears (bottom trawlers and purse seiners) and are characterized by high operating costs. The large-scale vessels consume 58 million litres of fuel. The large-scale fleet segment, in contrast to the small-scale benefits from the reduced price of fuel.

Performance results of selected fleet segments

The Greek fleet is highly diversified with a broad range of vessel types targeting different species. The national fleet consisted of 17 (DCF) fleet segments and 13 464 active vessels in 2017.

Netters 6-12m

This is the largest fleet segment of the Greek fishing fleet, containing 5 734 vessels. The total value of landings is EUR 116 million (AGRERI, 2019) and the total jobs employed in this fleet segment is 8 757 representing 39% of the Greek fishing fleet. The imputed value of unpaid labour is the main cost item (38% of total expenses) and represents the family contribution to labour.

It is also important to mention that this segment produces the highest added value among fleet segments, which is equal to EUR 116 million (AGRERI, 2019), a fact that reveals its substantial importance. Taking into consideration that the majority of these vessels are active in poor and isolated

areas, with very few alternative economic activities, the importance of this sector to the local economies is even more apparent. In 2017, the fleet segment of DFN0612 had weak profitability with 2.02% net profit margin, but it is important that the net profit is positive in relation to the previous years. Moreover, the profit plus the imputed value of labour provides a notable income to the families of many coastal areas.

Netters <6m

It is the second most important fish segment in Greece regarding the number of vessels employed 3 292 small vessels. These vessels target multi-species *(*e.g. *Mullus barbatus*, *Mullus Surmuletus*, *Merluccius merluccius* and others*).* The total value of landings is EUR 29 million (AGRERI, 2019). Moreover, this fleet segment employs 2 985 jobs. Taking into consideration that the majority of these vessels are family owned, they normally utilize only family labour. The share of the segment in both the total national value of landings and the national contribution to employment indicates its high importance (5% and 15%, respectively).

Unlike large-scale fisheries, the main cost element is the imputed value of unpaid labour (51%), followed by labour cost (17%) and energy costs (14% of total expenses). Finally, it is worth noticing that although this segment includes very small vessels, it highly contributes to the national economy (added value of about EUR 19 million) and provides livelihood and income for fishers with limited alternative employment. The economic performance is weak, while the profit plus the imputed value of labour provides a notable income to the families of many coastal areas. The mean wage is very low, only 5.7 thousand euros.

Longliners

The fleet is made up mostly of small vessels less than 12m, around to 3 231 vessels. This segment has a substantial contribution either to landings or employment. In total, it contributes with 3 904 jobs representing 19% of the Greek fishing fleet. This figure highlights the major importance to the local rural economies. The imputed cost of labour is the main type of cost, representing the family contribution to the labour. This has a significant effect due to limiting alternatives for jobs in some specific coastal areas.

Longliners <6m

This fleet segment includes 1 303 small vessels (4th largest fishing segment). Moreover, this fleet segment employs 1 451 jobs, which corresponds to 6.4% of the total engaged crew of the Greek fishing sector. Taking under consideration that the majority of these vessels are family owned, we can say that this segment utilizes mainly family labour. Unlike large-scale fisheries, the main cost element is the imputed value of unpaid labour (46%), which is more than EUR 7 million.

Longliners 6-12m

This is the 3rd largest fleet segment of the Greek fishing fleet, containing 1 829 vessels. The total value of landings is EUR 44 million (AGRERI, 2019) and the total engaged crew employed in this fleet segment is 2 629 representing the 12% of the Greek fishing fleet. These figures highlight the importance of this segment to the local, rural economies. The imputed value of unpaid labour is the main type of cost (33% of total expenses), and as in the previous segment, represents the family contribution to the labour. Energy costs are also important, contributing by 16% of total costs. It is important to mention that this segment an added value of EUR 27 million (AGRERI, 2019), a fact that reveals its high importance to the rural economies.

Bottom trawlers 18-24m

This fleet segment includes 90 active vessels with a total value of landings of EUR 25 million and total employment that corresponds to 501 engaged crew (2.3% of total). Bottom trawlers have multi-species characteristics, captures numerous fish species, such as Penaecus kerathurus, European hake (*merluccius merluccius*), deep-water rose shrimp (*parapenaeus longirostris)*, red mullet (*mullus barbatus)*, surmullet (*mullus surmuletus)*, Pagellus erythrinus, picarel *(Spicara smaris),* common octopus *(octopus vulgaris),* bogue *(Boops boops),* and many others. This segment spends on average 175 days-at-sea per year. Management regulations include seasonal (June 1-September 30) and spatial closures, as well as a minimum landing size. Energy cost is the main cost element (29% of total costs), followed by wages and salaries and variable costs as well as (21% and 19% share in total costs, respectively). Finally, it should be noted that this feet segment represents 8% of the total value of physical capital and 3% of total investments in 2017. This fleet segment has positive profitability.

Bottom trawlers 24-40m (DTS 24-40)

There are 141 vessels in this fleet segment with a total tonnage of 19 thousand and total power of 46 thousand KW. The average age of these vessels is low (25 years), which is an indication of increased welfare. They spend, on average 217 days-at-sea per year with a total value of landings of EUR 76 million. The total engaged crew are 871, representing around 4% of the jobs in the sector. The main expenses are energy cost (31%), wages and salaries (18%) and variable costs (19%). As far as the value of physical capital is concerned, it represents 24% of the total national value of physical capital while it represents 8% of the total national investment for 2017. Finally, it should be noted that, according to AGRERI (2019), this segment appears to have improved economic performance, mainly due to reduced energy costs. It has a high net profit margin, labour productivity and return on fixed tangible assets, which provide high profitability for this fleet segment. The landings contribution of this segment to the national economy is also significant, and the average wage per FTE is also very high.

Purse seiners

This segment includes 216 vessels operating predominately in areas Aegean (GSA 22) and Ionian GSA 20. Aegean has the 85% of the fishing effort and Ionian 15%. Purse seiners fishery is the main fishing method for small pelagic species, multispecies mainly European anchovy *(Engraulis encrasicolus)*, European pilchard or sardine *(Sardina pilchardus),* bogue *(Boops boops),* chub mackerel *(Scomber japonicus),* round sardinella *(Sardinella aurita)* and many others. The purse seiners conduct daily trips, and each vessel is responsible for fish searching, catching and transporting its own catches to port. Fishing operations are carried out exclusively during night hours with each vessel carrying around 8–10 persons. Each per seiner spends, on average, 157 days-at-sea per year. Management regulations currently in force for the purse seine fishery include mesh size regulations (14 mm), technical measures such as time closure (December– February), area closure and fishing prohibitions within specific distances from the coast (100 m).

Purse seiners 18-24m

This segment includes 118 vessels with a value of landings equal to EUR 62 million. Each vessel spends on average 160 days-at-sea per year. The segment employs a total of 1 113 engaged crew, and thus it contributes to the 5% of the national total. Variable costs and wages and salaries are the largest cost elements in this segment, together representing the 65% of the total cost. The economic performance improved this year, according to the AGRERI estimates, which allows for a positive and significant income to the fishers and high labour productivity.

Purse seiners 24-40m

The total number of vessels in this segment is 28. Unlike the previous segments, it is characterized by a low average age of the vessels (19 years). Each boat spends on average 199 days-at-sea per year. The total value of landings is equal to EUR 38 million. This segment employs 374 engaged crew (corresponds to 1.7% of the total engaged crew). The main costs of the vessels in this segment are the other variable costs (38% of total costs) and the wages and salaries of the crew (24% of total costs). Energy costs are also important contributing to the 13% of the total costs. The economic performance improved this year, which allows for positive and high profitability to the fishers.

Pots and Traps

This fleet is a small one. It includes totally 380 vessels, with the majority of them (319 vessels) to be categorized in the 6-12m length class. It offers 519 engaged crew representing 2.3% of the total engaged crew of the Greek fishing sector. Pots and Traps have multi-species characteristics but captures mainly common octopus *(octopus vulgaris),* common cuttlefish *(Sepia officinalis),* Norway lobster *(Nephrops norvegicus),* black seabream *(Spondyliosoma cantharus)* and picarel *(Spicara flexuosa)*. The main characteristics of this segment are the high average vessel age (more than 30 years); the main cost element is the imputed value of unpaid labour, which mainly represents the family contribution to the labour. In 2017, the segment faced stable economic results and low profitability.

Drivers affecting the economic performance trends

The main drivers affecting the economic performance of the Greek fishing sector involve the general economic environment, as well as specific sector characteristics. The cash flow shortage, the limited access to credit, the increasing social-security contributions and taxation together with the high value of

inputs creates unfavourable conditions for fishers and their activities. Low prices of the main target species are also linked to the low spending power of Greek households because of the financial crisis.

Furthermore, one of the main problems fisher's reports concerns the damages of the fishing gears, caused by protected species like dolphins, seals, sea turtles, and seabirds. These damages increase the repair and maintenance costs of the vessels and negatively affect their overall economic performance, keeping in mind that fishers do not receive any compensation for their losses.

Additionally, the reduction of fishing stocks in the Mediterranean Sea affects the economic performance of the Greek fishing sector. Pressure on stocks is increased due to the competition of the Greek fishing vessels with vessels from other countries that do not have to follow EU legislation and restrictions, like Turkey. There is also a variety of vessels operating in the same fishing areas, and this can lead to conflicts. In particular, there is a strong conflict between the small-scale and large-scale fleets that was highlighted by fishers as a major factor impacting on financial performance. Moreover, there is a conflict between professional and recreational fishers who usually fish in coastal areas and illegally sell their catch at low prices.

Markets and Trade (including fish price)

As far as the market structure is concerned, fishers reported that on average, 50% of their catch is channelled to wholesalers and fish auctions while 45% involves direct sales to consumers. Direct sales refer mainly to small-scale vessels. However, if only large-scale vessels are examined (bottom trawlers and purse seiners), fishers report that about 80% of the catch is channelled to wholesalers and fish auctions.

Operational costs (external factors)

In 2017, the overall economic performance of the Greek fleet seemed to be improved. This refers to a result of lower operating costs, particularly the continued low cost of fuel, the low wages and the reduced value for the variable and non-variable costs. Moreover, in 2017, the number of inactive vessels increased, so the remained vessels improved their economic performance.

As already discussed above, the main cost of the Greek fishing vessels is the energy cost. According to the data collected, energy cost decreased during 2017, as a result, mainly of the decreased fuel price. The fuel price has decreased even in the case of small-scale vessels. On the other hand, the wages and salaries of the crew, which is also an important cost element, have decreased compared to the previous years. This caused an increase in unpaid labour. The main concerns that fishers express are referred to the current reform of the social-security contribution, linking their contributions to their income.

Another external factor that affects the costs of the fishing activity is damages caused to fishing gear, especially nets, from mammals like dolphins, but also sea turtles, crabs, and sea birds. These damages are frequent and reported by the majority of fishers, although currently no compensation is received.

Innovation and Development

The Greek fleet consists mainly of small-scale, family-owned vessels that use traditional fishing gears. Furthermore, investments are limited due to the economic crisis, while the average age of the vessels is increasing. This environment leaves limited room for new and innovative techniques not only for small-scale fisheries but also for large vessels since the latter also faces high running costs. However, as mentioned above the Greek Operational Programme for 2014-2020 aims at the modernization of the fisheries sector and its sustainability particularly through supporting the use of more selective fishing gear as well as other on-board investments and equipment, the modernization of infrastructures and the improvement of fisheries monitoring and control.

In the context of the first phase of Greek Operational Program for 2014-20, 123 vessels have been approved for modernization through supporting investments that will ensure a higher level of on-board hygiene, safety and vessel energy efficiency. Also, 25 vessels will be funded in order to empower the added value and the quality of fish products but also to manage the discards rationally, through on-board eligible investments as refrigeration equipment, fish residues and discards processing equipment, establishment and implementation of quality management system etc.

At this point, we would like to refer that through the current Operational Program, 9 traditional fishing vessels were characterized as presumptions of national woodworking art, naval tradition and cultural heritage and are used as museum exhibits avoiding the demolition in the context of cessation of fishing activities measure.

Under the previous Operational Program, a 2-year pilot project (Plesionika Manage, http://plesionika-manage.eu/en/) was carried out in the Dodecanese archipelago of the south eastern Aegean Sea by the Hellenic Centre of Marine Research, aiming to develop an integrated and sustainable management system for the local SSCF specialized in the fishing of the narval shrimp (*Plesionika narval*). The SSCF fleet consists of 42 family-owned vessels and the narval shrimp is considered a significant source of income and activity for coastal communities, since accounts for 70% of their total catch which is sold directly to fishmongers and restaurants in the Dodecanese islands, and is characterized as a high-quality ingredient for the development of local gastronomy tourism.

The scientific results of the project were considered by relevant authorities and since May 2019 is implemented the revised legal framework concerning the narval shrimp fishery, aiming to provide a higher level of environmental and social sustainability ensuring the viability of coastal communities by promoting economic growth.

Furthermore, for successful management instruments and policies that can promote the sustainability and the development of the fisheries sector, the Greek Fisheries Institute, the Hellenic Centre for Marine Research and the Greek Agricultural Economics Research Institute are providing the necessary scientific knowledge.

Data issues

There have been significant data issues in producing this chapter. The implementation of the National Programme has faced some difficulties during the last years, which resulted in an interrupted time series on the economic data. The lack of data and time series has created many shortfalls in the presentation of the fleet economic performance. The figures for costs come from a survey based on probability sampling, and the response rate was limited for 2017 while the transversal variables were not collected for small-scale fishing segments because the National Program was lately initiated.

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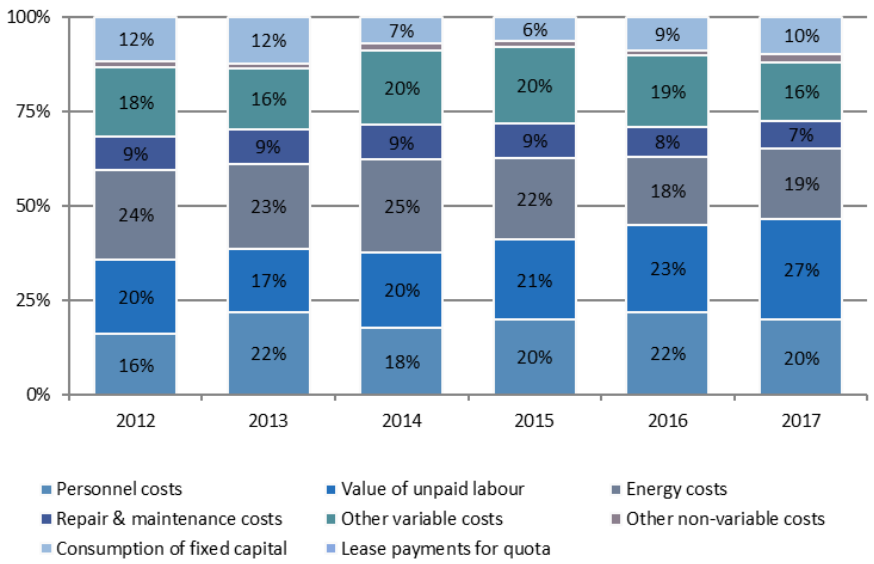

Figure 5.10 Greece: Cost structure
Data source: MS data submissions under the DCF 2019 Fleet Economic (MARE/A3/ASC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Table 5.28 Greece: National fleet statistics

variable_grou	variable_name	variable_code	2012	2013	2014	2015	2016	*2017*	Trend 2008-2018	Δ 2017 to 2016	Δ 2017 to avg. 08-16
Capacity	Number of vessels	totves	16.063	15.954	14.755	15.624	15.182	14.985		-1%	-7%
	Total vessel power	totkw	455.640	454.565	431.166	446.239	430.793	426.683		-1%	-8%
	Total vessel tonnage	totgt	76.211	75.566	72.843	74.699	71.751	71.085		-1%	-9%
Employment	Engaged crew	totjob	27.559	24.486	23.232	25.407	24.975	22.471		-10%	-11%
	Unpaid labour	unpaidemp						14.863			
	FTE national	totnatfte	23.945	22.546	20.780	23.431	23.040	20.542		-11%	-10%
	Total hours worked per year (eng	hrworked						41.428.109			
	Energy consumption	totenercons	115.096.554	113.673.414	107.319.701	107.015.700	104.897.542	93.157.875		-11%	-15%
Expenditure	Personnel costs	totcrewwage	70.941.485	102.809.078	66.539.475	77.354.959	91.262.969	71.809.413		-21%	-12%
	Value of unpaid labour	totunpaidlab	88.077.244	78.074.916	74.238.939	82.050.233	95.141.081	96.734.525		2%	16%
	Energy costs	totenercost	105.449.934	105.508.683	91.431.818	84.432.443	75.773.860	67.336.864		-11%	-27%
	Repair & maintenance costs	totrepcost	38.816.893	42.098.876	33.932.035	35.636.500	32.989.347	26.634.271		-19%	-27%
	Other variable costs	totvarcost	81.142.732	75.681.753	73.220.876	78.249.174	77.886.379	56.321.520		-28%	-27%
	Other non-variable costs	totnovarcost	7.493.314	6.580.841	7.061.010	6.482.234	6.475.608	7.528.850		16%	10%
	Consumption of fixed capital	totdepcost	51.744.538	57.221.654	26.549.628	24.206.436	36.276.016	35.813.222		-1%	-9%
	Lease/rental payments for quota	totrightscost	-	-	-	-	-	-			
Capital	Value of physical capital	totdeprep	218.595.911	236.609.179	112.717.078	99.787.479	151.592.609	157.448.956		4%	-4%
	Value of quota and other fishing	totrights	-	-	-	-	-	-			
	Investments	totinvest	29.208.245	23.514.163	25.853.360	27.767.435	25.713.491	27.217.390		6%	3%
	Total assets	assets						300.384.107			
	Long/short debt	debts						2			

Data source: MS data submissions under the DCF 2018 Fleet Economic (MARE/A3/AC(2018)); All monetary values have been adjusted for inflation; constant prices (2015).

Table 5.29 Greece: National fleet statistics by fishing activity

			SCF									
variable_grou	variable_name	variable_code	2012	2013	2014	2015	2016	*2017*	*2018*	Trend 2008-2018	Δ 2017 to 2016	Δ 2017 to avg. 08-16
Capacity	Number of vessels	totves	13.439	13.671	12.762	13.567	12.687	12.588	13.253		-1%	-5%
	Total vessel power	totkw	247.580	252.405	238.285	252.161	237.867	238.954	239.956		0%	-3%
	Total vessel tonnage	totgt	25.983	26.500	24.779	26.490	25.194	25.316	25.434		0%	-2%
Employment	Engaged crew	totjob	21.780	19.263	18.222	20.420	19.613	17.744			-10%	-11%
	Unpaid labour	unpaidemp						13.977				
	FTE national	totnatfte	19.396	17.440	15.782	18.490	17.799				-100%	-100%
	Total hours worked per year (eng	hrworked						30.181.227				
Expenditure	Personnel costs	totcrewwage	23.389.991	56.912.858	29.217.889	39.096.183	39.556.166	39.209.340			-1%	4%
	Value of unpaid labour	totunpaidlab	84.996.528	71.743.113	68.484.584	75.875.157	89.237.242	86.936.385			-3%	11%
	Energy costs	totenercost	54.776.633	57.592.224	51.990.841	49.009.374	45.336.010	36.321.035			-20%	-30%
	Repair & maintenance costs	totrepcost	24.969.573	28.999.172	22.148.050	23.808.484	18.653.614	17.174.943			-8%	-28%
	Other variable costs	totvarcost	33.050.568	31.064.915	30.059.961	31.660.887	24.751.737	18.891.728			-24%	-37%
	Other non-variable costs	totnovarcost	3.623.271	4.016.989	4.136.517	3.923.889	3.460.962	4.878.482			41%	27%
	Consumption of fixed capital	totdepcost	29.571.487	32.389.235	12.965.816	13.670.111	13.245.261	14.038.619			6%	-31%
	Lease/rental payments for quota	totrightscost	-	-	-	-	-	-				
Capital	Value of physical capital	totdeprep	232.767.769	252.711.142		103.652.937	100.111.348	106.247.879			6%	-38%
	Value of quota and other fishing	totrights	-	-		-	-	-				
	Investments	totinvest	23.542.227	18.412.864		21.254.460	16.123.663	19.468.492			21%	-2%
	Total assets	assets						152.401.003				
	Long/short debt	debts						370.767.827				
	Subsidies on investments	subinvest						1.246.533				

			LSF									
variable_grou	variable_name	variable_code	2012	2013	2014	2015	2016	*2017*	*2018*	Trend 2008-2018	Δ 2017 to 2016	Δ 2017 to avg. 08-16
Capacity	Number of vessels	totves	1.093	1.081	838	847	960	849	1.008		-12%	-12%
	Total vessel power	totkw	175.631	175.973	158.491	158.988	156.369	145.654	158.390		-7%	-12%
	Total vessel tonnage	totgt	46.501	45.996	44.127	44.164	42.176	39.419	41.661		-7%	-12%
Employment	Engaged crew	totjob	5.778	5.223	5.010	4.987	5.362	4.727			-12%	-10%
	Unpaid labour	unpaidemp						1.031				
	FTE national	totnatfte	4.548	5.106	4.998	4.942	5.242				-100%	-100%
	Total hours worked per year (eng	hrworked						11.851.222				
Expenditure	Personnel costs	totcrewwage	47.551.494	45.896.220	37.321.586	38.258.777	51.706.803	32.600.073			-37%	-26%
	Value of unpaid labour	totunpaidlab	3.080.715	6.331.803	5.754.355	6.175.076	5.903.839	9.798.141			66%	80%
	Energy costs	totenercost	50.673.301	47.916.460	39.440.977	35.423.069	30.437.850	31.015.829			2%	-24%
	Repair & maintenance costs	totrepcost	13.847.321	13.099.704	11.783.985	11.828.015	14.335.733	9.459.328			-34%	-27%
	Other variable costs	totvarcost	48.092.163	44.616.838	43.160.914	46.588.287	53.134.642	37.429.793			-30%	-21%
	Other non-variable costs	totnovarcost	3.870.044	2.563.851	2.924.493	2.558.345	3.014.646	2.650.368			-12%	-11%
	Consumption of fixed capital	totdepcost	22.173.051	24.832.419	13.583.811	10.536.324	23.030.755	22.579.333			-2%	20%
	Lease/rental payments for quota	totrightscost	-	-	-	-	-	-				
Capital	Value of physical capital	totdeprep	174.681.987	193.952.800		80.713.778	182.790.966	179.306.244			-2%	13%
	Value of quota and other fishing	totrights	-	-		-	-	-				
	Investments	totinvest	5.666.018	5.101.299		6.512.975	9.589.828	7.748.898			-19%	15%
	Total assets	assets						153.147.121				
	Long/short debt	debts						255.280.691				
	Subsidies on investments	subinvest						965.658				

5.11 Ireland

Short description of the national fleet

Fleet capacity

The capacity of the national fleet remains relatively stable albeit with small temporal fluctuations. In 2018, there were 2 045 registered vessels (excluding those registered in the *aquaculture* segment), with a total capacity of 62 thousand Gross Tonnes (GT) and 186 thousand kilowatts (kW). The estimated total number of inactive vessels in 2017 was 638. While inactivity for vessels over 10 metres LOA is known from logbook data, inactivity in the less than 10 metres LOA fleet has been estimated using data from equivalent (gear, target species *etc*.) fleets in the 10-12 metre segment and information from sales notes.

Fleet structure

National segmentation of the Irish fishing fleet does not match DCF segmentation in every case. For example, the polyvalent segment (see below) includes a variety of vessel lengths and fishing techniques. Nationally the fishing fleet is divided into five segments:

1. Refrigerated Seawater (RSW) Pelagic Segment: This segment is engaged predominantly in fishing for pelagic species (herring, mackerel, horse mackerel, blue whiting, and boarfish).
2. Beam Trawler Segment: This contains vessels, dedicated to beam trawling, a simple trawling method used predominantly in Irish inshore waters except in the southeast, where it is used to catch flatfish such as sole and plaice.
3. Polyvalent Segment: This segment contains the vast majority of the fleet. These vessels are multi-purpose and include small inshore vessels (netters and potters), along with medium and large offshore vessels targeting whitefish, pelagic fish and bivalve molluscs.
4. Specific Segment: This segment contains vessels which are permitted to fish for bivalve molluscs and aquaculture species.

Aquaculture Segment: These vessels must be exclusively used in the management, development, and servicing of aquaculture areas. They may collect spat from wild mussel stocks as part of a service to aquaculture installations. The aquaculture segment is excluded from analysis in this report.

Employment

Fleet employment in 2017 was estimated at 3 062 jobs with a further 321 unpaid jobs. This corresponds to 2608 FTEs with an average of 3.3 and 1.07 FTE per vessel for the large and small-scale coastal fleets, respectively (excluding inactive vessels). Employment in the Irish fishing industry is particularly important to coastal communities.

Average crew wage for the entire fleet has dropped slightly to around EUR 30 thousand per total jobs but has increased to EUR 35 thousand for FTE. Average wage is correlated with the number of active vessels, which were estimated to be lower in 2017 than 2016, thus driving up the average wage.

Effort

The Irish fishing fleet operates primarily in the North Atlantic, Celtic and Irish Seas. In 2017, the national fleet spent 79 thousand days-at-sea of which 67.8 thousand (84%) were fishing days. The increase in DAS and fishing days was 4% and 0.01% receptively from 2016 to 2017. Provisional figures for 2018 show a decrease in days-at-sea (75 thousand) and fishing days (63 thousand).

Note: Prior to 2015 *effort* was estimated using only data for the over 10 metre segments. Since then effort estimates for vessels less than 10 metres include data estimates for gear segments FPO and DRB only. The lack of logbook data for vessels under 10 metres has meant that the reporting of transversal, landings, activity and true economic performance of this segment (which makes up a large proportion of the Irish fleet) is based solely on results from the sentinel vessel survey and sales notes data.

Production

Production remained stable in 2017 with landings up 6 % from 239.35 thousand tonnes (valued at EUR 265 million) to 252 thousand tonnes (valued at EUR 272 million) in 2017. Provisional figures for 2018 indicate that total landings are 220 thousand tonnes with an associated value of EUR 277 million.

Adjusting for price errors in the landings data and including improved estimates for income for the less than 10m segments, landing income for 2017 is estimated as EUR 310 million.

Production trends are highly influenced by quota changes for pelagic species, particularly mackerel. Indeed, many of the historical fluctuations in the value and weight of landings have been driven by mackerel, landings of which rose by 11% between 2016 and 2017. The mackerel TAC for Ireland experienced an increase from 2016 to 2017 from 76.7 thousand tonnes to 86.5 thousand tonnes. This increase is reflected in the associated value of landings. Total landings in 2017 amount to 86 thousand tonnes which is valued at EUR 58.2 million.

Nephrops remains the other top landed species by value in 2017 valued at EUR 54 million with associated landings of 8 thousand tonnes. In 2017 Mackerel and *Nephrops* accounted for 21% and 20% of Irelands total value of landings.

Data for 2018 indicate that landing were 220.3 thousand tonnes (values at EUR 279 million). *Nephrops* and mackerel remained the highest valued landings accounting for 20% and 17% of landed value respectively.

Economic results for 2017 and recent trends

National fleet performance

In 2017, the Irish fleet recorded a gross profit of EUR 64 million and net profit of EUR 34 million. While this is a decrease from 2016 the net profit continues its positive trend from 2016. Fleet revenue, estimated to be EUR 310 million in 2017an increase of 1% from 2016 (EUR 305 million). Fleet revenue increased for both the Small-scale and Large-scale fisheries by 2.5% and 1% with values of EUR 40 and EUR 262 million respectively.

It should be noted that these figures are strongly influenced by the larger pelagic vessels in particular the value assigned to its cost structure and capital values along with fish prices which can greatly affect their total landings income due to the large volumes of catches.

Fleet cost has remained relatively stable however from 2016 to 2017 costs rose by approximately EUR 12 million, with increases to labour, energy and other variable costs while decreases can be seen in repair costs and other non-variable costs. Operating costs for 2017, excluding capital cost, were totalled EUR 246 million. Including capital costs, operational costs were estimated at EUR 274 million resulting in a Gross Profit and Net Profit of EUR 64 and EUR 34 million respectively for 2017.

Gross Value Added (GVA), gross profit, and net profit in 2017 were estimated at EUR 163 million, EUR 64 million and EUR 34 million, which is a decreasing of 1%, 9% and 5% respectively from 2017.

Resource productivity and efficiency indicators

The fleet average Gross Profit margin in 2017 was 21% which is a decreased from 23% in 2016. This indicates that the industry has seen increased challenge in turning inputs into outputs. The Net profit margin was estimated at 11%, a decrease of 1% from 2016. The Rate of Return on Fixed Tangible Assets (RoFTA) in 2017 was 8.9% an increase of 1% from 2016.

In 2017, fuel consumption was estimated to be 377 litres per tonne landed; the corresponding figure for 2016 was 409. While fuel consumption has remained relatively stable from 2012 to 2014 there has been a steady increase in fuel consumption each year since then. Fuel consumption *per tonne landed* had followed an overall decreasing trend from 2008 when fuel prices reached an historic high. This may, in part, be indirectly due to low fuel prices and their influence on fishers' behaviour: for example, when fuel prices are low fishers are more likely to incur increased time steaming to and from fishing grounds and/or time spent searching for fish or fishing.

2017 marked a decrease in energy consumption of 3% from 2016 to 2017, with the cost associated with this being 0.42 (litre/EUR) an increase of 8 cent, in comparison to the continued decrease that has been seen since 2014.

Total average fleet landings (tonnes) per unit of effort (Days-at-sea) have fluctuated since 2008. In 2017 the fleet's Landing Per Unit Effort (LPUE) averaged 3.1 tonnes/day. This average fleet figure may mask performance in specific segments. For example, the very large pelagic vessels (TM VL40XX) had an LPUE of 97 tonnes/day in 2017, while the demersal 24-40m segment recorded a value of 2.5 tonnes/day. Other pelagic sectors also present higher LPUE values with TM2440 and TM1824 having values of 22 tonnes/day and 18 tonnes/day respectively.

Performance by fishing activity

Small-scale coastal fleet

There were 783 active vessels registered in the small-scale coastal fleet in 2017 (vessels under 12 metres using passive gears). The number of vessels in the small-scale coastal fleet decreased 14%, on average, between 2016 and 2017. This figure rose again in 2018 to 804.

There are several vessels using active gears below 12 meters that are not included in the definition of small-scale coastal fleet. This results in discrepancies between the data presented in this report and how the fleet would be examined at a national level which examines all vessel under 12m irrespective of gear being active or passive.

Data for the under 10m fleet are sparse and in some cases impact on the estimates of economic indicators for the SSCF. This fleet recorded a GVA of EUR 24 million, gross profit of around EUR 11.3 million and net profit of EUR 10.8 million in 2017 demonstrating a decrease of 1%, 9 and 5%. This indicates reasonable profitability for 2017 with an improved economic development trend evident also in the GVA and Gross profit. This continues the improved trends experienced for this segment for the last three years.

While the SSCF makes up nearly 12% of the total revenue of the Irish fleet its importance to local coastal communities should not be understated. The SSCF offers employment in, often deprived areas, and brings much needed money into the local community and their hinterlands. The SSCF employs 1 097 fishers corresponding to 844 FTEs. Employment figures may be higher. Total employment is based, in part, on the total number of active vessels in the SSCF. As activity for the less than 10m is estimated from national expert knowledge and Sales Notes data, the figures presented for employment have a certain amount of uncertainty as these are calculated using this estimated activity level.

Performance results of selected fleet segments

Ireland's national fishing fleet is highly diversified with a broad range of vessel types targeting different species or species groups often in mixed fisheries. The fleet operates from as far north as Norway and Iceland, south to the coast of Africa, but carries out the bulk of its operations in ICES areas VI and VII.

In 2017, the national fleet consisted of 22 (DCF) fleet segments, In 2017 there were 13 segments (both clustered and un-clustered) that had sufficient data to calculate profitability. Of these eleven, 5 demonstrated high, 1 reasonable and 7 weak profitability.

The fleet is dominated by the (nationally defined) polyvalent segment, a diverse group that includes small inshore vessels (netters and potters), along with medium and large offshore vessels targeting *Nephrops,* mixed whitefish, some pelagic species (including mackerel, herring and tuna) as well as a range of vessels, from small to large-scale, targeting bivalve molluscs and crustaceans.

The Refrigerated Seawater (RSW) pelagic segment exclusively targets pelagic species (mackerel, horse mackerel, herring, blue whiting and boarfish) and equated to the TM VL40XX DCF segmentation.

Pelagic Trawl over 40m

Pelagic Trawlers over 40 metres (TM VL40XX) are part of the, nationally defined, Refrigerated Sea Water (RSW) segment. Currently there are 20 vessels classified as TM VL40XX and these are generally considered to be amongst the best performing components of the national fleet. These vessels land large quantities of pelagic fish (Atlantic mackerel, horse mackerel, herring, blue whiting, albacore tuna and boarfish) and operate mainly in ICEA areas VIa and VIIb,c,j,k. Mackerel, Horse mackerel, and blue whiting constitute 63%, 16% and 13% respectively of total value of landings.

The majority of the fleet operates out of Killybegs, county Donegal and Castletownbere, county Cork; both areas strongly dependent on the fishing sector. For example, total turnover for Killybegs and its hinterland in 2009 was estimated at EUR 250 million with the fishing sector accounting for 82% of the total. In the past, declines in the local economy have reflected declines in the fisheries sector.

- In 2017 landings (all species) by pelagic trawlers over 40m amounted to 142 thousand tonnes (live weight), valued at EUR 64 million.
- In 2014 Ireland's quota of mackerel reached an historic high of 105 thousand tonnes. In subsequent years this figure fell to 89 thousand tonnes (2015), 75.8 thousand tonnes (2016), 86.4 thousand tonnes (2017) and 69 thousand tonnes (2018). This decline explains the fall in total landing income from 2014.

- On-board employment comprised 186 fulltime equivalents (FTE) or almost 7% of total fleet employment nationally.
- Gross Value Added by the segment in 2017 was EUR 39 million generating a Gross Profit of EUR 14 million and a reported Net Profit of EUR 1.4 million.
- Total Revenue for this segment was EUR 66 million accounting for 21% of the total revenue of the fleet.
- The fleet has shown an improved economic development trend since 2006.

Ireland's pelagic fleet operates seasonally, reflecting both the annual distribution patterns of the target species as well as quota limitations.

The mackerel TAC increased to 86 thousand tonnes in 2017 valued at EUR 55 million. However, in 2018 a decrease in mackerel TAC to 69 thousand tonnes valued at EUR 46 million. This accounts for 21% of the total EU TAC.

Demersal Trawl 12m-18m

Demersal trawlers are found in one, nationally defined, segment: the polyvalent general segment. This is in contrast with previous years where 2 vessels from the specific segment were included in this definition. Currently there are 39 polyvalent vessels classified as Demersal Trawlers 12-18m. They target a wide variety of species including Norway lobster, anglerfish and whiting.

In 2017, the total value of landings by demersal trawlers (12-18 meters) was EUR 9.9 million and around 128 FTEs were employed, contributing 4% and 5% of the total income from landings and total FTE generated by the Irish fishing fleet, respectively. The value of landings predominantly comes from *Nephrops* and anglerfish which constitute 34% and 10% of total value landings respectively, which has dropped from 40% and 11% for *Nephrops* and anglerfish respectively from 2016. This fleet segment recorded a gross profit of EUR 3.3 million and a net profit of EUR 2.4 million in 2017. This indicates high profitability for 2017.

Demersal Trawl 18m-24m

Currently there are 67 polyvalent segment vessels classified as Demersal Trawlers 18-24 meters. They also target a wide variety of species including Norway lobster, anglerfish and whiting, accounting for 51%, 10% and 5% of the total catch for this segment.

In 2017, the total value of landings by demersal trawlers, 18-24 meters, was EUR 56.7 million. Employment for this segment amounted to 399 FTEs contributing 22% and 15% of the total income from landings and FTE and generated by the Irish fishing fleet, respectively. The value of landings comes predominantly from *Nephrops*, anglerfish and whiting which constitute 51%, 10% and 5% of total landings value respectively.

This fleet segment recorded a gross profit of around EUR 8.6 million and net profit of EUR 2.2 million in 2017 with an improved economic development trend.

Demersal Trawl 24m-40m

Currently there are 46 polyvalent vessels classified as Demersal Trawlers 24-40 meters. They likewise target a wide variety of species including Norway lobster, anglerfish, mackerel and whiting.

In 2017, the total value of landings was almost EUR 55 million with 310 FTEs employed, contributing 20% and 12% of the total income from landings and FTEs generated by the Irish fishing fleet, respectively. The value of landings predominantly comes from *Nephrops*, anglerfish and whiting which constitute 42%, 9% and 6% of total landings value respective.

This fleet segment generated a gross profit of EUR 13 million and net profit of EUR 10 million in 2017. This indicates reasonable profitability for 2017 with an improving economic trend. This continues the improved trends experienced for this segment for the last four years.

Drivers affecting the economic performance trends

Lower fuel costs, higher average fish prices for some species, and the impact of capacity/effort reduction were the main driving forces behind an overall improvement in the economic performance of the Irish fleet.

Markets and Trade (including fish price)

During 2017 average prices remained relatively unchanged for many species. There were some notable exceptions and *Nephrops* (20% of total value of landings) rose from EUR 6.5/kg in 2016 to EUR 6.9/kg in 2017.

Prices for pelagic species have a dramatic effect on the total income given the scale of the pelagic TAC . The average prices indicated from the national authority (SFPA) responsible for landings declarations indicate that the average prices of Atlantic mackerel (21% of total value of landings) was maintained at EUR 0.6/kg between 2015 and 2016 and rose to EUR 0.7/kg in 2017.

Management instruments and regulation (policy)

Fleet management tools include the sea-fishing boats licensing regime, gear, effort and vessel specific restrictions, as well as three separate decommissioning schemes completed between 2005 and 2008. Fishery management policy is developed through a transparent system that includes a quota management regime agreed with the Producer Organisations and other key stakeholders. Monthly allocation arrangements are designed to be responsive to criteria such as stock availability, remaining quota, market demand and other marketing initiatives.

The strengths of the fleet management system include a strict entry/exit regime that ensures the fleet remains within its prescribed reference levels. It also delivers a practical segmentation of the fleet along traditional fishing line and ensures that monthly vessel catch limits are respected.

The Landing Obligation

Ireland maintains an active research capacity in the area of fishing gear technology and a variety of studies examining ways to avoid unwanted catches have been undertaken (all funded through the European Maritime and Fisheries Fund or the earlier European Fisheries Fund) in an effort to mitigate against negative impacts of the landing obligation.

These include gear modifications as well as factors designed to induce spatial and temporal changes to fish behaviour. With a value of €54.9 million in 2017, *Nephrops* is the most commercially important species landed by vessels. In 2018, unwanted catches of very small whiting (less than 20 cm in length) posed a major challenge under the landing obligation for vessels operating in the Irish Sea.

Vessels targeting mixed demersal fish species also face major challenges under the landing obligation due to low quotas of some species specifically cod and flatfish species.

In 2018 BIM (The Irish Seafood Development agency) issued a guide advise to produced technical solutions which improve fisheries sustainability and help vessels address requirements of the EU landing obligation requirements. The guide consists of a collection of one-page summaries or snapshots of successful studies conducted by BIM and the Irish fishing Industry over the last four years and provides key information on reducing unwanted catches in commercially important Nephrops and mixed demersal fisheries. Many of the summaries were originally produced in collaboration with the EU DiscardLess project but have been fine tuned to hone in on key issues affecting the Irish Fishing Industry. The guide is available at: http://tinyurl.com/Technical-Solutions-Fish

The only fisheries within the economic data set that were subject to the landing obligation in 2016 were the pelagic fisheries and some demersal fisheries. Indicators from this dataset do not show any socioeconomic impacts that can be directly attributed to the landing obligation. Economic data collected under the DCF for 2017 was analysed and indicators from this dataset do not show any socioeconomic impacts that can be directly attributed to the landing obligation. The economic indicators for the Irish fishing fleet show it to be relatively stable with most fleet segments recording both positive gross and net profit.

Status of some key Stocks

Ireland's total share of TAC's in 2018 amounted to 215,511 tonnes. Ireland share comprised of 86% of the Celtic Sea herring TAC; 69% of the boarfish; 37% of Nephrops in Area 7; 26% of horse mackerel and 21% of mackerel. For other stocks it has a much lower share of the TAC; 8% of anglerfish in Area 7; 25% of Celtic Sea cod and 6% of northern hake.

The Marine Institute's 2018 stock book advises on 74 stocks. There is a higher number of sustainably fished stocks (32) and percentage (43%) in 2018 compared with 2017 fish stocks (29) and percentage (39%). The number of stocks (16) overfished has decreased in 2018 and the number of stocks with unknown status also decreased from 28 to 26.

Social aspects

The Irish fishing industry is primarily based in rural, often deprived, coastal areas. As such, income from fishing, aquaculture, and the wider seafood sector is extremely important to these local economies. As noted earlier, previous studies have shown that in the case of Killybegs, 82% of all turnover in the area is directly attributable to fisheries while in Castletownbere the fish catching and processing sectors account for over half (54%) of the town's economic activity. With the inclusion of aquaculture and ancillary sectors this rises to 86%. In every case the induced spend by employees of these sectors make a substantial contribution to the local service and retail sectors.

The lack of reliable data from the small-scale coastal fleet (SSCF) remains problematic, particularly for vessels less than 10 metres. While this report attempts to estimate the true value of the sector to local economies, there is an ongoing concern that this remains, at best, underestimated. Landed value (from sales notes data), whilst included in the analysis, are subject to underreporting, while estimates from survey returns are potentially subject to bias given the large number of small boats in the sector and the number of completed/returned survey forms. However, Ireland is seeing an increase in survey returns from the SSCF resulting in a positive effect on the estimations for their associated variables.

Nowcasts for 2018-19 and outlook

It is important to note that the preliminary effort data for the less than 10 metre fleets were not complete with only partial effort data available for some under 10 metre segments, (FPO and DRB). As such, the results provided should be used with caution.

Model Forecast

Data for 2018 demonstrate a relatively stable picture with some minor fluctuations in overall income and costs. Live weight of landings decreased from 2017 to 2018 and this downward trend is predicted to continue into 2019. However, value of landings for 2018 presented a 2% increase from 2017.

The slight increase in landing value offset the increased projected costs for crew wage (5%) and energy costs (18%) and predicts that the 2018 GVA and net profit will increase by 3% and 3.2%, respectively; estimating net profit in 2018 to be about EUR 35 million.

Forecasts for 2019 suggest a slightly lower economic performance compared to 2018 driven by decreases in landing values.

Data issues

Values and figures may differ somewhat from those in previous annual economic reports as additional survey returns, received after last year's AER meeting, have improved the precisions of many of the variables and indicators.

The effort data in the tables and graphs is not complete for some less than 10m segments. Specifically, from 2015, effort is only reported for less than 10m for the segments DRB and FPO. To report effort for these segments several assumptions had to be made mainly that a sale event for a vessel represents a day of fishing.

The operational division of the fleet into 'small-scale' and 'large-scale' fisheries is not a satisfactory aggregation for the Irish Fleet. The exclusion of active gears from the small-scale fishery definition means that many segments for which there is data, for <10m vessels, are eschewed from this fishing activity and added to the large-scale fishery instead. Therefore, the definition of SSCF defined in this report excludes a large part of the Irish fleet in vessel numbers (around 250) as they are below 12m in length and use active gears and thereby excludes important economic data for the small-scale fishery which instead are added to the large-scale fishery

Table 5.30 Ireland: National fleet statistics and economic performance results. Nowcast figures for 2018 and 2019

		2008	2009	2010	2011	2012	2013	2014	2015	2016	*2017*	*2018*	2019	Trend 2008-2018	Δ 2017 to 2016	Δ 2017 to avg. 08-16
Capacity	Number of vessels	1,939	1,977	2,038	2,074	2,106	2,140	2,095	2,048	2,044	1,954	2,045	2,058		-4%	-5%
	Total vessel power	205,238	185,970	184,134	189,213	184,244	183,870	181,577	179,230	182,834	181,030	186,940			-1%	-3%
	Total vessel tonnage	73,775	66,861	65,951	67,226	60,267	60,255	59,502	58,886	59,911	61,322	62,294			2%	-4%
Employment	Engaged crew	4,485	4,889	4,423	3,243	3,121	3,087	3,154	3,451	3,461	3,062	3,049	3,033		-12%	-17%
	Unpaid labour										321					
	FTE national	3,404	3,692	3,479	2,688	2,709	2,717	2,395	2,522	2,672	2,608	2,466	2,390		-2%	-11%
	Total hours worked per year (engaged crew)										6,767,361					
Effort	Days at sea	48,782	48,548	52,908	48,766	53,619	53,607	54,379	72,623	77,241	79,994	75,343	74,253		4%	41%
	Fishing days	39,986	39,963	44,001	40,635	43,309	42,797	43,504	62,017	67,737	67,809	63,505			0%	44%
	kW fishing days	12,562,941	11,502,957	12,817,271	11,646,735	12,297,931	12,777,156	13,050,344	14,714,644	14,498,278	15,681,531	15,137,392			8%	22%
	GT fishing days	4,968,591	4,694,336	5,148,521	4,480,548	4,759,816	4,984,964	5,038,670	4,991,520	5,258,274	5,677,376	5,538,078			8%	15%
	Number of fishing trips	17,920	18,889	20,418	19,186	21,231	20,236	20,076	39,158	23,414	43,630	40,086			86%	96%
	Energy consumption	70,204,881	86,421,253	82,592,048	61,980,043	66,031,378	68,753,814	67,698,537	82,335,813	97,901,935	95,345,049	91,647,561	86,544,241		-3%	25%
Landings	Live weight of landings	195,547,795	250,467,623	274,340,523	199,403,716	262,176,238	244,202,607	276,389,967	240,942,482	239,347,184	252,708,087	220,343,078	204,208,750		6%	4%
	Value of landings	223,871,762	167,677,522	172,193,246	209,460,739	243,218,365	258,938,464	293,149,107	237,444,953	265,550,864	271,829,070	277,265,847	237,248,822		2%	18%
Income	Gross value of landings	229,405,948	177,265,794	190,525,338	235,269,897	269,062,737	276,547,882	311,930,773	244,965,101	303,666,675	301,362,074	311,123,043	270,468,973		-1%	21%
	Other income	16,199,811	4,761,848	3,422,528	4,471,342	6,172,588	3,408,257	8,651,706	3,926,759	2,072,398	8,876,630	8,660,677	8,644,638		328%	50%
	Operating subsidies	22,112,473	17,357,582	1,023,130	641,446	309,469	539,103	936,472	697,566	409,961	369,788				-10%	-92%
	Income from leasing out quota	-	-	-	-	-	-	-	-	-	-					
Expenditure	Personnel costs	39,702,502	45,998,619	56,396,650	61,369,380	91,465,184	63,696,386	80,285,813	76,466,934	88,509,172	93,180,962	97,834,893	86,056,942		5%	39%
	Value of unpaid labour	-	150,533	824,577	1,900,112	1,025,392	1,714,956	1,390,173	4,134,040	5,128,545	5,903,852	6,395,752	5,891,821		15%	227%
	Energy costs	39,335,901	36,377,044	45,002,078	47,407,733	49,867,447	50,272,347	49,352,234	41,991,265	33,373,965	40,738,339	48,256,823	44,453,707		22%	-7%
	Repair & maintenance costs	17,355,839	27,125,947	28,663,557	27,794,856	30,417,221	31,364,730	36,049,470	31,870,333	43,583,793	42,886,915	43,011,361	42,903,697		-2%	41%
	Other variable costs	16,977,587	17,750,403	20,227,656	23,410,342	22,952,410	36,446,118	42,194,881	38,892,582	34,631,263	39,932,954	37,167,884	34,844,078		15%	42%
	Other non-variable costs	38,995,399	31,112,908	32,354,474	36,001,393	29,258,106	27,087,892	24,857,163	21,346,270	29,614,887	23,395,315	23,136,605	23,166,647		-21%	-22%
	Consumption of fixed capital	33,024,284	31,658,872	25,204,914	25,804,726	28,032,197	20,552,592	26,365,543	33,853,304	30,223,094	28,094,577	27,817,887	27,757,767		-7%	-1%
	Lease/rental payments for quota	-	-	-	-	-	-	-	-	-						
Capital	Value of physical capital	523,222,950	585,817,487	615,253,627	615,994,213	513,682,719	456,732,769	517,308,536	466,045,893	517,701,105	407,471,666	403,399,002	403,374,917		-21%	-24%
	Value of quota and other fishing rig	-	-	-	-	-	-	-	-	-	-					
	Investments	26,027,776	8,370,565	38,288,009	10,394,285	66,039,589	18,028,468	17,587,430	141,820,479	76,211,597	18,645,905				-76%	-58%
	Total assets										152,270,306					
	Long/short debt										111,813,258					
	Subsidies on investments										1,574,735					
Indicator	Opportunity cost of capital	7,257,118	41,299,239	45,893,919	51,129,954	21,525,272	14,951,749	10,676,258	5,499,342	4,876,143	2,031,265	1,001,487	- 968,499		-58%	-91%
	Gross Value Added	132,941,033	69,661,340	67,700,100	105,126,915	142,740,142	134,785,051	168,128,731	114,791,410	164,535,166	163,285,180	168,211,047	133,745,482		-1%	34%
	Net Value Added	92,659,632	- 3,296,770	- 3,398,733	28,192,235	93,182,673	99,280,710	131,086,930	75,438,764	129,435,929	133,159,339	139,391,673	106,956,214		3%	87%
	Gross profit	93,238,531	23,512,188	10,478,873	41,857,424	50,249,566	69,373,709	86,452,745	34,190,436	70,897,449	64,200,367	63,980,402	41,796,719		-9%	20%
	Net profit	52,957,130	- 49,445,922	- 60,619,960	- 35,077,256	692,096	33,869,368	49,410,944	- 5,162,210	35,798,212	34,074,526	35,161,028	15,007,450		-5%	1268%
	Net profit subsidised	75,069,602	- 32,088,340	- 59,596,830	- 34,435,811	1,001,565	34,408,471	50,347,416	- 4,464,644	36,208,173	34,444,314	35,161,028			-5%	367%
	Net profit rights	75,069,602	- 32,088,340	- 59,596,830	- 34,435,811	1,001,565	34,408,471	50,347,416	- 4,464,644	36,208,173	34,444,314	35,161,028			-5%	367%

Data source: MS data submissions under the DCF 2019 Fleet Economic (MARE/A3/ASC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

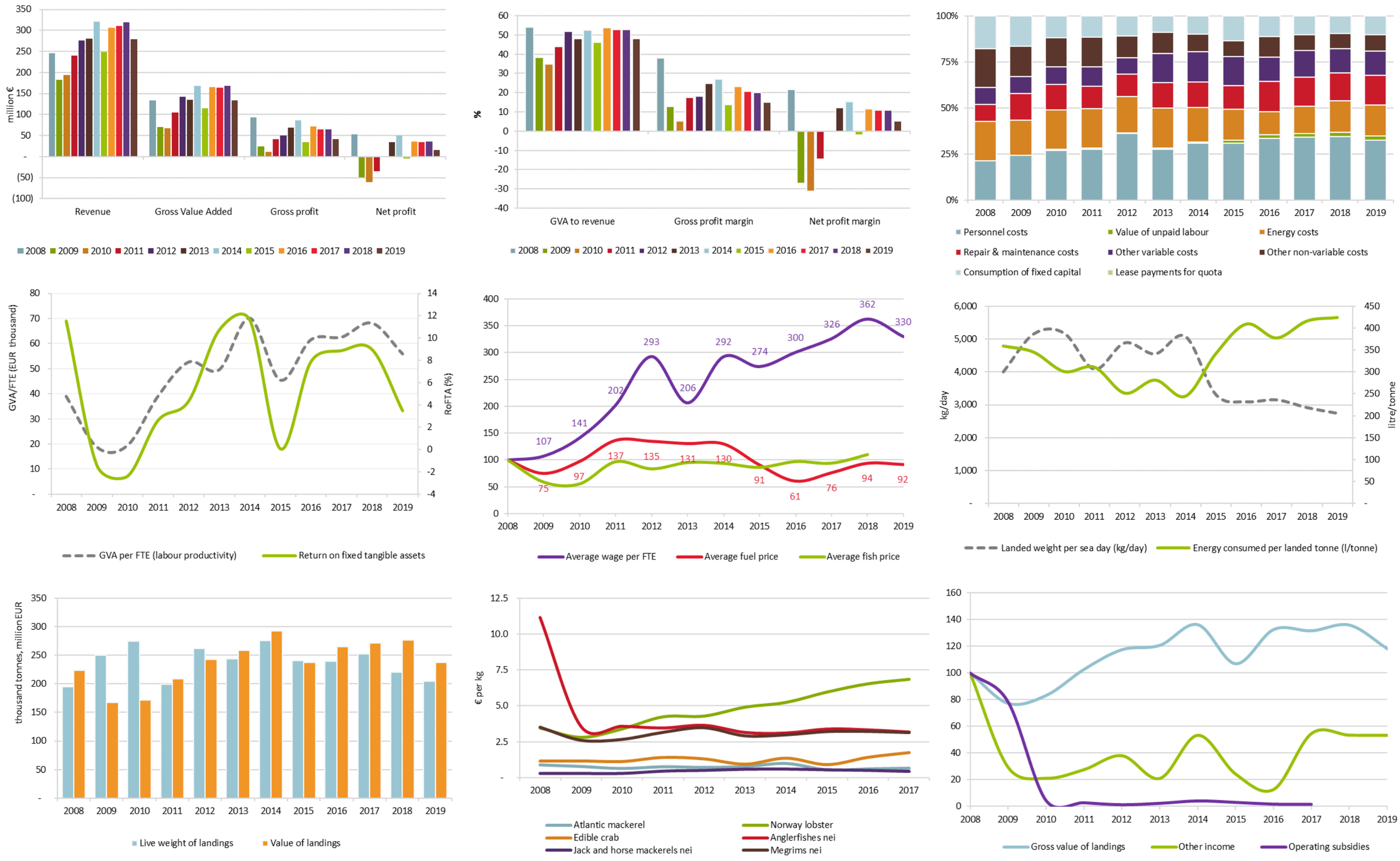

Figure 5.11 Ireland: Main trends in economic performance indicators (absolute value, panel 1a/top left and relative value, (panel 1b/top middle); cost structure (panel 1c, top right); productivity (panel 2a); key input/outputs (panel 2b); efficiency (panel 2c); landings (panel 3a); average price (EUR /kg) of top species (panel 3b) and income (panel 3c). Nowcast figures for 2018 and 2019

Data source: MS data submissions under the DCF 2019 Fleet Economic (MARE/A3/ASC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Table 5.31 Ireland: National fleet statistics and economic performance results by fleet segment, 2017

	Number of vessels	FTE national	Days at sea	Energy consumed per landed tonne	Live weight of landings	Value of landings	Revenue	Gross Value Added	GVA to revenue	Gross profit	Gross profit margin	Net profit	Net profit margin	Average wage per FTE	GVA per FTE (labour productivity)	Return on fixed tangible assets	Profitability (2017)	Net profit margin %Δ 2017 - average (2008-16)	Economic development trend	As a % of total revenue
IRL NAO TM 40XX	20	186	1,457	97	142,643,825	64,748,721	66,659,315	39,057,621	58.6	13,937,648	20.91	1,401,757	2.10	134,872	209,705	1.1	Weak	107%	Improved	21%
IRL NAO DTS2440	46	310	10,735	1,019	20,863,776	55,493,965	58,190,086	26,948,821	46.3	13,059,276	22.44	10,074,568	17.31	44,758	86,841	28.4	Reasonable	274%	Improved	19%
IRL NAO DTS1824	67	399	14,779	1,107	20,641,367	56,780,349	57,233,569	27,375,070	47.8	8,631,741	15.08	2,234,781	3.90	46,958	68,583	7.0	Weak	232%	Improved	18%
IRL NAO FPO0010	543	530	19,917	856	4,239,323	9,393,697	23,313,774	13,843,364	59.4	7,266,972	31.17			12,398	26,099					8%
IRL NAO TM 2440	12	81	1,458	132	33,115,205	19,794,151	22,570,779	10,803,439	47.9	5,904,474	26.16	809,158	3.59	60,516	133,452	1.8	Weak	113%	Improved	7%
IRL NAO DRB0010	156	152	1,482	2,026	963,057	3,550,582	14,336,571	9,800,649	68.4	7,124,847	49.70			17,567	64,344					5%
IRL NAO DTS1218	39	128	5,541	733	4,136,225	9,964,395	10,073,486	5,682,583	56.4	3,287,937	32.64	2,440,371	24.23	18,674	44,315	19.2	High	101%	Improved	3%
IRL NAO FPO1218 *	25	92	2,992	341	4,405,852	8,927,008	8,960,219	6,984,851	78.0	4,779,166	53.34	4,486,693	50.07	24,031	76,099	149.5	High	68%	Improved	3%
IRL NAO FPO1012	78	144	7,088	664	4,465,414	8,098,699	8,487,912	4,341,580	51.2	- 24,732	- 0.29	- 512,430	- 6.04	30,319	30,147	- 10.6	Weak	-206%	Deteriorated	3%
IRL NAO TBB2440 *	14	85	3,043	3,774	2,730,824	7,120,542	7,120,542	98,377	1.4	- 5,265,811	- 73.95	- 5,675,527	- 79.71	63,306	1,161	- 2,259.0	Weak			2%
IRL NAO DTS0010	50	49		872	1,703,439	2,457,187	6,995,242	4,370,565	62.5	1,351,534	19.32			61,474	88,994					2%
IRL NAO DRB2440 *	7	45	1,622	1,300	2,414,826	6,214,986	6,214,986	1,976,107	31.8	- 1,012,882	- 16.30	- 1,530,984	- 24.63	66,634	44,053	- 15.8	Weak	-164%	Deteriorated	2%
IRL NAO DFN0010	112	109		375	2,342,546	5,687,973	6,012,930	4,143,140	68.9	2,846,475	47.34			11,877	37,950					2%
IRL NAO DRB1012 *	54	116	5,264	2,109	1,232,708	4,527,042	4,527,124	1,065,362	23.5	- 2,399,171	- 53.00	- 2,735,490	- 60.42	29,980	9,219	- 49.0	Weak	80%	Improved	1%
IRL NAO DFN1824 *	13	54	1,887	482	1,499,857	4,088,356	4,088,356	2,394,144	58.6	1,143,123	27.96	971,132	23.75	23,077	44,164	74.3	High	481%	Improved	1%
IRL NAO TM 1218 *	5	19	334	-	2,950,750	1,622,516	1,622,516							1,233						1%
IRL NAO DTS1012	19	35	1,335	378	1,057,621	1,270,470	1,270,470	721,643	56.8	352,173	27.72	344,727	27.13	10,532	20,571	162.1	High	171%	Improved	0%
IRL NAO HOK0010	37	36		590	320,908	695,491	1,167,887	830,328	71.1	607,127	51.99			6,118	22,760					0%
IRL NAO DFN1012	9	17	746	304	471,706	1,011,764	1,011,764	843,844	83.4	657,835	65.02	616,180	60.90	11,194	50,783	172.2	High	444%	Improved	0%
IRL NAO PMP1218 *	1	3	91		273,619	196,484	196,484													0%
IRL NAO TM 1012 *	5	9	132		189,749	128,987	128,987													0%
IRL NAO HOK1012 *	4	7	87		45,490	55,704	55,704													0%

Data source: MS data submissions under the DCF 2019 Fleet Economic (MARE/A3/ASC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Table 5.32 Ireland: Landed value, weight and average price of principal species

	Value of landings (real) (thousand €)										Live weight of landings kg										Average landed price (real) (€)										% over total	
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	in EUR	in weight
Atlantic mackerel	40.1	48.3	37.4	48.7	45.4	44.5	103.5	49.1	47.7	58.2	44,735,369	61,035,957	57,876,974	62,976,274	62,784,057	56,700,470	103,379,822	88,863,284	76,725,750	86,511,650	0.9	0.8	0.7	0.8	0.7	0.8	1.0	0.6	0.6	0.7	21%	34%
Norway lobster	31.8	20.1	26.3	33.4	43.6	41.3	46.4	49.8	62.2	54.9	9,168,373	7,114,622	7,703,569	7,842,935	10,129,449	8,394,716	8,826,909	8,331,370	9,506,603	8,004,199	3.5	2.8	3.4	4.3	4.3	4.9	5.3	6.0	6.5	6.9	20%	3%
Edible crab	6.6	5.7	7.0	6.8	6.2	9.2	10.5	9.4	13.6	14.8	5,682,201	4,906,265	6,251,098	4,776,946	4,700,752	9,684,863	7,776,501	10,198,483	9,574,385	8,552,566	1.2	1.2	1.1	1.4	1.3	1.0	1.4	0.9	1.4	1.7	5%	3%
Anglerfishes nei	31.2	12.0	15.2	13.8	13.6	11.1	12.1	12.8	14.8	13.3	2,791,390	3,386,422	4,252,577	4,003,122	3,727,661	3,532,616	3,922,690	3,794,876	4,438,233	4,210,312	11.2	3.6	3.6	3.5	3.6	3.1	3.1	3.4	3.3	3.2	5%	2%
Jack and horse mackel	10.9	12.0	11.4	16.2	21.8	21.3	20.0	12.2	14.2	10.7	34,672,994	39,243,527	36,723,738	34,582,392	41,559,785	35,432,953	32,665,069	21,655,281	27,468,319	23,915,931	0.3	0.3	0.3	0.5	0.5	0.6	0.6	0.6	0.5	0.5	4%	9%
Megrims nei	6.1	5.7	7.3	8.0	11.9	10.0	8.6	9.7	10.6	10.1	1,746,179	2,169,586	2,724,635	2,534,922	3,423,659	3,415,739	2,873,297	3,011,355	3,283,446	3,210,391	3.5	2.6	2.7	3.2	3.5	2.9	3.0	3.2	3.2	3.1	4%	1%

Data source: MS data submissions under the DCF 2019 Fleet Economic (MARE/A3/ASC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

5.12 Italy

Short description of the national fleet

Fleet capacity

In 2017, Italian fishing fleet consisted of 12 270 registered vessels, with a combined gross tonnage of 157 thousand tonnes and engine power of 983 thousand kilowatts (kW). The size of the fleet decreased slightly compared to previous years. The proportion of inactive vessels remained stable with percentage below 9% of the vessels; inactive vessels mainly include small-scale vessels.

Fleet structure

The Italian fishing fleet is nationally divided into:

- the small-scale coastal fleet – SSCF (7 346 active vessels) with a large variety of passive gears (fixes nets, pots traps and longlines) and targeting many different species.

- the large-scale fleet - LSF (3 901 active vessels). They represent the major part of the fleet in terms of gross tonnage (82% of the total at national level); this group of vessels is mainly made up of vessels using active gears, especially demersal trawlers, purse seiners and dredgers. About 500 vessels use passive gears to catch mainly large pelagic species (i.e. tuna and swordfish). Among these, the hook vessels recorded improvements in all economic indicators over the last three years. The large-scale fleet is widespread along all the Italian coast, but the major proportion of these vessels is based in the Strait of Sicily and in Northern and Central Adriatic Sea.

- the distant water fleet - DWF - composed of 8 active vessels: 7 trawlers operating in in the Eastern Central Atlantic and a vessel operating as a purse seiner in Indian Ocean).

In 2018, the number of fishing enterprises amounted to 7 945, with the vast majority (87%) owning a single vessel. In the small-scale fisheries, the majority of the vessels are members of fishing cooperatives.

Employment

Total number of crew on board was estimated at 25 499 in 2017, corresponding to a total employment of 20 268 FTEs. The small-scale coastal fleet shows an average of 1.6 jobs per vessel, comparing to 3.4 for large-scale fleet. The total number of employees decreased by 2% between 2016 and 2017, a drop of 5% in FTEs.

Effort

In 2017, the fleet spent a total of around 1 401 thousand days-at-sea. Effort, in days-at-sea, decreased by 11% between 2008 and 2017. In 2017, the days-at-sea per vessel were 114, the lowest level since 2008. One of the reasons for the decrease of days-at-sea in the period 2008 – 2017 was the high price of fuel, which encourages fishers to limit the time spent at sea. Another factor, which may explain this trend, is that in some fishing communities, fishers adopted self-regulation measures in order to adequate the landings to the market demand. This was possible thanks to the cooperation between fisher cooperatives and Producer's organisations (some examples are the clam fishery with hydraulic dredges or the small pelagic fishery with mid-water pair trawlers in northern Adriatic Sea). For the future, a further reduction of fishing activity is expected due to the entry into force of the National Management Plans for demersal fisheries and the Multiannual Management Plan for the Western Mediterranean. These Plans are, indeed, based on an effort regime which is aimed to reduce fishing days for all fishing areas concerned.

The quantity of fuel consumed in 2017 was around 357 million litres, a decrease of around 6% from 2008.

Production

The total volume of products landed in 2017 has remained almost unchanged with a reduction in the SSCF component (-12%); stable the volume landed of LSF and DWF has improved (65%). The total value of landings slightly increased by 3% thanks to the good performance of the LSF component (+ 5%).

In 2017, European anchovy generated the highest value (EUR 74 million) landed by the Italian fleet, followed by giant red shrimp (EUR 64 million) and European hake (EUR 62 million). In terms of volume, the Italian fleet landed 39 thousand tonnes of European anchovy, 12 thousand tonnes of striped Venus and 9 thousand tonnes of deep-water rose shrimp.

Economic results for 2017 and recent trends

National fleet performance

The fleet's economic performance improved compared to previous years. After some years of negative economic performances (in particular over the period 2012-2014), all the economic indicators increased.

The revenue generated by the Italian fleet in 2017 was EUR 955 million, corresponding to an increase of 4% compared to 2016. The revenue consisted of EUR 934 million of income from landings and EUR 21 million of non-fishing income. Some vessels, mainly small-scale vessels, are involved in non-fishing activities, like "pescaturismo", in tourism-oriented coastal areas, or in supporting the traditional aquaculture and capture fishing activities for the harvest of Philippine clams in coastal lagoons in the North Adriatic regions, which offer an integration to the income from landings.

Direct income subsidies accounted for less than EUR 5.7 million in 2017; they include the grants to vessel owners for temporary cessation of fishing activities (art.33 of Reg (UE) No 508/2014).

The two major variable costs consist of labour and energy. In 2017, the costs for labour were EUR 278 million, while energy costs accounted for EUR 187 million. The labour costs decreased (-5% from 2016 to 2017), while the energy costs increased by 4% as a result of higher fuel prices in 2017 (on average EUR 0.52 per litre in 2017 and EUR 0.48 per litre in 2016).

In terms of economic fleet performance, the total amount of gross value added (GVA), gross profit, and net profit generated by the national fleet in 2017 were EUR 608 million, EUR 330 million and EUR 172 million, respectively. This corresponded to increases of 5%, 16% and 41%, compared to 2016. These increases in economic indicators were due to increased landings values (+3%) and decreased labour costs, repair and maintenance costs and other variable costs, while the capital costs remained stable.

The positive trend in economic indicators did not affect all fleet segments. The small-scale fishery recorded a reduction in landing values and gross value added, while the large-scale fishery retained a positive trend in all the economic indicators.

In 2017, the Italian fleet had an estimated (depreciated) replacement value of EUR 658 million; compared to 2016, the estimated replacement value slightly decreased by 1%.

Resource productivity and efficiency indicators

In 2017 all productivity and efficiency indicators showed an increase if compared to 2016.

In 2017 the gross profit margin was 35% and the net profit margin was estimated at 18%, with increases on the previous year by 11% and 35% respectively.

Labour productivity (GVA/FTE), estimated at EUR 29 981 in 2017, registered an increase by 11% compared to the previous year.

Energy consumption per landed tonne decreased by 4% compared to 2016. The weight of landings per unit of effort (in days-at-sea, DAS) also increased by 4% compared to 2016 and was estimated at 137 kg/DAS.

Performance by fishing activity

Small-scale coastal fleet

The Italian SSCF with 7 346 active vessels cover almost 65% of active vessels in 2017. In 2017, the SSCF production was EUR 195 million accounting for 21% of the Italian landings value with a decrease of 9%.

The Italian SSCF is mainly concentrated in length class 06-12m (70% of SSCF). This segment accounts for 45% of the whole national fleet and is spread along the Italian coasts, mainly in Sicily (more than 1 000 vessels), Sardinia and Campania region. The main gears are set gillnets, trammel nets, pots and traps, set longlines. The main target species are: common cuttlefish, common octopus, swordfish, European hake, mullets, blotched picarel, surmullet and spottail mantis squillid; these species are among the most commercially valuable species and the average prices are very high consequently; products are mostly sold on the local market directly to consumers or restaurants.

In 2017, total activity expressed in sea days decreased by 5%; landings in volume and value substantially decreased (-12% and -9% respectively). These negative trends had an impact on the labour costs that decreased by 16%; the crew-share system, in which the labour cost is a fixed share of the gross profits, is used in the great part of the local fishing harbours to calculate the remuneration for the crew. Most of

the fishers are also the owners' vessel and their remuneration is given by the revenue minus the operational costs.

Overall, the SSCF is profitable, generating a profit of EUR 42 million in 2017 but the resource productivity and efficiency indicators are very low if compared with the same indicators calculated for all the Italian fleet. For the segment 0006, the labour productivity indicator (GVA/FTE) was EUR 15 thousand in 2017 (the half of the national average labour productivity) and the revenue per vessel about EUR 20 thousand. Fishers do not seek to maximise profits but to have a subsistence income.

Large-scale fleet

Large-scale fleet segments, with 3 901 active vessels cover almost 35% of active vessels in 2017. As they are usually larger than SSCF vessels, they represent the major part of the active fleet regarding the gross tonnage (87%) and the engine power (77%). The large-scale fleet is mainly made up of vessels using active gears, especially demersal trawlers and beam trawlers (57% of the total vessels of the segments).

Demersal trawlers mainly operate in the Adriatic Sea and in the Strait of Sicily (60%), while the pelagic fleet is prevalent in the Northern Adriatic (pelagic trawlers) and in the Tyrrhenian Sea (purse seiners).

The large-scale fleet decreased by 12% from 2008 to 2017; in 2018, a huge reduction in capacity, as a consequence of the withdrawal of about 200 vessels with public aid, is expected. The scrapped vessels have an average tonnage of 54 GT and 80% of them were demersal trawlers.

Positive trends have been observed both in terms of productivity and profitability since 2015. In 2017, gross profit and net profit were estimated at EUR 243 million and EUR 124 million. Compared to 2016, these indicators increased 14% and 36%, respectively, showing improvement in the economic performance. The profitability (measured in terms of net profit margin) is higher for the fleet segments DTS18-24m and DTS24-40m while the fleet segment DRB1218 showed a weak profitability.

The main drivers affecting economic performance in 2017 were the improvement in the landing per unit of effort and in the first sale prices. The rise of the average productivity may be linked to the recovery in some fish stock (i.e. deep-water rose shrimp, red mullet and, to some extent, blue and red shrimp, FAO 2018).

Performance of selected fleet segments

In 2017 the Italian fleet consisted of 23 fleet segments. Most of them showed an improved economic performance compared with the previous year. Based on the net profit margin, seven fleet segments showed high profitability, six a reasonable profitability and only 4 a weak profitability. Net losses are registered with the only exception of the TBB VL1824.

Both in terms of number of vessels and production value, the fleet is dominated by polyvalent passive segments, large demersal trawlers and dredgers. The performance of the polyvalent passive vessels is described in the section on the small-scale costal fleet, which includes the fleet segments PGP VL0006 and PGP VL0612.

Demersal trawl / seine 12-18m

This fleet segment accounts for 11% of the national fleet and is spread along the Italian GSAs (Geographical Sub-Areas) and predominantly in Apulia and Sicily regions. The fleet mainly targets demersal species, such as European hake, giant red shrimp, deep-water rose shrimp, red mullet, spottail mantis squillid, common cuttlefish and Norway lobster. In 2017, the total value of landings was EUR 189 million, contributing to 20% of total revenue of the Italian fleet. The profitability of these vessels was high and slightly increasing from 2016. The main reason for the positive economic performance of this fleet segment is the increase in productivity, which determined an increase by around 10% in total revenues. The same percentage increase was registered in terms of GVA, gross and net profits.

Demersal trawl / seine 18-24m

A 6% of the Italian vessels belongs to this fleet segment, which is active in all the Italian GSAs and mainly in Sicily, Apulia, Marche and Lazio. In 2017, this fleet contributed to the national landings in weight and value by 13% and 19% respectively. Compared to 2016, the value of landings increased by 3%, mainly because of an increase in the prices of some species. However, the parallel increase in the operating costs, also due to an increase by 8% in the days-at-sea, did not allow the fleet segment to improve its weak profitability. In 2017, the fleet segment registered a gross profit of EUR 49 million and a net profit of EUR 15 million.

Demersal trawl / seine 24-40m

This fleet segment is concentrated in the GSA 16 (Strait of Sicily) and mainly in the port of Mazara del Vallo. Giant red shrimp, blue and red shrimp and deep-water rose shrimp are the main target species representing 65% of the landings in value and around a half of the landings in weight. In the last years, the activity of the fleet is more and more concentrated in fishing areas distant from the coast (like the eastern Mediterranean). This has changed the composition of the landings with an increasing quota of giant red shrimp and blue and red shrimp in place of the deep-water rose shrimp. The longer time needed to achieve fishing zones far from the coast determined also an increase in the days-at-sea and fuel cost. However, in 2017 the increase in fuel cost was compensated by reductions in other costs, except for labour costs that increased. From 2016 to 2017, the landings in weight and value increased by 16% and 19% respectively. This produced an improvement in all the economic performance indicators changing the profitability level from weak to reasonable and the net profits from EUR -1.8 million to EUR 13.4 million.

Dredges 12-18m

This fleet segment consisted of 704 vessels operating mainly in GSA 17 and predominantly in the Adriatic administrative Regions of Marche, Veneto and Abruzzo. Striped Venus (*Chamelea gallina*) is the main target species, representing 83% of the landing value and 91% of the landing weight. This fishing activity is traditionally managed by local Consortia, which can enforce limitations to the fishing days and the maximum quantities of daily catch. In 2017, the Discard Plan for mollusc bivalve Venus species entered into force specifying minimum conservation reference size and the list of the vessels authorised to fish Venus spp. using hydraulic dredges in the Italian territorial waters for the period 2017-2019.

In 2017 profitability was estimated at a weak level with a net profit margin close to zero. The strong reduction in net profits, from EUR 5.55 million to EUR 0.69 million, was due to a decrease by 27% in the volume of landings. This reduction, which was not counterbalanced by an increase in the average price of striped Venus, determined a decrease in revenues by more than 30%.

Drivers affecting the economic performance trends

The income from landings during last years and fish prices were the main driving forces behind the overall sustainability of the fleet.

The stable average price of some important species as European hake, deep-water rose shrimp and Norway lobster and the increase of the average price of European anchovy, giant red shrimp, swordfish had a positive impact on the profitability of some fleet segments.

The effort reduction together with the stability of the volume of landings lead to an increase in productivity. The landings per unit of effort (LpuE) recorded the highest level since 2008. LpuE was around 137 tonnes per day at sea in 2017, an increase of 4% compared to 2016. The status of certain stocks improved in the last years, even if the achievement of a long-term sustainable utilisation of the resource is still far for the majority of the stocks exploited (STECF, 2019).

Markets and Trade

In 2017, the average price saw an increase (+3%); giant red shrimp and Norway lobster were the two species with the highest prices (respectively 23.70 and 22.20 EUR /kg). There have been many cases of local operators adopting quality brands, quality certification or undertaking direct sales activities in local markets.

Despite this, there was still a highly fragmented sales channels dominated by regional wholesalers and traditional fishmongers. In most cases, the ex-vessel prices are set by the wholesalers and the vessel owners are not able to impose a higher price. This is one of the main weakness of the national fishery sector and concerns both SSCF and LSF.

Regarding foreign trade, Italy is a net importer of fish and seafood; in 2017, the ratio of domestic production over domestic demand or consumption (self-sufficiency ratio) was 19%, meaning that a higher share of demand was supplied from imports (EUMOFA, 2019). The low self-sufficiency rate, increasing over the last period, and the consequently high imports are due to the strong (and increasing) propensity of Italian consumers to purchase fish and seafood.

In 2017, consumption seems to have risen further: by 2.3% compared with 2016 for fish and seafood in general, and by 3.3% for fresh and frozen products. In particular, fish and mollusc sales appeared to be increasing (respectively by 3.5% and 2.3%), whereas the sale of crustaceans declined by 1.4% (ISMEA,

2018). According to the latest FAO data (FAO, 2019), *per capita* fish consumption in Italy in 2017 was nearly 25.5 kg, higher both than the world average (19.8 kg) and the EU average (21.8 kg).

Management instruments and regulation

The Italian fisheries management system is largely based on fishing effort control through input measures. The fishing effort is managed through fishing licenses (fish resources can be exploited only by subjects holding a regular license) and control of fishing capacity. The permanent decommissioning of vessels with public aid has been set out in the Action Plan enclosed in the annual Report describing the effort made by Italy in 2016 to find a sustainable balance between fishing capacity and resources, as envisaged by Regulation (EU) No 1380/2013 (art. 22). In 2018, about 200 vessels were scrapped with public aid.

The National Management Plans (NMPs) for demersal species updated by Italian authority in 2018 (Ministerial decree No 26510) provide for a reduction in fishing days for fishing segments targeting some selected demersal stock; the reduction is of 10% in 2019 and 7% in 2020 compared to the average fishing days in the period 2015-2017. The effort reduction in terms of capacity (permanent cessation of fishing activities) and activities (NMPs) should lead to a reduction in landings and, consequently, in revenues in the short period.

The implementation of the landing obligation in Italy has been hampered by a number of problems. In particular, the discard plan for small pelagics entails real-time monitoring of the de minimis exemption, and the discard plan regarding demersal species is based on a list of the vessels that are subject to the landing obligation for each individual fishing activity. All the vessels whose hake, mullet, common sole, and deep-water rose shrimp catch in 2014 and 2015 accounted for 25% of captures are to be included in such list (Sabatella et al., 2018). In 2018, the Commission Delegated Regulation (EU) No 2018/2036 (amending Delegated Regulation (EU) 2017/86 establishing a discard plan for certain demersal fisheries in the Mediterranean Sea) extended current survivability and de minimis exemptions for various single species or introduced new de minimis exemptions for some groups of species until 31 December 2021.

TACs and quotas

Three fisheries are managed through TACs and quotas in Italy.

- bluefin tuna: quota is allocated among purse seines (74.1% of the whole quota), longlines (13.5%), tuna purse seines (8.4%), a quota set aside for compensations (slightly less than 3.5%), and recreational fishing (0.5%). In 2017, Italian bluefin tuna quota increased by 20%, reaching 3 304.5 tonnes; regulation (EU) No 120/2018 has set for Italy a TAC of 3 894 tons for 2018 and of 4 308 for 2019;
- swordfish: in line with the ICCAT recommendations, the Italian Administration established the national list of vessels authorised to fish for swordfish and regulated the use of fishing gears (about 850 vessels); a TAC of 4.3 thousand tonnes has been set for 2017; regulation (EU) No 120/2018 has granted Italy a total quota of 3 624 tons for 2018 and 3512 for 2019;
- small pelagic species in Adriatic Sea: in December 2016, for the first time, the Council agreed on setting a catch limit for the EU concerning small pelagic species in the Adriatic Sea for 2017 (namely 112 700 tonnes of anchovy plus sardine - Annex IL of Regulation 2017/0127). The same catch limit was agreed for the 2018 fishing opportunities (Annex IL of Regulation 2018/120). Except the indication that the catch for Slovenia should not exceed 300 tonnes, the Council did not however define the share (quotas) of the total fishing opportunities between Croatia and Italy.

Stock status

Most stocks for which validated assessments are available continue to be fished outside biologically sustainable limits. Nevertheless, the recent trend is a decreasing one, especially since 2014 when the percentage of overexploited stocks decreased from 88 percent to 78 percent in 2016 (FAO, 2018)

The F/FMSY indicator has remained at a very high level during the whole 2003-2016 period for a great number of stocks; on the other hand, it is important to stress that after the observed peak in 2011 where F/FMSY has reached its highest historical level, there is a somewhat decreasing trend in overexploited stocks (STECF, 2019).

Operational costs including fuel prices

The most important operational costs are the wages and salaries of the crew members and the fuel costs. The operational cost structure changed slightly between 2008 and 2017. The incidence of labour costs on total operational costs increased from 27% to 36%, while the incidence of fuel costs decreased from 31% to 24%.

The average fuel price in 2017 was EUR 0.52 per litre; it declined by 32% between 2008 and 2017, whilst the average fuel costs per vessel decreased by 39%; this had a positive impact on profitability mainly in fuel intensive fleet segments as demersal trawlers.

Average crew wage per FTE was EUR 13.7 thousand in 2017. Crew share is strongly linked with fishing income and as the latter increased since 2015, the labour costs increased consequently in 2015 and 2016; in 2017, a slightly decreased trend has been recorded, due to the negative performance of SSCF (reduction in value of landings and labour costs).

Innovation and Development

EMFF funds foresee measures for investments to the fishing fleet to improve selectivity of the gears or for technical adjustments. In 2018, the first projects under EMFF have been funded by national and regional authorities; they concerned projects improving hygiene, health, safety and working conditions for fishers, limitation of the impact of fishing on the marine environment, replacement or modernisation of engines.

As a result of the implementation of the landing obligation, national projects have been financed in order to find solutions through the adoption of technologies and practices reducing bycatch and increase the selectivity; one of these projects tested modified bottom trawl nets by using sorting grid separators and separator panels in crustacean fisheries.

Investments that add value to fishery products, i.e. allowing fishers to carry out the processing, marketing and direct sale of their own catches, have met great interest on the part of the fishers. In some local harbours, new marketing approaches have been experimented: fish basket schemes or digital tools are providing opportunities for fishers to inform directly their customers and to promote and sell their products.

In the last years, various commercial strategies have been implemented, aiming to improve traceability and quality of local seafood. "Venetian Wild Harvested Striped Clam fishery" has become the first Italian and Mediterranean fishery to achieve an MSC certification in 2018.

Socioeconomic Impact

The overall economic situation of Italian fishing sector has improved. Energy consumption, after several years, have been decreased leading to proportionally lower energy costs per landed ton. Total income raised thanks to the positive trend in fish prices for some key species. The fleet appears to be returning to levels of profitability not achieved for many years.

Despite this positive national trend, economic performance differs significantly between fleet segments and fishing areas. In general, SSCF did not reach the same level of profitability and the income per vessel and the wage per fisherman remained at a very low level compared with other economic sectors. LSF showed a better situation with some exceptions (in particular, the hydraulic dredges and the beam trawlers).

The decline in the number of fishers has been particularly evident for the small-scale coastal fishing segment; many fishing enterprises closed because owner's sons are not interested to continue the fishing activity and it is difficult to sell the small- scale vessels to other fishers.

In the LSF, the employment is a problem, too; it is still difficult for many companies to recruit fishers and in some ports, the use of foreign labour (for example, African fishers) is the only way to reach the required number of workers on board.

In addition, new management measures (such as effort limitations, spatial closures, fishing permits) and law requirements (electronic logbook, landing obligation) had socioeconomic impact on fishers in so far as they need technical and behaviour adaptations.

Nowcasts for 2018-19 and outlook

In 2018, 192 thousand tonnes of seafood were landed by the Italian fleet in Mediterranean Sea (excluding tuna fishery), with an estimated value of EUR 939 million.

Revenue and profitability are expected to slightly increase in 2018. The positive factor registered in 2018 is the increase in the landing per unit of effort; the total volume of products landed is on the rise, especially for trawlers.

After a long period of relative stability, in 2018 an increase in fuel prices is expected. At the end of 2018 the average fuel price for fisheries was around EUR 0.60 per litre (http://dgsaie.mise.gov.it/dgerm).

Concerning the future period, beyond 2018, it can be expected a reduction of fishing effort as a result of the entry into force of the national management plans for demersal fisheries, the multiannual management plan for small pelagic species in the Adriatic sea and the multi-annual plan for fish stocks in the western Mediterranean Sea. By the provisions of these plans, a reduction of fishing effort in terms of number of fishing days has been set for PS and DTS segments.

Data issues

All fleet segments with major contribution to the total catches of the Italian fleet have been sampled with satisfactory response rates.

Except for capacity and weight of landings no data for the OFR purse seiners segment 40 m or larger (one vessel in 2017) could be published due to confidentiality issues.

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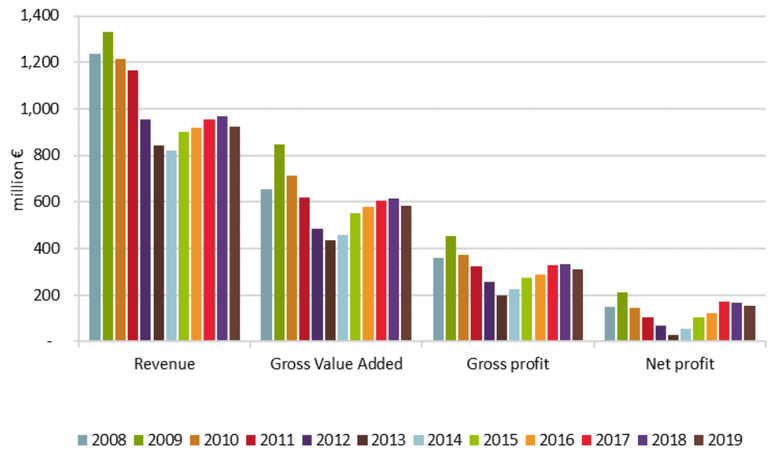
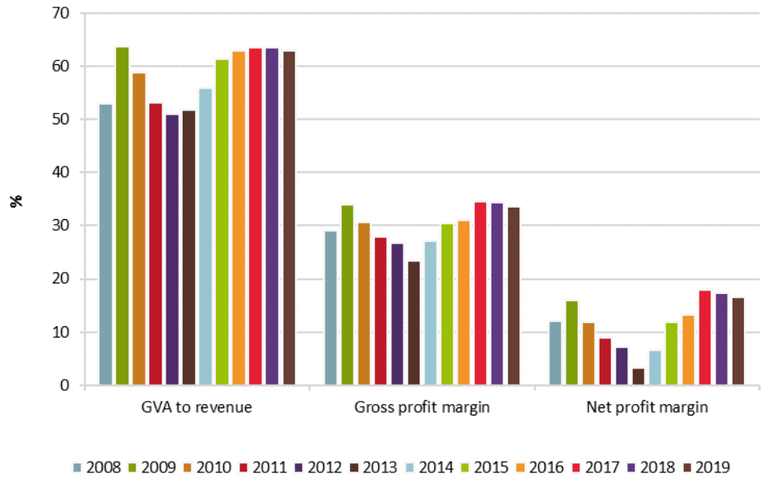
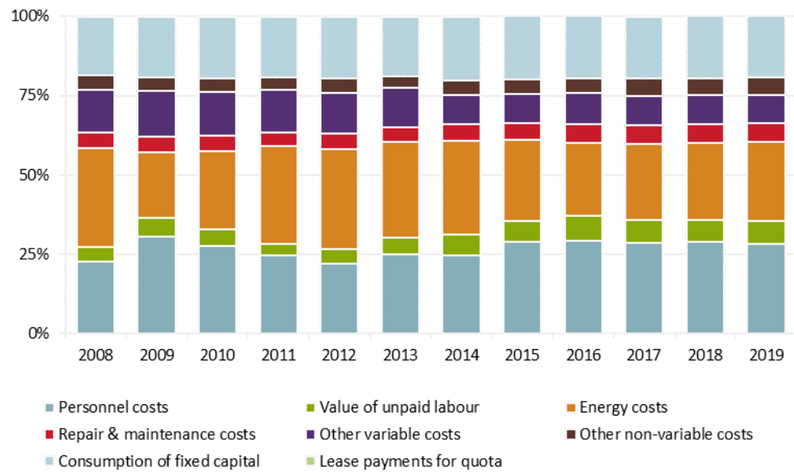
Table 5.33 Italy: National fleet statistics and economic performance results. Nowcast figures for 2018 and 2019

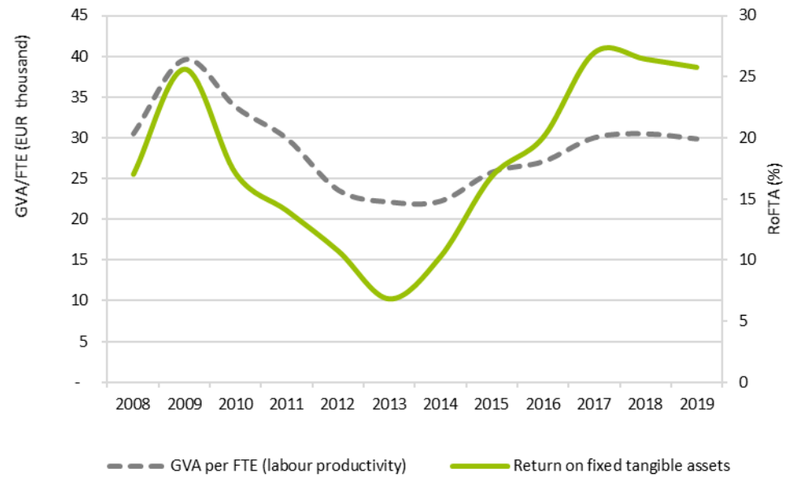
			2008	2009	2010	2011	2012	2013	2014	2015	2016	*2017*	*2018*	2019	Trend 2008-2018	Δ 2017 to 2016	Δ 2017 to avg. 08-16
Capacity	Number of vessels	totves	13,518	13,359	13,348	13,285	12,942	12,746	12,689	12,426	12,310	12,270	12,219	11,904		0%	-5%
	Total vessel power	totkw	1,147,267	1,122,930	1,121,224	1,088,094	1,047,390	1,023,865	1,023,819	1,013,526	993,719	983,010	974,075			-1%	-8%
	Total vessel tonnage	totgt	197,543	192,962	191,753	179,196	171,229	164,602	163,873	163,624	157,690	157,241	155,852			0%	-11%
Employment	Engaged crew	totjob	29,604	29,222	29,222	28,964	28,292	26,758	26,932	25,787	25,933	25,499	25,230	24,504		-2%	-8%
	Unpaid labour	unpaidemp										8,262					
	FTE national	totnatfte	21,456	21,414	21,169	20,740	20,693	19,749	20,694	21,459	21,349	20,268	20,159	19,488		-5%	-3%
	Total hours worked per year (engag	hrworked										32,776,890					
Effort	Days at sea	totseadays	1,590,798	1,782,805	1,668,669	1,749,335	1,556,489	1,493,757	1,432,611	1,438,206	1,463,714	1,400,837				-4%	-11%
	Fishing days	totfishdays	1,629,637	1,845,987	1,769,555	1,832,044	1,624,922	1,594,354	1,549,964	1,530,459	1,623,929	1,412,466				-13%	-15%
	kW fishing days	totkwfishdays	183,144,717	184,491,225	166,930,533	156,844,325	145,524,866	139,157,568	138,051,810	133,241,617	138,312,695	100,642,956				-27%	-35%
	GT fishing days	totgtfishdays	39,104,958	35,397,549	29,045,962	24,848,838	24,755,465	23,008,291	21,820,183	22,397,787	23,209,388	14,591,942				-37%	-46%
	Number of fishing trips	tottrips	1,519,043	1,711,263	1,603,056	1,690,603	1,507,368	1,453,989	1,394,640	1,397,184	1,412,302	1,315,992				-7%	-13%
	Energy consumption	totenercons	432,979,525	437,575,302	405,217,592	409,596,306	335,872,010	319,614,156	311,836,929	378,286,100	373,461,728	357,015,435	369,163,075	345,993,206		-4%	-6%
Landings	Live weight of landings	totwghtlandg	226,992,223	242,364,876	224,758,232	212,366,459	196,782,534	172,624,248	176,778,380	192,212,827	192,356,175	191,915,630	197,004,122	186,498,754		0%	-6%
	Value of landings	totvallandg	1,222,987,301	1,319,203,351	1,203,951,974	1,155,318,448	944,589,114	834,059,922	813,319,603	894,033,494	908,169,861	934,133,870	952,132,496	907,997,355		3%	-10%
Income	Gross value of landings	totlandginc	1,222,987,315	1,319,203,352	1,203,951,975	1,155,318,449	944,589,115	834,059,922	813,319,600	894,033,494	908,169,860	934,133,868	946,393,767	902,524,638		3%	-10%
	Other income	tototherinc	12,354,629	10,347,791	9,104,492	8,676,370	8,874,146	7,586,052	8,787,103	5,081,750	9,560,487	20,867,449	21,475,183	21,091,328		118%	134%
	Operating subsidies	totdirsub	33,166,498	13,869,859	23,935,244	11,721,887	7,830,476	12,607,529	17,064,309	7,954,739	-	5,721,647					-60%
	Income from leasing out quota	totrightsinc						534,460	1,202,990	111,834	-	282,379					-39%
Expenditure	Personnel costs	totcrewwage	242,752,747	329,262,154	286,172,350	255,903,824	191,775,016	196,323,005	184,720,462	224,862,190	228,758,076	222,339,808	227,160,816	215,273,238		-3%	-7%
	Value of unpaid labour	totunpaidlab	51,182,784	66,674,569	56,646,044	37,628,813	40,064,573	42,326,907	50,243,929	53,290,281	62,824,771	55,244,921	54,901,543	55,023,969		-12%	8%
	Energy costs	totenercost	334,892,480	223,857,844	257,517,151	318,049,601	274,090,957	240,364,719	221,711,421	200,026,439	179,914,187	186,690,647	193,106,210	189,512,012		4%	-25%
	Repair & maintenance costs	totrepcost	52,086,644	51,632,049	49,986,966	46,788,345	42,797,049	37,223,158	38,015,051	40,096,544	46,100,317	45,841,464	46,012,935	43,749,731		-1%	2%
	Other variable costs	totvarcost	146,379,123	157,402,205	146,103,652	137,351,716	111,266,443	97,472,289	69,334,165	71,358,003	76,547,382	73,141,854	72,643,343	68,913,462		-4%	-35%
	Other non-variable costs	totnovarcost	48,495,179	48,957,819	45,259,931	42,633,608	38,559,704	30,774,010	34,141,683	35,420,503	37,959,609	41,663,988	42,050,644	40,200,144		10%	4%
	Consumption of fixed capital	totdepcost	199,774,484	206,749,544	202,805,527	198,357,359	170,153,255	148,342,595	151,699,902	156,735,559	152,550,216	152,461,787	154,968,613	147,160,692		0%	-14%
	Lease/rental payments for quota	totrightscost	806,993	606,796	351,253	357,635	131,189	534,460	1,202,990			544,742					-4%
Indicator	Opportunity cost of capital	opr	10,685,109	33,276,856	23,695,216	22,174,835	16,681,755	21,208,958	18,745,629	11,171,126	10,554,011	5,260,138	9,320,600	11,469,998		-50%	-72%
	Gross Value Added	gva	653,488,519	847,701,227	714,188,767	619,171,549	486,749,108	435,811,798	458,904,382	552,213,755	577,208,852	607,663,364	614,055,818	581,240,617		5%	2%
	Net Value Added	nva	443,028,926	607,674,827	487,688,024	398,639,354	299,914,098	266,260,245	288,458,851	384,307,070	414,104,625	449,941,439	449,766,605	422,609,927		9%	13%
	Gross profit	grp	359,552,988	451,764,503	371,370,373	325,638,912	254,909,520	197,161,886	223,939,992	274,061,283	285,626,005	330,078,634	331,993,460	310,943,410		16%	8%
	Net profit	npl	149,093,396	211,738,103	144,869,630	105,106,717	68,074,510	27,610,332	53,494,461	106,154,599	122,521,777	172,356,709	167,704,246	152,312,720		41%	57%
	Net profit subsidised	npls	182,259,894	225,607,962	168,804,875	116,828,604	75,904,985	40,217,861	70,558,770	114,109,338	122,521,777	178,078,356	167,704,246			45%	44%
	Net profit rights	nplr	181,452,901	225,001,166	168,453,622	116,470,969	75,773,796	40,217,861	70,558,770	114,221,172	122,521,777	177,815,994	167,704,246			45%	44%
Capital	Value of physical capital	totdeprep	937,210,818	955,643,053	986,653,237	905,472,446	786,860,874	711,413,064	698,257,273	694,552,623	663,110,526	657,841,984	668,967,904	635,019,391		-1%	-19%
	Value of quota and other fishing rig	totrights										-					
	Investments	totinvest	75,579,579	76,469,995	53,133,121	36,949,697	29,524,804	15,047,193	21,999,076	20,311,386	23,121,536	27,110,779	26,879,410	25,742,115		17%	-31%
	Total assets	assets										1,680,885,932	1,660,035,715	1,624,844,088			
	Long/short debt	debts										1,157,513,337					
	Subsidies on investments	subinvest										-	-	-			

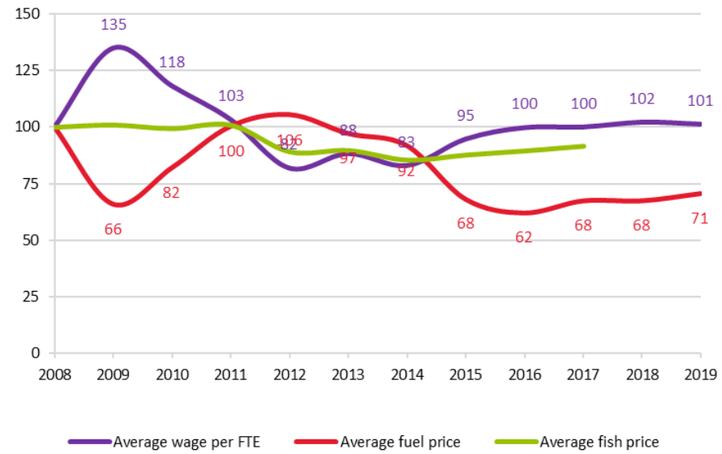
Data source: MS data submissions under the DCF 2019 Fleet Economic (MARE/A3/ASC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

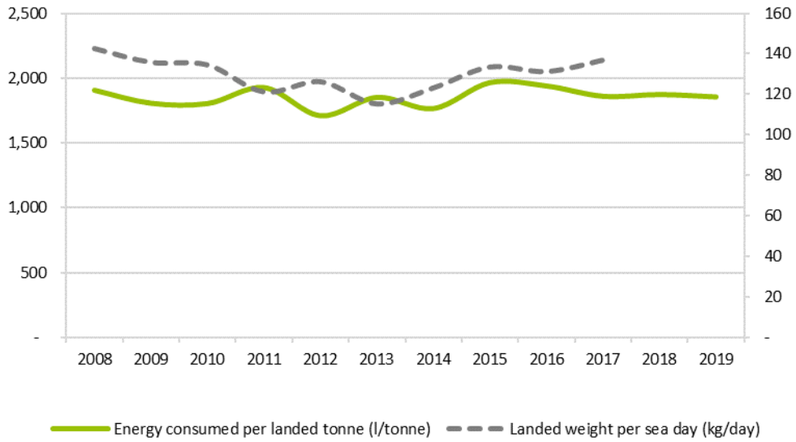


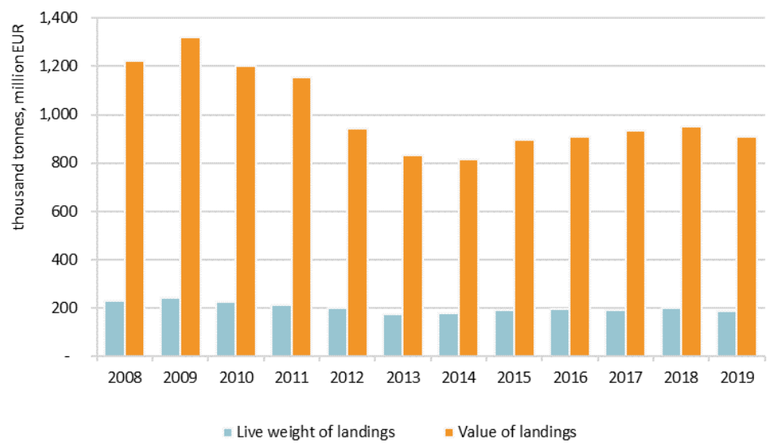


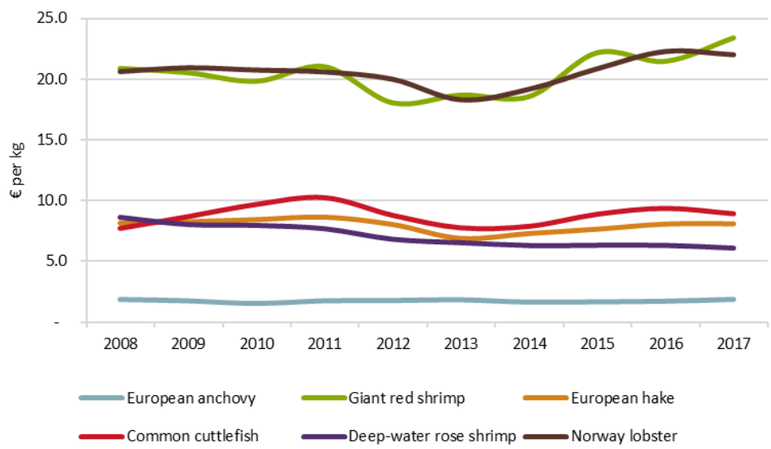












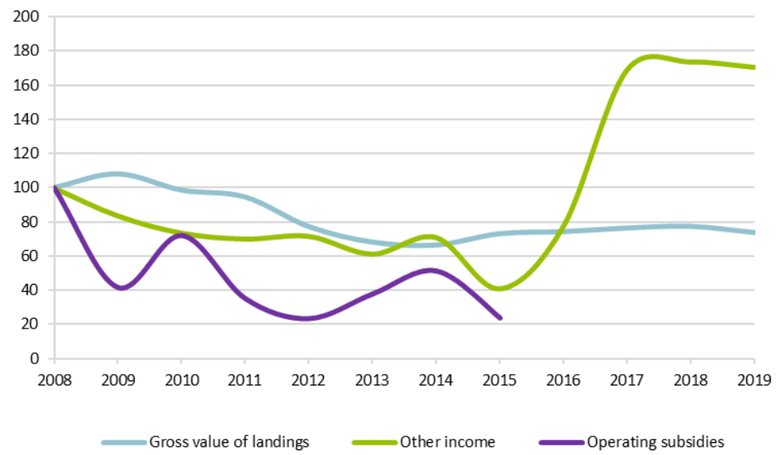


Figure 5.12 Italy: Main trends in economic performance indicators (absolute value, panel 1a/top left and relative value, (panel81b/top middle); cost structure (panel 1c, top right); productivity (panel 2a); key input/outputs (panel 2b); efficiency (panel 2c); landings (panel 3a); average price (EUR /kg) of top species (panel 3b) and income (panel 3c). Nowcast figures for 2018 and 2019

Data source: MS data submissions under the DCF 2019 Fleet Economic (MARE/A3/ASC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Table 5.34 Italy: National fleet statistics and economic performance results by fleet segment, 2017

	Number of vessels	FTE national	Days at sea	Energy consumed per landed tonne	Live weight of landings	Value of landings	Revenue	Gross Value Added	GVA to revenue	Gross profit	Gross profit margin	Net profit	Net profit margin	Average wage per FTE	GVA per FTE (labour productivity)	Return on fixed tangible assets	Profitability (2017)	Net profit margin %Δ 2017 - average (2008-16)	Economic development trend	As a % of total revenue
ITA MBS DTS1218 NGI	1,236	3,358	169,959	2,787	30,732,819	189,369,840	189,401,848	113,437,115	59.9	63,757,003	33.66	44,751,703	23.63	14,792	33,776	59.6	High	45%	Improved	20%
ITA MBS DTS1824 NGI	638	2,471	105,539	4,383	24,384,547	176,397,484	176,527,445	91,777,848	52.0	48,908,675	27.71	15,281,070	8.66	17,347	37,137	12.2	Weak	231%	Improved	18%
ITA MBS PGP0612 NGI	5,154	6,366	641,772	1,493	19,070,463	154,091,830	165,737,545	120,060,169	72.4	59,918,760	36.15	28,852,191	17.41	9,448	18,860	25.7	Reasonable	20%	Improved	17%
ITA MBS DTS2440 NGI	173	1,078	36,485	5,942	9,990,408	106,780,192	107,728,100	62,416,709	57.9	33,002,621	30.64	13,414,808	12.45	27,293	57,916	17.2	Reasonable	240%	Improved	11%
ITA MBS PGP0006 NGI	2,192	2,233	267,381	984	4,786,664	41,096,722	44,424,416	33,611,554	75.7	17,158,584	38.62	12,811,145	28.84	7,367	15,050	84.9	High	4%	Stable	5%
ITA MBS PGP1218 NGI*	390	1,035	42,094	1,710	4,669,120	35,989,330	36,450,770	24,683,792	67.7	13,243,957	36.33	5,455,247	14.97	11,058	23,860	19.7	Reasonable	7%	Improved	4%
ITA MBS DRB1218 NGI*	704	404	39,643	417	13,005,941	32,544,886	32,553,931	24,496,401	75.2	12,241,884	37.60	686,277	2.11	30,323	60,616	2.4	Weak	-87%	Deteriorated	3%
ITA MBS PS 40XX NGI	13	84	283	611	2,857,538	25,124,732	26,194,953	23,621,717	90.2	16,583,652	63.31	12,520,070	47.80	84,177	282,523	70.5	High	291%	Improved	3%
ITA MBS PS 1824 NGI	74	488	8,285	438	11,049,310	22,564,828	22,564,828	14,931,544	66.2	8,288,613	36.73	5,124,245	22.71	13,602	30,574	43.7	High	39%	Improved	2%
ITA MBS TM 1824 NGI	46	256	7,349	382	18,916,985	20,566,048	20,640,387	12,508,543	60.6	6,204,489	30.06	4,032,444	19.54	24,614	48,838	44.9	Reasonable	288%	Improved	2%
ITA MBS HOK1218 NGI	135	493	18,284	1,883	2,695,137	19,602,730	19,623,015	13,085,738	66.7	7,378,776	37.60	4,827,270	24.60	11,572	26,535	52.5	High			2%
ITA MBS TM 2440 NGI	35	226	6,026	872	11,543,959	17,133,839	17,170,115	9,544,417	55.6	5,484,200	31.94	3,340,806	19.46	17,926	42,139	38.1	Reasonable	1427%	Improved	2%
ITA MBS PS 1218 NGI	116	515	13,369	552	6,777,456	16,607,842	16,702,005	11,849,888	70.9	6,593,526	39.48	5,011,962	30.01	10,200	22,994	81.6	High			2%
ITA MBS PS 2440 NGI	29	318	3,380	349	8,651,421	13,258,979	15,061,425	11,584,819	76.9	7,155,942	47.51	3,555,300	23.61	13,938	36,457	23.3	High	1115%	Improved	2%
ITA MBS TBB1824 NGI	38	188	5,657	3,348	2,457,048	13,662,454	13,681,129	5,387,250	39.4	2,460,331	17.98	66,588	0.49	15,569	28,656	1.5	Weak	-55%	Deteriorated	1%
ITA MBS HOK1824 NGI*	36	223	5,488	1,553	1,768,627	10,313,001	10,313,001	7,459,256	72.3	4,178,136	40.51	1,211,860	11.75	14,707	33,434	12.3	Reasonable	8516%	Improved	1%
ITA OFR DTS40XX IWE	7	84	1,912	2,077	1,382,667	8,745,413	9,552,787	6,183,265	64.7	3,653,731	38.25	317,424	3.32	30,113	73,610	3.2	Weak			1%
ITA MBS TM 1218 NGI*	32	106	4,180	287	7,882,597	8,927,060	8,965,970	5,099,506	56.9	2,217,888	24.74	1,882,346	20.99	27,193	48,123	132.2	High	5%	Stable	1%
ITA OFR PS 40XX IWE	1		193		5,754,929	6,781,622	6,781,622													1%
ITA MBS DTS0612 NGI	117	138	10,919	1,847	1,016,226	5,361,567	5,712,558	3,722,485	65.2	1,888,460	33.06	1,058,155	18.52	13,272	26,938	35.4	Reasonable	39%	Improved	1%
ITA MBS TBB2440 NGI	10	62	1,906	2,781	1,356,427	5,593,028	5,593,028	2,894,236	51.7	1,574,776	28.16	683,190	12.22	21,365	46,865	19.7	Reasonable	813%	Improved	1%
ITA MBS PS 0612 NGI	72	124	10,010	756	994,077	2,426,844	2,426,844	1,775,892	73.2	1,040,092	42.86	753,072	31.03	5,921	14,291	62.8	High			0%
ITA MBS TBB1218 NGI	7	17	723	1,919	171,265	1,193,596	1,193,596	749,597	62.8	362,917	30.41	252,866	21.19	22,825	44,247	66.5	High	94%	Improved	0%

Data source: MS data submissions under the DCF 2019 Fleet Economic (MARE/A3/ASC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Table 5.35 Italy: Landed value, weight and average price of principal species

	Value of landings (real) (thousand €)										Live weight of landings kg										Average landed price (real) (€)										% over total	
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	in EUR	in weight
European anchovy	85.4	96.4	82.0	82.3	76.8	55.5	52.5	63.2	65.9	74.5	45,038,861	54,387,653	54,095,124	46,236,878	42,799,925	29,664,218	31,842,337	37,510,821	37,968,966	39,038,602	1.9	1.8	1.5	1.8	1.8	1.9	1.7	1.7	1.7	1.9	8%	20%
Giant red shrimp	37.2	48.1	50.0	49.5	43.0	52.1	41.6	53.9	54.6	63.8	1,777,591	2,338,133	2,519,332	2,350,322	2,376,661	2,780,082	2,236,969	2,427,850	2,539,794	2,723,299	20.9	20.6	19.9	21.1	18.1	18.7	18.6	22.2	21.5	23.4	7%	1%
European hake	102.4	99.4	97.3	90.4	75.6	67.4	63.8	68.9	66.7	61.6	12,552,216	12,039,935	11,527,806	10,461,504	9,393,103	9,766,938	8,735,450	8,993,774	8,257,674	7,597,709	8.2	8.3	8.4	8.6	8.0	6.9	7.3	7.7	8.1	8.1	7%	4%
Common cuttlefish	74.5	82.6	67.9	58.5	44.6	44.0	45.7	53.4	55.1	58.8	9,687,622	9,521,832	7,011,491	5,709,493	5,079,085	5,685,878	5,818,469	6,028,714	5,889,795	6,604,005	7.7	8.7	9.7	10.2	8.8	7.7	7.9	8.9	9.4	8.9	6%	3%
Deep-water rose shrimp	70.9	76.7	81.7	77.1	56.6	54.5	48.6	57.7	56.0	56.3	8,244,167	9,554,150	10,264,046	10,028,747	8,267,380	8,310,562	7,674,679	9,089,693	8,833,229	9,209,971	8.6	8.0	8.0	7.7	6.8	6.6	6.3	6.4	6.3	6.1	6%	5%
Norway lobster	70.4	74.8	66.8	55.5	41.0	36.6	28.5	28.3	28.8	37.6	3,414,286	3,575,616	3,221,074	2,697,756	2,050,626	2,001,767	1,488,557	1,354,761	1,294,150	1,707,273	20.6	20.9	20.7	20.6	20.0	18.3	19.2	20.9	22.3	22.0	4%	1%
Swordfish	59.2	67.3	72.8	64.0	46.5	29.3	31.9	39.4	36.6	29.1	4,533,566	5,120,451	6,032,361	5,356,934	4,017,772	2,862,019	3,393,035	4,272,649	3,945,595	2,986,711	13.1	13.1	12.1	12.0	11.6	10.2	9.4	9.2	9.3	9.7	3%	2%

Data source: MS data submissions under the DCF 2019 Fleet Economic (MARE/A3/ASC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

5.13 Latvia

A short description of the national fleet

Fleet capacity

In 2017, the Latvian Baltic Sea fishing fleet consisted of 324 registered vessels including 73 inactive vessels, with a combined gross tonnage of 6.8 thousand tonnes, a total engine power of 20.3 thousand kilowatts and an average age of 30 years. The size of the fleet followed a decreasing trend between 2008 and 2017. The gross tonnage declined by 27% whiles the total engine power of the fleet declined by 19% during the analysed period from 2008 to 2017. The reason for the changes was related to the vessels scrapping according to the multi-annual management plan aimed at achieving a better balance between fishing capacity and the available resources. The fishing vessels were "reassigned for activities outside fishing (by scrapping or selling)".

Fleet structure

The Latvian fleet is divided into several segments by the length, fishing gears and different operating areas: the Baltic Sea fleet (segment trawlers VL2440 metres), fleet operating predominantly in the Gulf of Riga (trawlers VL1218 metres), the SSCF operating in the coastal zone (segment with polyvalent fishing gears VL0010 metres) and a distant water fleet (segment trawlers VL40XX metres) operating in the Atlantic NEAFC Barents Sea (area 27) and CECAF Morocco and Mauritania (area 34) areas.

Significant differences in the number of vessels and in other related variables were observed between 2010 and 2011 when the fleet size decreased by 364 vessels or 53%. The major factor causing the fleet to decrease was the exclusion of a part of small coastal vessels less than 10 metres from the economic analysis. The excluded vessels have licenses and obligation to fill the coastal logbooks but fish only for self-consumption and are not involved in commercial fishery. The excluded volume corresponds 11% to gross tonnage and 7% to engine power in SSCF in 2017. The exclusion of recreational vessels does not affect the total engine power of the fishing fleet and gross tonnage.

Employment

The fishers on the Baltic Sea vessels are usually local Latvia inhabitants. For the crew on board on distant water vessels there may also be invited residents of the 3rd world countries.

The employment of the Baltic Sea fleet was estimated around 661 jobs; corresponding 326 FTEs in 2017. The total employment and the FTE decreased by 33% and 25% respectively between 2008 and 2017 while the GVA per FTE increased by 16%. Compared to other member states, Latvia has a low wage per fisher. Also, the average salary was only 9% higher than the average salary in Latvia in 2017.

Effort

The Baltic fleet spent a total of around 17 300 days-at-sea in 2017 but total number of fishing days calculated for each gear were 18 100. The number of sea days was relatively stable between 2016 and 2017 while the quantity of fuel consumed increased by 38% and was 4.8 million litres in 2017. The live weight of landings also had an increase of 12% in 2017. The trawlers VL1218 operating in the Gulf of Riga and trawlers VL2440 operating in the Baltic Sea used 95% and 66% respectively of their capacity in 2017.The coastal segment VL0010 used 27% from their gross tonnage in 2017.

Production

The total weight landed by the Baltic Sea fleet in 2016 was 66 900 tonnes of fish with a landed value of EUR 19.1 million. The total weight of landings increased by 12% between 2016 and 2017 while the landed value increased significantly by 21% during the same period. Significant increase in landed value was caused by sharp increase in price for the target species in 2017. The average first market price for the European sprat was relatively stable while price for Atlantic herring and Atlantic cod increased by 15% and 34% respectively from 2016 to 2017.

In 2017, in terms of landings composition European sprat was the most common species landed in terms of weight 35 700 tonnes, followed by Atlantic herring 24 800 tonnes and Atlantic cod around 2 100 tonnes. The European sprat also achieved the highest landed value EUR 8.3 million for the national fleet followed by Atlantic herring EUR 6.7 million and then Atlantic cod EUR 2.8 million in 2017. European sprat, Atlantic herring and Atlantic cod accounted for 44%, 36% and 15% respectively of the total landings value in 2017 and contributed to 53%, 37% and 3% to the total landed weight. Nevertheless,

decrease in demand for sprat from the fish processing sector from 2015 to 2017 caused a sharp decline in the average market price by 20% and decrease in weight of landing by 8% in 2016.

Economic results for 2017 and recent trends

National fleet performance

The economic performance for the Latvian fleet in 2017 improved compared to 2016. The amount of revenue generated by the Latvian national fleet in 2017 was EUR 20.1 million including EUR 19.1 million of income from fish sales and EUR 1.9 million of non-fishing income. The revenue increased by 20% or EUR 3.5 million between 2016 and 2017.

The total operating costs increased by 16% between 2016 and 2017, due to the sharp increase in the labour costs and energy by 37% and 42% respectively. The increase for the energy costs was caused by the increase in fishing intensity and volume of the energy consumed per landed tonne by 38% in 2017.

In terms of profitability the total amount of Gross Value Added (GVA), Gross profit and Net profit generated by the Latvian national fleet in 2017 were EUR 9.1, EUR 5.1 and EUR 2.9 million, respectively. The GVA and Gross profit increased by 27% and 22% respectively while Net profit decline by 4% between 2016 and 2017.

Towards the end of 2008 and during 2009 the Latvian fishery sector was negatively affected by the global economic crisis which led to significant decrease of Net profit level in 2009 and 2010. It should be mentioned that high values of Net profit in 2008 are due to the negative values of the opportunity cost of capital (EUR -5.19 million) caused by the negative real interest rates used to estimate this opportunity cost. The economic efficiency of the fleet started to improve in 2011 and reached the Net profit maximum of EUR 6.2 million. However, the Net profit declined by 72% between 2011 and 2013 due to the ban of Russian product trade from European Union countries implemented from the 7th of August 2014. Russian embargo was applied to beef, pork, fruit, vegetables, poultry, cheese, milk products and also fish and fish products, although the embargo list did not include sprat, canned meat and fish. The second reason which negatively influenced the fishery sector between 2015 and 2016 and deteriorated the profitability of the fishery sector was a temporary ban on the import of all fish and fish products from Latvia and Estonia by the Russian food safety authority Rosselkhoznadzor from the 4th June 2015. As a result, around 40 enterprises which exported their production to the Russian market suffered in Latvia. The decrease of the turnover by 22% for the fish processing sector from 2014 to 2015 also influenced the fishery sector. Despite the economic crisis and Russian ban which affected severely the profitability of the fishery enterprises, the Baltic Sea fleet in overall remained on the profit-making positions between 2009 and 2017.

Resource productivity and efficiency indicators

The Gross profit margin in 2017 was 24% indicating a high operating efficiency of the sector. Net profit margin was estimated at 14% in 2017 and the share of GVA to revenue 43% in the same year. The labour productivity (GVA/FTE) increased by 24% between 2016 and 2017 while the numbers of FTE decreased by 8%. The Gross profit margin stay relatable stable while Net profit margin declined by 20% from 2016 to 2017.

The tangible assets (replacement) had low values between 2011 and 2017 and were on average around EUR 11 million annually. The major factors were a long service life of vessels (around 30 years) and obsolete equipment.

The negative value of ROFTA -15% for the small coastal fleet in 2017 is a result of increased costs in the segment VL0010 and in particular of the costs - crew wage which in turn led to losses in 2017. However, negative ROFTA values for the small coastal fleet segment cannot be considered as characterizing of the low profitability of the segment in the long -term.

The positive ROFTA values 50% and 28% respectively are indicated in 2017 for the segment trawlers VL1218 operating in the Gulf of Riga and Baltic Sea trawlers in the segment VL2440. The ROFTA positive and greater than low risk long term interest rate indicates the profitable fishery in the long-term.

In general, it could be concluded for the three main fleet segments that fishing activity is cost effective in the long-term but fleet modernization could be necessary in the near future. It should also be noted that the potential capacity could be 20–30% more for some vessels in segments VL1218 and VL2440. If intensity of fishing for some vessels in segments VL1218 and 2440 will increase, the segments could obtain greater amount of catch and higher revenue from sales which in turn can facilitate a profit growth.

The ratio between the current revenue of the fleet and break-even revenue showed how close the current revenue of a fleet was to the revenue required for the fleet to break even in a short - term. The segment of small boats less than 10 metres with polyvalent passive gears attributed to the segment VL0010 has the lowest CR/BER ratio 0.72 in 2017. The segment contributed only 7% to total Latvian value of landing during analysed period and does not practically affect to the economic situation in the Latvian fishery. The positive CR/BER ratio 2.85 and 1.40 in 2017 for the segment trawlers VL1218 and VL2440 indicating the segments are profitable in the short - term.

The total numbers of vessels and total engine power decreased by 36% and 19% respectively from 2008 to 2017 while the average engine power per vessel increased by 48%. The number of the fishing days per vessel increased significantly by 42% while the average days-at-sea increased by 25% from 2008 to 2017. The landings and weight per unit of effort (in days-at-sea) had a sharp increase by 46% since 2008. The fuel consumed per landed tonne decrease by 25% while landed value per landed tonne (average price) decreased by 9% from 2008 to 2017. The landed weight per vessel had sharp increase by 38% between 2008 and 2017 while the landed value per vessel increased by 34% during the same period. The main factor which caused the increase in profitability of the Baltic Sea fleet was the decommissioning of the vessels from 2008 to 2017 and the increase of fishing intensity per vessel.

Performance by fishing activity

Small-scale coastal fleet

The number of the small-scale coastal fleet (SSCF) was relatively stable between 2016 and 2017. The vessels are included in the segment VL0010 metres which use polyvalent or passive gears and target at Atlantic salmon, Atlantic cod, European flounder, European eel and other coastal species. The SSCF business is oriented to the local market. The fishing trip usually is less than 24 hours and the weather conditions as cold winters may influence a lot the turnover of the segment. The coastal species achieved the highest average price per kilo EUR 1.59. Despite the highest prices for coastal species, the amount in the total landings composition had negligible values - 5% and 6% respectively from the total value and weight of landing in 2017 and did not influence the total value of Latvian landings. The landings weight for the SSCF decreased by 10% while the value of landings stays relatable stable and were around 3.4 thousand tonnes and EUR 1.0 million respectively in 2017. The SSCF is important for employment in coastal regions and was estimated at 298 jobs, corresponding to 120 FTEs. The GVA and Gross profit had a sharp declined by 44% and 84%. The SSCF suffered losses (EUR -0.150 million) in 2017 due to the sharp increase in energy costs and crew wage by eight times and four times respectively from 2016 to 2017.

Large-scale fleet

The increasing trend was observed for the large-scale fleet (LSF) operating in the Baltic Sea and the Gulf of Riga. The LSF targets at European sprat, Atlantic herring and Atlantic cod. The LSF was represented with the 55 vessels included in two segments VL2440 and VL1218 metres. The segments contributed 94% to total revenue and 100% to Net profit in 2017. Employment for the large-scale fleet was estimated at 363 jobs in 2017, corresponding to 206 FTEs. The total employment of large-scale fleet and FTEs was relatively stable over the observed period. The income from landings increased by 23% between 2016 and 2017 while the Net profit had a sharp increase during the same period from by 32%. The main reason was the increase in price for target species Atlantic herring and Atlantic cod 15% and 34% respectively between 2016 and 2017.

Distant water fleet

There were four active distant water vessels which made up the segment of vessels over 40 metres owned by two Latvian companies in 2017. One vessel with the average length of 60m was based predominantly in NEAFC area targeting beaked redfish. Three vessels with an average length of 100m operated in the CECAF area and targeted Atlantic horse mackerel, Atlantic mackerel, Madeiran sardinella and sardine. In 2017, the main landing ports for these vessels were Hafnarfjordur, Reykjavik, Dakhla and Nouadhibou. In 2017 the total weight for the Atlantic catches was 50.2 thousand tonnes of fish with an estimated value of EUR 18.7 million and reported income from landing EUR 11.5 million.

Performance results of selected fleet segments

The Baltic Sea fleet consisted of 3 active fleet segments in 2017. A short description for the segments is provided below.

Pelagic trawl 24-40 meters

44 vessels made up this segment in 2017 and vessels operated predominantly in the Baltic Sea. These vessels target at species such as European sprat, Atlantic herring and Atlantic cod. The total value of landings was EUR 15.5 million and around 162 FTEs were employed in the fleet segment in 2017 contributing 81% and 50% of the total income from landings generated and FTEs in the national fleet. The fleet segment was highly profitable with a reported Gross profit of around EUR 4.3 million and a Net profit of around EUR 2.5 million in 2017.

Pelagic trawl 12-18 meters

11 vessels made up this segment in 2017 and the vessels were operating predominantly in the Gulf of Riga. These vessels targeted at European sprat and Atlantic herring. The total value of landings was EUR 2.6 million and only 44 FTEs were supported in 2017 contributing 13% and 13% of the total income from landings generated and FTEs in the national fleet. The Gross profit and Net profit of EUR 0.664 million and EUR 0.568 million respectively were generated in 2017.

Polyvalent or passive gears <10 meters

196 vessels made up this segment in 2017 and the vessels were operating predominantly in the Baltic Sea and the coastal zone of the Gulf of Riga. These vessels targeted at a variety of Atlantic cod, Atlantic salmon, European flounder, European eel, Atlantic herring and other coastal species. The total value of landings was EUR 1.1 million and 120 FTEs were supported in 2017 contributing 6% and 37% of the total income from landings generated and FTEs in the national fleet. The Gross profit and Net profit of EUR 0.122 million and EUR -0.150 million respectively were generated in 2017.

Drivers affecting the trends of the economic performance

Operational costs, including fuel prices

The operational costs for the Latvian fleet in 2017 were EUR 15.9 million amounting to 76% of revenue. Overall the operational cost structure stayed relatively stable between 2008 and 2017. The sharpest increase was observed for the personal costs and energy costs which increased by 37% and 42% respectively in 2017. The items with the largest cost in 2017 were other non-variable costs, other variable costs and wages contributed 31%, 24% and 22% respectively to the operational costs.

The average fuel price per vessel in 2017 was EUR 0.50 per litre, which decreased by 39% since 2013 while the average landed fish price decrease by 22%. However, the average energy costs per vessel increased by 42% between 2016 and 2017 due to the 19% increase in fuel consumed per landed tonne.

Markets and Trade

The average price obtained for European sprat stay relatable stable while the Atlantic herring price increase by 18% between 2016 and 2017 and the price of the Atlantic cod increase sharply by 36% during the same period.

The fishery sector in Latvia depends on the economic situation in the external markets as well as on the turnover of the fish processing enterprises. The most important buyers of fresh fish are fish processing enterprises in Latvia and in neighbouring countries. The main produced product types are fresh or frozen fish and prepared or canned fish. The total exported value of the production to the EU countries increased by 10% or EUR 18.4 million between 2016 and 2017 while exported volume of the production also increased by 10% or around 9.7 tonnes. The increase in export to the EU countries was observed only by 4% or EUR 6.2 million from 2016 to 2017. The highest decline in turnover was observed with the 3rd world countries where fish production export declined by 41% in value or EUR 28.1 million during the same period. The main reason was the negative impact because of the ban of the product trade by Russia. The export to the Russian Federation was completely discontinued in 2017.

The Denmark ranked in the first place in terms of exported production value followed by Lithuania and Estonia with the share of 16%, 16% and 13% respectively in 2017.

It is expected that the Brexit of the UK from the European Union will not have a direct disruptive effect on the fisheries in Latvia due to the low share around 2% annually in the total Latvian export, as well as in different operating areas for Latvian vessels.

Management instruments

The scrapping of seven vessels was implemented according to the "Action plan for 2015-2017 to reach the balance between the Latvian fishing fleet's capacity and the fish resources for fleet segment VL24-40 m netters targeting at Eastern Baltic Cod". The other two vessels which potentially may operate as netters for the economic analysis in AER 2018 have been included in the segment trawlers VL2440 metres. The vessels decommissioning scheme was finalised in 2017 and further reduction of the fleet is not planned.

The distant water fleet had significant changes between 2013 and 2016. Three vessels were sold and excluded from the Fleet Register between 2013 and 2015 and at the same time eight vessels with the average length around 60 metres were included in the Fleet Register. The main reason for the changes was unlimited fishery in NEAFC area and high stock for Queen crabs in the Barents Sea. However, the Queen crabs' fishery was discontinued in 2017 and 8 from 12 vessels in the Fleet Register were inactive.

Latvia has one multilateral agreement for data sampling in CECAF area. Starting with 2012 the sampling of pelagic fishery has been performed on the basis of multi-lateral agreement between Germany, Latvia, Lithuania, the Netherlands and Poland by local observers.

TACs and quotas

The economic effectiveness of the Latvian fishing fleet is fully dependent on the quota received for the target species. The fishing quota for the European sprat remained approximately the same between 2018 and 2019 and was 37 460 tonnes. The quotas for the Atlantic herring in the Gulf of Riga increased by 7% while in the central region of the Baltic Sea decreased by 35% as compared to 2018. The fishing quota of the Atlantic herring in the Gulf of Riga and the central region of the Baltic Sea are 4 723 and 16 708 tonnes respectively in 2019. The fishing quotas for the Atlantic salmon in the Baltic Sea are 12 012 by the number of individual fish. The fishing quota of the Atlantic cod reduction in the eastern part of the Baltic Sea is 18%. The fishing quotas of the Atlantic cod in the western and eastern part are 344 tonnes and 2 060 tonnes, respectively. Latvia fulfils the fishing quotas of the sprat and Baltic herring assigned thereto almost completely. The fishing quotas of the salmon are used in a very small-scale. However, the remaining salmon share is used in the international quotas for the exchange for sprat. The changes in quotas between 2018 and 2019 do not practically affect the fishing efficiency in 2019.

Improvements and Development

For the elaboration of the national Fisheries Policy the Integrated Control and Information System (ICIS) was developed and improved during 2015 and 2017. ICIS is used for general management of fishing licences, control and enforcement of fishing activities. The database contains information from the vessel electronic logbooks as well as information from the coastal logbooks for the SSCF. The new part of the database was developed for imputing the distant water fleet data. The first distant water fleet data was stored in the database for 2016. The development of the ICIS provides better collaboration between Latvian fishing fleet management institutions and improves work of the staff with the data base as well as simplifies the process of data validation and allows to make cross checks and reports automatically.

Socioeconomic impacts

Changes that could affect the social situation in Latvia are connected to the decommissioning of the vessels between 2008 and 2017. Vessel scrapping between 2008-2017 as well as other structural changes in fleet segments had a positive impact on incomes and minimised the total costs resulting in an increase in profitability and overall improvement in the economic effectiveness of several fishing firms. However, the changes in the fleet may have had impact on the employment in coastal regions and especially on the SCF where the opportunities to find the job outside the fishery are low. The low salary and heavy working conditions also contribute to the outflow of labour abroad and force young people to choose other professions outside the fisheries.

Nowcasts for 2018-19 and outlook

Model forecast

Preliminary results for 2019 forecast a relatively stable landed weight, matched by a 24% decrease in landed value. Projections suggest operating costs increase, most notably personal and energy costs which are estimated to increase by 17% and 11%. In addition, the slight increase in capital costs, fostered further economic performance deterioration in 2019: GVA (-20%), gross profit (-19%) and net profit (-77%).

Results indicate that the Latvian fleet operated at a profit in 2018: with an estimated net profit of EUR 2.2 million and a margin of 11%. However, the deterioration of economic developments can be seen in performance indicators GVA to FTE (-12%), gross profit margin (-45%) and GVA per FTE, estimated at EUR 23.7 thousand in 2016 (-15%).

The fleet continuing operate with profit also in 2019. The decreased landings (-4% compared to projected 2018 figures) and lower prices per target species, resulting in an 24% decrease in value. With variable costs also increasing in 2019 (+4%), the fleet remains profitable with gross and net profit margins of 18% and 4%, respectively. However, the net indicators may be somewhat biased by negative estimated opportunity costs.

Projection suggests that Latvian fleet will keep the profit-making position in 2018 and 2019. However, the reliable economic data for 2018 will be received by questionnaires in 2019 and results provided in the current tables for 2018 and 2019 should be used with caution.

Data issues

All transversal data for 2008 to 2018 were obtained from the 'Integrated Control and Information System' for Latvian fisheries. The information system contains the logbook data and technical parameters of the fishing vessels from the Vessel Register. The data is reported on a monthly basis and covers all members of the Latvian fishing vessel population. All economic variables for 2008 to 2017 were received from the Central Statistical Bureau of Latvia (CSB) after completing the state statistical questionnaire form "1-Fisheries" and other statistical sources of economic information based on the annual balance sheet. Primary economic information from the state statistical questionnaire "1-Fisheries" was received annually from the owners of fishing firms. Economic data covers all the members of population. Despite that economic data collection is based on questionnaire forms, participation of the respondents is obligatory according to the Latvian legislation. The achieved sample rate was 100%.

The calculations were applied for FTEs and income from landings for 2008-2017 and were based on the data received from questionnaires and vessel logbooks.

The estimated values for the costs were used for 2015 and 2017. Restructuring of the costs between segments of the fleet was implemented for 2015 and 2017 in proportion relative to the value of landings. The main reason for restructuring the costs is the data collected from the companies which own vessels included in different segments. In some of such cases value and volume of landings precisely correspond to the segment but expenditures are attributed to the biggest segment.

The observed difference between 2010 and 2011 for the depreciated replacement value was caused by the necessary changes regarding data collection methodology implemented for more reliable data collection in 2010. The first data collected by the new approach was received for 2011. The data for 2008 and 2010 was imputed based on formulas for vessel scrapping. More reliable data for the depreciated replacement value was obtained by the questionnaire for 2011- 2016.

The data for the distant water fleet (segment VL40XX) operating in the Atlantic area 27 (NEAFC) and area 34 (CECAF) was collected but have not been submitted to ensure data confidentiality. In requested format, the data should be separated by supra regions and fishing technique. There were two segments which operated in the Atlantic in 2017: VL40XX TM NEAFC AREA 27 (one vessel) and VL40XX TM CECAF AREA 34 (3 vessels). The economic data cannot be provided for an individual vessel or for the vessels belonging to different companies (two companies in 2017).

The data collection of the social variables was conducting in 2018 the data was collected for 2017. The programming of computerized self-fulfilling questionnaires was implemented. The programming was carried out using the Lime Survey software. The automatically generated individual access to the online questionnaire form was sent to each respondent by e-mail. The enterprise was observation unit for the survey. The type of data collection was census with achieved sample rate 24%. The following variables were included in the questionnaire: employment by gender, employment by age, employment by education level, nationality and employment by employment status. The results were raised from sample to the population based on the total number of employees in the sector. The collected social data could be used for the overall analysis in the fishery sector. Furthermore, the received social data could be included into a subsequent forecast for the development of Latvian fishing fleet.

Table 5.36 Latvia: National fleet statistics and economic performance results. Nowcast figures for 2018 and 2019

		2008	2009	2010	2011	2012	2013	2014	2015	2016	*2017*	*2018*	2019	Trend 2008-2018	Δ 2017 to 2016	Δ 2017 to avg. 08-16
Capacity	Number of vessels	858	814	771	407	356	351	365	329	332	324	322	322		-2%	-36%
	Total vessel power	34,200	32,701	26,694	26,692	22,764	21,286	19,784	20,876	20,935	20,342	19,312			-3%	-19%
	Total vessel tonnage	12,867	12,368	9,755	10,142	8,412	7,779	6,987	7,379	7,349	6,753	6,288			-8%	-27%
Employment	Engaged crew	1,621	1,666	1,619	712	643	678	607	702	647	661	630	626		2%	-33%
	Unpaid labour										138					
	FTE national	664	548	521	378	353	414	362	347	318	326	316	309		3%	-25%
	Total hours worked per year (engaged crew)										586,905					
Effort	Days at sea	44,239	48,014	43,629	19,634	19,480	19,364	19,197	18,261	18,107	17,269	16,580	16,269		-5%	-38%
	Fishing days	35,894	38,163	35,560	17,440	17,333	17,208	17,132	16,259	19,552	18,145	17,669			-7%	-24%
	kW fishing days	2,500,135	2,030,267	1,971,140	1,878,345	1,937,165	1,902,196	1,766,907	2,033,044	2,092,486	2,028,700				-3%	1%
	GT fishing days	976,194	753,771	756,076	694,201	736,184	716,117	667,647	775,379	758,583	691,080				-9%	-9%
	Number of fishing trips	32,985	35,196	31,436	14,039	13,713	13,859	15,530	15,282	16,559	16,059				-3%	-23%
	Energy consumption	8,328,627	6,628,378	6,529,676	6,497,756	6,612,998	5,283,602	5,305,031	5,716,671	3,477,794	4,806,682	4,729,443	4,646,834		38%	-20%
Landings	Live weight of landings	86,469,603	78,463,896	74,017,218	63,119,788	57,472,974	60,850,474	59,162,530	62,083,660	59,964,730	66,957,594	70,182,536	67,647,497		12%	0%
	Value of landings	25,396,285	18,894,238	22,751,234	22,326,442	23,588,958	22,275,564	19,496,221	19,776,101	15,801,451	19,102,653	18,405,956	16,260,688		21%	-10%
Income	Gross value of landings	25,396,285	18,894,238	22,751,234	22,326,442	23,588,958	22,275,564	19,496,221	19,776,101	15,801,452	19,102,653	18,405,956	17,150,603		21%	-10%
	Other income	1,507,907	2,872,584	899,251	872,078	1,382,569	1,635,082	794,226	911,872	1,765,955	1,978,195	1,827,507	1,855,767		12%	41%
	Operating subsidies	1,745,321	3,641,573	36,793	1,653,797	887,224	350,451	-	-	327,010	-				-100%	-100%
	Income from leasing out quota	-	-	-	-	-	-	-	-	-	-					
Expenditure	Personnel costs	4,492,034	3,456,609	3,450,889	3,390,229	3,856,535	4,237,528	3,055,172	3,601,634	2,833,959	3,868,528	3,942,299	3,729,319		37%	8%
	Value of unpaid labour	79,727	67,950	45,906	21,848	22,216	13,474	46,276	217,942	138,626	74,317	90,208	90,890		-46%	2%
	Energy costs	4,816,472	3,712,241	3,697,778	4,298,880	4,942,493	4,365,156	3,402,365	2,858,336	1,702,417	2,421,186	2,921,559	2,803,083		42%	-36%
	Repair & maintenance costs	1,040,511	904,241	904,008	951,216	1,386,705	1,142,438	1,042,476	1,106,668	992,198	1,000,213	951,349	938,861		1%	-5%
	Other variable costs	2,567,011	2,513,300	2,906,187	2,709,887	3,761,358	4,253,214	3,421,535	2,609,695	2,440,732	3,575,802	3,505,920	3,440,658		47%	18%
	Other non-variable costs	2,924,225	2,616,671	3,838,371	4,348,018	6,357,427	5,997,916	5,227,617	2,754,255	5,274,118	5,014,005	4,600,200	4,701,414		-5%	15%
	Consumption of fixed capital	1,502,349	1,404,560	1,450,633	1,021,390	1,387,344	1,827,894	1,567,217	1,629,067	1,060,817	2,401,534	2,218,731	2,266,938		126%	68%
	Lease/rental payments for quota	-	-	-	-	-	-	-	-	-	-					
Indicator	Opportunity cost of capital	- 5,196,644	5,106,158	5,727,379	219,851	237,017	335,258	161,384	82,493	47,437	- 221,252	- 169,881	- 206,894		-566%	-130%
	Gross Value Added	15,555,971	12,020,369	12,304,142	10,890,518	8,523,544	8,151,922	7,196,454	11,359,019	7,157,942	9,069,643	8,254,435	7,122,355		27%	-12%
	Net Value Added	19,250,266	5,509,651	5,126,130	9,649,277	6,899,184	5,988,769	5,467,852	9,647,459	6,049,688	6,889,361	6,205,585	5,062,311		14%	-16%
	Gross profit	10,984,210	8,495,809	8,807,347	7,478,441	4,644,793	3,900,920	4,095,006	7,539,443	4,185,357	5,126,797	4,221,928	3,302,145		22%	-23%
	Net profit	14,678,505	1,985,091	1,629,335	6,237,200	3,020,432	1,737,768	2,366,404	5,827,883	3,077,103	2,946,515	2,173,078	1,242,102		-4%	-35%
	Net profit subsidised	16,423,827	5,626,664	1,666,129	7,890,998	3,907,656	2,088,219	2,366,404	5,827,883	3,404,113	2,946,515	2,173,078			-13%	-46%
	Net profit rights	16,423,827	5,626,664	1,666,129	7,890,998	3,907,656	2,088,219	2,366,404	5,827,883	3,404,113	2,946,515	2,173,078			-13%	-46%
Capital	Value of physical capital	67,550,516	58,219,222	49,035,102	13,396,760	10,681,422	10,037,677	8,978,670	10,876,015	11,042,831	10,998,475	10,252,806	10,425,858		0%	-59%
	Value of quota and other fishing rig	-	-	-	-	-	-	-	-	-	-					
	Investments	349,287	257,029	353,834	396,580	522,380	689,046	808,452	239,420	406,830	149,920				-63%	-66%
	Total assets										11,834,068					
	Long/short debt										2,852,845					
	Subsidies on investments										116,064					

Data source: MS data submissions under the DCF 2019 Fleet Economic (MARE/A3/ASC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

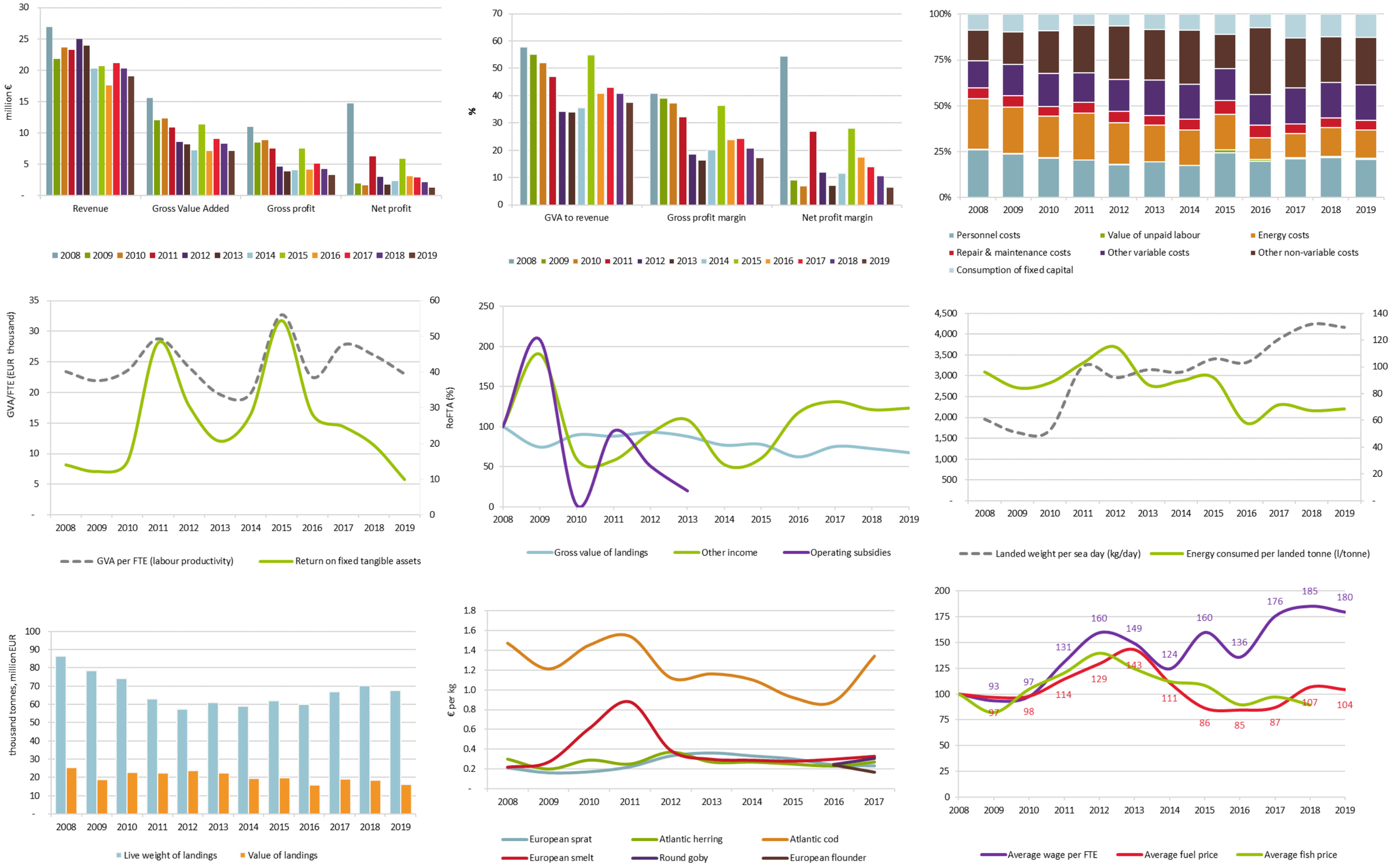


Figure 5.13 Latvia: Main trends in economic performance indicators (absolute value, panel 1a/top left and relative value, (panel 1b/top middle); cost structure (panel 1c, top right); productivity (panel 2a); key input/outputs (panel 2b); efficiency (panel 2c); landings (panel 3a); average price (EUR /kg) of top species (panel 3b). Nowcast figures for 2018 and 2019

Data source: MS data submissions under the DCF 2019 Fleet Economic (MARE/A3/ASC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Table 5.37 Latvia: National fleet statistics and economic performance results by fleet segment, 2017

	Number of vessels	FTE national	Days at sea	Energy consumed per landed tonne	Live weight of landings	Value of landings	Revenue	Gross Value Added	GVA to revenue	Gross profit	Gross profit margin	Net profit	Net profit margin	Average wage per FTE	GVA per FTE (labour productivity)	Return on fixed tangible assets	Profitability (2017)	Net profit margin %Δ 2017 - average (2008-16)	Economic development trend	As a % of total revenue
LVA NAO TM 2440 NGI	44	162	5,208	66	54,133,990	15,451,450	17,105,626	7,175,841	42.0	4,340,100	25.37	2,519,861	14.73	17,505	44,295	28.1	Reasonable	-38%	Deteriorated	81%
LVA NAO TM 1218 NGI	11	44	1,967	128	9,402,216	2,575,055	2,787,460	1,341,143	48.1	664,327	23.83	568,567	20.40	15,382	30,481	50.3	High	224%	Improved	13%
LVA NAO PGP0010 NGI	196	120	10,094	14	3,421,388	1,076,149	1,187,762	552,659	46.5	122,370	10.30	- 150,279	- 12.65	3,586	4,605	- 15.5	Weak	-121%	Deteriorated	6%

Data source: MS data submissions under the DCF 2019 Fleet Economic (MARE/A3/ASC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Table 5.38 Latvia: Landed value, weight and average price of principal species

	Value of landings (real) (thousand €)										Live weight of landings kg										Average landed price (real) (€)										% over total	
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	in EUR	in weight
European sprat	11.9	7.9	7.9	7.3	10.2	12.1	10.2	9.2	6.7	8.3	57,301,253	49,549,880	45,844,783	33,440,598	30,718,336	33,309,663	30,760,836	30,500,808	28,103,416	35,744,176	0.2	0.2	0.2	0.2	0.3	0.4	0.3	0.3	0.2	0.2	42%	53%
Atlantic herring	6.8	4.4	6.1	5.7	7.5	5.6	6.3	6.3	6.0	6.7	22,526,758	21,556,658	21,350,731	22,817,315	20,055,557	20,680,438	23,265,004	25,250,806	26,101,619	24,795,181	0.3	0.2	0.3	0.3	0.4	0.3	0.3	0.3	0.2	0.3	34%	37%
Atlantic cod	5.9	5.6	7.5	7.6	4.8	3.0	1.6	2.4	2.1	2.8	4,019,439	4,610,733	5,159,735	4,948,599	4,280,178	2,563,785	1,455,974	2,590,076	2,339,130	2,078,259	1.5	1.2	1.5	1.5	1.1	1.2	1.1	0.9	0.9	1.3	14%	3%
European smelt	0.4	0.5	0.7	1.3	0.6	0.8	0.4	0.3	0.2	0.4	1,745,073	1,978,765	1,127,771	1,466,779	1,462,422	2,512,745	1,511,377	1,102,184	579,682	1,220,577	0.2	0.3	0.6	0.9	0.4	0.3	0.3	0.3	0.3	0.3	2%	2%
Round goby									0.2	0.3									576,348	1,008,988									0.3	0.3	2%	2%
European flounder	0.2	0.2	0.1	0.2	0.2	0.4	0.5	0.5	0.5	0.3	650,744	517,950	281,206	297,741	608,673	1,446,297	1,828,118	2,050,444	1,902,095	1,559,517	0.3	0.5	0.4	0.7	0.3	0.3	0.3	0.3	0.2	0.2	1%	2%
Fourhorn sculpin									0.1	0.1									195,600	363,180									0.3	0.3	1%	1%
Eelpout	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	12,330	23,140	6,055	21,740	10,799	30,470	39,644	12,060	61,374	31,369	0.5	2.4	2.2	1.9	0.8	1.1	1.3	0.7	0.6	1.2	0%	0%
Snaggletooth					0.0	0.1	0.0	0.3							102,405	161,410	77,500	242,070							0.2	0.4	0.4	1.2			0%	0%
Other	0.2	0.2	0.4	0.2	0.3	0.3	0.4	0.8			209,248	218,055	243,356	125,123	234,365	144,210	217,391	334,382			0.8	0.8	1.6	1.9	1.4	1.8	1.8	2.4			0%	0%

Data source: MS data submissions under the DCF 2019 Fleet Economic (MARE/A3/ASC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

5.14 Lithuania

Short description of the national fleet

Fleet capacity

In 2017, Lithuanian fishing fleet consisted from 149 registered vessels and compare to 2016 it decreased by 3% and further declined by 1.3% in 2018. In 2017 national fleet used around 60% of capacity for fishing corresponding to 90 active vessels. Compare to 2016 exploitation of capacity was at the same level with minor deviation. The total combined gross tonnage and engine power in 2017 was 41.3 thousand GT and 49,0 thousand kW with annual decrease of 12% and 9%, respectively. Concerning fleet capacity in 2018, GT and total engine power remained almost unchanged – 41.6 thousand GT and 48.9 thousand kW.

Fleet structure

Lithuanian fishing fleet consists of small-scale fleet segments (SSCF) fishing in the coastal area of Baltic Sea (68.8% of number of active vessels and 0.81% of total GT), large-scale fleet (LSF), operating in Baltic Sea (24.4% of number of active vessels and 11.58% of total GT) and distant water fisheries (LDF) fleet (6.7% of number of active vessels and 87.6% of total GT). SSCF is composed from three segments: coastal vessels under 10 m length (56 vessels) fishing with passive gears, vessels 10-12 m (4 vessels) operating in coastal area and 24-40 m netters fishing in Baltic Sea (2 vessels). Due to confidentiality issue, 2 netters 24 m length are clustered with coastal fleet segments. Large-scale fleet operating in Baltic Sea consists from demersal trawlers 18-24 m and 24-40 m (14 vessels all together) and pelagic trawlers 18-24 m, 24-40 m and over 40 m (8 vessels all together). The distant water fleet was dominant in terms of landings and capacity and consists from three segments: demersal trawlers and/or demersal seiners 24-40 m (1 vessel), demersal trawlers and/or demersal seiners over 40 m (1 vessel), and the largest segment pelagic trawlers over 40 m (4 vessels).

Employment

Employment figures for 2017 show further decline. Total number of fishers including people working onshore in coastal fleet decreased by 6% and around 28% in five year period compare to 2012. In 2017 Lithuanian fishing sector employed 466 fishers, corresponding to 348 FTEs. In terms of number of employees, the largest decline was observed in the small-scale fleet – 16% compare to 2016.

Effort

Significant decline in days-at-sea and fishing days was observed in 2017 corresponding to 18% and 19% respectively. Largest decline in effort was observed in small-scale fleet – 21%, whereas in large-scale and long distance fleets days-at-sea were reduced by 12% and 16% respectively. In relation to decrease in efforts, energy consumption declined by 6% in 2017. However, in 2018 effort for Lithuanian fishing fleet recovered from 2017 decline when days-at-sea increased by 9.2% and fishing days improved by 12.6%. Unfortunately, increase of fishing effort in 2018 have not resulted in higher volumes of production.

Production

Decline in fishing days by 19% in 2017 lead to 16% decrease in volume of landings (to 88.674 thousand tonnes) and 18% drop in value of landings (to EUR 6.642 million). At national level, Lithuanian fleet long distance fleet had the largest decline of production volume – almost 52% compare to 2016. Performance of national fleet significantly depends on long distance fleet fisheries. Distant water fleet in 2016 covered 78.7% of national total landed volume. In 2017 volume and value of production in long distance fleet declined by 52% (to 69.810 thousand tonnes) and 43% (to EUR 53.142 million) respectively. The structure of landings in long distance fleet in terms of value generated from the main species recently remains unchanged with the largest share of coming from Atlantic horse mackerel (33.2% of value from landings), followed by Chub mackerel (22.2% of total value), Chilean jack mackerel (16.5% of total value) and Northern prawn (16.1% of total value). In 2018 Northern prawn was the species, generating the largest share of value from landings.

Concerning fisheries in Baltic Sea (Subarea 27.3.d) value of landings in 2017 decreased by 8.6% (to EUR 5.26 million) compare to 2016, but in 2018 improved by 15.5% (to EUR 6.07 million). The largest share of production value in 2017 was from Baltic sprat corresponding to 44% (EUR 2.316 million) of total value, following by Baltic cod with 31.8% (EUR 1.67 million) of total value. During 2016-2017 weight of

Baltic sprat and Baltic cod landings from Baltic sea increased by 8% (to 12.48 thousand tonnes) and 3.6% (to 1.729 thousand tonnes) respectively. However, value of landings of Baltic cod in 2018 dropped to the lowest level in the analysed period by 55% to EUR 750.9 thousand, compare to EUR 1.67 million in 2017. Data confirms the continuing decline of cod catches in Baltic sea, for example in 2018 weight and value of cod landings decreased by around 55% compare to 2017.

In 2017, in terms of landing value from coastal fleet the dominant species were European smelt, Baltic cod and round goby. Seasonally harvested European smelt has a tendency to increase value of landings for small-scale coastal fleet. Income from Baltic cod, as was mentioned before is constantly decreasing in both, large-scale Baltic fleet as well as in small-scale coastal fleet. In 2017, Baltic cod landings in term of value decreased by 24.7% (to EUR 104.7 thousand) and in 2018 further declined by 28.6% (to EUR 74.7 thousand). In 2017 and 2018, in terms of landing volume, the most dominant species for small-scale fleet was invasive round goby.

Economic results for 2017 and recent trends

National fleet performance

As the economic indicators of the national fleet are strongly dependent on the activity of the distant water fleet fisheries, factors that affect the performance of other fleet segments have a minor impact at national level. Almost 92% of total national revenues were generated from the distant water fleet in 2017. Revenue decreased by 18% compare to 2016. Taking into account long distance fleet segment dominance in national fleet, economic performance will be provided separately by each segment and fishing area in relevant further sections of the report.

The total amount of revenues in 2017, generated by the Lithuanian national fleet was EUR 57.49 million and consisted from 97.2% of fishing income and 2.8% of other income. Gross value added (GVA) and gross profit generated by the Lithuanian national fleet in 2017 were EUR 5.1 million and EUR -4.86 million (losses), respectively. Value of physical capital in 2017 decreased by 5% to EUR 112.4 million, investments declined significantly to EUR 0.23 million per year, compare to EUR 2.2 million in 2016.

Resource productivity and efficiency indicators

In 2017 national FTE remained almost unchanged whereas GVA declined significantly, thus reducing labour productivity to 14.67 thousand EUR per FTE. Compare to 2016, labour productivity declined by 67%. National efficiency indicators are highly influenced by the distant water fleet economic performance, where GVA/FTE decreased most significantly compare to other fleet segments. However, in 2017 decline of labour productivity was observed in large-scale and small-scale fisheries.

Return on fixed tangible assets (ROFTA) in 2017 was continuously negative and decreased to -12,9%. Decline was observed in all fleet segments.

Fishing efficiency in terms of landing weight per days-at-sea per active vessel (LPUE) in 2017 increased significantly in all fishing areas compare to 2016. The largest annual increase in LPUE observed in the distant-water fleet - 44.5% to 7.7 tonnes per sea day per active vessel, and large-scale fleet which increased LPUE by 18% to 0.43 tonnes per sea day per active vessel.

Performance by fishing activity

Small-scale coastal fleet

Small-scale coastal fleet consists of vessels 0-10 m and another segment, with larger than 10 m coastal vessels using passive gears and due to confidentiality reasons were clustered with two vessels operating in Baltic Sea with drift and fixed nets. Due to the presence of clustered segment with larger vessels fishing with drifting nets, SSCF performance is not specifically representing small-scale segment but rather the fleet fishing with passive gears. In 2017, fleet consisted of 62 active vessels with 5% decline compare to 2016. Effort, expressed in days-at-sea and fishing days declined by 21% in 2017. In the relation to the effort, landing volume declined by 14%. Economic indicators for this fleet are characterized by high annual volatility and strongly depends on the vessels larger than 12 m. In 2017, GVA decreased by 21% to EUR 0.32 million, net profit was negative and declined to EUR-42.7 thousand. Fleet employed 137 persons (crew and people on shore, related to fisheries) corresponding to 38 FTE. Number of persons employed and FTE declined 16% and 17% respectively, compare to 2016.

Large-scale fleets

Lithuanian large-scale fleet consists from two clustered segments, characterized by different fisheries and economic performance. Large-scale demersal trawler operates in Baltic Sea and targeting mainly Baltic cod, whereas large-scale pelagic trawlers operates in the same area but are targeting Baltic herring and European sprat. However, during the recent years, when cod fisheries started to constantly decline, and pelagic fisheries improved, both segments use mixed fisheries and operates on both demersal and pelagic gears depending on targeting stock and allocated fish quota. Number of active vessels in large-scale fleet decreased by 1 vessel and totalled 22 in 2017, corresponding to 3.9 thousand gross tonnes and 8.1 thousand kW, with 6% and 5% increase from 2016 respectively. In 2017, days-at-sea and fishing days decreased by 12% and 17% respectively. However, reduced effort was followed by almost unchanged volume of landings resulting better efficiency or landings per unit effort. Value of landings in large-scale fleet decreased by 13% to EUR 4.37 million in 2017. Concerning economic performance, in 2017 large-scale fleet incurred EUR -0.33 million of gross losses and EUR -0.79 million net losses. In contrary to previous years, 2017 for large-scale pelagic trawler segment was unsuccessful and it generated losses. Turning down the all large-scale fleet performance. Operating costs for large-scale fleet in 2017 increased by 15.8% compare to 2016 when revenues declined by 10%. The major changes in operating costs were related to the increase in personal costs by 21% and 16% higher expenditures on the energy products. Increase in wages was followed by national trend of growing of salaries. In 2017, large-scale fleet employed 133 persons (crew members) corresponding to 90 FTE. Number of employees increased by 5% whereas FTE declined by 2%.

Distant water fleet

In 2017, the Lithuanian distant water fleet consisted from 6 active vessels corresponding to 29.4 thousand gross tonnes and 26.3 thousand kW engine power. Such capacity of long distance fleet was the lowest, ever recorded. Compare to 2016 GT and kW decreased by 17% and 23% respectively. However, in 2018 decline was detained. Fishing effort in terms of days-at-sea and fishing days decreased equally by 16%. Volume and value of landings consequently dropped by 19%. Days-at-sea for this fleet segment has a constant decline from 2011 onwards to the record low effort in 2018 reaching 1023 days-at-sea. Distant water fleet has characteristics of high annual fluctuation of revenues and accordingly varying profitability results. In 2017 long distance fleet generated EUR 3.39 million GVA, with significant decline from 2016. Gross losses were EUR -4.54 million. Negative profitability results were influenced by 19% decline in revenues due to lower catches and increased operating costs. Repair and maintenance expenditures were 28% higher compare to 2016, wages and energy costs also increased by 10% and 7% respectively. Regardless of decline in capacity and fishing effort, long distance fleet was able to maintain stable employment. Number of jobs (crew members) in 2017 declined only 6% whereas FTE improved by 5% to 220.

Performance results of selected fleet segments

National fleet consists of five main segments, representing four type of fisheries, small-scale coastal fleet (two segments), demersal trawlers and pelagic trawlers operating in Baltic Sea and the distant water fleet. From the total fleet three main segments will be presented.

Passive Gears (PG) <10m

In 2017, total number of active vessels in this segment were 56 which operated entirely in coastal area of Baltic Sea with the passive gears. Compared to 2016 number of vessels decreased by 1.8%. The fleet targets a variety of species, in 2017 the main species in terms of value was European smelt, Baltic cod and round goby, corresponding to 46%, 20% an 17% of total value respectively. In 2017, revenue increased by 4% to EUR 0.47 million. GVA for PG 00-10 segment decreased by 4.6% to EUR 275.6 thousand, net profit declined by 19% to EUR 84.6 thousand corresponding to 18.2% net profit margin. In 2017 employment in this segment declined by 14.5% to 117 persons employed. Labour productivity improved by 7% to EUR 10 thousand GVA/FTE.

Demersal Trawlers and Seiners (DTS) 24-40

In 2017, this segment consisted from 14 active vessels with 7% increase from 2016. This fleet segment operates in Baltic Sea with demersal trawlers as the dominant fishing gear in fishing efforts. Fleet is targeting mainly Baltic cod with main gear and pelagic species with second gear. In 2017 demersal trawler segment generated EUR 1.64 million revenue with 12% decline compare to 2016. Profitability of this segment has been constantly decreasing since 2013. Demersal trawlers generated EUR 0.28 million GVA, whereas gross profit declined to EUR -0.15 million losses. Concerning net profit, segment incurred

EUR -0.31 million net loss. Demersal trawler segment employed 73 persons corresponding to 51 FTEs, down by 25% compare to 2016.

Pelagic Trawlers (TM) 24-40

In 2017, pelagic trawler segment consisted from 8 active vessels with 25% decline from 2016. This segment targeting mainly small pelagic species as sprat and herring in Baltic sea with the pelagic trawlers as dominant fishing gear in fishing efforts. In 2017 segment earned EUR 3.03 million revenue with 10.8% decline compare to 2016. GVA declined significantly to EUR 0.94 million and gross profit dropped from EUR 0.78 million EUR in 2016 to EUR -0.17 million losses in 2017. Segment employed 60 persons corresponding to 39 FTEs, with an increased by 30%.

Pelagic Trawlers (TM) 40XX, distant water fleet

In 2017, 6 vessels were fishing in distant waters. Lithuanian high sea vessels are predominantly operating in CECAF (area 34) and some have efforts in NAFO and NEAFC. In terms of landings value, the fleet targeted mainly small pelagic species, such as Atlantic horse mackerel, Chilean jack mackerel and Chub mackerel. In 2017, revenue declined by 22.7% to EUR 52.1 million. The fleet generated EUR 3.39 million of GVA, but obtained EUR -4.54 million gross losses. This fleet was also the most important in terms of employment, providing 220 FTE in 2017. Compared to 2016 FTE increased by 5.1%.

Drivers affecting the economic performance trends

Markets and Trade

Lithuanian fishing fleet is much diversified concerning dependency on the market. All production from distant water fleet is landed in foreign markets. Long distance fleet landings of pelagic species which accounts for largest part of total production is sold in Mauritania, Morocco, Chile and Spain. Prawns are landed in ports of Norway and Iceland, whereas other demersal species in other European ports. Absence of sufficient capacity of processing industry for pelagic species in Lithuanian is one of the reason to choose other destination points for the market. For example, in 2017 Lithuanian long distance fleet landed 39.2 thousand tonnes of *Trachurus* sp. and *Scomber* sp. (CJM, HOM, JAX, MAS, MAC), whereas in 2017 Lithuanian imports for processing and consumption (excluding re-export) of frozen *Trachurus* sp. (CN 030355) and frozen *Scomber* sp. (CN030354) were 5.33 thousand tonnes – around 14% of landing volume. Landings of northern prawn (PRA) in 2017 amounted 2711 tonnes, whereas imports for consumption and processing was 383.3 tonnes. In 2018 situation remained unchanged. Average landing prices for *Trachurus* sp. which are the main target species long distance fleet in 2017 declined by 7.4% from 0.8 EUR/kg to 0.75 EUR/kg, but in 2018 increased 24.7% to 1.01 EUR/kg. The same tendency was observed in *Scomber* sp. prices.

Landings from large-scale fleet operating in Baltic sea were composed from 69% of sprat (12.5 thousand tonnes), 21% Baltic herring (3.85 thousand tonnes), 9% of Baltic cod (1.62 thousand tonnes) and 1% of European flounder (0.2 thousand tonnes). Small pelagic species as sprat and Baltic herring were exported for the most part, only 0.1% of landed volume of sprat and 2.8% of herring were sold in Lithuanian market. The main destination points of pelagic species were in Denmark – 73.4% of total landings. Baltic cod landings predominantly are sold in national port – 48.4% of total catches and the rest part is exported to Poland and Latvia. In 2017 average landing cod prices increased by 18.3% to 0.97 EUR/kg (live weight), whereas in the retail market according to LAFPMIS (Lithuanian agricultural and food product market information system) the average price for fresh cod was 2.06 EUR/kg (without VAT). Steadily decreasing cod landings due to the quota reductions, stabilized decreasing cod price taking into account the small size fish. Decline of cod price from 2010 to 2015 (from 1.24 EUR/kg to 0.8 EUR/kg) started to increase and in 2018 reached 0.97 EUR/kg.

Small-scale fleet operating in coastal area release all production into internal market. Recent market distribution will likely remain unchanged in 2019.

Demand from the fish processing industry is more important for large-scale pelagic trawlers fishing in Baltic Sea and the distant water fleet, which land production in foreign ports and mainly for the processing and for reduction. Average price for sprat in 2017 declined by 20.8% to 0.19 EUR/kg. Drop of sprat prices was influenced by market conditions in the landing ports. Increase supply of species for reduction in Denmark for example sand eel, resulted in the decline of price for sprat for reduction. However, in 2018 average sprat price increased by 5.3% to 0.2 EUR/kg, enabling fishing companies to benefit from the increased volume of sprat landings.

SSCF landings of European smelt and Baltic cod are sold to local market for direct consumption with insignificant amounts coming for processing. Market for fresh European smelt, from which highly depends small-scale fisheries performance, during 2016-2017 performed quite well, as value of landings increased significantly and price at the retail market remained at high level indicating that demand for this species remains. For example, average price of European smelt at first sale in 2017 was EUR 2.21 EUR/kg whereas retail average price in the local markets were 4.13 EUR/kg without VAT and 4.31 EUR/kg in 2018.

Management instruments (policy)

From November of 2016, Lithuania introduced transferable fishing concessions into fleet management.

TACs and quotas

In Mauritania and Morocco, the Lithuanian fleet operates under EU fishery partnership bilateral agreements with third countries and quotas are set for every fishing year. The new agreement with Mauritania came into force at the very end of 2015 and for each year 57.64 thousand tonnes of pelagic species were allocated to Lithuanian vessels. Agreement with Morocco is valid from mid of 2014 and in 2017 year 20.69 thousand tonnes were allocated.

From historic point of view quotas in the most important fishing region for the Lithuanian distant water pelagic trawlers are constantly decreasing. For example, in 2008 quota for pelagic species in CECAF region in agreement with Mauritania, was 120.5 thousand tonnes. For 2017 quotas in Mauritanian water remained unchanged – 57.6 thousand tonnes. In 2018 agreement with Morocco terminated and any delays in new agreement will occur in the reduction of 2018-2019 long distance fleet landings and profitability.

In the Baltic Sea, Lithuania has quotas for cod, herring, sprat and salmon, while the most important species in terms of catches are cod, herring and sprat. Quotas for cod are constantly decreasing from 2014, when 4.1 thousand tonnes were available for landings. In 2017, annual Baltic cod quota declined to 1.87 thousand tonnes – 29% lower compare to 2016. In 2018 decrease of cod of quota was less significant - 1.8% to 1834 tonnes. However, due to the worsening status of cod stocks in Baltic sea, in 2019 cod quota allocated to Lithuanian vessels further decreased by 28% to 1.3 thousand tonnes.

Quotas for Baltic pelagic species significantly improved in 2017 and 2018. For example, in 2018 Lithuanian fishing companies had 16.68 thousand tonnes of Baltic sprat quota to exploit, Baltic herring quota increased by 24.2% to 6.9 thousand tonnes. In 2019 sprat quota allocated to Lithuanian fleet is 15.06 thousand tonnes and 7.17 thousand tonnes of Baltic herring. After quota exchange or purchase from other MS these figures could increase.

Status of Key Stocks

For Baltic Sea fisheries, key stocks are Baltic cod, Baltic herring and Sprat. Based on the ICES advice 2019, Eastern cod stock size indicator shows an overall decrease since the peak in 2010, and the value for 2018 is the lowest observed in the time-series. Population structure has deteriorated during the last years and shows no improvement. ICES advises that when the precautionary approach is applied, catches in 2019 from the eastern Baltic cod stock is reduced by 36% (to 16.6 thousand tonnes) compare to 2017 advice (26.0 thousand tonnes). For example, in 2015 ICES advised eastern cod catches at 29.2 thousand tonnes. This advice applies to all catches from the stock in subdivisions 24–32. Such constant decline of eastern Baltic cod is pernicious to Lithuanian demersal fleet. Pelagic species in Baltic Sea are managed at sustainable MSY level.

Operational costs (external factors)

Total operating costs incurred by Lithuanian fleet were EUR 62.3 million in 2017, down by 2% compare to 2016. Structure of operational costs remained almost unchanged. The largest share of in total operational cost structure was attributed to other variable costs, covering 36%, down 13% compare to 2016. The second of importance was Energy costs, around 20% of total operation costs. Compare to 2016, expenditure on energy products increased by 10%. Around 16% in total cost structure is allocated to crew wages, which increased by 9% in 2017.

Operational costs structure among different fleet segments were distinct. For example, in 2017 for the large-scale fleet, operating in Baltic sea, biggest part of operation costs were allocated to wages and salaries, around 34%, at the same level as in 2016. The second largest component was energy costs, covering 22% of total operating costs. Total operating costs per active vessel increased by 21% in 2017.

For the small-scale fleet segment 00-10 m PG, around 43% of total operating costs were spent on wages and salaries, 24% and 16% on other fixed and other variable costs respectively. Expenditures on the energy products accounted for 11%. Total operating costs per active vessel increased by 11% in 2017.

Long distance fleet around 40% of costs spent on the other variable costs, 20% on energy products and 14% on wages. In 2017 operating costs per active vessel increased by 11% compare to 2016.

Socioeconomic impact

Salaries in Lithuanian fisheries has a tendency to increase following the overall industry trends. In 2017 long distance fleet salaries increased by a 2% to EUR 36 thousand per FTE per year. Large-scale fleet operating in Baltic sea paid 4.5% higher salaries in 2017. Wages in large-scale demersal trawler segment in 2017 were EUR 11.7 thousand per FTE per year, whereas large-scale pelagic fisheries remunerated crew with EUR 28.7 thousand per FTE per year. In small-scale segments, compare to the national fleet, wages were significantly lower and during 2016-2017 increased by 11.3% to EUR6 thousand per FTE per year. For comparison, in 2017 the average annual gross salary in Lithuania was EUR 10.1 thousand.

Nowcasts for 2018-19 and outlook

Concerning outlook of economic performance of Baltic large-scale fleet, the main factors causing recent decline in fisheries persisted and unlikely to show any improvement in 2018 and 2019. The major cost items as crew wages and expenses on energy costs remained in uptrend during 2018. The main threats for Lithuanian fleet in Baltic Sea remained drastically declining Baltic cod stocks, which is still target species of significant part of Lithuanian Baltic fleet. In 2018 catches of cod declined by 55% to 775.8 thousand tonnes compare to 2017 and is expected to further decline in 2019. Average price for cod in 2018 was 0.97 EUR/kg and remained unchanged compare to 2017, whereas according to preliminary data in 2019 average price increased 24% to 1.21 EUR/kg. However, positive changes in price do not outweigh economic performance of demersal fleet as the quotas of cod declines sharply. Fleet capacity which was used for targeting cod have been partly allocated to pelagic fisheries, where stocks are exploited at MSY level. In 2018 sprat landings in Baltic sea increased by 32% to 16.5 thousand tonnes with the highest value since 2009. Average price for sprat in 2018 increased by 5% and according to preliminary data in 2019 it further improved by 15% to 0.23 EUR/kg. Such price development will likely recover profitability of Baltic pelagic fisheries in 2018 and 2019. According to the preliminary LAFPMIS results, in 2018 Baltic pelagic trawler segment increased gross profit to approximately EUR 0.77 million, whereas demersal trawlers, which in 2018 significantly decreased capacity, remained at the gross losses – approximately EUR 0.5 million.

For the SSCF decline in cod stocks did not significantly impact on the economic performance. Cod ladings in 2018 contributed to only 11% of revenues. Furthermore, SSCF value of landings in 2018 increased by 21% to EUR 659 thousand, the highest value over the 2008-2018 period. Growth of revenues is expected to appear in higher profits as expenditures are not foreseen to increase significantly. According to the preliminary LAFPMIS results, in 2018 PG 00-10 segment resulted in approximately EUR 0.25 million gross profit.

Long distance fleet in 2018 landed 53% less production compare to 2017 and was the worst year in terms of landings since 2012. Decline in landings was due to the termination of the bilateral agreement in July of 2018 between Morocco and EU. Lithuanian long distance fleet is the main operator among other MS in this region, therefore any delays in the new agreement will appear in losses due to the downtime of fleet. However prolonged negotiations have resulted in the low volume of landings and expected losses in the Lithuanian long distance fleet. Further decline in profitability of Lithuanian long distance fleet in 2018 could be influenced by the increased expenditures in the repair and maintenance of fleet, modernisation and with less extent due to the increase in administration costs related to the employment of third country citizens. Due to the above indicated factors long distance fleet is expected to obtain losses in 2018 and according to preliminary LAFPMIS data. Long distance fleet achieved EUR 0.8 million gross losses. However, it significantly less compare to 2017. In 2019 effort for Lithuanian long distance fleet in Mauritania and international waters increased significantly, as during January-April period fleet landed 24.4 thousand tonnes (more than half of 2018 landings). Taking into account that operation in West Sahara will be started with new 4 years contract in 2019, profitability outlook for long distance fleet is expected to recover.

Data issues

Under DCF, revenues from landings reported from two distinct data sources (total value of landings as transversal variable and total income from landings as economic indicator). In Lithuania, income from

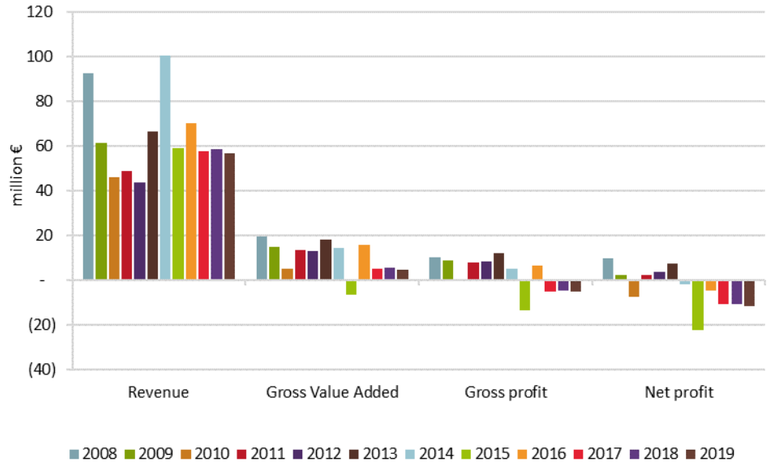
landings together with other socio-economic indicators, such as expenditure, employment and capital value are collected through census with a one-year lag whereas transversal variables are collected one year prior to economic data.

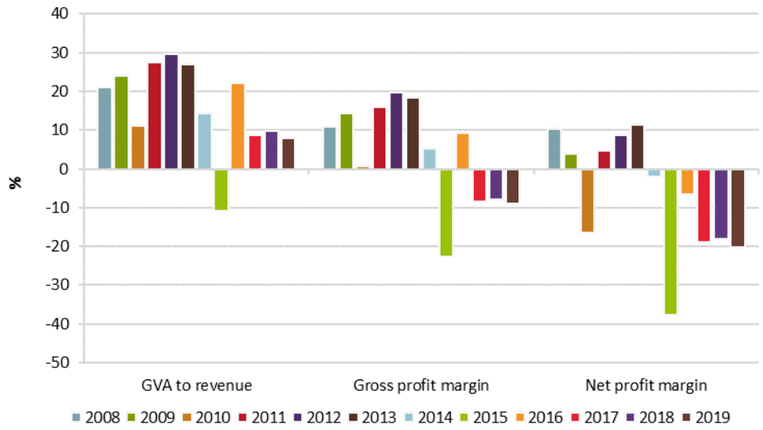
Depreciation costs of capital and capital value at MS level is recalculated for the total data set 2008-2017 after PIM method was revised and updated, whereas at fleet segment level data for capital depreciation costs and capital value from 2008 to 2016 left unchanged. The reason to leave previous data is because historic data were used for the fleet management with respectively addressed management measures.

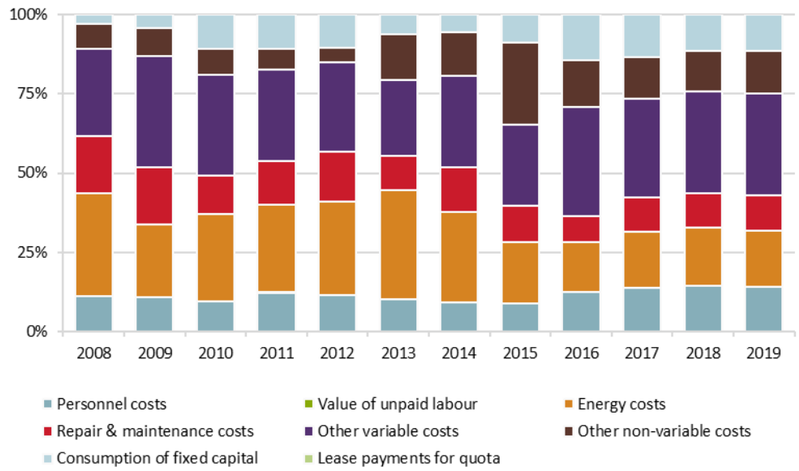
Table 5.39 Lithuania: National fleet statistics and economic performance results. Nowcast figures for 2018 and 2019

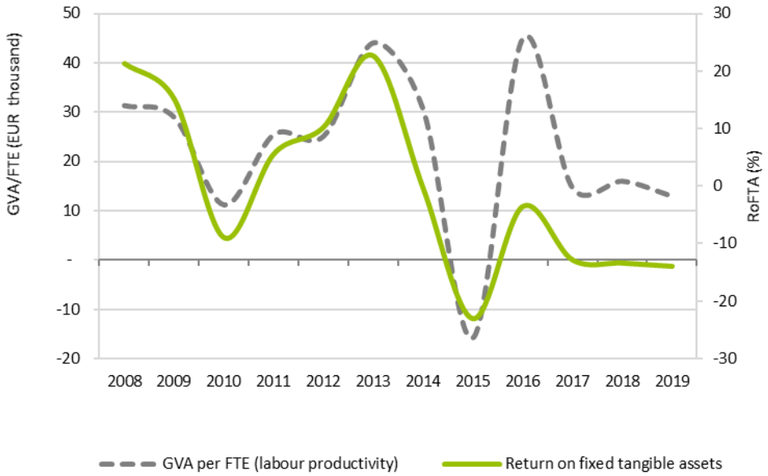
		2008	2009	2010	2011	2012	2013	2014	2015	2016	*2017*	*2018*	2019	Trend 2008-2018	Δ 2017 to 2016	Δ 2017 to avg. 08-16
Capacity	Number of vessels	250	219	193	171	151	152	154	152	153	149	147	147		-3%	-16%
	Total vessel power	68,909	59,754	56,386	54,395	54,195	52,392	63,221	57,033	53,859	48,997	48,904			-9%	-15%
	Total vessel tonnage	60,965	50,477	49,289	45,965	44,959	43,966	60,050	53,635	46,961	41,327	41,622			-12%	-18%
Employment	Engaged crew	1,046	662	631	692	648	610	615	597	498	466	463	463		-6%	-30%
	Unpaid labour										12					
	FTE national	617	507	454	525	516	407	472	401	346	348	354	351		1%	-26%
	Total hours worked per year (engaged crew)										699,140					
Effort	Days at sea	9,763	9,655	8,992	10,044	10,996	9,797	8,893	8,752	9,353	7,666	8,373	7,392		-18%	-20%
	Fishing days	7,728	7,911	7,482	8,061	8,765	8,749	7,985	7,862	8,340	6,750	7,601			-19%	-17%
	kW fishing days	7,649,182	7,949,681	6,412,955	8,243,834	4,539,364	6,579,727	9,807,707	6,662,038	8,088,489	6,642,467	5,201,378			-18%	-9%
	GT fishing days	7,392,643	7,976,949	6,131,315	7,610,483	3,967,423	6,262,233	10,554,555	6,921,599	8,660,247	7,289,151	5,375,431			-16%	0%
	Number of fishing trips	4,740	5,238	5,122	4,720	3,733	3,742	4,985	5,337	5,732	4,578	5,651			-20%	-5%
	Energy consumption	40,263,446	31,411,379	24,529,537	26,373,495	17,403,454	36,530,484	59,535,315	36,514,323	44,675,450	41,916,816	42,256,816	41,739,344		-6%	19%
Landings	Live weight of landings	180,841,476	209,146,478	108,134,503	114,541,578	58,037,255	89,722,741	146,705,579	81,582,719	105,738,281	88,674,601	70,196,464	65,717,393		-16%	-27%
	Value of landings	96,140,152	156,813,131	76,953,276	76,687,983	40,613,537	64,332,826	97,435,258	57,865,538	70,913,644	58,177,946	57,164,355	55,351,793		-18%	-29%
Income	Gross value of landings	91,960,453	55,021,111	42,717,034	48,350,296	43,066,259	65,887,714	99,904,000	58,418,876	67,977,251	55,902,268	56,803,317	54,977,270		-18%	-12%
	Other income	255,224	6,222,790	3,314,514	444,613	677,229	529,075	439,118	412,581	1,922,863	1,582,922	1,629,803	1,635,743		-18%	0%
	Operating subsidies	14,276	-	107,352	274,028	13,970	2,392	31,877	30,674	22,583	154,443				584%	180%
	Income from leasing out quota	-	-	-	-	-	-	-	-	-	-					
Expenditure	Personnel costs	9,240,836	5,887,647	4,803,047	5,602,318	4,415,255	5,825,034	9,261,126	6,976,793	9,159,753	9,954,907	10,265,394	9,688,620		9%	46%
	Value of unpaid labour	32,218	32,369	19,759	24,352	9,282	8,890	6,575	10,754	6,138	12,542	15,851	14,314		104%	-25%
	Energy costs	27,512,207	12,557,310	14,051,339	12,773,166	11,624,621	19,934,286	28,609,063	15,154,571	11,596,950	12,756,869	12,990,277	12,392,646		10%	-25%
	Repair & maintenance costs	15,388,872	9,842,889	6,260,783	6,322,748	6,170,182	6,237,514	14,170,538	9,107,557	6,109,008	7,700,269	7,796,214	7,816,753		26%	-13%
	Other variable costs	23,196,037	19,392,462	16,386,863	13,174,578	11,101,852	13,899,797	29,238,714	20,367,741	25,737,640	22,510,367	22,653,315	22,503,409		-13%	17%
	Other non-variable costs	6,749,081	4,732,091	4,239,205	3,136,719	1,837,842	8,368,387	13,880,545	20,531,506	10,886,225	9,415,190	9,312,852	9,337,351		-14%	14%
	Consumption of fixed capital	2,340,849	2,321,862	5,427,691	4,862,551	4,060,631	3,550,169	5,471,782	6,942,064	10,658,636	9,638,309	7,963,803	7,988,643		-10%	90%
	Lease/rental payments for quota	-	-	-	-	-	-	-	-	-	-					
Indicator	Opportunity cost of capital	-1,796,056	4,024,455	2,469,956	528,376	696,767	986,182	1,771,993	1,834,202	235,736	-3,675,315	-1,996,242	-1,642,056		-1659%	-408%
	Gross Value Added	19,369,480	14,719,149	5,093,358	13,387,698	13,008,991	17,976,805	14,444,258	-6,329,918	15,570,290	5,102,494	5,680,462	4,562,855		-67%	-57%
	Net Value Added	18,824,687	8,372,832	-2,804,289	7,996,771	8,251,593	13,440,454	7,200,483	-15,106,184	4,675,918	-860,501	-287,098	-1,783,732		-118%	-115%
	Gross profit	10,096,427	8,799,133	270,552	7,761,028	8,584,455	12,142,881	5,176,557	-13,317,465	6,404,399	-4,864,954	-4,600,783	-5,140,079		-176%	-195%
	Net profit	9,551,634	2,452,816	-7,627,095	2,370,101	3,827,057	7,606,530	-2,067,218	-22,093,731	-4,489,973	-10,827,949	-10,568,343	-11,486,666		-141%	-831%
	Net profit subsidised	9,565,910	2,452,816	-7,519,743	2,644,129	3,841,027	7,608,922	-2,035,341	-22,063,057	-4,467,390	-10,673,506	-10,568,343			-139%	-863%
	Net profit rights	9,565,910	2,452,816	-7,519,743	2,644,129	3,841,027	7,608,922	-2,035,341	-22,063,057	-4,467,390	-10,673,506	-10,568,343			-139%	-863%
Capital	Value of physical capital	36,346,420	42,790,632	57,198,982	51,890,485	44,114,317	37,947,376	68,553,547	87,565,500	118,693,095	112,427,765	93,431,429	93,661,425		-5%	86%
	Value of quota and other fishing rig	-	-	-	-	-	-		-	-	-					
	Investments	544,452	139,321	22,037,229	20,863,731	1,227,099	280,355	5,801,040	1,787	2,025,483	235,163	-	-		-88%	-96%
	Total assets										92,634,873	74,652,788	74,652,788			
	Long/short debt										54,371,988					
	Subsidies on investments										-	-	-			

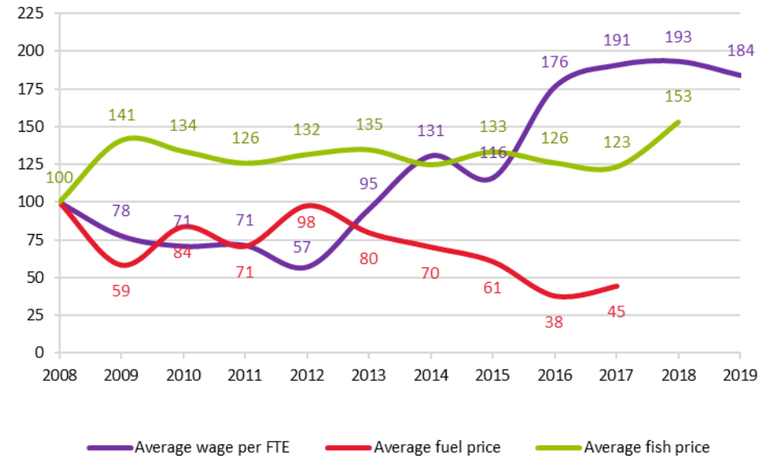
Data source: MS data submissions under the DCF 2019 Fleet Economic (MARE/A3/ASC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

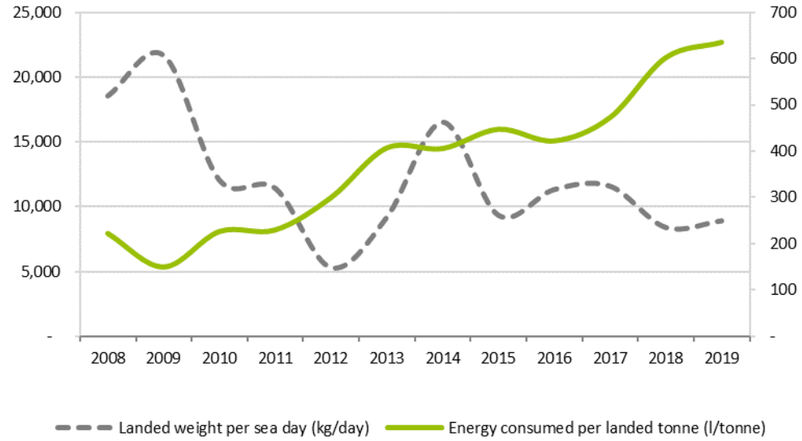


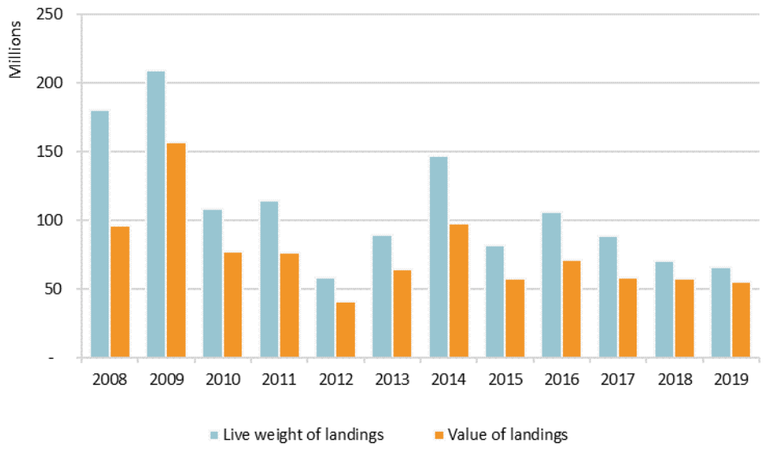


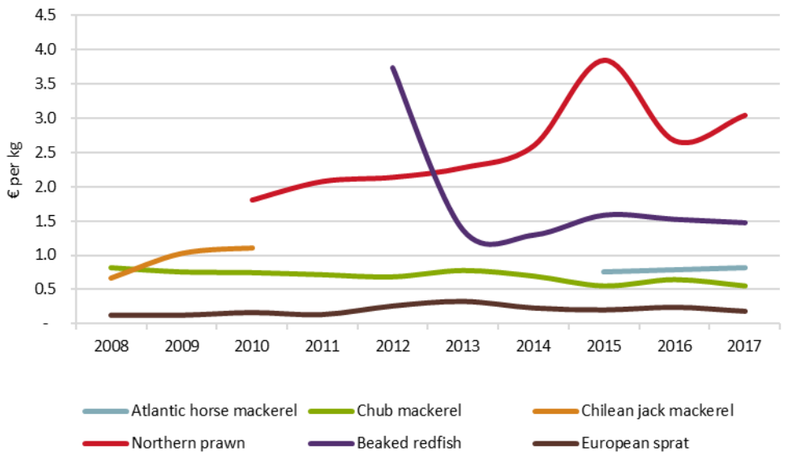












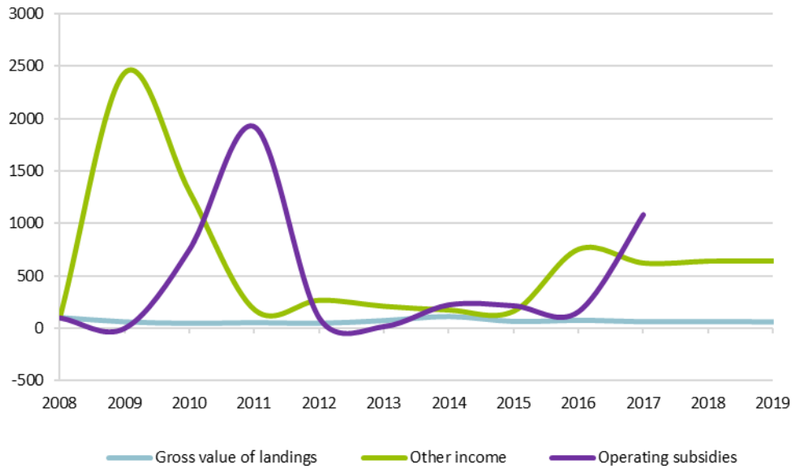


Figure 5.14 Lithuania: Main trends in economic performance indicators (absolute value, panel 1a/top left and relative value, (panel 1b/top middle); cost structure (panel 1c, top right); productivity (panel 2a); key input/outputs (panel 2b); efficiency (panel 2c); landings (panel 3a); average price (EUR /kg) of top species (panel 3b) and capital value (panel 3c). Nowcast figures for 2018 and 2019

Data source: MS data submissions under the DCF 2019 Fleet Economic (MARE/A3/ASC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

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Table 5.40 Lithuania: National fleet statistics and economic performance results by fleet segment, 2017

	Number of vessels	FTE national	Days at sea	Energy consumed per landed tonne	Live weight of landings	Value of landings	Revenue	Gross Value Added	GVA to revenue	Gross profit	Gross profit margin	Net profit	Net profit margin	Average wage per FTE	GVA per FTE (labour productivity)	Return on fixed tangible assets	Profitability (2017)	Net profit margin %Δ 2017 - average (2008-16)	Economic development trend	As a % of total revenue
LTU OFR TM 40XX NEU*	6	220	1,512	565	69,810,220	53,142,958	52,169,064	3,387,166	6.5	- 4,540,161	- 8.70	-8,756,783	- 16.79	36,004	15,383	- 13.7	Weak	-1398%	Deteriorated	91%
LTU NAO TM 2440 NGI*	8	39	735	114	14,817,795	2,674,666	3,028,587	942,933	31.1	- 177,940	- 5.88	- 481,588	- 15.90	28,790	24,219	- 14.8	Weak	-223%	Deteriorated	5%
LTU NAO DTS2440 NGI*	14	51	1,171	183	3,336,179	1,695,001	1,637,657	451,046	27.5	- 149,021	- 9.10	- 310,397	- 18.95	11,763	8,842	- 16.9	Weak	-170%	Deteriorated	3%
LTU NAO PG 0010 NGI	56	27	3,655	78	504,177	472,317	465,597	275,630	59.2	109,358	23.49	84,552	18.16	6,086	10,089	35.1	Reasonable	9%	Improved	1%
LTU NAO DFN1012 NGI*	6	10	593	487	206,230	193,005	184,286	45,719	24.8	- 107,190	- 58.17	- 127,218	- 69.03	14,727	4,403	- 58.1	Weak	-2366%	Deteriorated	0%

Data source: MS data submissions under the DCF 2018 Fleet Economic (MARE/A3/AC(2018)); All monetary values have been adjusted for inflation; constant prices (2015).

Table 5.41 Lithuania: Landed value, weight and average price of principal species

	Value of landings (real) (thousand €)										Live weight of landings kg										Average landed price (real) (€)										% over total	
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	in EUR	in weight
Atlantic horse mackerel	1.8							18.5	30.6	17.7	2,713,830							24,194,544	38,776,391	21,566,470	0.7							0.8	0.8	0.8	29%	24%
Chub mackerel	12.8	13.0	5.0	7.6	2.8	9.4	12.9	6.8	12.0	11.8	15,568,519	17,152,898	6,721,769	10,552,662	4,107,475	11,984,092	18,613,951	12,163,528	18,418,881	20,996,454	0.8	0.8	0.8	0.7	0.7	0.8	0.7	0.6	0.7	0.6	19%	24%
Chilean jack mackerel	11.9	76.4	13.3			9.3		9.8		8.8	18,077,538	75,074,654	12,010,518			10,055,008		10,864,474		15,129,068	0.7	1.0	1.1			0.9		0.9		0.6	14%	17%
Northern prawn	1.7		0.3	1.6	1.5	1.0	1.0	2.7	2.5	8.5	1,175,518		184,836	748,849	694,000	436,560	375,204	689,255	928,981	2,813,868	1.5		1.8	2.1	2.1	2.3	2.6	3.8	2.7	3.0	14%	3%
Beaked redfish	2.3				3.9	1.9	3.3	2.1	2.8	2.5	1,388,838				1,036,915	1,424,553	2,560,509	1,316,580	1,868,295	1,700,993	1.6				3.7	1.4	1.3	1.6	1.5	1.5	4%	2%
European sprat	2.9	2.3	1.7	1.3	2.9	3.4	2.2	2.2	2.7	2.2	23,253,943	19,944,799	10,222,775	9,730,010	11,245,330	10,353,847	9,679,230	11,008,238	11,548,022	12,480,058	0.1	0.1	0.2	0.1	0.3	0.3	0.2	0.2	0.2	0.2	4%	14%

Data source: MS data submissions under the DCF 2019 Fleet Economic (MARE/A3/ASC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

5.15 Malta

Short description of the national fleet

Fleet Structure

The Maltese fishery is a relatively small industry of a typically Mediterranean artisanal type, and is frequently described as a multi-species and multi-gear fishery, with the majority of the fishers switching from one gear to another several times throughout the year. The vast majority of the Maltese fishing fleet is composed of small-scale fishing vessels (91% in 2018) with an engine power of 40.5 thousand kW and a combined gross tonnage of 1 558 GT.

The total number of fishing enterprises in the Maltese fleet was 760 in 2018, 0.6% less than in 2017 (765 enterprises). The majority of fishing enterprises in 2018, 83% owned a single vessels, 16.8% of enterprises owned two to five fishing vessels while only 0.1% of the fishing enterprises owned six or more fishing vessels.

During 2018, the Maltese fishing fleet consisted of 938 registered vessels, 210 of which were inactive, having a combined gross tonnage of 6.5 thousand GT, engine power of 73.3 thousand kW and an average age of 30 years. The vast majority of the inactive vessels are below 12 meters. In 2018, the number of vessels in the fleet increased by 3 from 2017, furthermore the number of inactive vessels decreased implying that the number of active fishing operations in the sector has increased (4.9%) compared to the previous year. In fact, in 2018 728 vessels where active compared to the 686 recorded in 2017. The Maltese Fishing Vessel Register (FVR) did not open for new registrations during 2018, though registrations were accepted for recreational vessels, meaning that the increase in total vessels was probably due to vessel replacement.

The overall capacity of the Maltese fishing fleet has been showing a declining trend since 2008, with the number of vessels falling by 14% between the 2008 and 2016 average; the fishing capacity, in terms of GT and kW decreased by 26% and 12% respectively, for the same period.

Fishing Activity and Output

The Maltese fleet spent a total of around 22.4 thousand days-at-sea in 2018, 18.6 thousand of which were fishing days. The total number of days-at-sea slightly increased by 0.5% between 2017 and 2018, whereas fishing days decreased by 5% over the same period. Since 2008 the total number of days-at-sea has decreased by 52%.

The quantity of fuel consumed in 2017 totalled around 3.75 million litres. Considering that in 2017, days-at-sea and number of trips decreased by 4% and 5% respectively from 2016 data, fuel consumption followed a similar flow, as over the same period fuel consumption decreased by 11%. The decrease in fuel consumption and in the market price of fuel in Malta, contributed to an 11% decrease in fuel costs in 2017 from 2016.

The total weight landed by the Maltese fleet in 2017 was 2.1 million kilos of seafood, with a landed value of EUR 10.4 million, a 6% increase on 2016. Conversely the average weight of landings has decreased during the period analysed.

Provisional data for 2018 is showing that the total weight landed by the Maltese fleet in 2018 was around 2.7 million kilos of seafood, with a landed value of around EUR 13.5 million, a 29.8% increase on 2017. The live weight of landings has also increased (26.5%) during the period analysed. This landings data, both in terms of value and weight would be the highest registered since 2008.

The main exploited species include swordfish (*Xiphias gladius)*, common dolphinfish (*Coryphaena hippurus*), Atlantic bluefin tuna (T*hunnus thynnus)*, demersal and small pelagic species and a number of additional species some of which although caught in smaller quantities have a high commercial value such as the red shrimps.

The main exploited species include Swordfish (*Xiphias gladius)*, common Dolphinfish (*Coryphaena hippurus*), Atlantic bluefin tuna (T*hunnus thynnus)*, chub mackerel, demersal and small pelagic species and a number of additional species some of which although caught in smaller quantities have a high commercial value such as the giant red shrimps and red scorpion fish.

In 2017, Atlantic bluefin tuna catches produced the highest landed real value volume (EUR 2.4 million), followed by swordfish (EUR 2.17 million), common dolphinfish (EUR 1.15 million) and silver scabbardfish (EUR 0.51 million). These aforementioned species contribute to 59.8% of the total value of landings for

the fleet. In terms of landings weight for these species, swordfish landings amounted to 330.4 thousand kilos, Atlantic bluefin tuna to 258.4 thousand kilos, and common dolphinfish to 242.9 thousand kilos.

2018 provisional data shows that Atlantic bluefin tuna produced the highest landed value (EUR 2.8 million) by the Maltese fleet representing 20% of the total value of landings, followed by swordfish (EUR 2.7 million), common dolphinfish (EUR 2.1 millions) and giant red shrimps (EUR 0.6 million). In terms of landings weight for these species amount to 304.2 kilos, 308.6 kilos, 423.6 kilos, and 29.4 kilos respectively.

Where in 2016 the prices of some of the key species such as swordfish, Atlantic bluefin tuna, giant red shrimp, red porgy, red scorpionfish had dropped, in 2017 all these species have increased in price. Conversely key species such as the common dolphinfish, silver scabbard fish and surmullet all dropped in price. Since most of the key species have increased in price the overall economic performance of the Maltese fleet for 2017 should improve.

The increase in prices of species such as giant red shrimp, red scorpionfish, Atlantic blue fin tuna, and swordfish in 2017, aided the economic performance of the Maltese fleet. Provisional data shows that the key species to the Maltese fisheries sector have shown increases in their average price per kilo in 2018, excluding Atlantic bluefin tuna, which is showing a slight decreased.

Of the key species mentioned above, giant red shrimp achieved the highest average real landed price per kilo in 2018 (EUR 16.38 per kg), followed by red porgy (EUR 16.15 per kg) and axillary seabream (EUR 15.64 per kg). Red scorpionfish, Atlantic bluefin tuna, giant red shrimp, red porgy, surmullet and common octopus attained the highest prices amongst top species landed by the Maltese fishing fleet.

Employment

Although between 2012 and 2015 employment had been showing a positive trend, data from the 2016 and 2017 may be indicating a change in such a trend. In 2016, a 14% decrease from 2015 employment levels was recorded. In 2017 employment decreased further (10%) to 1 134, resulting in the lowest levels of employment over the last 6 years. This corresponds to 719 FTEs or an average of 1.05 FTE per vessel. 77% of the total jobs were employed in small-scale fishing operations. This implies that the small-scale fishing sector is of fundamental importance to the social and economic aspects of the Maltese Fishing Fleet. It is important to note that employment in 2017 decreased in both SSCF and LSF, by 12% and 5% respectively, from 2016. Data shows that the average wage has increased, across all typed of average wage indicators (being per vessel, per FTE, etc.), over 2016.

Economic performance for 2017 and recent trends

National fleet performance

Although the Maltese national fleet remained in a net loss making position in 2016. 2016's economic performance deteriorated from 2015 although the trend is expected to improve further in 2017, as fuel prices are expected to remain low, the average landed prices of the key species remained relatively high, and the total value of landings has increased.

In 2017, the Maltese national fleet recorded a positive turnaround in terms of net profits. Malta's net profit increased by 93% in 2017 when compared to 2016. Although still at a net loss position, this indicator showed a significant improvement in the trend so much so that 2017's recorded net loss is 98% less than the 9-year average. This positive result was driven by: relatively high average landed prices of key species, causing landings income to increase (even though landings by weight decreased); decreases in operational costs; and an overall improvement in the efficiency of the fleet.

The total amount of income generated by the Maltese national fleet in 2017 was EUR 10.8 million, a 4.8% increase derived from a 6% increase in the total landings income (EUR 10.4 million) and a 10% decrease in other income (EUR 0.52 million). When adding also the income generated in the sector, from leasing out fishing rights (EUR 1.14 million), total income amounts to EUR 11.8 million.

The operating costs in 2016 amounted to EUR 10.6 million. Crew cost, capital costs and energy costs were the three major cost items (EUR 4.4 million, EUR 2.4 million, and EUR 2.3 million respectively). However, EUR 3 million of crew costs were estimated for the unpaid labour which remained in the hands of the fishers as working capital. Between 2015 and 2016, the operating costs increased by 2.6% due to higher energy costs and unpaid labour costs. The Maltese fleet recorded a net loss of -EUR 2.6 million in 2016.

The operating costs in 2017 amounted to EUR 9.4 million. Labour, energy and other variable costs were the three major cost items (EUR 3.8 million, EUR 2.1 million, and EUR 1.7 million respectively). However,

EUR 1.7 million of labour costs were calculated for unpaid labour, which remained in the hands of the fishers as working capital. Between 2016 and 2017, the operating costs decreased by 12% as energy, repairs and maintenance, variable, and non-variable expenditure all decreased.

Economic performance indicators such as GVA, gross profit and net profit all significantly improved. he total amount of gross value added (GVA), gross profit and net profit in 2016 were estimated at EUR 5.4 million, EUR 1.5 million and EUR 0.2 million, respectively. Between 2016 and 2017, the GVA of the industry increased by 27%, gross profit increased by 869% and net profit increased by 93%. This indicates that the economic situation of the Maltese fishing fleet although still relatively weak has shown a significant sign of improvement from previous trends. This improvement is mainly driven due to increases in landings income and drops in operating costs.

In 2017, the Maltese fishing fleet had an estimated (depreciated) replacement value of EUR 35.0 million and investments amounted to EUR 1.3 million, a 40% increase on 2016. Investment remained relatively constant for SCF (+1%) whereas the LSF, investment recorded a 138% increase.

Resource productivity and efficiency

In 2017, the gross profit margin was 14.08%, This indicates a significant improvement in the operating efficiency levels for the sector from the -1.92% recorded in the previous year. This is also seen in the net profit margin for 2017 which was decreased to -1.6% from -25.1% (2016).

The Rate of Return on Fixed Tangible Assets (RoFTA) was -0.5%, in 2017, shows an improvement when compared to the previous year. Labour productivity (GVA/FTE) has increased by 37% between 2016 and 2017, this indicator is also 21% above the 9-year average. This increase in labour productivity is driven from the fact that GVA increased in value and FTE decreased in 2017.

Fuel consumption per landed tonne has followed an overall decreasing trend since 2008. In 2017, it is estimated at an average of 1.7 thousand litres per tonne landed. This is a standard consumption for a typical fishing vessel in the Mediterranean. Fuel efficiency has decreased to 20% from 24% in 2016.

Landings in weight per unit of effort (in days-at-sea) followed an increasing trend since 2008. In 2017, such indicator reported remained constant since 2016. It is important to note that days-at-sea continued to decrease, this time by 4% between 2016 and 2017, at the same time live weight of landings decreased by 6%, a relatively small decrease. This implies that between the 2016 and 2017 the Maltese fishing fleet operation continued improving its efficient.

Performance by fishing activity

Small-scale coastal fleet

In 2018, there were 665 active vessels belonging to the "small-scale coastal fleet" according to the European definition (defined as vessels less than 12 metres and not using towed gear as listed in table 3 in Annex 1 of Commission Regulation (EC) No 26/2004 of 30 December 2003). This represents 91% of the active vessels or 93% of the whole Maltese fishing fleet.

Fisheries in Malta are a relatively small industry where its social significance far outweighs its economic importance. It is in fact a traditional activity which operates on a small-scale, producing small volumes of a very valuable product. The industry is mainly artisanal and it is considered as a typical fisheries found in many Mediterranean countries. The majority of the small-scale fishing vessels conduct their coastal activities on a seasonal basis. There are no inland fisheries in Malta.

The Maltese national fishing fleet is mainly divided into two categories: The professional full-time fishing vessels and the part-time fishing vessels. 44% of the small-scale fishing vessels work on a full time basis in the fishing industry whilst 56% fish on a part time basis.

In 2017, 76% (872 employees) of the total 1,134 employed in the Maltese fishing industry worked on small-scale fishing vessels. This corresponds to 459 FTEs. In 2017, there was 12% decrease in the total jobs of the small-scale fishing vessels. The small-scale fishing sector, in the last three years (2015-2017) has shown a potential start to a decreasing trend in jobs in the sector. However, there have been constant fluctuations in the crew costs across the years due to unpaid labour. In 2017, wages amounted to EUR 599 thousand while the unpaid labour cost amounted to EUR 1.2 million. The vast majority of the employees in the small-scale fishing are the owners themselves with no employees. Others have their families and friends who voluntarily help them during a fishing trip.

The landings value of the small-scale fishery increased by 10% from 2016 to 2017 and increased by 38% in 2018 when compared to the previous year. In terms of profitability, in 2017, the economic

performance of the small-scale fishery improved since it registered improvements in gross loss of EUR 0.5 million in 2017 from a gross loss of EUR 1.6 million in 2016. A Similar trend was followed for the net profit as the industry registered a net loss of EUR 1.0 million in 2016, a 71% decrease from 2016.

In 2017, the economic performance, in terms of profitability, of the SCF vessels (-EUR 1.0 millions) was worse than the large-scale fishing vessels who reported a net profit of EUR 0.9 million.

Large-scale fleet

The large-scale fishing vessels that were active during 2018 amounted to 63. This represents 9% of the active Maltese fishing vessels. All large-scale fishing vessels work on a full time basis in the fishing industry.

In 2017, 23% of the total jobs (262 employees) in the Maltese fishing industry worked with the large-scale fishing vessels. This corresponds to 260 FTEs. In 2017, there was 5% decrease in the total jobs of the large-scale fishing vessels.

The landings value of the large-scale fishing vessels increased by 7% between 2016 and 2017 but increased by 25% in 2018. In 2017 this fleet category contributed to 66% to total income from fishing activity. In 2017, the large-scale fishery reported a net profit of EUR 0.9 million. In terms of profitability, Gross Value Added (GVA) and gross profit increased by 38% and 57%, respectively, between 2016 and 2017.

These results indicate that the economic performance of the large-scale fishery bounced back when compared to the weak showing recorded in 2016.

Performance results of selected fleet segments

The Maltese fishing fleet is highly diversified with a broad range of vessel types targeting different species in the Mediterranean. The Maltese national fleet consisted of 19 active (DCF) fleet segments in 2017, which were clustered into 10 fleet segments and 5 inactive fleet segments totalling 249 vessels. These vessels are classed as inactive if they did not land any catch in 2017.

Out of five large-scale clustered fishing segments, four generated a net profit during 2017. On the other hand, out of five small-scale fishing segments, none made a net profit in 2017. This shows that the overall economic performance of the fleet segments of the small-scale fishery is weak. Further analysis on the performance of the fleet segments of the small-scale fishery is provided below.

Since for 2017 segments where clustered, economic development trend could not be computed, thus no trend can be provided for these clustered segments.

Vessels using other active gears 06-12m

11 vessels made up this segment in 2017, which operates predominantly in the Mediterranean. This segment employed 18 jobs corresponding to 18 FTEs during the same period. The fleet targets mainly common dolphinfish (*Coryphaena hippurus*) by using fish aggregating devices (FADs). In 2017, the total value of landings was about EUR 0.18 million; the segment generated 2% of the fleet's total revenue. In the same year, this segment generated a net loss of EUR -0.16 million or an average net loss of EUR -14 231 per vessel. Although still 19% over the 2008-2016 average, such losses show that this segment has deteriorated over the past year. Such losses were driven by a 43% decrease in landing volumes which subsequently resulted in a 44% drop in landings income, also costs for this segment increased even though the number of vessels decreased from 2016. Furthermore the price of common dolphinfish dropped by 15% and the segments catches with respect to this specie dropped by 31%. Such decline shows weak profitability for 2017, although preliminary data shows that this may have only been a temporary decline, since landings income in 2018 increased by 324% over 2017.

Vessels using active and passive gears 06-12m

130 vessels made up this segment in 2017, which operates predominantly in the Mediterranean and represents 21% of the small-scale fishery in Malta. This segment employed 212 jobs which are equivalent to 160 FTE during the same period. This fleet segment targets several species, mainly common dolphinfish (*Coryphaena hippurus*) (38% of total landings) and swordfish (*Xiphias gladius*) (16% of total landings) by using fish aggregating devices (FADs), and drifting long-lines (LLD), respectively. In 2017, the total value of landings was about EUR 1.03 million and generated a net loss of EUR 0.5 million or EUR 3 987 per vessel. The net loss for this segment decreased by 19% from 2016 to 2017, which continued building on the improvement in the economic performance made in 2016 from 2015. Such

improvement was mainly due to an overall increase in the revenue and significant decreases in value of unpaid labour. However, the losses were mainly generated due to the fact that expenditure increased at a higher rate than the increase in income. The segment is still in a weak position in terms of profitability, although its economic performance is still improving. For 2018, although landings for swordfish dropped landings for common dolphinfish significantly increased (+41%), in fact landings income for 2018 increased by 71%. Considering that effort increased by 9% in the same period, this should result in higher efficiency, implying improvements in economic performance.

Vessels using polyvalent passive gears only 06-12m

162 vessels made up this clustered segment in 2017, which operates predominantly in the Mediterranean and represents 25% of the small-scale fishery in Malta. This segment employed 267 jobs which are equivalent to 157 FTEs during the same period. This fleet segment uses different metiers. In 2017 this segment's most landed specie was Swordfish (109 tonnes), the net profit, gross profit and gross value added amounted to -EUR 0.2 million, -EUR 0.04 million and EUR 0.9 million, respectively.

A short description of two important segments in terms of total value of landings is provided below.

Vessels using hooks 18–24m

17 vessels made up this segment in 2017, which operates predominantly in the Mediterranean. This segment employed 81 jobs which are equivalent to 81 FTE during the same period. The fleet targets a variety of species mainly by using surface and bottom long-liners. Surface long-liners target mainly large pelagic species such as Atlantic bluefin tuna (*Thunnus, thynnus*), swordfish (*Xiphias gladius*), and common dolphinfish (*Coryphaena hippurus*) while bottom long-liners target demersal species such as bluntnose sixgill shark (*Hexanchus griseus*), red scorpion fish (*Scorpaena scrofa*), silver scabbardfish (*Lepidopus caudatus*) species amongst others. In 2017, the total value of landings was about EUR 1.8 million. In 2017 this segment recorded a net profit of EUR 0.3 million stopping the declining trend that started in 2015. The main reason for such profits were due to an increase in the segment's efficiency, since landed value per sea day increased by 15%. Furthermore total costs costs also decreased in 2017 from 2016. Relatively for the 26% decline in effort, landings income only decreased by 15%. The increase in the average landed price of the key specie for this segment i.e. swordfish also continued assisting the improvement in economic performance. 2017 profitability was at acceptable levels, should efficiency levels remain constant, and the improved economic trend should be maintained for upcoming periods.

Demersal trawlers 24-40m

11 vessels made up this clustered segment in 2017, which operates predominantly in the Mediterranean. This segment employed 50 jobs/FTE in 2017. The fleet targets a variety of species but in particular demersal and deep water species, such as deep water rose shrimp (*Parapenaeus longirostris*), giant red shrimp (*Aristeomorpha foliacea*) and red mullets (*Mullus spp.*). In 2017, the total value of landings was about EUR 1.0 million. This fleet segment was not remain profitable in 2017, with a reported gross loss of around EUR 0.17 million and a net loss of EUR 0.9 million. This indicates weak profitability for 2017. The main driver behind this weak profitability is the high costs incurred relative to the income earned.

Purse seiners 18-24m

6 vessels made up this clustered segment in 2017, which operates predominantly in the Mediterranean. This segment employed 43 jobs corresponding to 42 FTEs in 2017. The fleet targets mainly Atlantic bluefin tuna, Atlantic mackerel and chub mackerel. In 2017, the total value of landings was about EUR 2.1 million. This fleet segment was profitable in 2017, with a reported gross profit of around EUR 1.6 million and a net profit of EUR 1.4 million. This indicates high profitability for 2017. The main driver behind this high profitability is driven by the high efficiency of the fleet's performance and the fact that its key specie, Atlantic bluefin tuna generates high turnover.

Drivers affecting the economic performance trends

Between 2016 and 2017, there was a decline in the weight of landings by 6% though landings increased by 6%. there was also a decline in two of the major cost items for fishing operations, labour costs and energy costs. These facts were the main driving sources behind the overall improvement in the economic performance between 2016 and 2017. Revenue increased by 5%, and the decrease in labour costs and energy costs by 13% and 12% respectively led to some particular segments to report a improvements in their economic performance. Positive profitability positions are present only in the large-scale fishery, profitability in SCF is still weak. Although most segments, in both LSF and SCF, are showing an improving economic performance trend.

Markets and Trade (including fish price)

Fishing in Malta is mainly a traditional artisanal activity which operates on a small-scale. The majority of the fish landed is sold in the local market. In recent years, the status of the fish stock has reduced which led to a general increase in prices for some of the key species. In 2016 Malta consumed 35.4kg per capita, the fourth largest domestic market for seafood per capita in the EU (46% over the EU average). This advancement could have been the result of Malta's tendencies towards fish all year round and the efforts of authorities to promote sustainable fish consumption through local publicity campaign which aimed at educating consumers, increasing consumer awareness, and diversifying national consumption patterns. Such campaigns were co-financed by the European Fisheries Fund (EFF) and the European Maritime and Fisheries Fund (EMFF).

Atlantic bluefin tuna, giant red shrimp, red scorpionfish, red porgy and surmullet attain the highest prices amongst all species landed by the Maltese fishing fleet. This is due to the fact that these species are characterised by a high demand both locally and abroad. In the latter case the main export markets for Giant red shrimp is in Europe while Japan is the main export market for Atlantic bluefin tuna.

Management instruments and regulation (policy)

Currently there are three management plans in place within the 25nM FMZ. These were developed in line with Article 19 of Council Regulation 1967/2006 and include: lampara purse seine fishery, bottom otter trawler fishery and lampuki FAD fisheries. The main objectives of management plans are to ensure the sustainability of stocks through better monitoring and to ensure financial stability for fishers.

Lampara fishery targets mainly small pelagic species, including chub mackerel (*Scomber japonicus*) and round sardinella (*Sardinella aurita*). The objectives of the lampara fishery management plan are to ensure that stocks are fished at sustainable levels, ensuring financial stability for fishers and safeguarding artisanal fishing activity. Following this management plan, the lampara vessel activities are monitored by a tracking system and catch logbooks and the fishing capacity in terms of GT and dimensions of the gear is frozen. In addition, the lampara management plans established that an implementation of a 20% reduction, in line with the precautionary approach, on the current lampara capacity in terms of number of vessels is to be carried out until the end of 2015. This action was then extended up until 2017.

The bottom otter trawl fishery main targets are shared stocks including red shrimps (*Aristaeomorpha foliacea*), red mullets (*Mullus* spp.) and deep water rose shrimp (*Parapenaeus longirostris*). The status of the latter stock together with that of European hake (*Merluccius merluccius*) is monitored annually at a regional level. The statuses of both stocks are in overexploitation. This management plan target to aid in the recovery of the stocks whilst at the same time ensuring economic returns and financial stability of fishers. The plan implemented a 20% capacity reduction, together with a temporal reduction in effort of 10%, via a one month cessation (closed season), up until the end of 2017.

The lampuki fish aggregating device (FAD) fishery targets juvenile species of *Coryphaena hippurus*. Lampuki is a highly migratory species and stocks are shared between diverse Mediterranean countries. The management plan for this fishery affects Maltese fishing fleet licensed to fish for the lampuki using FADs inside and outside the 25nM FMZ. The number of fishing vessels authorised to fish in the FAD fishery are frozen at 130 vessels. Following this management plan, the activities of all these vessels are monitored by means of tracking system and catch logbook. Moreover, the management plan stated that the Department of Fisheries and Aquaculture will continue to enhance data collection and research on the stock. This policy tool is expected to be reviewed in 2018.

The multiannual management plan for the fisheries exploiting European hake and deep-water rose shrimp in the Strait of Sicily (GSA12 to 16) targets:

- Exploitation at MSY for the species in discussion by 2020;
- protection of nursery areas and essential fish habitats important for the stocks of species in discussion in the strait of Sicily;
- gradual elimination of discards, by avoiding and reducing unwanted catches and ensuring that catches are landed;
- implementation of measures to adjust fishing capacity of fleets to levels of fishing mortalities consistent with the MSY, whilst maintaining economic sustainability of fleets without overexploiting marine biological resources.

The plan establishes that up until three years; target fishing mortality rates to be achieved and maintained by 2020 and onwards, fisheries restricted areas in three areas if the Strait of Sicily, temporary cessation of fishing effort, that the contracting and co-operating non-contracting parties (CPCs) are to implement monitoring and management procedures, that CPCs have to establish designated ports in which landings of European hake and deep-water rose shrimp from the Strait of Sicily may take place

and implement an observation and inspection programme to ensure compliance with the measures in the management plan. The plan also states that the CPCs are to carry out scientific monitoring, and ongoing adaptation and revision of the plan.

Stock status

The status of some of the fish stocks in the Mediterranean are overexploited with 90% of the fish stocks being overfished. F and Fmsy or F0.1 are unavailable for most of the fish stocks for Malta. However, in 2016 the joint stock assessments for European hake (*Merluccius merluccius*), deep-water pink shrimp (*Parapenaeus longirostris*) in GSAs 12-16, and red mullet (*Mullus barbatus*) in GSAs 15-16 were updated by Maltese, Tunisian and Italian scientists, combining data collected throughout the Central Mediterranean. The stock assessments were conducted under the auspices of the MedSudMed project, and finalised at the 2016 GFCM demersal working group. The assessments showed that hake was in overexploitation with relative high biomass, and that current fishing mortality has to be reduced by 60-70% to reach FMSY. Deep water rose shrimp was also considered to be in overexploitation, with relative intermediate biomass. Red mullet was considered to be in overexploitation, with relative low biomass and current fishing mortality has to be reduced by 17% to reach FMSY.

Management Strategy Evaluation (MSE) was also performed taking into consideration hake and deep water rose shrimp, using the same data used for the assessments.

One of the main problems of the economic performance of the Maltese national fleet is the status of fish stocks in the Mediterranean that have been declining for many years.

TACs and quotas

The bluefin tuna fishery in Malta has been managed under an IQ system. In 2009, the transferability of quotas was allowed and the system changed from IQ to ITQ. As a consequence, data on income from leasing out quota or other fishing rights, lease/rental payments for quota or other fishing rights and the value of quota and other fishing rights was collected for the first time for the year 2009.

In 2015, for the first time since the establishment of the bluefin tuna recovery plan in 2006, there was an increase in the quota, as the EU is allowed to fish over 9 372 metric tonnes. The annual increase in quota of 20% over three years (2015-2017) is due to the progressive recovery of the stock, as demonstrated by scientific evidence. As a result, Malta has benefitted and obtained an increase in the TACs of Bluefin tuna.

In 2017, bluefin tuna represented the 3rd most important species for Maltese fleets in terms of landings (260 tonnes in 2017), just after swordfish and common dolphinfish. In terms of value, bluefin tuna is one of the most valued species targeted by the Maltese fleets achieving an average first-sale price of EUR 9.28 per kg in 2017.

In 2016, the EU announced the plan to impose the catch limits on the Swordfish. This will be the second species which is facing the catch limits in the Mediterranean. Given that the two key species in Malta will be subject to catch limits, some fishers fear that this will impact their profitability and their survival. This will have high impacts on the profitability of those vessels that use to catch low weight of Swordfish.

Operational costs (external factors)

In 2017, both the small and large-scale fishing vessels in Malta experienced an overall reduction in their operating costs in terms of crew costs, unpaid labour, energy costs and repairs and maintenance costs.

The number of fishing days and days-at-sea has decreased for both small and large-scale vessels. However the decrease was much more significant for the large-scale fleet than the small-scale, in fact the fishing and sea days of LSF decreased by 20% and 16% respectively, when compared to the 4% and 1% decrease for the small-scale fleet.

Relatively low fuel prices in 2017, was a driver in improving the level by which the overall economic performance of the Maltese fishing fleet improved.

Innovation and Development

A number of project, co-financed by the EFF, involving upgrading of landing facilities in Gozo and designated ports in the southern regions of Malta were completed in 2016 with the aim to help fishers become more cost efficient.

A number of high standard training courses are being provided to all interested registered fishers. This investment was completed by the end of 2018 and involved courses with the aim of improving the

knowledge and skills of those working in the local fishing industry, with the ultimate aim being that of increasing the overall standard of the local fishing industry. Another training course is expected to be launched in 2019.

A publicity campaign "Nesploraw Flimkien it-Teżori tal-Baħar!" was launched and completed by the end October 2018. This publicity campaign's main aim was to communicate the importance of staying aware on the state of the local fish stocks, sustainable fish consumption, and the role of each individual in assisting conservation efforts.

A scientific study was also currently carried out to improve trawl gear selectivity so as to reduce discards of *Merluccius merluccius* and *Parapenaeus longirostris*. This study's recommendations can assist the Maltese otter board trawling fleet to be more sustainable and economically efficient.

Such innovations and developments will support coastal communities in diversifying their economies and improve economic performance.

Socioeconomic impact

Although the Maltese fishing fleet is benefiting from a number of young people who voluntarily help their family whilst at sea, on a seasonal basis, the Maltese fishing industry is experiencing the challenge to obtain the young generation into the profession of fishing. Fishing in Malta is mainly seasonal and as a consequence some of the full-time fishers own at least one small and one large vessel which enable them to practice off-shore fishing during the milder seasons and coastal activities during the winter months. Additionally, extra hands are sometimes recruited for bluefin tuna seines and common dolphinfish seasons.

91% of the active fishing vessels are small-scale fishers who fish a quarter of the total catches. These jobs are at risk as fish stocks in the Mediterranean are declining. Food security, livelihoods, and regional stability and security are all under threat.

Although the Maltese fisheries contribute a small percentage to Malta's gross domestic product, the sector creates is important to other industries of the economy, mainly tourism and catering.

Projections for 2018 and outlook for 2019

Overall, at the Maltese national fleet level, a slight decrease in landings volume and higher average prices for the high commercial value species resulted in a 6% increase in the value of landings, from EUR 10.3 million in 2017 to EUR 13.5 million in 2018. Although, should the fluctuations in landings remain at similar margins and trend of increasing prices of key species continue, preliminary forecasts indicate that 2019 will record a slight decrease in landings income by approximately 8%. Total operational costs for the year 2018 are expected to decrease slightly, as all operational costs are expected to not fluctuate drastically. Since preliminary results are showing that income is expected to increase by a larger margin than operating costs, the economic performance for 2018 is expected to become profitable at both gross profit and net profit levels due to significant increase in income from the sales of landings and slightly lower major cost items. Although effort has overall decreased in 2018, it is being expected that efficiency by the Maltese fleet will continue improving. As a result, profitability from this point of view is expected to be positively affected. Forecasts are indicating that economic performance will show improvements in 2018 from indicators such as GVA (+59% from 2017), gross profit (+208%) and net profit (positive levels of net profit for the first time since 2008).

Positive economic developments can also be observed in performance indicators such as GVA to revenue (+24% in 2018 from 2017), productivity or GVA per FTE (+57%) and net profit margins (+57%). In 2018, the average landed value per vessel increased by 22% with a 19% increase in the average landed weight. Hence, the economic performance of 2018 of the Maltese fishing fleet is expected to increase as fuel prices continued to remain relatively low, while the average landed prices of the key species appear to be remaining relatively high. Keeping in mind that currently the majority of the fish stocks remained overexploited, the economic performance of the Maltese fishing fleet for 2018 may be impaired, even though preliminary results suggest otherwise.

Given that effort is looking to be in a declining trend, average landed weight is expected to increase going forward in 2018, consequently average landings value per vessel are forecasted to increase as well. Preliminary forecasts are showing that overall average costs in 2018 will decrease, and since effort is declining, average revenue is expected to increase due to the significant rise in landings income. This will impact the turnover of certain segments which in turn will impact the profitability of the Maltese fleet. Overall, forecasted economic performance for 2018 shows a continued positive trend from the

improvement recorded in 2017, so much so that it is being forecasted that 2018, overall, will be a profitable year for the Maltese national fleet.

Data issues

Although no major issues were detected given that the Maltese fishing fleet is mainly composed of small-scale fisheries, it is very challenging to collect precise and complete data from the fishers. The reason being that the majority of small-scale fishery do not engage an accountant and thus they do not have professional bookkeeping. Having said this, Malta does its best to enhance the quality of the data at data collection level and also at analysis level.

Table 5.42 Malta: National fleet statistics and economic performance results. Nowcast figures for 2018 and 2019

		2008	2009	2010	2011	2012	2013	2014	2015	2016	*2017*	*2018*	2019	Trend 2008-2018	Δ 2017 to 2016	Δ 2017 to avg. 08-16
Capacity	Number of vessels	1,316	1,111	1,112	1,087	1,060	1,040	1,045	1,039	1,014	935	938	841		-8%	-14%
	Total vessel power	87,520	82,212	85,459	83,375	77,918	76,064	75,477	76,103	73,898	69,908	73,280			-5%	-12%
	Total vessel tonnage	7,472	8,295	12,303	12,107	8,049	7,786	7,673	7,472	7,166	6,405	6,530			-11%	-26%
Employment	Engaged crew	1,019	1,172	1,222	988	1,234	1,201	1,418	1,463	1,262	1,134	1,172	1,078		-10%	-7%
	Unpaid labour										774					
	FTE national	830	884	887	734	410	784	1,116	872	774	719	728	689		-7%	-11%
	Total hours worked per year (engaged crew)										1,584,732					
Effort	Days at sea	47,013	48,303	63,490	41,245	33,676	28,386	31,301	25,003	23,254	22,306	22,414			-4%	-41%
	Fishing days	46,993	48,209	63,490	39,614	32,347	25,274	28,588	23,277	20,896	19,621	18,596			-6%	-46%
	kW fishing days	3,218,993	3,294,388	1,015,092	3,084,855	2,799,135	2,060,871	1,902,314	2,016,781	1,909,904	1,672,712	1,518,328			-12%	-29%
	GT fishing days	287,776	308,099	213,882	370,487	358,188	16,636	199,686	283,453	273,534	206,501	163,803			-25%	-20%
	Number of fishing trips	43,283	43,989	63,330	37,660	29,236	22,382	27,176	20,757	18,816	17,843	17,765			-5%	-48%
	Energy consumption	4,905,855	4,957,166	5,175,335	5,963,005	2,926,933	6,833,194	3,678,577	3,694,193	4,210,156	3,748,995	3,703,878	3,591,510		-11%	-20%
Landings	Live weight of landings	1,281,355	1,587,396	1,835,513	1,919,859	2,203,859	2,354,973	2,402,547	2,436,935	2,301,809	2,152,700	2,722,356	2,641,831		-6%	6%
	Value of landings	8,818,071	9,327,817	10,459,884	12,082,566	13,046,877	12,492,911	10,461,108	11,576,296	9,800,391	10,360,660	13,451,976	12,355,305		6%	-5%
Income	Gross value of landings	8,818,071	9,327,817	10,459,884	12,082,566	13,046,877	12,492,911	10,461,108	11,576,296	9,800,391	10,360,660	13,451,871	12,355,209		6%	-5%
	Other income	306,345	708,036	-	2,195,521	500,023	2,492,316	1,220,355	880,538	577,468	520,280	490,662	479,597		-10%	-47%
	Operating subsidies	65,841	19,177	631,706	38,559	534,933	14,000	27,317	54,009	3,475	-				-100%	-100%
	Income from leasing out quota		9,496	27,245	156,678	57,422	476,304	347,328	1,008,012	1,141,581	963,266				-16%	139%
Expenditure	Personnel costs	1,425,813	1,610,304	2,535,149	2,072,902	2,103,666	1,532,497	1,932,258	1,648,741	1,407,422	2,153,967	2,066,749	1,939,421		53%	19%
	Value of unpaid labour	2,571,741	10,262,596	8,240,732	6,643,359	2,064,878	1,254,076	4,172,444	2,128,354	3,009,190	1,664,692	1,737,588	1,584,850		-45%	-63%
	Energy costs	2,924,266	2,654,727	3,799,819	4,088,748	4,025,417	3,663,242	2,704,738	2,266,277	2,385,657	2,095,866	2,092,235	1,930,436		-12%	-34%
	Repair & maintenance costs	1,544,523	1,205,442	1,091,747	1,135,726	1,207,720	1,164,850	1,792,159	1,812,799	1,771,436	1,552,402	1,523,187	1,471,131		-12%	10%
	Other variable costs	4,396,169	3,273,365	3,009,191	2,271,438	2,369,513	2,117,589	1,624,476	2,154,876	1,764,435	1,659,780	1,579,487	1,544,956		-6%	-35%
	Other non-variable costs	341,173	265,704	281,662	194,825	251,422	297,996	304,696	302,869	238,837	222,555	222,709	213,114		-7%	-19%
	Consumption of fixed capital	3,451,072	4,362,892	5,490,305	4,590,215	4,606,205	3,873,902	2,941,057	2,805,427	2,409,873	1,711,047	1,801,475	1,760,096		-29%	-55%
	Lease/rental payments for quota		19,870	112,123	193,154	1,031,128	99,540	456,207	1,099,009	1,141,581	1,166,476				2%	125%
Indicator	Opportunity cost of capital	84,776	2,463,707	1,955,738	2,610,339	887,323	1,801,522	1,293,328	187,631	- 4,956	- 6,909	- 113,314	- 245,069		-39%	-101%
	Gross Value Added	- 81,715	2,636,615	2,277,465	6,587,351	5,692,828	7,741,549	5,255,394	5,920,014	4,217,494	5,350,336	8,524,916	7,675,168		27%	20%
	Net Value Added	- 3,617,563	- 4,189,984	- 5,168,577	- 613,204	199,300	2,066,126	1,021,008	2,926,956	1,812,577	3,646,198	6,836,755	6,160,141		101%	690%
	Gross profit	- 4,079,269	- 9,236,285	- 8,498,416	- 2,128,911	1,524,284	4,954,975	- 849,308	2,142,919	- 199,118	1,531,677	4,720,580	4,150,897		869%	184%
	Net profit	- 7,615,117	- 16,062,884	- 15,944,458	- 9,329,465	- 3,969,244	- 720,448	- 5,083,694	- 850,139	- 2,604,035	- 172,461	3,032,418	2,635,870		93%	98%
	Net profit subsidised	- 7,549,276	- 16,043,707	- 15,312,752	- 9,290,906	- 3,434,312	- 706,448	- 5,056,377	- 796,130	- 2,600,560	- 172,461	3,032,418			93%	97%
	Net profit rights	- 7,549,276	- 16,054,081	- 15,397,631	- 9,327,382	- 4,408,018	- 329,685	- 5,165,255	- 887,127	- 2,600,560	- 375,671	3,032,418			86%	95%
Capital	Value of physical capital	80,691,137	91,534,816	91,089,162	134,452,142	98,464,273	77,099,020	72,026,249	65,476,756	50,004,328	34,996,319	37,174,204	36,288,077		-30%	-59%
	Value of quota and other fishing rights		964,083	920,973	712,299	738,305	786,581	766,700	1,254,749	747,474	1,756,473				135%	104%
	Investments	991,768	1,038,050	1,521,845	1,806,638	2,150,455	1,465,542	1,171,086	1,074,858	899,255	1,261,749	1,349,003	1,299,599		40%	-6%
	Total assets										27,807,600	28,978,657	28,333,286			
	Long/short debt										619,539					
	Subsidies on investments										-	-	-			

Data source: MS data submissions under the DCF 2019 Fleet Economic (MARE/A3/ASC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

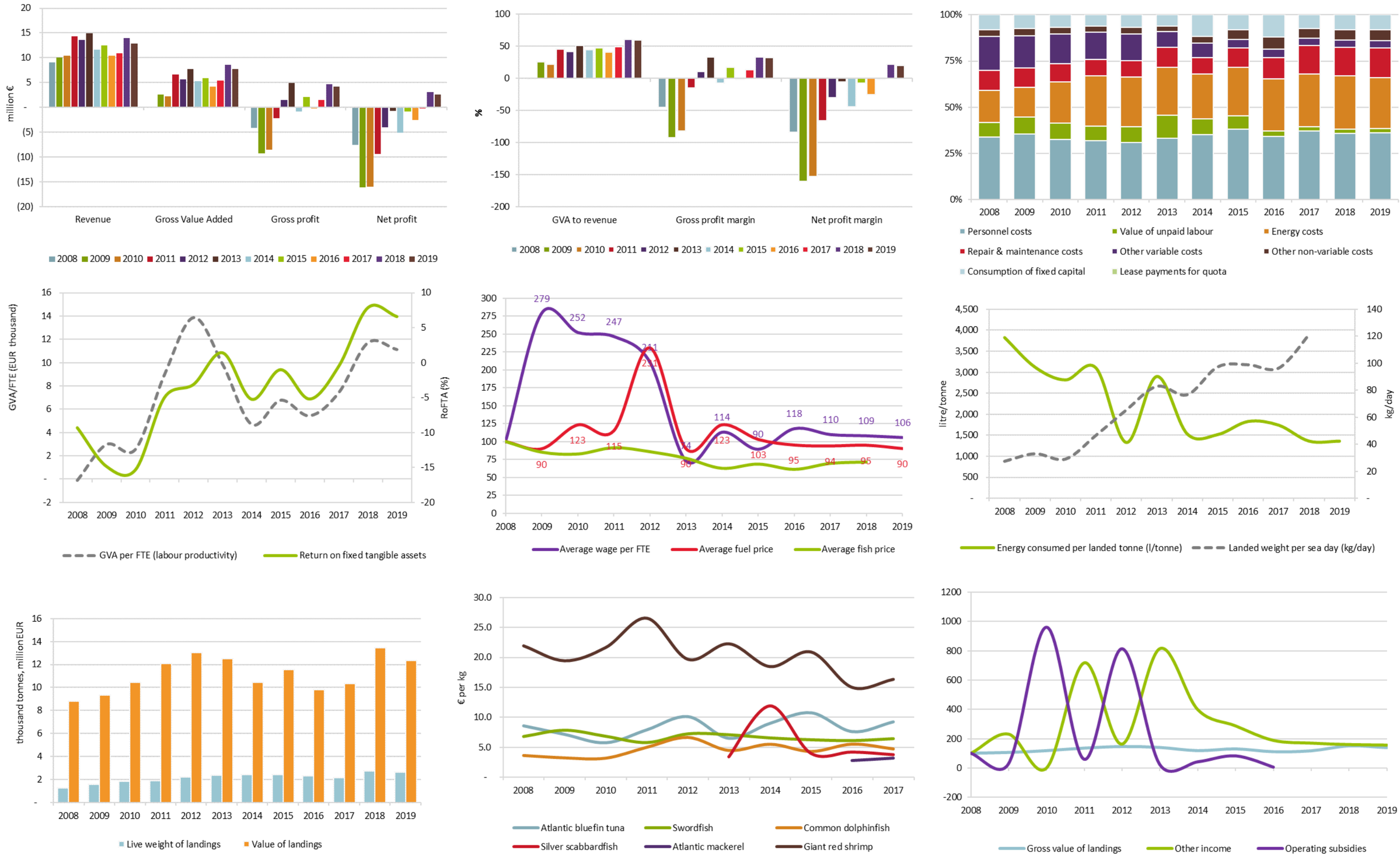


Figure 5.15 Malta: Main trends in economic performance indicators (absolute value, panel 1a/top left and relative value, (panel 1b/top middle); cost structure (panel 1c, top right); productivity (panel 2a); key input/outputs (panel 2b); efficiency (panel 2c); landings (panel 3a); average price (EUR /kg) of top species (panel 3b) and income (panel 3c). Nowcast figures for 2018 and 2019

Data source: MS data submissions under the DCF 2019 Fleet Economic (MARE/A3/ASC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Table 5.43 Malta: National fleet statistics and economic performance results by fleet segment, 2017

	Number of vessels	FTE national	Days at sea	Energy consumed per landed tonne	Live weight of landings	Value of landings	Revenue	Gross Value Added	GVA to revenue	Gross profit	Gross profit margin	Net profit	Net profit margin	Average wage per FTE	GVA per FTE (labour productivity)	Return on fixed tangible assets	Profitability (2017)	Net profit margin %Δ 2017 - average (2008-16)	Economic development trend	As a % of total revenue
MLT MBS PS 1824 NGI*	6	42	274	376	780,001	2,054,731	2,054,731	1,787,391	87.0	1,553,042	75.58	1,436,298	69.90	5,580	42,557	77.4	High			19%
MLT MBS HOK1824 NGI	17	81	1,226	2,076	314,327	1,770,014	2,005,502	810,599	40.4	272,005	13.56	252,034	12.57	6,649	10,007	88.6	Reasonable	139%	Improved	18%
MLT MBS PGP0612 NGI*	162	157	5,918	2,183	299,614	1,957,352	1,963,224	855,257	43.6	-41,561	-2.12	-239,072	-12.18	5,712	5,447	-9.1	Weak			18%
MLT MBS DTS2440 NGI*	11	50	1,112	7,179	120,908	1,035,242	1,286,563	317,771	24.7	-166,941	-12.98	-912,559	-70.93	9,694	6,355	-8.5	Weak			12%
MLT MBS HOK1218 NGI	11	39	870	1,058	197,416	1,162,337	1,162,337	721,296	62.1	192,016	16.52	76,489	6.58	13,571	18,495	4.4	Weak	343%	Improved	11%
MLT MBS PMP0612 NGI	130	160	4,215	2,922	178,377	1,006,940	1,006,940	299,246	29.7	-293,630	-29.16	-518,350	-51.48	3,705	1,870	-15.3	Weak	45%	Improved	9%
MLT MBS PGP0006 NGI*	311	132	7,235	3,401	92,253	649,396	676,016	110,109	16.3	-108,615	-16.07	-260,469	-38.53	1,657	834	-11.6	Weak			6%
MLT MBS MGO1824 NGI*	6	30	278	783	127,249	481,783	481,783	370,505	76.9	246,326	51.13	177,346	36.81	4,139	12,350	17.7	High			4%
MLT MBS MGO0612 NGI	11	18	266	3,320	33,419	176,762	176,762	53,794	30.4	-99,464	-56.27	-156,542	-88.56	8,514	2,989	-21.0	Weak	-43%	Deteriorated	2%
MLT MBS PMP0006 NGI	21	10	912	2,909	9,134	66,104	67,083	24,369	36.3	-21,501	-32.05	-29,652	-44.20	4,587	2,437	-22.9	Weak	18%	Improved	1%

Data source: MS data submissions under the DCF 2019 Fleet Economic (MARE/A3/ASC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Table 5.44 Malta: Landed value, weight and average price of principal species

	Value of landings (real) (thousand €)										Live weight of landings kg										Average landed price (real) (€)										% over total	
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	in EUR	in weight
Atlantic bluefin tuna	2.6	1.9	0.9	1.1	1.4	1.0	1.4	1.9	0.7	2.4	295,912	262,589	153,216	141,727	136,553	155,383	156,481	179,902	96,573	258,355	8.6	7.2	5.8	8.0	10.2	6.5	9.0	10.8	7.6	9.3	23%	12%
Swordfish	1.8	2.1	2.9	3.1	3.7	3.3	2.5	3.1	2.5	2.1	259,009	265,937	422,783	531,949	503,360	459,669	376,779	489,342	409,708	330,381	6.8	7.9	6.9	5.8	7.3	7.1	6.6	6.3	6.2	6.5	20%	15%
Common dolphinfish	0.9	1.3	1.7	1.8	1.2	1.7	1.2	1.4	1.3	1.2	237,193	394,726	529,999	348,692	181,038	381,863	207,704	334,321	237,603	242,913	3.6	3.2	3.2	5.0	6.7	4.5	5.5	4.3	5.5	4.7	11%	11%
Silver scabbardfish						0.4	0.4	0.3	0.5	0.5						123,104	37,346	82,683	111,777	133,491						3.4	11.9	4.0	4.2	3.8	5%	6%
Atlantic mackerel									0.4	0.5									139,560	156,579									2.8	3.2	5%	7%
Giant red shrimp	0.6	0.8	0.6	1.1	1.0	0.9	0.5	0.6	0.3	0.4	27,181	39,391	27,402	41,423	48,061	40,088	25,136	29,082	22,263	26,631	22.0	19.5	21.7	26.6	19.7	22.3	18.5	20.9	15.0	16.4	4%	1%

Data source: MS data submissions under the DCF 2019 Fleet Economic (MARE/A3/ASC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

5.16 Netherlands

Short description of the national fleet

Fleet capacity

In 2018, the Dutch fishing fleet consisted of 721 registered vessels, 199 of which were inactive, with a combined gross tonnage of 103 thousand GT, a total power of 247 thousand kW. Within the last 10 years the size of the fishing fleet fluctuated between 712-740 vessels with an average age per vessel of 36 years. In 2018, the number of fishing enterprises totalled 564, with the vast majority (81%), owning a single vessel. Around 19% of the enterprises owned two to five fishing vessels and only a few enterprises owned more than five vessels.

Fleet structure

According to the EU standards the Dutch fishing fleet can be divided into a small-scale coastal fleet (vessels under 12m using passive gears; 34% of the vessels in 2018) and a large-scale fleet (66% of the vessels in 2018). Nationally, the fishing fleet is divided into an active cutter fleet (active vessels with a minimum vessel length of 12m and landings value of 50 000 euro or more using an active fishing gear), a trawler fleet (targeting pelagic fish species) and the other coastal fisheries fleet (fisheries that do not fit in above mentioned fleets).

The cutter fleet is divided into 4 kW-categories. The first category is the ≤191 kW (≤260 Hp) shrimp vessels fishing with beam trawls or demersal trawls. The second category, vessels with 192-221 kW (261-300 Hp) engines, fish with pulse/SumWing/beam trawls or demersal trawls on shrimps and/or flatfish. The largest kW-category, vessels with 1 105-1 472 kW (1 500-2 000 Hp) engines, mainly fish with pulse/SumWing/beam trawls on flatfish. The vessels between the Eurokotters and the largest kW-category, vessels with engines between 222-1 104 kW (301-1 500 Hp), fish mainly with Danish/Scottish seines (flyshoot) or demersal trawls. Within the two largest kW categories the number of vessels are increasing over the period 2014-2018. Former fishing vessels return from activities for the offshore industry to flatfish fisheries, foreign vessels are being bought and new vessels are build.

The trawler fleet fish with midwater trawls on pelagic fish species. The number of vessels in this fleet has decreased in recent years from 14 vessels in 2012 down to 8 vessels in 2018. In the beginning of 2019 the number of vessels in the trawler fleet decreased to 7. The other small-scale fisheries fleet can be subdivided into inactive vessels, static gear vessels, and other coastal fisheries like dredges, pole and line fisheries, etc.

Employment

Total employment in 2017 was estimated around 2 150 jobs, corresponding to around 1 725 FTEs. Around 14% of the jobs come from the small coastal fleet, whereas the rest comes from the large-scale fleet (68% from cutter fleet and 18% from the trawler fleet). The number of jobs slightly increased in the active cutter fisheries and trawler fleet. If expressed in FTE, the contribution of the small coastal fleet is much lower: about 4% of the total.

Effort

In 2017, the Dutch fleet spent a total of 51.0 thousand days-at-sea, a decrease of 2% from 2016 (52.4 thousand days-at-sea). Compared with 2008-2016 average the effort increased by 1% in 2017. The quantity of fuel consumed in 2017 is estimated around 168 million litres, an increase of 3% from 2016 but a decrease of 7% compared with the 2008-2016 average. The increase in fuel consumption in 2017 (+3%) can be linked to the increased days spent at sea by the large scale vessels in this year including the pelagic trawler fleet (+13%), TBB40XX fleet (+7%) and DTS2440 fleet (+18%). The major factors causing the overall decrease in fuel consumption over years include the results of innovation programmes (introduction of new technics in fishing gear) that commenced in 2008 and the decrease of effort in kW-days. Transition to sustainable fisheries is an ongoing process. In 2017, most of the EU allowances for pulse technique were in effect in the Netherlands. This resulted in up to 40-50% less fuel consumption per vessel per day at sea. It is estimated that the total fuel consumption will increase in the next few years, caused by an increase in the number of (larger) active flatfish and flyshoot vessels and the restriction of pulse allowances by the EU in 2019.

The average Landings per unit of Effort (LpuE) for the Dutch large-scale fisheries estimated around 8.1 tonne per DaS in 2018, an increase of 1% compared to 2017. The reason of this increase can be found in the increased landings of pelagic fish by the pelagic trawler fleet. The average LpuE for the trawler

fleet amounted 168 tonne per DaS. Without the trawler fleet, the large-scale LpuE amounted 1.9 tonne per DaS. The small-scale coastal fleet amounted 0.17 tonnes per DaS.

Production

The total weight of fish and shellfish landed by the Dutch fleet in 2017 was 375.6 thousand tonnes, with a value of EUR 431.3 million. Compared to 2016, the total landings weight increased by 2% and landings value decreased by 8%. The increase in weight is mainly caused by the increased landings weight of pelagic fish species. The total landings of pelagic fish fluctuate from year to year. Due to decreased volume of common shrimps (-5.1 thousand tonnes; -28%) there was a large decrease in landings value of this species in 2017 (-EUR 37 million; -31%).

The demersal fleet targets mainly flatfish and common shrimp. The top landed flatfish species are European plaice and sole. Due to a great decrease in landings volume of common shrimp, sole generated the largest share of landings in value in 2017. The landed value of sole was EUR 95.7 million, common shrimp was EUR 80.9 million (EUR 37 million less compared than 2016). These species represent respectively 22% and 19% of the total landings value. European plaice is most important species for the demersal fleet in terms of the landings weight. European plaice (30.2 thousand tonnes) generated the third highest landed value (EUR 53.9 million, or 12% of total landings value).

The trawler fleet targets pelagic species. In 2017 the most important species were Atlantic herring (EUR 32.5 million), Atlantic mackerel (EUR 28.4 million), blue whiting (EUR 24.1 million), Atlantic horse mackerel (EUR 10.9 million), and pilchard (EUR 9.3 million).

Economic results for 2017 and recent trends

National fleet performance

The economic performance of the Dutch national fleet improved in 2017 and it is expected to stay on a high level in 2016 and 2017.

The total amount of income generated by the Dutch national fleet in 2017 was EUR 440.2 million. This consisted of EUR 438.2 million landings value and around EUR 2.0 million in non-fishing income. When including income from leasing fishing rights and direct income subsidies, total income amounted to EUR 442.0 million. Total income increased strongly between 2015 and 2016 due to increased fish prices and landings. From 2016 to 2017 income decreased mainly because of less landings slightly compensated by higher prices. Total income is expected to decrease again in 2018 due to decreased landings of especially flatfish while common shrimps were increasing.

Total costs in 2017 were EUR 373 million. Total costs for 2017 decreased 5% from 2016. Labour and energy costs, normally the two major fishing expenses, amounted to EUR 120 and EUR 61 million, respectively in 2017. Especially labour costs strongly decreased in 2017 (-EUR 17 million; -13%). Wages decreased because they are linked to the total income from landings (income decreased by EUR 26 million).

Gross Value Added (GVA), gross profit and net profit generated by the Dutch national fleet in 2017 were estimated at EUR 238 million, EUR 103 million and EUR 75 million, respectively. GVA decreased by 16%, gross profit and net profit decreased 21% and 22%. These results indicate a slightly deteriorated economic situation compared to previous year. All indicators are expected to decrease a bit in 2018, but will stay at relative decent levels relatively to last 10 years especially before 2014. The major factors causing the improvement in economic performance include higher landings of more valuable species, higher fish prices and lower costs mainly because fuel saving (e.g. pulse) techniques despite increasing fuel prices in the flatfish fleet (compared to 2016).

In 2017, the Dutch fleet had a (depreciated) replacement value of EUR 259 million, which was lower than the year before, and a value of fishing rights of EUR 459 million. Fishing rights and quota are transferable in the Netherlands. Selling/buying and leasing these rights are quite common and prices fluctuate substantially from year to year, depending on market availability (e.g. quota for sole or plaice available or not). Since the introduction of the pulse (high selectivity for sole) sole prices grew substantially (average lease prices of around EUR 3.35 in 2015) but dropped again in 2016 due to a higher TAC and national quota that has not been entirely be utilized. Investments amounted to EUR 15 million in 2016 and did not change significantly compare to 2017. It is expected that since the ban of pulse fishing, the quota prices for sole will decrease as sole is the target species for pulse fisheries. Furthermore the national quota for sole is not be fully utilized by the Dutch fleet. Dutch vessels are becoming older: the average age is 36 years. The improved economic performance stimulates further fleet renewal in the cutter fleet last years. New flyshoot, twinrig and shrimp vessels are expected in

2019. Uncertainties like Brexit, multi-use of the North Sea (windmill parks for instance), the landing obligation, ban for pulse fishery and the capacity at shipbuilding companies to build new vessels have an inhibiting effect on the speed of the fleet renewal.

Resource productivity and efficiency indicators

The gross profit margin in 2017 was 24.0%, indicating a very high operating efficiency of the sector. This percentage increased yearly from 2011 (gross profit margin of 5.8%) till 2016 (28%). Net profit margin was estimated at 17%, a 3% decrease on 2016. The Rate of Return on Fixed Tangible Assets (RoFTA) decreased in comparison with 2016 (36%) but it still positive with 28% relatively to negative numbers in 2011-2013.

Labour productivity (GVA/FTE) decreased in 2017: EUR 138.5 thousand per FTE. Where GVA decreased (-16%), FTE increased (+5%), therefore the labour productivity deteriorated by its inefficiency.

Fuel consumption per landed tonne increased a bit compared to 2016 and amounted 0.45 thousand litres per tonne landed in 2017. LpuE (in days-at-sea) also showed an increase compared to 2016 due to increased catches in pelagic fisheries (+13%). The landed weight per DaS amounted 7.36 tonne.

Small-scale coastal fleet

In 2017, there were 179 vessels where it was 175 vessels in 2018 belonging to the small-scale coastal fleet according to the European definition (vessels under 12m using passive gears). The segment accounts only for <1% of the national total volume of landings. The segment employs 14% of total number of fishers and 4% in terms of FTE.

The segment generated EUR 2.3 million of gross value added, EUR 1.6 million of gross profit (EUR 1.7 million in 2016) and EUR 0.8 million of net profit (EUR 1.1 in 2016).

Large-scale fleet

In 2017, there were 346 vessels belonging to the large-scale fleet where in 2018 it was 347 vessels. The large-scale fleet is dominated by the pelagic trawler fleet and demersal beam trawl fleet. However, the number of flyshoot and twin-rig vessels are increasing. The segment accounts over 99% of the national total volume of landings. The segment employs 85% of total number of fishers and 96% in terms of FTE.

The segment generated EUR 236.3 million of gross value added (EUR 281.5 million in 2016), EUR 102,1 million of gross profit (EUR 130.2 million in 2016) and EUR 73,8 million of net profit (EUR 95.0 in 2016).

Performance results of selected fleet segments

The Dutch fleet is highly diversified with a broad range of vessel types targeting different species predominantly in the North Sea (demersal fleet) and North East Atlantic Ocean (pelagic fleet), around the UK and Ireland. Besides that, a small part of the pelagic fleet operates in African waters and in the Pacific.

The economic performance of the fleet relies heavily on innovation and technical/structural development. The Dutch government and the EU supported the fisheries sector to produce fish in a more sustainable way with economic perspectives. Projects started a few years ago (e.g. 'knowledge networks') appears to help to improve entrepreneurship in fisheries so that fishers will be able to compete in international fish business in future. In 2016 this project ended. New projects focus more on the fisheries' selectivity approaching landing obligation.

The national fleet consisted of 11 (DCF) fleet segments in 2017. Almost all of the larger active fleet segments made profits in 2017. Table 5.69 provides a breakdown of key performance indicators for all 11 fleet segments in 2017. A short description of the five most important segments in terms of total value of landings is provided below.

Beam trawl over 40m

58 vessels make up this segment which operates predominantly in the North Sea. The fleet targets a variety of species but in particular flatfish, such as sole, plaice and turbot. In 2017, the total value of landings was over EUR 132 million and around 462 FTEs were employed in this fleet segment, contributing to 30% and 27% of the total income from landings and FTEs generated by the Dutch fishing fleet, respectively. This fleet segment was profitable in 2017, with a reported GVA, gross profit and net profit of EUR 74.3 million, EUR 35.9 million and EUR 32.1 million, respectively.

Despite to increased fuel prices (compared to 2016) and high flatfish prices conventional beam trawl vessels, SumWing vessels and Pulse vessels made still profits in 2017.

Beam trawl 18-24m

155 vessels made up this segment which operated predominantly in the North Sea and in the coastal zone. The fleet mainly targeted common shrimp and some vessels targeted langoustines (seasonally) and flatfish, such as sole, plaice and turbot. In 2017, the total value of landings was around EUR 87.9 million and around 411 FTEs were employed in this fleet segment, contributing 20% and 24% respectively of the total income from landings and FTEs generated by the Dutch fishing fleet. Total value of landings decreased by 26% especially due to the decreased landings of shrimps (-28%) and prices for common shrimp (-5%).

This fleet segment was profitable in 2017, with a reported GVA, gross profit and net profit of EUR 52.6 million, EUR 18.9 million and EUR 13.1 million, respectively.

Pelagic trawl over 40m

8 vessels made up this segment which operated predominantly in the North East Atlantic Ocean and to a lesser extend in the North Sea. The fleet targeted pelagic species, particularly herring, mackerel, horse mackerel, blue whiting, pilchard and sardinella. The total estimated value of landings was over EUR 116.8 million and around 378 FTEs were employed in this fleet segment, representing 27% of the total Dutch value of landings and 22% of the FTEs of the Dutch fishing fleet. It should be noted that the prices used to calculate the value of landings of the pelagic trawlers are obtained from the pelagic sector (see data issues). They are internal prices used to calculate the wage of the crew of the fishing vessel. The integrated companies cover the whole production chain from fishing to the consumer and there are no real ex-vessel prices available.

This fleet segment was profitable in 2017, with a reported GVA, gross profit and net profit of EUR 57.3 million, EUR 25.4 million and EUR 11.3 million, respectively. Information about the economic performance of the overall companies is not available, so it is hard to evaluate whether those profits resemble reality.

Beam trawl 24-40m

27 vessels made up this segment which operated predominantly in the North Sea. The fleet targeted in particular flatfish, such as sole, plaice and turbot. In 2017, the total value of landings was over EUR 34 million and around 126 FTEs were employed in this fleet segment, contributed to 8% of the total income from landings and 7% of FTEs generated by the Dutch fishing fleet.

This fleet segment was profitable in 2017, with a reported GVA, gross profit and net profit of EUR 18.9 million, EUR 8.4 million and EUR 7.1 million, respectively.

Demersal trawls and seiners 24-40m

27 vessels made up this segment which operated predominantly in the North Sea. The fleet targeted a variety of species like mullet, gurnard, squid and sea bass (mainly fly shoot method) but also flatfish, such as plaice and turbot. In 2017, the total value of landings was over EUR 37.4 million and around 152 FTEs were employed in this fleet segment, contributing to both 9% of the total income from landings and FTEs generated by the Dutch fishing fleet, respectively.

This fleet segment was profitable in 2017, with a reported GVA, gross profit and net profit of EUR 20.5 million, EUR 8.2 million and EUR 6.2 million respectively.

Drivers affecting the economic performance trends

Especially high fish prices caused by decreasing landing for many fish species (in particular flat fish), relatively low fuel prices (compared to prices before 2016) and further introduction of innovative fuel saving fishing gears were the main driving forces behind the overall improvement in economic performance. However, a decrease in economic performance is already observable from the year of 2017. There is concerning about further decreasing performances when the pulse fishing technique is forbidden, fuel prices increase and sole landings are expected to decrease to certain extent. The Dutch demersal fishing fleet is dominated by trawlers, beam trawlers and demersal trawlers. As trawling is typically fuel intensive, fluctuations in fuel consumption and fuel prices are therefore key drivers of the fleet's profitability.

Markets and Trade

European plaice generally compete with other (non-)European flatfish species. However, they also compete with whitefish species on the same market in and outside Europe. An increased dollar exchange rate helped this flatfish to become more competitive, where important non-European whitefish species became less competitive due to relatively higher import prices. On the other hand, the total availability of (non-) European flatfish species and substitutes for these species dropped in previous years. As effect of the increased competitiveness and the relatively low availability the plaice price went up.

Most flatfish caught by the Dutch fishing sector is consumed in southern Europe in countries like Italy, Spain and France. In northern Europe, Germany is an important country for the consumption of flatfish.

In 2017 common shrimp landings prices decreased explosively by 5% due to a growing unbalance between demand and supply and due to (inter)national landings volumes dropping significantly. Landings volumes in the Netherlands decreased with 28% (from 18.7 to 13.5 thousand tonnes) in 2017. The probability of losing markets for common shrimps increases when there is a substantially supply shortage. Due to pending contracts from last year high prices are paid to fulfil the contracted volumes.

Management instruments

The Dutch fleet is managed mainly through ITQs for the most important species, together with a range of input controls.

In the context of the recovery of cod stocks, a number of effort measures (including real time closures) were implemented depending on the fishing gear in the North Sea, the Irish Sea, Skagerrak and west of Scotland. Many additional yearly restrictions exist, depending on the fleet segment, the species and area. In 2015, the North Sea cod management plan was discontinued and limits on days-at-sea in the North Sea stopped.

Due to Natura 2000 demersal trawl fisheries are facing many area closures. Besides that, other activities in the North Sea such as windmill parks claim more and more space. As a result, fisheries are forced to change their fishing grounds.

The Landing Obligation

There is much concern about discarding in mixed fisheries, especially in terms of sustainability of fish populations which is in turn a threat to the future of fisheries. This led to the implementation of a landing obligation (or discard ban) for European fisheries in the latest CFP reform in 2013. The landing obligation will prohibit discarding all species with a TAC by 2019, with a gradual implementation. The aim is to incentivise fishers to avoid non-target species, juvenile fish and catches that exceed quota through better selectivity. Measures were put into place to allow for some flexibility, such as quota uplifts. Furthermore, in the Netherlands a *de minimis* exemption was set for multiple quota species between 2016 and 2019 in the North Sea.

Different projects, partly funded by the EMFF, are started in the Netherlands for finding solutions for a workable landing obligation. The projects mainly focus on increasing survivability of quoted unwanted fish species and improving selectivity of nets. By increasing survivability species like sole and turbot could be excluded from the landing obligation. Improving selectivity will reduce the amount of unwanted bycatch. Especially in *Nephrops* fisheries net adjustments improved selectivity. The new developed SEPNEP, a net with two cod ends that separate the *Nephrops* from the other fish, reduces unwanted bycatch up to 65% (unwanted plaice and dab by -69% and -78% respectively) without losing (too much) marketable fish.

Fishers fear that the discard ban will not be workable. Beside of the extra costs and the need of additional crew, the most important concern is related to choke species[21], i.e. losing catches of species where quota are still available. Discards are highly variable depending on the fishery in terms of quantity and composition. It is expected that a quota uplift may not be sufficient in some fisheries to prevent a "choke". In such a situation, the fishing activities are halted regardless of the available quota for other species. Particularly in a mixed fishery where the stocks and quotas of the target species are high, this could be an issue as many species are caught at the same time and multiple choke species may occur. Rays, turbot and brill are potential choke species candidates in mixed demersal fisheries (Batsleer, 2016).

[21] A choke species is a species for which available quota is insufficient to cover catches.

TACs and quotas

Total initial available quota for the Dutch fleet in 2019 is 262 thousand tonnes for the most important demersal and pelagic species cumulative. For many species, quota is managed through ITQs.

The Dutch quota for sole from ICES area IV and union waters of IIa, which is especially important for the Dutch fleet, decreased by 19% (including top up for the purpose of the landing obligation) to 12 140 tonnes in 2018. The Dutch quota for European plaice from ICES area IV, union waters of area IIa and area III (excluding Skagerrak and Kattegat) decreased as well with 10% (including top up for the purpose of the landing obligation), on 38 170 tonnes.

The Netherlands conducts quota swaps with other Member States. This, together with the transferable quota from 2017 to 2018, allowed for a sufficient amount of quota for important fish species like sole, plaice and *Nephrops* in 2018. In total sole quota increased in 2018 by 2%, amounting to a total of 12 896 tonnes. For European plaice this amounted to a total of 54 168 tonnes (-10%).

In 2018, Lease prices for sole were around EUR 0.25-0.50 per kg. Sole quota was not fully utilised in 2017 (66%). This fact, together with an increased effort in shrimp fisheries (due to good shrimp prices) and uncertainty about pulse fisheries brought back the lease price for sole to below EUR 0.50 per kg in 2018.

The utilisation of plaice quota was low in 2016, 2017 and 2018 and lease prices were also very low.

Status of Key Stocks

Most of the imported stocks fished by the Dutch fleet such as sole and plaice in the North Sea are fished at sustainable levels, below or at MSY. Some other stocks (like cod) are still overfished. These species (like cod) are caught as bycatch or a target for only a couple of vessels.

Innovation and Development

Around 80 commercial vessels are currently using pulse technique. Pulse technique reduce fuel consumption up to 40-50%. Most of these vessels target flatfish. A few targeted shrimps. The European Parliament voted against the pulse fishing technique in European waters since 16 April 2019. This mean that the legal exemptions will be revoked. In June and by the end of December 2019 exemptions that were approved from 2014 for a 5 year period will not be prolonged. The other exemptions for an infinite period will be revoked from July 2021 when there is a total ban on pulse fisheries in the EU. Especially the Dutch fleet has a large pulse fishing fleet. In 2017 almost 30% of the active cutters applies this technique. The topic of pulse fishing is highly controversial at the moment, due to discussion about the ecological effect. In the end of 2019 the research program about these ecological effect of pulse fishing will be finished.

Projections for 2018 and outlook for 2019

The number of vessels within the pelagic trawler fleet will decrease from 8 to 7 in 2019. The pelagic vessels are more efficient (faster freezing technics) and have enough capacity to fish their quota. Increased landings of pelagic fish species in 2018 (+8%) will improve economic performances in this year. For 2019 it is expected that economic performance will be lower than 2017 and 2018. Almost all important pelagic fishing rights decrease except of horse mackerel (+16%) in 2019.

Preliminary numbers demonstrates decreased fish prices for common shrimp -48% to EUR 3.08 per kg in 2018, together with decreased landing volumes for plaice (-19% to 24.6 thousand tonnes) and sole (-8% to 8.6 thousand tonnes) will give lower economic results. By higher landing prices for flatfish like sole (+8% to EUR 11.15 per kg) the drop of shrimp prices could be compensated for a part. Extremely higher landings for common shrimp (+200% to 28.0 thousand tonnes) will decrease the landings income shrimp fisheries. These changes in income, together with the expected increased fuel prices and fuel costs (+25% in 2018), let the economic performances across fleet types and for the Dutch demersal fishery overall decrease a bit.

It is expected that profitability in 2018 will not as historical as 2016 and even good as 2017 but will be still positive. Especially in the years before 2014 there were negative results (losses). Projections for 2018 show an overall increase of 8% in landed weight and a 3% decrease in landed value. Together with an expected increase in most notably fuel costs (+25%) and an expected increase of wages and salaries of crew (+0.3%), gross profits and net profits are expected to decrease up to 16% and 20%, respectively.

Vessels that do not own sole quota (e.g. static gear vessels) may see their situation improve in 2018 and 2019, compared to 2016 and 2017. The increased amount of fishing rights for sole while the national quota has not been optimal utilized, this will increase the availability of sole quota (and further reduce lease prices). The lease price for sole increased substantially over the last years due to optimal use of sole TAC. The relatively high lease price (around EUR 3.35/kg) caused an increase in total costs for some vessels. In 2018 average lease price dropped to around EUR 0.25-0.50 per kg.

There are different future drivers that could influence the performance of the (Dutch) fisheries. Dutch fisheries are highly dependent on the UK waters. It is still very unclear what the UK exit will imply, however, the most important fleet segments are getting up to 60% of their landings value from fishing areas in UK waters. It is known that a transitional period will come first in which the UK will actually remain a Member State of the EU. In the transitional period, everything will actually remain as it is. The UK will remain part of the Common Fisheries Policy (CFP), but it will not have any voice in determining quotas and other changes. So until the end of 2020 no big changes are expected. However, British political leaders have made clear that Britain will take back control on its fisheries. Therefore, it is not unreasonable to expect that Brexit may potentially have large negative consequences on the current Dutch fishing fleet after the transitional period.

Another important future driver is that the fisheries sector is preparing to meet the requirements with respect to landing obligation which has been fully introduced since the start of 2019. Fishers started projects (supported by the Dutch government and EU) to decrease unwanted bycatch and to improve survivability. It is expected that quota for especially Turbot/Brill and Rays (for demersal fisheries) and boarfish (pelagic fisheries) are not sufficient in some fisheries to prevent a "choke". In these situation, the fishing activities will be halted regardless of the available quota for other species.

MODEL FORECAST

Preliminary results in 2018 could be applied as a model forecast for 2019 that gives a calculated 27% decrease in landed weight, with a 15% decrease in landed value. Projections suggest that a decrease in value of landings, the economic performance will decrease in 2019: GVA (-18%), gross profit (-32%) and net profit (-41%).

Projection results suggest that the Dutch fleet will operate at a profit in 2019: with an estimated gross and net profit margin of 16% and 9%, respectively while a projected decrease is given of fuel costs (-8%) by especially less days-at-sea in 2019. Positive economic developments can also be seen in performance indicators GVA to revenue (48.2%), GVA per FTE (EUR 121.5 thousand) and a gross value added of EUR 182 million.

The 2019 gains are slightly less in 2018 as an decreasing landings weight is probably partly compensated by higher prices (e.g. flatfish), but resulting in a 13% decrease in revenue (income from landings). For 2018 and 2019, it is forecasted a lower net economic performance than 2017 (since increased costs), and even more decreasing comparing to the high profitability levels achieved in 2016.

Data issues

Most of the segments in the Dutch fishing fleet were well covered. In some of the smaller segments (DRB 0-10 m, DRB 24-40 m, DTS 0-10 m and TBB 12-18 m) variation in activity levels was high resulting in high uncertainty in the economic indicators estimates and large fluctuations from year to year. Moreover, the smaller fleet segments are clusters of vessels using different fishing techniques:

- Drift and/or fixed netters 12-18m include drift and/or fixed netters 12-18m and vessels using pots and/or traps 12-18m;
- Drift and/or fixed netters 18-24m include drift and/or fixed netters 18-24m, vessels using pots and/or traps 18-24m and vessel using other active gears 18-24m;
- Dredgers 24-40m include drift and/or fixed netters 24-40m, dredgers 24-40m and dredgers 40m or larger;
- Beam trawlers 0-10m include demersal trawlers and/or demersal seiners 10-12m, purse seiners 0-10m, beam trawlers 0-10m, beam trawlers 10-12m, pelagic trawlers 0-10m and pelagic trawlers 10-12m;
- Beam trawlers 12-18m include demersal trawlers and/or demersal seiners 12-18m, beam trawlers 12-18m and pelagic trawlers 12-18m.

Because of low response rates for the data collection in the segments above in 2016, clusters were combined in order to estimate the economic parameters: Demersal trawlers and/or demersal seiners 0-< 10 m, Beam trawlers 0-< 10 m and Beam trawlers 12-< 18 m were combined and Dredgers 24-< 40 m and Drift and/or fixed netters 12-< 18 m were combined. Therefore, these figures should be viewed

as indicative for the size of the sector rather than describing the exact trends. Currently work is being carried out to improve the estimation procedures.

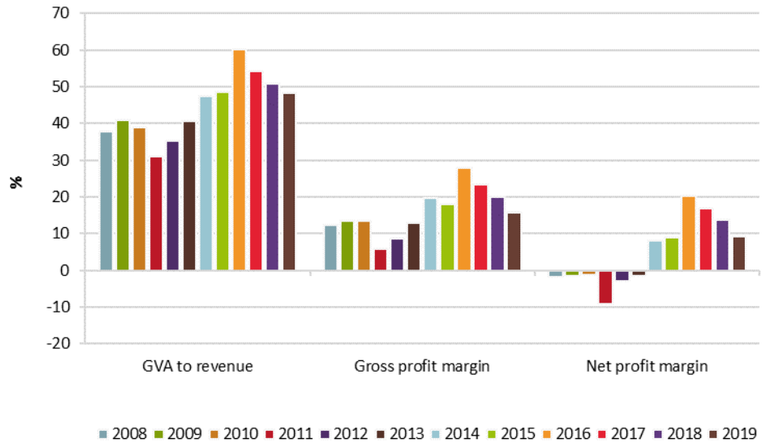
Prices of pelagic fish

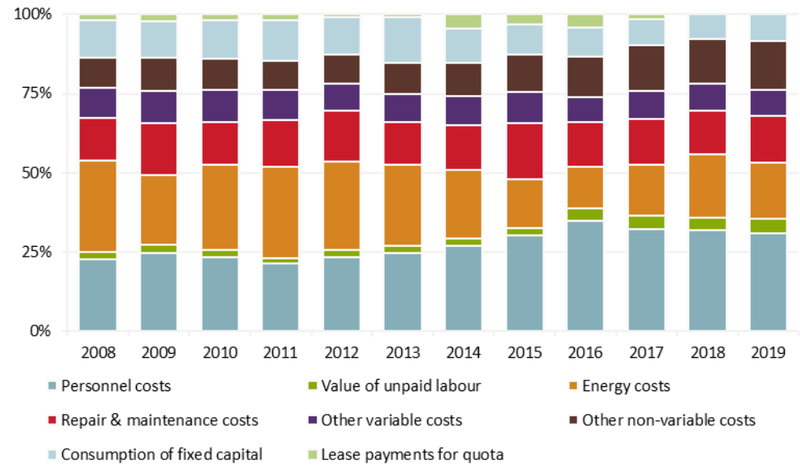
The prices of pelagic fish used to calculate the fishing revenue of the pelagic trawler fleet are not actual prices. They are internal prices used within the fishing companies to calculate the wage of the fishing crew. The integrated companies cover the whole production chain from fishing to the consumer and there are no real ex-vessel prices available. Those prices probably underestimate the value of landings of pelagic fish.

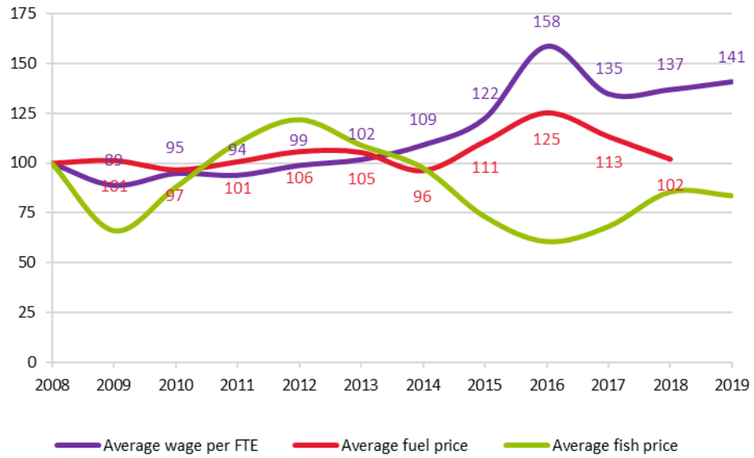
Table 5.45 Netherlands: National fleet statistics and economic performance results. Nowcast figures for 2018 and 2019

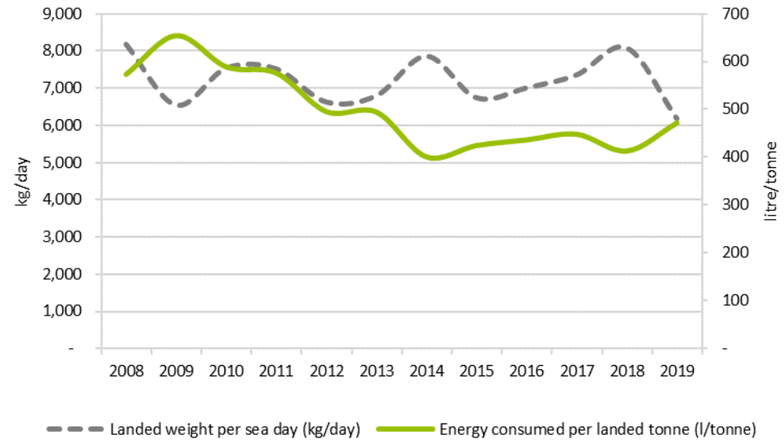
		2008	2009	2010	2011	2012	2013	2014	2015	2016	*2017*	*2018*	2019	Trend 2008-2018	Δ 2017 to 2016	Δ 2017 to avg. 08-16
Capacity	Number of vessels	712	725	737	736	740	735	719	717	733	736	721	702		0%	1%
	Total vessel power	295,860	293,953	288,774	288,082	276,336	280,142	266,723	247,240	254,691	258,960	246,893			2%	-6%
	Total vessel tonnage	138,772	137,197	130,523	135,495	128,789	134,094	126,067	110,172	114,695	116,390	103,483			1%	-9%
Employment	Engaged crew	2,205	2,087	2,095	2,050	2,040	2,087	2,014	1,970	1,972	2,149	2,112	2,085		9%	4%
	Unpaid labour										408					
	FTE national	1,883	1,964	1,795	1,707	1,720	1,729	1,684	1,623	1,648	1,723	1,701	1,498		5%	-2%
	Total hours worked per year (engaged crew)										3,135,569					
Effort	Days at sea	50,897	54,321	51,302	47,002	51,833	50,714	48,671	49,000	52,419	51,040	50,292	47,890		-3%	1%
	Fishing days	44,605	47,707	44,979	41,096	45,570	44,648	42,868	43,187	46,216	44,890	44,089			-3%	1%
	kW fishing days	43,775,201	41,231,756	41,347,223	39,438,706	37,356,665	36,245,321	36,046,279	34,132,183	35,472,613	36,926,757	37,101,844			4%	-4%
	GT fishing days	24,242,395	21,522,533	22,327,482	21,680,997	20,002,873	19,663,594	20,944,858	18,965,301	19,263,834	20,391,781	19,792,651			6%	-3%
	Number of fishing trips	28,375	28,980	29,874	27,322	28,208	27,859	28,031	27,969	30,062	29,565	33,599			-2%	4%
	Energy consumption	238,333,497	232,832,103	227,775,418	203,443,802	170,088,795	170,397,181	152,878,003	140,060,031	160,100,612	168,055,661	167,424,886	139,535,156		5%	-11%
Landings	Live weight of landings	415,994,945	355,788,257	386,753,316	353,252,675	343,714,907	345,084,683	382,428,485	330,506,705	367,518,873	375,605,214	406,176,934	296,237,385		2%	3%
	Value of landings	421,206,888	365,417,456	378,839,630	360,431,448	368,438,712	368,581,228	373,044,335	371,272,625	466,505,027	431,360,879	419,849,689	355,727,733		-8%	12%
Income	Gross value of landings	430,203,002	370,210,374	384,456,490	366,856,735	370,226,333	369,439,263	378,484,876	376,071,666	469,307,706	438,160,690	433,589,166	375,566,248		-7%	12%
	Other income	1,572,595	1,905,843	2,681,577	1,880,935	2,387,148	1,977,001	6,005,714	2,442,257	2,525,929	2,035,757	2,014,742	2,003,129		-19%	-22%
	Operating subsidies	-	-	1,307,384	357,530	1,212,998	1,720,534	2,437,129	-	2,577,560	-				-100%	-100%
	Income from leasing out quota	1,999,762	2,502,946	2,394,678	1,618,817	1,232,712	2,567,528	2,650,179	2,842,131	2,117,228	1,885,648				-11%	-15%
Expenditure	Personnel costs	98,706,593	91,760,717	90,837,562	86,613,493	90,969,738	93,183,533	98,044,856	106,802,968	136,613,622	120,073,223	120,413,991	107,496,075		-12%	21%
	Value of unpaid labour	10,826,719	9,913,536	8,290,786	6,768,415	8,038,994	9,226,969	8,840,486	8,678,191	15,240,072	14,923,266	14,944,122	15,134,031		-2%	56%
	Energy costs	126,061,148	81,567,163	105,857,756	118,589,210	109,649,432	98,347,201	79,037,719	54,296,398	51,440,964	60,613,780	75,804,678	61,827,295		18%	-34%
	Repair & maintenance costs	58,751,560	61,109,601	51,167,882	60,235,708	62,159,690	50,913,006	50,955,954	63,549,570	55,018,550	53,743,580	51,802,200	52,183,078		-2%	-6%
	Other variable costs	41,408,818	37,275,544	40,451,407	37,767,628	33,743,928	34,331,972	33,811,769	34,330,609	31,029,169	32,781,693	32,587,997	27,683,964		6%	-9%
	Other non-variable costs	41,900,289	39,961,881	38,423,959	37,447,019	35,285,595	37,017,469	38,062,809	41,980,166	50,508,049	54,442,202	53,170,949	53,848,100		8%	36%
	Consumption of fixed capital	52,581,750	42,961,487	47,065,370	53,427,352	46,075,635	55,327,149	40,597,391	33,797,214	35,434,884	30,805,440	29,125,728	29,366,542		-13%	-32%
	Lease/rental payments for quota	7,286,367	7,449,713	7,093,284	6,772,391	3,141,850	3,024,668	15,715,902	11,201,423	16,198,977	5,132,814				-68%	-41%
Indicator	Opportunity cost of capital	9,189,249	13,204,809	10,001,404	1,958,009	- 2,842,147	- 1,656,364	3,612,216	1,348,118	516,113	- 1,995,584	- 2,421,440	- 5,433,367		-487%	-151%
	Gross Value Added	163,653,781	152,202,027	151,237,062	114,698,106	131,774,836	150,806,616	182,622,340	184,357,180	283,836,902	238,615,192	222,238,083	182,026,939		-16%	42%
	Net Value Added	101,882,782	96,035,731	94,170,287	59,312,745	88,541,348	97,135,830	138,412,733	149,211,848	247,885,906	209,805,336	195,533,796	158,093,763		-15%	76%
	Gross profit	54,120,470	50,527,775	52,108,714	21,316,198	32,766,104	48,396,114	75,736,999	68,876,021	131,983,209	103,618,703	86,879,970	59,396,833		-21%	74%
	Net profit	- 7,650,529	- 5,638,522	- 4,958,060	- 34,069,163	- 10,467,383	- 5,274,672	31,527,391	33,730,689	96,032,212	74,808,846	60,175,683	35,463,658		-22%	622%
	Net profit subsidised	- 7,650,529	- 5,638,522	- 3,650,676	- 33,711,634	- 9,254,386	- 3,554,138	33,964,520	33,730,689	98,609,772	74,808,846	60,175,683			-24%	555%
	Net profit rights	- 12,937,134	- 10,585,288	- 8,349,283	- 38,865,208	- 11,163,523	- 4,011,277	20,898,797	25,371,397	84,528,023	71,561,681	60,175,683			-15%	1335%
Capital	Value of physical capital	462,631,152	495,793,961	482,842,923	409,583,462	335,830,746	265,535,779	315,048,044	275,676,350	271,910,021	259,170,080	241,194,449	242,471,906		-5%	-30%
	Value of quota and other fishing rig	210,079,691	269,632,193	240,150,279	240,504,170	227,135,629	256,693,990	273,081,932	349,521,179	449,614,822	458,934,942				2%	64%
	Investments	18,664,969	60,721,570	26,025,392	31,608,472	34,233,523	9,274,256	18,764,974	14,855,664	15,134,705	17,588,294				16%	-31%
	Total assets										11,785,633					
	Long/short debt										2,842,933					
	Subsidies on investments										320,513					

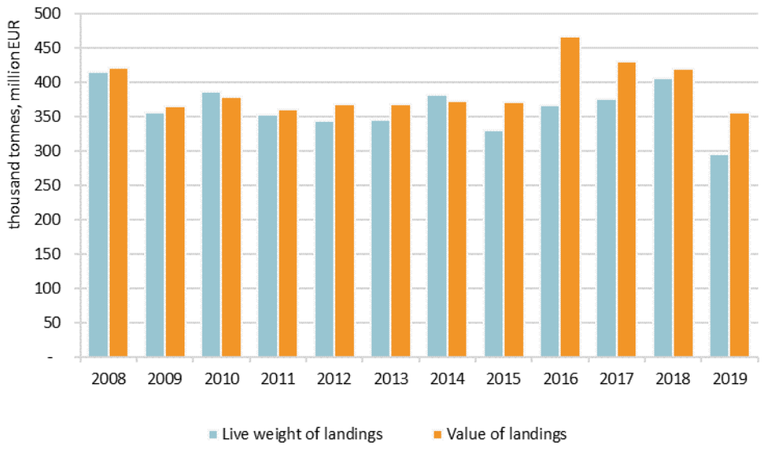
Data source: MS data submissions under the DCF 2019 Fleet Economic (MARE/A3/ASC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).











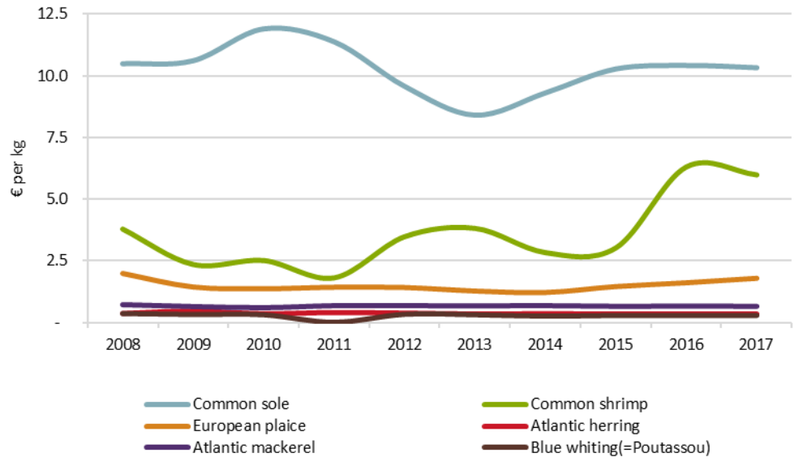


Figure 5.16 Netherlands: Main trends in economic performance indicators (absolute value, panel 1a/top left and relative value, (panel 1b/top middle); cost structure (panel 1c, top right); productivity (panel 2a); key input/outputs (panel 2b); efficiency (panel 2c); landings (panel 3a); average price (EUR /kg) of top species (panel 3b) and income (panel 3c). Nowcast figures for 2018 and 2019

Data source: MS data submissions under the DCF 2019 Fleet Economic (MARE/A3/ASC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Table 5.46 Netherlands: National fleet statistics and economic performance results by fleet segment, 2017

	Number of vessels	FTE national	Days at sea	Energy consumed per landed tonne	Live weight of landings	Value of landings	Revenue	Gross Value Added	GVA to revenue	Gross profit	Gross profit margin	Net profit	Net profit margin	Average wage per FTE	GVA per FTE (labour productivity)	Return on fixed tangible assets	Profitability (2017)	Net profit margin %Δ 2017 - average (2008-16)	Economic development trend	As a % of total revenue
NLD NAO TBB40XX NGI*	58	462	12,196	1,641	35,172,579	132,034,120	132,427,369	74,287,339	56.1	35,854,424	27.07	32,081,871	24.23	83,267	160,947	139.3	High	132%	Improved	30%
NLD NAO TM 40XX NGI*	8	378	2,059	193	295,313,501	116,765,731	123,471,660	57,346,217	46.4	25,358,422	20.54	11,329,190	9.18	84,624	151,710	8.5	Weak	175%	Improved	28%
NLD NAO TBB1824 NGI*	155	411	20,416	1,518	15,080,345	87,876,737	88,084,484	52,640,380	59.8	18,947,707	21.51	13,103,225	14.88	81,978	128,080	33.8	Reasonable	115%	Improved	20%
NLD NAO DTS2440 NGI*	27	152	4,759	866	12,531,296	37,413,368	37,728,087	20,471,690	54.3	8,208,695	21.76	6,234,555	16.53	80,585	134,527	29.5	Reasonable	174%	Improved	9%
NLD NAO TBB2440 NGI*	27	126	4,682	1,772	7,706,952	33,830,104	33,926,918	18,830,806	55.5	8,390,573	24.73	7,051,766	20.79	82,959	149,632	86.8	High	314%	Improved	8%
NLD NAO TBB1218 NGI*	23	87	1,557	474	7,233,691	13,590,377	13,654,973	9,424,127	69.0	4,324,909	31.67	3,917,285	28.69	58,754	108,587	106.0	High	290%	Improved	3%
NLD NAO DTS1824 NGI*	8	26	1,406	1,010	1,848,063	6,437,377	6,491,528	2,664,884	41.1	554,903	8.55	- 79,642	- 1.23	80,585	101,778	- 2.0	Weak	-222%	Deteriorated	1%
NLD NAO PG 0010 NGI*	161	63	3,051	1,527	248,051	1,826,440	3,213,381	2,093,635	65.2	1,407,940	43.81	728,188	22.66	10,925	33,357	8.0	High	32%	Improved	1%
NLD NAO DFN1824 NGI*	13	8	274	240	243,036	653,350	472,560	356,935	75.5	240,854	50.97	170,206	36.02	14,089	43,323	14.5	High	7593%	Improved	0%
NLD NAO TBB0010 NGI*	27	3	259	267	156,798	368,444	368,444	266,555	72.3	173,839	47.18	10,928	2.97	28,022	80,562	- 0.4	Weak	115%	Improved	0%
NLD NAO PG 1012 NGI*	18	7	380	594	70,902	564,832	357,042	232,626	65.2	156,438	43.81	80,910	22.66	10,925	33,357	8.0	High	29%	Improved	0%

Data source: MS data submissions under the DCF 2019 Fleet Economic (MARE/A3/ASC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Table 5.47 Netherlands: Landed value, weight and average price of principal species

	Value of landings (real) (thousand €)										Live weight of landings kg										Average landed price (real) (€)										% over total	
	2008	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**in EUR**	**in weight**
Common sole	98.7	101.7	104.4	90.7	87.0	83.9	85.4	94.4	100.6	95.7	9,425,049	9,597,418	8,776,892	7,969,979	9,087,281	9,987,464	9,184,484	9,199,542	9,663,830	9,272,669	10.5	10.6	11.9	11.4	9.6	8.4	9.3	10.3	10.4	10.3	22%	2%
Common shrimp	58.3	45.3	43.5	29.1	50.8	76.8	66.4	57.3	117.7	80.9	15,395,809	19,239,583	17,277,078	15,946,938	14,575,156	20,111,243	23,381,530	18,928,405	18,675,725	13,528,150	3.8	2.4	2.5	1.8	3.5	3.8	2.8	3.0	6.3	6.0	18%	4%
European plaice	40.8	33.4	38.3	40.8	45.3	42.7	35.5	46.8	53.9	53.7	20,723,000	23,412,563	28,269,331	28,797,232	32,242,333	33,752,187	29,280,098	32,203,372	33,683,245	30,211,953	2.0	1.4	1.4	1.4	1.4	1.3	1.2	1.5	1.6	1.8	12%	8%
Atlantic herring	21.8	22.1	20.8	18.6	32.8	31.8	31.2	27.3	37.2	32.5	56,709,617	47,728,653	55,780,405	45,350,135	85,097,481	88,010,082	85,238,367	75,902,421	103,350,607	91,494,301	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	7%	24%
Atlantic mackerel	14.4	15.1	14.8	19.2	17.5	14.5	32.0	25.7	24.8	28.4	20,070,457	23,417,503	24,903,961	28,393,305	25,700,494	21,604,076	46,809,158	39,358,332	37,511,513	43,541,198	0.7	0.6	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.7	7%	12%
Blue whiting(=Poutass	29.5	12.2	11.5		9.4	17.1	10.5	16.9	17.5	24.1	78,447,045	35,728,959	34,965,699		27,241,314	51,583,135	38,620,982	56,402,589	58,440,676	81,513,939	0.4	0.3	0.3		0.4	0.3	0.3	0.3	0.3	0.3	6%	22%

Data source: MS data submissions under the DCF 2019 Fleet Economic (MARE/A3/ASC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

5.17 Poland

Short description of the national fleet

Fleet capacity

In 2017 the number of Polish fishing vessels slightly decreased, with a total of 844 (-4%).However, combined gross tonnage (GT) and engine power (kW) increased by 6% and 9% and amounted to 37.2 thousand tonnes and 86.2 thousand kilowatts (kW) respectively. There were 49 inactive vessels in the fleet 1/5 less than in 2016. Majority of them belonged to two smallest length classes (<10, and 10-12m).

Fleet structure

In 2017, the Polish large-scale fishing fleet (length >12m) consisted of 170 vessels (=20%), whereas 623 vessels (=74%) were accounted for the small-scale coastal fleet (<12m passive gears).

Employment was estimated at 2 560 jobs, corresponding to 2 484 FTEs or an average of 3.1 FTE per vessel in 2017.

Effort was estimated at 60 thousand days-at-sea in 2017 (71.3 thousand days in 2016) an 20% decrease, while the amount of energy remained almost unchanged. Decreased fuel consumption was observed in small-scale fisheries -5%. The highest relative changes in energy consumption were observed for demersal trawlers 12-18 metres length (-38%) and PG 10-12m length (-18%). Number of days-at-sea for these two segment has decreased as well by 34% and 18% respectively.

Vast of Polish vessels operate mainly in the Baltic Sea. In 2017, there were five vessels (in 2016, four vessels) fishing outside Baltic Sea, two operating in African waters i.e. Morocco, Mauritania and Namibia (FAO 34 and 47), and two (one joined the fishery in mid of the year) operating in North East Atlantic (FAO 27.I, II, IV, VI, and VII). Because of the low number of vessels, they contribute negligible to the total effort but substantially to the total production.

Total Production in 2017, increased compared to 2016, with a weight of landings of 208.7 thousand tonnes (compared to 198.6 thousand tonnes in 2016). The main Baltic species landed in 2017 were European sprat, Atlantic herring, Atlantic cod, and European flounder. In terms of weight sprat is by far the dominant species (71.9 thousand tonnes), whereas the highest revenue was generated by Atlantic herring (EUR 14.7) following by sprat (EUR 13.4 million).

Economic results for 2017 and recent trends

National fleet performance

Economic performance of the fleet had gradually deteriorated since 2012 up to 2014, improved in 2015 remained good in 2016. This was caused by lower energy costs and labour costs. The decrease of 2017 profit were caused by significant increase of personnel and repair costs as well as higher other non-variable costs.

Based on 2018 preliminary information the overall performance is expected not to change significantly compared to 2017 result, however the small-scale segments as well as other segments significantly dependant on cod (like 12-18 DFN and DTS) may deteriorate as a consequence of tough situation with that fish.. Baltic cod landings volume and value decreased by about 8-9% in 2018..

Revenue, estimated at EUR 47.6 million in 2017 (EUR 51.4 million in 2016), decreased by 8%, however is expected to increase by 1% in 2018 due to higher landings income.

When including direct income subsidies, total income (no income from fishing rights) amounted to EUR 63.4 million, compared to EUR 52.25 million in 2016. Direct income subsidies accounted for EUR 15.7 million (in 2016 just EUR 0.65 million). , The significant increase was caused by accumulation of payments to fishers from EMFF, mostly for temporary stopping activity that took place in 2016 and 2017.

When excluding opportunity capital costs, total costs amounted to EUR 42.4 million, 6% increase compared to 2016 but not exceeding total revenue and generating a net profit of EUR 3.2 million (EUR 7.7 million net profit in 2016). Total operating costs increased mainly due to the 21% increase of personnel cost as well as 34% increase of unpaid labour costs.

Gross Value Added (GVA) and gross profit in 2017 were estimated at EUR 25.9 million and EUR 7.7 million respectively, compared to 2016 (EUR 31 million, EUR 16.6 million) GVA decreased by 17% and

gross profit by 54%. These results indicate a deteriorated economic situation compared to previous years mainly due to higher repair and maintenance costs and lower value of fish landed. Preliminary 2018 data shows that the situation my stabilise or insignificantly deteriorate.

The (depreciated) replacement value of the Polish fleet was estimated at EUR 115.6 million (compared to EUR 124.4 million in 2016).

Investments amounted to just EUR 0.9 million (EUR 1.4 million in 2016), a decrease compared to previous year what can be explained by delayed founds available from EFF/EMFF for vessels modernisation.

Generally, the cost structure has remained relatively constant over the years, with some apparent increase in personnel and unpaid labour costs which can be explained by an average salaries increase in Poland that took place in 2017.

Resource productivity and efficiency indicators

The gross profit margin had improved between 2013 and 2016 from 16% to 32%. Unfortunately the indicator deteriorated significantly in 2017 and amounted to 16%.

After an overall improved development trend since 2008, labour productivity (GVA/FTE) decreased in 2014 by 23% (EUR 9.2 thousand) and has recovered until 2016 to EUR 13.7 thousand. In 2017 it decreased however again and amounted to 10.4 EUR.

Fuel consumption per landed tonne for the Baltic Sea fleet has fluctuated in analysed period but stabilised in recent years. In 2017, amounted to 123 litres per landed tonne (122 litres in 2016).

Landings in weight per unit of effort (in days-at-sea) indicator increased to 3.5 tonnes in 2017 from 2.6 tonnes per day in 2016.

Performance results of selected fleet segments

Pelagic trawlers (24-40)

Pelagic trawlers 24-40 m length is the most important segment in terms of economic output, operating in the Baltic Sea. In 2016 and 2017, 44 and 43 vessels make up this segment. Employment in the segment increased slightly compared to 2016 (+7%). In 2017, the segment contribution to the total volume of landings and income from landings generated by the Polish Baltic fishing fleet increased to 63% and 44% respectively (from 54% and 39% in 2016). The fleet targets particularly pelagic species, such as sprat and herring. In 2016 and 2017, sprat had 56% and 62% share in catch composition of the segment landings, following by herring (39% and 48%). In 2017, the total value of landings was EUR 21.1 (4% more compared to 2016). Despite of lower herring prices in 2017 (-10%) value of landings of the segment increased mainly as a consequence of higher weight of landings (+15%)

As a consequence of TAC cuts in 2016 individual sprat quota available for vessels belonging to the segment were slightly lower (-6%) than the year before. However, significantly increased in 2017 (+32%). Individual sprat quotas for the segment followed TAC allocation to Poland for sprat. In 2018 and 2019 it remained at almost unchanged level.

Herring (the second most important species) quota in 2015, 2016 and2017 was raised by 43%, 7% and 35% respectively. At the end in 2017, the 24-40 TM vessels were allocated twice higher quota that they had in 2014. Herring quota allocated for Poland in 2018 was again higher, so individual limits available for the segment went up by 16%. Unfortunately 2019 herring TAC was cut by 26%, what may negatively influence the segment revenues.

Increased herring landings had no negative effect on first sale prices. In 2017 they remained at the average level of 2016. In 2018 however a decline of 20% in herring prices and -8% in sprat prices were observed on the first sale market. The situation did not improve in the first quarter of 2019. Taking account that the majority (over 70%) of the segment herring catches is landed in the second half of the year final economic effect of the price decline will depend on the further developments on market.

In 2017 the fleet segment was profitable, with a reported gross profit of around EUR 6.1 million, (EUR 7.5 million in 2016), and produced a net profit of EUR 3.9 million as much as in 2016. Most of segment's economic indicators have again improved in 2017 compared to 2016. The segment generated higher GVA (4%). Net profit margin was positive (18%). Profitability indicator was again at "reasonable" level in 2017 and economic development is improved.

Passive gears <10 m

The passive gears segment constituted of 509 in 2017 (in 2016, 511 vessels) operating in the Baltic Area including lagoon brackish waters. The segment is the biggest one in terms of people engaged. In 2015, there were 1 076 total jobs including 726 unpaid workers. The number of fishers remained stable.

The fleet targets a variety of saltwater species: Atlantic herring, European flounder, Atlantic cod and a variety of freshwater species, such as freshwater bream, pike perch and pike. In 2017, the total volume of landings was 6.4 thousand tonnes (-24% compared to 2016) worth EUR 7 million (-13% compared to 2016). The value of fish landed decreased by 14%. The deterioration was due to lower value of pike perch (-52%), freshwater bream (-46%) cod (-30%) and herring landings (-13%), since eel landing value increased by 43%.

The segment produced a net loss of EUR - 2.1 million compared to EUR 0.7 million profit in 2016 and a gross loss of EUR 1.6 million compared to EUR 1.7 million profit in 2016. The economic indicators deteriorated significantly. Gross value added decreased by about 20%, net profit margin was negative -30% compared to positive value in 2016 (8%).
The segment is affected by poor condition of Eastern Baltic cod stock. Before 2012 cod had been the most important species in terms of landings value (over EUR 2 million) in the segment. In 2015, cod landings dropped to EUR 1.1 million and in 2016 and 2017 to EUR 0.8 million and EUR 0.6 million respectively. Except for lower landings value the poor economic condition of the segment in 2017 was cause by significantly higher personnel costs (paid and unpaid) - 43% growth compared to 2016. The PG0010 segment was highly subsidised from EMFF. In 2017 the fleet received EUR 8 million direct subsidies (EUR 15.7 thousand average per vessel), mostly in a form of compensation for a temporary cessation of fishing activities in 2016 and 2017. The subsidies financed a high growth of labour costs.

Drivers affecting the economic performance trends

Polish fleet is dominated by trawlers, so the fuel price has always a major impact on the overall economic performance. 2017 fuel prices decreased slightly (-2%) compared to 2016.

The poor condition of Baltic cod (skinny fish) did slightly improve however it still negatively influence the performance of the demersal fleet segments targeting cod (DTS, DFN, HOK and PG1012). Additionally, the small-scale fleet is affected by limited abundance of this fish in coastal waters which is commonly attributed to environmental changes in the Baltic Sea. The recruitment of cod in 2018 was at very low level, so the economic prospect of the fishery is also rather pessimistic.

Small pelagic stocks (sprat and herring) have been in good condition. There is also a good demand on these fish from processing sector as well as from fish meal industry.

Since the EU accession (2004) subsidies for fisheries became a substantial part of the Polish fisheries sector incomes. Since 2014 however due to termination of EFF (2007-2013) the inflow of money to the fisheries has decreased significantly, what affected direct incomes as well as funds that used to be available mainly for repairs and investments. The money from new EMFF program became available for the industry at the end of 2016 but was paid out mostly in 2017 and mostly for temporary stopping of fishing activity. During the programming period vessels under 24 meters length are eligible to get money for up to 180 days of being inactive.

Polish fish market is characterised by very well developed fish processing sector with total annual output exceeding EUR 2 billion and generating a total demand close to million tonnes of raw material (live weight). Taking this into account the Polish market is dominated by imported fish and highly dependent on global market prices. This has indirect impact on the fisheries incomes by influencing first sale prices offered to fishers.

Markets and Trade

Fish and fish products consumption in Poland amounted to 12-13 kg per capita (live weight) in 2014-2017 and has been stable for many years. Atlantic herring (2.8 kg), Alaska Pollock (2.5 kg), Atlantic mackerel (1.1 kg), sprats (0.9 kg), Atlantic cod (0.8 kg) and Atlantic salmon (0.5 kg) dominate in the fish consumption pattern.

The annual production capacity of Polish fish processing sector amounts to about half million tonnes and is not satisfy by national supplies. Poland imported 580 thousand tonnes (925 thousand tonnes in live weight equivalent) of fish and fish products worth EUR 2 billion in 2017. It is estimated that it will rise to 590 thousand tonnes (EUR 2.1 billion) in 2018. Alaska salmon and herring were two most important species imported to Poland in 2017, contributing to 28% and 16% respectively or, in monetary value,

52% and 7%. Atlantic cod (imported mostly from Norway) is the third most important species. In 2017 Poland imported 55 thousand tonnes of cod products worth EUR 186 million.

An upward trend in retail prices of fish and fish products has been observed on Polish market in recent years. The retail price of fish and frutti di mare index in 2017 was 103.4 year to year compared to 102.0 of the index of consumption goods and services.

Price increases primarily for dried, salted and smoked fish (+6.4%), mostly due to continued growth of smoked salmon prices (+20%).

In the 1st quarter of 2019 first sale prices for herring and sprat were lower compared to 2018, by 4% and 7% respectively. Both species are however fish for human consumption and for reduction, so different proportion of landings in 2017 and 2018 between of these two products might contributed to observed price changes. First sale price for Baltic cod slightly recovered (+9%) in the same time.

Management instruments

The Polish Baltic fleet is managed mainly through TACs and subsequently - individual quotas imposed for all TAC species (sprat, herring, cod, and salmon) except for plaice. In 2017 and 2018 the quotas system did not change – quotas continued being allocated to fishing vessels based on length classes. Small-scale fisheries (vessels under 8 m length or 12 meters in sprat fisheries) was exempted form quota system.

The regulation prohibiting individual catch or days quota exchange implemented in 2017 has been relaxed in 2019. The former regulation limited possibility to exchange quotas to vessels belonging to the same fishing operator. The revised regulation enable the quota exchanges however at specified by the Ministry coefficients set for TAC regulated species.

Regulation (EU) No 1380/2013 introduced a landing obligation, applied for all catches of species which are subject to catch limits. In the Baltic Sea it came into force since 1 January 2015 for salmon, sprat, cod, and herring and, since 1 January 2017, also plaice. The regulation, which prohibits selling undersized fish for human consumption, has rather neutral impact on the industry. In 2016-2018 only 1% of cod was sold as non-human consumption fish.

A multiannual plan for the stocks of cod, herring and sprat in the Baltic Sea and the fisheries exploiting those stocks was adopted by European Parliament and the council on 6 July 2016. According to the regulation a target fishing mortality for the stocks concerned shall be achieved as soon as possible and, on a progressive, incremental basis, by 2020. The regulation set up mortality ranges for six Baltic fish stocks while left undefined for two (Eastern Baltic cod and Bothnian Bay herring).

TACs and quotas

The 2017 quotas allocated to Poland on the Baltic Sea amounted to about 140 thousand tonnes. In 2018 available quotas for sprat and herring were higher than in 2017 (by 1% and 16% respectively) since cod quota decreased by 7%. Available total TAC for 2019 is 9% lower than 2018. Combined Central and Western Baltic herring quota available for Poland decreased by 27% while sprat slightly increased (+3%). Poor condition of Eastern Baltic cod resources caused that quota was cut by 15% however Western cod quota were raised by 70%. Since the Polish Western cod quota is very small, the combined available 2019 cod quota is 8% lower compared to 2018.

Relative changes in individual quotas followed the changes in TAC available for Poland. The system of individual quota allocation remained unchanged in 2019 compared to 2018.

Performance by fishing activity

Small-scale coastal fleet

In 2016 and 2017, 617 and 623 vessels were assigned to the small-scale fleet according to the European definition (vessels under 12m using passive gears). These vessels operate exclusively in the Baltic Sea and two brackish water lagoons, targeting mainly herring, cod, flounder and various kinds of freshwater species which are not managed under a TAC regime. Weight and value of landings of the small-scale fleet has not changed significantly over the past years and varied between 10-13 thousand tonnes or EUR 10-12 million. The effort of the fleet decreased remarkably in 2017 by 9% and is expected to further deteriorate in 2018.

The reason behind declining landings is poor condition of Baltic cod stocks to be especially evident in the shallow coastal areas. In 2017, volume and value of cod landing decreased by 29% and 23%

respectively. The fleet were also affected by sharp decline of value and volume of Pike perch catches that decreased by 53% and 50% respectively. Pike perch contributed to as much as 12% of the total landings value in 2016 and 6.5% in 2017.

In 2017, GVA of the fleet amounted to EUR 6.4 million, 19% less than in 2016.

The sector suffered negative gross profit of EUR 2.1 million and 2.5 million and negative net profit of EUR 3 million in 2017. The number of people working in the fleet change insignificantly in 2017 and amounted to 1456 total jobs. The combined paid and unpaid labour costs (that are major cost item) increased significantly in 2017 (+35%) - this was an effect of huge subsidies paid out this year for temporary stopping of fishing activity.

Large-scale fleet

In 2016, 193 active vessels and in 2017, 170 were assigned to the large-scale fleet. These vessels exclusively operated in the Baltic Sea, just one large trawler fished in the North Atlantic. The Baltic vessels targeting mainly sprats, herring, cod and flounder. The landings volume continued upward trend in 2017 (+11%) however value of fish landed decreased (-7%).

The fleet is dependent substantially on small pelagic species. Sprat and herring contributed to 64% and 70% of total landing revenues in 2016 and 2017, respectively.

The costs of the fleet generated in 2017 were higher than in the previous year for most of important cost item like wages, fuel but except for depreciation cost.

The fleet generated GVA EUR 19.4 million, produced EUR 9.8 million gross and EUR 6.2 million net profit. All these economic parameters deteriorated remarkably by 17%, 35% and 19% respectively.

Nowcasts for 2018-19 and outlook

Model forecast

According to preliminary figures landings volume and value increased in 2018 by 1% and 14%. The economic situation deteriorated for fisheries but improved for bigger vessels. The decrease in 2019 Baltic Sea quotas as well as fuel prices increase may affect negatively economic results of the fleet in 2019.

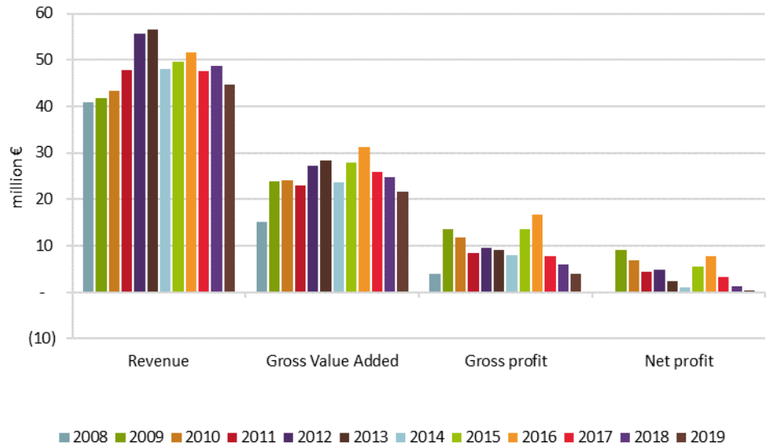
Data issues

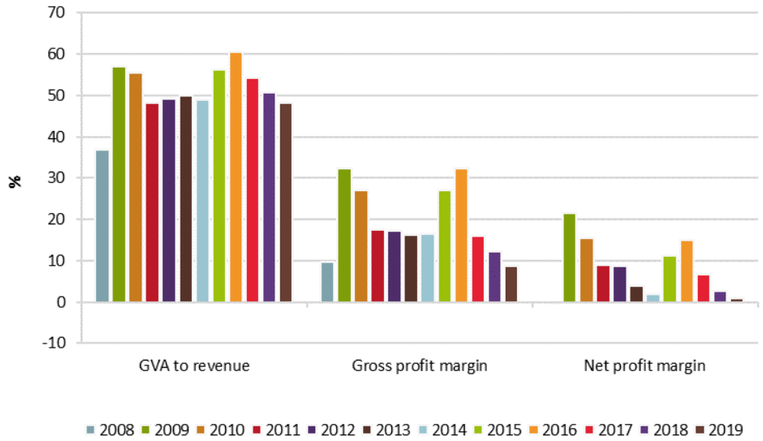
Similar to previous years, due to confidentiality reasons, distant water fleet (vessels over 40m fishing outside Baltic Sea) were excluded from the economic analysis. However, transversal data (except for value of landings) and employment data were provided for all fleet segments. In order to ensure consistency with data provided for previous years, premiums paid by government for scrapped vessels were taken into account when calculating invested capital (not the PIM method). Because change in methodology of reporting capacity, 2017 the figures are not fully comparable with the earlier years.

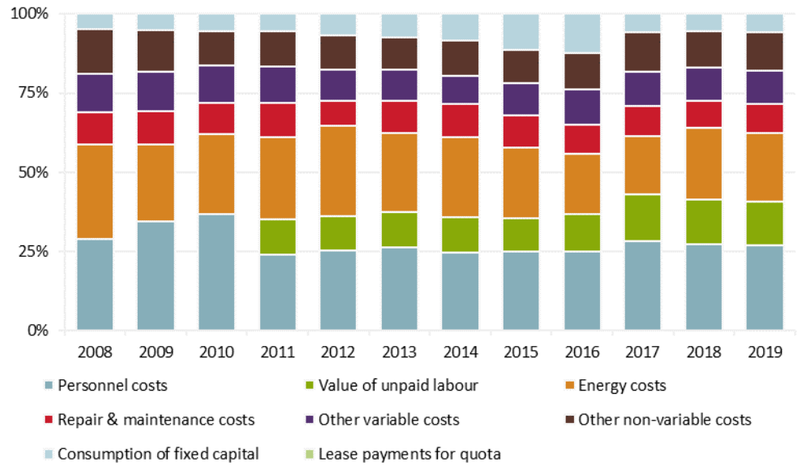
Table 5.48 Poland: National fleet statistics and economic performance results. Nowcast figures for 2018 and 2019

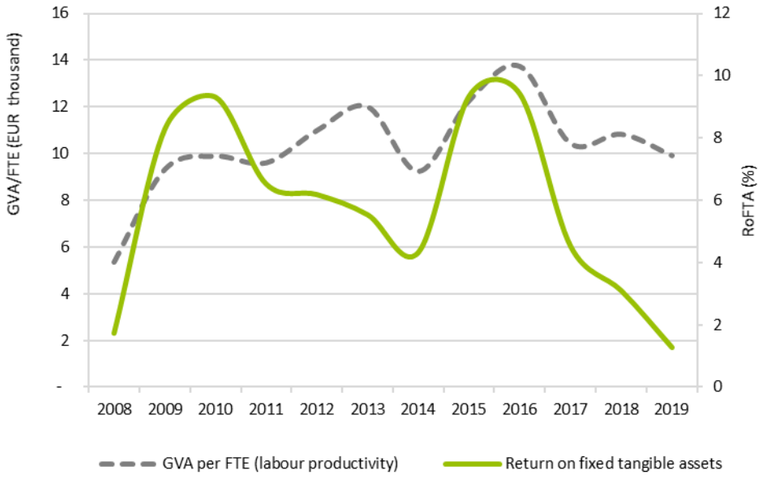
		2008	2009	2010	2011	2012	2013	2014	2015	2016	*2017*	2018	2019	Trend 2008-2018	Δ 2017 to 2016	Δ 2017 to avg. 08-16
Capacity	Number of vessels	864	832	806	793	790	798	838	873	875	844	832	826		-4%	2%
	Total vessel power	96,616	98,960	90,738	86,899	82,890	81,937	81,387	81,538	81,545	86,199				6%	-1%
	Total vessel tonnage	29,966	41,001	38,244	37,266	33,377	33,399	33,886	34,034	34,216	37,210				9%	6%
Employment	Engaged crew	3,026	2,699	2,590	2,548	2,601	2,515	2,703	2,491	2,481	2,560	2,468	2,411		3%	-3%
	Unpaid labour										1,081					
	FTE national	2,822	2,552	2,433	2,400	2,487	2,361	2,550	2,280	2,276	2,484	2,278	2,178		9%	1%
	Total hours worked per year (engaged crew)										1,924,248					
Effort	Days at sea	66,446	62,129	58,148	58,743	67,175	71,316	74,555	71,796	75,214	60,045	60,209	58,151		-20%	-11%
	Fishing days	62,511	59,845	55,483	56,794	64,085	68,115	71,247	68,670	71,348	56,833				-20%	-12%
	kW fishing days	6,020,162	8,377,770	7,318,950	7,904,626	7,080,234	7,477,874	7,015,461	6,342,635	7,398,468	8,269,248				12%	15%
	GT fishing days	2,646,529	6,315,276	5,185,820	6,142,348	4,553,346	5,261,554	4,843,393	3,932,846	5,412,585	4,956,536				-8%	1%
	Number of fishing trips	54,359	51,635	47,424	47,678	54,151	58,553	62,170	60,285	63,544	50,356				-21%	-9%
	Energy consumption	15,969,936	12,518,407	17,071,627	17,625,264	20,203,986	19,277,062	18,372,094	17,515,435	17,042,524	16,995,778	17,554,390	16,447,826		0%	-2%
Landings	Live weight of landings	126,150,213	212,125,618	170,771,384	179,540,187	179,238,606	194,957,945	171,305,143	187,915,550	198,495,590	208,722,730	214,451,549	189,035,819		5%	16%
	Value of landings	40,041,140	41,280,760	43,103,652	47,370,260	55,410,317	56,511,880	47,898,457	48,722,659	51,366,563	47,479,251	47,916,596	43,292,700		-8%	-1%
Income	Gross value of landings	40,041,141	41,280,760	43,158,290	47,370,260	55,409,965	56,512,071	47,898,453	48,722,655	51,397,520	47,449,649	48,462,228	44,572,073		-8%	-1%
	Other income	840,487	473,499	166,105	382,184	176,510	90,190	162,029	858,900	160,321	209,349	187,706	187,208		31%	-43%
	Operating subsidies	24,746,626	19,900,577	16,014,202	17,905,577	15,365,047	11,544,605	6,680,343	6,557,681	650,384	15,502,154				2284%	17%
	Income from leasing out quota	-	-	-	-	-	-	-	-	-	-					
Expenditure	Personnel costs	11,159,588	10,214,072	12,281,544	9,981,519	12,543,833	13,509,402	10,694,668	10,094,463	9,923,146	11,966,071	12,331,101	11,576,738		21%	7%
	Value of unpaid labour				4,667,132	5,212,284	5,625,651	4,922,437	4,368,459	4,662,811	6,233,257	6,345,639	6,072,439		34%	27%
	Energy costs	11,562,526	7,263,896	8,390,346	10,685,260	14,165,686	12,778,524	11,067,406	9,030,993	7,687,976	7,854,152	10,135,287	9,313,689		2%	-24%
	Repair & maintenance costs	4,008,620	3,110,767	3,317,118	4,542,815	3,962,478	5,261,224	4,581,423	4,208,115	3,583,467	4,022,277	3,977,906	4,015,888		12%	-1%
	Other variable costs	4,734,032	3,748,723	3,988,305	4,867,380	4,861,833	4,980,748	3,901,475	4,202,280	4,494,289	4,550,625	4,630,723	4,544,772		1%	3%
	Other non-variable costs	5,475,421	3,850,791	3,588,081	4,620,921	5,279,363	5,268,454	4,970,989	4,189,507	4,563,727	5,346,514	5,258,211	5,305,096		17%	15%
	Consumption of fixed capital	1,821,472	1,559,097	1,810,673	2,219,369	3,389,437	3,797,907	3,606,340	4,658,887	4,916,934	2,447,879	2,427,596	2,452,260		-50%	-21%
	Lease/rental payments for quota	-	-	-	-	-	-	-	-	-	-					
Indicator	Opportunity cost of capital	2,179,168	2,951,011	3,202,274	1,882,329	1,249,177	3,109,582	3,394,174	3,230,898	4,043,251	2,071,175	2,253,214	1,068,309		-49%	-26%
	Gross Value Added	15,101,029	23,780,083	24,040,545	23,036,068	27,317,116	28,313,311	23,539,188	27,950,660	31,228,382	25,885,430	24,647,805	21,579,837		-17%	4%
	Net Value Added	11,100,389	19,269,974	19,027,598	18,934,371	22,678,502	21,405,822	16,538,675	20,060,875	22,268,197	21,366,376	19,966,996	18,059,268		-4%	12%
	Gross profit	3,941,441	13,566,011	11,759,001	8,387,417	9,560,999	9,178,258	7,922,083	13,487,738	16,642,425	7,686,102	5,971,065	3,930,660		-54%	-27%
	Net profit	- 59,199	9,055,902	6,746,055	4,285,720	4,922,386	2,270,770	921,570	5,597,953	7,682,240	3,167,048	1,290,255	410,091		-59%	-31%
	Net profit subsidised	24,687,427	28,956,479	22,760,257	22,191,297	20,287,432	13,815,374	7,601,912	12,155,634	8,332,624	18,669,201				124%	4%
	Net profit rights	24,687,427	28,956,479	22,760,257	22,191,297	20,287,432	13,815,374	7,601,912	12,155,634	8,332,624	18,669,201				124%	4%
Capital	Value of physical capital	121,427,429	144,766,585	106,777,108	94,480,174	99,645,865	97,042,064	99,344,099	94,361,230	124,542,113	115,621,654	114,012,603	115,083,417		-7%	6%
	Value of quota and other fishing rights										-					
	Investments	8,697,730	2,160,308	3,751,339	8,632,291	6,922,604	6,127,233	2,453,361	1,433,476	1,402,481	885,384				-37%	-81%
	Total assets										115,621,654					
	Long/short debt										4,787,971					
	Subsidies on investments										1,971,208					

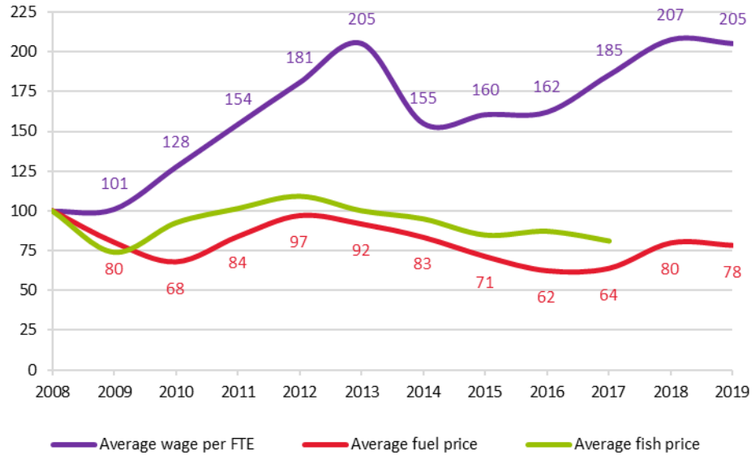
Data source: MS data submissions under the DCF 2019 Fleet Economic (MARE/A3/ASC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

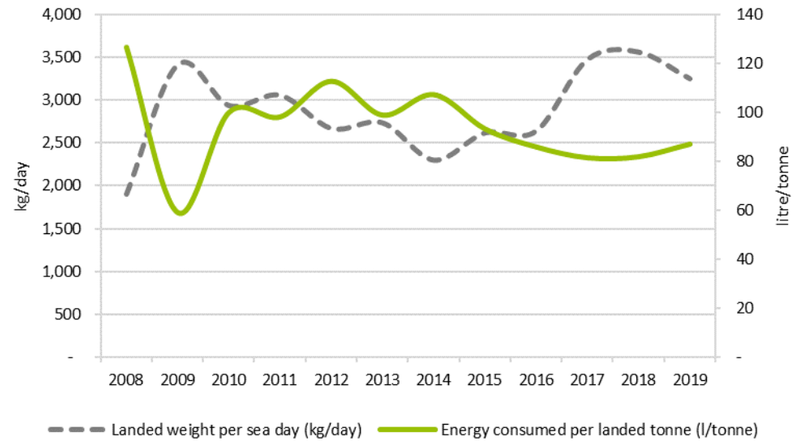


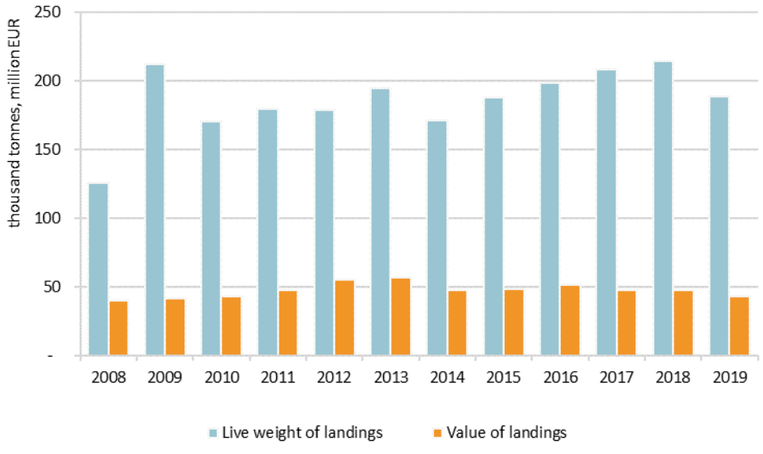












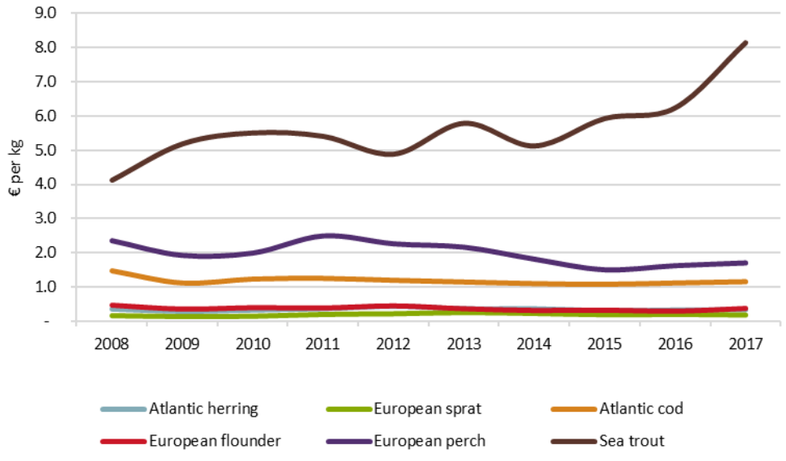


Figure 5.17 Poland: Main trends in economic performance indicators (absolute value, panel 1a/top left and relative value, (panel 1b/top middle); cost structure (panel 1c, top right); productivity (panel 2a); key input/outputs (panel 2b); efficiency (panel 2c); landings (panel 3a); average price (EUR /kg) of top species (panel 3b). Nowcast figures for 2018 and 2019

Data source: MS data submissions under the DCF 2019 Fleet Economic (MARE/A3/ASC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Table 5.49 Poland: National fleet statistics and economic performance results by fleet segment, 2017

	Number of vessels	FTE national	Days at sea	Energy consumed per landed tonne	Live weight of landings	Value of landings	Revenue	Gross Value Added	GVA to revenue	Gross profit	Gross profit margin	Net profit	Net profit margin	Average wage per FTE	GVA per FTE (labour productivity)	Return on fixed tangible assets	Profitability (2017)	Net profit margin %Δ 2017 - average	Economic development trend	As a % of total revenue
POL NAO TM 2440 *	43	282	5,749	99	86,419,864	21,119,592	21,117,908	11,747,961	55.6	6,108,545	28.93	3,877,452	18.36	19,998	41,659	11.2	Reasonable	118%	Improved	44%
POL NAO PG 0010	509	923	34,198	140	6,435,136	7,028,585	7,049,401	4,804,201	68.2	- 1,580,915	- 22.43	-2,118,499	- 30.05	6,918	5,205	- 8.1	Weak			15%
POL NAO DTS1218 *	49	190	4,478	232	10,691,791	5,356,830	5,473,151	2,164,299	39.5	817,562	14.94	399,837	7.31	7,088	11,391	5.3	Weak	-65%	Deteriorated	11%
POL NAO TM 1824	31	160	3,164	78	20,547,389	5,222,837	5,220,515	3,398,040	65.1	2,203,821	42.21	1,843,021	35.30	7,464	21,238	16.8	High	-3%	Stable	11%
POL NAO DTS1824 *	23	94	2,288	234	8,750,011	3,899,552	3,895,840	1,460,700	37.5	585,707	15.03	141,685	3.64	9,308	15,539	3.3	Weak	-79%	Deteriorated	8%
POL NAO PG 1012	114	340	7,587	219	3,974,153	3,363,179	3,364,759	1,603,899	47.7	- 551,086	- 16.38	- 932,666	- 27.72	6,338	4,717	- 4.5	Weak	-613%	Deteriorated	7%
POL NAO DFN1218 *	20	106	1,869	414	1,322,445	1,488,675	1,537,423	706,329	45.9	102,466	6.66	- 43,783	- 2.85	5,697	6,663	0.9	Weak			3%
POL NAO TM 40XX	2	4	60		15,889,722		-													0%
POL NAO DTS40XX	2	26	181		4,032,219		-													0%
POL OFR TM 40XX	2	160	471		50,659,999		-													0%

Data source: MS data submissions under the DCF 2019 Fleet Economic (MARE/A3/ASC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Table 5.50 Poland: Landed value, weight and average price of principal species

	Value of landings (real) (thousand €)										Live weight of landings kg										Average landed price (real) (€)										% over total	
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	in EUR	in weight
Atlantic herring	6.2	6.6	8.2	11.2	12.0	8.7	10.4	11.7	14.6	14.7	17,031,513	22,528,437	24,747,190	29,999,946	26,988,331	23,628,653	28,270,782	38,035,411	43,776,663	43,421,812	0.4	0.3	0.3	0.4	0.5	0.4	0.4	0.3	0.3	0.3	31%	23%
European sprat	9.3	11.7	8.5	11.6	14.6	21.9	13.9	13.0	13.0	13.4	55,422,113	84,625,306	58,842,598	56,107,877	62,817,826	80,344,000	58,333,952	63,953,722	60,580,446	71,879,009	0.2	0.1	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	28%	38%
Atlantic cod	15.0	12.6	15.1	14.9	17.9	14.6	13.1	14.7	11.6	8.6	10,089,921	11,179,573	12,190,701	11,834,508	14,858,511	12,624,700	11,835,293	13,650,250	10,386,159	7,459,479	1.5	1.1	1.2	1.3	1.2	1.2	1.1	1.1	1.1	1.2	18%	4%
European flounder	4.3	3.6	4.6	3.9	4.6	4.5	4.1	3.2	4.6	4.1	9,119,255	9,658,243	11,228,712	9,676,778	10,088,029	11,827,650	12,545,366	9,343,112	14,550,040	10,498,191	0.5	0.4	0.4	0.4	0.5	0.4	0.3	0.3	0.3	0.4	9%	6%
European perch	1.8	1.3	1.7	2.0	2.3	2.1	2.1	1.3	1.6	1.6	737,343	691,203	837,551	811,477	996,469	953,019	1,125,279	884,237	971,632	913,477	2.4	1.9	2.0	2.5	2.3	2.2	1.8	1.5	1.6	1.7	3%	0%
Sea trout	0.5	1.9	2.1	1.1	0.7	0.7	0.6	0.7	1.1	1.3	128,308	364,748	371,760	205,014	145,051	113,458	115,077	121,585	170,680	163,730	4.1	5.2	5.5	5.4	4.9	5.8	5.1	5.9	6.2	8.1	3%	0%

Data source: MS data submissions under the DCF 2019 Fleet Economic (MARE/A3/ASC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

5.18 Portugal

Short description of the national fleet

Fleet capacity

In 2017, the national fleet capacity is composed by 7 950 vessels, having a combined gross tonnage (GT) of 88.5 thousand tonnes and engine power of 348 thousand kilowatts (kW), distributed by Mainland Fleet, Azores and Madeira. In 2017, 49 new vessels entered the Portuguese fleet, while 86 ceased their fishing activities. The national fleet is characterized by a prevalence of small fishing vessels, with length of less than 12 meters representing 90% of the all fleet in number of vessels and 14% of the national total gross tonnage. The average vessel length is 7m and the average age of the registered fleet is around 33 years. In terms of active fleet is the average age drops to 24 years. The active fleet represents 48% of the national fleet.

Fleet structure

The Portuguese fishing fleet includes the Mainland Fleet, Azores and Madeira and developing the respective fisheries in accordance with the operating areas and gears. The national fleet contains vessels from the small-scale, large-scale and vessels which operate in distant waters and are grouped into 11 major segments (DFN, DRB, DTS, FPO, HOK, MGO, PS, TBB, MGP, PGP and PMP). The most important segments in terms of value from landings are: Demersal Trawl and Seine over 40m (DTS40XX), DTS2440, Hook between 24 and 40m (HOK 2440) and Polyvalent Passive Gears only above 10m (PGP0010) that together represents 49% in value landings.

Employment

Employment was estimated at 14 705 jobs, corresponding to 7 823 FTEs or an average of 2.1 FTE per active vessel. Although the results show a part time structure of the employment, many fishers work full time on fisheries but in part time on more than one vessel. The average FTE per vessel slightly increased from 1.9 to 2.1 in the 2008-17 period. The average wage per FTE reaches the maximum value over the all period, at around EUR 18 182 (17 700 in 2106). According to the 2011 census of the population, the average age of the fishers was 43.6 years. In 2017, the average age was estimated to increase to around 44.8 years.

The Portuguese official statistics reports three different age-classes to classify the annual trends in the age of the fishers': below 35, between 35 and 55 and over 55 (55 years is the retirement age in Portugal for the fishers). Comparing 2016 to 2017 revels a slightly decrease in the younger class (23.7% in 2016 and 23.0% in 2017) and an increase value in the older ones (18.5% in 2016 and 20.0 in 2017). This trend can be explained due to the age of the fishing vessels (in the last 10 years the renewal of fishing vessels was practically inexistent) and the correspondent poor working conditions not compatible to the other working activities. DTS fleet segment is the one who employs a higher percentage of younger fishers (23.8%) and lower percentage for older ones (10.2%), this can be explained by higher values of days in sea for this fleet segment and corresponding better crew wages.

Effort

An estimated 338 thousand days were spent at sea, similar to the 2016 value, which confirms the decreasing trend of the period 2008-15 (24% decrease over the period) and a stable effort after that period. The average days-at-sea per vessel shows also the same trend: 2014 achieved the lowest value of 85 days of activity per vessel, and in 2017 the observed value was 89. Landed weight per sea day seems to be increasing over the period, albeit the normal fluctuations from year to year; at 482 kg/sea day, it was 6% lower than the 2016 value. The energy consumption decreases 7% compared to 2016.

Vessels operate mainly in the Northwest Atlantic, with some important activities in the NAFO and Savlbard/Irminger areas (demersal trawlers), Indian and Pacific oceans (surface longliners) and near Madeira coast, for the Madeiran fleet.

Production

Despite the production in 2017, estimated to a value of 163 thousand tonnes corresponding to the lowest observed value, the total landed value reached the value of EUR 380 million which represents a similar value to 2016. The mean price of fish reaches the value of 2.3 €/kg which represents the higher value for the all period resulted mainly from the significant increase of common octopus prices in 2017 to a

value of 6.5 €/kg (4.5 in 2016). The landed value of European anchovy continues to grow reaching a value of EUR 14.2 million (4.9 in 2015).

In terms of landed weight, *21.6* thousand tonnes of Atlantic horse mackerel were landed in 2017, followed by chub mackerel (19.7 thousand tonnes). Due to the limitations imposed by the Iberian sardine management plan, catches of European pilchard reaches the volume of 15.0 thousand tonnes representing a decrease of 76% between 2008 and 2017. This strong reduction affects in an important manner not only the fleet segments that catch this specie but also the processing industry. In order to overcome the strong reduction in the European pilchard catches, the importations of these specie strongly increases between 2010 and 2017

The average price of the European pilchard increases from 0.7 EUR /kg in 2008 to a sustainable value in 2014-2016 of 2.0 EUR /kg (in 2015 the price reaches the maximum value of 2.2 EUR /kg). In 2017 a significant reduction of the European pilchard price was observed (1.6 €/kg) due to a strong concentration of daily landings that pushes the prices down. The fish stock shows some recuperation and new values for the Portuguese catches limitation are expect in near future which will appoint to a good direction to the optimal values in terms of sustainability/economics and necessary catches to feed the internal consumption and industry needs. These three species represent 34% of the total Portuguese landings.

Economic results for 2017 and recent trends

National fleet performance

In 2017, the Portuguese national fleet improved its economic performance, recovering from the minimum low of 2012 where it achieved a net loss, into a positive net profit of EUR 75.2 million in 2017. This trend tends to stabilised in 2018 and 2019, as fuel prices and rate of interest (opportunity costs) remained low and the expecting landing values tends also to be constant.

Revenue, estimated at EUR 383.3 million, contradicts the historical declining trend with a positive variation of EUR 27 million compared with 2015, achieving a good result due to increase of average fish price, with lower catches in volume of small pelagic fish with low value (like chub mackerel) and a significant value for the common octopus landing (EUR 37.2 million).

Operating costs decreased mainly due to the decreasing of and energy costs. From 2012 to 2017 energy costs decreased 39%. When including capital costs, total costs amounted to EUR 303 million representing a 14% reduction compared to 2012.

Gross Value Added (GVA), gross profit and net profit in 2017 were estimated at EUR 257 million, EUR 115 million and EUR 75.2 million, respectively. Over the 2008-16 period, GVA, gross profit and net profit increased 7%, 32% and 100%, respectively. These results indicate an improving economic situation compared to previous years, benefiting mainly from observed low energy costs in the recent years.

Overall, the cost structure has remained relatively constant over the years, with a slight increase in labour costs and a decrease in the energy cost.

Resource productivity and efficiency indicators

The gross profit margin in 2017 was 30.0%, indicates a satisfactory operating efficiency of the sector. Net profit margin was estimated at 19.6%, a similar value to the one achieved in 2016.

The Rate of Return on Fixed Tangible Assets (RoFTA) has been improving since 2012, where it achieved a minimum of 6.8% due to drop of landings revenue and very high fuel prices. Since then, decreasing operational costs were observed, due to the reduction of fuel prices. This decreasing has been contributing to the better economic performance of the fishing fleet. In 2017, RoFTA achieved 21.8%.

Labour productivity (GVA/FTE) follows the recent trend increased in 2017 to 32.9 thousand euros (+1.0% by comparison with the previous year), reversing the decreasing trend of 2012 and 2013. This was due to the combination of improving GVA and a decrease in FTE.

Fuel consumption of 533 litres per tonne landed is similar to the one observed in 2016. Landings in weight peir unit of effort (in days at sea) slightly decrease to 482 kg/day and still close to the mean value in 2008-2016 period. This indicator shows some mixed results, increasing in 2010 and remained stable after that year, due to the decreasing of both effort and landings.

Performance by fishing activity

Small-scale coastal fleet

In 2017, the small-scale coastal fleet (SSCF) comprised 3 004 vessels, corresponding to 79.3% of the total active fleet, with a combined gross tonnage of 7.28 thousand units and a total power of 101.1 thousand kW. The majority of SSCF, up to 49.0%, operates along the coast using several gears (PGP - nets, longlines, pots and traps) catching a diverse amount of species, being the cephalopods (octopus and cuttlefish) the major group achieving 24% of SSCF landings. Demersal and pelagic species like conger and chub mackerel are the following species that with cephalopods represents 45% of SSCF landings. In 2017, this fleet generated 7 412 jobs, corresponding about 50% of the national employment and a decrease of 4.2% in FTE by comparison with the previous year. The average fleet activity in 2017 reaches a value of 72 days at sea/vessel.

Landings in weight increase, following the trend of the whole fleet but with improved prices of fish it achieved a higher level of value. In 2017, landings from the SSCF represented 12.0% in weight and 23.3% in value of the total Portuguese landings, revealing high quality of the fresh product catch by this fleet segment.

In terms of economic performance, the total amount of Gross Value Added (GVA), gross profit and net profit generated by the SSCF in 2017 were EUR 70.0 million, EUR 35.4 million and EUR 26.0 million, respectively. The performance of the fleet improved consistently since 2012. Furthermore, this part of the national fleet contributes significantly to the economic and social sustainability of local fishing communities. Projections for 2019, suggest that the SSCF continued to decrease in capacity (number, GT and kW) but in terms of economic performance, a further improvement is expected.

The cost structure of the fleet remained stable over the period 2008-16 with Wages and salaries of the crew being the major cost and highly linked to the income from landings.

Large-scale Fleet

The large-scale fleet comprised 766 vessels and it represents 20.2% of the active Portuguese fleet. The majority of large-scale fleet use mobile gears (purse seine, demersal trawl and dredges) and in 2017 generated 7 035 jobs, representing 48% of total fleet employment. In 2017, the activity and landings of this fleet decreased as the income from landings. The economic performance (Gross Value Added, Gross and Net profit) retreated when compared to 2016.

Distant water fleet

The distant water fleet comprised 18 surface longliners. It must be stressed that the 12 demersal trawlers and 7 pole and line vessels operated in Madeira included in the previous years in this fleet were reclassified for the Large-scale fleet, so it is not appropriated to compare the economic and social indicators with the previous years. In 2017, the fleet generated 259 jobs. In terms of economic performance, the fleet showed an estimated Gross Value Added (GVA), gross profit and net profit of EUR 9.0 million, EUR 5.9 million and EUR 3.6 million, respectively. Considering only the fleet of the longliners one can conclude that economic performance of this fleet segment a decline when compared to 2016.

Outermost region fleets

Madeira

The Madeiran fleet consisted of 431 vessels in 2017, having a combined gross tonnage (GT) of 4 thousand and an engine power of 16.5 thousand kW. The majority of this fleet had an overall length of 12 meters or less and the active fleet amounted to only 88 vessels in 2017. The Madeiran fleet develops its activity mainly in Subarea 2 ZEE-Madeira, with vessels operating in certain seasons of the year in Azorean waters and the Canary Islands, under reciprocity agreements. The majority of the active vessels operated with long-lines and the most representative species are tunas and Black scabbardfish, representing 38% and 24% of total landings, respectively.

Azores

In 2017, the fleet of Azores consisted of 758 vessels, having a combined gross tonnage of 8.6 thousand GT and an engine power of 51.7 thousand kW. 84.3% of this fleet had an overall length of 12 meters or less and the active fleet represents 77% of the fleet. The Azorean fleet develops its activity mainly in Sub-area Azores EEZ, and is licensed mostly for longliners (HOK) and purse seiners (PS). The most

representative species are: tunas (40.6%), blue jack mackerel (6.7%), blue shark (5.6%) blackspot seabream (5.4%), that in total are representing around 58% of the total of landings.

Other fishing regions

NAFO

The fleet operated in NAFO waters is composed by 9 vessels (DTS40XX) with a total capacity GT 16 656 of and 18 340 kW. In 2017 the effort was 1587 fishing days and the catches for each fishing day were around 10 ton. The most representative species are: Cod, Atlantic redfish and Greenland halibut.

ICCAT

All the regions of the Portuguese fleet operate in ICCAT zone and catches species assessed by this organization. The main gear used by this fleet is HOK – surface long line for the mainland fleet and pole and line for the outermost regions (Azores and Madeira). The total landings for the species that are full assessed by ICCAT are 19.0 thousand tonnes and 50.5 million euros, representing 11.7% of the Portuguese landings and 13.3% of the landing value. The main species catches by this fleet are the blue shark (44.4%), bigeye tuna (16.1%), albacore (13.5%) swordfish (12.0%) and skipjack tuna (9.5%).

Considering vessels above 20m in length were the landings of ICCAT species represents at least 75% of the total landings, these fleet is composed by 57 vessels (23 from Azores, 28 from mainland and 6 from Madeira) with a total GT 11 030 and 28 795 kW.

Performance results of selected fleet segments

The Portuguese fleet is highly diversified with a broad range of vessel types targeting different species predominantly in the Portuguese Exclusive Economic Zone (27.IX.a for the mainland fleet, 27.X for the Azores's fleet and CECAF 34.1.2 for the Madeira's fleet). The national fleet consisted of 52 (DCF) fleet segments in 2017 and 6 inactive length classes. A short description of the most important segments is provided below.

Demersal trawl and seine over 40m (mainland fleet) – 11 vessels made up this segment which operates predominantly in Area 27 and 21 (NAFO, Norway, Banana hole and Irminger). The fleet targets a variety of species but in particular Atlantic Cod, Atlantic redfish and Greenland halibut. In 2017, the total value of landings was around EUR 63.0 million and around 249 FTEs were employed in this fleet segment, contributing to 16.6% and 3.2% of the total income from landings and FTEs generated by the Portuguese fishing fleet, respectively. This fleet segment shows a significant improvement in the economic performance, with a reported gross profit of around EUR 25.0 million and net profit of EUR 19.6 million in 2017.

Demersal trawl and seine 24-40m (mainland fleet) – 56 vessels made up this segment in 2017; the fleet targets a variety of species but in particular deep water rose shrimp, Atlantic horse mackerel and Atlantic mackerel. In 2017, the total value of landings was around EUR 43.1 million and around 440 FTEs were employed in this fleet segment, contributing to 11.3% and 5.6% of the total income from landings and FTEs generated by the Portuguese fishing fleet, respectively. The fleet segment reported a gross profit of around EUR 7.2 million and net profit of EUR 2.6 million.

Purse seine 18-24m (mainland fleet) – 53 vessels made up this segment in 2017, which operates predominantly in Area 27 (27.IX.a and 27.VIII.c). The fleet targets a variety of species but in particular small pelagic fishes, such as Atlantic pilchard, Atlantic horse mackerel and anchovy. In 2017, the total value of landings was EUR 26.6 million and the fleet segment employed around 713 FTEs, contributing 7.0% and 9.1% of the total income from landings and FTEs, respectively. The fleet segment achieved a reported gross profit of around EUR 5.1 million and net profit of EUR 2.6 million. The average price per kg continued its upward trend in 2017, contributing to the stability of the segment.

Hooks 24-40m (mainland fleet) – 17 vessels made up this segment which operates predominantly in Area 27 and 21. The fleet targets a variety of species, but in particular, blue shark and swordfish. In 2017, the total value of landings was around EUR 12.0 million and around 173 FTEs were employed in this fleet segment, contributing to 3.1% and 2.2% of the total income from landings and FTEs generated by the Portuguese fishing fleet, respectively. This fleet segment shows a significant improvement in the economic performance, with a reported gross profit of around EUR 2.7 million and net profit of EUR 1.5 million in 2017.

Hooks 24-40m (Azores) – This fleet segment generates over 36% of total landings value and around 52% of total weight in Azores. It's composed by 28 vessels operating exclusively in Area 27.X.a. The fleet targets mainly tuna fishes (big eye tuna, albacore and skipjack). In 2017, the total value from landings was EUR 13.9 million which represents a huge improvement comparing to the last years with

very weak profitability. The fleet segment employed 267 FTEs. Economic indicators for this fleet reported a gross profit of EUR 9.6 million and net profit of EUR 1.3 million.

Drivers affecting the economic performance trends

Higher average fish prices, lower fuel costs and further effort reduction were the main driving forces behind the overall improvement.

The increase in the average prices was a consequence of the lower availability of fish due to decreasing catches. The decrease on landings on sardine, traditionally the most caught specie in Portugal, due to the restrictions imposed on catches, made the average price of this species go up from EUR 0.8 per kg in 2011 to EUR 1.6 per kg in 2017 and mitigating the economic effects on purse seiners.

Markets and Trade

About 18% of landings occur in foreign harbours. The most important Portuguese fishing ports in terms of landings are: Sesimbra (15.1%), Matosinhos (14.6%), Peniche (12.0%), Aveiro (7.4%), Figueira da Foz (6.6%), Sines (5.3%) and Portimão (4.2%) representing 50% of total national landings

Around 73% of landings in foreign harbours occur in Spain, 9% in Uruguay, 4% in Germany and Zambia and the remaining in several third countries.

The number of recognized Producers organizations is 16 (the same in 2016), in which 13 are based on mainland. These organizations account for 1 807 vessels, increasing for 45% of total licensed vessels. Purse seiners are the most represented segment in those structures and sardine, horse mackerel and chub mackerel the main species landed. Around 98% of sardine, 78% of horse mackerel and 73% of chub mackerel landed in Portugal were accounted to producer's organizations.

The average price of fresh fish landed in 2017 in national harbours increased in relation to 2016, from EUR 2.10 per kg to EUR 2.23 per kg. This was force by the increase of average price in mainland (5.3%, from EUR 1.93 to EUR 2.03 per kg), Azores (2.6%, from EUR 4.50 to EUR 4.62 per kg) and Madeira (1.2%, from EUR 2.68 to EUR 2.71 per kg).

Management instruments

In 2017, fishing permits constraints have been pursued on the use of certain gear for the most vulnerable species. In specific circumstances, the administration has allowed gear transfers between vessels providing that the receiving vessel achieves a better economic profitability without increasing fishing effort. The allocation of new gear permits is strongly restricted to ensure that levels of fishing effort do not exceed those commensurate with the sustainable use of fishery resources and in order to keep the existing balances between fleet segments.

In 2017, the following recovery plans / adjustment of fishing effort or capacity control schemes were applied:

- Recovery plan for Southern hake and Norway lobster stocks in the Cantabrian Sea and South Western Iberian waters with the aim of rebuilding those stocks to within safe biological limits. This recovery plan sets TAC constraints and progressive adjustments to the maximum number of fishing days available to vessels subject to a system of fishing effort limitations (reducing fishing mortality rate of 10% per year). The vessels under this recovery plan are identified with a special fishing permit;
- Fishing effort rules as a method to ensure the precautionary management of deep sea stocks. The system in place includes the limitation of the global fishing effort for those stocks and the issuing of a special fishing permit to vessels targeting deep-sea species;
- Management plan to promote the recovery of the Iberian sardine stock. This plan establishes several harvesting rules for seiners, total allowed catches, actions to protect juveniles and to greatly decrease the fishing effort in order to reach MSY in a short period;
- Adjustment of fishing effort for surface longline vessels targeting swordfish in the north Atlantic with the aim to maintain the sustainability of the fishery. The capacity reduction has been defined as a goal in order to allow an adequate balance between fishing effort and available quotas;
- Recovery plan for bluefin tuna, freezing fishing capacity. Catching vessels are not authorized to fish actively for bluefin tuna. Only by-catches of bluefin tuna not exceeding 5% of the total catch on board are authorized;

- Eel management plan, including fishing gear restrictions, limited catching seasons and a complete ban in recreational fishing.

- Considering the fleet capacity adjustment, it was published the Regulation to support definitive stops on fisheries activities of vessels included on the recovery plan for Southern hake and Norway lobster (Portaria nº 381-A/2017, of 19 December)

TACs and quotas

Fishing opportunities in total increased by 31% in 2017. In all species subject to catch limitations the more relevant increases were in the quota of monkfish (54%, -14% in 2016), Skates and Rays (+10%, 0% in 2016), horse mackerel (+7%, + 15% in 2016), and Norway lobster (+ 5%, + 26% in 2016). There was a decrease in the quotas of anchovy (-17%, + 10% initially, reviewed exceptionally by the Commission to +46% in 2016), megrim (-14%, no variation in 2016).

All the quotas for deep-sea fish stocks decreased in 2017, except for red seabream in zone 10 (Azores) compared to 2016.

The state of exploitation of the resources captured by the fleet in national waters has shown a positive evolution, in particular with regard to the horse mackerel, monkfish, hake, and particularly, for anchovy. There are still some concerns about the Norway lobster, with regard to the functional unit of the North, and with the sardine, that despite presenting a slight recovery, continues with a low recruitment level.

During 2017, it was also possible to further increase the quotas available for anchovy, megrim and red seabream (zone 9) through the mechanism of exchange quotas between Member States, as provided for Article 16(8) of the Regulation (EC) No 1380/2013, and to benefit from an increase in quotas (megrims, horse mackerel, hake, monkfish, blue whiting, ling, red seabream (9 and 10 zones), black scabbardfish, mackerel, Alfonsinos and Forkbeard) from the quantities initially allocated, through the mechanism provided for in Article 4 (2) of Regulation (EC) No 847/96 allowing the transfer to the following year up to 10% of the allocated and unused quota.

Portugal also has fishing possibilities within the framework of Regional Fisheries for international waters and Protocols fisheries agreements annexed to the Partnership Agreements European Union and third countries, for Exclusive Economic Zones. In case Regional Fisheries Organizations, the activity of the national fleet is traditionally developed NAFO, NEAFC, ICCAT and IOTC areas. How much fishing activity within the framework of the Partnership, were used in 2016 by the fishing opportunities within the framework of the Fisheries Protocols with Guinea-Bissau, Morocco, Cape Verde and Madagascar.

In the North Atlantic, the initial fishing opportunities have remained at the same level as in 2015 once the reductions observed in 2016 face to 2015 in quotas for Svalbard and Norway cod and in NEAFC redfish and Greenland halibut in NAFO, were compensated by the increases in North swordfish, albacore North, horse mackerel, blue whiting and cod in 3M of NAFO quotas.

With regard to the South Atlantic, Portuguese quotas of tuna and related species decreased by 11% due, above all, the reduction of national quotas for bigeye tuna and blue marlin.

As for the partnership agreements with third countries, the situation has changed since last year. In 2016, one more licence was issued to Cabo Verde uplifting for 3 the number of vessels, confirming the growing interest of the national armaments in this fishery, by the possibility of making shark catches introduced by the Fisheries Protocol in force, namely blue sharks and Shortfin mako, species that are particularly interesting for this sector.

It is also worth mentioning the return of the Portuguese fleet waters of Guinea-Bissau with one fishing license for shrimp trawling.

With regard to the Fisheries Protocol with Morocco, in 2016, it was possible to license three Portuguese vessels for Moroccan waters, (minus 2 than in 2015).

With regard to Partnership Agreements in the Indian Ocean, in 2016 there was a resumption of in this area. Indeed, although negotiated a new Protocol of Fisheries with Mozambique, completed on January 31/2015, which is of particular interest to the Portuguese vessels caused a departure from the remaining Indian Association Agreements, it is clear that, in 2016, a return of the national fleet to the Indian Ocean, with the activity of three longliners area under the Partnership Agreement EU / Madagascar.

Projections for 2018 and outlook and for 2019

Preliminary results for 2018 forecast reveal a 5% increase in landed weight. The landings in fresh fish in national ports, which normally represents 75% of the overall landings, increase 8.4% in weight and 6.9% in value. According to the preliminary report of statistics Portugal for 2018 the fresh fish average price decreases EUR 0.23 per kg.

In relating of costs for 2018 the structure is expecting to remain constant and the main costs (labour and fuel) prediction is to be similar to the ones achieved in 2017, so it will be expected slightly higher values for the global economic indicators.

It should be stressed that since 2005 (year when the public support to new vessel construction stops) the investment costs with new vessels construction are very close to zero, since the fleet renewal represents only 0.1% of the total capacity (GT and kW) per year. Maintaining the renewal indicators in the observed levels for 2005-2018 can compromise all the fishing activity in the future. The main factors related to that are the instability for the TACs and quotas for the future, the problems with the past financial sector in Portugal and the difficulty of new investors enter in this activity, since if a new investor wants get in this business with a new production unit (new vessel), first he has to buy an old equivalent one and after that scrap the vessel, which will represent a large investment. It is observed also that the ship owners tend to keep the vessel to an over age limit, doing only some repairs, since they have size constrains for the new vessel, which represents a large investment that for one unit that will be equivalent in terms of GT to the one they own.

MODEL FORECAST

Preliminary results for 2018 forecast that landings in weight can slightly increase compared to 2017 (+1%) with a higher increase on their value (+3%). Projections suggest that the economic performance of the fleet better than 2017, with GVA (+4%) and gross profit (+6%).

Forecast for 2019 suggest a decrease in the weight and value of landings (-7% and 3%, respectively), that together with an increase in energy costs, will lead to a worsening of the economic performance.

Data issues

Several improvements were made in the economic model to predict value of landings, vessel classification (fishing gear classification), and expenditure values. In 2019 is also be expected to improve the questioners to the fisherman’s in order to collect only data that can’t be obtained by administrative in a reliable way.

Table 5.51 Portugal: National fleet statistics and economic performance results. Nowcast figures for 2018 and 2019

		2008	2009	2010	2011	2012	2013	2014	2015	2016	*2017*	*2018*	2019	Trend 2008-2018	Δ 2017 to 2016	Δ 2017 to avg. 08-16
Capacity	Number of vessels	8,770	8,731	8,655	8,507	8,399	8,311	8,256	8,205	8,100	7,950	7,893	7,285		-2%	-6%
	Total vessel power	389,227	393,180	383,561	374,897	371,158	367,960	368,074	367,658	359,876	347,964	346,754			-3%	-7%
	Total vessel tonnage	107,205	107,677	104,441	102,159	101,112	100,133	100,385	100,327	94,856	88,478	86,883			-7%	-13%
Employment	Engaged crew	17,239	17,860	16,583	18,258	16,754	17,867	16,992	16,086	15,396	14,705	14,134	13,098		-4%	-14%
	Unpaid labour										1,006					
	FTE national	9,155	9,260	9,155	9,614	9,241	9,748	8,515	8,130	8,230	7,823	6,915	7,554		-5%	-13%
	Total hours worked per year (engaged crew)										15,162,759					
Effort	Days at sea	441,082	424,951	402,327	390,878	385,422	368,778	335,577	352,461	339,471	337,649	314,337	331,802		-1%	-12%
	Fishing days	399,615	383,664	362,116	351,946	348,914	331,465	321,533	338,211	325,128	324,466				0%	-8%
	kW fishing days	43,063,605	41,476,014	40,383,292	40,736,187	39,866,954	38,413,718	35,786,598	34,850,027	35,380,310	36,445,109				3%	-6%
	GT fishing days	13,904,453	13,777,857	13,830,364	14,253,208	13,886,531	13,287,218	12,334,888	12,088,513	12,102,099	12,206,714				1%	-8%
	Number of fishing trips	382,040	370,856	357,099	343,094	336,062	312,614	310,914	320,593	312,815	308,262				-1%	-9%
	Energy consumption	107,654,766	108,592,766	108,466,560	106,055,147	103,621,916	100,409,706	82,870,675	69,197,412	92,829,073	86,628,857	76,547,406	91,425,175		-7%	-11%
Landings	Live weight of landings	193,902,107	171,604,625	194,720,268	197,710,155	189,082,291	195,982,764	163,405,604	183,392,278	173,192,834	162,585,806	133,716,767	157,892,956		-6%	-12%
	Value of landings	400,792,858	360,964,377	399,227,770	408,893,366	386,799,301	367,713,522	353,397,476	351,939,957	390,149,443	380,009,438	310,147,870	394,755,730		-3%	0%
Income	Gross value of landings	402,872,321	367,181,442	402,456,654	412,735,210	382,627,179	362,879,348	363,729,014	355,884,490	394,563,038	382,407,256	315,880,630	406,412,272		-3%	0%
	Other income	1,283,713	937,825	3,559,636	3,771,178	3,382,737	1,865,619	1,180,712	803,278	756,593	843,732	803,362	700,149		12%	-57%
	Operating subsidies	-	4,153,446	3,259,277	1,946,015	990,094	90,443	4,248,552	3,811,285	1,027,641	6,096,753				493%	181%
	Income from leasing out quota	-	-	-	-	-	-	-	-	-	-					
Expenditure	Personnel costs	151,553,254	134,943,564	144,817,454	151,891,039	144,680,529	131,083,459	130,383,881	127,807,526	140,452,582	137,123,531	113,113,414	145,446,241		-2%	-2%
	Value of unpaid labour	5,829,166	5,744,509	5,995,598	5,988,827	8,723,138	4,807,424	5,558,067	5,334,528	5,222,100	5,116,201	5,022,190	5,342,715		-2%	-13%
	Energy costs	76,488,957	66,714,357	65,140,172	77,024,946	80,371,577	71,730,373	60,251,216	48,172,362	49,127,729	48,698,825	53,203,001	61,949,142		-1%	-26%
	Repair & maintenance costs	21,473,581	23,570,641	24,408,751	23,851,022	22,772,983	22,488,024	24,791,090	18,779,616	25,116,470	25,103,565	23,824,425	21,141,340		0%	9%
	Other variable costs	40,547,983	37,690,134	44,271,692	41,618,885	38,172,926	35,653,897	34,198,805	32,365,486	40,377,892	41,199,706	36,166,019	42,400,968		2%	8%
	Other non-variable costs	15,825,488	14,873,600	20,817,236	12,073,684	13,131,650	15,863,976	12,781,353	8,285,041	12,716,218	10,913,237	10,372,858	9,426,352		-14%	-22%
	Consumption of fixed capital	45,834,708	52,707,371	51,188,000	45,927,177	45,649,163	41,051,556	41,496,126	35,967,654	35,906,642	34,566,260	32,865,469	29,553,160		-4%	-21%
	Lease/rental payments for quota	-	-	-	-	-	-	-	-	-	-	-				
Indicator	Opportunity cost of capital	8,325,375	27,242,205	19,655,244	31,428,754	36,200,832	27,517,368	18,094,780	8,622,716	9,766,168	5,284,063	2,241,987	1,042,003		-46%	-75%
	Gross Value Added	249,820,025	225,270,536	251,378,440	261,937,850	231,560,780	219,008,696	232,887,261	249,085,263	267,981,322	257,335,656	193,117,688	272,194,619		-4%	6%
	Gross profit	92,437,605	84,582,463	100,565,388	104,057,983	78,157,112	83,117,813	96,945,313	115,943,209	122,306,640	115,095,924	74,982,084	121,405,663		-6%	18%
	Net profit	38,277,523	4,632,887	29,722,144	26,702,051	- 3,692,883	14,548,888	37,354,406	71,352,839	76,633,829	75,245,600	39,874,628	90,810,499		-2%	129%
	Net profit subsidised	38,277,523	8,786,334	32,981,421	28,648,067	- 2,702,789	14,639,331	41,602,958	75,164,124	77,661,470	81,342,354	39,874,628			5%	132%
	Net profit rights	38,277,523	8,786,334	32,981,421	28,648,067	- 2,702,789	14,639,331	41,602,958	75,164,124	77,661,470	81,342,354	39,874,628			5%	132%
Capital	Value of physical capital	469,788,992	528,317,512	498,260,426	490,364,302	480,186,522	469,056,671	457,179,517	451,345,292	382,286,581	370,248,823	354,514,116	319,231,963		-3%	-21%
	Value of quota and other fishing rig	-	-	-	-	-	-	-	-	-	-	-				
	Investments	9,353,569	21,115,548	22,484,507	14,447,913	11,454,200	13,278,829	17,878,452	14,437,830	15,793,181	11,972,472	920,186	819,172		-24%	-23%
	Total assets										819,342,140	61,557,668	53,372,561			
	Long/short debt										54,577,484					
	Subsidies on investments										1,727,695	-	-			

Data source: MS data submissions under the DCF 2019 Fleet Economic (MARE/A3/ASC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

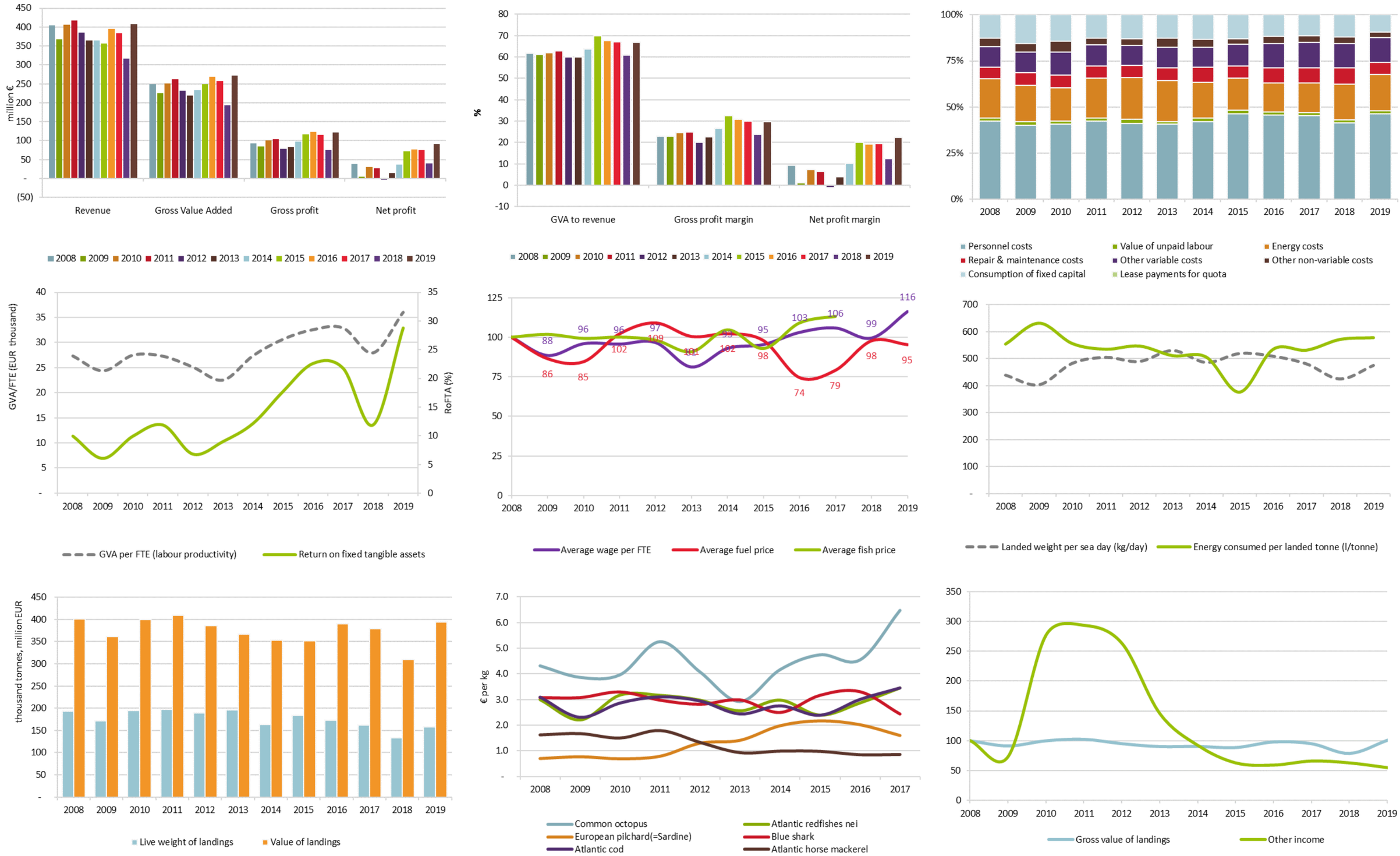


Figure 5.18 Portugal: Main trends in economic performance indicators (absolute value, panel 1a/top left and relative value, (panel 1b/top middle); cost structure (panel 1c, top right); productivity (panel 2a); key input/outputs (panel 2b); efficiency (panel 2c); landings (panel 3a); average price (EUR /kg) of top species (panel 3b) and income (panel 3c). Nowcast figures for 2018 and 2019

Data source: MS data submissions under the DCF 2019 Fleet Economic (MARE/A3/ASC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Table 5.52 Portugal: National fleet statistics and economic performance results by fleet segment, 2017

	Number of vessels	FTE national	Days at sea	Energy consumed per landed tonne	Live weight of landings	Value of landings	Revenue	Gross Value Added	GVA to revenue	Gross profit	Gross profit margin	Net profit	Net profit margin	Average wage per FTE	GVA per FTE (labour productivity)	Return on fixed tangible assets	Profitability (2017)	Net profit margin %Δ 2017 - average	Economic development trend	As a % of total revenue
PRT NAO DTS40XX IWE	11	249	1,831	669	18,198,486	63,035,855	63,203,265	41,271,633	65.3	24,954,100	39.48	19,640,968	31.08	65,532	165,750	47.5	High	179%	Improved	16%
PRT NAO DTS2440 NGI	56	440	13,654	810	30,813,209	43,089,937	44,342,349	21,389,412	48.2	7,237,212	16.32	2,631,383	5.93	32,164	48,612	9.1	Weak	333%	Improved	12%
PRT NAO PGP0010 NGI	1,485	1,317	120,808	273	11,291,194	38,214,729	38,214,494	30,623,400	80.1	16,024,957	41.93	12,255,827	32.07	11,085	23,252	47.0	High	89%	Improved	10%
PRT NAO PS 1824 NGI	53	713	8,519	179	25,724,904	26,636,022	26,664,104	19,113,780	71.7	5,142,143	19.28	2,657,458	9.97	19,596	26,808	17.6	Weak	17%	Improved	7%
PRT NAO FPO0010 NGI	331	215	24,103	483	2,105,250	14,335,043	14,393,353	11,597,020	80.6	5,707,163	39.65	4,554,646	31.64	27,395	53,940	56.9	High	4%	Stable	4%
PRT NAO HOK2440 P3 *	28	267	4,098	742	5,306,678	13,917,778	13,971,265	9,586,652	68.6	3,308,107	23.68	1,303,371	9.33	23,515	35,905	11.8	Weak	356%	Improved	4%
PRT NAO PS 2440 NGI	20	320	3,437	217	11,776,169	13,312,894	13,331,260	9,290,018	69.7	2,338,063	17.54	830,662	6.23	21,725	29,031	10.6	Weak	-17%	Deteriorated	3%
PRT OFR HOK2440 IWE*	12	147	2,994	806	5,429,497	12,353,749	12,277,413	4,724,072	38.5	2,683,809	21.86	1,168,722	9.52	13,879	32,137	12.9	Weak			3%
PRT NAO HOK2440 NGI	17	173	3,827	1,197	2,997,192	11,948,156	11,932,631	7,075,622	59.3	2,741,991	22.98	1,497,451	12.55	25,050	40,900	19.1	Reasonable	91%	Improved	3%
PRT NAO DFN1218 NGI	77	459	14,562	836	2,939,869	11,882,362	11,900,365	8,238,478	69.2	3,058,047	25.70	1,313,450	11.04	11,286	17,949	12.2	Reasonable	159%	Improved	3%
PRT NAO HOK1824 NGI	17	187	3,703	599	2,375,663	8,986,707	9,318,175	6,100,325	65.5	2,507,284	26.91	1,801,998	19.34	19,214	32,622	43.7	Reasonable	42%	Improved	2%
PRT NAO HOK0010 P3	360	226	20,352	596	1,302,972	9,190,163	9,192,737	7,149,795	77.8	3,650,022	39.71	2,328,138	25.33	15,486	31,636	25.7	High	2%	Stable	2%
PRT OFR HOK40XX IWE*	6	83	1,431	605	5,301,918	8,108,584	8,149,967	4,281,096	52.5	3,256,869	39.96	2,446,324	30.02	12,340	51,579	30.1	High			2%
PRT NAO FPO1218 NGI*	51	207	7,036	652	1,596,526	7,913,700	7,937,752	5,764,189	72.6	2,750,341	34.65	1,745,690	21.99	14,560	27,846	26.9	High			2%
PRT NAO DFN1824 NGI	31	354	6,846	942	2,104,204	7,042,216	7,068,685	4,685,043	66.3	2,039,457	28.85	781,325	11.05	7,473	13,235	10.7	Reasonable	245%	Improved	2%
PRT NAO HOK1218 P2	18	192	3,702	389	2,090,116	6,920,144	6,924,988	5,394,106	77.9	1,438,948	20.78	1,210,235	17.48	20,600	28,094	73.9	Reasonable	-13%	Deteriorated	2%
PRT NAO PS 1218 NGI	36	164	4,607	158	5,650,984	6,869,533	6,875,268	5,089,465	74.0	1,638,925	23.84	1,061,958	15.45	21,040	31,033	27.4	Reasonable	12%	Improved	2%
PRT NAO HOK1012 P3	72	225	8,066	916	1,107,196	6,849,250	6,849,082	4,912,654	71.7	2,159,702	31.53	1,376,725	20.10	12,235	21,834	25.9	High	23%	Improved	2%
PRT NAO HOK1218 NGI	20	185	3,715	389	2,021,672	6,521,660	6,252,543	4,252,974	68.0	1,484,732	23.75	1,107,549	17.71	14,963	22,989	31.7	Reasonable	17%	Improved	2%
PRT NAO HOK1218 P3	44	236	4,870	594	1,364,388	5,630,998	5,632,564	3,790,064	67.3	1,265,406	22.47	729,303	12.95	10,698	16,060	21.3	Reasonable	-3%	Stable	1%
PRT NAO DFN0010 NGI	396	148	16,448	411	946,963	5,570,047	5,585,136	4,616,118	82.7	2,312,577	41.41	1,562,681	27.98	15,564	31,190	30.0	High	546%	Improved	1%
PRT NAO HOK2440 P2	6	78	1,012	1,113	1,232,331	3,499,412	4,964,452	3,907,412	78.7	1,923,565	38.75	1,594,522	32.12	25,434	50,095	50.7	High	269%	Improved	1%
PRT NAO DTS1824 NGI	7	48	1,844	4,934	376,446	4,698,875	4,700,671	2,431,863	51.7	678,319	14.43	371,378	7.90	36,532	50,664	18.3	Weak	43%	Improved	1%
PRT NAO PS 1012 NGI	30	114	3,389	161	3,208,594	4,102,638	4,110,061	3,056,508	74.4	993,648	24.18	719,944	17.52	18,095	26,811	33.2	Reasonable	-2%	Stable	1%
PRT NAO FPO1012 NGI	52	89	5,513	759	616,561	4,051,650	4,073,162	3,052,456	74.9	1,660,624	40.77	1,062,227	26.08	15,639	34,297	23.8	High	2%	Stable	1%
PRT NAO DRB1218 NGI	14	40	1,591	230	1,381,719	3,718,706	3,720,136	3,073,114	82.6	1,686,216	45.33	1,445,645	38.86	34,672	76,828	75.6	High	17801%	Improved	1%
PRT NAO PGP1218 NGI	19	106	2,782	877	718,776	3,329,169	3,329,248	2,318,757	69.6	1,165,266	35.00	723,146	21.72	10,882	21,875	24.8	High	145%	Improved	1%
PRT NAO DTS1218 NGI	8	46	1,625	1,130	818,877	2,618,933	2,651,341	1,706,720	64.4	736,366	27.77	515,746	19.45	21,095	37,103	48.9	Reasonable	60%	Improved	1%
PRT NAO HOK0010 NGI	135	52	8,986	225	578,270	2,633,499	2,633,828	2,228,959	84.6	1,073,518	40.76	905,763	34.39	22,220	42,865	75.1	High	188%	Improved	1%
PRT NAO DFN1012 NGI	20	45	2,502	868	357,446	2,173,242	2,175,912	1,684,356	77.4	1,026,633	47.18	811,354	37.29	14,616	37,430	40.1	High	119%	Improved	1%
PRT NAO DRB1012 NGI	24	39	2,744	630	1,028,021	1,962,213	1,962,131	1,308,039	66.7	609,220	31.05	351,470	17.91	17,918	33,539	17.4	Reasonable	185%	Improved	1%
PRT NAO MGO0010 NGI	33	80	2,223	22	3,892,377	1,769,394	1,769,623	1,449,380	81.9	665,568	37.61	529,999	29.95	9,798	18,117	50.1	High	77%	Improved	0%
PRT NAO HOK0010 P2 *	53	110	2,610	837	432,338	1,760,942	1,760,980	1,221,466	69.4	358,134	20.34	243,228	13.81	7,848	11,104	28.1	Reasonable	-39%	Deteriorated	0%
PRT NAO HOK1824 P2	3	41	646	502	562,403	1,615,108	1,615,109	1,265,418	78.3	350,990	21.73	227,800	14.10	22,303	30,864	33.6	Reasonable			0%
PRT NAO DTS1012 NGI	3	18	912	1,461	279,212	1,443,194	1,443,557	1,016,604	70.4	464,658	32.19	372,767	25.82	30,664	56,478	45.1	High			0%
PRT NAO DTS0010 NGI	5	21	1,090	967	352,419	1,407,227	1,408,136	1,005,919	71.4	578,056	41.05	507,967	36.07	20,374	47,901	111.0	High	34%	Improved	0%
PRT MBS FPO2440 NGI	2	19	362	5,855	57,033	1,256,159	1,256,336	832,026	66.2	395,152	31.45	316,903	25.22	22,993	43,791	44.3	High	380%	Improved	0%
PRT NAO PS 0010 NGI	20	23	1,071	152	899,437	1,201,002	1,199,835	905,863	75.5	342,404	28.54	224,664	18.72	24,498	39,385	28.5	Reasonable	-15%	Deteriorated	0%
PRT NAO HOK1012 NGI	6	13	674	700	156,907	1,085,772	1,088,078	859,364	79.0	454,836	41.80	386,640	35.53	31,118	66,105	67.4	High	36%	Improved	0%
PRT NAO PS 1012 P3 *	12	71	1,647	434	485,075	1,058,537	1,059,154	756,731	71.4	540,701	51.05	432,916	40.87	3,043	10,658	51.3	High	179%	Improved	0%
PRT NAO DFN0010 P3	39	31	3,062	259	294,430	939,428	940,126	733,379	78.0	349,980	37.23	263,114	27.99	12,368	23,657	40.6	High	5%	Stable	0%
PRT NAO PMP0010 NGI	31	18	1,908	532	176,511	826,859	836,046	614,574	73.5	260,920	31.21	157,726	18.87	19,647	34,143	22.0	Reasonable	191%	Improved	0%
PRT NAO PGP1012 NGI	14	19	1,148	880	116,439	671,370	677,193	439,328	64.9	190,591	28.14	56,476	8.34	13,091	23,123	7.4	Weak	18%	Improved	0%
PRT NAO TBB1012 NGI*	10	19	1,106	344	321,254	584,264	584,303	422,175	72.3	160,794	27.52	60,309	10.32	13,757	22,220	7.8	Reasonable			0%
PRT NAO MGP1824 P2 *	3	37	716	444	470,149	504,408	504,406	312,283	61.9	35,393	7.02	-1,727	-0.34	7,483	8,440	0.9	Weak	97%	Improved	0%
PRT NAO TBB0010 NGI	15	19	1,334	493	249,634	463,750	465,667	313,976	67.4	140,147	30.10	86,105	18.49	9,149	16,525	15.8	Reasonable	139%	Improved	0%
PRT NAO PS 0010 P3	20	19	1,449	324	265,071	449,403	449,523	351,518	78.2	145,028	32.26	92,421	20.56	10,868	18,501	29.1	High	80%	Improved	0%
PRT NAO MGO1012 NGI	9	18	562	73	324,301	429,033	429,142	311,038	72.5	148,382	34.58	70,463	16.42	9,036	17,280	14.2	Reasonable	23%	Improved	0%
PRT NAO PGP0010 P3 *	10	16	850	1,047	63,262	405,651	405,726	269,777	66.5	153,336	37.79	77,903	19.20	7,278	16,861	14.7	Reasonable	26%	Improved	0%
PRT NAO DRB0010 NGI	36	23	2,586	1,022	220,703	398,625	398,360	151,324	38.0	6,753	1.70	-125,617	-31.53	6,286	6,579	-11.5	Weak	-69%	Deteriorated	0%
PRT NAO PGP1824 NGI	3	36	629	1,214	133,656	374,789	374,655	220,987	59.0	60,638	16.19	-8,152	-2.18	4,454	6,139	0.5	Weak			0%
PRT NAO MGP0010 P2	5	9	467	274	71,191	246,695	246,697	168,435	68.3	40,248	16.31	32,628	13.23	14,243	18,715	75.4	Reasonable			0%

Data source: MS data submissions under the DCF 2019 Fleet Economic (MARE/A3/ASC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Table 5.53 Portugal: Landed value, weight and average price of principal species

	Value of landings (real) (thousand €)										Live weight of landings kg										Average landed price (real) (€)										% over total	
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	in EUR	in weight
Common octopus	39.8	26.7	41.7	38.5	40.4	37.9	44.5	35.6	47.8	37.2	9,231,007	6,915,553	10,544,174	7,339,760	9,922,648	12,950,596	10,681,000	7,507,164	10,532,917	5,754,499	4.3	3.9	4.0	5.3	4.1	2.9	4.2	4.7	4.5	6.5	10%	4%
Atlantic redfishes nei	18.4	20.4	29.8	29.5	24.8	22.5	24.3	28.7	28.8	30.3	6,148,982	9,290,707	9,351,447	9,309,874	8,323,586	8,793,471	8,167,695	12,000,218	10,032,386	8,753,403	3.0	2.2	3.2	3.2	3.0	2.6	3.0	2.4	2.9	3.5	8%	5%
European pilchard	44.2	41.1	38.9	42.5	41.1	39.8	31.8	30.2	27.9	24.0	63,322,363	53,658,109	56,513,133	53,855,198	31,580,675	28,267,583	16,044,842	13,929,927	13,782,041	14,962,887	0.7	0.8	0.7	0.8	1.3	1.4	2.0	2.2	2.0	1.6	6%	9%
Blue shark	20.1	20.9	27.0	25.3	22.4	16.2	15.4	16.6	23.5	22.9	6,553,528	6,807,576	8,202,169	8,538,205	7,972,609	5,428,438	6,167,966	5,246,522	7,104,039	9,443,705	3.1	3.1	3.3	3.0	2.8	3.0	2.5	3.2	3.3	2.4	6%	6%
Atlantic cod	9.8	8.8	12.4	14.9	14.4	20.0	17.0	15.6	26.0	20.3	3,161,331	3,797,409	4,302,179	4,802,338	4,856,969	8,213,067	6,147,785	6,518,475	8,642,503	5,869,323	3.1	2.3	2.9	3.1	3.0	2.4	2.8	2.4	3.0	3.5	5%	4%
Atlantic horse mackerel	15.6	17.5	15.8	17.0	21.5	17.6	20.4	22.2	20.8	18.6	9,630,549	10,454,013	10,508,465	9,514,481	16,097,516	18,810,529	20,576,224	22,723,045	24,331,707	21,640,317	1.6	1.7	1.5	1.8	1.3	0.9	1.0	1.0	0.9	0.9	5%	13%

Data source: MS data submissions under the DCF 2019 Fleet Economic (MARE/A3/ASC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

5.19 Romania

A more detailed account of the Romanian fishing fleet was not conducted as no expert with expertise on the fishing fleet attended any of the two working groups.

Short description of the national fleet

Fleet capacity

In 2017, the Romanian fishing fleet consisted of 155 registered vessels, with a combined gross tonnage of 1.41 thousand GT and a total power of 6.20 thousand kW. The size of the Romanian fishing fleet decreased between 2008 and 2017, with the number of vessels falling by 49% and kW by 6% comparing with the average of the period 2008-2016. However, GT increased in the last four years registering in 2017 an increase by 17% compared with the average of 2008-2016.

Fleet structure

The fishing fleet is divided into a small-fleet segment (82% of all active vessels in 2017, 111 on 135) with an engine power of 1.31 thousand kW and a large-fleet segment (just 18% of all active vessels in 2017) with an engine power of 4 790 kW. The number of active vessels in the SSCF is 36% lower than the average value on the period 2008-2016, while the number of large-scale vessels increased by 192%.

Employment

In 2017, a total employment of 406 fishers was reported, corresponding to 60 FTEs. The level of employment increased between 2013 and 2017 both in terms of number and FTE. However, compared to the average 2008-2016, total jobs registered a decrease by 5%, while FTE increased by 57%, which highlights an increase in the average annual hours worked by employees.

Effort

The total days-at-sea reported for the fleet totalled almost 5 000 days in 2017, an increase by 37% compared to the average 2008-2016. A similar increase was registered also for the number of fishing days. The amount of fuel consumed in 2017 totalled 768 thousand litres, equivalent to a fuel cost by EUR 632 thousand. Both variables show increases by around 100% compared to the average 2008-2016.

Production

The total weight of landings of the Romanian fleet in 2017 was 9.55 thousand tonnes of fish and seafood, with a value of EUR 4.52 million. The total weight and value of landings showed strong positive trends in the period 2008-2017, with increases in 2017 by 383% and 143% respectively compared to the average 2008-2016. Compared to the previous year, increases by 40% and 16% were registered for the landings in weight and value respectively.

This is explained by Thomas' rapa whelk catches, which generated the highest landed value of the national fleet with around EUR 3.70 million in 2017, followed by turbot with EUR 0.37 million and Mediterranean mussel with EUR 0.21 million. In 2017, in weight, the landings of Thomas' rapa whelk (rapana) were 9 240 tonnes, followed by Mediterranean mussel with a value of 140 tonnes. Thomas' rapa whelk is the most important species in the Romanian fisheries, representing 97% of the total landings in weight and 82% of the total landings in value.

The average prices for the 5 key species are relatively stable between 2008 and 2017, except for turbot. This stock registered an increasing trend in price in the last five years achieving the highest value in 2016 (10.6€/kg). In 2017, with a price by €8.7 per kg, turbot represents the most valuable stock among the five key stocks exploited by the Romanian fleets.

Economic results for 2017 and recent trends

National fleet performance

In 2017, the amount of income from landings generated by the Romanian national fleet was EUR 4.5 million. There is no amount of income from activities other than fishing. The total income of the Romanian fleet increased by 16% between 2016 and 2017. Total costs of the Romanian national fleet in 2017 accounted for EUR 2.39 million, which represents 53% of total income. This determined a high profitability for the fleets. Crew cost and fuel costs, the two major fishing expenses, amounted to EUR

0.76 and EUR 0.63 million respectively. Compared to the period 2008 – 2016, crew cost showed and increase by 62% and fuel cost by 96%. Notwithstanding, as reported above, the increase in total income was much higher than that in costs, producing a positive economic performance.

Gross Value Added (GVA), gross profit and net profit generated by the Romanian national fleet in 2017 were estimated at levels of EUR 3.25 million, EUR 2.45 million and EUR 1.96 million respectively. Compared to 2016, increases by 10%, 8% and 14% respectively were registered for the three indicators.

Resource productivity and efficiency indicators

In 2017 the gross profit margin was 54%, with a decrease by 4% from 2016. Since 2008, many economic indicators increased, and profit margins changed from values close to zero to positive values.

In 2017 the Rate of Return on Fixed Tangible Assets (RoFTA), amounting to 24.3%, decreased slightly if compared to the previous year and increased by 120% if compared to the average 2008-2016. The labour productivity (GVA/FTE) also registered a low decrease if compared to 2016 value and an increase by 67% if compared to the average 2008-2016.

Performance by fishing activity

In 2017 the Romanian fleet consisted of 4 fleet segments, two segments (PG VL0006, PG VL0612) belonging to SSCF and, two segments (PMP VL1218, PMP VL2440) belonging to the LSF.

Small-scale coastal fleet

In 2017, there were 135 total active vessels in the Romanian fishing fleet, 111 of them in the group of SSCF. These vessels employed 307 people, 13 of them were unpaid. The amount of income generated by the Romanian SSCF was EUR 1.6 million. Landings income increased by 63% on the average level 2008-2016. In terms of economic performance, the amounts of GVA, gross profit and net profit generated by the SSCF were EUR 1.10 million, EUR 0.72million and EUR 0.65 million, respectively. Compared to the average 2008-2016, GVA and gross profit increased by 70% and 139% respectively, while net profit increased by 180%. The increases in the last year of available data were equal to 33% for GVA, 38% for gross profit and 49% for net profit.

Large-scale fleet

For the LSF fleet an increase of active vessels from 17 in 2016 to 24 vessels in 2017 is observed. These vessels employed 99 people, 7 of them were unpaid. In 2017, the amount of income generated by the Romanian LSF fleet was EUR 2.91 million, with an increase by 231% compared to the average 2008-2016. In terms of economic performance, the amounts of GVA, gross profit and net profit generated by the LSF fleet were EUR 2.16 million, EUR 1.73 million and EUR 1.31 million, respectively. Compared to the average values of the period 2008-2016, GVA, gross profit and net profit increased by 229%, 268% and 299%, respectively. However, no significant change was registered from 2016 to 2017.

Performance results of selected fleet segments

The Romanian fleet has a small range of vessel types fishing only in the Black Sea and catching a reduced number of species, pelagic and demersal. The national fleet is characterised by 4 fleet segments and all of them made profits in 2017.

Vessels using passive gears only for vessels 6-12m

PG VL0612 is the largest segment with 99 active vessels in 2017. In the same year, the total value of landings was EUR 1.57 million, representing 35% of the total Romanian income from landings. This fleet registered a gross profit of EUR 0.71 million and a net profit of EUR 0.64 million in 2017.

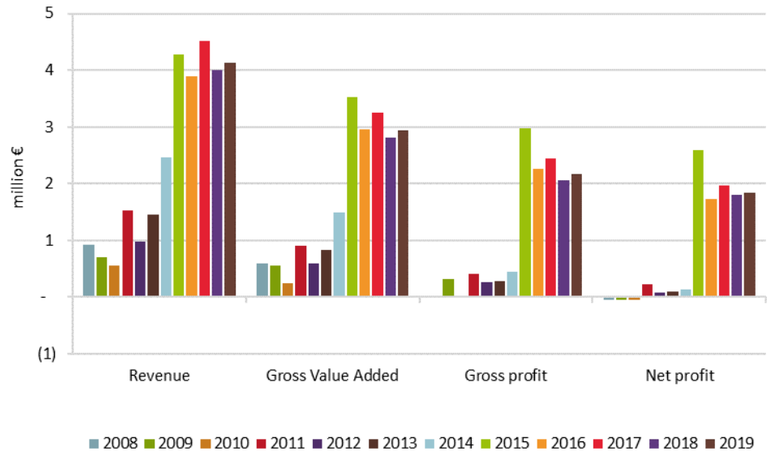
Data issues

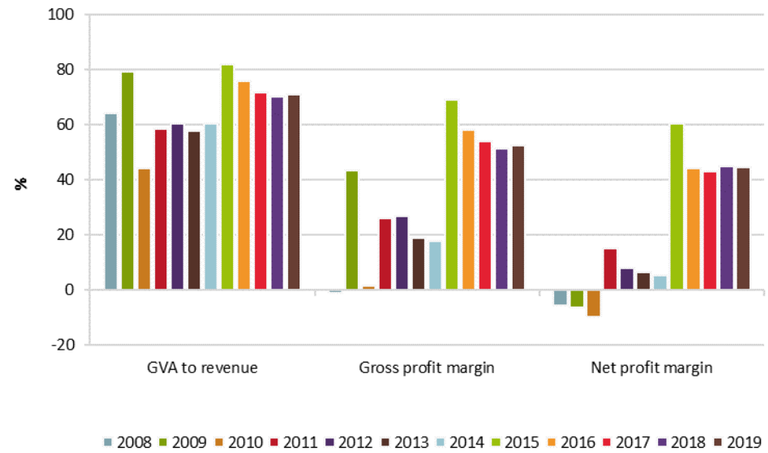
No specific issues were detected on the data submitted. However, the average number of days-at-sea per vessel and the variations in productivity along the period 2008-2017 could indicate the presence of anomalies, which should be further investigated by the national experts. Annual days-at-sea per vessel moved from 8 days in 2008 to 31 days in 2017, with a minimum of 5 days per vessel in 2011. These values seem to be too low for a professional fleet. Furthermore, landings per day changed from 122 kg in 2008 to more than 2 tons in 2017, with an increase in the average productivity by more than 1500%.

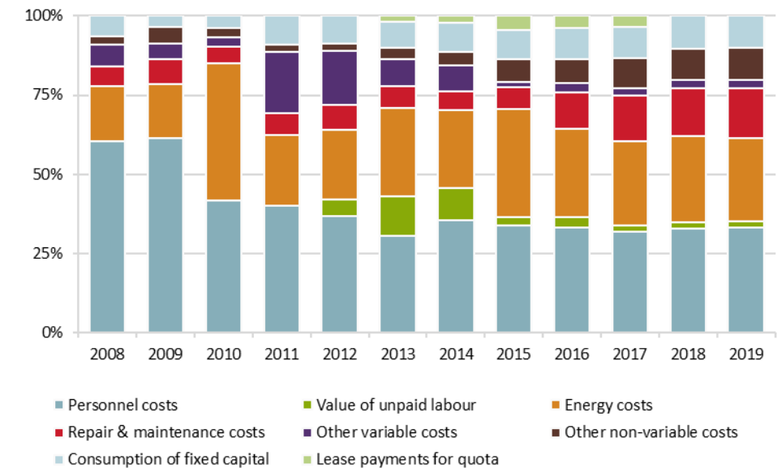
Table 5.54 Romania: National fleet statistics and economic performance results. Nowcast figures for 2018 and 2019

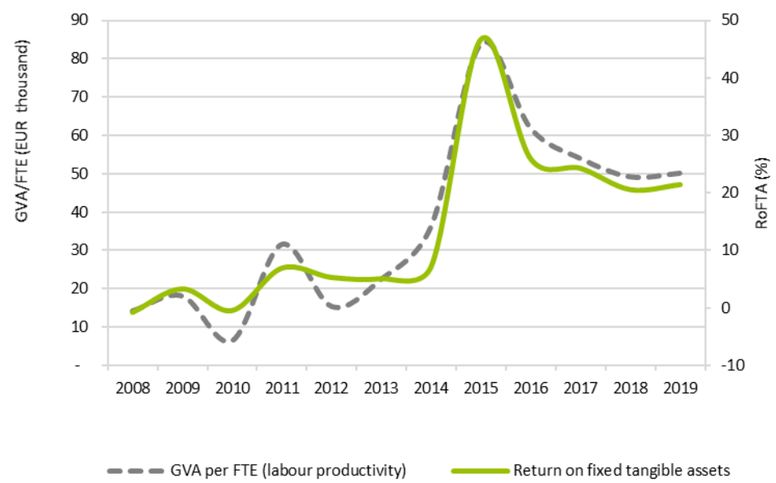
		2008	2009	2010	2011	2012	2013	2014	2015	2016	*2017*	*2018*	2019	Trend 2008-2018	Δ 2017 to 2016	Δ 2017 to avg. 08-16
Capacity	Number of vessels	441	440	429	488	261	196	158	151	147	155	167	176		5%	-49%
	Total vessel power	8,717	8,224	5,447	6,964	5,864	6,172	6,111	6,032	5,846	6,201	6,249			6%	-6%
	Total vessel tonnage	2,340	2,291	1,047	1,000	735	606	790	873	1,109	1,407	1,472			27%	17%
Employment	Engaged crew	875	289	444	454	471	304	330	331	345	406	377	396		18%	-5%
	Unpaid labour										20					
	FTE national	42	31	38	28	39	37	41	42	48	60	57	58		26%	57%
	Total hours worked per year (engaged crew)										109,996					
Effort	Days at sea	3,728	4,056	4,319	2,640	3,326	2,833	2,774	4,045	4,093	4,859	5,533			19%	37%
	Fishing days	3,651	3,898	4,114	2,549	3,255	2,700	2,735	3,681	3,747	4,770	5,349			27%	42%
	kW fishing days	3,184,906	2,368,877	4,652,771	3,139,187	2,417,661	1,942,945	1,810,348	2,683,108	2,929,937	3,626,421	4,236,314			24%	30%
	GT fishing days	417,674	350,977	590,281	276,091	244,982	178,321	237,173	375,037	542,466	739,526	862,445			36%	107%
	Number of fishing trips	3,553	4,029	4,126	2,572	3,387	2,853	2,684	3,595	3,423	4,442	4,656			30%	32%
	Energy consumption	110,619	52,471	194,697	256,208	165,939	360,875	545,231	711,130	744,339	768,375	823,238	839,434		3%	120%
Landings	Live weight of landings	444,757	288,502	230,913	537,188	810,682	1,617,354	2,199,519	4,842,574	6,839,443	9,553,182	7,744,995	7,920,206		40%	383%
	Value of landings	925,053	709,896	553,349	1,531,354	976,551	1,451,505	2,458,069	4,282,355	3,884,182	4,520,497	3,998,517	4,104,355		16%	143%
Income	Gross value of landings	925,053	709,896	553,349	1,531,386	976,550	1,451,529	2,458,069	4,282,353	3,884,182	4,520,497	3,998,517	4,125,002		16%	143%
	Other income	-	-	-	-	-	-	-	-	-	-	-	-			
	Operating subsidies	-	-	-	-	-	-	-	-	-	-	-				
	Income from leasing out quota	-	-	-	-	-	-	-	-	-	-	-				
Expenditure	Personnel costs	602,733	254,715	235,695	495,949	289,013	399,914	804,588	513,453	623,957	761,161	702,724	721,272		22%	62%
	Value of unpaid labour	-	-	-	-	41,081	163,171	236,060	38,032	59,318	47,146	43,140	44,640		-21%	-21%
	Energy costs	171,021	70,950	245,241	275,967	172,889	364,373	553,598	519,071	525,570	631,628	587,599	576,570		20%	96%
	Repair & maintenance costs	64,148	32,729	30,256	86,625	60,213	90,945	135,094	103,879	213,493	345,993	327,625	337,237		62%	281%
	Other variable costs	66,342	20,363	16,413	240,595	133,834	113,372	193,231	29,590	54,187	61,105	56,984	59,361		13%	-37%
	Other non-variable costs	28,375	22,239	16,909	29,665	17,596	44,614	90,952	107,864	143,187	228,257	214,563	220,663		59%	310%
	Consumption of fixed capital	62,844	13,792	21,934	111,654	69,481	106,708	214,471	138,268	184,262	230,015	219,638	221,879		25%	124%
	Lease/rental payments for quota	-	-	-	-	-	25,430	46,476	68,589	73,498	85,329				16%	259%
Indicator	Opportunity cost of capital	- 18,408	339,606	39,518	58,786	113,997	70,117	96,192	235,678	358,725	257,895	50,807	104,683		-28%	79%
	Gross Value Added	595,167	563,614	244,530	898,534	592,018	838,224	1,485,194	3,521,949	2,947,745	3,253,514	2,811,746	2,931,170		10%	151%
	Gross profit	- 7,567	308,900	8,835	402,585	261,923	275,138	444,545	2,970,464	2,264,470	2,445,207	2,065,882	2,165,259		8%	218%
	Net profit	- 52,003	- 44,499	- 52,617	232,145	78,445	98,313	133,883	2,596,518	1,721,484	1,957,297	1,795,437	1,838,696		14%	274%
	Net profit subsidised	- 52,003	- 44,499	- 52,617	232,145	78,445	98,313	133,883	2,596,518	1,721,484	1,957,297	1,795,437			14%	274%
	Net profit rights	- 52,003	- 44,499	- 52,617	232,145	78,445	72,883	87,407	2,527,929	1,647,985	1,871,968	1,795,437			14%	275%
Capital	Value of physical capital	9,931,112	8,768,319	3,381,354	4,174,171	3,593,686	3,274,233	3,166,825	6,065,519	8,026,664	9,116,495	8,964,405	9,056,512		14%	63%
	Value of quota and other fishing rig	61,136	24,167	28,129	28,683	19,984	14,455	16,436	72,656	46,688	53,662				15%	55%
	Investments	204,902	118,597	74,433	59,531	130,042	109,735	184,806	212,173	684,960	1,341,891	1,275,603	1,303,190		96%	579%
	Total assets										3,949,886	3,837,598	3,862,281			
	Long/short debt										1,109,110					
	Subsidies on investments										-	-	-			

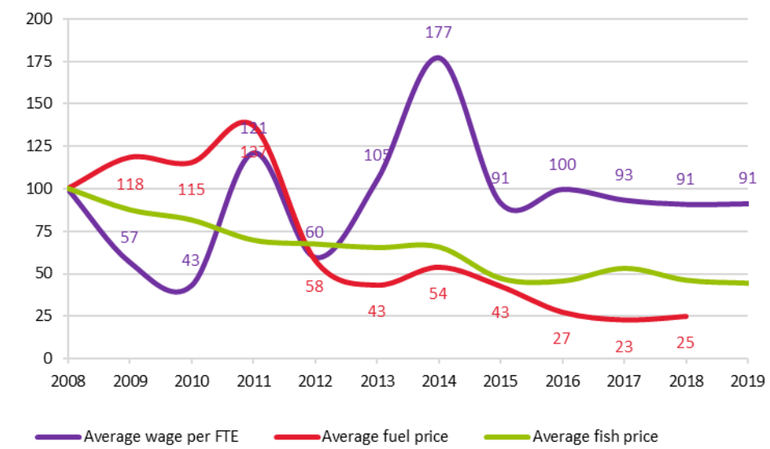
Data source: MS data submissions under the DCF 2019 Fleet Economic (MARE/A3/ASC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

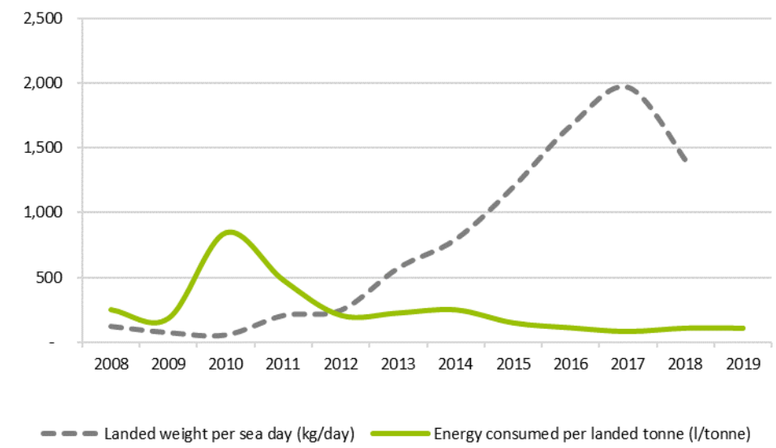


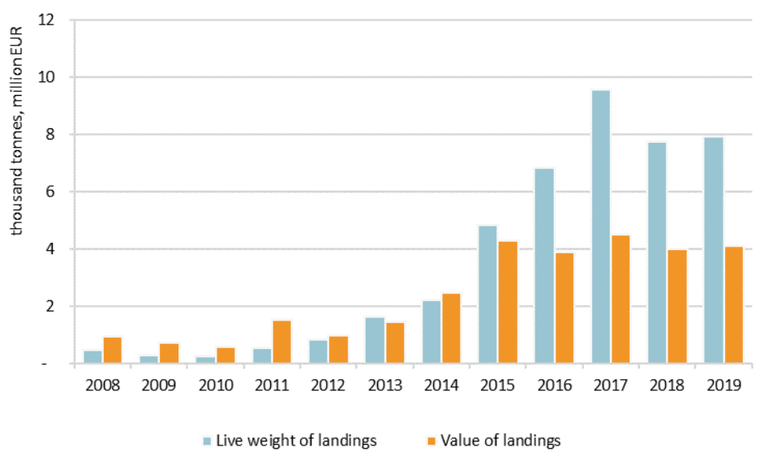


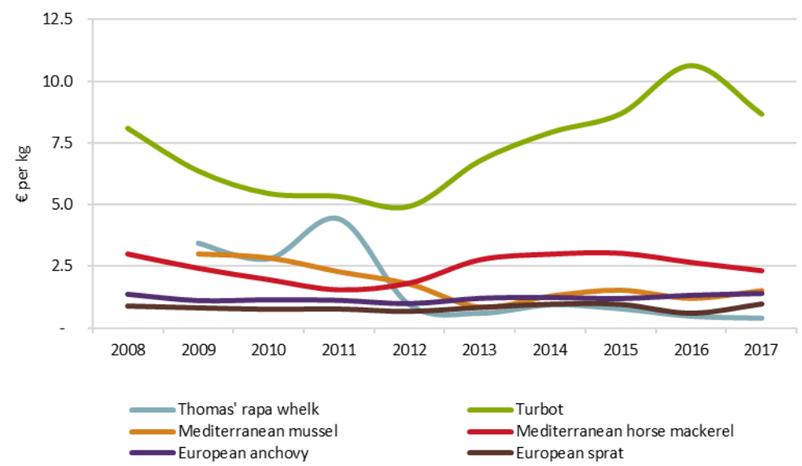












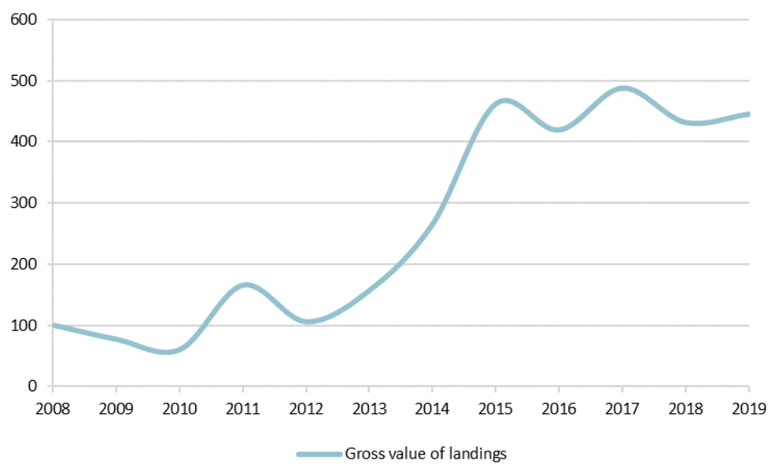


Figure 5.19 Romania: Main trends in economic performance indicators (absolute value, panel 1a/top left and relative value, (panel 1b/top middle); cost structure (panel 1c, top right); productivity (panel 2a); key input/outputs (panel 2b); efficiency (panel 2c); landings (panel 3a); average price (EUR /kg) of top species (panel 3b) and income (panel 3c). Nowcast figures for 2018 and 2019

Data source: MS data submissions under the DCF 2019 Fleet Economic (MARE/A3/ASC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Table 5.55 Romania: National fleet statistics and economic performance results by fleet segment, 2017

	Number of vessels	FTE national	Days at sea	Energy consumed per landed tonne	Live weight of landings	Value of landings	Revenue	Gross Value Added	GVA to revenue	Gross profit	Gross profit margin	Net profit	Net profit margin	Average wage per FTE	GVA per FTE (labour productivity)	Return on fixed tangible	Profitability (2017)	Net profit margin %Δ 2017 -	Economic development trend	As a % of total revenue
ROU MBS PMP1218 NGI	20	26	1,131	69	5,217,203	2,236,174	2,236,174	1,713,068	76.6	1,408,860	63.00	1,130,358	50.55	11,700	65,887	27.3	High	62%	Improved	49%
ROU MBS PG 0612 NGI*	99	21	3,113	85	2,686,635	1,567,248	1,567,248	1,071,435	68.4	708,607	45.21	644,497	41.12	17,278	51,021	61.9	High	143%	Improved	35%
ROU MBS PMP2440 NGI	4	12	411	108	1,617,832	679,203	679,203	442,231	65.1	316,885	46.66	181,962	26.79	10,359	36,548	8.6	High	622%	Improved	15%
ROU MBS PG 0006 NGI*	12	1	204	125	31,512	37,872	37,872	26,780	70.7	10,855	28.66	4,974	13.13	14,477	24,345	8.5	Reasonable	-9%	Deteriorated	1%

Data source: MS data submissions under the DCF 2017 Fleet Economic (MARE/A3/AC(2017)); All monetary values have been adjusted for inflation; constant prices (2015). * projected values

Table 5.56 Romania: Landed value, weight and average price of principal species

	Value of landings (real) (thousand €)										Live weight of landings kg										Average landed price (real) (€)										% over total	
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	in EUR	in weight
Thomas' rapa whelk		0.01	0.03	0.96	0.55	0.78	1.83	3.48	3.09	3.70		1,761	11,610	218,256	588,484	1,314,188	1,953,161	4,460,435	6,504,480	9,244,247		3.4	2.8	4.4	0.9	0.6	0.9	0.8	0.5	0.4	82%	97%
Turbot	0.38	0.31	0.26	0.23	0.21	0.29	0.34	0.27	0.31	0.37	47,112	48,767	48,248	43,248	43,213	43,200	43,183	31,152	29,492	43,220	8.1	6.4	5.5	5.3	4.9	6.8	7.9	8.7	10.6	8.7	8%	0%
Mediterranean mussel		-	-	-	-	-	0.01	0.07	0.08	0.21		475	423	1,042	1,902	2,888	5,079	45,610	67,420	142,108		3.0	2.9	2.3	1.8	0.8	1.3	1.5	1.2	1.5	5%	1%
Mediterranean horse	0.04	0.04	0.01	0.03	0.04	0.07	0.02	0.04	0.09	0.08	12,457	16,783	7,228	22,130	20,005	25,864	6,611	13,875	32,397	34,569	3.0	2.4	2.0	1.5	1.8	2.8	3.0	3.0	2.7	2.3	2%	0%
European anchovy	0.02	0.02	0.05	0.05	0.02	0.13	0.07	0.13	0.13	0.04	15,553	21,371	48,204	40,801	18,391	110,980	59,348	111,964	102,420	27,275	1.4	1.1	1.1	1.1	1.0	1.2	1.2	1.2	1.3	1.4	1%	0%
European sprat	0.21	0.07	0.02	0.10	0.06	0.05	0.08	0.10	0.03	0.03	234,896	90,707	29,625	131,507	87,458	60,000	84,980	106,331	49,275	28,738	0.9	0.8	0.8	0.8	0.7	0.8	1.0	1.0	0.6	1.0	1%	0%

Data source: MS data submissions under the DCF 2017 Fleet Economic (MARE/A3/AC(2017)); All monetary values have been adjusted for inflation; constant prices (2015).

5.20 Slovenia

Short description of the national fleet

Fleet capacity

In 2018, the Slovenian fishing fleet consisted of 134 registered vessels, with a combined gross tonnage of 668.89 GT, a total power of 8.5 thousand kW and an average age of 39.8 years. The average length of the fishing vessels was 7.55 metres in the same year. The size of the fleet decreased between 2008 and 2018; the number of vessels by 26% and GT and kW by 32% and 20%, respectively. The major factors causing the fleet to decrease include the scrapping of vessels, including two of the largest vessels in Slovenian fishing fleet. A large decrease of 22% in number of vessels is recorded in 2018 regarding 2017. In 2018, Slovenia updated the register of fishing vessels. All inactive vessels, with no fishing license, were, with the permission of the owner, deleted from the registry.

In 2018, there were 77 active vessels which represent 57% of all fishing vessels in the same year. The number of all active vessel increase for 7% from 2008-2015, while a decrease of 12% was recorded in 2018 to 2015. One of the reasons for increased number of active vessels (2008-2015) is scrapping of some large vessels. Many fishers lose their jobs and decided to starts fishing on his own. Also the economic crisis over the past few years had the similar effect on increased number of active vessels. One of the reasons for drop in period from 2016 to 2018 is crisis in Purse seiners sector where the number of vessels decreased by two thirds in the last few years. Regardless of increased number of active vessels, the number of passive vessels is still very high. The case is complex and there are several reasons for this situation. One of the reasons is high age of these vessels. Many vessels are very old and they are no longer suitable for fishing. Also many owners cannot fish anymore because they are retired but they do not have a successor who would continue with the fisheries. In many cases, the fisher found a new job, because he could no longer earn a living from fishing, but still own the fishing vessel.

Fleet structure

The Slovenian fishing fleet nationally divided into a small-fleet segment (84% of all active vessels in 2018) with an engine power of 3.1 thousand kW and a large-fleet segment (16% of all active vessels in 2018) with an engine power of 1.9 thousand kW. The number of vessels in the SSCF increase for 8% from 2008-2018, while the number of large-scale vessels decrease for 52% in the same period. Scrapping is the major factor for decreased large-scale fleet. On the other hand, those fishers who lost their jobs because of scrapping, starts to fish on their own, which results in a higher, number of small-scale vessels.

The Slovenian national economy is insignificantly influenced by the marine fisheries sector. However, the sector has a particular social impact in terms of employment. The watershed moment for Slovenian marine fisheries began with Slovenian independency in the year 1991. This period marked a decrease in the extent of fishing regions and a substantial loss of market for fish products. A large number of poorly equipped small-scale fishers, inadaptability of large-scale fisher, along with discordance among fishing, producing and marketing capabilities brought the sector into crisis. Landings of almost 6 thousand tonnes in 1990 have decreased to less than 200 tonnes in 2018.

The existence of two sea fishery reserves where all fishing activities are banned (Portorož and Strunjan fishery reserves) further limit the reduced Slovenian fishing area. Moreover, there is an important industrial port in the Gulf of Koper. Due to the safety and international rules, a common routing system and traffic separation scheme was established in the Northern Adriatic, which also has an important impact on fisheries. For the last few years, this has had a negative impact, particularly on those fishers who are engaged only in small-scale coastal fishing.

Employment

In 2017, the number of fishing enterprises totalled 78, with the majority (77%), owning a single vessel. 23% of the enterprises owned two to five fishing vessels and none of the enterprises owned six or more vessels. Total employment in 2017 was estimated at 101 jobs, corresponding to 63 FTEs. The level of employment decreased between 2008 and 2017, with total employed decreasing by 11%, whiles the number of FTEs decreased by 18 %.

The Slovenian fishing fleet consists predominantly of small vessels of less than 12 meters (mainly vessels of 6 meters). Self-employed fishers who own one fishing vessel about six meters long represent a typical Slovenian fishing enterprise.

Effort

In 2017, the fleet spent a total of around 7.3 thousand days-at-sea. Effort, in days-at-sea, increased 29% between 2008 and 2015, while in the period 2016 - 2017 decrease for almost 16% comparing 2015. The fisheries in the Adriatic Sea is very intense, consequently most of the fish stocks are overexploited. Although small Slovenian fisheries have a negligible effect on fish stocks, feels the effects of intensive fishing, which resulting in lower landings and increased effort. Furthermore, the fisheries sector, particularly the SSCF, is affected by the limited size of marine fishing area. Most of the fleet is poorly equipped and unable to operate in international waters. One of the reasons for increased days-at-sea, in the period 2008 – 2015, is also the high price of fuel in the past few years, which encourages the fishers to do shorter and more frequent trips. On the other hand, the reason for the declined fishing days after 2015 can be attributed to the crisis in Purse seiners sector and reduced effort in DFN 00-06m segment. Fluctuation in number of vessels and number of fishing days in small-scale sector is manly related with activity of occasional fisher, i.e., those whom fishing is not the only source of income. During the economic crises, when incomes were lower, they went to the sea more often to earn some additional income. Also effort increase when the season for fishing of some ''high market price'' species, i.e. sole, turbot, is very good.

The quantity of fuel consumed in 2017 was around 227 thousand litres, a decrease of around 43% from 2008. The major factor causing this decrease includes the scrapping of several vessels in the fleet, including two of the largest vessels.

Production

The total weight of seafood landed in 2017 was around 128 tonnes, with a landed value of EUR 0.88 million. The total weight and value of landings decreased by 73% and 48%, respectively, over the period analysed. In 2009, the national fleet generated the highest landed value (EUR 2.4 million), followed by 2008 (EUR 2.3 million). In terms of landings weight, in 2009 the fleet landed around 866 tonnes, 2010 (764 tonnes) and 2011 (719 tonnes). The major factor causing the decrease in landed weight and value, especially for European anchovy and sardine, include scrapping of fishing vessels. In the last quarter of 2011, Slovenia sent the two largest ships to be scrapped (pelagic trawlers 24-40m); those vessels targeted mainly sardine and anchovy and represented around 50% of the Slovenian landed weight. The climate changes could be also one of the reason for reduce landings. The Northern Adriatic Sea was very warm over the past few years, which could be the reason for the reduced presence of certain fish species, e.g. whiting. The landings volume of whiting decreased from 2012 to 2017 for more than 75%.

Prices obtained for the key species targeted by the fleet generally remain stable between 2008 and 2017. Slight annual variations of the prices are the results of increased or decreased volume of landings over the period. European pilchard accounted for 26% of the total landings value obtained by the Slovenian fleet in 2008, decreasing to only 1% of income in 2017, while European anchovy decreased from 23% in 2008 to less than 1% in 2017. On the other hand, gilthead sea bream and Common sole records increased value of landings from 2008-2017 for 350% and 88%, respectively. Slovenia, in the last period, invested a large amount of money in marine aquaculture, especially in shellfish farming. Increased production of shellfish could be one of the reasons for more frequent occurrence of Gilthead sea bream in the Slovenian sea since it is mainly fed with shellfish.

Economic results for 2017 and recent trends

National fleet performance

The amount of income generated by the Slovenian national fleet in 2017 was EUR 2.16 million. This consisted of EUR 0.88 million in landings value and EUR 1.28 million in non-fishing income. The Slovenian fleet's landings income decreased more than 60% between 2008 and 2017, while other income increased for 83% during the same period. Due to reduced landings, Slovenian fishers are looking for the opportunity to generate earnings in other industries, such as tourism, aquaculture etc.

Large increase in subsidies was recorded in 2015. The reason for increase are payments to fishers that were implemented by Slovenia through the measure ''Socio-economic compensation for the management of the Community fishing fleet in the framework of OP EFF 2007-2013'' which were a consequence of Croatia's accession to the EU. Through Croatia's Accession Treaty which entered into force on 1 July 2013, the provision became applicable in EU legal order that Slovenia may finance a scheme of individual premiums for fishers who would benefit from the access regime laid down in Part 11 of Annex I to Regulation (EC) No 2371/2002 (this access regime is now provided for in point 8 of Annex I to Regulation (EU) No 1380/2013) as amended by the Act of Accession of Croatia. The scheme may only apply during the period 2014 to 2015 or, if this occurs earlier, up until the date of the full implementation of the

arbitration award resulting from the Arbitration Agreement between the Government of the Republic of Slovenia and the Government of the Republic of Croatia, signed in Stockholm on 4 November 2009.

Total operating costs incurred by the fleet in 2017 equated to EUR 1.1 million, amounting to 51% of total income. Personnel and energy costs, the two major fishing expenses, were EUR 0.45 and EUR 0.20 million, respectively. Between 2008 and 2017, total operating costs decreased 55%, largely due to scrapping of several vessels. In the last few years, especially in 2012 and 2013, Slovenian fisheries sector records an increased value of direct income subsidies. It has been intended primarily to diversify their activities. The results of these investments are also increased depreciation costs (period 2013-2015) and other income.

In terms of economic performance, the amount of Gross Value Added (GVA), gross profit and net profit generated by the Slovenian fleet in 2017 were EUR 1.7 million, EUR 1.1 million and EUR 1.1 million, respectively. Between 2008 and 2017, GVA recorded a slide decrease of 1%, while gross profit and net profit increased 48% and 65%, respectively. Although the Slovenian fishing fleet was in a poor economic condition because of old and poorly equipped fleet and reduced catches, still records positive trend of economic indicators. The reason for the positive trend is primarily because of higher revenues from other sources.

In 2017, the Slovenian fleet had an estimated (depreciated) replacement value of EUR 3.6 million. Investments by the fleet amounted to EUR 0.12 million in 2017.

Resource productivity and efficiency indicators

The gross profit margin in 2017 was 53%, a 56% increase from 2008. Net profit margin was estimated at 50% in 2017, resulting in 117% increase from 2008.

The Rate of Return on Fixed Tangible Assets (RoFTA) improved in comparison to previous and amounted 30% in 2017. Labour productivity (GVA/FTE) also record increase in period 2008- 2017 for 8%: GVA decreased for 1% while the number of FTE decreased by 18% in the period analysed.

Fuel consumption per landed tonne has followed an overall increasing trend since 2008, and amounted 1 779 litres per tonne landed in 2017. On the other hand, the landed weight per sea day decreased significantly for more than 80% from 2008-2017. One of the reasons for that is scrapping of some large vessels with high volume of landings and, subsequently, changed composition of the fleet consisting now in majority of smaller vessels with lower landed weight per sea day. Lower volume of landings of Purse Seiners segment in last few years also affect productivity and efficiency indicators since this segment has the best ratio between the weight of catches and fuel consumption.

Performance by fishing activity

The Slovenian fleet has a range of vessel types targeting different species predominantly in the Adriatic Sea. The fleet consisted of 8 (DCF) fleet segments in 2018, with 4 inactive length classes consisting of 57 vessels. Two of active segments (DFN VL00-06, DFN VL06-12) belongs to SSCF and two (DTS VL12-18, PS VL12-18) belongs to the large-scale fleet.

Small-scale coastal fleet

In 2017, there were 80 active vessels of which around 69 (86% of all active vessels) are classified as small-scale (an increase for 15% from 2008). The majority of these vessels operate in the coastal waters of Slovenia.

The amount of income generated by the Slovenian SSCF in 2017 was EUR 1.73 million. This consisted of EUR 0.58 million in landings value and EUR 1.15 million in non-fishing income. Landings income increased 50% between 2008 and 2017, while other income increased for more than 500% during the same period. Due to reduced landings, Slovenian fishers are looking for the opportunity to generate earnings in other industries, such as tourism, aquaculture etc.

In terms of economic performance, the amount of Gross Value Added (GVA), gross profit and net profit generated by the SSCF in 2017 were EUR 1.5 million, EUR 1.16 million and EUR 1.13 million, respectively. Between 2008 and 2017, GVA, gross profit and net profit following the positive trend although the substantial fall was recorded in 2015. The major factors causing the improvement in economic performance in period analysed included increases in landing income and income from other sources while, on the other hand, operation costs remain relative stabile during the period analysed. In 2017, the SSCF had an estimated (depreciated) replacement value of EUR 1.35 million. Investments by the fleet amounted to EUR 0.06 million in 2017.

Large-scale fleet

11 vessels (14% of all active vessels) represents Slovenian large-scale sector in 2017. The majority of these vessels operate in the coastal waters of Slovenia.

The amount of income generated by the Slovenian large-scale fleet in 2017 was EUR 0.43 million. This consisted of EUR 0.3 million in landings value and EUR 0.13 million in non-fishing income. Landings income decreased 85% between 2008 and 2017. The major factor for decreased value of landing income is scrapping of some vessels and in the last few years a crisis in PS segment, which is deeper from year to year.

In terms of economic performance, the amount of Gross Value Added (GVA), gross profit and net profit generated by the large-scale fleet in 2017 were EUR 0.26 million, EUR -0.34 million and EUR -0.60 million, respectively. Between 2008 and 2017, GVA, gross profit and net profit decreased 79%, 107% and 115%, respectively. The major factor causing for decreasing in economic performance is lover income from landings of PS sector and scrapping of some vessels. In 2017, the large-scale fleet had an estimated (depreciated) replacement value of EUR 0.94 million. Investments by the fleet amounted to EUR 0.05 million in 2017.

Performance results of selected fleet segments

The entire active fleet made an overall profit in 2017. All small-scale fleet segments revealed an improving economic trend in 2017, while large-scale fleet segment pursuing a negative trend in the same year.

Demersal trawlers and demersal seiners 12-18m

Eight vessels make up this segment and are based predominantly in the Adriatic. The fleet targets a variety of species, the most important being whiting, musky octopus and European squid. The value of landings was EUR 0.28 million and 9 FTEs were employed in this fleet segment in 2017, contributing to 32% and 14% of the total income from landings and FTEs generated by the MS fishing fleet respectively. This fleet segment made a loss in 2017.

Purse seiners 12-18m

Three vessels make up this segment and are based predominantly in the Adriatic. The most important targeting species are European anchovy and European pilchard. The value of landings was EUR 0.01 million and 1 FTEs were employed in this fleet segment in 2017, contributing to 1% and 2% of the total income from landings and FTEs generated by the MS fishing fleet respectively. This fleet segment made a loos in 2017. This segment is in crises for past few years and it threatens to collapse. The value of landings decreased from EUR 0.8 million in 2008 to just EUR 0.01 million in 2017. Also other economic and social indicators decrease substantially in the period mentioned. The main reasons are that the targeting fish is too small for fishing, problems with employees which are hard to get because of the seasonal nature of work and high tax on occasional work in Slovenia and because of large Italian and Croatian fleet which are more cost effective and landed large amount of sardine and anchovy at a lower price.

Drift and fixed netters <6m

Around 30 vessels make up this segment which operate in Slovenian coastal areas of the Adriatic. These vessels target demersal species, such as sole, sea bass and sea bream. The total value of landings was EUR 0.13 million and around 23 FTEs were employed in this fleet segment in 2017, contributing 15% and 36% of the total income from landings and FTEs generated by the national fleet respectively. This fleet segment made a profit in 2017.

Drift and fixed netters 6-12m

Around 39 vessels make up this segment which operate in Slovenian coastal areas of the Adriatic. These vessels target demersal species, such as sole, Mullets, turbot and sea bream. The total value of landings was EUR 0.46 million and around 30 FTEs were employed in this fleet segment in 2017, contributing 41% and 52% of the total income from landings and FTEs generated by the national fleet respectively. This fleet segment made a profit in 2017.

Drivers affecting the economic performance trends

Lower income from landings which depends, mainly, on the status of fish stocks, operating costs and higher income from other sources were the main driving forces behind the overall deteriorated trend.

The Slovenian fleet's landings income decreased more than 60% between 2008 and 2017. Other income increased 83% during the same period. Due to reduced landings, Slovenian fishers are looking for the opportunity to generate earnings in other industries, such as tourism, aquaculture etc. In the last few years, especially in 2012 and 2013, Slovenian fisheries sector records an increased value of direct income subsidies. It has been intended primarily to diversify their activities.

Markets and Trade

The Slovenian seafood trade balance is relatively stable over the years and it is significantly negative. Slovenia is a net importer of fish and fish products. In 2018, imports were approximately five times larger than export and amounted to 18 608 tonnes (EUR 99 million) of fish and other fish product. On the other hand, export amounted to 5 361 tonnes (EUR 31 million) in the same year. The majority of the imported fish and fish products come mainly from European Union. The largest Slovenian seafood import partners are Italy, Spain and Croatia. Concerning export, the largest partners are Austria, Croatia and Bosnia and Herzegovina.

The Slovenian volume of landings for 2017 amounted less than 130 tonnes. In the same year Slovenian aquaculture sector has produced 1 730 tonnes of fish and shellfish. Slovenian market for marine products is fragmented and disorganized. A large number of producers and dealers are unorganized and acting individually. Most of the catches are sold directly to known customers. Part of landed catches is sold also on the fish market in Trieste, Italy.

Prices obtained for the key species targeted by the fleet generally remain stable between 2008 and 2017. Slight annual variations of the prices are the results of increased or decreased volume of landings thru the period.

Management instruments

In Slovenia the field of fisheries, together with relevant legislation and management, is currently the responsibility of the Fisheries Sector at the Ministry of Agriculture, Forestry and Food (MAFF). The Ministry developed a new information system (InfoRib) which collects data on marine species, landings, register of fishing vessels and socio-economic data. The data are linked to each fishing vessel and enable assessment of the socio-economic status in marine fisheries. Those data provide the basis for adopting measures in favour of sustainable development and for the common European fisheries policy.

Fisheries management is regulated mostly by capacity limitations and spatial restrictions. Capacity limitation is related to increase of vessel power and GT in terms of total national fleet capacity. Spatial restrictions are related with the existence of two sea fishery reserves where all fishing activities are banned (Portorož and Strunjan fishery reserves). Moreover, there is an important industrial port in the Gulf of Koper. Due to the safety and international rules, a common routing system and traffic separation scheme was established in the Northern Adriatic, which also has an important impact on fisheries.

From 2014 GFCM management plan for small pelagic fish in GSA 17 has been in force. By the provisions of this plan maximum number of fishing days for targeting sardine and anchovy has been set, as well as temporal closure period.

TACs and quotas

Slovenia does not have any TACs and/or quotas.

Status of Key Stocks

According to the GFCM Working Group on Stock Assessment of Small Pelagic Species (WGSASP) held in November 2017, anchovy and sardine in the Adriatic Sea (GSA17-18 combined) were considered overexploited and in overexploitation.

According to the GFCM Working Group on Stock Assessment of Demersal Species (WGSAD) held on November 2017, out of the 37 stock assessments validated by the WGSAD, 7 were found in a state of sustainable exploitation and 30 were assessed as in overexploitation.

Operating costs

Between 2008 and 2017, total operating costs decreased 55%, largely due to scrapping of several vessels. In the last few years, especially in 2012 and 2013, Slovenian fisheries sector records an increased value of direct income subsidies. It has been intended primarily to diversify their activities. The results of these investments are also increased depreciation costs and other income. In the period 2013-2016, i.e., after the scraping, operating costs remained relatively stable, with slight annual variations as a result of increased or decreased number of active vessels in the fleet. One of the drivers which effect on the economic situation of the fleet are repair & maintenance costs which are relatively high and represented 16% of total operating costs in 2017. In the future an increase in the value of repair & maintenance costs is expected because of old fleet. Energy costs are one of the key drivers only for Demersal trawlers and demersal seiners 12-18m segment. Increased energy costs in 2017, because of higher prices of fuel, are one of the reasons for the poor economic performance of this sector in 2017.

Innovation and Development

Slovenia has a derogation regards the minimum distance from coast and the minimum sea depth for the ''volantina'' trawlers; Article 13(1) of Regulation (EC) No 1967/2006 shall not apply in territorial waters of Slovenia, irrespective of the depth, between 1.5 and 3 nautical miles from the coast, to 'volantina' trawlers which are used by vessels:

(a) bearing the registration number mentioned in the Slovenian management plan;

(b) having a track record in the fishery of more than five years and not involving any future increase in the fishing effort deployed;

(c) holding a fishing authorisation and operating under the management plan adopted by Slovenia in accordance with Article 19(2) of Regulation (EC) No 1967/2006.

The derogation shall apply until 27 March 2020.

For this purpose, Slovenia will have to implement a study in order to display the structure of catch with ''volantina'' trawlers in the zone between 1.5 and 3 nautical miles from the coast.

Social impact

Although the marine fishing sector is numerically small and has an insignificant influence on national economy, it is still considered to have a strong social impact on the Slovene coastal region in terms of employment. Besides, this activity is also important for maritime identity and tourism. In addition to directly creating employment opportunities, it is linked to the economy of the entire region, especially to tourism and catering. As said before, the value and volume of landings, as key drivers do not have affect only on fishers but also to the people on shore. Slovenian fish processing industry, on the other hand, less depends on Slovenian fisheries because most of the raw materials are imported from another, mostly EU, countries. However, the crisis in Purse seiners segment has negative impact on some smaller processors which produce Salted fillets of anchovies.

Nowcasts for 2018-19 and outlook

National Fleet

Due to scrapping the size of the fleet decreased between 2008 and 2018; the number of vessels by 26% and GT and kW by 32% and 20%, respectively. Because of that and because of poor landing volume of Purse Seiners segment, the weight of landings decreases in 2018 by more than 80% regarding 2008. Also in 2019 the positive trend regarding volume of landings it cannot be expected. Landing volume and income, which depends on the status of fish stocks, are the main drivers in Slovenian fishing fleet. They have the effect on all others economic and social indicators. If the fish stocks in the Adriatic Sea will recover in the future, we can expect also an increased trend in economic and social situations of the sector.

As the fleet is generally old and poorly equipped we can expect that repair and maintenance costs will continue to increase in the future furthermore, because of old fleet increase in inactive vessels is expected.

Small-scale coastal fleet

The same issues regarding age and equipment of the fleet apply also to the SSCF. The economic situation of SSCF is largely dependent on the landing volume of migratory species, such as sole, see bream, turbot

or European flounder so it is very difficult to predict the volume of landings. It depends on a variety of factors, such as sea temperature, other climatic factors, condition of the stock, fishing effort in neighbouring countries etc. Based on current data the volume of landings decrease in 2018 for 28% regarding 2017, mostly because of decreased landings of European pilchard (=Sardine), sea bream and sole.

Model forecast

Preliminary results for 2019 forecast a increasing landed weight and value for SSCF and decreasing one for LSF. Projections suggest total job and FTE in general will remain stable for both fleets. Economic performance results in 2019: GVA, gross profit and net profit will increase in SSCF, while a declines will be recorded in LSF. The same goes also for GVA per FTE.

Results indicate that the RoFTA for Slovenian SSCF will reach 83%, while LSF will record a negative value of RoFTA (-10%).

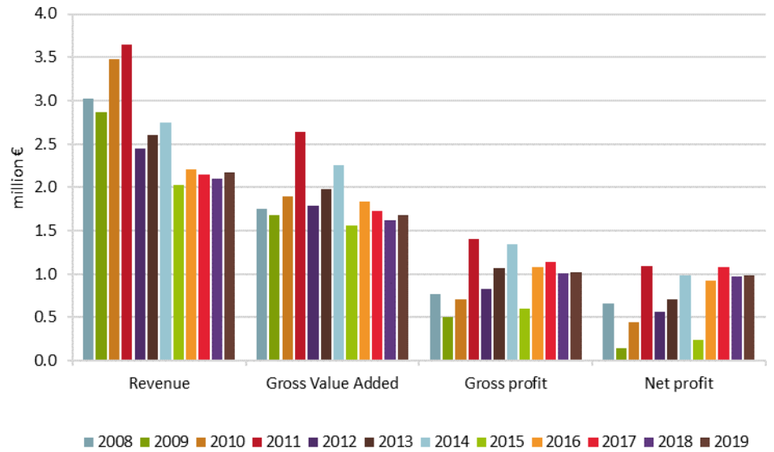
Data issues

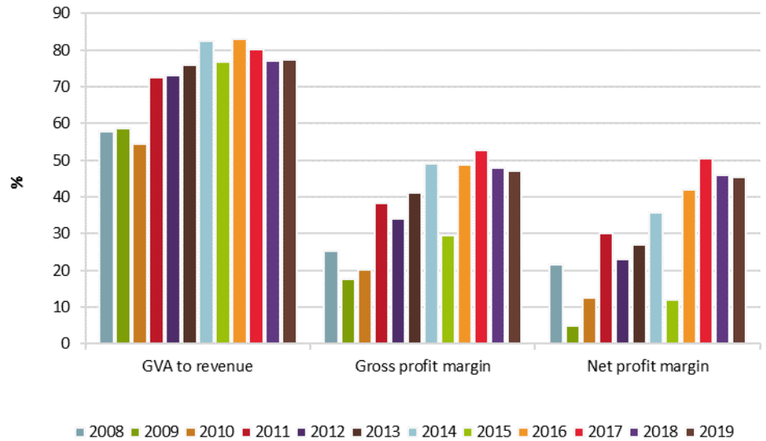
No major issues detected. The economic data on the fishing sector were collected mostly from accounting records – AJPES, from data base 'InfoRib', through questionnaires and sales notes. In the monitoring programme all fishing vessels were included. The data collected from all sources were combined in such a way that a complete set of accounting items is compared for each business enterprise. The target population was all fishing sector in Slovenia. There were approx. 100 companies or fishers in Slovenia. In March 2018 the questionnaires for 2017 were sent to all users of fishing vessels in Slovenia. Where the questionnaire was the only source used, the response rate was around 94%. Where the data from annual accounts of business enterprises was used the response rate was 100%, because there are economic reports for all investigated companies or fishers.

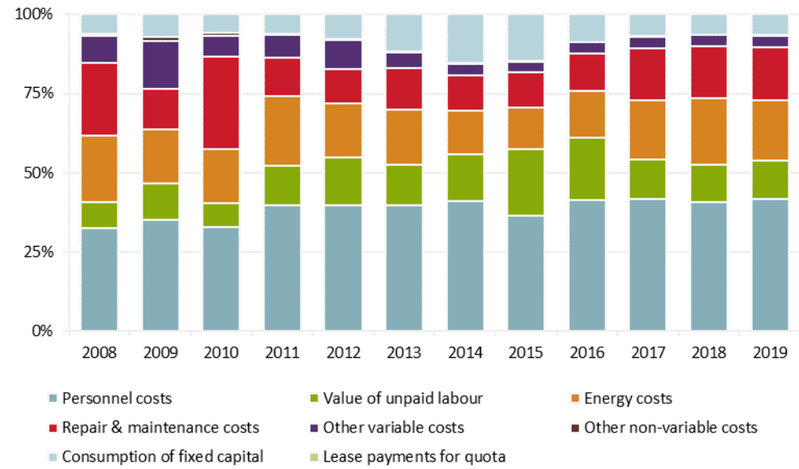
Table 5.57 Slovenia: National fleet statistics and economic performance results. Nowcast figures for 2018 and 2019

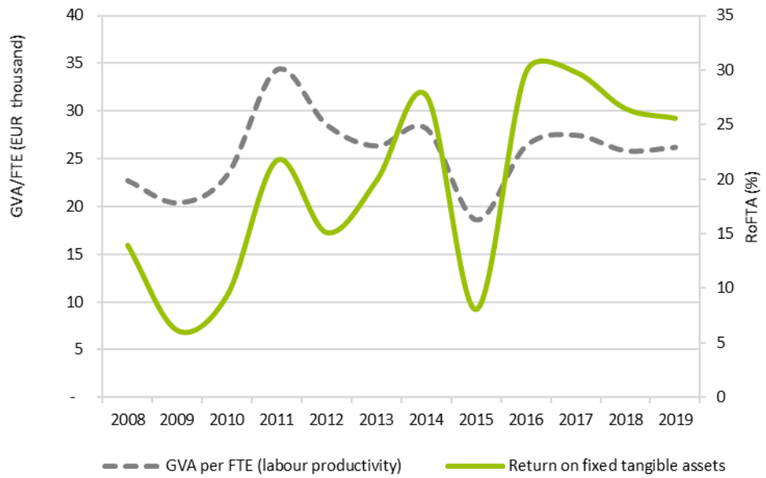
		2008	2009	2010	2011	2012	2013	2014	2015	2016	*2017*	*2018*	2019	Trend 2008-2018	Δ 2017 to 2016	Δ 2017 to avg. 08-16
Capacity	Number of vessels	181	185	185	186	180	171	170	169	171	172	134	134		1%	-3%
	Total vessel power	10,653	10,953	10,956	10,857	9,497	8,455	8,511	8,540	8,535	8,840	8,467			4%	-9%
	Total vessel tonnage	983	1,004	1,004	1,004	685	599	598	597	590	605	669			3%	-23%
Employment	Engaged crew	109	117	116	114	106	107	126	119	110	101	96	99		-8%	-11%
	Unpaid labour										59					
	FTE national	77	82	81	77	63	75	80	84	70	63	63	64		-10%	-18%
	Total hours worked per year (engaged crew)										131,107					
Effort	Days at sea	6,763	6,873	7,749	7,680	7,613	7,646	8,595	8,706	7,898	7,327	6,772			-7%	-5%
	Fishing days	6,763	6,873	7,749	7,680	7,613	7,646	8,595	8,706	7,898	7,327	6,772			-7%	-5%
	kW fishing days	604,677	727,098	775,227	724,419	506,626	495,864	496,548	518,184	481,331	439,085				-9%	-26%
	GT fishing days	80,437	99,109	98,672	90,741	36,460	34,528	32,852	33,073	30,148	27,971				-7%	-53%
	Number of fishing trips	5,557	5,582	5,752	5,884	5,511	5,384	6,108	5,956	5,259	4,772				-9%	-16%
	Energy consumption	541,703	641,006	604,469	546,650	277,830	278,736	220,910	238,798	226,213	227,835	278,988	310,301		1%	-43%
Landings	Live weight of landings	694,540	867,167	763,956	719,380	329,220	237,858	254,099	196,005	152,310	128,083	126,259	139,171		-16%	-73%
	Value of landings	2,326,626	2,369,497	2,123,543	2,140,823	1,486,252	1,174,063	1,277,201	1,272,615	965,482	872,597	879,434	945,505		-10%	-48%
Income	Gross value of landings	2,326,626	2,369,497	2,123,543	2,140,823	1,486,252	1,174,063	1,277,201	1,272,614	965,482	872,597	879,434	942,779		-10%	-48%
	Other income	701,139	491,659	1,352,478	1,503,041	958,382	1,427,662	1,464,229	758,045	1,247,727	1,280,757	1,225,346	1,228,581		3%	16%
	Operating subsidies	243,768	269,688	243,462	275,854	411,768	526,586	65,595	322,842	135,305	-				-100%	-100%
	Income from leasing out quota	-	-	-	-	-	-	-	-	-	-					
Expenditure	Personnel costs	779,180	888,485	962,520	943,038	692,056	688,134	678,033	609,402	511,979	452,702	475,525	509,485		-12%	-40%
	Value of unpaid labour	201,821	287,672	224,053	299,833	262,956	218,424	240,112	351,847	247,682	138,215	138,868	148,278		-44%	-47%
	Energy costs	507,485	438,703	500,868	529,929	301,770	300,932	231,944	220,036	181,217	204,652	243,920	235,083		13%	-43%
	Repair & maintenance costs	551,303	318,425	858,768	284,768	188,898	232,488	180,115	190,833	149,378	178,119	192,166	205,900		19%	-46%
	Other variable costs	204,867	382,168	196,817	175,339	157,716	85,408	64,255	55,144	42,387	41,776	42,384	44,726		-1%	-72%
	Other non-variable costs	14,351	39,452	26,072	10,542	8,808	3,697	3,825	4,338	3,195	2,094	2,323	2,628		-34%	-84%
	Consumption of fixed capital	149,823	175,859	168,874	142,071	131,959	201,495	251,868	245,400	106,287	73,294	73,850	79,269		-31%	-58%
	Lease/rental payments for quota	-	-	-	-	-	-	-	-	-	-					
Indicator	Opportunity cost of capital	- 37,419	185,270	97,092	162,804	135,831	168,164	112,889	110,766	44,077	- 22,478	- 33,691	- 37,806		-151%	-121%
	Gross Value Added	1,749,760	1,682,408	1,893,497	2,643,287	1,787,442	1,979,201	2,261,291	1,560,309	1,837,032	1,726,713	1,623,987	1,683,024		-6%	-11%
	Gross profit	768,759	506,251	706,924	1,400,416	832,430	1,072,643	1,343,146	599,061	1,077,371	1,135,796	1,009,594	1,025,261		5%	23%
	Net profit	656,355	145,122	440,958	1,095,542	564,641	702,984	978,389	242,894	927,007	1,084,980	969,436	983,798		17%	70%
	Net profit subsidised	900,123	414,810	684,420	1,371,396	976,409	1,229,569	1,043,984	565,736	1,062,312	1,084,980	969,436			2%	18%
	Net profit rights	900,123	414,810	684,420	1,371,396	976,409	1,229,569	1,043,984	565,736	1,062,312	1,084,980	969,436			2%	18%
Capital	Value of physical capital	4,435,661	5,371,754	5,730,129	5,791,723	4,638,999	4,382,581	3,949,150	4,377,691	3,258,417	3,568,449	3,539,325	3,700,585		10%	-23%
	Value of quota and other fishing rig	-	-	-	-	-	-	-	-	-	-					
	Investments	263,349	337,532	380,191	217,084	317,799	192,512	215,296	170,274	105,288	107,247	120,984	129,326		2%	-56%
	Total assets										352,350	414,645	459,418			
	Long/short debt										115,601					
	Subsidies on investments										-	-	-			

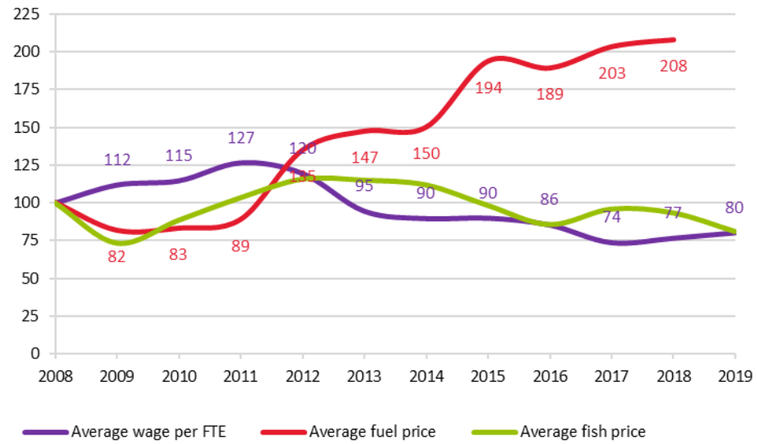
Data source: MS data submissions under the DCF 2019 Fleet Economic (MARE/A3/ASC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

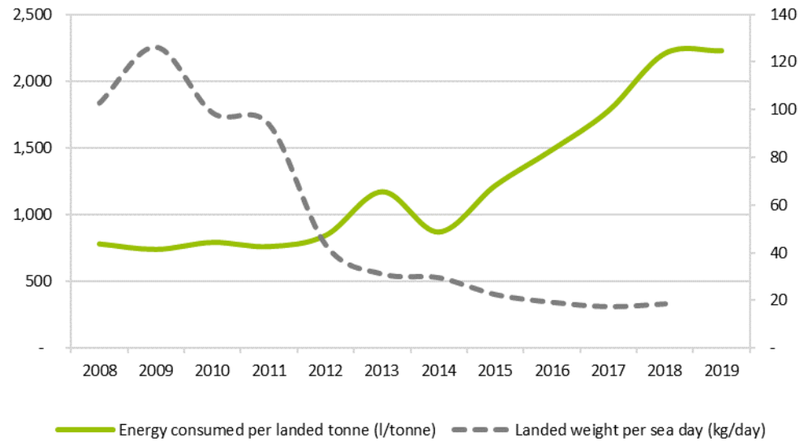


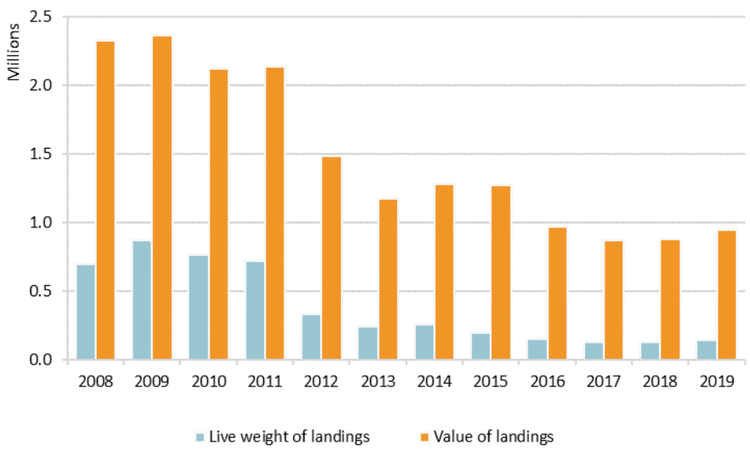












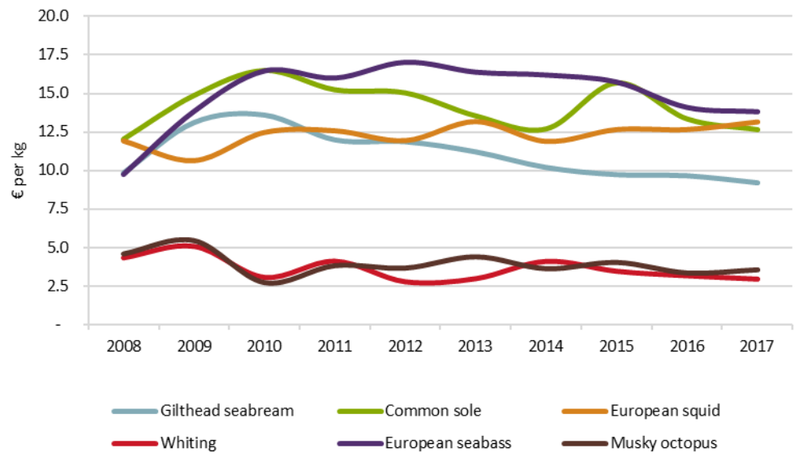


Figure 5.20 Slovenia: Main trends in economic performance indicators (absolute value, panel 1a/top left and relative value, (panel 1b/top middle); cost structure (panel 1c, top right); productivity (panel 2a); key input/outputs (panel 2b); efficiency (panel 2c); landings (panel 3a); average price (EUR /kg) of top species (panel 3b). Nowcast figures for 2018 and 2019

Data source: MS data submissions under the DCF 2019 Fleet Economic (MARE/A3/ASC(2019)); All monetary values have been adjusted for inflation; constant prices (2015). .

Table 5.58 Slovenia: National fleet statistics and economic performance results by fishing activity. Nowcast figures for 2018 and 2019

		SCF											Trend	Δ 2016	Δ 2016 to
		2008	2009	2010	2011	2012	2013	2014	2015	2016	*2017*	*2018*	2008-2018	to 2015	avg. 08-15
Total number of vessels	**(#)**	60	62	67	62	67	69	77	76	72	*69*	70		-5%	7%
Vessel tonnage	**(thousand GT)**	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	*0.2*			-3%	6%
Engine power	**(thousand kW)**	3	2	3	3	3	4	4	4	3	*3*			-20%	-4%
FTE	**(#)**	48	45	49	42	44	50	60	66	57	*58*	59		-14%	12%
Total employed	**(person)**	67	64	72	62	68	71	89	90	87	*89*	91		-3%	19%
Days at sea	**(thousand day)**	4.8	4.7	5.4	5.7	6.2	6.4	7.4	7.6	6.9	*6.6*	6.7		-10%	14%
Fishing days	**(thousand day)**	4.8	4.7	5.4	5.7	6.2	6.4	7.4	7.6	6.9	*6.6*			-10%	14%
Number of fishing trips	**(thousand)**	3.6	3.4	3.7	4.0	4.2	4.2	5.0	5.0	4.3				-14%	3%
Energy consumption	**(million litre)**	0.08	0.07	0.07	0.06	0.06	0.07	0.06	0.09	0.07	*0.08*	0.08		-19%	4%
Live weight of landings	**(thousand tonne)**	0.06	0.05	0.05	0.05	0.06	0.06	0.07	0.08	0.06	*0.07*	0.07		-22%	8%
Value of landings	**(million €)**	0.39	0.47	0.49	0.50	0.52	0.51	0.61	0.74	0.53	*0.58*	0.61		-29%	0%
Income from landings	**(million €)**	0.39	0.47	0.49	0.50	0.52	0.51	0.61	0.74	0.53	*0.58*	0.61		-29%	0%
Other income	**(million €)**	0.19	0.26	0.86	0.94	0.38	0.74	0.85	0.40	0.96	*0.97*	0.97		140%	66%
Direct income subsidies	**(million €)**	0.03	-	-	0.04	0.07	0.01	-	0.19	0.06				-69%	34%
Income from leasing fishing rights	**(million €)**	-	-	-	-	-	-	-	-	-					
Wages and salaries of crew	**(million €)**	0.26	0.26	0.31	0.28	0.37	0.48	0.33	0.34	0.35	*0.39*	0.41		3%	6%
Unpaid labour value	**(million €)**	0.09	0.07	0.10	0.16	0.09	0.12	0.15	0.25	0.14	*0.16*	0.17		-44%	9%
Energy costs	**(million €)**	0.09	0.08	0.09	0.08	0.09	0.10	0.09	0.11	0.08	*0.09*	0.09		-25%	-9%
Repair & maintenance costs	**(million €)**	0.13	0.11	0.21	0.08	0.09	0.12	0.11	0.13	0.10	*0.10*	0.10		-23%	-20%
Other variable costs	**(million €)**	0.10	0.11	0.11	0.09	0.09	0.05	0.05	0.04	0.02	*0.02*	0.02		-49%	-72%
Other non-variable costs	**(million €)**	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	*0.00*	0.00		-9%	38%
Annual depreciation costs	**(million €)**	0.03	0.04	0.06	0.05	0.06	0.15	0.19	0.22	0.09	*0.09*	0.09		-62%	-15%
Rights costs	**(million €)**	-	-	-	-	-	-	-	-	-	-	-			
Opportunity cost of capital	**(million €)**	-0.01	0.03	0.02	0.03	0.04	0.06	0.04	0.04	0.02	*-0.01*	-0.01		-46%	-37%
Tangible asset value (replacement)	**(million €)**	1.1	1.0	1.4	1.1	1.3	1.5	1.5	1.5	1.6	*1.6*	1.6		3%	19%
Fishing rights	**(million €)**	-	-	-	-	-	-	-	-	-					
Investments	**(million €)**	0.1	0.1	0.2	0.2	0.1	0.1	0.2	0.1	0.1				-41%	-32%
Gross Value Added	**(million €)**	0.2	0.4	0.9	1.2	0.6	1.0	1.2	0.9	1.3	*1.3*	1.4		49%	58%
GVA to revenue	**(%)**	42.8	59.0	69.5	82.9	69.9	77.7	83.2	75.3	86.2	*86.4*	86.4		14%	23%
Gross profit	**(million €)**	-0.1	0.1	0.5	0.8	0.2	0.4	0.7	0.3	0.8	*0.8*	0.8		193%	124%
Gross profit margin	**(%)**	-18.8	14.2	38.5	52.5	19.3	30.0	50.0	23.7	53.3	*50.9*	50.0		125%	104%
Net profit	**(million €)**	-0.1	0.0	0.4	0.7	0.1	0.2	0.5	0.0	0.7	*0.7*	0.7		6040%	213%
Net profit margin	**(%)**	-22.1	4.4	32.4	46.7	8.1	12.9	33.8	1.0	46.2	*46.0*	45.2		4631%	215%
Return on fixed tangible assets	**(%)**	-12.0	6.6	33.6	62.0	8.6	14.3	35.8	3.2	45.3	*44.4*	44.8		1307%	138%
GVA per FTE (labour productivity)	**(thousand €)**	5.1	9.6	19.2	28.8	14.3	19.2	20.2	13.1	22.6	*23.1*	23.1		73%	40%

	LSF											Trend	Δ 2016	Δ 2016 to
	2008	2009	2010	2011	2012	2013	2014	2015	2016	*2017*	2018	2008-2018	to 2015	avg. 08-15
Total number of vessels	25	25	24	22	22	14	14	12	11	*11*	11		-8%	-44%
Vessel tonnage	0.6	0.6	0.6	0.6	0.5	0.2	0.2	0.2	0.2	*0.2*			-11%	-61%
Engine power	4.6	4.4	4.4	4.1	3.6	1.9	1.9	1.8	1.5	*1.7*			-14%	-54%
FTE	29.3	37.4	32.4	35.4	18.8	24.7	20.3	17.8	13.1	*12.1*	12.1		-27%	-52%
Total employed	42.0	53.0	44.0	52.0	39.0	36.0	37.0	29.0	23.0	*21.2*	21.2		-21%	-45%
Days at sea	2.0	2.2	2.4	2.0	1.4	1.3	1.2	1.1	1.0	*0.8*	0.8		-7%	-40%
Fishing days	2.0	2.2	2.4	2.0	1.4	1.3	1.2	1.1	1.0	*0.8*			-7%	-40%
Number of fishing trips	1.9	2.1	2.1	1.9	1.4	1.1	1.1	1.0	1.0				-2%	-38%
Energy consumption	0.47	0.57	0.53	0.49	0.22	0.20	0.16	0.15	0.15	*0.14*	0.14		3%	-56%
Live weight of landings	0.64	0.81	0.71	0.66	0.27	0.18	0.19	0.11	0.09	*0.06*	0.06		-23%	-80%
Value of landings	1.94	1.90	1.64	1.64	0.97	0.67	0.67	0.53	0.44	*0.29*	0.30		-17%	-65%
Income from landings	1.94	1.90	1.64	1.64	0.97	0.67	0.67	0.53	0.44	*0.29*	0.30		-17%	-65%
Other income	0.52	0.23	0.49	0.56	0.58	0.69	0.61	0.36	0.29	*0.26*	0.26		-19%	-43%
Direct income subsidies	0.21	0.27	0.24	0.24	0.34	0.51	0.07	0.14	0.08				-43%	-69%
Income from leasing fishing rights	-	-	-	-	-	-	-	-	-					
Wages and salaries of crew	0.52	0.63	0.65	0.66	0.33	0.21	0.35	0.27	0.16	*0.10*	0.11		-40%	-64%
Unpaid labour value	0.11	0.22	0.12	0.14	0.18	0.10	0.09	0.10	0.11	*0.08*	0.08		8%	-19%
Energy costs	0.42	0.36	0.41	0.45	0.22	0.20	0.15	0.11	0.10	*0.10*	0.10		-11%	-65%
Repair & maintenance costs	0.42	0.21	0.65	0.21	0.10	0.11	0.07	0.06	0.05	*0.05*	0.05		-19%	-78%
Other variable costs	0.10	0.27	0.09	0.09	0.07	0.03	0.02	0.01	0.02	*0.02*	0.02		74%	-76%
Other non-variable costs	0.01	0.04	0.02	0.01	0.01	0.00	0.00	0.00	0.00	*0.00*	0.00		-50%	-93%
Annual depreciation costs	0.12	0.14	0.11	0.09	0.07	0.05	0.06	0.02	0.02	*0.02*	0.02		-11%	-75%
Rights costs	-	-	-	-	-	-	-	-	-	-	-			
Opportunity cost of capital	-0.02	0.09	0.05	0.09	0.05	0.04	0.04	0.03	0.01	*-0.00*	-0.00		-70%	-79%
Tangible asset value (replacement)	2.8	2.6	2.8	3.2	1.6	1.2	1.3	1.3	0.7	*0.7*	0.7		-43%	-65%
Fishing rights	-	-	-	-	-	-	-	-	-					
Investments	0.1	0.1	0.2	0.0	0.1	0.1	0.1	0.0	0.0				-24%	-76%
Gross Value Added	1.5	1.3	1.0	1.4	1.2	1.0	1.0	0.7	0.6	*0.4*	0.4		-20%	-51%
GVA to revenue	61.3	58.7	45.0	65.7	75.0	74.6	81.7	78.8	76.4	*71.0*	71.0		-3%	13%
Gross profit	0.9	0.4	0.2	0.6	0.7	0.7	0.6	0.3	0.3	*0.2*	0.2		-13%	-48%
Gross profit margin	35.7	18.9	8.8	29.2	42.6	51.5	47.8	37.0	39.2	*38.3*	37.6		6%	15%
Net profit	0.8	0.2	0.0	0.5	0.5	0.6	0.5	0.3	0.3	*0.2*	0.2		-7%	-40%
Net profit margin	31.7	8.2	1.5	21.0	35.1	44.7	40.4	30.8	35.0	*35.6*	34.9		14%	31%
Return on fixed tangible assets	27.1	10.3	2.8	17.3	36.6	55.7	43.3	23.9	36.3	*29.1*	29.4		52%	34%
GVA per FTE (labour productivity)	51.4	33.5	29.6	40.8	61.9	41.0	51.6	39.3	42.6	*32.6*	32.9		9%	-2%

Data source: MS data submissions under the DCF 2019 Fleet Economic (MARE/A3/ASC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Table 5.59 Slovenia: National fleet statistics and economic performance results by fleet segment, 2017

	Total number of vessels	FTE	Days at sea	Energy consumed per landed tonne	Live weight of landings	Value of landings	Revenue	Gross Value Added	GVA to revenue	Gross profit	Gross profit margin	Net profit	Net profit margin	Average wage per FTE	GVA per FTE (labour productivity)	Return on fixed tangible assets	Profitability (2016)	Net profit margin %Δ 2016 - average (2008-15)	Economic development trend	As a % of total revenue
	(#)	(#)	(day)	(litre/tonne)	(tonne)	(thousand €)	(thousand €)	(thousand €)	(%)	(thousand €)	(%)	(thousand €)	(%)	(thousand €)	(thousand €)	(%)				
SVN A37 DFN0612 °	41	36	4,084	1,211	49	390	1,067	906.6	85.0	517.9	48.5	432.4	40.53	10.7	24.9	32.5	High	83%	Improved	48.2%
SVN A37 DTS1218 °	9	11	918	2,327	64	390	622	460.2	73.9	217.6	35.0	193.4	31.07	22.7	43.1	35.9	High	30%	Improved	28.1%
SVN A37 DFN0006 °	31	20	2,806	902	16	137	418	374.3	89.5	274.2	65.5	254.1	60.72	5.0	18.6	147.2	High	419%	Improved	18.9%
SVN A37 PS1218 °	2	2	90	149	23	49	105	95.8	90.9	67.7	64.2	61.5	58.30	11.8	40.3	37.4	High	-6%	Deteriorated	4.8%

Data source: MS data submissions under the DCF 2019 Fleet Economic (MARE/A3/ASC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Table 5.60 Slovenia: Landed value, weight and average price of principal species

	Value of landings (real) (thousand €)										Live weight of landings (thousand tonne)										Average landed price (real) (€)										% over total 2016	
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	in value	in weight
Common sole	0.08	0.16	0.14	0.20	0.13	0.20	0.18	0.21	0.15	0.16	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	12.0	14.9	16.5	15.2	15.0	13.5	12.7	15.7	13.3	12.6	16%	7%
Gilthead seabream	0.04	0.03	0.07	0.06	0.13	0.12	0.20	0.28	0.15	0.18	-	-	0.01	-	0.01	0.01	0.02	0.03	0.02	0.02	9.9	13.1	13.6	12.0	11.9	11.2	10.2	9.7	9.7	9.3	16%	13%
European squid	0.10	0.11	0.30	0.22	0.15	0.13	0.14	0.13	0.12	0.09	0.01	0.01	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.01	11.9	10.6	12.5	12.6	11.9	13.2	11.9	12.7	12.7	13.2	12%	7%
Caramote prawn	-	-	-	-	-	-	0.03	0.02	0.08	-	-	-	-	-	-	-	-	-	0.01	-	6.8	7.9	8.0	13.7	8.6	17.9	25.8	16.8	14.7	14.8	8%	7%
European pilchard(=Sa	0.61	0.58	0.61	0.44	0.04	0.05	0.13	0.11	0.06	0.01	0.31	0.43	0.40	0.31	0.02	0.03	0.08	0.04	0.03	0.01	2.0	1.4	1.5	1.4	2.0	1.7	1.7	2.6	2.0	1.6	6%	20%
Whiting	0.22	0.27	0.21	0.23	0.22	0.17	0.08	0.04	0.05	0.06	0.05	0.05	0.07	0.06	0.08	0.06	0.02	0.01	0.02	0.02	4.3	5.1	3.1	4.1	2.8	3.0	4.1	3.4	3.2	2.9	5%	13%
Common cuttlefish	0.08	0.09	0.04	0.05	0.06	0.02	0.04	0.03	0.04	0.02	0.01	0.01	0.01	0.01	0.01	-	0.01	-	0.01	-	5.4	6.8	5.6	6.0	6.3	6.7	6.9	6.8	7.2	7.8	4%	7%
European seabass	0.04	0.10	0.06	0.06	0.05	0.04	0.04	0.06	0.04	0.05	-	0.01	-	-	-	-	-	-	-	-	9.7	13.8	16.5	16.0	17.1	16.4	16.2	15.8	14.1	13.8	4%	0%
Musky octopus	0.06	0.13	0.05	0.10	0.09	0.08	0.06	0.03	0.04	0.04	0.01	0.02	0.02	0.03	0.03	0.02	0.02	0.01	0.01	0.01	4.6	5.5	2.7	3.8	3.7	4.4	3.6	4.0	3.3	3.6	4%	7%
Common pandora	0.04	0.04	0.04	0.05	0.12	0.05	0.03	0.04	0.02	0.03	0.01	-	0.01	0.01	0.02	0.01	-	0.01	-	-	6.7	8.0	7.7	7.9	7.3	8.5	8.0	6.8	7.7	7.4	2%	0%
																															78%	79%

Data source: MS data submissions under the DCF 2019 Fleet Economic (MARE/A3/ASC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

5.21 Spain

Short description of the national fleet

Fleet capacity

In 2018, the Spanish fishing fleet consisted of 9 207 registered vessels, with a combined gross tonnage of 340 thousand tonnes, engine power of 8 798 thousand kW, and an average age of 32 years.

The Spanish fishing fleet has decreased significantly in number of vessels, engine power and gross tonnage over the last years in order to bring fishing capacity in balance with fishing opportunities, and to withdraw vessels on those fleet segments that for biological, economical or technical reasons are not in balance.

Over the last ten years 2018, 3 908 vessels have permanent stopped their fishing activities.

In 2018, 1 157 vessels were inactive which represents 12.56% of the Spanish fleet (looking back to 2008, the restructuring of the Spanish fleet sector is evident, notably the decrease of inactive vessels: in 2008, 25% of the Spanish fleet was inactive); almost 90% of these inactive vessels are small coastal vessels, less than 12 meters in length.

If we have a look to the number of vessels with more than 90 fishing days, which can be consider to be real professional vessels, the 64.67% of the active fleet is professional.

Fleet structure

The Spanish fleet, with 9 207 vessels registered in 2018, is one of the largest MS fleet, and the one that carries out fishing activities in more fishing zones.

More than 71% of the active Spanish fleet are vessels under 12 meters in length (with activity always on domestic waters, of Atlantic, Mediterranean, and Canary Island Waters) without any doubt the Coastal Spanish fleet is the larger in number of vessels, and the activity of this type of vessel is carried out on trips that last less than one day. 20% of the Spanish fleet are vessels with a length 12 to 24 meters, and only 9% of the vessels are over 24 meters in length.

Even though the average vessel age is 31 years old, the oldest is the SSCF under 12 meters of length using static gears (35 years old). The fleet comprised in the range of 12-24 meter vessels is 21 years, and for those vessels that are over 24 meters, the average vessel age is 18 years. From 2012, the average vessel age shows this year a change on the trend that had increased since 2012, as the Spanish economic situation is starting to recover, more inversion or replacement is been done and so, the average vessel age maintain the 31 years as in 2016.

Around 97% of the 8 295 active vessels have carried out the **fishing activity on Spanish waters** (FAO 27.VIII, 27.IX.a, 37.1, and the Canary Island waters 34.1.2), with a combined gross tonnage of 42.5% of the total of the Spanish GT, and 66.3% of the total engine power (kW).

The rest of the Spanish fleet is integrated by vessels that carry out their **fishing activities on EU waters** (103 of the active fleet, 8.74% of GT and 5.83% of the total kW); the main gear they are using are trawl nets, drift and/or fix netters, and bottom-set longline and **vessels on international fishing areas**, with a capacity of 48.7% GT and 27.79% out of the total kW, that carry out their activity under international agreement, Regional Fishery Bodies, or private licenses; these vessels are mainly demersal trawlers, tuna purse seiners, and surface longliners.

The classification presented in this report, shows distorted image for the Spanish fleet, as the activity of this fleet is complex, fishes in very different fishing grounds. Also, as the data are aggregated at a Supra region level, this report is giving for the North Atlantic area the same profitability for NAFO drift and/or fix netters, CIEM drift and/or fix netters, or for the drift and/or fix netter vessels that fish in domestic waters (including Canary islands waters) which have different target species, different fuel consumption, and therefore incomes, costs, profitability very different. So the economical results do not reflect the reality of the Spanish fleet, as the data are aggregated on big boxes and cover very different types of activities, this makes the analysis of the real economic situation very complex.

Also, it has to be taken into account that with the data uploaded to the Fleet Economic Data Call (based on 6 length section, main gears, and three supra regions) the fleet is reclassified as:

- Small-scale coastal fleet (SSCF) - includes all vessels under 12m using static gears.
- Large-scale fleet (LSF) - segment includes all vessels using towed gears, and vessels over 12 meters using static gears operating in EU fishing regions.

- And distant water fleet (DWF) - includes EU registered vessels over 24 meters operating in 'other fishing regions' including EU outermost regions.

With this definition of the fleet, 1 867 Spanish dredgers (towed gear which are under 12 meters in length) with coastal activity in Spanish waters should be classified as SSCF and instead of that, they are evaluated at the LSF group, which results as a distortion on the data analysis, the same situation is suffer by the 35 Spanish Purse Seiners with coastal activity, this situation can be seen year after year, and will not be solved until the current classification changes

The number of fishing enterprises reached 8 493 in 2018 If we look back to 2008 we can see that the small enterprises (with one vessel, and with two till five vessels) decreased, due to the decrease of the number of vessels, while the enterprises with 5 or more vessels are more stable. This trend will continue the following years, with a decrease of 200 enterprises in this year.

Employment

Total employment in the Spanish fishing fleet for 2017 was estimated at 34 326 jobs, corresponding to 29 202 FTEs, with an average wage per employee of EUR 19 709 in 2016 and an average wage per FTE of EUR 21 183 in 2016.

Effort

In 2017, the Spanish fleet spent around 1.06 million days-at-sea, (no mayor difference related to the year before), and 1.02 million fishing days (lightly increase of 1%.

The quantity of fuel consumed in 2017 was 605 million litres, which shows an increase of 4% from 2016. These increase is due to the increase in all the fleet segments, SSCF increase of 6%, LSF 5%, and DWF +3% ,

Production

The production in 2017 increase in terms of weight of landings 4%, reaching the value of 931.5 thousand tonnes, the value of landings also shows an increase of 3%.

In terms of live weight and value of landings, the main species for the Spanish fleet are: highly migratory stocks (Yellowfin Tuna, swordfish, skipjack tuna, Big eye Tuna), landed by 26 tuna purse seiners that belong to the distant water fleet and small pelagic species (European anchovy and European pilchard) which are mainly fished by purse seiners of Spanish fisheries of north Atlantic and Mediterranean Spanish waters.

It is important to pay attention to the total amount of the weight of landings, more than 50% of which is landed by the DWF, representing only 1% of the total number of vessels in the Spanish fleet

Economic results for 2017 and recent trends

National fleet performance

In 2017, the economic performance of the Spanish fleet shows an improvement over 2016. Income from landings (total value of landings) increase 1%, although value of landings decrease 3% Revenue estimated at EUR 2 019 billion, with an average revenue per vessel of 243.481

Gross Value Added (GVA), gross profit and net profit for the Spanish fleet in 2017 were estimated at EUR 1149 million, EUR 445 million and EUR 333 million, respectively. These figures show a worst profitability of the sector (ROFTA). Even though the income increase, total operational costs increase (4%), energy costs (+8%), other non-variable cost (+14%) and personal cost (+13%). The unpaid labour breaks the trend of the last years, and shows an increase of 15% on 2017 .

The Value of fiscal capital was estimated at 445 million, 2% less that the year before (and investments reach EUR 55 million in 2017,

However, if the period 2008-2017 is analysed, several facts can be checked. First of all, the investments data has a high variability and no clear trend; second the value on investment on 2016 does not seem to be realistic, as the information on the last four years (2014, 2015, 2016, and 2017 EUR 33.6 million, EUR 65 million, EUR 31 million, EUR 55 million) shows a variability that has to be analyse with care

Resource productivity and efficiency indicators

The gross profit margin in 2017 was 22%, showing a decrease (15%) on profitability for 2017. On the same way, net profit margin was estimated on 16% (-15%), this is mainly due to a decrease of the net profit (-13%), as the total operational costs increase 4%, while the income of landings shows an increase of 1%. Labour productivity (GVA/FTE) keeps the upward trend started on 2016 tie and is estimated on EUR 39 thousand (6% higher than the year before). Fuel intensity (litter/tonne) keeps the values of 2016, 0.65 thousand litres per tonne

Performance by fishing activity

The Spanish fleet is highly diversified, not only on the number of catches species, but also on the gears and fishing areas. This diversity can be seen on the high number of segments that make it up, 60 fleet segments.

The SSCF represents 48% of the total fleet (3 961active vessels in 2017), while 50% of the fleet (4 136 active vessels) belong to the large-scale fleet, and the remaining 2.4% are covered by the distant water fleet (198 active vessels).

Even though almost have of the Spanish fleet belongs to the SSCF segment, The live weight of landings, are higher for the vessels that belonging to the LSF segment (46%) and DWF (50%), than for the SSCF and the incomes from landings follow the same trend, LSF segment (49%), DWF (45%) and SSCF (6%).

A common fact must be highlighted for all the segments and for the total fleet collectively: the increase of the energy costs, showing the same behaviour for all the segments and for the national total.

Small-scale coastal fleet

On 2017, 3 961 vessels were covered by the fishing activity "small-scale coastal fleet" in accordance with the European definition. However, this classification differs from the Spanish classification that includes on this fishing activity the mobile gears of 12 meters (DTS, DRB, and PS). This type of vessels is covered under the EU classification on the activity "Large-scale Fleet", so the result is that the information that emanates from this report will show some distorted data with the reality of the Spanish small and the large-scale fleet. However, the analysis of this fleet is carried out according to the European definition, but using as the beginning of the period of reference 2011 (first year in which the Spanish classification included mobile gears belong 12 meters on the Large-scale fleet).

Economic data need to be treated with caution, as almost 50% of this fleet carried out their activity on partial time (less than 90 days/year).

In 2017, related to the average 2011-2016, the decrease on the number of vessel reaches the 5.1%, and the power related to the same period decrease 2.6%;

This segment has suffered an increase on total employed (9 %) and FTE keeps stable compared to 2016; probably due to the mild recovery of the Spanish economy. This fleet generated 9 664 jobs (28% of the total jobs generated for fisheries), this figure must be carefully studied, as explained before, 1 921 vessels (and so the employment of this "segment" is included on the LSF even though the economic activity is more similar to the SSCF.

On the SSCF it has to be taking into account that of the total jobs generated (9 664), more than 40% are unpaid labour.

During 2017, the number of days-at-sea decrease compared to 2016 (8%) the same decrease took place for the fishing days, the average fleet activity in 2017 reaches a value of 97 days-at-sea/ vessel.

Life Weight of landings decrease 3% if we compare the landings catches on 2016, on the other hand we can also see an increase referred to the period 2011-2016 (10.7%).Value of landings for SCF decrease with respect to 2016, 2% while the income from landings increase 2%, if we analysis the period 2011-2016, value of landings increases 19% and income from landings increase 16%

Wages and salaries of crew increase with EUR 7 million more in 2017, also increase the total employed of this fleet.

In terms of GVA, this is a segment economically profitable, EUR 121 million, even though due to the increase on wages and salaries, both gross profit and net profit decrease compared to 2016, but still shows a profitable behaviour

The labour productivity as GVA grows on higher figures than FTE, productivity increase, leading to the same benefits with less FTE, keeping the growing trend that started on 2012.

Large-scale fleet

In 2017, 4 136 vessels were included on the "Large-scale fleet" segment; according to the European definition (1867 DRB vessels are included in this fishing activity). The number of vessels, and the power of the LSF has increase while the vessel tonnage decrease.

With an increase of 3% on the number of vessels, the number of days-at-sea also increased 3%, the incomes have the same figures as 2016, as the weight of landings, and the value of landings are also showing an increase in 2017.

An increase on salaries and decrease on total employment compared to 2016, probably due to the professionalization of this fleet, with less people employed but with better salaries. This added to the decrease on the other costs leads to that even though the energy costs have been increased (9%), the result is a GVA positive, contributing to the total national GVA on 56% (EUR 641.1 million). This higher contribution to the national GVA is due to several issues, one is the balance achieve by the Spanish fleet that carry out their fishing activities on EU waters and also due to the decrease of the GVA on the DWF segment.

The energy consumption has increased, this segment is profitable, with an increase on the gross profit margin (21%) and an increase on the labour productivity of 2%, Due to a higher value of landings in 2017.

Distant water fleet

In 2017, 198 vessels were included on the "distant water fleet" less than 2.5% of the total Spanish fleet, but with a contribution to the total weight of landings in more than 50%, almost half of the incomes, and a high participation on the National Gross Value Added (34%) , for 2017 the contribution to the national GVA is more than the year before.

The days-at-sea, have been reduced 3% referred to 2016, and 16% referred to the averaged period 2008-2016. The fishing days have also been reduced (2%), and so the number of fishing trips shows a decrease (17%).

In terms of landings, the live weight of landings and the income from landings have been more than 2016, 2% and 5% respectively. However, the value of landings decreased 8% compared to 2016.

In terms of costs, energy costs breaks the trend seen over the last period, with an increase of 9%.

The economic performance shows an improvement with better indicators for Gross and net profit (+17%, and +17%), and Gross Value Added (+19%)

Outermost regions (Canarias)

The Spanish outermost region, Canary Islands (FAO 34.1.2) has a fleet with the following main characteristics: the number of vessels reaches 742 vessels, 590 of them were active during 2017 is the oldest Spanish fleet, with an average vessel age of 35 years; mainly small size of vessels, 561 vessels are below 12 meters in length, 62.5% of the active vessels carried out their fishing activity less than 90 days/year, these vessels carry out the polyvalent fishing activity (polyvalent gears, for more than one specie as target).

This fleet is not quota species dependent, and do not fish high risk species, in terms of stock status.

Only 4.8% of the total Canary Island active fleet carry out the fishing activity outside Canary Waters. These vessels are demersal trawlers and tuna hooks that fish on COPACE waters, under different agreements, and drifting longliner.

The income of this fleet has been EUR 51 million, as the GVA has positive values; this fleet is profitable, GVA EUR 36 million.

The main problem for this fleet is the inactivity; fisheries are partial time and complementary activity. 18.4% of the Canary Island fleet is inactive so a plan for this fleet is being carried out.

Performance results of selected fleet segments

Purse seiners over 40m (Distant Water Fleet)

26 active vessels (freezer tuna seiners), (13.1% of the total DWF), the total weight of landing of this segments reaches the 470.4 thousands of tonnes, that represents 51% of the total weight of landings of the DWF, 52.6% of revenue and 59.5% of GVA of DWF.

This segment that had an income of EUR 452 million, GVA of EUR 231 million and EUR108 million in net profit GVA to revenue (51%), Gross profit margin (33.2%), net profit margin (23.8%) shows better results than in 2016

The economic development of this fleet segment has improved, probably due to the fact that the live weight of landing has increased, and even more increase can be seen on the value of landings, probably due to the species

Drifting longliners fleet

As the Spanish drifting longlines fleet is so particular, the Spanish authorities consider that the information of this fleet should be split from the information of the rest of the hooks, and so decided to add geo indicator LLD to the gear HKO, in order to have the information of this fleet apart from the rest of the hokes.

The management of this fishery is carried out by national regulation that covers the drifting longline fleet for highly migratory species (mainly swordfish, tunas and pelagic sharks). A unified census of drifting longline is developed. In this census the right to carry out the fishing activity is set down, for each vessel and fishery area, also the percentage of quota for those areas subject to TACs (South and North Atlantic swordfish) for each of the 7 areas in which this fishery is split:

Zone 1: Mediterranean

Zone 2: waters covered by the sovereignty or jurisdiction of Spain till 80 miles on Atlantic

Zone 3: Waters of the Atlantic Ocean north of latitude 5° N and outside sovereignty or jurisdiction of Spain till 80 miles of base lines.

Zone 4: Waters of the Atlantic Ocean south of latitude 5° N.

Zone 5: Waters of the Indian Ocean (IOTC)

Zone 6: Waters of the Pacific Ocean (IATTC)

Zone 7: Western & Central Pacific Ocean (WCPFC)

1. Drifting longlines (Large-scale Fleet)

105 vessels are part of this subgroup (64 of the Mediterranean, 41 North Atlantic), with a GVA of EUR 33 million, 54.5% of this amount belongs to Surface LL North Atlantic 24-40m (EUR 17.4 million) the same can be seen with Gross profit (EUR 12 million) where half of it belongs to Surface LL North Atlantic 24-40m, and with Net profit (EUR 9.5 million) where EUR 5.2 million belongs to Surface LL North Atlantic 24-40m.

The results of the performance indicators in 2017 for the fleet segments that take part of this drifting longlines (LSF) are:

North Atlantic 24-40 GVA to revenue (51%) and gross and net profit margins 19.7% and 15.3%, the performance has improved, and this fleet segment is profitable.

North Atlantic 18-24 GVA to revenue (71.6%) and gross and net profit margins 34.8% and 33.6%, the performance has improved, and this fleet segment is profitable.

For the Mediterranean we have two fleet segments, the segment 12-18 has the following behaviour: GVA to revenue (54.6%) and gross and net profit margins 14% and 8,8%, the performance is worse than the year before, although this fleet segment is profitable; the segment 18-24 GVA to revenue (63.4%) and gross net profit margins 18.3% and 11.4%, the performance has improved, and this fleet segment is profitable

2. Drifting longlines (distant water fleet)

87 active vessels are part of this subgroup (62 vessels 24-40m, and 25 over 40m) represent 44% of the total DWF, but only 13% of the total weight of landings, 17% of revenue and 14% of GVA of the DWF, with a GVA of EUR 55.1 million, net profit of EUR 19 million, the labour productivity reaches 35 thousand EUR per FTE.

The results of the performance indicators in 2017 were: GVA to revenue (37.7%) and gross and net profit margins 17.2% and 13.1%, so this fleet segment is profitable.

If we split the two lengths that are part of this group (24-40 and over 40), the one with the largest number of vessels, people employed, and incomes is 24-40, the net profit is higher on this length

(EUR 10.3 million). We can appreciate that even though both are profitable, the economic development trend of the subgroup 24-40 has worse behaviour as while the behaviour of the subgroup over 40 shows better economic results

Drivers affecting the economic performance trends

Markets and Trade

During 2017, the Spanish DWF fleet has continued under by fisheries agreements with Third Countries

Whit the Morocco agreement, 59 vessels had licence on 2017, under the different parts of the agreement, three species are especially important for the Spanish fleet: *Engraulis encrasicolus*, *Pagellus bogaraveo* and *Lepidopus caudatus*.

The main agreements of the Spanish fleet with third countries are Mauritania, Cape Verde, Guinea Bissau, Côte d'Ivoire, São Tomé and Príncipe, Gabon, Mozambique, Comoros Islands, Madagascar, Seychelles, Kiribati and Mauritius islands. These agreements have allowed 99 vessels of the Spanish fleet to carry out their fishing activities on many different places, and for different target species.

In 2017, 1 777 329 tonnes of fishery products were imported into Spain (1 707 303 tonnes in 2018). The main origins of these products (69%) were: Morocco, China, Ecuador, Argentina Peru and Chile

In the EU framework, the main countries of origin of the imports were: Portugal, France, the Netherlands, United Kingdom, Italy and Sweden.

On the other hand, the exports of Spanish products reached the total of (1 186 996 tonnes in 2017 (1 157 485 tonnes, in 2018), with a value of EUR 4 124,1 million 2017 (EUR4 223 million in 2018), the main Spanish destination of the products was the EU market (61%). Italy, Portugal and France were the main EU destinations, while for third countries; the main destinations were Ecuador, Egypt, and Morocco.

The main fishery product exported was the Tuna Frozen, and the canned Tuna

Management instruments, Regulation Policy

The Spanish fleet is managed through several management tools, such as fishing license, engine power limited, time at sea, TACs and quotas related to the area and fishing stock. Under national regulations there are managements plans set down; each plan covers species, gears allowed for the fisheries, additional prohibited days, and technical requirements (such as power, Vessel tonnage, length). In several cases the management or recovery plans have also a reduction objective that is funded by the European Maritime and Fisheries Fund (EMFF).

As an example, on 2017 there were (among others) management plans for Mediterranean affecting trawls.

The recovery plan for Mediterranean swordfish (SWO) that started in 2017, introduced a Total Allowable Catch (with gradually reduction over the years), control measures as the increase of the minimum size to protect juveniles are also included on this plan, this plan will affect the longliner fleet, that catch SWO on the Mediterranean waters.

Landing obligation: the number of fleets that are under the landing obligation Regulation has increased in 2017, Spain is making big efforts in order to full comply with the regulation. The big challenge for the following years will definitely be meet the problematic of the choke species, practical solutions will have to be found, in order to avoid that the Spanish fleet stop the activities due to the lack of quota for some species.

TACs and quotas, Status of Key stocks

As it has defined previously, the Spanish fleet operates in almost all fishing grounds, under agreements with Third Countries (Sustainable Fisheries Partnership Agreements, SFPAS), under the umbrella of Regional Fisheries Management Organizations (RFMOS), and of course in community and national waters.

Each of the above mentioned fishing grounds have a specific importance. On one hand, the fleet operating far distance, it’s a very well developed fleet, with important technical investment, able to seek for new fishing grounds and able to incorporate new technologies that help to a more sustainable activity. Also, the collaboration with Third Countries offers a payback in terms of employment, training, etc. to

the Third Country, aside to the specific contribution to the development that the EU implies in every agreement.

In the case of RFMOS, the fishing possibilities (and allowed fishing effort) are negotiated by the EU in the framework of each organization, **having had the advice of the relevant scientific advisory body**. This is the case of NAFO, NEAFC, ICCAT, GFCM, IOTC, CIAT, CCSBT, CCAMLR and WCPFC. As for the SFPA, the harvest activity is limited to the surplus in the specific area, which is **also under scientific revision, according to the provisions of each agreement signed**.

The fleet operating in the nearest fishing grounds is the major in terms of number, and also in terms of direct impact on coastal populations. We may differentiate the fleet that operates in the Atlantic fishing grounds and within the domestic waters which is the biggest in terms of number (accounting the small-scale fisheries, including those vessels of less than 12 meters-trawlers and dredges of this length included[22]). The small-scale fleet is less prepared to face a sudden change, depending mainly on the activity performed targeting the species that traditionally meant their most important catches. As social data shows, educational level, paid work and the rest of main indicators lead us to conclude that they are in a more weak position, and therefore, efforts should be driven to achieve the goal of social sustainability as it is expressed in the EU Regulation 1380/2013[23], on the Common Fisheries Policy.

Regarding the fishing possibilities, in a wide generalization, we have the Mediterranean with no quota itself (but, as it was previously expressed, given the delicate situation of most important fishing stocks, with a number of measures driven to recovery the stock status, such as effort limitation, closure areas or size limit.

In the case of the Atlantic, the fishing possibilities are set according to the scientific recommendations made by the International Council for the Exploration of the Seas (ICES), and subject to negotiations during the December Council of Ministers that conclude with the adoption of the fishing possibilities for the following year (the "TAC and quota regulation").

Precisely due to the importance of this Regulation, the procedure to its adoption and the social impact of the quota in the fleet, more in depth revision is paid in this report.

Status of Key stocks

As it has already been presented and for the sake of clarity and efficiency, it will be reviewed under this chapter the status of the most important stocks in terms of its impact in the fleet.

Spain, as all MMSS, totally shares the need of achieving the maximum sustainable yield (MSY) for all stocks that aren't currently in this biological situation, making ours the commitment to achieve it. But it cannot be forgotten that sustainability has also another pillar; socio-economic sustainability.

The adequate standard of living for the fisheries sector is therefore, one of the main goals to prosecute. The CFP itself, requests for the collection of data to facilitate the adoption of the best management measures. Although the fisheries sector does not contribute in a significant percentage to the economic macro magnitudes, it is essential in some small-scale economies, determining the survival of small and medium populations along the coast.

The gradual elimination of discards is another of the main objectives of the Common Fisheries Policy. In particular, it must be remembered that the text itself establishes that such gradual elimination must meet the circumstances of each case and always with the best available scientific advice. Mention is made regarding the conditions that make this implementation economically viable for the transformation and fisheries catching sector.

As data shown in previous chapters point, the fleet in a weaker condition are those of small-scale, with small chances of adapting to a changing environment.

For this reason, one of the main milestones was the situation of **anchovy in the Gulf of Cádiz**. For 2018, ICES wasn't able to propose a recommendation due to lack of data on the distribution of biomass and catches. There were no clear trends on this stock, and its biomass is very variable as it is a small pelagic that reaches sexual maturity and is incorporated into the fishery in one year. After the good biomass indicator of the previous recommendation, in the case of the South part of the stock there is a

[22] For the sake of coherence, it is mentioned that this is not the definition included under the arrangements to build the data call whose data are explained in this report.

[23] Regulation (EU) No 1380/2013 of the European Parliament and of the Council of 11 December 2013 on the Common Fisheries Policy, amending Council Regulations (EC) No 1954/2003 and (EC) No 1224/2009 and repealing Council Regulations (EC) No 2371/2002 and (EC) No 639/2004 and Council Decision 2004/585/EC

significant fall, contrary to what occurs in the northern part of the stock with an increase in biomass. The situation of this stock is key to the small-scale fleet operating in the Gulf of Cádiz, mainly purse seiners, due to its economic and social significance for the fleets that exploit it. More than 65% of the catches especially of the fleet of the Gulf of Cádiz correspond to these species. The adjustment effort made by this fleet has already been considerable, and it will possibly be duplicated by the measures to be taken in relation to the Iberian sardine.

As for the **Southern hake**, one of the most important species in terms of value, social appreciation and impact on specific fleet segments, ICES Advice for 2018 showed a clear recovery of biomass, a decrease in fishing mortality and a catch recommendation that was the highest in recent years. Taking into account the biological situation, with a significant increase in spawning biomass in the last five years, the reduction of fishing mortality by 23% in the last three years and the socio-economic importance of the stock. For all of this, it was necessary to seek for a balance that supports the permanence in the coastal zones by means of the maintenance of the activity and the employment, avoiding its disappearance. the dependence of this stock for many fleets is very high, conditioning an important part of their income, in addition to a product with a high demand. This dependency is concentrated on small fleet and Spanish ports where fishing activity is the main engine of the economy.

More than 6OO vessels have this species as one of the main species in its catch composition. They employ around 5,000 crew members (to which auxiliary companies are added). One day and fresh trips, with great links to traditional coastal populations and highly dependent on fishing. A very significant part meets the definition of "artisanal coastal fishing" (less than 12 meters) and they work with smaller gear

With regard to the **horse mackerel in area IXa**, ICES advice showed a stock in good conditions (both in the situation of biomass and in fishing pressure), with recruits within the average of recent years, thus avoiding the possibility of overfishing in the future. This is a species of great relevance in the Spanish coastal fleet and of special dependence for the purse seine fleet of Galicia. Fundamental stock for 100 small boats that work for fresh products and in daily trips. Approximately 1,000 crew on board, of coastal populations highly dependent on fishing. Low average price, but with great economic impact due to the volume of catches, around 15 million euros per year.

Operational costs (external factors)

The energy costs breaks the downtrend that started on 2012, mainly due to the increase of the energy costs of the DWF segment.

As the year previsions the wages and salaries, represents the most important issue of the operational costs (44.7% in 2017), the trend is maintained, as this item has been the most important operational cost during the last years.

The Investments carried out by the Spanish fleet in order not only to adapt the vessels to the regulations, but also to meet private certification requirements that are being demanded by the consumers, like the standard UNE which promotes a responsible extractive activity of tropical tunas worldwide.

Innovation and Development

In the field of technological development and innovation in the Spanish fishing sector, new projects are being developed with a specific target, women in fisheries, the association ANMUPESCA, developed many actions in order to help the society to have a better knowledge of the women activities in fisheries, more visibility, and specific women-oriented projects in order to integrate the local fisheries activities.

Spain has adopted the so-called Strategic Plan for Innovation and Technological Development in Fisheries and Aquaculture, covering the period from 2014 to 2020. Its main objective is to increase the competitiveness of Spanish fisheries and aquaculture sectors through innovation and technological development, optimizing resources in the context of the European Union and considering economic, social, and environmental and health requirements.

As regards fishing technologies, priorities and specific strategic objectives were established, highlighting priority. Among all of them, the following:

Innovation in more selective gear, in order to avoid non-target catches, reducing the environmental impact of fishing, capture reduction of sensitive species and by catch, promotion of energy audits, to promote energy savings, design of energy efficient fishing gear, automation of fishing practices, adaptation of fuel cells for marine use (fuel cells are an energy alternative that should be raised in the medium term).

Complementarily, it has been established other priorities in the field of marine resources:

Quantification of socioeconomic exploitation of fisheries and integration in all studies on the state of resources and exploitation models, conservation of marine and coastal ecosystems, study of profitability of the fleet, genetic characterization of biodiversity, determination of the impact of aquaculture on the marine environment, recovery of discards and new species.

Socioeconomic impact

The entry in force of several agreements that have the main objective of improve the labour conditions of the fishers could be one of the challenge for the following years, better conditions is a must if the Spanish fleet wants to maintain the fishery activities, as a lack of professionals is increasing, on the other hand more space for the fishers may led to less room for storage, as the EU regulation stablish limits on capacity, so may the improve on the labour conditions predetermine less incomes for the vessels, and so the profitability could be worse.

Landing obligation, is without any doubt another point to consider, as the consequences are not clear yet, the choke species could end the vessel activity, for the north Spanish fleet anglerfish, and cod are choke species, as the quota may not be enough.

Nowcasts for 2018-19 and outlook

Preliminary results for 2018 suggest that the structural policy carried out to reduce the number of vessel will continue, not only on number of vessels but also in tonnage and power. Of the total 9 207 vessels, 8 050 were active during 2018. Most of the inactive vessels (more than 90% of them) were below 12 meters of length.

Model forecast

Preliminary results for 2017 forecast a 7% increase in landed weight, matched with a 5% increase in landed value. Projections suggest operating costs decrease, even if energy costs are estimated to increase by 5% due an increase in fuel prices. A reduction of capital costs is also estimated. This will lead to a slight increase in the economic performance compared to 2016: GVA (+2%), gross profit (+4%) and net profit (+8%).

Results indicate that the Spanish fleet operated at a profit in 2017: with an estimated net profit of EUR 414 million and margin of 21%. Positive economic developments can also be seen in performance indicators GVA to revenue (+3%), gross profit margin (+3%) and GVA per FTE, estimated at EUR 38 thousand in 2017 (+3%).

The 2017 gains are expected to continue in 2018 as increased landings (+4% compared to projected 2017 figures) are matched by a 9% increase in value. The 16% increase in energy costs due to expected higher fuel prices and fishing effort (days-at-sea, +3%) in 2018, is counteracted by low capital costs. The fleet remains profitable with gross and net profit margins of 25% and 22%, respectively.

Data issues

The economic data collection on the Spanish fleet is carried out by statistical sampling; such sampling does not differentiate the fleet according to the days of activity, so the sampling can include vessels with few days of activity. When these results are raised for the total of the fleet segment, the profitability of the segment can be influenced, obtaining worse results than the reality and vice versa.

In order to clarify the information for the drifting longliners fleet, and to avoid misunderstandings on the data when the regional information is developed in this report, Spain assigned the gear PGO only for the drifting longlines fleet, but during this year a big effort has been done to adapt the gear to HOK with the additional information LLD, this will clarify the data when the European fleet is analyse together, and so for the regional chapter will be clear the gear used by the Spanish drifting longliners fleet.

Table 5.61 Spain: National fleet statistics and economic performance results. Nowcast figures for 2018 and 2019

		2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Trend 2008-2018	Δ 2017 to 2016	Δ 2017 to avg. 08-16
Capacity	Number of vessels	13,115	11,501	11,209	10,900	10,544	10,167	9,921	9,686	9,459	9,356	9,207	9,126		-1%	-13%
	Total vessel power	1,067,855	1,027,254	983,232	937,699	903,647	873,921	866,971	842,051	802,761	799,669	798,335			0%	-13%
	Total vessel tonnage	470,082	459,465	439,722	415,372	400,141	384,924	379,438	366,710	343,929	341,041	340,827			-1%	-16%
Employment	Engaged crew	36,765	38,045	39,281	35,808	34,399	33,129	33,121	32,059	31,597	34,326	33,507	33,139		9%	-2%
	Unpaid labour										7,693					
	FTE national	34,921	35,844	33,678	33,210	30,302	28,782	28,629	30,015	29,399	29,203	27,756	28,529		-1%	-8%
	Total hours worked per year (engaged crew)										52,564,761					
Effort	Days at sea	1,105,029	1,122,326	1,208,861	1,150,705	1,149,129	1,096,886	1,117,674	1,077,994	1,083,308	1,066,740	667,946	686,204		-2%	-5%
	Fishing days	1,049,896	1,067,960	1,153,598	1,100,043	1,102,337	1,048,982	1,073,399	1,030,824	1,037,763	1,023,757				-1%	-5%
	kW fishing days	176,124,191	172,208,614	170,149,479	161,896,598	157,667,801	149,454,347	148,013,343	147,564,464	143,041,294	141,572,860				-1%	-11%
	GT fishing days	92,396,319	89,150,922	87,962,490	83,876,994	81,769,669	76,676,975	74,607,904	74,520,694	71,744,985	70,899,448				-1%	-13%
	Number of fishing trips	860,639	886,365	978,434	963,725	941,013	890,114	900,364	865,621	903,939	891,246				-1%	-2%
	Energy consumption	674,937,960	745,928,654	719,203,280	653,349,897	683,289,510	695,422,570	641,073,507	709,342,103	582,200,734	605,762,769	579,084,444	594,927,647		4%	-11%
Landings	Live weight of landings	775,940,922	798,858,992	873,435,274	860,991,968	871,084,971	898,143,324	932,722,422	922,185,171	897,693,158	931,497,053	905,945,572	929,677,368		4%	7%
	Value of landings	1,864,446,066	1,906,997,410	1,885,024,147	1,861,621,673	1,942,447,699	1,970,012,986	2,074,754,479	1,861,056,784	2,086,120,077	2,032,765,016	1,876,645,163	1,973,061,077		-3%	5%
Income	Gross value of landings	1,526,328,942	1,988,155,436	1,868,123,457	2,036,002,846	1,920,883,919	1,884,725,826	1,997,623,802	1,952,188,164	1,968,105,272	1,993,466,911	1,864,931,535	1,980,502,424		1%	5%
	Other income	-	-	16,754,696	45,457,430	119,243	12,739,610	23,278,937	24,331,974	17,999,300	26,207,847	25,156,037	25,078,495		46%	68%
	Operating subsidies	60,885,141	68,108,308	34,629,079	30,863,492	22,818,130	11,418,950	12,257,548	13,924,337	4,757,133	7,414,331				56%	-74%
	Income from leasing out quota	- 1.08	- 1.08	587,065	94,829	846,064	6,581,997	14,261,817	6,676,751	1,547,103	5,805,127				275%	71%
Expenditure	Personnel costs	460,129,048	649,257,753	554,914,495	548,464,490	493,798,511	486,216,046	513,954,415	536,523,219	545,145,857	615,276,899	564,083,540	622,434,381		13%	16%
	Value of unpaid labour	89,790,798	149,175,450	116,777,669	102,856,173	87,256,405	107,123,292	100,831,991	78,629,088	77,621,918	89,399,495	86,528,208	89,714,846		15%	-12%
	Energy costs	411,232,346	375,697,923	378,035,919	448,382,052	441,033,190	409,318,833	345,735,888	300,724,163	215,156,755	233,152,834	239,311,977	246,452,986		8%	-37%
	Repair & maintenance costs	118,007,226	153,287,277	141,486,518	163,611,937	122,180,955	127,657,351	120,988,552	137,082,562	143,547,367	127,946,060	125,887,303	125,388,199		-11%	-6%
	Other variable costs	303,800,569	405,491,573	384,772,069	423,854,537	341,165,059	362,456,198	367,630,821	433,689,068	425,346,953	378,295,555	365,377,811	372,266,984		-11%	-1%
	Other non-variable costs	107,443,831	169,257,573	130,687,766	134,930,936	133,421,645	119,021,716	126,917,011	134,608,975	114,203,796	130,539,222	129,063,983	128,427,702		14%	0%
	Consumption of fixed capital	188,817,183	219,001,223	140,833,257	134,824,843	126,815,001	104,073,304	97,843,594	125,862,524	72,952,684	113,962,185	113,443,170	112,844,585		56%	-15%
	Lease/rental payments for quota	- 1.08	- 1.08	8,674,696	7,704,773	9,734,045	11,666,374	13,836,401	16,160,796	7,659,830	10,622,445				39%	27%
Indicator	Opportunity cost of capital	2,538,535	35,917,783	14,819,580	12,105,473	17,456,631	15,090,331	14,355,353	11,754,644	7,719,760	- 1,923,370	- 1,218,472	479,674		-125%	-113%
	Gross Value Added	585,844,969	884,421,090	849,895,881	910,680,814	883,202,313	879,011,339	1,059,630,468	970,415,370	1,087,849,701	1,149,741,087	1,030,446,498	1,133,045,048		6%	28%
	Net Value Added	394,489,252	629,502,085	694,243,044	763,750,497	738,930,682	759,847,704	947,431,520	832,798,202	1,007,177,256	1,037,702,272	918,221,801	1,019,720,789		3%	38%
	Gross profit	35,925,123	85,987,887	178,203,717	259,360,151	302,147,397	285,672,002	444,844,062	355,263,063	465,081,926	445,064,693	379,834,751	420,895,822		-4%	66%
	Net profit	- 155,430,595	- 168,931,119	22,550,880	112,429,835	157,875,765	166,508,367	332,645,114	217,645,895	384,409,481	333,025,878	267,610,053	307,571,563		-13%	180%
	Net profit subsidised	- 94,545,454	- 100,822,811	57,179,958	143,293,327	180,693,895	177,927,317	344,902,663	231,570,231	389,166,614	340,440,210	267,610,053			-13%	130%
	Net profit rights	- 94,545,454	- 100,822,811	49,092,328	135,683,383	171,805,914	172,842,939	345,328,079	222,086,186	383,053,888	335,622,892	267,610,053			-12%	135%
Capital	Value of physical capital	978,746,136	857,558,547	671,820,958	533,365,084	518,133,042	500,545,301	490,638,439	501,464,197	455,420,166	445,872,069	442,566,587	440,864,195		-2%	-27%
	Value of quota and other fishing rig	- 1.08	- 1.08	71,490,122	64,515,459	56,238,092	114,456,178	221,541,513	197,786,620	124,300,513	137,368,293				11%	45%
	Investments	105,114,236	29,220,103	47,180,826	34,185,718	23,055,726	87,057,719	33,641,252	65,418,417	30,878,114	55,484,462	33,698,765	33,325,146		80%	10%
	Total assets										567,419,662	259,825,645	257,189,676			
	Long/short debt										189,856,781					
	Subsidies on investments										3,994,966	2,026,349	2,007,233			

Data source: MS data submissions under the DCF 2019 Fleet Economic (MARE/A3/ASC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

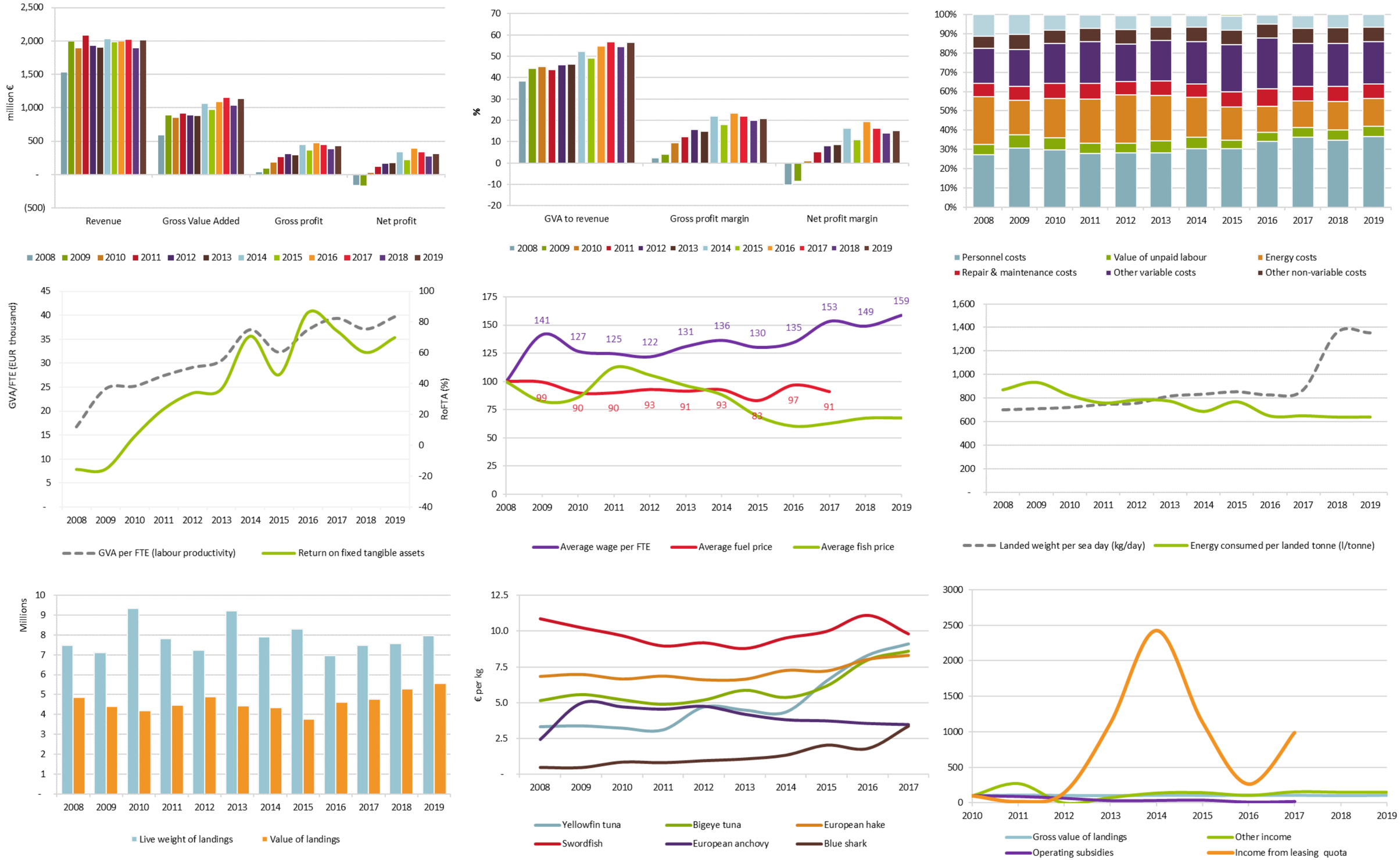


Figure 5.21 Spain: Main trends in economic performance indicators (absolute value, panel 1a/top left and relative value, (panel 1b/top middle); cost structure (panel 1c, top right); productivity (panel 2a); key input/outputs (panel 2b); efficiency (panel 2c); landings (panel 3a); average price (EUR /kg) of top species (panel 3b) and income (panel 3c). Nowcast figures for 2018 and 2019

Data source: MS data submissions under the DCF 2019 Fleet Economic (MARE/A3/ASC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Table 5.62 Spain: National fleet statistics and economic performance results by fleet segment, 2017

	Number of vessels	FTE national	Days at sea	Energy consumed per landed tonne	Live weight of landings	Value of landings	Revenue	Gross Value Added	GVA to revenue	Gross profit	Gross profit margin	Net profit	Net profit margin	Average wage per FTE	GVA per FTE (labour productivity)	Return on fixed tangible assets	Profitability (2017)	Net profit margin %Δ 2017 - average (2008-16)	Economic development trend	As a % of total revenue
ESP OFR PS 40XX NGI	26	1,591	7,818	506	238,587,626	466,073,428	451,813,186	230,531,787	51.0	150,156,655	33.23	107,625,489	23.82	50,518	144,895	100.4	High	94%	Improved	22%
ESP OFR DTS40XX NGI	33	1,381	9,252	449	134,893,048	196,731,315	160,631,367	73,127,957	45.5	36,132,256	22.49	27,751,711	17.28	26,797	52,968	198.1	Reasonable	177%	Improved	8%
ESP NAO DTS2440 NGI	108	1,369	27,780	1,215	69,228,301	136,076,790	154,024,744	86,964,388	56.5	33,139,328	21.52	27,457,420	17.83	39,321	63,530	73.6	Reasonable	61618%	Improved	8%
ESP NAO PGP2440 NGI*	55	1,110	15,725	785	26,784,084	108,731,604	117,414,025	71,295,672	60.7	19,277,748	16.42	14,635,920	12.47	46,869	64,239	92.4	Reasonable	-15%	Deteriorated	6%
ESP OFR HOK2440 LLD*	62	1,070	19,435	828	43,560,999	108,329,206	92,764,876	33,775,301	36.4	14,039,304	15.13	10,303,385	11.11	18,452	31,578	62.7	Reasonable	-23%	Deteriorated	5%
ESP MBS DTS1824 NGI	303	1,405	60,848	2,835	13,678,093	91,048,126	84,700,915	47,451,681	56.0	15,275,076	18.03	9,210,942	10.87	22,907	33,782	38.9	Reasonable	474%	Improved	4%
ESP NAO PS 2440 NGI	81	1,439	14,921	283	51,290,552	78,720,316	83,014,059	61,398,602	74.0	20,075,128	24.18	17,983,046	21.66	28,715	42,665	82.5	High	190%	Improved	4%
ESP OFR DTS2440 NGI	41	1,195	11,456	1,399	23,170,595	89,431,229	80,012,298	18,052,972	22.6	1,612,760	2.02	187,825	0.23	13,754	15,103	0.8	Weak	-95%	Deteriorated	4%
ESP NAO DTS40XX NGI	13	391	3,165	532	34,169,352	84,879,453	79,156,427	55,827,721	70.5	31,914,052	40.32	24,591,079	31.07	61,169	142,803	306.3	High			4%
ESP NAO PMP0010 NGI	1,954	3,066	184,709	729	10,377,981	49,418,973	64,997,354	48,683,208	74.9	7,457,649	11.47	5,832,911	8.97	13,446	15,878	41.5	Weak			3%
ESP OFR HOK40XX LLD*	25	493	7,692	1,098	17,423,073	48,958,079	53,447,953	21,345,968	39.9	11,113,941	20.79	8,795,657	16.46	20,763	43,315	65.5	Reasonable	18%	Improved	3%
ESP MBS DTS2440 NGI	132	720	26,453	4,764	5,371,826	45,527,053	44,521,399	24,314,709	54.6	6,441,885	14.47	2,393,962	5.38	24,811	33,753	15.8	Weak	185%	Improved	2%
ESP NAO PS 1824 NGI	101	1,000	17,749	174	59,317,915	47,308,535	42,729,755	30,334,912	71.0	8,540,382	19.99	5,591,218	13.09	21,797	30,338	48.2	Reasonable	294%	Improved	2%
ESP NAO DRB0010 NGI	1,814	1,820	205,299	802	4,800,624	35,761,060	40,269,954	33,380,140	82.9	825,215	2.05	624,940	1.55	17,884	18,337	12.7	Weak	167%	Improved	2%
ESP MBS PMP0612 NGI	913	1,208	94,065	1,515	4,386,828	28,656,909	39,550,185	29,030,472	73.4	2,907,717	7.35	1,190,876	3.01	21,630	24,037	15.3	Weak	10%	Improved	2%
ESP NAO HOK2440 LLD*	30	408	9,105	769	19,035,188	50,861,575	34,209,464	17,406,547	50.9	6,744,523	19.72	5,244,108	15.33	26,130	42,660	54.3	Reasonable	41%	Improved	2%
ESP NAO PS 1218 NGI	112	825	15,457	155	32,647,951	24,637,754	30,321,783	22,060,834	72.8	6,901,190	22.76	5,432,337	17.92	18,366	26,727	85.4	Reasonable	54%	Improved	2%
ESP MBS PS 1824 NGI	88	802	19,974	187	26,281,267	38,328,044	28,318,345	19,654,360	69.4	3,918,426	13.84	2,915,071	10.29	19,610	24,494	43.0	Reasonable	59%	Improved	1%
ESP NAO DTS1824 NGI	75	386	13,631	2,326	5,869,205	20,890,523	25,570,397	11,988,065	46.9	4,102,752	16.04	3,300,464	12.91	20,447	31,085	81.4	Reasonable	416%	Improved	1%
ESP NAO PMP0010 IC	465	726	33,938	837	3,396,101	9,581,417	24,324,873	19,432,657	79.9	285,442	1.17	-84,254	-0.35	26,383	26,776	-4.5	Weak			1%
ESP MBS DTS1218 NGI	147	438	27,614	2,073	4,288,142	23,563,891	24,307,923	14,052,328	57.8	5,302,286	21.81	4,070,923	16.75	19,969	32,070	64.1	Reasonable	1105%	Improved	1%
ESP NAO DFN1218 NGI	139	592	23,597	1,008	5,191,232	16,585,109	22,535,850	15,870,573	70.4	5,048,999	22.40	4,467,817	19.83	18,277	26,805	93.0	Reasonable	606%	Improved	1%
ESP MBS PS 2440 NGI*	26	221	4,732	296	7,482,745	21,180,322	22,339,686	17,981,658	80.5	7,464,358	33.41	5,449,976	24.40	47,527	81,258	115.3	High	175%	Improved	1%
ESP OFR HOK2440 NGI*	12	322	3,041	247	12,966,748	16,469,373	19,534,147	10,377,493	53.1	6,886,675	35.25	6,248,831	31.99	10,851	32,257	170.6	High	269%	Improved	1%
ESP NAO HOK2440 NGI	25	376	4,214	359	9,087,271	20,174,740	18,944,483	15,046,060	79.4	6,415,509	33.86	6,365,490	33.60	22,950	40,009	152.2	High			1%
ESP NAO HOK1218 NGI	81	380	11,721	542	5,202,722	12,386,180	18,126,904	12,230,373	67.5	4,098,841	22.61	3,642,043	20.09	21,385	32,165	81.1	High	457%	Improved	1%
ESP MBS PS 1218 NGI	84	539	18,532	133	17,101,920	23,563,012	14,970,103	10,882,925	72.7	2,913,716	19.46	2,302,493	15.38	14,773	20,174	62.7	Reasonable	35%	Improved	1%
ESP NAO HOK2440 IC *	22	245	4,247	1,120	3,557,693	7,513,509	10,557,755	5,345,596	50.6	-531,514	-5.03	-1,158,919	-10.98	23,946	21,780	-30.4	Weak			1%
ESP NAO HOK1824 NGI	29	244	5,325	761	3,657,767	9,063,151	9,845,212	6,545,020	66.5	1,734,809	17.62	1,164,094	11.82	19,690	26,792	43.8	Reasonable			0%
ESP MBS HOK1824 LLD*	22	119	3,716	1,310	1,157,554	7,369,788	8,950,883	5,672,046	63.4	1,634,488	18.26	1,022,823	11.43	33,839	47,538	45.3	Reasonable	61%	Improved	0%
ESP MBS HOK1218 LLD*	42	173	5,967	1,337	1,087,853	6,692,839	8,423,723	4,595,330	54.6	1,180,307	14.01	739,794	8.78	19,746	26,571	41.4	Weak	77%	Improved	0%
ESP MBS FPO1218 NGI*	31	149	4,867	3,750	446,532	4,524,548	7,479,577	4,278,007	57.2	932,220	12.46	497,370	6.65	22,435	28,686	26.2	Weak	-42%	Deteriorated	0%
ESP NAO HOK1824 LLD*	11	96	2,133	553	2,333,908	6,056,855	7,320,627	5,241,473	71.6	2,548,123	34.81	2,457,543	33.57	28,003	54,496	272.3	High	133%	Improved	0%
ESP NAO DTS1218 NGI*	66	210	11,302	1,771	2,712,226	13,211,706	7,191,239	4,147,400	57.7	1,344,616	18.70	1,150,760	16.00	13,321	19,712	39.9	Reasonable	611%	Improved	0%
ESP NAO DFN1824 NGI*	25	185	5,408	705	2,592,474	8,711,498	7,136,646	4,488,987	62.9	805,967	11.29	589,500	8.26	19,933	24,295	21.1	Weak			0%
ESP NAO PMP1012 NGI	60	113	6,287	336	1,605,198	2,429,504	6,809,018	5,735,490	84.2	2,905,554	42.67	2,506,338	36.81	25,053	50,775	199.1	High			0%
ESP NAO PMP1218 NGI*	42	179	5,744	660	2,378,693	6,043,798	6,675,848	4,909,869	73.5	1,810,533	27.12	1,303,924	19.53	17,335	27,462	41.9	Reasonable	18%	Improved	0%
ESP NAO FPO1218 NGI	58	153	8,662	623	1,157,704	4,713,950	6,306,457	5,257,743	83.4	1,154,152	18.30	1,056,295	16.75	26,838	34,386	65.1	Reasonable	287%	Improved	0%
ESP NAO HOK1218 IC	27	119	3,075	689	1,947,699	3,824,977	4,963,054	3,849,379	77.6	1,866,076	37.60	1,807,515	36.42	16,638	32,293	136.2	High			0%
ESP NAO HOK1012 IC *	43	78	2,771	235	1,738,119	3,120,454	4,749,984	3,669,839	77.3	1,334,444	28.09	1,215,011	25.58	30,037	47,200	173.1	High			0%
ESP MBS DFN1218 NGI	53	181	8,763	1,338	627,832	4,162,657	4,650,189	3,360,362	72.3	990,399	21.30			13,096	18,569					0%
ESP MBS DFN0612 NGI	85	166	12,819	820	734,002	4,510,641	4,617,083	3,419,657	74.1	446,233	9.66	130,887	2.83	17,863	20,544	10.6	Weak			0%
ESP NAO DFN1012 NGI*	115	245	16,808	402	3,177,743	8,067,096	4,357,321	3,201,187	73.5	112,092	2.57	-234,894	-5.39	12,585	13,041	-12.2	Weak	-329%	Deteriorated	0%
ESP NAO DRB1218 NGI	84	125	8,732	3,676	872,730	4,058,471	4,305,390	2,198,854	51.1	712,108	16.54	579,055	13.45	11,888	17,581	18.3	Reasonable	295%	Improved	0%
ESP NAO PS 1218 IC *	16	62	2,270	89	2,178,085	2,503,014	4,020,068	3,009,158	74.9	911,568	22.68	761,446	18.94	33,676	48,311	156.8	Reasonable			0%
ESP MBS PMP0006 NGI	109	260	7,626	1,241	340,567	2,294,750	3,834,754	2,905,378	75.8	1,290,496	33.65	1,237,398	32.27	6,202	11,158	267.1	High			0%
ESP MBS PMP1218 NGI*	34	99	5,135	529	1,262,418	4,368,824	3,562,275	2,112,951	59.3	439,441	12.34	237,372	6.66	16,831	21,250	11.6	Weak			0%
ESP NAO FPO1012 NGI	71	90	10,917	483	1,314,778	4,574,662	3,177,235	2,267,024	71.4	1,038,896	32.70	876,652	27.59	13,669	25,232	60.4	High	328%	Improved	0%
ESP NAO HOK1218 MA *	19	73	2,493	931	1,309,007	4,678,213	3,087,876	1,722,561	55.8	258,774	8.38			20,086	23,637					0%
ESP NAO HOK1012 NGI*	63	143	6,222	188	2,067,589	4,610,252	2,419,079	1,794,955	74.2	311,431	12.87	41,769	1.73	10,360	12,535	2.4	Weak	-83%	Deteriorated	0%
ESP MBS HOK1218 NGI*	23	43	2,567	1,153	305,216	2,183,759	1,934,328	1,279,061	66.1	485,116	25.08	397,142	20.53	18,410	29,659	40.7	High	372%	Improved	0%
ESP MBS DRB0612 NGI*	39	46	3,230	3,894	226,009	665,697	1,510,914	758,331	50.2	116,680	7.72	20,185	1.34	13,908	16,437	7.7	Weak			0%
ESP MBS PS 0612 NGI	18	78	2,758	159	1,181,166	1,796,576	1,457,998	1,303,891	89.4	411,237	28.21	405,458	27.81	11,433	16,699	194.0	High			0%
ESP MBS DRB1218 NGI	14	38	2,422	6,050	105,681	810,105	1,414,613	604,563	42.7	33,865	2.39	8,085	0.57	15,160	16,060	1.7	Weak			0%
ESP NAO PS 1012 NGI*	18	62	1,602	94	2,880,243	1,989,595	1,352,894	1,030,762	76.2	-165,745	-12.25	-250,155	-18.49	19,188	16,530	-84.7	Weak			0%
ESP MBS DTS0612 NGI	18	23	2,665	2,064	233,287	1,263,874	1,342,445	791,778	59.0	221,050	16.47	122,849	9.15	24,404	33,856	41.9	Weak	4%	Stable	0%
ESP MBS HOK0612 NGI	47	35	4,467	1,485	229,410	1,531,262	1,331,959	578,118	43.4	-222,615	-16.71			22,800	16,461					0%
ESP NAO PMP1012 IC *	20	37	1,222	1,586	278,945	538,448	1,253,553	535,672	42.7	-136,037	-10.85	-296,859	-23.68	18,237	14,544	-89.6	Weak			0%
ESP NAO DRB1012 NGI	14	35	1,448	2,277	136,599	670,375	762,466	428,812	56.2	89,799	11.78	68,512	8.99	9,805	12,402	27.8	Weak	-26%	Deteriorated	0%
ESP NAO FPO1012 IC *	12	22	1,147	598	70,936	336,152	319,838	202,470	63.3	8,316	2.60	-69,743	-21.81	8,868	9,248	-39.6	Weak			0%

Data source: MS data submissions under the DCF 2019 Fleet Economic (MARE/A3/ASC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Table 5.63 Spain: Landed value, weight and average price of principal species

	Value of landings (real)										Live weight of landings										Average landed price (real)										% over total	
	(thousand €)										kg										(€)											
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	in EUR	in weight
Yellowfin tuna	269.0	230.3	272.4	296.0	483.7	442.0	390.5	604.6	742.7	598.2	162,134,504	135,979,525	169,483,803	191,292,198	206,198,692	197,143,150	180,214,234	185,582,272	179,058,292	131,482,175	3.3	3.4	3.2	3.1	4.7	4.5	4.3	6.5	8.3	9.1	29%	14%
Bigeye tuna	95.5	115.5	97.1	136.2	116.2	191.6	163.4	155.7	237.3	353.1	36,973,515	41,346,878	37,151,512	55,479,970	44,773,739	65,223,743	60,767,993	50,424,179	59,447,881	82,185,006	5.2	5.6	5.2	4.9	5.2	5.9	5.4	6.2	8.0	8.6	17%	9%
European hake	292.6	322.9	260.7	198.5	192.7	200.5	250.0	275.4	321.0	323.8	85,626,789	92,619,210	78,357,576	57,945,744	58,353,856	60,472,380	68,786,576	76,243,964	79,749,528	77,911,844	6.8	7.0	6.7	6.9	6.6	6.6	7.3	7.2	8.0	8.3	16%	8%
Swordfish	260.3	260.2	251.9	228.0	267.2	268.4	211.4	241.1	313.0	223.5	47,862,421	50,686,401	51,991,221	50,814,491	58,033,090	61,005,937	44,324,581	48,190,381	56,267,665	45,505,014	10.9	10.3	9.7	9.0	9.2	8.8	9.5	10.0	11.1	9.8	11%	5%
European anchovy	17.0	70.0	93.3	123.1	114.1	151.8	163.1	115.9	165.4	179.9	6,961,391	28,139,687	39,477,946	53,965,383	48,003,364	72,272,931	85,238,150	61,889,721	92,884,659	103,644,145	2.4	5.0	4.7	4.6	4.8	4.2	3.8	3.7	3.6	3.5	9%	11%
Blue shark	11.2	11.4	72.8	62.4	52.9	55.7	64.3	110.8	93.6	169.7	22,895,942	23,900,339	168,583,497	152,237,294	109,397,491	102,736,784	95,602,035	108,131,506	104,063,459	100,778,582	0.5	0.5	0.9	0.8	1.0	1.1	1.3	2.0	1.8	3.4	8%	11%

Data source: MS data submissions under the DCF 2019 Fleet Economic (MARE/A3/ASC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

5.22 Sweden

Short description of the national fleet

Fleet capacity

In 2017, there were 1 209 vessels, 298 of these were inactive. The capacity decreased by 45 vessels compared to previous year and the general trend of the Swedish fleet is still that the number of vessels is decreasing. In 2018, the number of vessels were 1 177. The fleet in 2017 had a combined gross tonnage (GT) of 28.2 thousand tonnes and engine power of 159.3 thousand kilowatts (kW).

Fleet structure

The Swedish fleet is highly diversified with a broad range of vessel types targeting different species predominantly in the Baltic Sea, Skagerrak, and Kattegat regions. The national fleet consisted of 10 fleet segments in 2008-2017 vessels including 7 clustered active length classes and 3 un-clustered inactive length classes.

Employment

In 2017 the fleet employed a total of 1449 workers, including owners, which corresponds to approximately 793 FTE or an average of 0.87 FTE per active vessel. The level of employment follows the same decreasing trend as the overall capacity. Total number of employed has decreased by 529 employees since 2008 and is projected to continue the negative trend in 2018. FTE follow the same trend but has only decreased by 3 % compared to 6%. The lower decrease in FTE compared to total jobs indicate that the share of part-time fishers is decreasing slightly in Sweden. The major factors causing employment to decrease include the decreasing fleet size and less labour intensive vessels.

In 2017 there were on average 0.55 FTE per employed. The average wage per employed and per FTE has increased heavily over the period 2008 to 2017, 119% and 93%, respectively. Thus, average wage has increased well above the Swedish national average for all employees over the same period (slightly under 2% per year). Compared to 2016, the average wage per employed and per FTE in 2017 has increased by 7% and 4%, respectively.

Effort

An estimated 67.3 thousand days were spent at sea during 2017, a decrease by 9 % compared to 2016. The amount of energy consumed decreased but the general trend since 2008 is that energy consumption is increasing, 20%. Even though the total capacity is decreasing each year the total fuel consumption is increasing. The small-scale fleet has a decreasing trend while the large-scale fleet is the driving factor of the increased fuel consumption, with -9% and +20% respectively since 2008. The quantity of fuel consumed in 2017 totalled around 57.8 million litres.

Production

The total weight landed in 2016 was 222 thousand tonnes of seafood (214 thousand tonnes in 2018), with a landed value of EUR 127 million (EUR 111 million in 2018). The total weight and the value of landings vary over the period analysed due to quotas, prices and currency, especially the pelagic. In 2012 for example, the catch was exceptionally low due to low quotas. In 2018, the total value is significantly lower than in 2017, which is mainly caused by a weak SEK in comparison to EUR. Put into perspective, In SEK 2018 value is on the same level as 2016, not adjusted for inflation.

The fleet targets both pelagic and demersal species, with herring remaining the dominant species, generating the highest landed value with EUR 47 million, which represents approximately 36% of the total landings value in 2017. Other important species in value for the Swedish fleet in 2017 were Norway lobster EUR 17.3 million, Northern prawn EUR 14.4 million, European sprat EUR 11.6 million and cod EUR 8.4 million.

Economic results for 2017 and recent trends

National fleet performance

The Swedish national fleet continued the positive trend from 2016, and kept the net profit at approximately the same level, mainly due to higher profitability in the large-scale fleet while the net

profit decreased for the small-scale fleet. The large-scale fleet is very profitable and has been able to cover the losses in the small-scale fleet, resulting in a positive result when aggregated. The economic performance was mainly driven by higher income while increasing costs had a negative effect. This positive trend is expected to stagnate or even decrease into 2018, since landings has decreased together with a weak national currency.

Revenue in 2017, estimated at EUR 135 million, increased 2% due to a 2% increase in landings income and an increase in other income (EUR 7.6 million) by 29%. Total operating costs was the same as previous year but the cost distribution between costs categories differed compared to 2016. Personnel costs increase by 1% while unpaid labour saw a decrease by 8%. Energy cost and repair & maintenance increased by 9% and 4% respectively. Other variable costs and other non-variable costs decreased by 28% and 4% respectively. Total operational costs amounted to approximately EUR 91 million. When including capital costs, total costs amounted to EUR 111 million, deducted from total revenue, it generates a net profit of EUR 25 million.

Gross Value Added (GVA), gross profit and net profit in 2017 were estimated to EUR 73 million, EUR 44 million and EUR 25 million, respectively. Compared to 2016 GVA and gross profit increased by 4% and 8%, respectively. The positive trend seen in 2016 continued in 2017 with the highest gross profit seen in the period 2008-2017. These results indicate a good year, but the profit is not evenly distributed within the fleet.

The (depreciated) replacement value of the Swedish fleet was estimated at EUR 114 million, an increase by 20% compared to 2016. Although the replacement value in 2016 was significantly lower than other years. Investments amounted to EUR 6.5 million in 2017, a decrease by 10%.

Resource productivity and efficiency indicators

The gross profit margin in 2017 was 33%, indicating a relatively high operating efficiency of the sector. Net profit margin was estimated at 19%, approximately the same as in 2016.

An overall improved development trend can be seen since 2008, labour productivity (GVA/FTE) further increased in 2017 with 7%; GVA increased by 4% while the number of FTE decreased by 3%).

Fuel consumption per landed tonne has increased since 2008 but is still relatively low at 0.261 thousand litres per tonne landed in 2017. Landings in weight per unit of effort (in days-at-sea) has been relatively stable since 2008 at around 2.1 tonnes per day. In recent years it increased due to less demersal in relation to pelagic fishing and it amounted to 2.7 tonnes per day in 2016. It further increased to 3.3 tonnes per day in 2017 and stabilized in 2018 at 3.3 tonnes per day.

Performance by fishing activity

Small-scale coastal fleet

The number of small-scale vessels decreased from 852 in 2008 to 680 in 2017 (660 in 2018), a decrease of 20%, following the general trend of the Swedish fleet but a relatively lower annually percentage decrease compared to large-scale vessels.

The numbers employed and FTE in the small-scale fisheries follow the same decreasing trend as the fleet in general over the period 2008-2017, 21% and 5% respectively. Vessel tonnage as well as engine power has decreased slightly during 2017, 9% and 6% respectively.

Overall, the SSCF is not profitable, generating a net loss of EUR 5.1 million in 2017. Gross value added is positive but relatively low per FTE at EUR 25.2 thousand. As tangible assets are, in most cases, probably paid off, these vessels can afford to continue fishing. Low GVA estimates signal that there are other reasons for fishing than just profit, such as part-time employment or a way of life. Fishers whom do not have profit as main reason for fishing raises the competition on the market, which makes it harder for new firms/individuals to enter the market.

Additionally, increased seal populations along the Swedish coastline are still heavily affecting both income, by taking and eating fish directly from the gears, and costs, by destroying gears as well as creating extra work.

The outlook for the small-scale is both positive and negative. Due to the discard ban a new management system were introduced in 2017. Despite still missing transferability like a proper ITQ system the individual quotas now introduced with some transferability during the year (not permanent) is by performance a step forward.

Large-scale fleet

For the large-scale fleet, the number of vessels decreased from 344 in 2008 to 231 in 2017 (227 in 2018), a decrease of 33%. More than half of this decrease stems from vessels with main income from the Norwegian lobster fishery. The Swedish authorities have promoted fishing lobster with passive gears and as cod populations are in bad conditions, mixed fisheries with cod and lobster are no longer a profitable option. Vessels fishing for cod as main source of income have also decreased. Some of these vessels also fished pelagic species and after the introduction of fishing-rights in the pelagic fishery they sold their rights and left the fishery.

The numbers employed in the large-scale fisheries follows the same decreasing trend as the fleet in general, where the decrease in FTE is somewhat lower, indicating a decreasing portion of part-time fishers, meaning less fishers doing more fishing. Vessel tonnage and power has decreased and are still decreasing, although not at the same pace as before.

The weight and value of landings for the large-scale vessels from 2008 to 2018 is more dependent on the quotas than the same measure for the small-scale fleet. The landings weight decreased substantially in the first half of the period. Although, with recent increase in quotas the landings weight is higher and almost back at the same level as in 2008. The landing values follow the same trend but with more variation due to changes in fish prices and the exchange rate EUR/SEK. Despite, the large-scale fleet seems to perform fairly well but the variation is large. Vessels fishing pelagic species and those that fish in the north Baltic for vendance rom are performing well while those fishing for cod are performing poorly.

The large-scale fleet has slightly increased their operational costs (3%), mainly due to higher energy costs and repair & maintenance costs. Increasing total incomes is the main reason the large-scale fleet is maintaining their overall high net profit. Overall, the large-scale fleet is profitable, generating a net profit of EUR 30.1 million in 2017. Gross value added per FTE is relatively high at EUR 127 thousand. Although, due to a weak national currency lower net profits in 2018 in terms of absolute values is expected.

Performance results of selected fleet segments

The Swedish fleet is highly diversified with a broad range of vessel types targeting different species predominantly in the Baltic Sea, Skagerrak, and Kattegat regions. None of the four fleet segments using active gear made losses in 2017 in comparison to the passive gear segments whom all made losses. It can further be observed that the vessels with active gears account for the main part of the landed value and the landed weight. During the time period 2008-2017, the vessels with active gears annually accounted for 96-97% of the total catch measured in weight, and 85-89% of the total catch value. Thus, the vessels with passive gears only accounts for 3-4% of the total catch measured in weight, and 11-15% of the total catch value. A short description of the two most important segments in terms of total value of landings is provided below.

Demersal trawl seine 18-24 meters

In 2017, 38 vessels made up this clustered segment that uses different types of active fishing gear. It operates predominantly in the Baltic Sea, Skagerrak and Kattegat. The fleet segment targets a variety of species but in particular demersal species such as cod, lobster and prawn and pelagic species such as herring and sprat. In 2017, the total value of landings was EUR 18.4 million and around 123 FTEs in this fleet segment, contributing 14% of the total income from landings and 15% of the FTEs in the Swedish fishing fleet. This fleet segment was profitable, with a reported net profit of around EUR 1.6 million in 2017. There are some differences in performance within the segment. The vessels in the segment fishing prawn and vessels fishing pelagic species have the highest profit, while the vessels fishing for cod and Norwegian lobster have significantly lower profit.

Demersal trawl seine 24-40 meters

There were 33 vessels in this clustered segment in 2017, which also contains 17 vessels using pelagic trawlers (ten of the pelagic trawlers are over 40 m). This segment is operating in the Baltic Sea, Kattegat, Skagerrak, and North Sea. The fleet targets a variety of species, in particular pelagic species such as herring and sprat but also demersal species such as cod and prawn to a small extent. In 2017, the total value of landings was EUR 73 million and around 245 FTEs in this fleet segment, contributing to 57% and 31% of the total income from landings and FTEs in the Swedish fishing fleet, respectively. This segment dominates the Swedish fishing fleet with 88% of the total landings in weight.

This fleet segment was profitable, with a reported gross profit of around EUR 32.4 million and a net profit of EUR 22.8 million in 2017. There is a distinct difference in performance within the segment. The profit is generated from vessels fishing mainly pelagic species. Vessels with more than 50% cod in landing value are making losses while the prawn vessels are profitable in aggregate.

Drivers affecting the economic performance trends

Higher quotas for pelagic species and were still the main driving force behind profitability and the continued profitability trend in 2017. The Swedish fleet's income is dominated by trawlers, both pelagic and demersal trawlers. As trawling is typically fuel intensive, fluctuations in fuel prices are therefore a key driver of the fleet's profitability. The pelagic fleet is the driving factor regarding economic performance for the Swedish fleet.

Markets and Trade

The number of market places for landed fish has also decreased. In Sweden, the market places for fishers have been concentrated to the west coast of Sweden, resulting in logistical problems for selling and distributing fresh fish to the rest of Sweden. This problem is especially evident for the small-scaled fishery. A new fish market, government funded, recently opened in Stockholm, on the east coast, not only to solve the structural problem but also to offer consumers environmental sustainable fresh fish.

Good economic performance for the Swedish fishing fleet is highly dependent on fish prices for pelagic species as well as a strong national currency. High prices but more importantly stable prices are key to good economic performance. The prices are driven by the supply and demand on the local and for some species, the global market. The supply on the market is highly dependent on quotas, which can have a big impact on prices in the end due to sudden supply shocks or lack of supply. The demand on the other hand is not as volatile as the supply, although community trends, such as recent health trends can have an impact on the demand in the short run. Furthermore, changes in seasonal fishing, e.g. shorter fishing period for certain species, can have an effect on the fish price. Due to the fact that fishing is concentrated to a shorter period, which will produce a sudden supply shock on the market. One example of this is the vendace fishing in northern Baltic sea. The access to the resource is limited to a few vessels and the price elasticity is quite high. In recent years the landed weight have been approximately half of what it once was but the price has double, yielding approximately the same total value.

Management instruments

A major challenge regarding fleet management is the adjustment to the landing obligation, which is gradually introduced between 2015 and 2019. An obligation to land all catches of quota species requires a system to allocate fishing opportunities that as far as possible help facilitates this obligation and creates conditions for the Swedish fleet to comply with it. A system that is compatible with the landing obligation must for example consider the challenge of choke species and allow some flexibility so that it is possible to match catches and fishing opportunities.

With background of the needs created by the landing obligation, the Swedish Agency for Marine and Water Management (SwAM) introduced a system in 2017 with individual annual fishing opportunities that can be temporarily transferred between fishers during the year. The individual allocations are, with some exceptions, based on reported catches during the reference period 2011-14. The design of the system paid particular attention to small-scale coastal fisheries fishing with passive gears for which unallocated quotas are reserved. The new system means increased flexibility and better possibilities for individual fishers to adjust their fishing opportunities during the year, which probably gives them better possibilities to comply with the landing obligation. The first year with the new system has recently been evaluated by SwAM. The evaluation showed, among other things, that the number of quota transfers was high already the first year. At the same time trade frictions existed (e.g. difficulties to find someone who could transfer fishing opportunities). There are also other challenges connected to the system. Even though the system allows for increased flexibility, quotas may still be limiting at the individual level. Given economic incentives to maximise the value of the own fishing opportunities, this may affect compliance as it creates incentives for high-grading and discard of unwanted by-catches. Another concern is that since the fishing opportunities are only annual, fishers face uncertainty about what fishing opportunities and income they will have the coming years. A further challenge is that various "lock-in" effects can be observed in the present system. In case the system would be adjusted to allow for longer-term fishing rights, the design of such a system is of critical importance in order to avoid unwanted effects.

Status of Key Stocks, TACs and quotas

Most of the important stocks fished by the Swedish fleet are fished at MSY. In 2017, Sweden had a total quota of 268 thousand tonnes, compared to 225 thousand tonnes in 2016. In 2018 the quota decreased to 249 thousand tonnes.

Herring and sprat is especially important for the Swedish fleet. The quota for herring increased by 10% by compared to 2016 in Skagerrak, Kattegat, and North Sea, while the quota for sprat decreased by 19%. In the Baltic Sea herring and sprat were managed at MSY level, the quota were the same for herring while the sprat quota decreased by 19%. For 2018, the quotas for herring increased by 5% while the quota for sprat decreased by 1%.

In 2017, the important quota for cod in the Baltic continued to decrease significantly, the total quota decreased by 56% in the western stock and 24% in the eastern stock, resulting in a 30% decrease in the total cod quota. Total available cod quota for the Swedish Baltic fleet in 2017 in eastern and western stocks was 8.3 thousand tonnes and 1 thousand tonnes, respectively (in 2016; 10.9 thousand tonnes and 2.3 thousand tonnes, respectively). Small sized and bad conditioned cods resulted in a poor economic performance. The Eastern Baltic cod TAC is in line with the precautionary approach, but due to a missing biological advice no MSY level can be defined.

Innovation and Development

Towards the end of 2009, Sweden introduced a tradable fishing right system for pelagic quotas running for a 10 year period. The system made the pelagic fishing a lot more efficient and increased the overall profit for the fleet. The end of the first 10 year period is approaching and will be analysed if it had all of its designed and desired effects.

In the beginning of 2017, Sweden introduced a tradable fishing right system for non-pelagic fishers, in order for fishers to comply with the landing declaration. Fishers can temporarily, trade quotas, which will allow fishers to be more flexible and efficient, which in turn can have an impact on the profitability in the small-scale fisheries.

The increasing seal population around the Swedish coastline has caused a growing conflict between seals and inshore fisheries. Seals damage the fisher's catch and fishing gear, which causes significant economic losses to the fishing industry. In some areas, it is even impossible to conduct a profitable fishery. The development of seal-safe fishing gear is at the moment the only long lasting and sustainable solution to the conflict. The development mainly focuses on improving traditional fixed gear, such as push-up traps for salmon and by developing new alternatives to the net fisheries, such as cod pots.

In the shrimp and Norwegian lobster fisheries, research for new and more sustainable fishing techniques is on-going. In general, transition towards the implementation of these new techniques in the sector is slow as fishers are hesitant due to high investments, the uncertainty of the impact of the techniques and the possible market effects.

Nowcasts for 2018-19 and outlook

Preliminary results for 2018 suggest an annually decrease of 3% in landed weight, matched by a 12% decrease in value. The discrepancy between the decrease in landed weight and value is mainly due to a weak national currency (SEK) relatively to EUR. Projections for 2018 suggest an increase in energy costs and unpaid labour and a decrease in repair & maintenance costs, variable costs, non-variable costs as well as personnel costs. A small increase in operating costs and a decrease in landed value in euro will make 2018 worse than 2017 in terms of GVA, gross profit and net profit. Although, measured in SEK 2018 will be in line with the results of previous years. Furthermore the gross profit margin and net profit margin is still high at 23% and 7% respectively.

The general trend since the beginning of the 2000s is a decrease in Swedish fleet capacity, i.e. in the number of vessels that also reflects reduction of total engine power and gross tonnage. This is partly due to management efforts directed at decreasing fleet size in order to bring it in balance with the resources. The analysis of economic performance shows that all Swedish segments with vessels using active gear are making positive net profits while the three passive segments are negative net profits. These passive segments are heavily affected by increasing populations of seals in recent years and diminishing stocks.

There is also a crew recruitment problem as jobs on board fishing vessels is not a particularly attractive way of making a living for younger people; due to low wages and relatively poor working conditions compared to other land-based jobs. This poor recruitment is reflected in the increasing average age of Swedish fishers, which is expected to continue into 2018 and 2019. A decreasing fleet size is also

expected to continue for some time but will lead to a better overall economic performance in the long run.

Furthermore, there are other reasons than profit to keep a fishery going in small-scale fisheries, e.g. a way of life or a part-time employment. The fact that profit is not the sole driver can have a huge impact on the market in terms of higher competition, due to fishers don't have to make a profit from their business, thus making it harder for new firms/individuals to enter the market. Higher barriers for entering the market have an effect on the wages and in turn crew recruitment. In the long run, this problem will disappear when the older fishers are crowded out from the market.

In late 2017 and early 2018, it was decided to close the commercial fishing for eel for a certain time period in the Baltic Sea. In the Swedish fleet, 90 vessels have eel as their main income (>50% of total value). The ban will have an economic impact on the small-scale fisheries and might have some negative externalities on other species-specific markets, due to fishers being forced to change their target species.

Data issues

There are no major data issues in the Swedish EU-MAP data. Swedish data come from logbooks, journals, surveys with a census sample with high response rate (87%) and tax declarations. Previously, Sweden used probability sampling when sending out the questionnaires. Since 2012, the survey had a census approach. With the census approach, the number of data points have increased significantly and the response rate has been stable around 85% since 2012.

An important issue is clustering. With a small and diminishing fleet, Sweden is forced to cluster all of the economic data and also report cluster definitions.

Sweden changed definition for the fleet from including vessels in the fleet by 1 January to include all vessels active during the year. All the previous years are adjusted to follow the new definition. Furthermore, recalculations of many variables was made to the whole time series to have a new and complete time series with the new EU-MAP definitions. The recalculation use a slightly modified design, which in turn affects the results.

Table 5.64 Sweden: National fleet statistics and economic performance results. Nowcast figures for 2018 and 2019

		2008	2009	2010	2011	2012	2013	2014	2015	2016	*2017*	*2018*	2019	Trend 2008-2018	Δ 2017 to 2016	Δ 2017 to avg. 08-16
Capacity	Number of vessels	1,578	1,529	1,474	1,408	1,358	1,354	1,328	1,298	1,254	1,209	1,177	1,135		-4%	-14%
	Total vessel power	224,938	213,345	202,784	186,433	177,054	174,512	171,138	167,915	170,631	159,270	153,599			-7%	-15%
	Total vessel tonnage	46,340	42,224	39,552	34,618	31,340	30,703	31,441	30,826	31,858	28,165	28,014			-12%	-21%
Employment	Engaged crew	1,977	1,863	1,806	1,745	1,686	1,623	1,628	1,522	1,541	1,449	1,411	1,375		-6%	-15%
	Unpaid labour										160					
	FTE national	954	1,013	976	1,000	935	905	878	791	818	793	747	1,029		-3%	-14%
	Total hours worked per year (engaged crew)										1,438,102					
Effort	Days at sea	104,393	98,295	85,871	85,018	79,794	79,020	80,455	73,422	73,653	67,262	64,284	99,990		-9%	-20%
	Fishing days	104,393	98,295	85,871	85,018	79,794	79,020	80,455	73,422	73,653	67,262	64,284			-9%	-20%
	kW fishing days	25,878,565	23,652,765	20,543,908	21,071,881	19,074,865	20,317,277	18,845,748	18,723,255	18,244,707	18,753,036	17,188,917			3%	-9%
	GT fishing days	6,496,698	5,877,121	5,065,201	5,191,044	4,573,624	5,011,892	4,556,060	4,806,131	4,551,059	4,932,218	4,463,644			8%	-4%
	Number of fishing trips	89,655	84,645	74,641	73,782	71,468	71,150	73,894	67,636	67,762	60,522	58,917			-11%	-19%
	Energy consumption	49,409,729	45,672,069	48,068,245	45,335,042	50,901,950	48,587,512	41,114,487	52,397,194	59,216,988	57,764,911	52,364,704	57,220,446		-2%	18%
Landings	Live weight of landings	222,541,105	200,617,402	204,979,471	177,564,984	149,845,973	177,748,731	172,100,487	202,695,161	197,846,451	221,662,883	214,681,737	179,163,333		12%	17%
	Value of landings	124,253,060	102,773,732	114,598,863	127,808,403	129,106,173	126,853,765	109,134,535	115,996,424	125,716,266	127,151,893	111,272,941	124,846,166		1%	6%
Income	Gross value of landings	124,252,992	102,773,674	114,598,805	127,808,343	129,106,113	126,853,708	109,134,479	115,996,372	125,715,092	127,151,849	111,272,902	129,253,163		1%	6%
	Other income	17,761,463	16,537,352	8,477,476	9,414,057	15,072,896	10,476,587	11,723,707	8,102,944	5,869,997	7,570,464	7,375,999	7,418,801		29%	-34%
	Operating subsidies	-	-	-	-	-	-	-	-	-	-					
	Income from leasing out quota	-	-	-	-	-	-	-	-	-	-					
Expenditure	Personnel costs	12,239,800	11,328,534	13,712,358	14,071,155	16,123,505	17,316,204	17,334,908	17,436,503	19,431,235	19,615,360	17,913,107	20,912,567		1%	27%
	Value of unpaid labour	8,785,737	10,947,266	11,863,935	12,865,715	11,975,324	11,615,489	11,222,408	10,024,959	9,822,955	9,045,104	9,197,852	16,104,622		-8%	-18%
	Energy costs	25,336,394	20,321,107	26,225,479	30,451,528	34,160,316	31,853,945	25,540,958	22,777,858	23,792,848	26,051,095	29,448,599	32,666,678		9%	-2%
	Repair & maintenance costs	19,734,921	17,455,623	19,222,051	19,275,999	17,637,075	18,076,166	15,491,520	19,251,002	21,492,180	22,273,229	21,820,645	21,998,459		4%	20%
	Other variable costs	5,737,362	4,861,453	6,936,271	6,627,933	7,322,396	6,570,223	8,007,508	6,472,735	7,485,737	5,389,035	5,128,554	7,156,762		-28%	-19%
	Other non-variable costs	8,053,933	7,292,243	9,115,805	8,459,636	9,018,229	8,639,063	7,819,411	7,462,218	8,550,790	8,199,705	8,035,812	8,149,789		-4%	-1%
	Consumption of fixed capital	37,382,343	22,199,222	28,993,786	28,740,697	26,259,892	23,160,597	24,132,319	24,283,874	16,240,204	20,272,545	19,749,755	19,807,482		25%	-21%
	Lease/rental payments for quota	-	-	-	-	-	-	-	-	-	-					
Indicator	Opportunity cost of capital	1,105,017	1,640,814	1,496,924	1,841,042	1,002,720	2,205,199	2,036,976	26,329	- 523,587	- 1,398,871	- 1,467,317	- 1,288,308		-167%	-216%
	Gross Value Added	83,151,845	69,380,600	61,576,674	72,407,305	76,040,994	72,190,897	63,998,789	68,135,503	70,263,534	72,809,249	54,215,292	66,700,275		4%	3%
	Gross profit	62,126,308	47,104,800	36,000,381	45,470,435	47,942,165	43,259,205	35,441,473	40,674,041	41,009,343	44,148,785	27,104,332	29,683,086		8%	0%
	Net profit	23,638,948	23,264,764	5,509,671	14,888,696	20,679,553	17,893,409	9,272,178	16,363,838	25,292,726	25,275,111	8,821,895	11,163,911		0%	45%
	Net profit subsidised	23,638,948	23,264,764	5,509,671	14,888,696	20,679,553	17,893,409	9,272,178	16,363,838	25,292,726	25,275,111	8,821,895			0%	45%
	Net profit rights	23,638,948	23,264,764	5,509,671	14,888,696	20,679,553	17,893,409	9,272,178	16,363,838	25,292,726	25,275,111	8,821,895			0%	45%
Capital	Value of physical capital	193,471,628	123,851,049	154,077,345	154,282,345	146,629,686	128,722,075	134,279,573	132,566,456	94,526,122	114,036,001	110,863,950	111,525,129		21%	-19%
	Value of quota and other fishing rig	-	-	-	-	-	-	-	-	-	-					
	Investments	-	5,347,580	8,159,668	6,786,077	8,163,795	7,241,365	6,415,000	6,083,345	7,257,445	6,526,379				-10%	6%
	Total assets	175,282,344	143,129,120	222,271,255	182,944,907	235,672,904	222,184,464	226,509,053	241,779,879	244,193,169	244,974,877				0%	16%
	Long/short debt	102,372,789	85,170,348	129,140,247	104,347,276	130,903,880	118,756,905	115,605,920	121,141,658	120,165,280	107,872,935				-10%	-6%
	Subsidies on investments	-	-	-	-	-	-	-	-	-	-					

Data source: MS data submissions under the DCF 2019 Fleet Economic (MARE/A3/ASC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

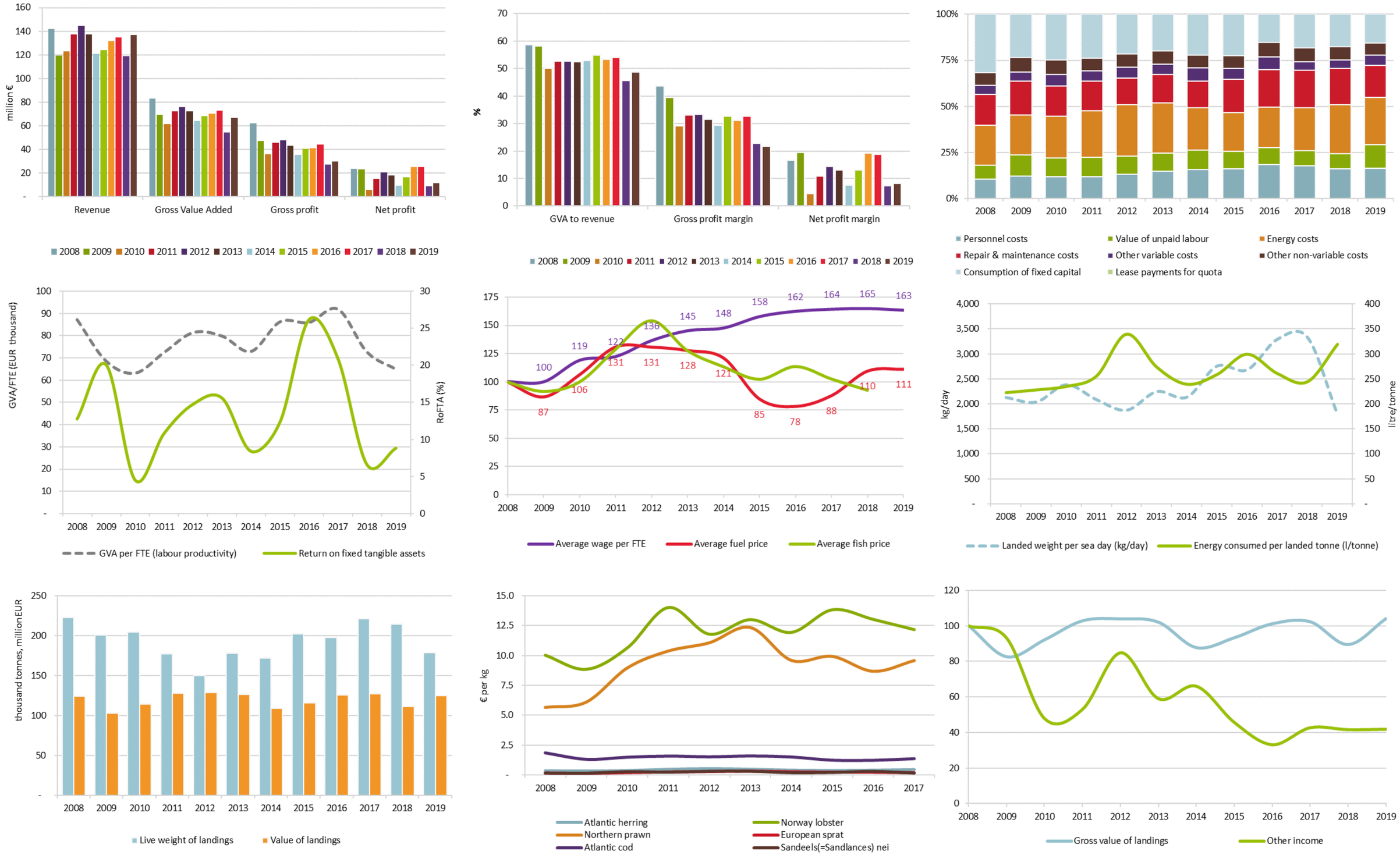


Figure 5.22 Sweden: Main trends in economic performance indicators (absolute value, panel 1a/top left and relative value, (panel 1b/top middle); cost structure (panel 1c, top right); productivity (panel 2a); key input/outputs (panel 2b); efficiency (panel 2c); landings (panel 3a); average price (EUR /kg) of top species (panel 3b) and income (panel 3c). Nowcast figures for 2018 and 2019

Data source: MS data submissions under the DCF 2019 Fleet Economic (MARE/A3/ASC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Table 5.65 Sweden: National fleet statistics and economic performance results by fleet segment, 2017

	Number of vessels	FTE national	Days at sea	Energy consumed per landed tonne	Live weight of landings	Value of landings	Revenue	Gross Value Added	GVA to revenue	Gross profit	Gross profit margin	Net profit	Net profit margin	Average wage per FTE	GVA per FTE (labour productivity)	Return on fixed tangible	Profitability (2017)	Net profit margin %Δ 2017 -	Economic development trend	As a % of total revenue
SWE NAO DTS2440 NGI*	33	245	6,756	208	194,929,934	72,964,402	76,277,722	42,042,924	55.1	32,352,274	42.41	22,842,457	29.95	39,529	171,499	45.9	High	26%	Improved	57%
SWE NAO DTS1824 NGI*	38	123	5,720	462	14,755,192	18,430,055	19,315,836	8,770,581	45.4	4,207,506	21.78	1,573,644	8.15	37,156	71,416	11.9	Weak	31%	Improved	14%
SWE NAO DTS1218 NGI*	71	93	6,485	842	5,138,699	16,343,069	18,020,615	10,805,470	60.0	6,831,681	37.91	5,387,764	29.90	42,546	115,691	81.5	High	43%	Improved	13%
SWE NAO DFN0010 NGI*	565	215	34,980	1,317	1,849,468	7,484,726	7,952,542	3,791,857	47.7	- 2,892,252	- 36.37	- 4,709,438	- 59.22	31,139	17,665	- 61.1	Weak	-38%	Deteriorated	6%
SWE NAO DTS1012 NGI*	80	50	4,616	696	3,073,596	6,585,099	7,342,087	4,104,728	55.9	2,315,625	31.54	651,385	8.87	35,680	81,860	7.5	Weak	-46%	Deteriorated	5%
SWE NAO DFN1012 NGI*	115	61	7,869	786	1,674,638	5,000,714	5,462,215	3,155,693	57.8	1,343,265	24.59	- 422,122	- 7.73	29,836	51,949	- 6.8	Weak	-9%	Deteriorated	4%
SWE NAO DFN1218 NGI*	9	6	836	602	241,358	343,827	351,296	137,995	39.3	- 9,314	- 2.65	- 330,570	- 94.10	26,266	24,606	- 30.4	Weak	-863%	Deteriorated	0%

Data source: MS data submissions under the DCF 2019 Fleet Economic (MARE/A3/ASC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Table 5.66 Sweden: Landed value, weight and average price of principal species

	Value of landings (real) (thousand €)										Live weight of landings kg												Average landed price (real) (€)										% over total	
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	in EUR	in weight
Atlantic herring	31.8	23.4	24.3	29.1	37.2	37.9	31.6	35.2	45.2	46.9	95,468,042	76,443,081	70,097,734	60,720,479	67,907,145	77,986,116	81,435,453	96,974,789	117,179,873	103,141,669	0.3	0.3	0.4	0.5	0.6	0.5	0.4	0.4	0.4	0.5	36%	47%
Norway lobster	15.4	11.8	13.3	13.4	16.0	14.6	15.1	15.7	17.8	17.3	1,541,665	1,337,186	1,251,684	953,069	1,357,813	1,125,009	1,262,522	1,135,332	1,370,092	1,421,829	10.0	8.8	10.6	14.0	11.8	13.0	11.9	13.8	13.0	12.2	13%	1%
Northern prawn	13.3	13.8	14.6	17.0	15.7	13.7	12.2	15.0	16.8	14.4	2,352,650	2,265,826	1,635,255	1,636,251	1,421,902	1,109,894	1,270,913	1,515,379	1,945,430	1,506,636	5.6	6.1	8.9	10.4	11.1	12.3	9.6	9.9	8.7	9.6	11%	1%
European sprat	14.9	12.3	16.0	15.4	14.5	17.4	13.5	12.0	13.6	11.6	88,151,001	80,697,144	77,754,057	58,936,819	49,976,821	52,939,071	51,005,910	51,061,405	56,379,297	58,476,336	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.2	0.2	0.2	9%	26%
Atlantic cod	23.3	17.2	18.5	21.2	20.1	12.4	10.4	10.0	9.2	8.4	12,715,326	13,145,872	12,484,051	13,536,565	13,364,230	7,873,085	6,939,003	8,030,023	7,426,835	6,196,970	1.8	1.3	1.5	1.6	1.5	1.6	1.5	1.2	1.2	1.4	6%	3%
Sandeels(=Sandlances	1.9	1.8	8.5	7.3	1.6	8.1	3.5	6.6	1.2	6.2	12,273,673	12,529,157	33,132,788	32,381,302	5,480,996	27,463,932	19,110,923	33,438,789	4,259,496	42,338,642	0.2	0.1	0.3	0.2	0.3	0.3	0.2	0.2	0.3	0.2	5%	19%

Data source: MS data submissions under the DCF 2019 Fleet Economic (MARE/A3/ASC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

5.23 United Kingdom

NOTE: All financial figures included in this report are first generated in pounds and then converted to euros using an exchange rate relevant for the year in question. In previous years this method has had little to no impact on trends shown in this report. However, due to the fall in the value of the pound in 2017 there are instances in this edition of the report where trends have been impacted. For example the total value of landings of the UK fleet appears to have decreased in this report however when looking at the figures in pounds, as originally calculated, there was an increase. As much as possible commentary has been included to take into account the exchange rate however these methods should be taken into consideration when reproducing any financial data from this report.

For further details on the economic performance of the UK fleet as originally calculated please see the UK Sea Fisheries Statistics and Seafish's Economic Performance of the UK Fishing Fleet 2017.

Short description of the national fleet

Fleet capacity

In 2017, the UK fishing fleet consisted of 6 267 registered vessels of which 1 558 were inactive. The fleet had a combined gross tonnage (GT) of 200 thousand tonnes and engine power of 798 thousand kilowatts (Kw). Estimates for 2018 show the size of the overall fleet was largely static but with a very slight decrease in the number of active vessels.

Fleet structure

The UK fleet can be divided into a small-scale coastal fleet (71% of the active fleet in 2017) made up of vessels under 12m in length using passive gears and large-scale fleet (29% of the active fleet in 2017) made up of vessels greater than 12m in length using passive gears and vessels of any length using active gears. Of the active fleet 1 680 vessels (36%) had annual landings with a value of less than £10 000. These vessels are termed as 'low activity' in UK-specific analysis and the vast majority of these vessels are from the small coastal fleet.

Employment

Total employment in 2017 was estimated at 11 692 jobs, corresponding to 7 358 FTEs or 1.6 FTE per active vessel. The SSCF represented 46% of total jobs but a much smaller percentage of FTEs due to the fact that a large number of vessels in this fleet operate on a part-time basis.

Many UK fishers are paid a share of landed value of fish, hence crew share is strongly linked with fishing income; therefore, crew shares across fleet segments reflect the variability in fishing income.

Effort

An estimated 370 thousand days were spent at sea in 2017, a 14% decrease from the previous year. At the same time energy consumption decreased by 4%.

Production

Between 2016 and 2017, production increased 4% to 726 thousand tonnes of seafood (live-weight equivalent) with a landed value of EUR 1.08 billion. The UK fleet is extremely diverse with a wide variety of fleet segments targeting different species. In terms of landings value, demersal species and shellfish species represented 36% and 38% of total fishing revenues by the fleet in 2017 respectively with pelagic species representing 26%. In terms of the weight, pelagic species represented 55% of total landings.

In 2017, the dominant species was Atlantic mackerel generating the highest landings value (EUR 224 million) and landed weight (227 thousand tonnes), representing 20% of the total value of landings and 31% of the total weight of landings by the UK fleet. Norway lobster generated the second highest landings value (EUR 109 million), representing 10% of the total value of landings but only 4% of the weight.

Economic results for 2017 and recent trends

National fleet performance

The UK national fleet as a whole remained in a profit-making position in 2017 and profits were at roughly the same level as 2016 when taking into account the impact of the exchange rate. This stability is mainly

the result of a slight decrease in average prices across species groups at the same time as the total weight of landings increased. In 2018 the fleet is expected to have remained profitable.

Revenue in 2017 appears to have fallen 4% to EUR 1.129 billion although when viewing figures in pounds there appears to be a slight increase in revenues. Other income has increased to EUR 53 million and when including income from fishing rights total income amounted to EUR 1.134 billion.

Total operating costs were largely stable in 2017 compared to 2016. When including capital costs, total costs amounted to EUR 844 million generating a net profit of EUR 293 million.

Gross Value Added (GVA), gross profit and net profit in 2017 were estimated at EUR 651 million, EUR 343 million and EUR 293 million, respectively. For all three of these measures results were largely similar to those shown in 2016. Regardless of whether you view the fleet's performance in pounds or euros these measures suggest little change in overall performance from 2016 to 2017.

The (depreciated) replacement value of the UK fleet was estimated at EUR 516 million and investments amounted to EUR 69 million, a 36% decrease on 2016.

Overall, the cost structure has remained relatively constant across the time series even with variations in landings and fuel price influencing crew and energy costs respectively.

Resource productivity and efficiency indicators

The gross profit margin in 2017 was 30%, indicating a high operating efficiency of the sector. Net profit margin was estimated at 26%.

The Rate of Return on Fixed Tangible Assets (RoFTA) was 55%, a slight increase from 2016.

GVA remained largely the same whilst the number of FTE decreased by 17% ensuring that labour productivity (GVA/FTE) increased in 2017. Despite a decrease in 2015, there is an overall improved development trend since 2008 indicating efficiency gains within the fleet. This trend appears even stronger in 2017 when taking into account the exchange rate.

Fuel consumption per landed tonne was relatively high at 373 litres per tonne. This was a 7% decrease on 2016 and fits with the overall decreasing trend for this indicator observed since 2008.

Landings weight per unit of effort (in days-at-sea) had followed an increasing trend since 2008 but in 2015 and 2016 dipped from the results shown in 2014. In 2017 landings weight per unit of effort increased 21% on 2016 showing the strongest result of the time series.

Performance by fishing activity

Small-scale coastal fleet

In 2017, there were 3 337 active vessels belonging to the 'small-scale coastal fleet' (vessels under 12m using passive gears). Estimates suggest the fleet was less profitable in 2017 although it should be taken into account that figures in this report showing the extent to which this is the case are impacted by exchange rates and the relative value of the pound against the euro.

Weight and value of landings for the SSCF decreased by 5% and 7% respectively even as prices for a number of key species remained strong.

Costs and total jobs appeared largely static whilst days-at-sea decreased by 21%. Energy costs decreased by 11%, which can largely be attributed to the decrease in effort. GVA, gross profit and net profit in 2017 were estimated at EUR 75 million, EUR 22 million and EUR 13 million, respectively. GVA decreased 13%, gross profit decreased by 31% and net profit decreased by 47% but again the size of these changes must be considered in terms of the exchange rate.

Large-scale fleet

In 2017, there were 1 372 vessels belonging to the 'large-scale fleet' (all vessels using active gears and vessels over 12m using passive gears). Although landings weight increased by 4%, the value of landings appeared to decrease by 4% when converting from pounds to euros. Total costs decreased meaning the fleet appears to be more profitable than in 2016.

Any changes in wages and salaries were in line with changes in the value of landings due to the fact the majority of fishers in the UK are paid via crew share but most other major costs were either stable or decreased in 2017. The exception to this is energy costs which increased by 11% in line with the rising cost of fuel.

GVA increased by 2% to EUR 576 million while gross profit increased by 1% and net profit by 4% to EUR 321 million and EUR 279 million, respectively. When considering these variables in pounds the trends are largely the same.

The large-scale fleet is extremely diverse and it needs to be taken into account that profitability can be driven by a relatively small number of larger vessels targeting pelagic and certain demersal species. Despite overall increases in profitability there were some DCF segments that only experienced small increases in profitability or in a few cases became less profitable.

Performance results of selected fleet segments

The UK fleet is highly diversified with a broad range of vessel types targeting different species predominantly in the Bering Sea, North Sea, West of Scotland and English Channel and Western Approaches. These overlapping areas of interest make it difficult to provide a simple explanation of fleet structures across the UK. For example, the Scottish fleet has moved toward higher capacity vessels that can cover large sea areas and catch several hundred tonnes of fish per trip whilst a greater proportion of the English fleet is engaged in inshore areas remaining economically viable by catching smaller quantities of more valuable fish.

Pelagic trawlers (>40m)

This fleet is made up of 27 large-scale trawlers, responsible for more than half of the total weight of fish landed by the UK fishing fleet in 2017. This volume of fish equated to a quarter of the total value of landings with the segment making a net profit of EUR 140 million in 2017. This segment has been consistently profitable and in 2017 profit margins increased as weight of landings increased and costs decreased.

These vessels generally operate out of Scottish ports and target pelagic species in the North Sea and West of Scotland. Mackerel and herring are the two main pelagic species landed by the UK fleet, accounting for around 85% by weight and 95% by value of total pelagic landings in 2017. Mackerel is by far the most expensive pelagic fish.

More than half of the pelagic species caught by the UK fishing fleet are landed abroad with Norway and the Netherlands the main locations.

Pot and traps (<10m)

This fleet is a main employer for the UK fishing fleet. There are 1 842 vessels in the segment although around 690 of these vessels would be termed as low activity (annual landings less than £10 000).

Excluding the lower activity vessels, whelks and brown crab account for the majority of the weight of landings however higher priced lobster species are more important to the fleet in terms of value. Lobsters had some of the highest average price of all species landed by the UK fleet in 2017.

The fleet as a whole made a net profit of EUR 5 million in 2017, which was less than 2016 but largely in line with other years from the time series. Net profit margin was 6% when considering the figures in Euros. If low activity vessels are excluded from consideration, then this net profit margin increases further.

Demersal trawlers and seiners

This segment represented 12% (755 vessels) of the total UK fishing fleet in 2017. It landed 26% (191 thousand tonnes) of the total weight and 41% (EUR 440 million) of the total value of landings of the UK fishing fleet. Of particular importance are the 163 vessels between 18 and 24 m and the 93 vessels between 24 and 40 m with net profits of EUR 28 million and EUR 49 million respectively in 2017. Together these two segments generate around a quarter of total UK fleet FTEs and EUR 174 million in GVA.

There are, however, differences in the economic performance of vessels in this fleet operating in different areas of UK waters. For example, segmenting *Nephrops* trawlers operating mainly in Area VIIA, North Sea and the West of Scotland all saw profitability decrease in 2017 but on average the net profit of those mainly fishing in Area VIIA was higher than their counterparts in these other areas.

Drivers affecting the economic performance trends

Similar to the previous years, the fleet benefitted from higher average fish prices for a number of prominent species, an increase in the weight of landings and comparatively low energy costs thanks to

a decline in the price of marine grade diesel that began in 2014 and continued through until the middle of 2016.

The increase in landings value in 2017 was mainly driven by the pelagic sector and the increase in quota for a couple of key species. For a number of years the performance of the pelagic sector has been a driver for overall fleet performance.

There were, however, some fleets that saw a reduction in profitability as fishing opportunities reduced due to deterioration in the stock status, or efficiency in terms of landings per unit of effort reduced. With a fleet as diverse as the UK fishing fleet, it is difficult to define main drivers of economic performance as different factors will have varying levels of impact on different fleets.

Markets and Trade (including fish price)

Generally, shellfish and demersal species are the most valuable, reaching average prices approximately three times higher than pelagic species. The overall average price per tonne landed for the UK fleet decreased by 8% in 2017 (2% if looking at the figures in pounds) therefore impacting on profitability.

Atlantic mackerel is a key species for the UK fishing fleet representing 20% of total landings by value and 31% by weight. In 2017 the average landed price (real) remained at EUR 988 per tonne meaning that, because of the increase in landings weight, the value of landings of Atlantic mackerel increased by EUR 1 million (Again this increase is larger when you consider the data in terms of pounds).

When considering prices achieved by the fleet in pounds, all five of the top species landed by the UK fleet by value saw the average price per tonne increase in 2017 compared to 2016 helping to drive slight increases in profitability. When converted to euros four of the top five species decreased in value which in part explains the fall in value of landings shown in this report.

Management instruments and regulation (policy)

The fleet is managed mainly through TACs and quotas, together with a range of input controls. The highest profile regulation is the landing obligation, which has now been fully implemented after being phased in over a number of years.

There was no obvious economic impact of the landing obligation observed in the first three years of implementation (2015-2017). In general, the pelagic fishery was not expected to be affected too much, as in most of the cases fish is not sorted at sea and usually landed directly to processing plants where sorting takes place. It was expected that the landing obligation would have greater impact on demersal fisheries but no major issues with choke species have been recorded as of yet. It should be noted that work is still on-going in this area.

Restrictions on effort have been set in certain areas with the introduction of a number of marine conservation zones in England, Wales and Northern Ireland and marine protected areas in Scotland. In addition, recovery zones as well as limitations to activity in the Western Waters have been in place since the early years of the 21st century.

Recent analysis has highlighted that between 2012 and 2017 there has been a nearly 40% increase in the number of 10-15m scallop revenue dependent UK vessels alongside a 31 percent decrease in fishing efficiency (landings per KWDAS) which has led to discussions about introducing further management measures in UK waters for this fleet.

Stock status, TACs and quotas

Total initial available quota for the UK fleet in 2017 was 898 thousand tonnes. For a number of years increases and decreases in Atlantic mackerel quota have been a main driver of economic performance and in 2017 the initial quota for this species increased by 14% and as a result the weight and value of landings for this species also increased. Key demersal species haddock saw its initial quota cut by 36%, however, weight of landings remained stable and value of landings increased as prices also rose.

Operating costs (external factors)

For the majority of the UK fleet fuel costs are perceived to be one of the key drivers for economic performance. From mid-2014 to mid-2016 there has been a significant decline in the price of marine grade diesel with the average price in 2016 estimated at 34 pence per litre. However, from mid-2016 to the end of 2017 the price increased again with the average price for 2017 estimated at 42 pence per litre, a 24% increase on 2016. According to this report, overall in 2017 total energy costs for the fleet increased 11% to EUR 124 million despite a decrease in effort. When considering this in pounds the increase in energy costs is even more pronounced with an overall 17% increase.

Wages and salaries increased with the value of landings but other costs including repair and maintenance costs and other variable and non-variable costs decreased.

A further external factor to consider is the exchange rate in terms of sales to Europe. Vessels which made direct sales to Europe would have found the increasing strength of the euro against the pound increased their profit margins particularly in the summer months as the pound fell to lows last seen in October 2009.

Innovation and Development

The implementation of the landing obligation has driven the development of new types of gear technology in the last few years. From mesh panels to strategically placed lights various different methods for reducing bycatch have been trialled with many of these projects now reaching the end of lengthy development and testing phases with reports being made to government.

The four national governments have supported a number of projects including the Scottish industry-led Gear Innovation and Technology Advisory Group, a two-year gear trial project in Northern Ireland and the fully documented fishing scheme and there is recognition that technical innovation will be an important tool for making the landing obligation a workable policy. However, there still remains a challenge for many vessel owners to access the capital required to make changes to their operations. To assist with this best practice guidance for assessing the financial performance of fishing gear have been developed by Seafish and the UK Fisheries Economics Network.

The climate of uncertainty surrounding Brexit has had many impacts but one is a general reluctance to make long-term plans. This focus on day-to-day operations, whilst necessary for the survival of a large number of vessels can hinder innovation and development.

Nowcasts for 2018-19 and outlook

Model forecast

Preliminary results for 2018 forecast a 4% decrease in landed weight, with a 3% decrease in landed value. The majority of the main operating costs will remain stable with the major exception energy costs, which are estimated to increase 19%. Overall economic performance is forecast to worsen in 2018: GVA (-8%), gross profit (-16%) and net profit (-19%).

Results indicate that the UK fleet operated at a profit in 2018: with an estimated gross and net profit margin of 26% and 22%, respectively.

The model forecasts that the economic performance in 2019 will slightly improve on 2018, as decreased landings (-11% compared to projected 2018 figures) are counteracted by high prices, resulting in a 3% increase in value. With fuel costs also increasing in 2019 (+12%), the fleet remains profitable with gross and net profit margins of 25% and 21%, respectively.

Data issues

No major issues detected. In 2017, some changes were made to segmentation in order to provide a more relevant picture of fleet performance and the methodology used to estimate data on capital values was updated. In 2018, the method for calculating energy cost was updated to take into account monthly fuel prices (as opposed to annual), also updated was the method for calculating depreciation. As a result of these changes values and figures may differ from previous reports.

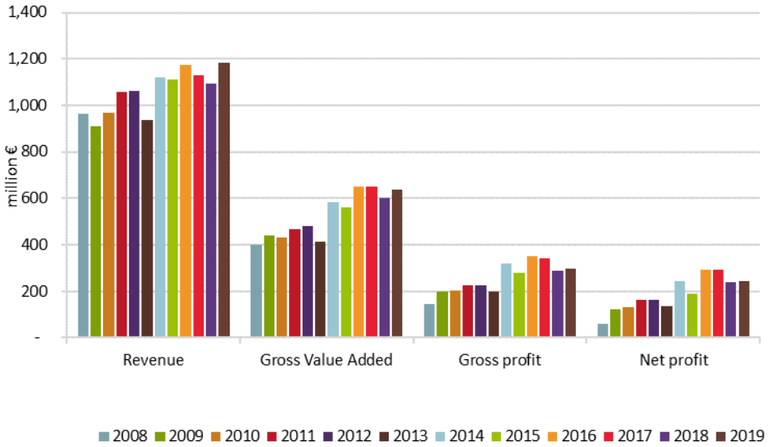
Exchange rates also affect the trend analysis due to the fact that the UK calculates all economic variables in pounds and then converts to euro amounts. Between 2014 and 2017 there were substantial changes in the exchange rate which would certainly impact this analysis.

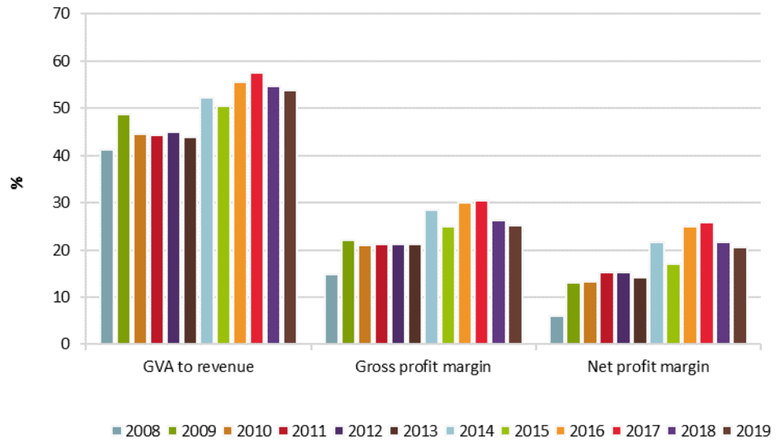
The reader should note that UK fleet revenues and costs do not include trade in quota. Quota trades take two forms; transfer in perpetuity and transfers for a defined period, usually one year – generally called leasing. There are two components within each of these. First, there is windfall accruing to those enjoying the initial allocation of the resource in 1999 and secondly the normal capital gain or loss arising on the transfer of the asset. Only the latter should be included in the accounts used in this report. However, it is impossible to identify the contribution of each component, but as the proportion of the total value is declining with each transfer of the original allocation, the problem will disappear as time goes by. Initially, however, the windfall component will be by far the greater proportion and hence for the time being omission of transfers limits any distortion of the fleet profitability figures.

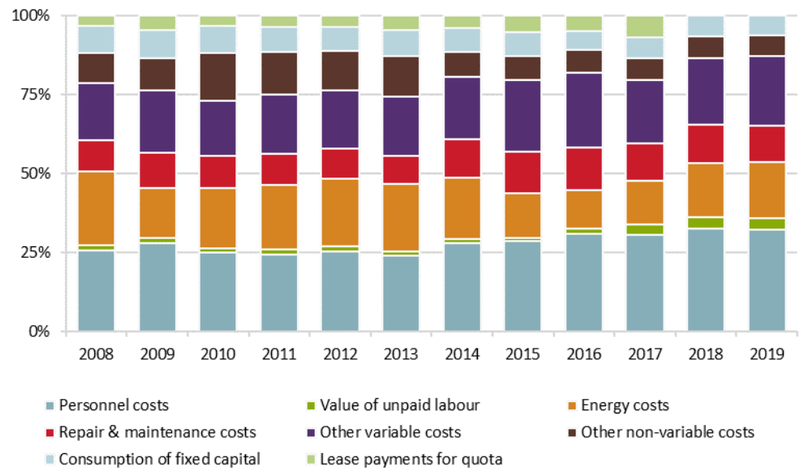
Table 5.67 United Kingdom: National fleet statistics and economic performance results. Nowcast figures for 2018 and 2019

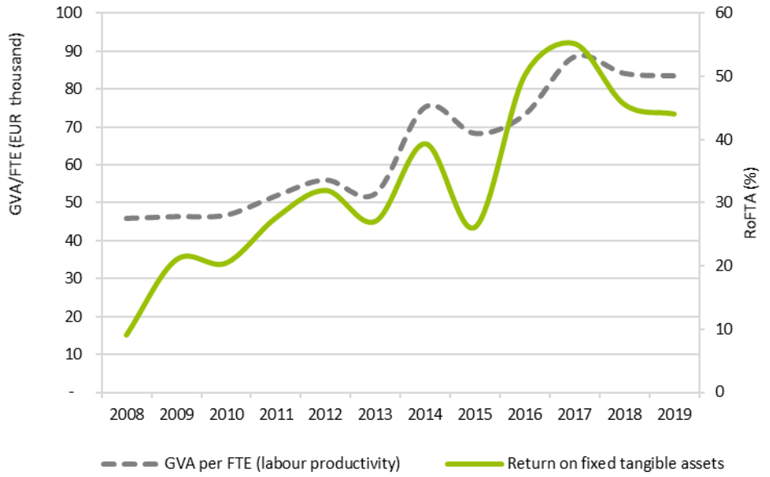
		2008	2009	2010	2011	2012	2013	2014	2015	2016	*2017*	*2018*	2019	Trend 2008-2018
Capacity	Number of vessels	6,706	6,681	6,531	6,467	6,435	6,376	6,338	6,307	6,304	6,267	6,318	6,419	
	Total vessel power	868,637	849,388	847,884	816,335	810,432	808,198	799,054	794,214	790,877	797,986	799,907		
	Total vessel tonnage	215,944	209,886	216,781	204,040	202,698	202,094	198,346	195,826	193,537	200,538	206,865		
Employment	Engaged crew	12,614	12,212	12,703	12,405	12,445	12,235	11,845	12,107	11,757	11,692	11,253	11,498	
	Unpaid labour										686			
	FTE national	8,699	9,549	9,245	9,034	8,563	7,870	7,769	8,223	8,888	7,358	7,131	7,617	
	Total hours worked per year (engaged crew)										16,476,990			
Effort	Days at sea	456,154	433,348	429,174	419,974	411,610	401,325	428,196	431,658	431,035	369,611	351,602	364,311	
	Fishing days	377,532	348,367	343,230	337,314	337,214	323,389	325,111	304,089	320,979	324,626	307,680		
	kW fishing days	82,968,344	80,417,935	79,715,619	74,133,057	71,871,814	69,734,133	71,728,519	69,713,190	72,295,319	74,231,282	73,826,998		
	GT fishing days	24,677,758	24,540,573	24,632,401	22,117,990	21,474,061	20,863,808	21,723,067	21,705,759	22,173,901	23,677,311	24,291,151		
	Number of fishing trips	201,640	231,330	229,453	230,787	231,336	227,009	226,495	219,285	230,676	220,387	202,121		
	Energy consumption	318,692,415	312,364,010	310,505,145	285,653,790	279,780,100	273,310,805	281,435,505	279,277,080	281,692,585	270,937,380	271,553,635	294,476,069	
Landings	Live weight of landings	575,003,187	582,816,808	608,440,823	603,742,695	634,404,896	628,467,924	758,861,545	708,976,650	700,613,707	726,365,826	694,711,698	617,998,016	
	Value of landings	932,748,501	880,251,670	938,735,786	1,026,753,667	1,010,593,798	887,847,322	1,072,122,975	1,070,619,545	1,130,137,927	1,080,226,188	1,050,386,996	1,082,977,092	
Income	Gross value of landings	933,062,554	881,286,278	940,634,546	1,028,662,035	1,022,500,871	892,907,756	1,072,212,330	1,070,677,794	1,134,367,995	1,076,651,426	1,044,151,427	1,128,377,330	
	Other income	32,296,147	27,328,834	29,540,440	27,023,192	41,688,272	43,682,456	47,411,604	41,786,559	38,225,795	52,957,170	50,371,302	52,824,305	
	Operating subsidies	-	-	-	-	-	-	-	-	-	-			
	Income from leasing out quota	838,050	5,124,582	5,365,593	1,787,646	4,153,224	4,372,902	6,009,496	10,210,011	5,504,340	4,965,813			
Expenditure	Personnel costs	239,827,372	227,867,220	216,261,486	229,618,042	239,824,024	203,438,032	254,447,004	272,909,672	285,230,632	277,462,155	280,420,434	304,299,691	
	Value of unpaid labour	14,704,096	14,062,199	12,233,084	12,770,458	12,739,911	10,155,013	11,563,105	11,206,622	14,292,786	30,375,028	30,790,410	33,540,895	
	Energy costs	216,193,438	129,565,875	166,615,981	192,258,513	203,539,932	180,522,459	176,247,903	135,476,640	114,561,710	124,570,724	148,784,227	165,985,875	
	Repair & maintenance costs	94,125,303	92,383,738	89,637,381	93,437,656	89,410,962	77,014,045	110,476,897	126,567,623	121,900,852	106,633,402	103,752,093	110,078,609	
	Other variable costs	168,206,311	160,993,019	151,626,763	175,187,346	172,984,697	158,234,124	177,992,430	217,462,563	219,700,579	184,476,922	181,441,649	205,800,242	
	Other non-variable costs	88,230,806	83,642,376	130,645,777	127,303,662	119,205,470	108,805,034	70,384,196	71,663,584	65,557,250	62,792,098	60,854,384	63,732,558	
	Consumption of fixed capital	80,718,135	73,471,275	73,494,902	71,983,110	68,935,279	67,183,159	71,408,341	74,378,222	55,988,930	58,138,295	56,357,217	59,272,442	
	Lease/rental payments for quota	30,821,152	38,180,895	30,283,658	36,471,668	36,125,092	40,998,733	35,461,437	50,756,725	46,392,850	64,210,958			
Indicator	Opportunity cost of capital	6,017,137.6	6,825,234.7	366,675.9	- 8,628,158.7	- 5,073,847.4	- 2,687,936.7	3,955,066.9	13,779,794.2	3,037,189.5	- 7,643,051.6	- 5,411,962.2	- 4,282,509.9	
	Gross Value Added	398,602,843	442,030,105	431,649,083	467,498,050	479,048,082	412,014,549	584,522,508	561,293,943	650,873,399	651,135,450	599,690,376	635,604,351	
	Gross profit	144,071,375	200,100,687	203,154,513	225,109,550	226,484,146	198,421,505	318,512,399	277,177,650	351,349,981	343,298,268	288,479,531	297,763,765	
	Net profit	57,336,103	119,804,177	129,292,935	161,754,599	162,622,714	133,926,282	243,148,992	189,019,634	292,323,862	292,803,024	237,534,277	242,773,834	
	Net profit subsidised	57,336,103	119,804,177	129,292,935	161,754,599	162,622,714	133,926,282	243,148,992	189,019,634	292,323,862	292,803,024	237,534,277		
	Net profit rights	27,353,001	86,747,863	104,374,870	127,070,577	130,650,845	97,300,451	213,697,051	148,472,920	251,435,352	233,557,879	237,534,277		
Capital	Value of physical capital	692,639,396	601,326,717	631,293,731	553,154,958	492,067,469	483,828,603	627,248,888	774,145,742	588,163,427	516,408,815	508,923,048	540,948,623	
	Value of quota and other fishing rig	1,077,854,758	1,081,381,971	1,077,714,841	1,263,584,626	1,434,798,147	1,064,305,458	1,379,033,459	1,854,162,217	1,275,910,896	1,226,873,902			
	Investments	52,773,404	74,896,337	104,647,196	49,605,979	60,248,148	100,802,686	83,819,771	99,621,375	106,989,637	68,525,911			
	Total assets										1,775,744,722			
	Long/short debt										483,489,167			
	Subsidies on investments										3,535,307			

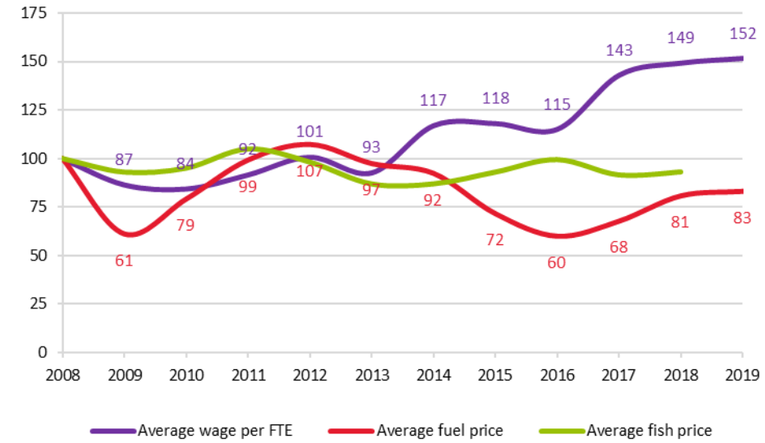
Data source: MS data submissions under the DCF 2019 Fleet Economic (MARE/A3/ASC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

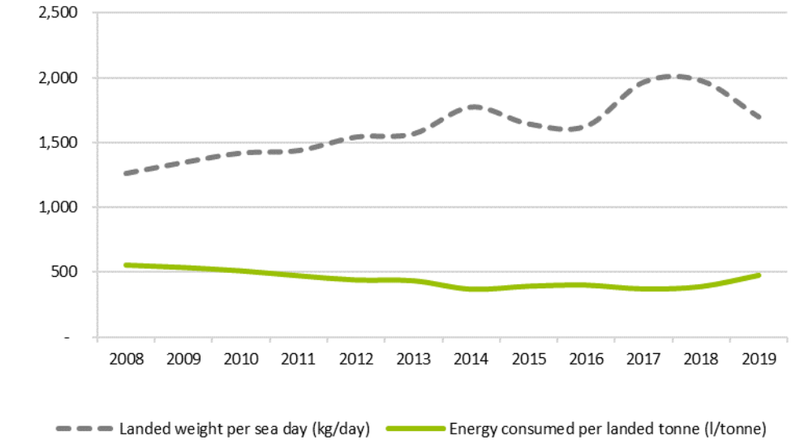


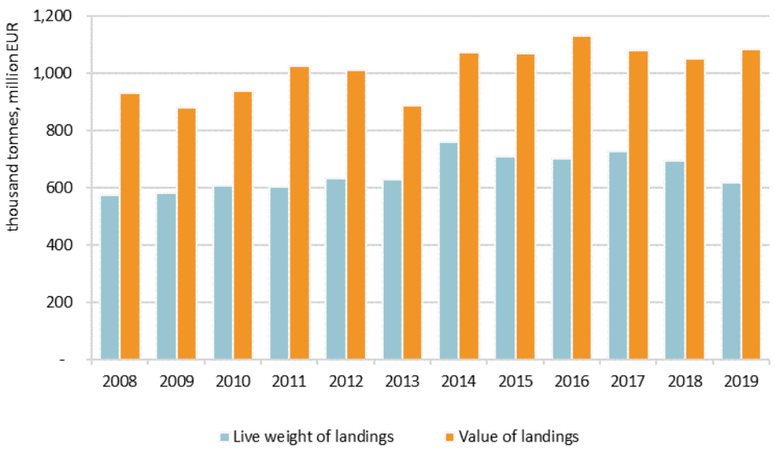


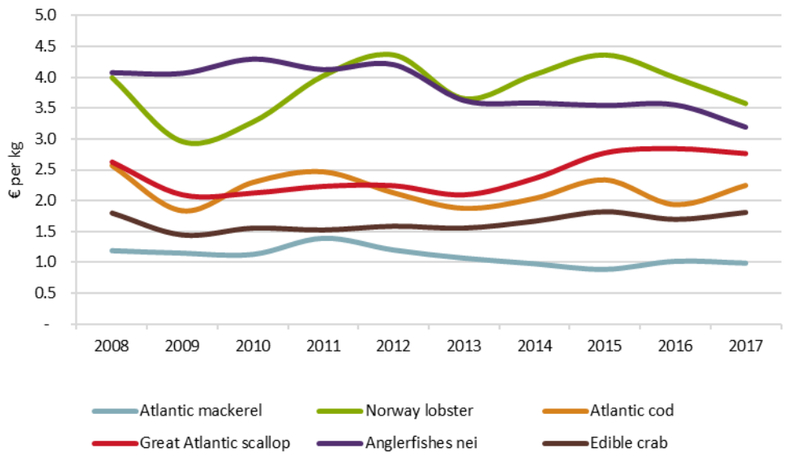












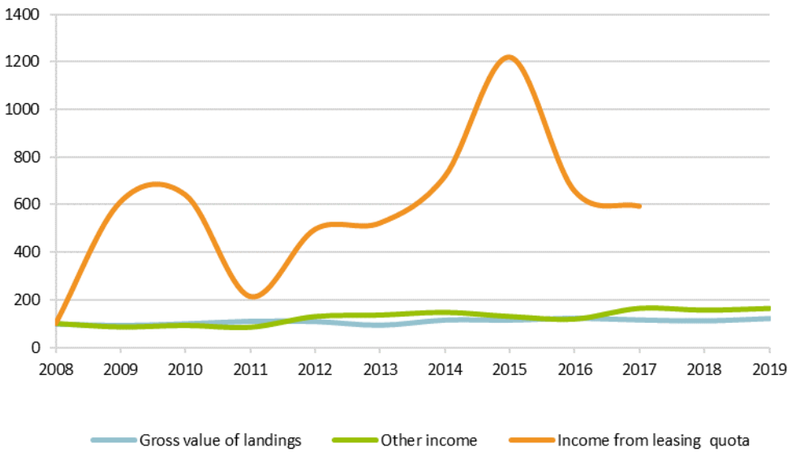


Figure 5.23 United Kingdom: Main trends in economic performance indicators (absolute value, panel 1a/top left and relative value, (panel 1b/top middle); cost structure (panel 1c, top right); productivity (panel 2a); key input/outputs (panel 2b); efficiency (panel 2c); landings (panel 3a); average price (EUR /kg) of top species (panel 3b) and incomes (panel 3c). Nowcast figures for 2018 and 2019

Data source: MS data submissions under the DCF 2019 Fleet Economic (MARE/A3/ASC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Table 5.68 United Kingdom: National fleet statistics and economic performance results by fleet segment, 2017

	Number of vessels	FTE national	Days at sea	Energy consumed per landed tonne	Live weight of landings	Value of landings	Revenue	Gross Value Added	GVA to revenue	Gross profit	Gross profit margin	Net profit	Net profit margin	Average wage per FTE	GVA per FTE (labour productivity)	Return on fixed tangible	Profitability (2017)	Net profit margin %Δ 2017 -	Economic development trend	As a % of total revenue
GBR NAO TM 40XX NGI*	27	87	1,779	103	383,869,038	276,781,471	275,162,187	205,909,447	74.8	147,122,642	53.47	140,146,196	50.93	679,388	2,379,658	88.6	High	86%	Improved	24%
GBR NAO DTS2440 NGI	93	992	18,490	544	84,663,711	183,999,542	191,367,698	106,657,978	55.7	56,523,441	29.54	48,822,286	25.51	50,557	107,557	84.0	High	63%	Improved	17%
GBR NAO DTS1824 NGI	163	1,007	27,865	827	45,200,571	115,021,356	126,155,251	67,055,484	53.2	35,196,153	27.90	28,096,372	22.27	31,653	66,621	55.0	High	82%	Improved	11%
GBR NAO FPO0010 NGI	1,842	829	113,976	549	26,900,937	78,168,385	80,158,770	40,656,615	50.7	10,614,713	13.24	5,075,795	6.33	36,227	49,027	13.1	Weak	18%	Improved	7%
GBR NAO DTS40XX NGI*	9	165	2,212	525	33,174,446	63,877,595	76,611,243	40,626,962	53.0	19,518,634	25.48	15,902,540	20.76	127,673	245,731	56.6	High	42%	Improved	7%
GBR NAO DTS1218 NGI*	196	696	29,395	934	19,321,417	52,178,991	55,630,410	27,433,974	49.3	11,237,652	20.20	6,998,263	12.58	23,276	39,425	31.7	Reasonable	8%	Improved	5%
GBR NAO TBB2440 NGI*	36	329	7,680	1,768	14,918,062	42,927,577	43,001,309	18,761,294	43.6	7,471,844	17.38	6,754,664	15.71	34,307	57,013	42.5	Reasonable	670%	Improved	4%
GBR NAO FPO1218 NGI	77	443	13,697	497	16,914,912	34,631,766	39,205,812	23,181,492	59.1	9,985,916	25.47	7,726,797	19.71	29,807	52,365	103.6	Reasonable	97%	Improved	3%
GBR NAO FPO1012 NGI	179	377	26,602	377	11,144,867	28,092,179	30,744,827	19,562,220	63.6	8,506,470	27.67	5,859,978	19.06	29,329	51,895	38.6	Reasonable	0%	Stable	3%
GBR NAO DRB1218 NGI	117	337	14,274	737	13,026,548	27,903,019	28,586,891	10,900,555	38.1	2,891,223	10.11	1,400,086	4.90	23,791	32,379	12.9	Weak	-59%	Deteriorated	3%
GBR NAO DRB2440 NGI*	23	204	4,864	712	9,365,739	22,650,925	22,772,292	12,305,949	54.0	4,884,361	21.45	4,003,624	17.58	36,441	60,424	42.3	Reasonable	22%	Improved	2%
GBR NAO HOK2440 NGI*	15	235	3,795	702	8,447,152	18,730,772	19,117,379	6,034,349	31.6	2,382,202	12.46	1,406,158	7.36	15,556	25,703	16.8	Weak	-20%	Deteriorated	2%
GBR NAO DRB1824 NGI	25	156	5,149	753	7,863,693	17,446,310	17,539,790	9,121,036	52.0	3,308,296	18.86	2,618,939	14.93	37,195	58,365	40.1	Reasonable	2%	Stable	2%
GBR NAO FPO1824 NGI*	16	186	3,870	378	7,678,701	14,998,484	16,979,709	10,373,219	61.1	4,853,141	28.58	3,898,822	22.96	29,725	55,860	79.7	High	57%	Improved	2%
GBR NAO TBB1824 NGI	17	86	4,226	1,297	4,182,272	16,812,739	16,824,309	9,708,589	57.7	4,830,234	28.71	4,334,946	25.77	56,891	113,221	102.0	High	189%	Improved	1%
GBR NAO DTS0010 NGI	215	231	15,974	651	4,805,782	14,179,029	14,594,254	8,071,316	55.3	2,703,008	18.52	1,712,373	11.73	23,274	34,993	15.2	Reasonable	52%	Improved	1%
GBR NAO DFN2440 NGI*	13	214	3,107	351	5,303,921	11,808,426	11,883,783	5,227,778	44.0	2,481,798	20.88	2,327,561	19.59	12,843	24,450	42.9	Reasonable	30%	Improved	1%
GBR NAO DTS1012 NGI	79	141	8,947	809	3,997,457	11,029,208	11,498,241	6,015,727	52.3	2,695,547	23.44	1,747,646	15.20	23,552	42,674	28.1	Reasonable	16%	Improved	1%
GBR NAO HOK0010 NGI	649	97	20,361	446	3,091,636	10,225,928	10,926,936	5,436,764	49.8	1,341,238	12.27	717,232	6.56	42,281	56,127	8.0	Weak	500%	Improved	1%
GBR NAO DFN0010 NGI	533	141	19,952	573	3,170,918	9,518,474	10,037,818	6,408,823	63.8	1,459,827	14.54	862,321	8.59	35,192	45,573	8.7	Weak	62%	Improved	1%
GBR NAO DRB0010 NGI	119	101	6,654	829	2,783,600	6,937,795	7,242,828	2,453,709	33.9	457,691	6.32	58,813	0.81	19,760	24,291	- 0.0	Weak	-70%	Deteriorated	1%
GBR NAO DRB1012 NGI	29	63	3,150	926	1,830,516	5,006,193	5,158,008	1,676,675	32.5	423,678	8.21	139,131	2.70	19,847	26,558	3.9	Weak	-73%	Deteriorated	0%
GBR NAO MGP1218 NGI	21	35	1,842	154	7,141,827	4,042,392	4,744,222	2,407,494	50.7	1,073,165	22.62	828,319	17.46	37,926	68,429	45.1	Reasonable	69%	Improved	0%
GBR NAO DFN1012 NGI*	16	58	1,616	214	2,790,702	3,565,432	3,588,735	1,563,304	43.6	634,893	17.69	600,069	16.72	16,072	27,063	23.7	Reasonable	30%	Improved	0%
GBR NAO TBB1218 NGI	21	50	2,280	3,089	750,109	2,839,318	2,981,951	939,336	31.5	190,415	6.39	98,792	3.31	15,120	18,964	5.0	Weak	131%	Improved	0%
GBR NAO MGP0010 NGI	38	28	1,892	177	2,929,032	2,355,174	2,426,376	1,117,108	46.0	369,819	15.24	220,374	9.08	26,943	40,276	13.8	Weak	48%	Improved	0%
GBR NAO HOK1012 NGI*	18	35	1,730	3,306	387,351	1,793,697	1,832,440	244,765	13.4	- 140,315	- 7.66	- 231,837	- 12.65	10,928	6,946	- 26.5	Weak	26%	Improved	0%
GBR NAO PGP0010 NGI*	100	21	3,177	776	481,456	1,702,165	1,781,037	919,429	51.6	233,407	13.11	123,826	6.95	32,641	43,746	7.3	Weak	1523%	Improved	0%
GBR NAO TBB0010 NGI*	23	18	1,057	2,693	229,455	1,001,847	1,054,090	364,061	34.5	47,178	4.48	10,981	1.04	17,530	20,140	- 0.6	Weak	113%	Improved	0%

Data source: MS data submissions under the DCF 2019 Fleet Economic (MARE/A3/ASC(2019)); All monetary values have been adjusted for inflation; constant prices (2015).

Table 5.69 United Kingdom: Landed value, weight and average price of principal species

	Value of landings (real) (thousand €)										Live weight of landings kg										Average landed price (real) (€)										% over total	
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	in EUR	in weight
Atlantic mackerel	152.0	198.5	180.9	253.2	203.2	174.9	281.8	220.2	223.0	224.4	127,998,038	172,309,994	160,671,171	182,215,008	168,841,426	163,809,072	287,978,420	247,992,652	217,637,251	226,930,875	1.2	1.2	1.1	1.4	1.2	1.1	1.0	0.9	1.0	1.0	20%	31%
Norway lobster	173.7	127.0	126.6	138.9	143.0	104.1	123.5	113.2	125.7	109.4	43,552,193	43,026,614	38,694,392	34,528,712	32,765,164	28,486,456	30,534,565	25,942,359	31,487,690	30,615,340	4.0	3.0	3.3	4.0	4.4	3.7	4.0	4.4	4.0	3.6	10%	4%
Atlantic cod	49.6	41.3	59.1	57.1	56.2	55.4	62.2	67.6	63.8	86.9	19,342,872	22,539,767	25,768,882	23,185,762	26,462,622	29,564,018	30,721,461	28,942,892	32,996,696	38,759,272	2.6	1.8	2.3	2.5	2.1	1.9	2.0	2.3	1.9	2.2	8%	5%
Great Atlantic scallop	58.7	57.7	65.4	67.2	77.0	65.3	67.2	79.0	80.8	74.2	22,288,729	27,627,491	30,917,244	30,130,184	34,383,792	31,180,108	28,515,118	28,434,652	28,298,567	26,811,629	2.6	2.1	2.1	2.2	2.2	2.1	2.4	2.8	2.9	2.8	7%	4%
Anglerfishes nei	63.0	61.4	61.9	62.6	56.6	49.4	56.9	64.5	72.8	65.3	15,430,749	15,100,075	14,392,034	15,150,018	13,455,713	13,616,927	15,860,093	18,168,024	20,484,496	20,415,424	4.1	4.1	4.3	4.1	4.2	3.6	3.6	3.6	3.6	3.2	6%	3%
Edible crab	41.0	32.8	38.6	41.0	45.2	45.8	55.3	54.2	57.4	60.4	22,809,106	22,552,483	24,776,858	26,799,656	28,402,744	29,325,994	33,146,141	29,829,054	33,797,431	33,278,987	1.8	1.5	1.6	1.5	1.6	1.6	1.7	1.8	1.7	1.8	5%	5%

Data source: MS data submissions under the DCF 2018 Fleet Economic (MARE/A3/AC(2018)); All monetary values have been adjusted for inflation; constant prices (2015).

6 AER REPORT METHODOLOGY

Background

The data used to compile all the various analyses contained within the report were collected under the EU Data Collection Framework, cf. Council Regulation (EC) No 199/2008 of 25 February 2008 for the years 2008 -2016 (DCF) and cf. Council Regulation (EC) No 2017/1004 of 17 May 2017, for the years 2017-2018 (EU-MAP).

This year's fleet economic data call was issued by DG MARE on the 29 January 2019 with a one-month deadline (4 March 2019). The call requested transversal and economic data for the years 2017 and 2018. Capacity data were requested up to and including 2018, while employment and economic parameters were requested up to and including 2017. Member States were able to resubmit previous years data (DCF, 2008-2016) if needed.

Days-at-sea, fishing days, landings in value and weight were requested up to and including 2018, as well as, income from landings (all non-mandatory) to allow for economic performance nowcasts to be estimated at fleet segment and national level for 2018 and 2019.

The table below outlines all the economic and transversal variables to be submitted for the years 2008-2017/18, along with their uploading acronyms and corresponding aggregation levels. All the various definitions for variables, aggregation levels, gear types, length classes, DCF supra regions, FAO sub regions, species, sampling strategies and precision levels can be found by navigating through the data collection website.

See https://datacollection.jrc.ec.europa.eu

Table 6.1 EU MAP data requirements - Economic variables for the fleet

Variable group	Variable	Variable code	Unit	Years	Aggregation level	Template	Other requested fields	AR support fields**
Number of fishing enterprises/units	1 owned vessel	*oneves*	Number	2017-2018	Yearly, by: 1) National totals.	1) map_ms	Sampling Strategy, Achieved Sample Rate, Coefficient of Variation (for national totals, only achieved sample rate is requested) Geographical Indicator at fleet segment level	Data source, Response rate (at fleet segment level only)
	2-5 owned vessels	*twofiveves*						
	>5 owned vessels	*sixmoreves*						
Employment	Engaged crew	*totjob*	Number	2017	Yearly, by: 1) Fleet segment and Supra-region; 2) National totals.	1) map_fs 2) map_ms		
	Unpaid labour	*unpaidemp*						
	FTE national*	*totnotfte*						
	Total hours worked per year	*hrworked*	Hour					
Income	Gross value of landings	*totlandginc*	Euro	2017-2018*				
	Income from leasing out quota or other fishing rights	*totrightsinc*		2017				
	Other income	*tototherinc*						
Subsidies	Operating subsidies	*totdirsub*	Euro	2017				
	Subsidies on investments	*subinvest*						
Labour costs	Personnel costs	*totcrewwage*	Euro	2017				
	Value of unpaid labour	*totunpaidlab*						
Energy costs	Energy costs	*totenercost*	Euro	2017				
Repair and maintenance costs	Repair and maintenance costs	*totrepcost*	Euro	2017				
Other operating costs	Other variable costs	*totvarcost*	Euro	2017				
	Other non-variable costs	*totnovarcost*						
	Lease/rental payments for quota or other fishing rights	*totrightscost*						
Capital costs	Consumption of fixed capital	*totdepcost*	Euro	2017				
Capital value	Value of physical capital	*totdeprep*	Euro	2017				
	Value of quota and other fishing rights	*totrights*						
Investment	Investments in tangible assets	*totinvest*	Euro	2017				
Financial position	Long/short debt (gross debt)	*debts*	Euro	2017				
	Total assets	*assets*						

*2018 data not mandatory but requested from MS wherever possible in order to estimate economic projections for 2019. These data, where provided, will be flagged as preliminary in the 2019 Annual Fleet Economic Report and corresponding data tables.

** Non-mandatory

Table 6.2 EU MAP data requirements – Fishing activity (transversal) variables

Variable group	Variable	Variable code	Unit	Years	Aggregation level	Template	Other requested fields	AR support fields*
Fleet Capacity	Number of vessels	*totves*	Number	2017-2018	Yearly, by: 1) Fleet segment and Supra-region; 2) National totals.	1) map_capacity 2) map_ms	Geographical Indicator at fleet segment level	Frame population, Survey name (at fleet segment level only)
	Mean LOA of vessels	*avgloa*	Metre					
	Total vessel tonnage	*totgt*	GT					
	Total vessel power	*totkw*	kW					
	Mean age of vessels	*avgage*	Year					
Effort	Fishing days	*totfishdays*	Day	2017-2018*	Yearly, by: 1) Fleet segment and Supra-region; 3) (2) + FAO Area level 4 for the Baltic), GFCM-GSA for the Mediterranean & Black Sea and FAO Area level 3 for all other regions); 3) National Totals;	1) map_fs 2) map_fssub 3) map_ms	Sampling Strategy, Achieved Sample Rate, Coefficient of Variation (for national totals, only achieved sample rate is requested) Geographical Indicator at fleet segment level	Data source, Response rate (at fleet segment level only)
	Days at sea	*totseadays*						
	kW Fishing days	*totkwfishdays*	kWday	2017				
	GT Fishing days	*totgtfishdays*	GTday					
	kW days at sea**	*totkwseadays*	kWday					
	GT days at sea**	*totgtseadays*	GTday					
	Energy Consumption	*totenercons*	Litre	2017	Yearly, by: 1) Fleet segment and Supra-region; 2) National totals.	1) map_fs 2) map_ms		
	Number of fishing trips	*tottrips*	Number					
	Maximum days at sea**	*maxseadays*	Day	2017	Yearly, by: 1) Fleet segment and Supra-region.	1) map_fs		
Landings per species	Live weight of landings per species	*totwghtlandg*	kg	2017-2018*	Yearly, by: 1) Fleet segment and Supra-region, FAO Area level 4 (Baltic), GFCM-GSA (Mediterranean & Black Sea), FAO Area level 3 (All other regions) 2) National Totals.	1) map_fsfao 2) map_msfao		
	Value of landings per species	*totvallandg*	Euro	2017-2018*				

*2018 data not mandatory but requested from MS wherever possible in order to estimate economic projections for 2019. These data, where provided, will be flagged as preliminary in the 2019 Annual Fleet Economic Report and corresponding data tables.

** Non-mandatory

Concepts, Terms and Definitions

Revenue

Revenue – the value of production (sale of landed seafood products) and income generated from the use of the vessel in other, non-commercial fishing activities, such as recreational fishing, transport, tourism, oil rig duty, research, etc., may also include insurance payment for gear damage/loss /vessel. Income from direct subsidies and fishing rights are excluded.

Gross Value Added (GVA)

Gross Value Added - net output of a sector after deducting intermediate inputs from all outputs. It is a measure of the contribution to GDP made by an individual producer, industry or sector. The Gross Value Added indicator calculated in this report is similar, but does not fully correspond to the Value added at factor cost of the Structural Business Statistics.

GVA to Revenue

Gross value added to revenue ratio - indicates the share of revenue that contributes to the economy through factors of production (returns to labour and returns to capital). Indicator is calculated as the ratio between gross value added and revenue and expressed as a percentage.

Gross profit

Gross profit – the normal profit after accounting for operating costs, excluding capital costs. Also referred to as gross cash flow, i.e. the flow of cash into and out of a sector or firm over a period of time.

Gross profit margin (%)

Gross profit margin - a measure of profitability that can be used to analyse how efficiently a sector is using its inputs to generate profit. Calculated as the ratio between gross profit and revenue. Expressed as a percentage.

Gross profit margin indicates the normal profitability of a firm and is of most interest to fishers as it represents the share of income they are left with at the end of the year. For managers, it may be used as an indication of the viability of an industry in terms of its commercial profitability by measuring the share of cash coming in and out of an industry. A high gross profit margin indicates that the sector has a low-cost operating model; reflects efficiency in turning inputs into outputs. A low percentage value can indicate a low margin of safety, i.e. a higher risk that declines in production or increases in costs may result in a net loss, or negative profit margin.

Net profit

Net profit is the difference between revenue and explicit costs and opportunity costs. Explicit costs include all operational costs, such as wages, energy, repair and other variable and non-variable costs. Net profit differs from gross profit in that it includes depreciation and opportunity costs of capital. It measures the efficiency of a producer in society's view by evaluating the total costs of inputs (excluding natural resource costs) in comparison to outputs or revenue.

Economic profit is the primary indicator of economic performance and is often used as a proxy of resource rent in fisheries. Economic profits emerge as the excess of revenue over the opportunity cost of producing the good. Also referred to as supernormal or abnormal profits. Abnormal profits in a sector is an incentive for other firms to enter the industry (if they can). Zero or a negative profit margin may indicate high competition in the sector and can be used as one of the indicators of overcapacity.

Net profit margin (%)

Economic profit margin - a measure of profitability after all costs have been accounted for, and reflects the percentage of revenue that a sector retains as profit. It measures the relative performance of the sector compared to other activities in the economy and provides an indication of the sector's operating efficiency as it captures the amount of surplus generated per unit of production.

Labour productivity (GVA/FTE):

Labour productivity - defined as output per unit of labour. Calculated as Gross Value Added (measure of output) by full-time equivalent (FTE) employment (unit of labour input). Labour productivity can be used

as a measure of economic growth, competitiveness, and living standards within a sector. An increase in labour productivity indicates that a unit of input labour is producing more output or that the same amount of output is being produced with fewer units of labour. Labour productivity may also provide an indicator of worker's wellbeing or living standards, assuming that increases in productivity are matched by wage increases.

Capital productivity

Capital productivity - the return of the investment divided by the cost of the investment, also referred to as ROI (Rate on Investment). It measures profits in relation to capital invested, i.e. indicates how profitable a sector is relative to its total assets. The higher the return, the more efficient the sector is in utilising its asset base.

As data on intangible assets (e.g. fishing rights, natural resource) are not always available in fisheries, the Return on Fixed Tangible Assets (ROFTA) is used as an approximation of ROI.

Economic performance indicator calculations

From the data submitted by Member States, indicators were calculated in order to assess the economic performance of fleet segments, national fleets, regional fleets and the EU fleet as a whole.

In order to account for inflation over the given time-period, all nominal values (i.e., the actual price in a given year) were converted to real values before estimating indictors.

For this conversion from nominal to real values, a Consumer Price Index (CPI) 'deflator' for each MS was applied to nominal values. Annual CPI data from taken from Eurostat's time-series of harmonised CPI http://epp.eurostat.ec.europa.eu/portal/page/portal/hicp/data/database (Table 6.3).

$$Real\ value_{\ i} = \frac{Nominal\ value_i}{\frac{CPI_i}{CPI_{2015}}}$$

where i represents the year for which the nominal value is converted into 2015 real value

All values in this report are therefore given in real 2015 EUR, rather than nominal EUR.

For economic performance calculations the following formulas were used:

Total Income:

Total Revenue = Income from landings + income from fishing rights + other income + direct subsidies

Revenue:

Revenue = Income from landings + other income

Gross Value Added (GVA)

GVA = Income from landings + other income – energy costs – repair costs – other variable costs – non variable costs

Net Value Added (NVA)

NVA = Income from landings + other income – energy costs – repair costs – other variable costs – non variable costs – depreciation cost – opportunity cost of capital

Gross Profit (GRP)

GRP = Income from landings + other income – crew costs – unpaid labour - energy costs – repair and maintenance costs – other variable costs – non variable costs

Net Profit/Loss

Net Profit = Income from landings + other income – crew costs – unpaid labour - energy costs – repair costs – other variable costs – non variable costs – depreciation cost – opportunity cost of capital

Where opportunity cost of capital = fixed tangible asset value * real interest

Where real interest (r) = [(1 + i)/ (1 + π)] -1.

Where i is the nominal interest rate of the Member State in the year concerned and π is the inflation rate of the Member State in the year concerned. See Table 6.3.

Rate of Return on Fixed Tangible Assets (RoFTA)

RoFTA = (net profit + opportunity cost of capital) / tangible asset value (vessel depreciated replacement value)

Rate of Return on Investment (RoI)

RoI = (net profit + opportunity cost of capital) / capital asset value

Where net profit is calculated as:

Net Profit = Income from landings + other income + income from fishing rights – crew costs – unpaid labour - energy costs – repair costs – other variable costs – non variable costs – fishing rights costs – depreciation cost – opportunity cost of capital

And capital asset value as:

Capital asset value = vessel depreciated replacement value + estimated value of fishing rights

Break-even revenue (BER)

BER = (Fixed costs + opportunity costs of capital +depreciation) / (1-(crew costs + unpaid labour + energy costs + repair and maintenance costs + other variable costs)/Revenue)

Revenue to Break-even Revenue Ratio (CR/BER)

CR/BER = revenue / break-even revenue = Income from landings + other income / BER

CR/BER gives an indication of the short-term profitability of the fleet/fleet segment (or over/under capitalised): if the ratio is greater than 1, then enough cash flow is generated to cover fixed costs (economically viable in the short term). If the ratio is less than 1, insufficient cash flow is generated to cover fixed costs (indicating that the segment is economically unviable in the short to mid-term).

For energy use and other productivity and efficiency indicators, the following formulas were used:

Energy use – fuel efficiency and intensity

Fuel intensity - quantity of fuel consumed per quantity of fish landed (litre per tonne),

Fuel efficiency - ratio between fuel costs and the income from landings expressed as a percentage (%).

Table 6.3 Harmonised index of consumer prices (HICP) by EU Member State, 2008-2018

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
BEL	90.00	89.99	92.09	95.18	97.68	98.90	99.38	100.00	101.77	104.03	105.68
BGR	91.55	93.81	96.66	99.94	102.33	102.72	101.08	100.00	98.68	99.85	101.45
DNK	91.20	92.10	94.10	96.60	98.90	99.40	99.80	100.00	100.00	101.10	101.63
DEU	91.90	92.10	93.20	95.50	97.50	99.10	99.90	100.00	100.40	102.10	103.47
EST	85.45	85.62	87.96	92.43	96.33	99.46	99.93	100.00	100.80	104.48	107.75
IRL	99.50	97.80	96.20	97.40	99.20	99.70	100.00	100.00	99.80	100.10	100.40
GRC	93.55	94.81	99.27	102.36	103.42	102.54	101.11	100.00	100.02	101.15	101.49
ESP	92.41	92.19	94.08	96.94	99.31	100.83	100.63	100.00	99.66	101.69	102.79
FRA	92.34	92.44	94.05	96.20	98.33	99.31	99.91	100.00	100.31	101.47	103.08
HRV	89.56	91.56	92.55	94.59	97.76	100.04	100.26	100.00	99.37	100.67	101.86
ITA	90.40	91.10	92.60	95.30	98.40	99.70	99.90	100.00	99.90	101.30	102.07
CYP	92.55	92.71	95.09	98.40	101.45	101.84	101.57	100.00	98.78	99.45	98.81
LVA	91.14	94.11	92.96	96.88	99.09	99.11	99.79	100.00	100.10	103.00	105.11
LTU	87.69	91.34	92.43	96.24	99.28	100.44	100.68	100.00	100.68	104.42	107.41
MLT	88.33	89.95	91.79	94.10	97.13	98.08	98.84	100.00	100.90	102.18	103.51
NLD	90.32	91.20	92.05	94.32	96.99	99.47	99.79	100.00	100.11	101.40	102.54
POL	86.80	90.30	92.70	96.30	99.80	100.60	100.70	100.00	99.80	101.40	102.40
PRT	92.78	91.95	93.22	96.54	99.22	99.65	99.50	100.00	100.64	102.20	102.94
ROU	78.33	82.70	87.73	92.84	95.98	99.04	100.41	100.00	98.93	100.00	103.86
SVN	91.13	91.92	93.85	95.81	98.50	100.39	100.76	100.00	99.85	101.40	103.04
FIN	87.89	89.32	90.83	93.85	96.81	98.96	100.16	100.00	100.39	101.23	102.03
SWE	92.83	94.63	96.43	97.75	98.66	99.10	99.30	100.00	101.14	103.02	104.81
GBR	84.70	86.60	89.40	93.40	96.10	98.50	100.00	100.00	100.70	103.40	105.93

HICP (2015 = 100) - annual data (average index and rate of change) Source: Eurostat[24]

[24] Starting with the release of January 2016 data, the reference year of the HICP changed to 2015=100. The change of reference year caused revisions to a number of previously published inflation rates because of rounding effects. Thus, inflation rates for European and country aggregates calculated from the 2015=100 series can differ from the rates calculated from the 2005=100 series.

Table 6.4 Inflation, nominal and real LT interest rates by EU Member State 2010-2018

	Inflation									Interest rate									real interest rate								
MS	2010	2011	2012	2013	2014	2015	2016	2017	2018	2010	2011	2012	2013	2014	2015	2016	2017	2018	2010	2011	2012	2013	2014	2015	2016	2017	2018
BEL	2.3	3.4	2.6	1.2	0.5	0.6	1.8	2.2	2.3	3.46	4.23	3.00	2.41	1.71	0.84	0.48	0.72	0.80	0.35	0.19	0.11	0.55	0.81	0.15	-0.47	-0.46	-0.46
BGR	3	3.4	2.4	0.4	-1.6	-1.1	-1.3	1.2	2.6	6.01	5.36	4.50	3.47	3.35	2.49	2.27	1.60	0.89	0.75	0.44	0.62	2.19	-8.25	-35.90	-11.91	0.18	-0.47
CYP	2.6	3.5	3.1	0.4	-0.3	-1.5	-1.2	0.7	0.8	4.60	5.79	7.00	6.50	6.00	4.54	3.77	2.62	2.18	0.56	0.51	0.95	4.36	9.00	-12.08	-24.86	1.13	0.76
DEU	1.2	2.5	2.1	1.6	0.8	0.1	0.4	1.7	1.9	2.74	2.61	1.50	1.57	1.16	0.50	0.09	0.32	0.40	0.70	0.03	-0.19	-0.01	0.20	0.36	-0.22	-0.51	-0.52
DNK	2.2	2.7	2.4	0.5	0.3	0.2	0.0	1.1	0.7	2.93	2.73	1.40	1.75	1.33	0.69	0.32	0.48	0.46	0.23	0.01	-0.29	0.83	0.79	0.41	0.32	-0.30	-0.14
ESP	2	3.1	2.4	1.5	-0.2	-0.6	-0.3	2.0	1.7	4.25	5.44	5.85	4.56	2.72	1.73	1.39	1.56	1.42	0.75	0.57	1.01	1.22	3.65	5.83	2.42	-0.15	-0.10
EST	2.7	5.1	4.2	3.2	0.5	0.1	0.8	3.7	3.4	5.97	:	:				0.37			0.88	-0.84			-0.33	-0.09	-0.24	-0.79	-0.77
FIN	1.7	3.3	3.2	2.2	1.2	-0.2	0.4	0.8	1.2	3.01	3.01	1.89	1.86	1.45	0.72	0.00	0.55	0.66	0.49	-0.07	-0.31	-0.11	0.11	1.15	-0.29	-0.14	-0.24
FRA	1.7	2.3	2.2	1	0.6	0.1	0.3	1.2	2.1	3.12	3.32	2.54	2.20	1.67	0.84	0.47	0.81	0.78	0.53	0.31	0.11	0.60	0.67	0.67	0.13	-0.18	-0.42
GBR	3.3	4.5	2.8	2.6	1.5	0.0	0.7	2.7	2.5	3.36	2.87	1.74	2.03	2.14	1.78	1.22	1.18	1.41	0.01	-0.30	-0.28	-0.16	0.26	1.78	0.31	-0.41	-0.31
GRC	4.7	3.1	1	-0.9	-1.4	-1.1	0.0	1.1	0.8	9.09	15.75	22.50	10.05	6.93	9.67	8.36	5.98	4.19	0.77	3.09	10.75	109.50	-20.82	-107.7	8.36	2.32	1.88
HRV	1.1	2.2	3.4	2.3	0.2	-0.3	-0.6	1.3	1.6	6.29	6.54	6.13	4.68	4.05	3.55	3.49	2.77	2.17	2.47	1.36	0.62	0.72	3.21	5.50	10.21	0.64	0.22
IRE	-1.6	1.2	1.9	0.5	0.3	0.0	-0.2	0.3	0.7	5.74	9.60	6.17	3.79	2.37	1.18	0.74	0.80	0.95	-12.23	3.82	1.47	2.19	1.59	1.18	1.17	0.39	0.15
ITA	1.6	2.9	3.3	1.3	0.2	0.1	-0.1	1.3	1.2	4.04	5.42	5.49	4.32	2.89	1.71	1.49	2.11	2.61	0.94	0.65	0.51	1.31	2.24	1.46	1.76	0.35	0.64
LTU	1.2	4.1	3.2	1.2	0.2	-0.7	0.7	3.7	2.5	5.57	5.16	4.83	3.83	2.79	1.38	0.90	0.31	0.31	1.98	0.21	0.39	1.20	2.16	6.93	0.12	-0.72	-0.63
LVA	-1.2	4.2	2.3	0.0	0.7	0.2	0.1	2.9	2.6	10.34	5.91	4.57	3.34	2.51	0.96	0.53	0.83	0.90	-57.69	0.33	0.69	3.34	1.06	0.63	0.39	-0.53	-0.47
MLT	2	2.5	3.2	1	0.8	1.2	0.9	1.3	1.7	4.19	4.49	4.13	3.36	2.61	1.49	0.89	1.28	1.39	0.73	0.57	0.22	1.18	1.01	0.13	-0.01	-0.01	-0.12
NLD	0.9	2.5	2.8	2.6	0.3	0.2	0.1	1.3	1.6	2.99	2.99	1.93	1.96	1.45	0.69	0.29	0.52	0.58	1.10	0.14	-0.23	-0.18	0.89	0.41	0.18	-0.34	-0.39
POL	2.7	3.9	3.7	0.8	0.1	-0.7	-0.2	1.6	1.2	5.78	5.97	5.00	4.03	3.52	2.70	3.04	3.42	3.20	0.83	0.42	0.28	1.79	3.11	11.33	4.04	0.70	0.91
PRT	1.4	3.6	2.8	0.4	-0.2	0.5	0.6	1.6	1.2	5.40	10.24	10.55	6.29	3.75	2.42	3.17	3.05	1.84	1.66	1.44	2.04	4.21	4.94	1.28	1.61	0.56	0.29
ROU	6.1	5.8	3.4	3.2	1.4	-0.4	-1.1	1.1	4.1	7.34	7.29	6.68	5.41	4.48	3.47	3.32	3.96	4.69	0.17	0.22	0.75	0.53	1.28	6.45	-44.24	1.36	0.12
SVN	2.1	2.1	2.8	1.9	0.4	-0.8	-0.2	1.6	1.9	3.83	4.97	5.81	5.81	3.27	1.71	1.15	0.96	0.93	0.56	0.93	0.79	1.35	2.05	12.55	1.69	-0.25	-0.33
SWE	1.9	1.4	0.9	0.4	0.2	0.7	1.1	1.9	2.0	2.89	2.61	1.59	2.12	1.72	0.72	0.54	0.65	0.65	0.34	0.50	0.36	1.23	1.26	0.01	-0.27	-0.43	-0.45

Annual average rate of change (%) HICP - Inflation rate – Source: Eurostat

http://epp.eurostat.ec.europa.eu/portal/page/portal/hicp/data/main_tables

Harmonised long-term interest rates for convergence assessment purposes - Source: ECB

http://www.ecb.int/stats/money/long/html/index.en.html

Economic Performance Indicator Classifications

Development trend

The development trend, calculated as the change between 2017 and the average value 2008-2016, for the economic performance indicators analysed, such as GVA, gross profit, net profit and GVA/FTE were classified as High, Reasonable or Weak according to the criteria in Table 6.5.

Table 6.5 Development trend classification

Development - change 2017/ average 2008-2016	
>5%	Improved
-5% - 5%	Stable
< -5%	Deterioration

Based on: Pavel, AER 2005

Profitability

Profitability, as net profit (or net profit as a % of income, where income includes income from the sale of fish and other non-fishing income and excludes direct income subsidies and income from fishing rights) was classified as *High*, *Reasonable* or *Weak* according to the criteria in Table 6.6.

Table 6.6 Profitability classification

Profitability: Net profit margin in 2017		
>10%	High	Profitability is good and segment is generating a good amount of resource rent
0-10%	Reasonable	Segment is profitable generating some resource rents
<0%	Weak	The segment is making losses; economic overcapacity

Disaggregation of economic data

Fleet economic data cannot be collected at higher resolution than defined in the DCF. Only landings (value and weight) and effort data (days-at-sea, fishing days, etc.) are provided by Member States at the sub-region level by fleet segment. Therefore, the correlation with transversal data is the only viable way for disaggregating economic data at the sea basin level (Baltic Sea, North Sea, NE Atlantic, Mediterranean & Black Sea and Other Fishing Regions).

Several assumptions can be made based on correlations between transversal and economic data, which were previously examined during the PGECON workshop in Hamburg 2012. However, these analyses are still preliminary and considered as work in progress. PCEGON (2013) strongly recommended a study on the disaggregation that delivers a comprehensive analysis of different approaches and methods, while also addressing the availability of individual data which varies by MS.

This year, the effort based approach was again used to disaggregate economic data. Seeing that the methodology is still to be validated, this exploratory exercise set out to estimate the economic performance indicators at the sea basin level by MS and fleet segment.

For this exercise, transversal and economic data by fleet segment were disaggregated based on either the number of active vessels, value of landings or effort (days-at-sea), as:

- (1) Number of vessels in region (N_{Reg}) – used to estimate fleet capacity, non-variable costs and capital costs (annual depreciation and opportunity costs of capital)
- (2) Value of landings (VaL) – used to allocate income from landings;
- (3) Effort in days-at-sea (DAS) – used to allocate all variable costs, including labour, energy, repair & maintenance, and fuel consumption. DAS was also used to estimate the number of vessels when N_{Reg} was not available.

The estimated number of vessels in the region ($N_{Reg*)}$ was calculated based on DAS and using the total number of vessels (N_{tot}), as:

$$N_{Reg*} = \frac{DAS_{Reg}}{\sum DAS_{Reg}} \times N_{Tot}$$

When available, the number of vessels operating in a given region (N_{Reg}) was used to disaggregate other capacity variables (GT and kW), as:

Gross tonnage (GT): $GT_{reg} = \frac{N_{Reg}}{\sum N_{Reg}} \times GT_{Tot}$, if N_{Reg} is missing, $GT_{reg} = \frac{GT_{Tot}}{N_{Tot}} \times N_{Reg*}$

Engine power (kW): $kW_{Reg} = \frac{N_{Reg}}{\sum N_{Reg}} \times kW_{Tot}$, if N_{Reg} is missing, $kW_{reg} = \frac{kW_{Tot}}{N_{Tot}} \times N_{Reg*}$

The number of vessels in the region was also used to disaggregate employment, *other income* (OInc), *non-variable costs* and capital costs (*opportunity cost of capital* and *annual depreciation*), as:

Total employed (JOB): $JOB_{reg} = \frac{N_{Reg}}{\sum N_{Reg}} \times JOB_{Tot}$

Other income as: $Other\ Income_{Reg}(OInc) = \frac{N_{Reg}}{\sum N_{Reg}} \times OInc_{tot}$

Opportunity cost of capital as: $Opportunity\ Cost\ of\ Capital_{Reg}(OPC) = \frac{N_{Reg}}{\sum N_{Reg}} \times OPC_{tot}$

Annual Depreciation costs as: $Annual\ Depreciation\ Costs_{\mathrm{Re}\,g}(DEP) = \frac{N_{\mathrm{Re}\,g}}{\sum N_{\mathrm{Re}\,g}} \times DEP_{tot}$

Income from Landings was disaggregated based on the value of landings (VaL) in the region and the total value of landings for the fleet segment multiplied by Income:

Income from landings: $Landings\ Income_{\mathrm{Re}\,g}(LInc) = \frac{VAL_{\mathrm{Re}\,g}}{\sum VAL_{\mathrm{Re}\,g}} \times LInc_{Tot}$

If N_{Reg} is missing, $Landings\ Income_{\mathrm{Re}\,g}(LInc) = \frac{VAL_{\mathrm{Re}\,g}}{VAL_{Tot}} \times LInc_{Tot}$

Crew wage (CW), unpaid labour, fuel costs (FC), repair & maintenance (REP) and other variables costs (VAR) were allocated based on effort (DAS) as:

Crew wages: $CW_{reg} = \frac{DAS_{\mathrm{Re}\,g}}{\sum DAS_{\mathrm{Re}\,g}} \times CW_{Tot}$

Unpaid labour costs: $ULab_{reg} = \frac{DAS_{\mathrm{Re}\,g}}{\sum DAS_{\mathrm{Re}\,g}} \times ULab_{Tot}$

Fuel costs: $FC_{reg} = \frac{DAS_{\mathrm{Re}\,g}}{\sum DAS_{\mathrm{Re}\,g}} \times FC_{Tot}$

Repair costs: $REP_{reg} = \frac{DAS_{\mathrm{Re}\,g}}{\sum DAS_{\mathrm{Re}\,g}} \times REP_{Tot}$

Other variable costs: $VAR_{reg} = \frac{DAS_{\mathrm{Re}\,g}}{\sum DAS_{\mathrm{Re}\,g}} \times VAR_{Tot}$

This method was also used to disaggregate fuel consumption and employment.

Fuel consumption: $FCon_{reg} = \frac{DAS_{\mathrm{Re}\,g}}{\sum DAS_{\mathrm{Re}\,g}} \times FCon_{Tot}$

Full Time Equivalent (FTE): $FTE_{reg} = \frac{DAS_{\mathrm{Re}\,g}}{\sum DAS_{\mathrm{Re}\,g}} \times FTE_{Tot}$

Data Limitations

Complete estimates were not possible due to fleet segments with incomplete or missing data sets submitted by MS (i.e. number of vessels by region, landings and efforts variables by sub-region).

Fleet segments for which days-at-sea or landings in value were not available at the sub-region level, could not be completely disaggregated. Information on these MS fleet segments is provided, when either the days-at-sea or landings values that were available, occurred on only one region. In all other cases, only incomplete results could be provided. This affects the entire Spanish fleet as days-at-sea were not available, although fishing days were and used as a proxy to days-at-sea. Greece is excluded due to missing DCF data on effort and landings, as well as income. Additional information to fill gaps is provided where possible.

Nowcasting economic variables

Refer to the 2018 Annual Economic Report for a detailed account of the methodology and data sources

7 DATA COVERAGE AND QUALITY

Data validation – AER Exercise

Quality and Coverage checking procedures on the data submitted under the 2019 fleet economic data call

Although the quality and coverage of the fleet economic data reported under the Data Collection Framework are a responsibility of the EU Member States, JRC has undertaken quality and coverage checking procedures on the data submitted, some carried out during the data uploading phase and some afterwards. The quality and coverage of the data has also been checked by national fisheries experts during the STECF EWG 19-04 meeting on the 2019 Annual Economic Report of the EU fishing fleet which took place in Ispra, during the week 8 to 12 April 2019.

Data issues

In terms of the completeness of the Member States data submissions, most countries submitted the majority of the parameters requested under the call. Overall, there has been an improvement in the data quality and coverage compared to previous years. In many cases missing data relates to fleet segments with low vessel numbers for which data is hard to obtain.

In terms of data quality, inevitably some 'abnormal' estimates for various parameters were detected by the JRC or the EWG and in most cases rectified by the Member States. However, some quality issues remain outstanding.

Incomplete time series data due to either the non-submission of data, questionable data and/or new MS additions, make trend analysis at the EU level impossible without excluding the MS fleets that are incomplete. These discrepancies make an evaluation of the overall economic performance of the EU fishing fleet in 2016 impossible (Greece had to be excluded).

Under the Data Collection Framework Regulation, Member States provide transversal and economic data on their fleets at the national level and by fleet segments (combination of main fishing technology and vessel length group at the supra-region level). For this report, national level datasets were used for the EU and Member State level analyses while data submitted at the fleet segment level were used to analyse performance by fleet segment and fishing activity. While in theory both national level and fleet segment datasets submitted by MS should equate, this is not always the case and some discrepancies may exist between the two. These discrepancies are mainly due to missing/incomplete datasets at the fleet segment level or the non-submission of data due to confidentiality issues.

Due to these and other data related issues, a complete overview of the EU fishing fleet for all reference years was not possible.

Fleets for MS that were unable to deliver all the required and reliable data had to be excluded from the analyses at the EU and Regional levels.

To mitigate data deficiencies, a status quo of the EU fleet in 2017 was provided considering only Member State fleets for which reliable data were provided and trend analyses included only the MS that provided the necessary data over the entire period (2008-2017/18). The National Chapters present all the data provided by MS (some questionable data may be highlighted).

All MS were included in the EU overview analyses for 2017, with the exception of Greece, which needed to be excluded from all economic analyses due to incomplete data sets.

Submissions from France and Spain continue to be somewhat incomplete, especially for the period 2008-2010 that impacts on time-series analysis mainly. Some minor data quality issues remain for several other Member States.

For confidentiality reasons, Member States may aggregate fleet segments into clusters to provide sensitive economic data. In several cases, clustering may not be enough to guarantee confidentiality, and hence, parts of MS fleets are not completely covered. These generally relate to distant-water fleet segments and include MS such as Germany, Italy and Poland. Other MS, such as Estonia and Latvia, simply do not provide any data on part of their fleet.

When fleet segments are clustered to provide economic data, one result may be that some MS fleet segments appear to be missing but these have just been grouped together with other segments, becoming part of a cluster.

Another result of clustering may be that fleet segments with different characteristics, such as different vessel length groups or fishing gears, are grouped together which could bias results when assessing by type of fishing gear or activity, such as small-scale versus large-scale fleet. For example, a fleet segment that would otherwise be considered as small-scale (i.e. vessel under 12m using non-towed gears) may be clustered into a large-scale fleet segment (i.e. vessel under 12m using towed gears), and vice-versa. Hence, results at the fishing activity level should be considered as only indicative of each fishing type. Furthermore, although clustering of fleet segment should be applied consistently, as far as possible, over the period, this is not always the case, making time-series hard to follow.

Member State specific data issues and developments

Although the coverage and quality of the data submitted by Member States has improved significantly over the years, some data issues remain. These include, in particular to data for 2017/18 (EU-MAP), the following:

Belgium: No major data transmission issues to report. *Unpaid labour* not provided for 2017 for any of the fleet segments and MS total. *Value of physical capital* for inactive vessels missing all years.

Bulgaria: Significant effort has been made by Bulgaria over the last years to improve on the data quality and coverage. A few minor missing data remain, such as *Value of physical capital* for inactive vessels in 2017. Bulgaria should try to avoid reporting landings for sea snails as RPN (*rapana spp*.); if species is in fact *rapana venosa*, landings should be reported as RPW (in line with Romania).

Croatia: No major data transmission issues to report. As a new Member State, Croatia submits data from 2012 onwards.

Cyprus: *Other non-variable costs* missing for some small scale fleet segments (PGO VL0006 and PGO VL 0612 in 2017. Only partial data reported for PS VL2440 due to confidentiality (1 vessel). National level and fleet segment totals are significantly different in 2017 for vessel tonnage, suggesting that one of the data sets is not complete which may affect indicator calculations.

Denmark: No major data transmission issues to report. Requested variables for 2018 not reported. Capital value (tangible assets replacement value) for inactive vessels not provided for all years. National level and fleet segment totals are significantly different in 2017 for total investments suggesting that one of the data sets is not complete which may affect indicator calculations.

Estonia: No data transmission issues to report. For confidentiality reasons, Estonia only provides data for its Baltic Sea fleet, i.e., no data are provided for the distant water fleet; this impacts on the AER as a complete coverage of the EU fleet is not possible. National level and fleet segment totals are significantly different in 2017 for GT fishing days, suggesting that one of the data sets is not complete which may affect indicator calculations

Finland: No major data transmission issues to report. *Value of physical capital* for inactive vessels not reported for 2017. GT fishing days and kW fishing days not reported for passive gears (PG VL0010 and PG VL1012) in 2017

France: A significant amount of missing data for essential parts of the data call still remain. The new EU-MAP variables (e.g. investments, total assets, debts) were not provided for 2017. Days-at-sea not provided by FAO sub-region - this impacts on the regional analysis in the AER. While improvements have been made to report data on the OMR fleets there are still significant data gaps for several fleet segments. Total assets and value of quota and other fishing rights not provided for 2017 at MS level. Significant differences between the two variables 'value of landings' (transversal) and 'gross value of landings' (economic) persist for many fleet segments (e.g. MBS PS VL2440 NGI*, MBS DFN VL0612 NGI, NAO DTS VL40XX NGI, NAO HOKVL 2440 NGI* etc.).

Germany: No major data transmission issues to report. *GT fishing days* and *kW fishing days* not provided for passive gear segments (e.g. DFN VL1218, DFN VL 2440, PG VL0010 and PG VL1012). For confidentiality reasons, Germany provides only partial data on its distant water fleet. This impacts on the AER as a complete coverage of the EU fleet is not possible. National level and fleet segment totals are significantly different in 2017 for kW fishing days and GT fishing days – this may be due to confidential issues but suggests that one of the data sets is not complete which may affect indicator calculations.

Greece: Major data transmission issues continue. Big data gaps, in particular for landings and effort variable, for most fleet segments and years. Gross value of landings in 2017 reported for 3 fleet segments only. Landings reported for 5 large scale fleet segments only. *Days-at-sea* provided for 6 fleet segments only. Due to these and other data issues, the Greek fleet was excluded from all aggregated analyses in

the AER. At the national and fleet segment levels, data are not representative of the entire fleet and/or year.

Ireland: A significant amount of missing data (transversal and economic data) for the under 10 m segments. *Value of physical capital* (depreciated replacement value) missing or zero for all inactive vessels as well as for many other fleet segments (e.g., DFN VL0010, DRB VL0010, DTS VL0010, PMP VL1218, TM VL1218, etc.). This impacts the calculation of net profit as the opportunity cost of capital cannot be estimated. *Days-at-sea* by FAO sub-region missing in 2017 for the fleet segments DFN VL 0010 and PS VL0010 – this impacts on the regional analysis. *Energy consumption* missing for HOK VL1012, PS VL0010, TM VL1012, TM VL1218 and PMP VL1218 in 2017. National level and fleet segment totals are significantly different in 2017 for engine power (totkW) and number of fishing trips suggesting that one of the data sets is not complete which may affect indicator calculations. Significant differences between the two variables 'value of landings' (transversal) and 'gross value of landings' (economic) detected for some fleet segments (e.g. NAO DRB VL0010, NAO FPO VL0010 and NAO DTS VL0010).

Italy: No major data transmission issues to report. Due to confidentiality reasons, Italy only provides partial data on its distant water pelagic trawler fleet (PS VL40XX IWE). This impacts on the AER as only incomplete coverage of the EU fleet is possible.

Latvia: No major data transmission issues to report. For confidentiality reasons, Latvia does not provide any data on its distant water fleet; this impacts on the AER as a complete coverage of the EU fleet is not possible.

Lithuania: No major data transmission issues to report. *Value of physical capital* missing in 2017 for the inactive groups VL1218, VL1824 and VL40XX. National level and fleet segment totals are significantly different in 2017 for value of physical capital and consumption of fixed assets suggesting that one of the data sets is not complete which may affect indicator calculations

Malta: No major data transmission issues to report.

Netherlands: No major data transmission issues to report. The new EU-MAP variables - debts, subsidies on investment and total assets not provided for TM VL40XX for 2017.

Poland: *Value of physical capital* missing in 2017 for the inactive vessel groups. Due to confidentiality reasons, Poland only provides partial data on its distant water fleets (NAO DTS 40XX, NAO TM VL40XX and OFR TM40XX). This impacts on the AER as a complete coverage of the EU fleet is not possible. National level and fleet segment totals are significantly different in 2017 for FTE suggesting that one of the data sets is not complete which may affect indicator calculations

Portugal: No major data transmission issues to report. Operating subsides missing for HOK VL1824 NGI in 2017

Romania: No major data transmission issues to report.

Slovenia: No major data transmission issues to report.

Spain: Days-at-sea at FAO sub-region level missing in 2017 for all fleet segments. This impacts on the regional analysis in the AER. Value of physical capital missing for the inactive vessel group MBS VL1824 in 2017. Significant differences between the two variables 'value of landings' (transversal) and 'gross value of landings' (economic) persist for many fleet segments (e.g. MBS PMP Vl0612 NGI, MBS PS VL1824 NGI, NAO HOK VL2440 LLD*, NAO PMP Vl0010 NGI, OFR DTS VL40XX NGI, etc.).

Sweden: No data transmission issues to report.

United Kingdom: No data transmission issues to report.

See JRC online tool and data coverage report for more details on data transmission issues by fleet segment, variable and year https://datacollection.jrc.ec.europa.eu/web/dcf/data-analysis/fleet/quality

8 LIST OF PARTICIPANTS EWG 19-04 AND 19-06

1 - Information on EWG participant's affiliations is displayed for information only. In any case, Members of the STECF, invited experts, and JRC experts shall act independently. In the context of the STECF work, the committee members and other experts do not represent the institutions/bodies they are affiliated to in their daily jobs. STECF members and experts also declare at each meeting of the STECF and of its Expert Working Groups any specific interest, which might be considered prejudicial to their independence in relation to specific items on the agenda. These declarations are displayed on the public meeting's website if experts explicitly authorized the JRC to do so in accordance with EU legislation on the protection of personnel data. For more information: http://stecf.jrc.ec.europa.eu/adm-declarations

Invited Experts

Name	Address	Email
Paolo ACCADIA	NISEA. Italy	accadia@nisea.eu
Edo AVDIC MRAVLJE	Fisheries Research Institute , Slovenia	edoavdic@gmail.com
Jörg BERKENHAGEN	Thuenen Institute of Sea Fisheries, Germany	joerg.berkenhagen@ti.bund.de
Gustav BLOMQVIST	Swedish Agency for Marine and Water Management, Sweden	gustav.blomqvist@havochvatten.se
Brian BURKE	BIM, Ireland	Brian.Burke@bim.ie
Suzana CANO	Direção Geral Recursos Naturais e Segurança Marítima, Portugal	sfcano@dgrm.mm.gov.pt
Griffin CARPENTER	New Economics Foundation, UK	griffin.carpenter@neweconomics.org
Irina DAVIDJUKA	Institute of Food Safety, Animal Health and Environment, Latvia	irina.davidjuka@bior.lv
Ralf DORING	Thuenen-Institute of Sea Fisheries	ralf.doering@thuenen.de
Mike FITZPATRICK		mike@irishobservernet.com
Monica GAMBINO	NISEA Società Cooperativa, Italy	gambino@nisea.eu
Geert HOEKSTRA	LEI wageningen UR, The Netherlands	geert.hoekstra@wur.nl
Myrto IOANNOU	Department of Fisheries & Marine Research, Cyprus	mioannou@dfmr.moa.gov.cy
Emmet JACKSON	Bord Iascaigh Mhara, Ireland	jackson@bim.ie
Armelle JUNG	Des Requins et des Hommes, France	armelle@desrequinsetdeshommes.org
Edvardas KAZLAUSKAS	Agricultural information and Rural Business Centre, Lithuania	edvardas.kazlauskas@vic.lt
Michael KEATINGE	Bord Iascaigh Mhara (BIM), Ireland	keatinge@bim.ie
Emil KUZEBSKI	National Marine Fisheries Research Institute, Poland	emil@mir.gdynia.pl
Steve LAWRENCE	SEAFISH, UK	steve.lawrenece@seafish.co.uk
Christelle LE GRAND	IFREMER. France	christelle.le.grand@ifremer.fr
Janek LEES	Marine Institute, Estonia	janek.lees@ut.ee
Angelos LIONTAKIS	AGRERI. Greece	aliontakis@agreri.gr
Loretta MALVAROSA	NISEA. Italy	malvarosa@nisea.eu
Carmen MARTIN FRANCO	Ministry of Agriculture, Food and Environment, Spain	cmartinf@magrama.es

Invited Experts

Name	Address	Email
Marie-Dominique MINNE	Ministry of agriculture, France	marie-dominique.minne@agriculture.gouv.fr
Maria MOSET	Ministry of Agriculture, Food and Environment, Spain	smosetma@mapama.es
Simona NICHEVA	Executive Agency for Fisheries and Aquaculture, Bulgaria	simona.nicheva@iara.government.bg
João RAMOS DO Ó	Direção Geral Recursos Naturais e Segurança Marítima, Portugal	jramos.do.o@gmail.com
Alexandre RODRIGUEZ	EU Long Distance Advisory Council (LDAC), Madrid	alexandre.rodriguez@ldac.eu
Gonzalo RODRIGUEZ	University of Santiago de Compostela. Spain	gonzalo.rodriguez@usc.es
Rosaria Felicita SABATELLA	NISEA Società Cooperativa, Italy	r.sabatella@nisea.eu
Andrew SCIBERRAS	Department for Fisheries and Aquaculture, Malta	andrew.d.sciberras@gov.mt
Arnaud SOUFFEZ	University Of Nantes, France	arnaud.souffez@univ-nantes.fr
Irene TZOURAMANI	Agricultural Economics Research Institute, Greece	tzouramani@agreri.gr
Katrien VERLÉ	Institute for Agricultural and Fisheries Research (ILVO), Belgium	katrien.verle@ilvo.vlaanderen.be
Jarno VIRTANEN	Natural Resources Institute, Finland	jarno.virtanen@luke.fi
Ivana VUKOV	Ministry of Agriculture, Directorate of Fisheries, Croatia	ivana.vukov@mps.hr
Kolyo ZHELEV	Executive Agency for Fisheries and Aquaculture, Bulgaria	kolyo.zhelev@iara.government.bg

JRC EXPERTS

Natacha CARVALHO	Joint Research Centre, Via E. Fermi, 2749 21027 Ispra (Varese) Italy	natacha.carvalho@ec.europa.eu Tel.+390332786713
Franca CONTINI	Joint Research Centre, Via E. Fermi, 2749 21027 Ispra (VA) Italy	franca.contini@ext.ec.europa.eu Tel.+390332785646
Jordi GUILLEN	Joint Research Centre, Via E. Fermi, 2749 21027 Ispra (VA) Italy	jordi.guillen@ec.europa.eu Tel.+390332785253

COMMISSION

Angel CALVO (DG MARE focalpoint)	DG Maritime Affairs and Fisheries Unit A3 - Structural Policy and Economic Analysis J-9902/70, B-1049 Belgium	calvo-santos@ec.europa.eu Tel. +32 2 29 93630
Natacha CARVALHO	Joint Research Centre, Via E. Fermi, 2749 21027 Ispra (Varese) Italy	natacha.carvalho@ec.europa.eu Tel.+390332786713
Jordi GUILLEN	Joint Research Centre, Via E. Fermi, 2749 21027 Ispra (VA) Italy	jordi.guillen@ec.europa.eu Tel.+390332785253

9 LIST OF BACKGROUND DOCUMENTS

Background documents are published on the EWG-19-04 meeting's web site on:

http://stecf.jrc.ec.europa.eu/web/stecf/ewg1904

Background documents are published on the EWG-19-06 meeting's web site on:

http://stecf.jrc.ec.europa.eu/web/stecf/ewg1906

EWG-19-04 – Declarations of invited and JRC experts (see also section 8 of this report – List of participants)

EWG-19-06 – Declarations of invited and JRC experts (see also section 8 of this report – List of participants)

Scientific, Technical and Economic Committee for Fisheries (STECF) – The 2018 Annual Economic Report on the EU Fishing Fleet (STECF-18-07). Publications Office of the European Union, Luxembourg, 2018, JRC112940, ISBN 978-92-79-79390-5, doi:10.2760/56158 (2018 AER)

STECF 18-15 - CFP monitoring - expansion of indicators.pdf (Version 1.3)
https://stecf.jrc.ec.europa.eu/reports/cfp-monitoring

STECF 18-14 - Assessment of balance indicators for key fleet segments and review of national reports on Member States efforts to achieve balance between fleet capacity and fishing opportunities

https://stecf.jrc.ec.europa.eu/reports/balance

Member States Annual Report on the National Data Collection Programmes
http://datacollection.jrc.ec.europa.eu/ars

Data-handling procedure for STECF Expert Working Groups

http://datacollection.jrc.ec.europa.eu

10 ANNEXES

Annex 1 - CFP monitoring: Inclusion of economic indicators

Introduction

EWG 19-06 was requested to assess the appropriate aggregation level and the applicability of the three proposed indicators by EWG 18-15 for a possible inclusion in the CFP monitoring. EWG 18-15 proposed three indicators:

- Return on fixed tangible assets (RoFTA),
- Net value added/Full time equivalent (NVA/FTE), and,
- Net Profit Margin (NPM).

The rational for selecting those indicators was to reflect the efficient utilization of the three production factors: resources (net profit margin as proxy for resource rent), capital (RoFTA) and labour (NVA/FTE).

General comments

The basic aim of the CFP monitoring is to provide background information on the achievement of the objectives of the CFP. So far, the monitoring report (e.g. STECF ad hoc 19-01) includes, basically, the information for the achievement of the MSY objective.

The three economic indicators should reflect other objectives of the CFP which can be aligned with social or economic development (Regulation EU 1380/2013, Art. 2):

- Achieving economic, social and employment benefits;
- Provide conditions for an economically viable and competitive fishing capture (sector);
- Contribute to a fair standard of living for those who depend on fishing activities, bearing in mind coastal fisheries and socio-economic aspects;
- Take into account the interests of both consumers and producers and in addition guaranteeing a level playing field on the markets
- Promote coastal fishing activities, taking into account socio-economic aspects.

The three proposed indicators, RoFTA, NVA/FTE and NPM, are especially aligned to the economic objectives, e.g. 'viable fishing sector', 'economic benefits', partly 'fair standard of living' (as NVA/FTE does not compare the situation in fisheries with other sectors) and 'promote coastal fishing activities' (in the case where indicators are specifically calculated for different segments of the fleets (LSF, DWF, SSCF). EWG 19-06 notes that there is a need to further elaborate other indicators to reflect additional objectives (e.g. social indicators).

Detailed comments on the proposed indicators

EWG 19-06 elaborated the applicability and possible aggregation level for the three indicators. Due to time constraints it was not possible to test all possible aggregation levels. It was decided to provide information on aggregation levels which seams good candidates for a possible inclusion in the CFP monitoring. However, further testing is necessary before a final decision can be made.

Note: The lowest level of aggregation is the fleet segment (or in some cases clustered fleet segments). Possible aggregation levels include: vessel length classes, fishing technique, fishing activity (SSCF, LSF and DWF), MS, supra-region, etc. Based on assumptions using effort and landings data provided by sub-region (level 3 or 4), economic data, and hence indicators, can be disaggregated by main fishing region and for the above mentioned aggregations levels. Hence, the possible aggregation levels are numerous. EWG 19-06 looked at only a few. It should also be noted that a fleet segment may be a clustered segment, i.e., grouped together with other fleet segments (with different fishing technique and/or vessel length classes) to protect sensitive data or for methodological purposes.

RoFTA

The RoFTA indicator reflects the productivity of the capital employed in a company. A level at or above the average rate of return on investment (including a risk premium) would signal attractiveness for investments in the fishing sector. EWG 18-15 displayed the indicators values for two aggregation levels: fleet segment and FAO fishing region (level 1).

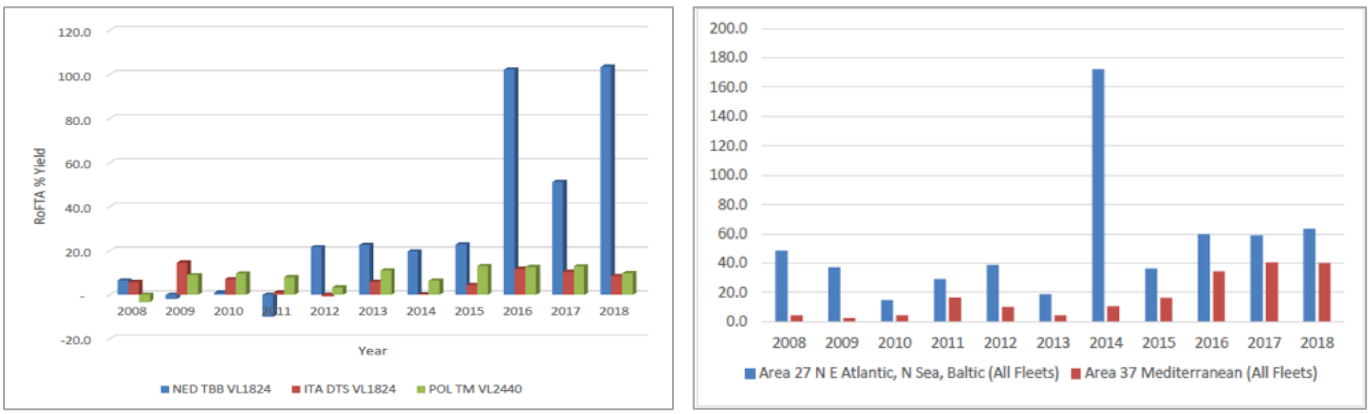


Figure A.1: RoFTA: (left) for three selected fleet segments and (right) by FAO fishing region

In the STECF ad hoc 19-01 report information is provided by FAO fishing region level 1. This would correspond to Figure A.1 (right).

As conditions in fisheries, fleets and regions are very diverse regarding the economic indicators, the FAO area level seems to be too broad to display the success or failure of the CFP. Therefore, different aggregation levels should be considered and the EWG decided to provide, as a first example, information from the North and Baltic Sea at the following aggregation levels (Figure A.2):

- Fleets by regional sea, by main fishing technique (pelagic vs demersal) and vessel length groups

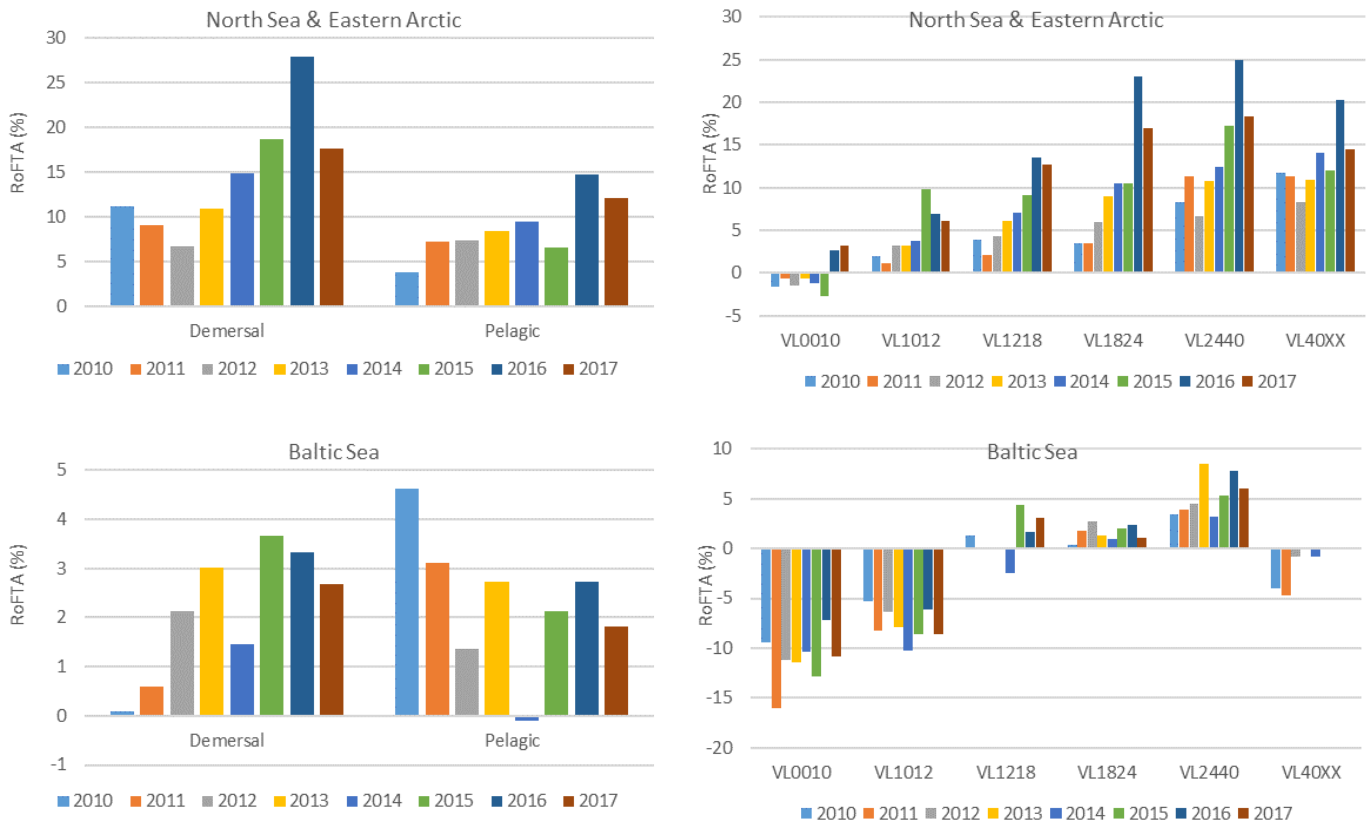


Figure A.3: RoFTA for fleets by main fishing technique (pelagic / demersal) and by vessel length in the (top) North Sea & Eastern Arctic region and (bottom) Baltic Sea

There are pros and cons regarding RoFTA as a suitable indicator. On the positive side is that data are available at several aggregation levels (fleet segment, MS, and EU and can be disaggregated by fishing

region based on assumptions using more detailed effort and landings data). On the negative side, the value of the indicator heavily depends on the assumptions used to value the opportunity cost of capital. Currently, not all MS apply the same methodology. Therefore, when comparing the results for fleet segments, regions or vessels lengths it would make sense to distinguish between countries to a certain extent when comparing trends. Else more harmonization across MS is required.

Net Profit Margin (NPM)

The second proposed indicator is net profit margin. EWG 18-15 displayed NPM by fleet segment and by specific fleet segment and fishing region (in this case pelagic trawlers 24-40m).

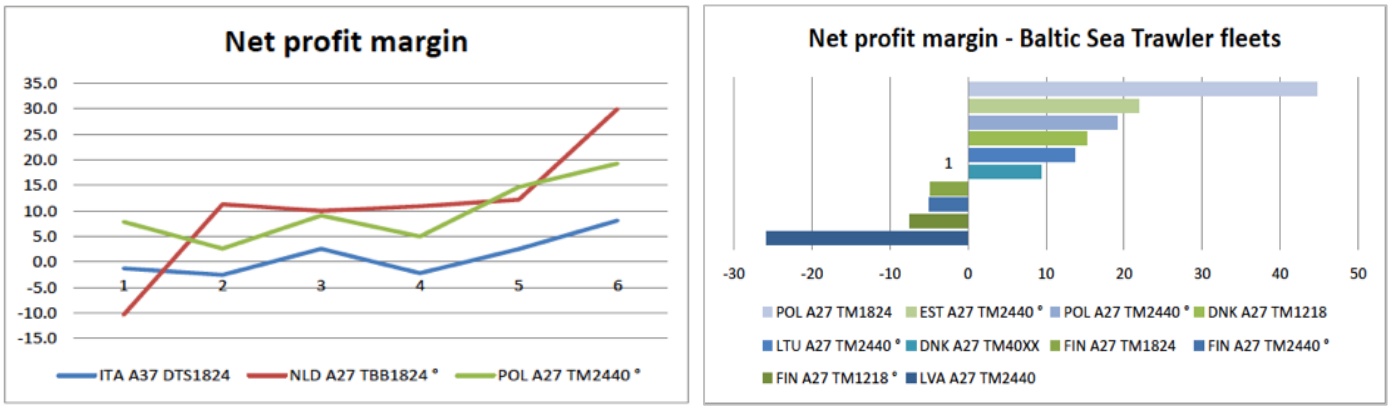


Figure A.4: Net profit margin (left) for three selected fleet segments and (right) for fleet segments in the Baltic Sea

For this indicator, aggregation by regional sea (displaying the countries around it) and distinguishing by vessel length classes and main fishing technique (e.g., pelagic vs. demersal gears, etc.) appear to be reasonable levels of aggregation. It would be necessary, however, to display time series. For example, Figure A.4 (right) shows NPM for just one year only and does not reveal any trends. When aggregating the indicator at the regional level, trends within and across regions can be compared.

It is also possible to analyze the indicator by small-scale coastal and large-scale fleets at the EU level (Figure A.6) and by fishing region (Figure A.7 and A.8) (see section 3.6 for more details on the SSCF).

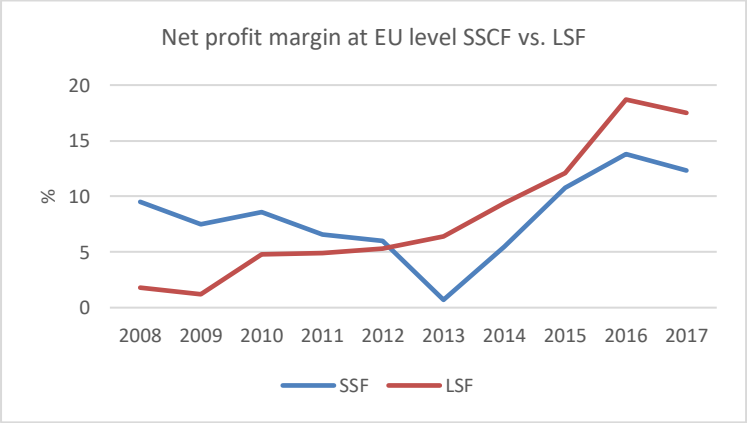


Figure A.6: Net profit margin by SSCF vs LSF

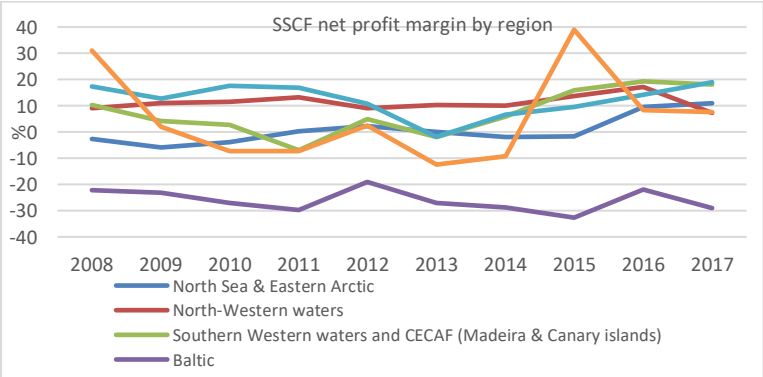


Figure A.7: Net profit margin for the SSCF by fishing region

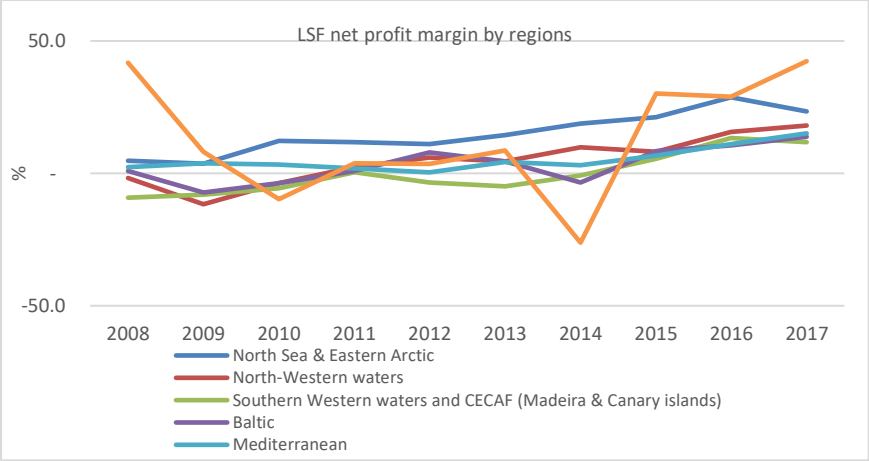


Figure A.8: Net profit margin for the LSF by fishing region

Aggregation by regional sea basis can reveal some general trends, however, such an aggregation does not capture differences between species groups and gear types. As for the RoFTA indicator, an additional separation by species group (e.g. pelagic and demersal) should be considered. Figure A.9 shows net profit by pelagic and demersal gears by region.

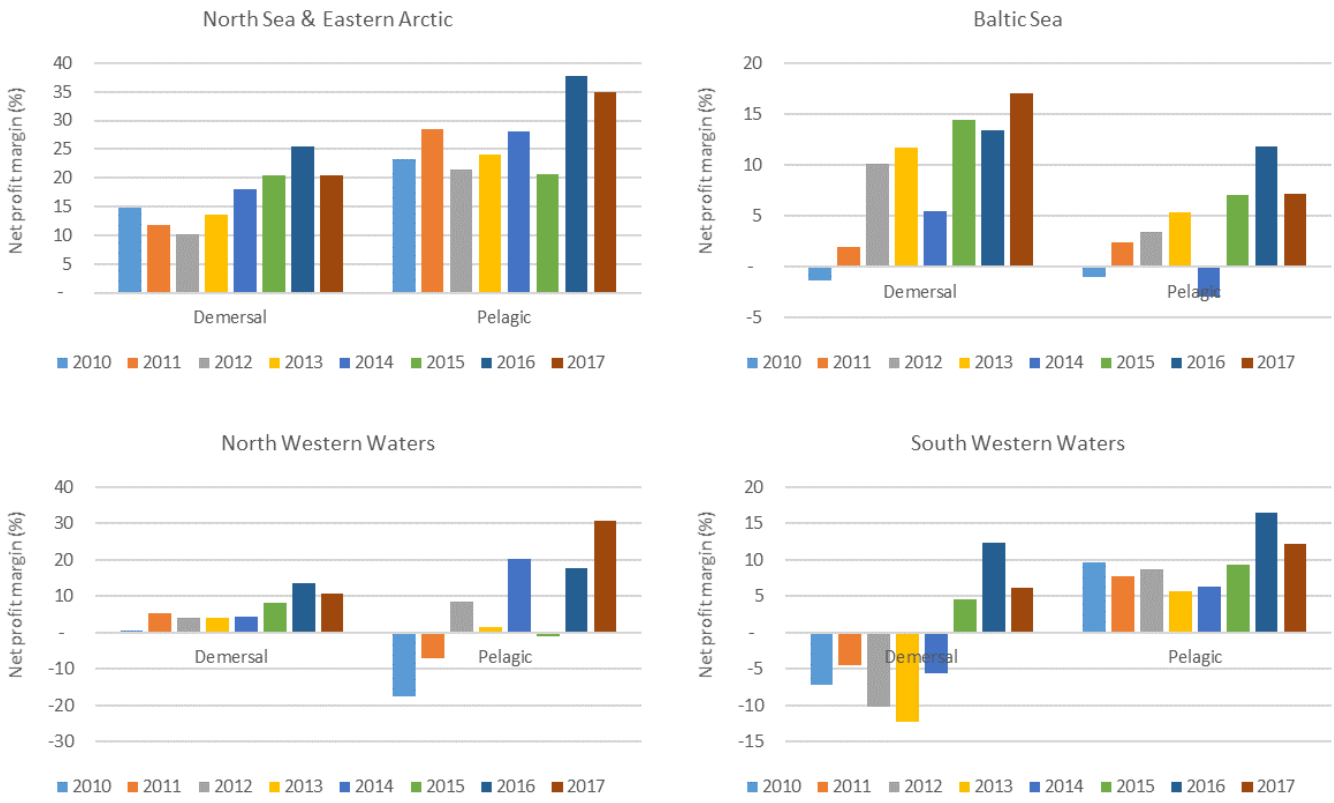


Figure A.9: Net profit margin separated by demersal and pelagic fleets in a region (Northwest Waters)

The indicator is available at fleet segment level but this is also a problem as differences between individual vessels may be significant.

Net Value Added per Full time equivalent (NVA/FTE)

As the third indicator EWG 18-16 proposed NVA/FTE. Again the data was presented for the three selected fleet segments and for a specific fleet segment, in this case demersal trawlers between 18 and 24m (DTS 18-24) for four MS fishing in the Mediterranean.

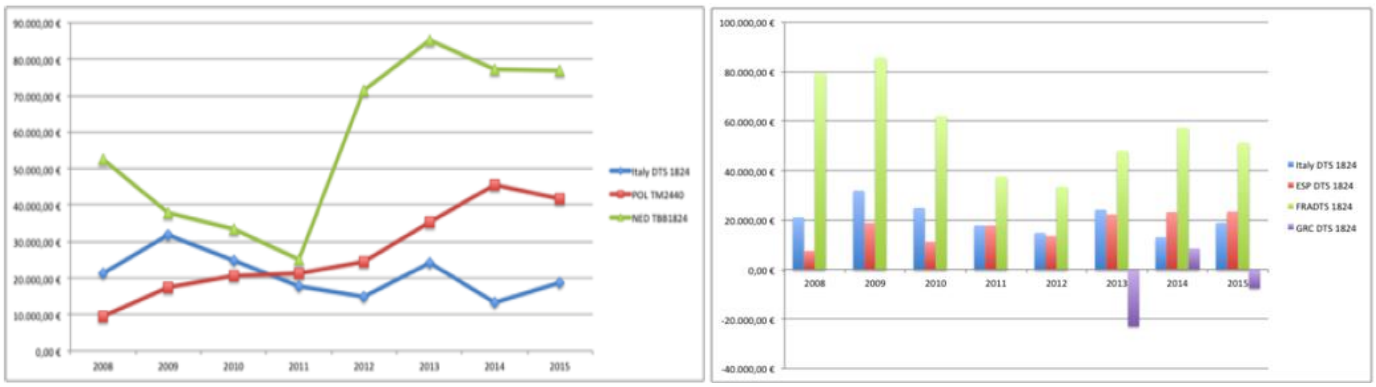


Figure A.10: NVA/FTE for (left) three selected fleet segments and (right) four DTS fleet segments from the Mediterranean Sea

Also in the case of this indicator, the level of regional sea with separation of the countries around it plus distinguishing by vessel-length classes and main fishing technique or gear (e.g., pelagic vs. demersal, etc.) seems a reasonable level of aggregation (see Figures A.12 and A.13).

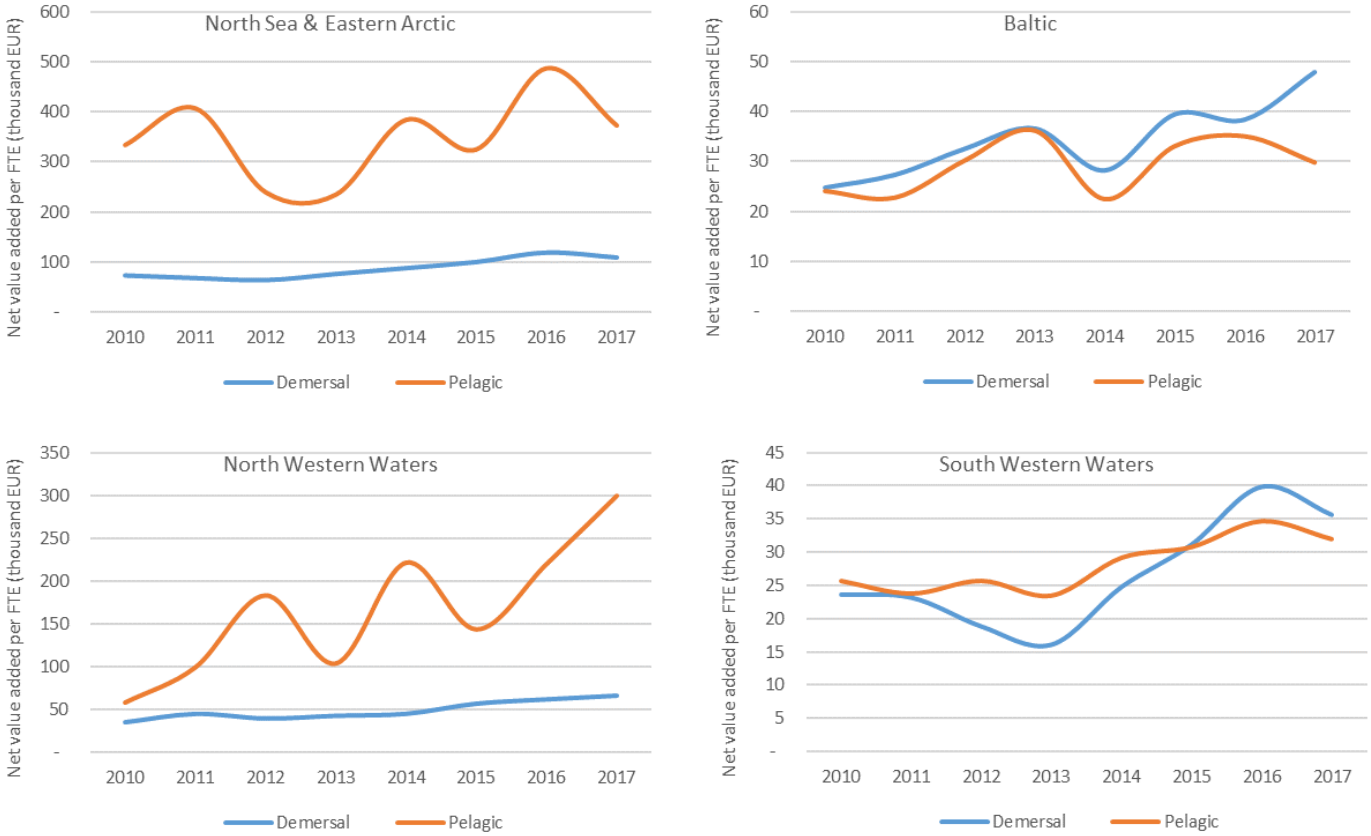


Figure A.12: NVA/FTE by main type of fishing technique (pelagic and demersal) and fishing region

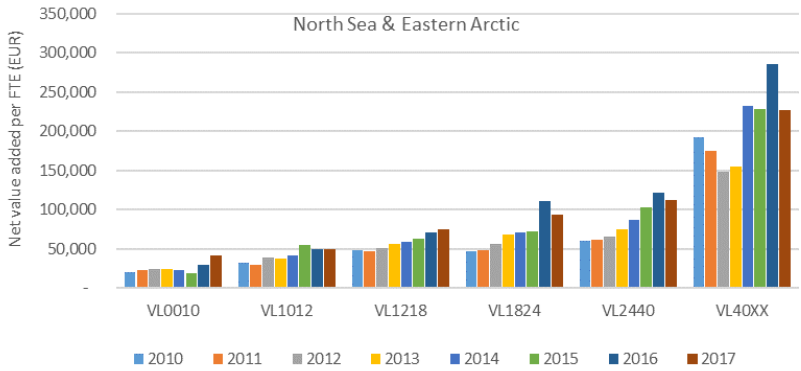


Figure A.13: NVA/FTE by vessel length groups in a regional sea (North Sea & Eastern Arctic)

Again, for this indicator the data are available at the fleet segment and country level and can be disaggregated to the regional level based on assumptions using more detailed effort and landings data.

General indicators

EWG 18-16 also discussed indicators at the EU level as possible indicators for the CFP monitoring.

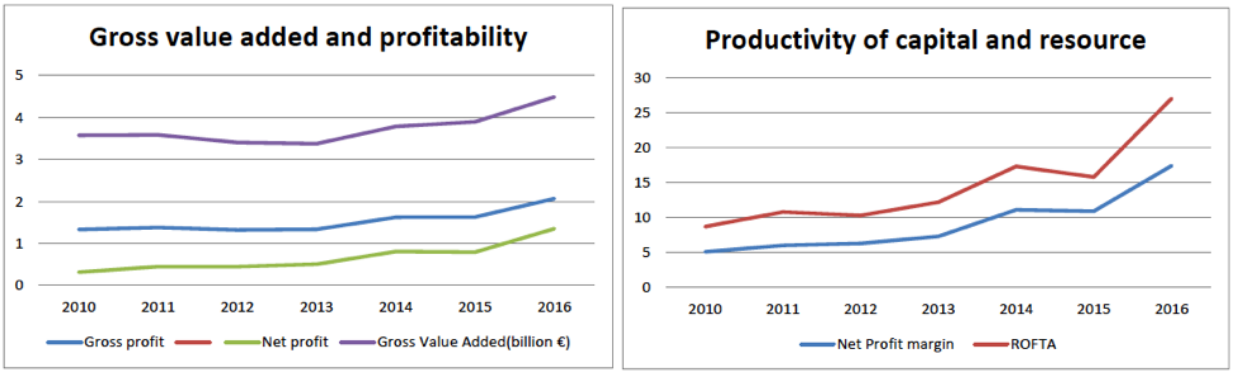


Figure A.14: Development of (left) Gross profit, Net profit and GVA and (right) NPM and RoFTA at the EU level

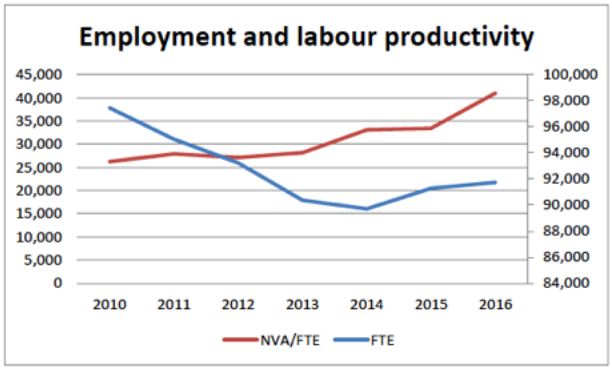


Figure A.15: Employment and labour productivity at the EU level

EWG 19-06 was not able to further elaborate on this more general indicators/variable values at the EU level during the meeting.

Economic dependency indicator

Also the economic dependency indicator (EDI) was proposed as a possible indicator for the CFP monitoring. This indicator is also considered as a replacement for the balance indicators. EWG 19-06 was not able to further assess the usefulness/applicability of this indicator. As there should be a testing of the usefulness and applicability of the indicator for the balance exercise, this testing can be also useful for a discussion on a possible inclusion of the indicator in the CFP monitoring.

Conclusions

EWG 19-06 concludes that further testing of the indicators is necessary. The EWG suggests that before the next overall CFP monitoring meeting (planned for early 2020) data should be prepared on the proposed aggregation levels to have a basis for the discussion on a possible inclusion of a certain indicator into the CFP monitoring. It makes sense also to start to include the indicators as 'test indicators' to get a broader feedback from the managers and stakeholders about the usefulness of the information.

EWG 19-06 concludes that also the proposed balance indicator EDI needs further testing but that should be done prior to the next balance EWG meeting in September 2019. For the revision of the balance indicators it was also proposed to add a stock dependency indicator to the EDI. The usefulness of this indicator should also be tested prior to the next balance EWG.

Annex 2 – Economic performance at MSY

Introduction

The latest reform of the Common Fisheries Policy (Regulation EU 1380/2013) introduced an objective to manage fishing pressure so that fish stocks can produce their maximum sustainable yield (MSY) by 2015 where possible and on a progressive, incremental basis by 2020 at the latest. Since 2013, the number of stocks fished in accordance with the MSY objective has substantially increased, although not at a rate that will reach the 2020 deadline for all fish stocks (STECF ad hoc 19-01).

The pathway to MSY fisheries is expected to affect the economic performance of the EU fishing fleet. For many fish stocks, reducing fishing pressure and rebuilding biomass will result in more abundant fish stocks that can support larger catches that can be harvested more efficiently. For fishing fleets exploiting these stocks, revenues are expected to increase, costs to decrease, and profitability to increase further as a result of both effects. There are, however, some well-documented complications:

- Mixed fisheries may not see these beneficial effects if additional fishing opportunities increase unevenly across fish stocks. For fish stocks that have not been fully or over exploited, fishing at MSY state could result in higher fishing pressure and lower biomass.
- Multispecies interactions also complicate MSY potential as growth in one fish stock may limit or decrease growth in others.
- Also, the beneficial effects outlined are not instantaneous; economic performance is expected to decrease (as fishing mortality is reduced) before increasing once again as fish stocks grow in abundance.

Discussion

Following a request from the EU Commission (EWG 19-06 terms of reference), a subgroup of the EWG discussed how MSY could be incorporated into the EWG 19-06 report and potentially into future exercises. Two distinct approaches were identified:

- a forward-looking approach demonstrating the economic costs and benefits to EU fishing fleets of a long-term state of MSY while holding other factors fixed,
- and/or a backward-looking approach to tease out causality between MSY pathways for European fish stocks and the economic performance of the EU fishing fleets that exploit them.

A forward-looking approach was applied in the 2015 Annual Economic Report of the EU Fishing Fleet (STECF 15-07) using a comparative static approach. The EWG subgroup agreed not to repeat this exercise as an update would not significantly change the previous results and other EWGs are exploring forward-looking economic impacts of MSY options (STECF 17-05). There is also a practical resource constraint: in recent EWG reports (STECF 16-07, STECF 17-07, STECF 18-07) the modelling tasks of the EWG have focused on producing nowcasts for fishing fleets and Member States. Continuing with this approach limits the ability to deliver additional modelling tasks within the time and resource constraints of the EWG.

A backwards-looking approach offers a different type of economic analysis of the MSY objective as it focusses on the causal linkage that has been observed. Previous attempts by the EWG to link trends in economic performance, fishing mortality and/or stock biomass were largely inconclusive (STECF 15-07). However, the broad trend of decreasing fishing pressure, increasing biomass, decreasing costs, and increasing profits is clear at the aggregate level. As MSY and fish stock status is only one of many drivers for a fishing fleet, the main challenge is in isolating this MSY effect.

While there was no time to complete this exercise in the EWG, the EWG subgroup agreed that this exercise could be carried out in a future EWG as the economic and biological data required are readily available. To better understand the MSY effect, two approaches could be taken:

- The first will be to identify the causal mechanisms through which MSY could affect economic performance (e.g. days-at-sea, landings) and control for the mechanisms independent from MSY status (e.g. fuel price, fish prices with the exemption of price elasticities). A major challenge with this approach is that some drivers (e.g. fuel usage) could be related either to MSY (e.g. fewer days-at-sea) or other independent factors (e.g. improvements in engine efficiency).
- A second approach is to explore a limited number of fish stocks where i) the MSY objective has been met for several years, ii) the MSY objective was achieved through reduced fishing pressure (as

opposed to undeveloped fisheries), iii) there is a high dependency by some fleet segments and therefore economic impacts could potentially be observed. North Sea herring, 3a Nephrops, 9a horse mackerel, North Sea place, and North Sea hake were identified as potential stocks for this approach.

The objective will be to elaborate on whether the economic performance of fisheries exploiting these fish stocks has i) changed, ii) in what direction, and iii) whether this change can be attributed to changes in stock status and the transition to MSY.

Taking a more focused approach and dealing with clear MSY cases is likely to prove more illuminating than accounting for cases where both economic performance and stock status are fluctuating on an annual basis. A major challenge with this approach is to develop a standardised methodology that can be applied across case studies including case where there is no trend towards – or even a trend away from – the MSY objective.

Annex 3 – Implementation of the Landing Obligation and Economic impacts

Introduction

With Art. 15 of the basic regulation of the CFP (Regulation (EU) 1380/2013) the EU introduced the Landing Obligation (LO). While the objective is to land all fish from regulated species, there are several exemptions that allow fishers to discard parts of their catch. These include high survivability, disproportionate costs, and interspecies flexibility. The regulation also includes a phasing in period, starting in 2015 with a number of pelagic stocks. From 2019 all regulated stocks are subject to the LO.

The European Commission has identified the LO as an important element of its fisheries management policy intended to reduce the quantity of quality fish returned to the sea, often dead or seriously compromised. The Commission has also noted the potential economic impacts of this policy, particularly in those fisheries that traditionally record high levels of discarding.

Application of the LO could lead to higher operating costs, for example where vessels adapt or change of their fishing patterns to avoid unwanted bycatch resulting in increased steaming time, or where the carriage of unwanted catch reduces the space available on-board for higher value target species, or, the costs associated with additional sorting time. It could also affect revenue; for example, fishers are not allowed to sell undersized fish for direct human consumption and these fish are therefore sold at a low or lower price than might otherwise be the case.

Member States are required to report, annually, on the impact of the LO on their fleets. This report should include information on any economic or social impacts of the policy.

Although there is general agreement that the LO could affect the economic performance of some fishing companies, there is currently no quantifiable information on either the direct economic or wider social impact of the policy. The reasons for this include:

- Exemptions, proposed in the joint recommendations, for many species, reduce or remove the need to modify fishing activity, at least in the short term.
- Choke species; while many potential choke species have been identified, it remains unclear whether these have led to the sorts of difficulty initially envisaged, in particular early closure of some fisheries.
- ICES notes for several fisheries that enforcement may still be on a low level (e.g. Western Baltic Cod (ICES 2019)) and the sector may not, yet, have fully adapted its fishing practices, particularly where such change will result in poorer performance.
- Data; currently available economic data refers to 2017, some two-years before the full implementation of the LO. As such, these data provide little or no insight into the economic impact of the policy

Discussion

Taking all of these reasons into account it is not surprising that MS haven't, as yet, reported any, or very limited, social or economic impacts of the LO.

EWG 19-06 expects that this situation will evolve in the coming years. There will, inevitably, be changes in fishing practices; more unwanted fish landed; some, non-negligible, consequences arising from choke species etc. and these will have economic consequences. The question remains however, how does one assess the economic and social impacts of this policy, and, more specifically, how to distinguish between consequences of the landing obligation and the many other policy tools currently deployed as part of the CFP (the MSY policy, structural aid, common organisation of the markets etc.). For that the following steps should be considered:

1. The detailed landings and landings value information from sales slips should be made available for research purposes (e.g. should be included in the new control regulation). This would allow e.g. the detection of economic impacts of the landings of undersized fish (i.e., not for human consumption) and landings of fish for which an additional quota had to be obtained.
2. After detecting possible social or economic effects of the LO MS should employ a limited effort to organise e.g. focus groups to discuss reasons for those effects of the LO. It is important to make sure that fishers have not to report own behaviour, as they may fear legal consequences.

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ABBREVIATIONS

European Member States

BEL	BE	Belgium	**HRV**	HR	Croatia
BGR	BG	Bulgaria	**IRL**	IR	Ireland
CYP	CY	Cyprus	**ITA**	IT	Italy
DEU	DE	Germany	**LTU**	LT	Lithuania
DNK	DK	Denmark	**LVA**	LV	Latvia
ESP	ES	Spain	**MLT**	MT	Malta
EST	EE	Estonia	**NLD**	NL	Netherlands
EU	EU	European Union	**POL**	PL	Poland
FIN	FI	Finland	**PRT**	PT	Portugal
FRA	FR	France	**ROU**	RO	Romania
GBR	UK	United Kingdom	**SVN**	SV	Slovenia
GRC	EL	Greece	**SWE**	SE	Sweden

Fishing Technologies – DCF categories

DFN	Drift and/or fixed netters
DRB	Dredgers
DTS	Demersal trawlers and/or demersal seiners
FPO	Vessels using pots and/or traps
HOK	Vessels using hooks
MGO	Vessel using other active gears
MGP	Vessels using polyvalent active gears only
PG	Vessels using passive gears only for vessels < 12m
PGO	Vessels using other passive gears
PGP	Vessels using polyvalent passive gears only
PMP	Vessels using active and passive gears
PS	Purse seiners
TM	Pelagic trawlers
TBB	Beam trawlers

Fishing activity – scale of fishing operation

SSCF	Small-scale coastal
LSF	Large-scale fleet
DWF	Distant water fleet

Fishing regions

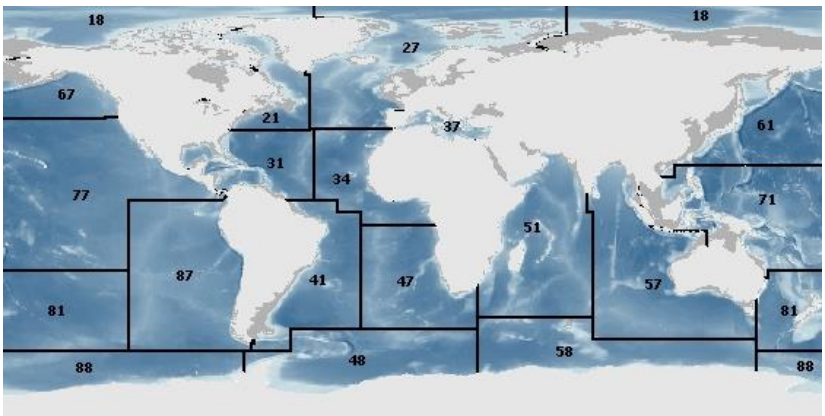
BS	Baltic Sea
BKS	Black Sea
MED	Mediterranean Sea
NS+EA	North Sea & Eastern Arctic
NWW	North Western Waters
OFR	Other fishing regions
SWW	South Western Waters

Regional fisheries

ABNJ	Areas Beyond National Jurisdiction
CECAF	Fishery Committee for the Eastern Central Atlantic
GFCM	General Fisheries Commission for the Mediterranean
ICCAT	International Commission for the Conservation of Atlantic Tunas
IOTC	Indian Ocean Tuna Commission
LDF	Long Distant Fisheries
NAFO	Northwest Atlantic Fisheries Organization
NEAFC	North-East Atlantic Fisheries Commission
OMR	EU Outermost Regions
RFB	Regional Fisheries Bodies
RFMO	Regional Fisheries Management Organisations
SFPAs	EU Sustainable Fisheries Partnership Agreements

Food and Agriculture Organization of the United Nations (FAO) Major Fishing Areas

FAO area 18	Arctic Sea	**FAO area 57**	Indian Ocean, Eastern
FAO area 21	Atlantic, Northwest	**FAO area 58**	Indian Ocean, Antarctic
FAO area 27	Atlantic, Northeast	**FAO area 61**	Pacific, Northwest
FAO area 31	Atlantic, Western Central	**FAO area 67**	Pacific, Northeast
FAO area 34	Atlantic, Eastern Central	**FAO area 71**	Pacific, Western Central
FAO area 37	Mediterranean and Black Sea	**FAO area 77**	Pacific, Eastern Central
FAO area 41	Atlantic, Southwest	**FAO area 81**	Pacific, Southwest
FAO area 47	Atlantic, Southeast	**FAO area 87**	Pacific, Southeast
FAO area 48	Atlantic, Antarctic	**FAO area 88**	Pacific, Antarctic
FAO area 51	Indian Ocean, Western		

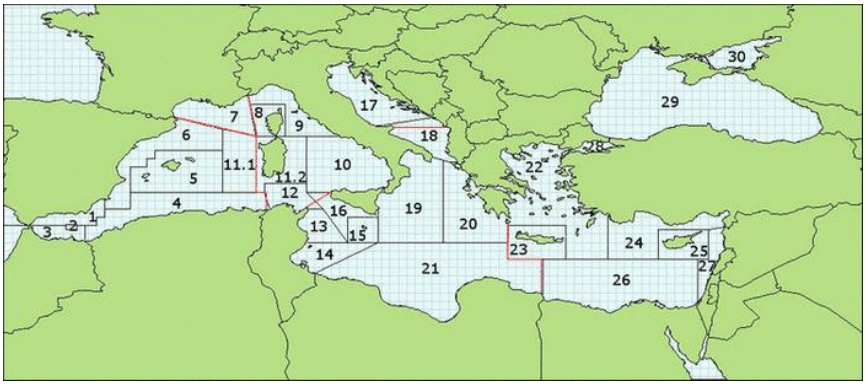


Source: http://www.fao.org/fishery/area/

General Fisheries Commission for the Mediterranean (GFCM) Geographical subareas (GSAs)

GSA 1	Northern Alboran Sea	**GSA 16**	Southern Sicily
GSA 2	Alboran Island	**GSA 17**	Northern Adriatic
GSA 3	Southern Alboran Sea	**GSA 18**	Southern Adriatic Sea
GSA 4	Algeria	**GSA 19**	Western Ionian Sea
GSA 5	Balearic Island	**GSA 20**	Eastern Ionian Sea
GSA 6	Northern Spain	**GSA 21**	Southern Ionian Sea
GSA 7	Gulf of Lion	**GSA 22**	Aegean Sea
GSA 8	Corsica	**GSA 23**	Crete
GSA 9	Ligurian Sea and North Tyrrhenian Sea	**GSA 24**	Northern Levant Sea

GSA 10	Southern and Central Tyrrhenian Sea
GSA 11.1	Western Sardinia
GSA 11.2	Eastern Sardinia
GSA 12	Northern Tunisia
GSA 13	Gulf of Hammamet
GSA 14	Gulf of Gabes
GSA 15	Malta
GSA 25	Cyprus
GSA 26	Southern Levant Sea
GSA 27	Eastern Levant Sea
GSA 28	Marmara Sea
GSA 29	Black Sea
GSA 30	Azov Sea



Source: http://www.fao.org/gfcm/data/maps/gsas

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