European Commission

Joint Research Centre

Scientific, Technical and Economic Committee for Fisheries (STECF) – Economic Report on the fish processing industry (STECF 25-15)

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2025

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JRC145111

PDF ISBN 978-92-68-35308-0 ISSN 2467-0715 doi:10.2760/1591692 KJ-01-25-672-EN-N

Luxembourg: Publications Office of the European Union, 2025

How to cite this report: European Commission, Joint Research Centre, *Scientific, Technical and Economic Committee for Fisheries (STECF) – Economic Report on the fish processing industry (STECF 25-15),* Malvarosa, L., Virtanen, J. and Guillen, J. (editors), Publications Office of the European Union, Luxembourg, 2025, https://data.europa.eu/doi/10.2760/1591692, JRC145111.

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Abstract

Commission Decision of 25 February 2016 setting up a Scientific, Technical and Economic Committee for Fisheries, C(2016) 1084, OJ C 74, 26.2.2016, p. 4–10. The Commission may consult the group on any matter relating to marine and fisheries biology, fishing gear technology, fisheries economics, fisheries governance, ecosystem effects of fisheries, aquaculture or similar disciplines.

In 2023, the EU fish processing industry comprised 3 245 main-activity enterprises, employing around 102 000 FTE and generating turnover of EUR 33.5 billion. The sector recovered strongly after the pandemic, with gross value added reaching EUR 8.7 billion, up 48% from 2022, and operating cash flow of EUR 5.2 billion, doubling from previous year. Labour productivity rose also by about 50%. Raw materials remain the dominant cost component (71% of production costs). Energy costs stabilised in 2023 after the sharp 2022 increase related to the energy crisis.

Overall, the report highlights that 2023 was an exceptionally positive year for the sector, marked by simultaneous increases in productivity, margins, and profitability, likely reflecting a combination of production efficiency, higher selling prices, and market consolidation in the post-pandemic phase.

STECF Report on EWG 25-15 Economic Report on the fish processing industry

Request to STECF

STECF is requested to evaluate the findings of the STECF Expert Working Group meeting and make any appropriate comments and recommendations to the Economic report on the fish processing industry.

Overview of EWG 25-15

EWG 25-15 met virtually between 20 and 24 October 2025 with 27 experts, 4 JRC staff and the DG MARE focal point. The group prepared the 2025 edition of the Economic Report on the EU Fish Processing Industry, covering the period 2013 to 2023 and, where data permitted, producing indicative projections for 2024 and 2025. This report supersedes previous editions and provides the main evidence base on the structure, performance and outlook of the EU processing sector.

The analysis draws primarily on Member State submissions under the 2025 EU-MAP data call for processing, complemented by Eurostat Structural Business Statistics (SBS) and PRODCOM data to ensure full coverage for Member States that do not report data under the voluntary processing data call. EU-wide aggregates were compiled in accordance with the imputation principles established in PLEN 19-02, adjusted to maintain a homogeneous sample over time and transparent treatment of missing data.

The EWG report delivers a comprehensive overview of the economic and social performance of the EU fish-processing industry notwithstanding the issues with data coverage and availability. The report describes structural developments, cost and revenue composition, profitability, investment trends, and employment patterns, including comparisons between SMEs and large enterprises where data allowed. It also provides an in-depth analysis of raw-material use, disaggregated by species, origin and production environment, and introduces an experimental nowcasting framework to project key indicators for 2024 and 2025 using PRODCOM and ComExt. The report includes national chapters for 25 Member States, each highlighting specific trends, data quality considerations, and policy context. Socio-economic aspects, notably labour productivity, wage trends, and gender composition, were also examined in line with the ToR.

Summary of Main Findings

- In 2023 the EU fish processing industry comprised 3 245 main-activity enterprises, employing around 102 000 FTE and generating turnover of EUR 33.5 billion up 12% from 2021.
- The sector recovered strongly after the pandemic, with gross value added up 48% and operating cash flow doubling between 2022 and 2023. Labour productivity rose by about 50%.
- Raw materials remain the dominant cost component (71% of production costs). Energy costs stabilised in 2023 after the sharp 2022 increase linked to the energy crisis.

- Non-main processing enterprises (900) account for about EUR 1.6 billion in turnover, demonstrating the importance of secondary processing within broader food industries.
- The EWG identified continued heterogeneity and data gaps in the raw-material module notably the use of non-standard species names, missing origin information (70 % unspecified), and inconsistent use of the fishery/aquaculture classification.
- Overall, the report highlights that 2023 was an exceptionally positive year for the sector, marked by simultaneous increases in productivity, margins, and profitability, likely reflecting a combination of production efficiency, higher selling prices, and market consolidation in the post-pandemic phase.
- The nowcast exercise provided a plausible baseline for 2024–2025 but highlighted the need for a standard projection protocol to improve comparability and timeliness.

STECF comments

STECF considers that the EWG satisfactorily addressed all Terms of Reference. The report presents a coherent and well-structured overview of the EU fish-processing sector and successfully integrates quantitative analysis with qualitative interpretation of the drivers shaping recent performance.

Process feedback

STECF notes that the work of the EWG was significantly constrained by limited time availability due to time having to be committed to resubmission of data sets and data verification. As a result, experts were delayed in preparing the final drafts of national chapters. This situation also affected the EU-level analysis which could only proceed once Member States data were finalised. This situation hindered in-depth discussion during the week on key trends and challenges for the sector. Consequently, much of the report's content is based on individual work carried out outside the meeting which is not ideal.

Comments on the data

STECF notes that the 2025 EU-MAP data call for processing still presented issues especially with data heterogeneity and data coverage. Not all Member States reported economic data for the main and non-main segments. Furthermore, not all the Member States followed the RCG Econ recommended categories (as detailed in the Regional Work Plan) for the provision of raw material volume. Specifically, the analysis carried out by experts was impacted by the following data issues:

- 16 Member States provided data under the EU-MAP data call for processing, while Eurostat SBS and PRODCOM data were used to cover the remaining Member States that did not submit information.
- Eurostat data was available at the start of the meeting. There was a delay in fixing the dataset due to the further resubmission of DCF data by Member States because data checks were not conducted in time before the meeting. Some Member States were resubmitting DCF data as late as the Thursday.

- Raw-material data were provided by a limited number of Member States, but the data was not always reported in a standardised way across all Member States with frequent gaps in species coding, country of origin, and production environment.
- Data on non-main processing enterprises were reported inconsistently.

These data issues, combined with the voluntary nature of the processing data collection, continue to restrict comparability and the depth of analysis across Member States. STECF notes that the EWG applied the PLEN 19-02 imputation protocol and included a detailed annex on data coverage and quality.

STECF agrees with the EWG's recommendation to schedule future processing EWGs later in the year (e.g. November or December) to align with Eurostat data release schedules and to organise work in two phases for data validation and EU analysis to allow sufficient time for cross-checking.

STECF notes that the inclusion of a distinct raw-material section, since the 2023 report, represents a significant methodological advance. STECF further notes that previous initiatives (including the SECFISH Project, Döring et al, 2019) aimed at improving raw-material reporting including efforts to link catching and processing activities encountered limited success, in part due to industry reluctance to share commercially sensitive information on sourcing. However, as highlighted by the EWG persistent data gaps particularly the use of non-standard species naming, missing origin information, and inconsistent classification of fishery versus aquaculture sources present difficulties in providing quality data analysis and report content. STECF welcomes and stresses the importance of the alignment with RCG Econ recommendations and supports the continued adoption of standard categories for species (FAO 3-letter codes), production environment, and country of origin (domestic / other-EU / non-EU with ISO codes), as well as the collection of information on processing typology (fresh, frozen or semi-processed).

Comments on the methodology

STECF stresses that projection methods should be fully documented and harmonised, with uncertainty measures clearly reported, before they are used operationally in EU-level monitoring. STECF notes that the nowcast exercise linking PRODCOM and ComExt data provides a short-term baseline for 2024 and represents an important step towards improving the timeliness of processing-sector indicators.

STECF agrees with the EWG that the development of a harmonised protocol for projecting turnover, GVA, and gross profit using PRODCOM data should be undertaken ideally through a dedicated expert task or *ad-hoc* contract given that such methodological design work falls outside the remit of the RCG Econ.

Once developed, the protocol should be tested and refined by a relevant future processing EWGs (2027) using updated data and case studies. The protocol should draw on the work undertaken by EWG 25-15 and include:

- a detailed assessment of PRODCOM product codes relevant to fish processing, identifying gaps, abnormal patterns or single-year observations, and determining whether these should be excluded or recoded,

- transparent criteria for the inclusion or exclusion of codes, including possible weighting approaches for highly volatile series,
- standardised guidance for projecting core indicators such as turnover, GVA and gross profit,
- further exploration of ComExt import–export flows as a potential early-warning indicator for current-year turnover estimates, and
- the use of case studies from selected Member States with different industry profiles to validate and stress-test the projection method.

STECF further agrees with the EWG suggestion for a dedicated RCG Econ workshop on processing. This meeting should happen in 2026 in time to accommodate any recommendations that need to be actions prior to the next processing data call in 2027. STECF suggests that this dedicated workshop should address the following topics:

- Raw-material methodology: The current data available, particularly for raw material, is inadequate for meaningful analysis. There needs to be an exploration of other options to obtain these data. There also needs to be discussion on standardise reporting formats for raw-material volumes by species, origin and production environment, fully aligning with FAO ASFIS and ISO code lists and clarifying conversion from commodity to species level.
- Processing segmentation: discuss the possibility of defining and applying a common typology of processing activities (filleting, freezing, canning, and smoking) to improve comparability and policy insight.
- Future data collection: examine the voluntary nature of data collection, progress on harmonisation, and the feasibility of including key processing variables as mandatory items in the forthcoming EU-MAP revision.

STECF conclusions

STECF concludes that all terms of reference were successfully addressed by EWG 25-15, noting the data issues highlighted and the lack of homogeneity between the data submitted, especially concerning raw material.

STECF agrees with the EWG that the development of a harmonised protocol for projecting turnover, GVA, and gross profit using PRODCOM data should be undertaken ideally through a dedicated expert task or ad-hoc contract.

STECF agrees with the EWG and supports a dedicated RCG Econ workshop on processing to address several key issues raised in the EWG 25-15 report. Specifically, as stated above, STECF suggests that this dedicated workshop should address the raw-material methodology, the segmentation and the future data collection.

STECF agrees with the EWG's recommendations to adjust meeting schedules and consider splitting meetings to enhance data availability and report quality. To address these issues, STECF proposes the following improvements for future reports:

- Ensure enough time to perform preliminary data checks and obtain initial feedback from Member States prior to the EWG meeting.

- Split the next EWG in two. The first half of the meeting should be focused on verifying national data and drafting national chapters, and the second dedicated to preparing the EU-level overview.
- Allocating time between the two meetings to allow the chair(s) to consolidate and construct the EU-wide dataset.

Contact details of STECF members

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.

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REPORT TO THE STECF

The EU Fish Processing Sector. Economic Report 2025 (EWG-25-15)

20-24 October 2025

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

1. INTRODUCTION

This report summarises the work carried out by the STECF EWG 25-15 meeting virtually on October 2025, 20th-24th to draft the 2025 Economic Report on the EU Fish Processing Sector. The EWG was composed of 27 experts, the JRC team (4 persons) and the DG-MARE focal point.

The 2025 Economic Report on the EU Fish Processing Sector provides a comprehensive overview of the latest information available on the structure and economic performance of the EU fish processing industry, from a socio-economic point of view, updated with official data at the year 2023 (for some countries at 2024) and with nowcast up to 2024.

The report covers the period starting with the year 2013 and includes information on the EU fish processing industries in terms of number of enterprises, employment, income and costs. The profitability and performance of the sector is also reported in terms of gross value added, profits, profit margins and labour productivity.

The report provides an in-depth look of the different factors affecting the economic performance of the EU fish processing industry with a special focus on the major drivers and issues affecting the sector. It gives insights on the main factors influencing the industry's economic performance in the period covered by the data series but also trying to provide an outlook on the most recent years, relying on the experts' knowledge and external information, e.g. import and export flows, market prices and consumption trends.

Given that under the new EU-MAP, the transmission of data about the fish processing sector is only done on a voluntarily basis, complementary sources of data (e.g. Structural Business Statistics and Prodcom from Eurostat) were used for some countries. This isin line with what suggested by the EWG drafting the 2017 report and already implemented by the STECF/EWGs for the draft of the 2019, 2021 and 2023 reports.

Furthermore, in line with the approach used for the 2019, 2021 and 2023 reports, the data for EU totals represent the complete picture of the EU fish processing sector as they are not biased by the inclusion (or exclusion) of some Member States, throughout the analysed period (mainly due to the optionality of the data collection for the fish processing sector under EUMAP). The protocol approved by STECF 19-02, adapted by the EWG 21-14 and EWG 23-14 has furtherly been adjusted by EWG 25-15. The compilation of EU aggregates required the use of external sources (Eurostat/SBS) to cover the lack of data for a) for some MS committed to data delivering under DCF/EUMAP but submitting not complete data series; b) for MS not (or no more) committed to deliver data under DCF/EUMAP. Thanks to this, the EU overview analysis is based on the aggregation of a full dataset of 25 Member States, providing the main socio-economic indicators for the sector. It is worth noting, nevertheless, that an in-depth analysis of the economic performance of the EU fish processing sector has been possible only for the group of DCF/EUMAP MSs, because of the more detailed level of variables covered by the DCF/EUMAP in comparison to the Eurostat/SBS framework.

It is important to highlight that even if the report has largely benefited of this methodological approach, a lot of time was spent during the meeting, for cross-checking the two datasets (DCF/EUMAP and Eurostat/SBS). The EWG's work was constrained by limited time, as much of the week was spent on data verification and resubmissions, delaying analysis and drafting. The EWG has provided some suggestions for future improvements.

With the aim of providing a real EU overview of the sector, the report includes also a brief analysis, at country level, for Member States involved in data collection under EUMAP, but not collecting data for the fish processing sector because of a very small sized industry (i.e. Austria, Czechia, Hungary and Slovakia). For these countries and for those no more submitting data because of the voluntarily of the data collection (Estonia, France, Latvia, Ireland, Netherlands and Portugal), the national chapters are built on a bit different format as graphs and tables are based also or exclusively on Eurostat (Structural Business Statistics) data, for the description of the main economic indicators.

The purchase of fish and raw material is the dominant cost item for the sector, accounting for more than 71% of the total production costs. Understanding which segments and Member States use domestic raw material (either from wild fisheries or from aquaculture) and which ones depend on imported supplies and on which species is of high importance for assessing the strengths and vulnerabilities of the sector as well as its sustainability. The 2021 and 2023 reports already dealt with a first analysis of the data on the volume of raw material collected during the respective data calls, highlighting the low coverage and high heterogeneity of the data collection. In line with its Terms of Reference, EWG 25-15 further advanced this work by analysing the data submitted by Member States on raw material volumes by species and origin during the 2025 data call, as presented in this report.

As requested in the ToRs, the EWG assessed different approaches to project key economic indicators (turnover, GVA, and gross profit) for 2024–2025. The analysis focused on identifying available data for all Member States and using external sources to produce preliminary national and EU-wide projections.

The report is structured as follow:

- An overview of the economic performance of the EU fish processing industry, with specific sections on the structural aspects, on economic data and performance indicators (e.g. revenue items, cost items, earnings, profitability, etc.);
- A section on the use of raw materials in terms of volume by species and origin at EU level (with some country details)
- A section on nowcast: methodology used and first results;
- A summary of MS national chapters
- National chapters on the economic performance of the fish processing industry at Member States level (including a section on raw material by species and origin, when collected)
- Annexes containing the main details of the datasets used (DCF/EUMAP and Eurostat/SBS), the checks on data submitted, the glossary of the main variables and indicators.

The 2025 Fish processing economic report supersedes all previous reports.

1.1 Terms of Reference for EWG-25-15

Background and objectives

The economic report on the fish processing industry is one of the main sources of economic and social data for scientific advice on the performance of the EU fish processing industry. It is also increasingly used by scientific bodies, national administrations and international institutions.

Following the 2025 DCF/EU-MAP call for economic data on the EU fish processing sector, the EWG is requested to analyse and comment on the economic performance of the EU and national fish processing sector between 2013 and 2023 (2024 when available).

The final draft of the EWG report will be reviewed by the STECF.

The report should provide an in-depth look at the different factors affecting the economic performance of the EU fish processing industry with a special focus on the major drivers and issues affecting the sector, in particular the persistent high operational costs driven by energy volatility, the ongoing structural challenges and policy-driven energy transition, and inflationary pressures along the value chain, initially exacerbated by the Russian invasion of Ukraine. In addition to interpreting and explaining the quantitative results, the report should contain qualitative information and analysis on the drivers and trends in performance and other aspects of policy relevance based largely on the scientists' expert knowledge. The main objective of the report is to obtain high quality interpretation of all data outputs to ensure the usefulness of the report for DG MARE's policy development, Member States and the industry.

The analysis of raw materials is essential. When possible, raw materials should be analysed by species and origin. In the case of origin by whether it is coming from fisheries or aquaculture and whether if it is domestic or not coming from (other) EU countries or from non-EU countries.

Experts are asked to analyse the sector and its components, e.g. by markets and trade determinants (particularly imports) by main segments of processing activities (where data is available), competitiveness, market prices and consumption, certification, innovation, links and level of dependency with the local fishing fleet and aquaculture sector, the role of European Maritime Fisheries Fund support, contribution to the local communities and the Blue Economy, strengths, weaknesses, opportunities and threats.

Given the importance of the processing sector in many communities, the socio-economic aspects including trends on employment, salaries and labour productivity, shall need to be considered.

Structure and content

Being the basis for the structure of the report, the EWG is requested to work and comment on, at least, the following items:

An executive summary containing the key findings.

An overview of the economic performance of the EU fish processing industry (The report should mention indication on the evolution compared with 2013 base year. The latest developments should be presented in annual terms and not with respect to the previous

report), including a comparative across Member States highlighting the differences and similarities of national industries. This should include the drivers and main trends based on expert knowledge. It must include specific sections on:

- **EU overview chapter** on the economic performance of the fish processing industry providing[1]**:**
    - EU fish processing sector overview (including recent developments).
    - Economic data and performance indicators (e.g. revenue items, cost items, earnings, profitability, etc.), including contrasting company size (e.g. SMEs vs. non-SMEs), when possible.
    - Specific data/trends on economic sustainability indicators
    - Trends and drivers up to 2023
    - Outlook for the years 2024 and 2025 (based on expert knowledge and external data sources)

- **National chapters** on the economic performance of the fish processing industry providing[2]**:**
    - National fish processing sector overview (including recent developments).
    - Economic performance indicators, including by size category (e.g. contrasting SMEs and non- SMEs when possible).
    - Trends and drivers up to 2023
    - Outlook for the years 2024 and 2025 (based on expert knowledge and external data sources)
    - Specific national data coverage and quality issues

- **Special sections**
    - Raw materials: data analysis on volume, species and origin
    - Nowcast: evaluating approaches for projecting economic indicators for 2024 and 2025

- **Annexes**
    - Data coverage and quality.

Streamlining of the report and data issues

Efforts should also be invested in streamlining the structure and content of the report. In particular, the following should be taken into account:

[1] Given the use of EUMAP as well as Eurostat data, it should be clearly identified the source of data. A more detailed discussion about data coverage and quality issues could be included in an Annex.

[2] Given the use of EUMAP as well as Eurostat data, it should be clearly identified the source of data. A more detailed discussion about data coverage and quality issues could be included in an Annex.

The narrative should add value to the figures compiled in the charts and tables. This could be achieved by highlighting figures with special relevance and by explaining what the drivers and/or consequences are.

Where feasible, compare the main socio-economic indicators for fish processing with equivalent EU and national figures. (e.g., national average salaries, GDP, etc.), or in relations with the other fisheries sectors (the fishing fleet and aquaculture).

Given that under the EU-MAP, the transmission of data about the fish processing sector is only done on a voluntarily basis, the use of complementary source of data (e.g. SBS and PRODCOM from Eurostat) may be required for some countries.

When aggregating national indicators to obtain the EU totals, special attention should be given to maintain a homogeneous number of Member States. The data for EU total should reflect an estimation of the actual evolution and should not be distorted by the inclusion (or exclusion) of Member States throughout the analysed period. The compilation of EU aggregates may require the use of imputation in some Member States. The imputation of missing values should follow the principles approved by STECF (PLEN 19-02).

The economic report on the fish processing industry is produced on a biennial basis. This should be taken into account when presenting the information and making the interpretations. Besides the long-term evolution analysis, a special focus should be made not only on the last year, but rather on the last two years, when relevant. Indications on the latest developments should be presented in annual terms and not with respect to the previous report (which would imply an increase or decrease over two years). The report should also present indications on the evolution compared with the base year.

A discussion and explanation about data coverage, data issues and how they were addressed should be included in an Annex.

Data transmission

As a matter of priority, the EWG is requested to ensure that all unresolved data transmission (DT) issues encountered prior to and during the EWG meeting are reported on-line via the Data Transmission Monitoring Tool (DTMT). Guidance on precisely what should be inserted in the DTMT, log-on credentials and access rights will be provided during the EWG.

2. EU OVERVIEW

This chapter presents an overview of the structure and economic performance of the EU fish processing industry over the period 2013–2023. It describes the number and size of enterprises, employment levels, and the evolution of these indicators both at EU and Member State (MS) level. The analysis also includes a comparison of average wages and labour productivity, used here as an indicator of capital intensity. For the EU as a whole, the chapter reports key financial variables such as turnover, subsidies, profits, and gross value added, also considered in terms of their social contribution.

As in previous editions, the 2025 report provides a comprehensive assessment of the EU fish processing sector, covering all Member States with processing activities. This includes both the countries participating in data collection under the DCF/EUMAP framework (referred to as DCF/EUMAP MSs) and those that never have been or are no longer involved in such data collection (NO DCF MSs) — see notes under Table 3.1 for details.

The main economic analysis focuses on the EU-25, while more detailed insights are provided for the DCF/EUMAP MSs, given the broader range and granularity of variables available from this source compared with Eurostat/SBS data. Annex 2 explains the data usage protocol, including the imputation methods applied to address missing data.

The EU-level overview also compares Member States where possible, highlighting the main factors underlying cross-country differences.

2.1 Overview of the EU fish processing industry

In 2023, the overall number of enterprises carrying out fish processing as a main activity was equal to 3 245 firms. The overall turnover produced by the sector is estimated at EUR 33.5 billion (Table 2.1).

After the most acute phase of the pandemic (2020-2021), 2022 marked a rebound year for many European industries - particularly manufacturing and food processing - reflected in a 6% increase in turnover compared to 2021 – Table 2.1.

The recovery in domestic and foreign demand, driven by the reopening of restaurants, hotels, and HoReCa channels, led to a surge in orders after two years of depressed consumption. Many companies, having scaled down production during 2020-2021, intensified shifts in 2022 to rebuild inventories and meet new orders. Public support measures and favourable credit conditions, including European funds and expansionary policies, further sustained production and consumption. Rising inflation also encouraged distributors and retailers to anticipate purchases and buy in larger quantities to lock in lower costs.

As a result, in 2022 many workers received higher pay due to overtime, productivity bonuses, and exceptional production-related incentives, which increased the average annual wage.

In 2023, the sector began to normalise: demand stabilised, profit margins narrowed due to higher energy costs, and companies reduced overtime and variable pay components. Consequently, even with a stable number of FTEs per enterprise (over 2021-2023), the apparent average wage declined compared to the previous year, as 2022 figures had been inflated by post-pandemic production peaks – Table 2.1.

Under the DCF/EUMAP framework, Member States are required to report both the number and the turnover of enterprises engaged in fish processing as a secondary activity (“non-

main”). These “non-main” enterprises are companies whose primary business lies outside fish processing - typically in other branches of the food industry - but which also carry out some level of fish or seafood processing as part of a broader production mix.

According to available estimates (covering only DCF/EUMAP Member States), there are approximately 905 such enterprises. Although fish processing is not their core activity, their contribution to the sector is far from marginal: the turnover attributable to fish and fish product processing is estimated at around EUR 1.6 billion, representing about 5% of the total sector turnover of the fish processing activity in 2023 (see Table 2.1).

Among reporting countries, Italy, Belgium and Germany account for the largest number of enterprises processing fish and fish products as a secondary activity.

Table 2.1 EU fish processing industry sector overview, 2013-2023

Variable	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Δ (2023-22)
Structure (number)												
*Total enterprises **	3,413	3,255	3,417	3,405	3,218	3,119	3,049	3,209	3,297	3,265	3,245	-1%
≤ 10 employees	2,072	1,959	2,110	2,025	1,919	1,868	1,720	1,860	1,945	1,933	1,964	2%
11-49 employees	930	884	896	938	886	832	885	922	929	899	851	-5%
50-249 employees	350	353	352	383	357	359	381	367	356	367	364	-1%
≥ 250 employees	61	59	59	59	56	60	63	60	67	66	66	0%
Employment (number)												
Total employees	100,066	101,185	101,275	105,397	102,965	105,227	108,536	108,334	112,500	113,044	110,879	-2%
FTE	89,318	91,231	91,442	95,561	93,343	95,946	98,223	97,076	102,709	103,148	102,354	-1%
Indicators												
Turnover (million €)	22,391	22,408	23,492	25,242	26,458	27,627	28,430	28,255	29,869	31,552	33,498	6%
FTE per enterprise	26.2	28.0	26.8	28.1	29.0	30.8	32.2	30.3	31.2	31.6	31.5	0%
Average wage (thousand €)	26.2	26.1	26.2	27.0	28.2	29.8	30.5	31.7	31.8	33.4	32.6	-3%
Value of unpaid work (% on total)**	2.2%	2.9%	1.6%	1.7%	1.6%	2.0%	1.4%	1.3%	2.7%	2.8%	1.8%	-37%
Enterprises doing fish processing not as main activity*												
Number of entreprises	635	654	679	687	664	662	628	906	910	893	905	1%
Turnover attributed to fish processing (million €)	841	964	985	997	1,035	988	1,034	1,576	1,494	1,398	1,633	17%

Source: elaboration by the EWG on MS data submissions under the 2025 Fish processing data call and on Eurostat/SBS. *Notes:* *Eurostat/SBS size classes not perfectly homogenous with DCF/EUMAP size classes; **only on DCF countries (details on the value of unpaid work missing under SBS data)

Looking at the structure of the EU fish processing sector, considering only enterprises whose core activity is the processing of fish and fish products, Spain ranks first at EU level, accounting for 19% of all firms and generating 24% of the total EU turnover. Italy and France follow, each representing around 12% of active enterprises. France also holds the second position in terms of turnover, contributing 16% of the EU total, while Poland ranks third with 15%.

In terms of employment, Spain remains the leading country, providing 23% of all jobs in the sector. Poland follows with 19% of total EU employment, reflecting the larger average size of its processing facilities (Table 2.2).

Table 2.2 Number of enterprises, employment and turnover in the fish processing sector by EU countries, 2023

Country	Number of enterprises	enterpises %	Turnover (million €)	turnover %	Total employment	employment %
Belgium	77	2%	1,169	3%	2,227	2%
Bulgaria	66	2%	200	1%	2,346	2%
Croatia	35	1%	169	1%	2,547	2%
Denmark	89	3%	2,398	7%	3,064	3%
Finland	139	4%	407	1%	955	1%
Germany*	204	6%	2,165	6%	4,867	4%
Greece	178	5%	361	1%	2,257	2%
Italy	404	*12%*	2,201	*7%*	6,047	*5%*
Lithuania	47	1%	674	2%	5,020	5%
Malta	9	0%	74	0%	151	0%
Poland	145	4%	5,044	15%	20,514	19%
Romania	16	0%	100	0%	1,042	1%
Slovenia	16	0%	43	0%	179	0%
Spain	604	19%	7,968	24%	25,354	23%
Sweden	166	5%	579	2%	1,439	1%
EU DCF MSs	2,195	67%	23,552	70%	78,009	70%
Austria	16	0%	65	0%	192	0%
Czechia	23	1%	178	1%	785	1%
Estonia	77	2%	238	1%	1,188	1%
France	381	12%	5,285	16%	13,117	12%
Hungary	14	0%	12	0%	111	0%
Ireland	112	3%	609	2%	2,497	2%
Latvia	93	3%	309	1%	2,604	2%
Netherlands	182	6%	1,501	4%	3,438	3%
Portugal	165	5%	1,721	5%	8,786	8%
Slovakia	4	0%	30	0%	152	0%
EU not-DCF MSs	*1,067*	*33%*	*9,946*	*30%*	*32,870*	*30%*
Total EU	**3,262**	**100%**	**33,498**	**100%**	**110,879**	**100%**

Source: elaboration by the EWG on MS data submissions under the 2025 Fish processing data call and on Eurostat/SBS. *Notes:* 1) EU DCF MSs= EU MSs for which is mandatory to deliver data under DCF/EUMAP for the 2023 data call. 2) EU not-DCF MS s= EU MSs not covered by obligation under DCF/EUMAP but having a fish processing industry, namely Austria, Czechia, Estonia, France, Hungary, Ireland, Latvia, Netherlands, Portugal and Slovakia, for which Eurostat/SBS data have been used. *Number of enterprises for Germany refers to the overall popolutation while turnover, employment and all the other economic variables refer only to the number of enterprises with employees>20 units.

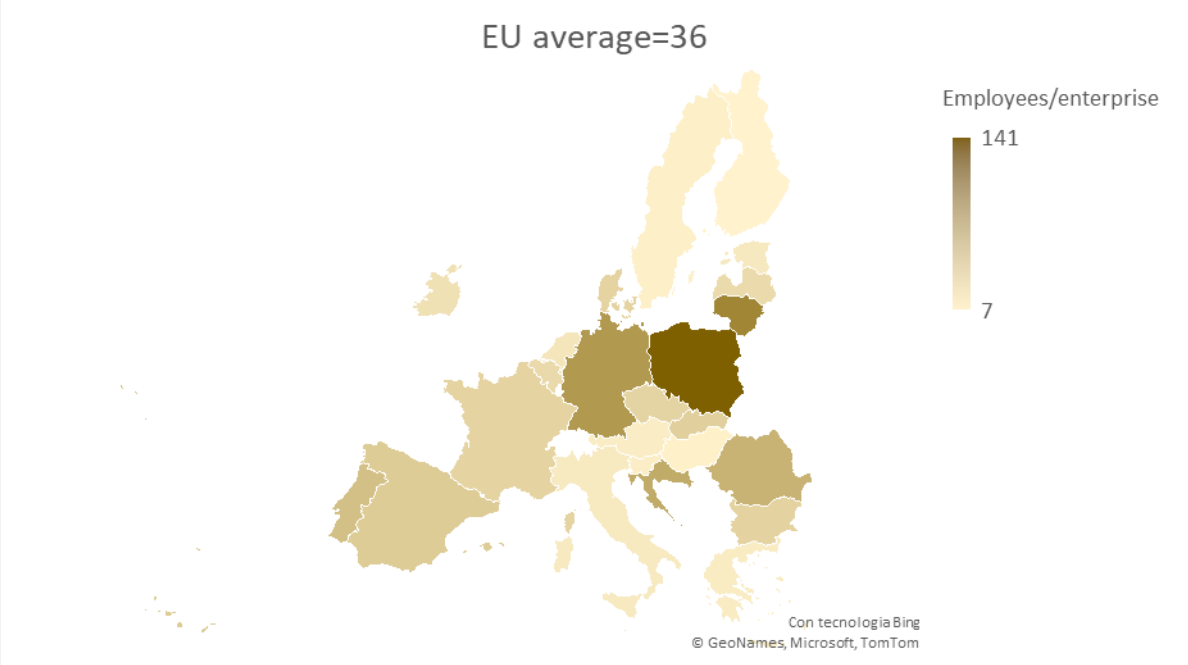
At the EU level, fish processing enterprises employ on average about 36 people per firm[3].

[3] The average number of people employed per firm at EU level in the text is not consistent with that calculated starting from the totals in Table 2.2 (being =34) because number of enterprises for Germany refers to the overall popolutation while totaL employment refers only to the number of enterprises with employees>20 units.

However, significant differences emerge across Member States in terms of labour intensity. In Eastern Europe, enterprises tend to be much larger, with Poland and Lithuania leading at an average of 141 and 107 employees per firm, respectively. Germany and Croatia follow with 88 and 73 employees per enterprise.

Conversely, several countries are characterised by a predominance of small-scale plants, including Finland, Sweden, and Hungary, where firms employ fewer than 10 people on average (Figure 2.1).

Figure 2.1 Number of employees per enterprise by country, 2023



Source: elaboration by the EWG on MS data submissions under the 2025 Fish processing data call and on Eurostat/SBS. *Note:* for Germany the ratio has been calculated considering only enterprises with employees>20 units.

Figure 2.2 illustrates the distribution of fish processing enterprises across EU Member States by firm size class, expressed as a percentage of total enterprises per country.

At the EU level, the sector is overwhelmingly composed of small-scale enterprises: micro-enterprises (≤ 10 employees, blue) account for around two-thirds of all firms, while small enterprises (11-49 employees, orange) represent most of the remaining share. Medium-sized enterprises (50-249 employees, grey) and large enterprises (≥ 250 employees, yellow) make up only a small fraction.

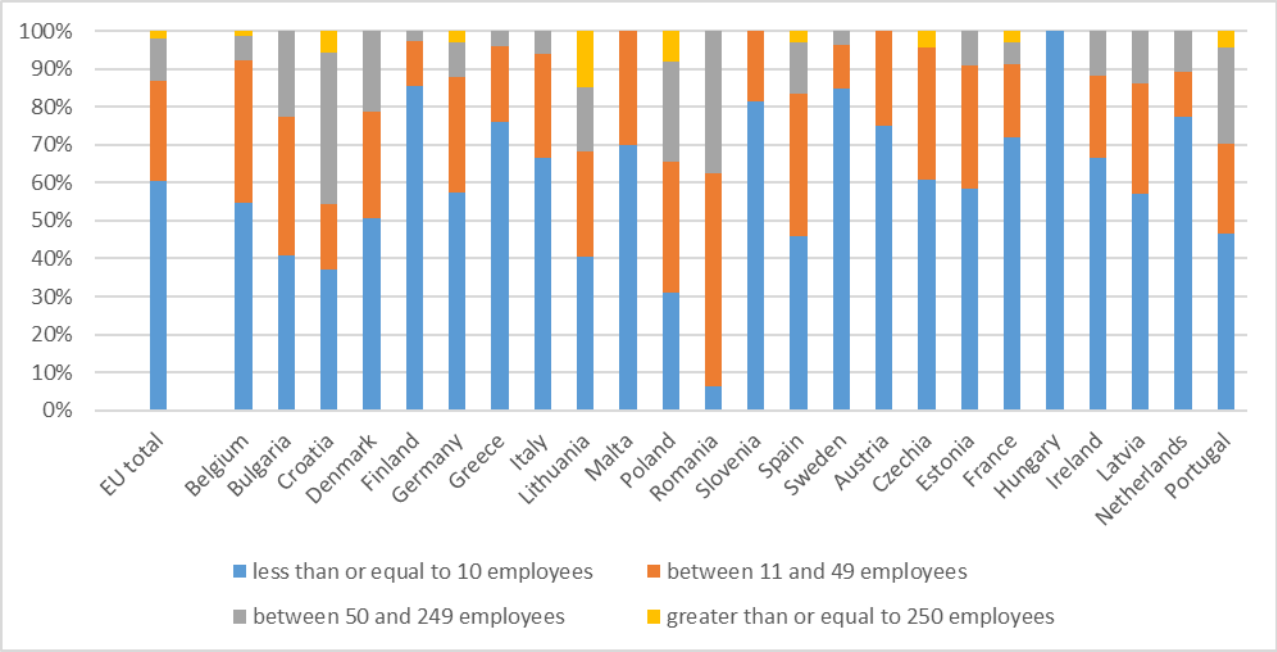
However, the composition varies considerably across countries confirming what emerging from Figure 2.1:

- High prevalence of micro-enterprises: In countries such as Finland, Sweden, Greece, Ireland, and the Netherlands, more than 70-80% of firms employ fewer than 10 people, reflecting a highly fragmented and small-scale structure.

- Balanced structures: Countries like Spain, Italy, France, and Germany show a more balanced distribution between micro- and small-sized firms, with a moderate presence of medium enterprises.
- Higher share of medium and large enterprises: In Poland, Lithuania, and Romania, the proportion of firms with 50-249 employees is significantly higher than the EU average, and these countries also record the highest shares of large enterprises (≥ 250 employees). This indicates a more concentrated and industrialised sector.
- Countries with diverse structures: Denmark and Croatia display mixed profiles, with a notable presence of both small and medium-sized enterprises.

Overall, the data confirm that while the EU fish processing industry is dominated by small businesses, structural differences across Member States are marked - with Northern and Western Europe characterised by micro-enterprises, and Eastern Europe showing more consolidated, large-scale operations.

Figure 2.2 Firms by country and by size classes, 2023



Source: elaboration by the EWG on MS data submissions under the 2025 Fish processing data call and on Eurostat/SBS. *Notes:* Eurostat/SBS size classes not perfectly homogenous with DCF/EUMAP size classes

The graph shows the evolution of the number of fish processing enterprises in the EU between 2013 and 2023, broken down by firm size class (index 2013 = 100).

Overall, the total number of enterprises (black line) remained relatively stable over the period, with only moderate fluctuations. However, notable differences can be observed among size classes.

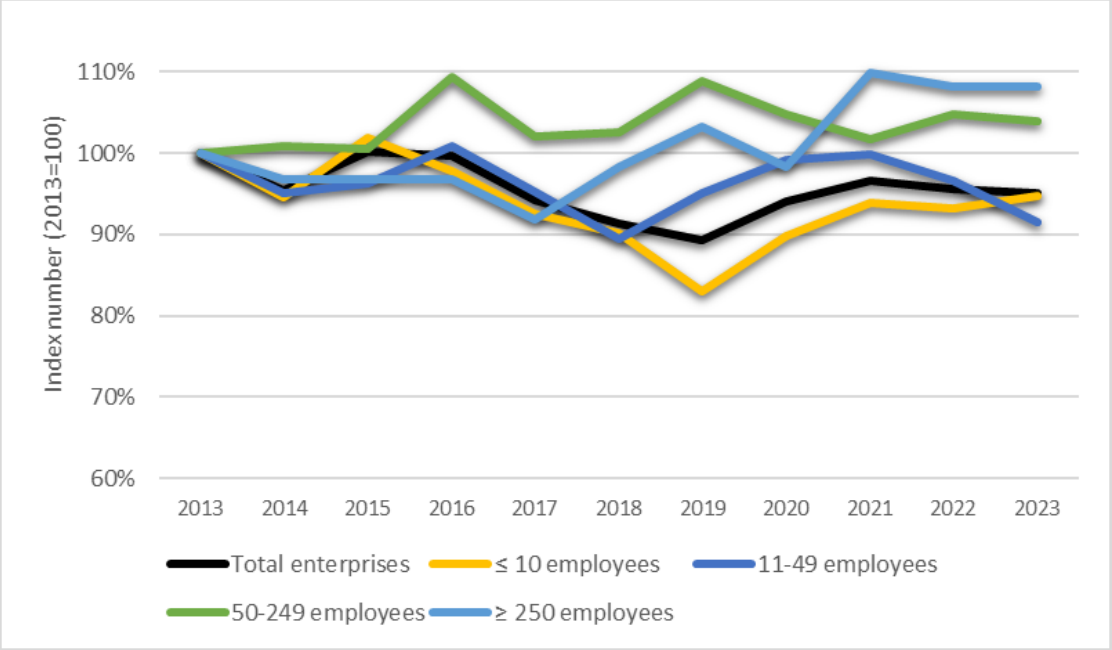
Micro-enterprises (≤ 10 employees, yellow line) show a gradual decline after 2015, reaching their lowest point around 2019, before slightly recovering toward 2023. A similar though less pronounced trend is observed for small enterprises (11–49 employees, dark blue line).

In contrast, medium-sized enterprises (50-249 employees, green line) display the strongest growth dynamics, with the index peaking above 110% around 2016 and again in 2020, suggesting a consolidation trend within this category.

Large enterprises (≥ 250 employees, light blue line) also show a general upward trend, particularly after 2018, when their number increased sharply, stabilising at higher levels through 2023.

Overall, the data suggest a modest decline in smaller firms and a relative strengthening of medium and large enterprises, indicating a gradual structural concentration in the EU fish processing industry over the past decade.

Figure 2.3 Trend of the numbers of firms, total and by size classes, 2013-2023 (index number, 2013 =100).



Source: elaboration by the EWG on MS data submissions under the 2025 Fish processing data call and on Eurostat/SBS.

The two pie charts in figure 2.4 compare the distribution of turnover in the EU fish processing sector by enterprise size class between 2013/14 and 2022/23. The data show a clear shift toward larger enterprises over the decade, confirming the trend already emerging from the previous graphs:

- In 2013/14, the largest share of turnover (44%) came from medium-sized enterprises (50-249 employees), followed by large enterprises (≥250 employees) with 24%. Small enterprises (50-249 employees) generated 25% of total turnover, while micro-enterprises (≤10 employees) accounted for only 7%.

- By 2022/23, the structure had changed significantly. The share of large enterprises increased sharply to 39%, overtaking medium-sized firms (now 35%) as the main contributors to total turnover. Meanwhile, the share of small and micro-enterprises declined to 22% and 4%, respectively.

This evolution indicates a progressive concentration of production and value creation in the hands of larger companies. The sector appears to have become more capital-intensive and consolidated, with fewer small players contributing proportionally to total turnover.

Overall, the data suggest that the EU fish processing industry has undergone a structural transformation favouring economies of scale and industrial efficiency, while reducing the relative weight of smaller operators in market output.

Figure 2.4 Turnover by size classes, 2013/14 and 2022/23.

Source: elaboration by the EWG on MS data submissions under the 2025 Fish processing data call and on Eurostat/SBS. *Notes:* based only on DCF/EUMAP EU MSs because of lack of figure, for confidentiality reasons, for some size classes on Eurostat data

Figure 2.5 illustrates the evolution of employment (total employees and Full-Time Equivalents - FTE) and turnover in the EU fish processing sector between 2013 and 2023.

Over the decade, the sector shows a steady upward trend in both employment and turnover, although the growth in output is clearly stronger than the increase in the workforce.

Employment rose gradually, reaching its highest levels in 2022 and 2023. After a relatively stable phase between 2018 and 2020, a clear recovery is observed from 2021 onward, with both indicators (total employee and FTE) increasing, suggesting renewed sectoral activity and expansion following the slowdown likely linked to the COVID-19 period.

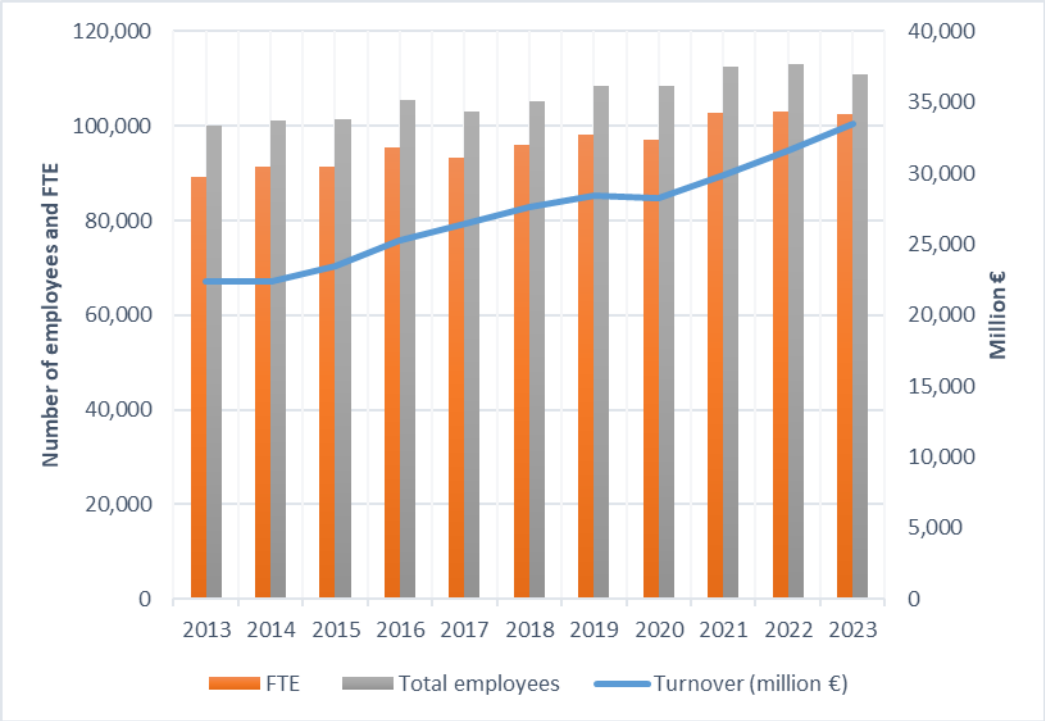
The gap between total employees and FTE remains, but it appears to narrow slightly in the most recent years, possibly indicating a rise in full-time positions or greater employment stability within firms (decrease of seasonal work).

Turnover shows a particularly strong growth in 2022 and 2023, reaching its highest point in the series, around EUR 35 billion in 2023. This sharp increase follows the upward trajectory already visible after 2020 which reflects post-pandemic recovery effects, including adjustments to global supply chains as well as higher market prices, increased production

volumes. As already mentioned above, 2022 marked a period of strong production growth driven by the reopening of the HoReCa sector, restocking, and high demand supported by expansionary policies.

Overall, the data for 2022-2023 confirm a robust and expanding phase for the EU fish processing industry: turnover growth accelerated more rapidly than employment, indicating improved productivity and efficiency, as well as a possible consolidation of the sector driven by larger, more capital-intensive enterprises.

Figure 2.5 Trend of total employment, FTE and turnover, 2013-2023.

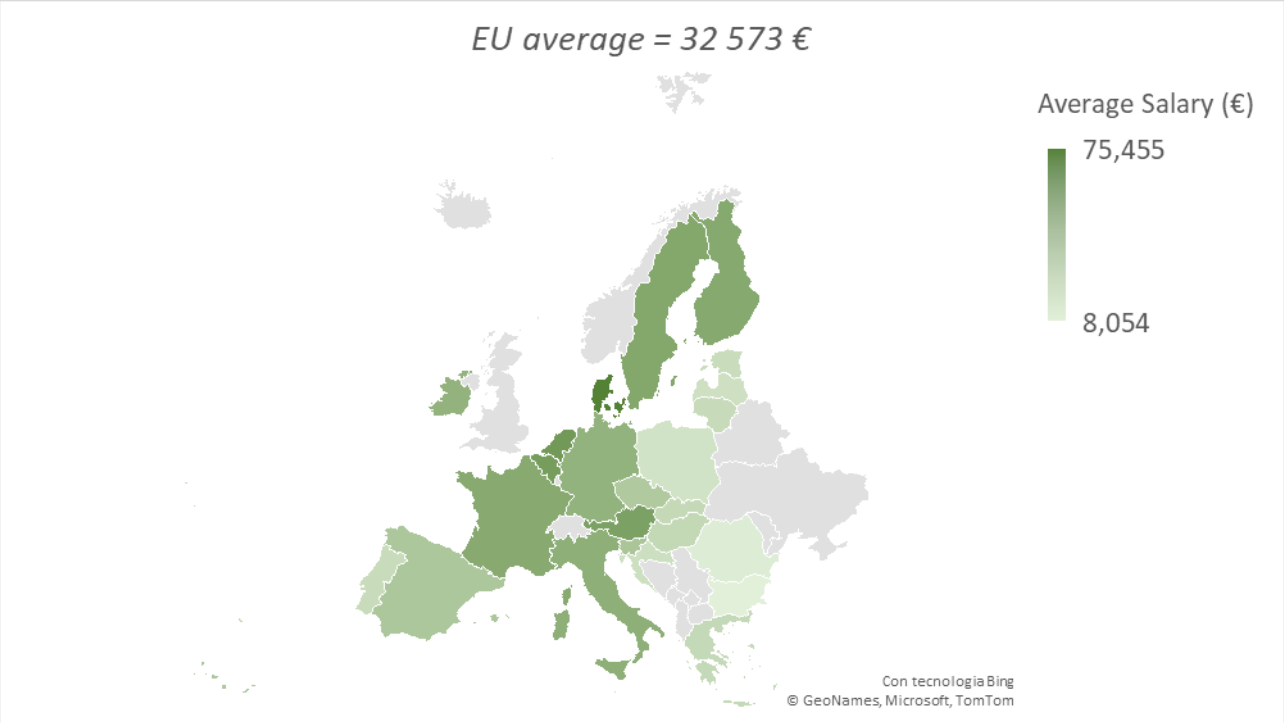


Source: elaboration by the EWG on MS data submissions under the 2025 Fish processing data call and on Eurostat/SBS.

The average wage paid by the sector (measured as personnel costs per FTE unit) in 2023 was around EUR 32.6 thousand, decreasing by 3% vs the level of 2022, year when, on the opposite, an increase of the average salary was detected in comparison to the previous year 2021, due to post-pandemic normalisation effect (see above).

2023 data on personnel costs and employment by countries suggest that the average level of remuneration of the labour force (wage per FTE) varies substantially by MSs (Figure 2.6). The Danish fish processing industries record the highest remuneration (EUR 75.4 thousand), followed by the Dutch industries (EUR 61 thousand per FTE). Belgian, Austrian, Swedish, Finnish and French industries follow with average paid wage in a range between EUR 50-60 thousand. For Italy, Ireland and Germany average wage between EUR 40-50 thousand are detected in 2023 while Slovenian, Spanish and Czech industries pay wage more in line with the EU average. Romania and Bulgaria stay at the lowest level (between EUR 8 and 10 thousand).

Figure 2.6 Average salary by country, 2023.

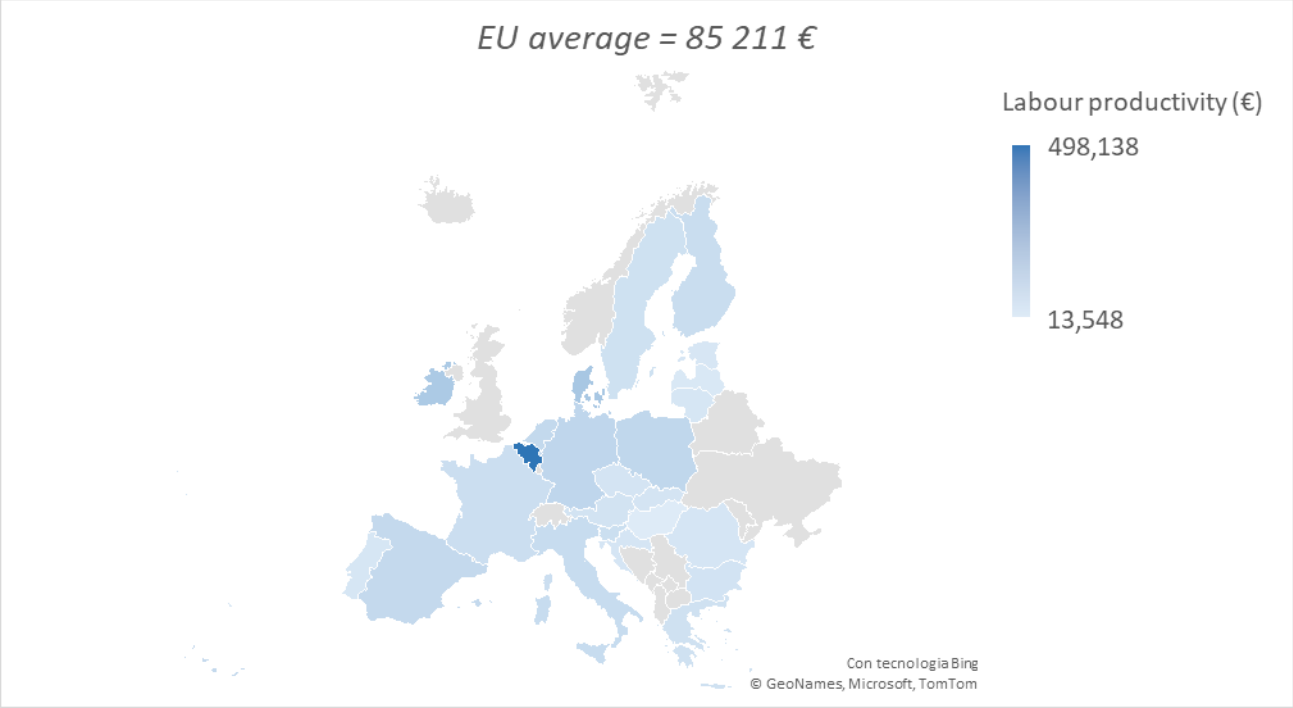


Source: elaboration by the EWG on MS data submissions under the 2025 Fish processing data call and on Eurostat/SBS.

The labour productivity of the EU fish processing industries, measured as the GVA produced by a unit of labour (FTE) was on average EUR 85 thousand (Figure 2.7), increasing by a half compared to the 2022 value and 30% in the last 2 years of the series (Table 2.3).

Again, large differences emerge across EU. Belgium's exceptionally high labour productivity in the fish processing sector (EUR 458,000 per employee versus the EU average of EUR 85,000) reflects a highly capital-intensive and export-oriented industry structure. The sector is dominated by a few large, automated plants focused on high-value products and supported by Belgium's role as a major logistics and trading hub. Consequently, part of the recorded value added derives from commercial and distribution activities rather than purely processing operations. The Danish and Irish industries follow, each reporting values exceeding EUR 150 thousand. Germany, Poland, the Netherlands, and Spain also perform above the EU average, while the lowest figure is observed in Hungary, where the sector records only EUR 13.5 thousand of GVA per FTE – Figure 2.7.

Figure 2.7 Labour productivity by country, 2023.



Source: elaboration by the EWG on MS data submissions under the 2025 Fish processing data call and on Eurostat/SBS.

2.2 Economic performance

Between 2021 and 2023, the EU fish processing sector showed solid economic recovery accompanied by improved efficiency and profitability.

Turnover increased by 12% compared with 2021 (+6% over 2022), indicating sustained demand despite inflationary pressures and rising production costs. At the same time, there was a rationalization of operating costs: purchases of goods and services fell by 3% and labour costs by 4%, both contributing to the strong recovery in margins.

The data on energy costs reveal a clear post-crisis adjustment phase. After the sharp surge in 2022 — when energy expenditure rose by around +34% compared to 2021 — 2023 shows a modest decline of 5%, indicating a partial stabilization of energy markets following the peak of the energy crisis triggered by the war in Ukraine.

This reduction suggests that processors may have benefited from lower wholesale energy prices in 2023, as well as from energy-efficiency measures and the gradual diversification of energy sources implemented across the EU. However, despite this short-term improvement, energy costs remain about one-third higher than in 2021, confirming that the sector continues to operate under a structurally more expensive energy environment. While 2023 brought temporary relief, the figures show that energy remains a key vulnerability for the fish processing industry — particularly for plants with energy-intensive operations such as freezing, drying, or refrigeration.

Gross Value Added (GVA) rose by 48% in just one year, while Operating Cash Flow more than doubled (+103%), highlighting a marked improvement in profitability and operational

efficiency. Labour productivity increased by 50%, reflecting higher value generated per employee, likely linked to greater automation and process optimization.

Investment activity also followed a positive trend: net investments grew by 10% compared with 2021, supported by rising operating (+71%) and capital (+11%) subsidies. This points to a context of favourable public policies and a renewed commitment by the sector to modernization and sustainability – Table 2.3.

Overall, in 2023 the sector displayed a combination of growth, public support, and improved efficiency, strengthening its resilience and investment capacity after the challenges of the previous years.

Table 2.3 Cost Economic performance of the EU fish processing industry sector, 2013-2023

Variable	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Δ (2023-22)
Income, expenditure and investments (million €)												
Turnover	22,391.4	22,407.7	23,492.3	25,242.3	26,457.7	27,627.4	28,430.3	28,254.7	29,869.1	31,552.1	33,497.9	6%
Total Income	22,561.9	22,641.5	23,821.9	26,327.3	27,631.1	28,541.4	29,463.7	29,294.2	31,134.1	32,711.7	34,804.2	6%
Total purchase of goods and services	16,130.4	16,028.3	17,303.3	19,589.3	19,949.0	20,669.8	21,355.8	19,814.0	21,661.2	23,669.0	23,070.7	-3%
of which: energy costs	*466.2*	*454.5*	*456.2*	*500.8*	*416.9*	*422.5*	*458.4*	*420.6*	*491.2*	*656.7*	*624.1*	-5%
Labour costs	2,374.0	2,429.5	2,418.0	2,608.7	2,663.4	2,894.4	3,021.6	3,108.5	3,329.8	3,512.4	3,372.7	-4%
Net Investments	359.8	437.3	411.8	416.5	431.5	479.6	432.7	619.3	664.1	698.6	732.3	5%
Economic performance (million €)												0%
Gross Value Added	4,190.0	4,242.6	4,007.0	3,929.4	4,823.3	4,060.9	5,006.1	6,129.7	6,319.2	5,875.1	8,721.7	48%
Operating Cash Flow	1,868.3	1,854.1	1,653.3	1,357.2	2,200.9	1,876.9	2,055.4	3,104.0	3,035.3	2,590.5	5,247.6	103%
Productivity and performance Indicators												0%
Labour productivity (thousand €)	46.9	46.5	43.8	41.1	51.7	42.3	51.0	63.1	61.5	57.0	85.2	50%

Source: elaboration by the EWG on MS data submissions under the 2025 Fish processing data call and on Eurostat/SBS

Table 2.4 illustrates the cost structure evolvement of the EU fish processing industry from 2013 to 2023. The trend confirms the key findings emerging from the above reported data.

The table shows a clear improvement in cost efficiency over time: total costs decreased from 90.3% of total income in 2013 to 80.6% in 2023, indicating stronger profitability.

The cost structure remains relatively stable, with raw materials consistently accounting for around 70% of total costs, confirming their dominant role in the sector's cost composition. Personnel costs slightly increased since 2016 but remain moderate (about 11%), while other operational costs declined to 15.9%, suggesting improved efficiency or cost control.

Energy costs, after dropping to a low of 1.8% in 2020, rose again to 2.4% in 2023, reflecting the impact of the recent energy crisis, though they remain below early-decade levels. Overall, the sector appears to have maintained stable input proportions while improving overall cost management and profitability.

Table 2.4 Cost structure of the EU fish processing industry, 2013-2023

Cost items		2013	2016	2020	2023
Total costs / Total income (%)		90.3%	96.0%	86.2%	80.6%
Cost items as a share of total costs (%)	*Raw materials*	70.4%	71.0%	69.4%	70.6%
	Personnel costs	10.8%	9.4%	11.6%	11.1%
	Other operational costs	16.3%	17.4%	17.2%	15.9%
	Energy costs	2.5%	2.2%	1.8%	2.4%

Source: elaboration by the EWG on MS data submissions under the 2025 Fish processing data call and on Eurostat/SBS. *Notes:* based only on DCF/EUMAP EU MSs because of lack of details on some operational costs in Eurostat/SBS

Table 2.5 reveals again a high heterogeneity among MSs and a geographical concentration of economic performance within the EU fish processing sector in 2023.

Spain and Poland clearly dominate, jointly accounting for nearly half of the EU's Gross Value Added (GVA) and more than half of its operating cash flow. Spain leads with 24% of total GVA and the same share of operating cash flow, reflecting the country's large-scale production capacity and high market integration. Poland, with 23% of GVA and 32% of cash flow, stands out for its strong profitability, likely linked to large, efficient processing plants and competitive cost structures.

Belgium ranks third in terms of GVA (12%) but shows an even stronger position in operating cash flow (18%), suggesting very high efficiency and margins relative to its size. Other Western European countries - France, Germany, Denmark, Italy, and Portugal - make moderate but significant contributions, together representing about one-quarter of the EU's total value added. In contrast, smaller or Eastern EU countries (e.g. Bulgaria, Croatia, the Baltic States) have limited economic weight, each contributing less than 2% of total GVA. Some, such as Austria and Hungary, even show negative or near-zero operating results, indicating low profitability or structural inefficiencies.

Overall, the data highlight a dual structure in the EU fish processing industry: a few large, highly efficient producers (notably Spain, Poland, and Belgium) generating the bulk of the sector's value and profit, alongside a majority of smaller national industries with marginal economic impact.

The disparities across EU industries clerarly emerges also when considering the two ratios of GVA and OCF in relation to income. Belgium stands out with exceptionally high GVA (88%) and operating cash flow (78%) relative to income, indicating a highly efficient and profitable processing sector. Poland also performs strongly (38% and 33%), confirming its leading position in the EU fish processing industry. In contrast, several Western and Northern countries, such as France, Germany, Denmark, and Finland, show moderate profitability with GVA margins between 14% and 20%. Southern countries like Italy, Greece, and Portugal remain below the EU average, reflecting lower operational efficiency. Negative or near-zero cash flow ratios in Austria and Hungary suggest financial stress or weak profitability.

Table 2.5 Economic performance of the EU fish processing industry sector by country, 2023

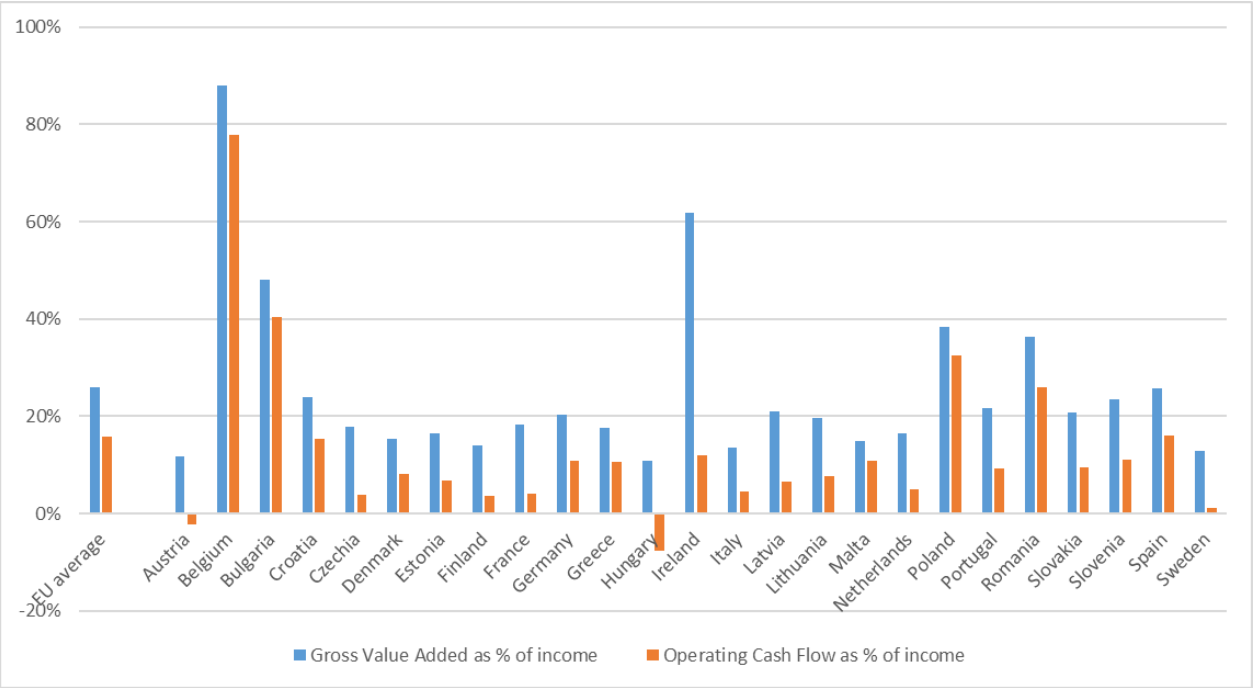
Country	Gross Value Added (million €)	% of total EU	Operating Cash Flow (million €)	% of total EU
Austria	7.3	0%	- 1.4	0%
Belgium	1,047.0	12%	925.3	18%
Bulgaria	99.7	1%	83.5	2%
Croatia	82.7	1%	53.0	1%
Czechia	29.8	0%	6.2	0%
Denmark	368.4	4%	195.9	4%
Estonia	38.1	0%	15.5	0%
Finland	58.5	1%	14.7	0%
France	791.7	9%	176.5	3%
Germany	441.9	5%	238.2	5%
Greece	111.6	1%	66.9	1%
Hungary	1.3	0%	- 0.9	0%
Ireland	356.9	4%	69.1	1%
Italy	377.2	4%	123.3	2%
Latvia	62.0	1%	19.6	0%
Lithuania	140.9	2%	55.8	1%
Malta	11.0	0%	7.9	0%
Netherlands	215.5	2%	65.8	1%
Poland	1,966.0	23%	1,665.1	32%
Portugal	306.1	4%	132.7	3%
Romania	38.5	0%	27.7	1%
Slovakia	6.2	0%	2.8	0%
Slovenia	10.8	0%	5.1	0%
Spain	2,077.5	24%	1,280.8	24%
Sweden	75.4	1%	6.5	0%
Total	**8,721.7**	**100%**	**5235.8**	**100%**

Source: elaboration by the EWG on MS data submissions under the 2025 Fish processing data call and on Eurostat/SBS.

To summarise with the trend of the economic performance of the sector, Table 2.6 illustrates the main productivity and performance indicators of the EU fish processing industry sector over the perio, 2013-2023. The data show a marked improvement in the sector's productivity and profitability between 2013 and 2023, with a clear acceleration in recent years. Capital productivity rose impressively from 23% in 2013 to 55% in 2023. After fluctuating until 2019, the post-2020 surge indicates a much more efficient use of invested capital, likely driven by technological innovation, cost rationalization, and business consolidation.

GVA margin increased from 15% to 29%, confirming a stronger ability to generate value relative to total costs. EBIT and net profit margins show the most significant trend: after remaining relatively low (2–5%) in 2013–2019, they reached 19% in 2023, signalling a robust recovery in profitability and reduced operational inefficiencies.

Figure 2.8 Economic performance of the EU fish processing industry sector by country (indicators in relation to income), 2021.



Source: elaboration by the EWG on MS data submissions under the 2025 Fish processing data call and on Eurostat/SBS.

Table 2.6 Main productivity and performance indicators of the EU fish processing industry sector, 2013-2023

Productivity and performance Indicators	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Capital productivity (%)	23%	26%	28%	23%	30%	26%	25%	34%	34%	33%	55%
GVA margin (%)	15%	16%	16%	12%	18%	15%	15%	20%	20%	19%	29%
EBIT margin (%)	3%	4%	5%	2%	7%	4%	4%	9%	8%	7%	19%
Net profit margin (%)	2%	3%	5%	2%	7%	4%	4%	9%	9%	7%	19%
Return on Investment (%)	5%	7%	9%	4%	12%	7%	7%	15%	14%	13%	36%
Financial position (%)	31%	32%	35%	37%	41%	41%	40%	40%	39%	35%	39%

Source: elaboration by the EWG on MS data submissions under the 2025 Fish processing data call and on Eurostat/SBS. *Notes:* based only on DCF/EUMAP MSs (Spain excluded) because of lack of details on capital assets, depreciation costs, financial costs and debts in Eurostat/SBS. Spain excluded because of missing data needed to calculate ratios (see Annex on Data coverage and check).

Return on Investment (ROI) followed the same trajectory, rising from a modest 5% in 2013 to 36% in 2023, confirming a structural improvement in capital profitability.

The financial position remained stable, ranging between 31% and 41%, with a slight decline in 2022–2023. This suggests that despite the profit growth, companies have maintained a prudent financial balance but with a slight the decrease in the use of third-party capital.

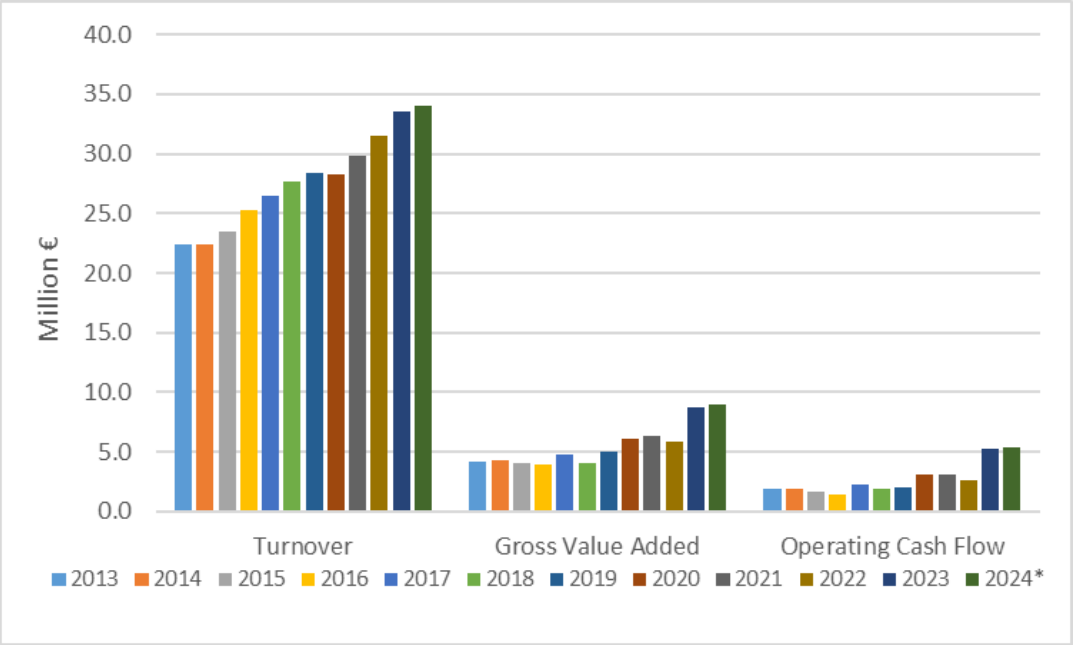
In summary: 2023 stands out as an exceptionally positive year for the sector, marked by simultaneous increases in productivity, margins, and profitability, likely reflecting a combination of production efficiency, higher selling prices, and market consolidation in the post-pandemic phase.

According to estimated projection for 2024 (figures are projections based on the trend in production value derived from Prodcom/Eurostat statistics, the detailed data of which are presented in Section 4), in 2024, the sector shows further consolidation of growth, although at a slower pace compared to 2023 (Figure 2.9):

- Turnover increased slightly (+1.6%), indicating a phase of stabilization following the strong expansion recorded in 2023.
- Gross Value Added (GVA) continued to grow (+3.3%), though more moderately than in the previous year (+48% in 2023), suggesting that efficiency and productivity remain solid, but are reaching a mature stage.
- Operating Cash-Flow rose by +3%, reflecting sustained operating profitability and a good ability to generate liquidity, although growth margins have narrowed.

In summary: 2024 confirms a financially sound performance, with profitability and value added still improving, but at a slower pace, marking a stabilization after the strong rebound of 2023.

Figure 2.9 Turnover, GVA and Operating cash flow evolution of the EU fish processing industry sector EU sectro 2013-2024.



Source: elaboration by the EWG on MS data submissions under the 2025 Fish processing data call and on Eurostat/SBS. *2024= nowcasted data.

2.3 Trends, drivers and outlook

This paragraph aims to provide more qualitative and quantitative insights into the main drivers of change that have directly or indirectly influenced the EU fish processing sector up to 2023 (the latest year for which data are available). The objective is to interpret and justify the trends observed in the submitted data and, where possible, to explain more recent developments between 2023 and the time of writing (October 2025), seeking to identifify factors that may account for changes in “nowcasted” data and to offer insights into current and potential developments and key drivers likely to shape the sector’s economic performance in the coming years.

Inflation, rising costs and contracting demand.

Because of Russia's aggression against Ukraine and the subsequent implementation of sanctions on the aggressor’s economy, an energy crisis affected the EU during 2022 and 2023, resulting in a scenario of increasing energy costs that impacted prices across all markets and industries.

The energy crisis triggered a period of sustained inflation, which continued into 2024 and 2025. Although the rise in industrial and consumer goods prices has moderated as more Member States completed the disconnection from Russian supplies, the inflationary trend remains persistent and is affecting both supply and demand.

As an energy-intensive industry, the fish processing sector’s profitability has been severely affected by rising costs. Furthermore, downstream in the supply chain, increasing seafood prices have led to contractions in demand. In this context, the ability to pass cost increases on to market prices is uncertain, making profit recovery more challenging.

Adding to the rise in energy costs is the uncertainty generated by the global political context and the unpredictable tariff war initiated by the new US administration, which has caused disruptions in international trade flows and distorted global supply chains.

Beyond the difficulties in planning efficient and sustainable supply chains, this uncertainty is also affecting intermediation and transportation costs. Since the EU seafood market is highly dependent on imported raw materials, the shock to global trade is exerting additional pressure on the fish processing industry.

Labor issues, including manpower shortages and rising wages, are also compromising the industry’s profitability (Eurostat, 2025a). Businesses that are labor-intensive are particularly vulnerable to these impacts due to the significant share of labor within their total cost structure.

In an attempt to mitigate the impacts of these trends and disruptions, processors are investing in the automation of repetitive tasks, upgrading or switching to energy-saving machinery, optimizing supply chain activities, differentiating products, and adjusting prices (OECD, 2025). The implementation of these measures, however, will depend on the industry’s financial capacity to sustain the required investments.

Compliance with regulations

EU food regulations include specific requirements for fishery and aquaculture products covering mandatory standards for processing every member of the industry must comply with for preserving the safety and quality of both raw materials and finished products. EU processors are also committed to ensuring traceability downstream the supply chain, enabling rapid hazard identification. Environmental regulations add further commitment to processors, by adapting their operations to more sustainable techniques and procedures. Failing to comply may result in serious consequences for offenders. Thus, processors are compelled to increase their investments in new production and marketing technologies and procedures. In addition, fish processors have been encouraged to adopt sustainable practices and circular economy systems for minimizing waste and developing new income alternatives.

While these mandatory environmental standards are well justified and must have a positive return in the future, success may be seriously compromised in the scenario of increasing production costs and declines in profitability as described above. The necessary investments for transitioning to a full environmentally friendly and circular economy may be difficult to meet many small and medium enterprises with limited financial ability. Although this scenario could be the starting point of a concentration process towards larger and more profitable and sustainable industry, the social costs of the dismissal on the small and medium segment could offset the environmental benefits.

Persistent Supply Constraints and Import Dependence

Between 2024 and 2025, the European Union’s wild-capture fisheries sector faced significant challenges stemming from declining fish stocks and shifting global market dynamics. These pressures led to substantial adjustments in Total Allowable Catches (TACs) and fishing quotas, affecting both the supply of wild-caught seafood and the broader seafood processing industry. The quotas agreed in 2025 combined small increases in some regions with reductions in others, resulting in a stagnation of overall supply at levels similar to previous years (European Commission, 2024).

Processors reliant on domestic EU raw materials faced shortages and limitations on expanding production, which contributed to rising raw material prices.

At the same time, aquaculture production has remained stagnant for almost a decade (Eurostat, 2025b). Environmental regulations, limited space, complex administrative procedures, and low private investment are cited as the main bottlenecks behind this stagnation.

With limited domestic seafood supply, the EU fish processing industry remains highly dependent on imported raw materials, while also facing evolving quotas, tariffs, sustainability requirements, and shifting trade relationships. In short, the fish-processing industry is heavily exposed to global sourcing. These dynamics generate both risks and opportunities: rising input costs and volatile availability push processors to optimize efficiency, diversify suppliers, and develop innovative, higher-margin products.

The high level of import reliance means that EU fish-processing firms have limited control over raw material volumes and must manage risks related to international sourcing, price volatility, and supply disruptions (AIPCE-CEP, 2024). Domestic supply, including aquaculture, represents only a small fraction of the industry’s total input. The decline in

import volumes and trade value in 2023 (and likely continuing into 2024) reflects supply limitations and rising import costs feeding into processing cost structures.

Import dependency is particularly strong in high-value processed fish products. The European smoked salmon industry, for example, relies almost entirely on imported raw material (EUMOFA, 2024a). Consequently, fluctuations in Norwegian production, exchange-rate movements, and global demand directly affect EU processors' costs and margins. First-sale and import prices for Atlantic salmon rose sharply in 2024, with frozen fillets from Norway ranging roughly between EUR 10.8 and EUR 14 per kg, reflecting tighter supply conditions and strong consumer demand (EUMOFA, 2024b).

Ukraine-Russian war: impact of Sanctions on the EU Whitefish Processing Sector

By mid-2025, the EU fish processing industry continues to grapple with the cumulative effects of successive sanctions against Russia. On 20 May 2025, the European Council adopted its "hybrid threat" package, officially blacklisting two of Russia's largest whitefish exporters - Norebo JSC and Murman Sea Food - on security grounds. This action severed their access to EU ports, financial services, and insurance. The measure builds on a 2024 decision that excluded all Russian-origin fish, including products reprocessed in China, from the Autonomous Tariff Quota (ATQ) system. As a result, imports of Russian Alaska pollock and cod are now subject to full Most Favoured Nation (MFN) duties, both for fillets and head & gutted formats. Utilization of the largest ATQ volume for Alaska pollock dropped sharply to just 37% in 2024, down from 85% the previous year. In parallel, the EU has ceased approving new Russian vessels for export, further constraining the supply of EU-compliant whitefish from Russia. These restrictions have contributed to a fragmented market for cod and pollock. EU buyers are now competing for certified supplies from Norway and the United States, while increasingly turning to non-certified raw material from Greenland and Iceland to fill the gap. By June 2025, several processors reported that offers of non-certified cod had, for the first time, outpaced demand for certified alternatives. With Russian head & gutted pollock unlikely to return to the market and ICES already signaling reduced Barents Sea cod TACs for 2026, processors anticipate continued raw material shortages. Analysts now project that EU whitefish throughput will decline by 8–10% by the end of 2025 compared to the previous year (Turenhout et al., 2025).

Brexit effect on the EU fish processing sector

The Trade and Cooperation Agreement (TCA) between the UK and EU, signed in December 2020, set the framework for post-Brexit relations, including a highly sensitive and politically charged area: fisheries. This agreement is valid for the period 2021 until June 2026. Among this current fisheries agreement EU vessels retained access to UK water, the UK gained a larger share of fishing quotas in its waters - about 25% of the EU's previous catch was reallocated to the UK over five years and both sides agreed to non-discriminatory treatment of vessels and to cooperate on sustainability and stock management. In June 2025, the UK and EU agreed to extend EU access to UK waters until 2038. In particular for those EU MS with a larger dependence for catches in British waters (e.g. Ireland, The Netherlands, France, Belgium and Denmark) this long-term agreement provides stability for their fisheries. The agreement helped avoid tariffs on fish exports, which are vital for both sides. With this new TCA agreement until 2038 there is large negative economic effects avoided of loosing access to British waters for fisheries. However, other regulations could hamper the economic

relations for fish processors and fisheries between EU and UK, such as real time closures (RTC) and Marine Protected Areas (MPA) by UK government for British waters. Following a high-level UK-EU Summit meeting in London on 19 May, it was announced that both sides would work towards reaching an agreement to create a new common SPS area to ease post-Brexit border frictions and allow for the faster, easier and cheaper movement of agri-food products in both directions. It was agreed that existing arrangements for access to waters and quota shares for the catching sector would be extended for a further 12 years from the review due next year, effectively maintaining the status quo until 2038 (Turenhout et al., 2025).

After Brexit under the TCA as of 2021, processors and traders in general (beyond just fish products) experienced several obstacles: 1) administrative procedures and border controls that caused additional costs and transport delays, 2) restrictions for phytosanitary reasons, 3) import duties and quotas on many products now that the UK and the EU have become third countries to each other.

The required catch certificates for each fish product traded caused delays and increased costs for traders in early 2021. This was mainly due to undercapacity at British customs. In addition, the accessibility of ports for fishing vessels was temporarily problematic in 2021 due to the late recognition of these in multiple EU ports as customs points. As a result, cutters, particularly British-flagged demersal trawlers, were temporarily unable to land in these EU ports.

Also, since Brexit, the UK no longer participates in scientific research programs and data collection for EU reports. This has reduced transparency, making the basis for cooperation on sustainable management of fish stocks and trade in fish products more complex.

Moreover, legislation in the UK and the EU is diverging. For example, phytosanitary and sanitary regulations, as well as fisheries legislation and regulations, differ, resulting in increased administrative burdens for companies.

Zero or reduced import and export tariffs do not apply to trade in fish products with the UK if the fish products do not originate in the EU. The fish processing chain imports many fish products from third countries, adds value to them through processing, and exports them to the UK, for example. Before Brexit (2020 and earlier), this was possible under a zero and reduced tariff for all fish products. This is no longer the case since Brexit, weakeaning the competitive position of fish exporters in the EU compared to other third countries. The UK can import fish products directly from third countries at a reduced tariff if this is the country of origin of the fish product. Trade figures show that the EU has exported far fewer fish products to the UK since Brexit.

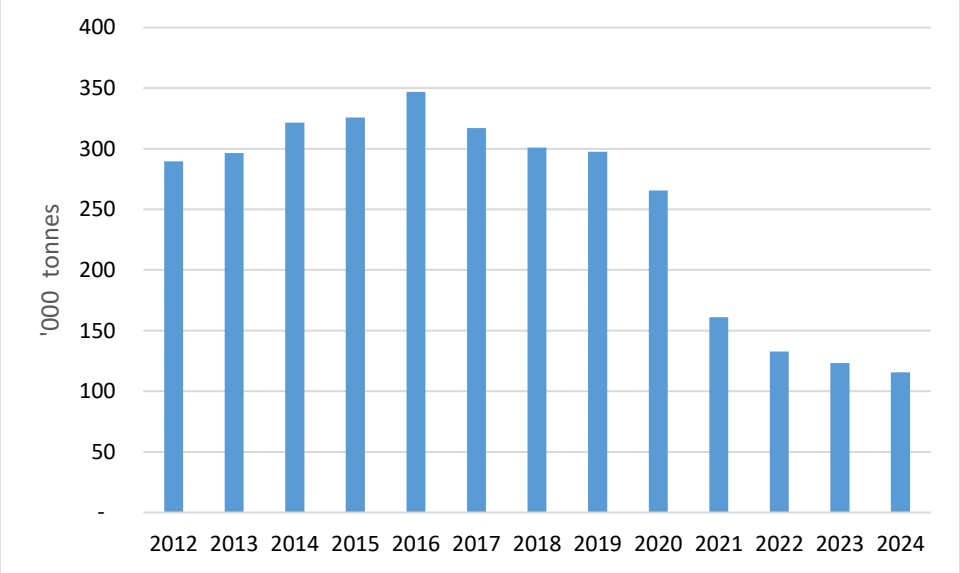
Since January 1, 2024, health certificates have been mandatory for many fish products. Otherwise, export and import between the EU and the UK is not possible. As of January 31, 2024, companies wishing to export medium-risk fish, shellfish, and mollusk products from the EU to the UK will be required to include a health certificate. From April 30, 2024, it has been stated that the UK will also carry out checks on these documents and on risk-based physical matters relating to the above-mentioned products. In order to export fishery products to the UK, exporting companies must have an approved UK fishery products protocol. All these additional manual steps for requesting documents place a considerable administrative burden on exporters and importers on both the British and EU sides. Fish processing companies in the EU that import and export fish products to the UK find the health certificates

that must be requested for each transaction time-consuming and therefore economically costly.

The main concern and obstacle for EU fish processing and trade in fish products is that the increased administration and documentation have led to higher costs. This increase in costs means that the UK can import fish products from third countries other than the EU more cheaply. This increase in administrative burdens and costs has resulted in a sharp decline in exports of fish products from the EU to the UK since Brexit (Figure 2.10).

It is striking that the UK has imported far less (in value and volume) fish products from the EU and much more from other third countries since Brexit (Figure 2.10). In other words, the EU has exported less to the UK after Brexit (since 2021) compared to previous years (until 2020). In 2024 the exported volume of fish products from EU to UK was only 116 thousand tonnes while this was three times more at the peak 347 thousand tonnes in 2016.

Figure 2.10 Exported volume (thousand tonnes) of FAP by EU-27 to UK, 2012-2024.



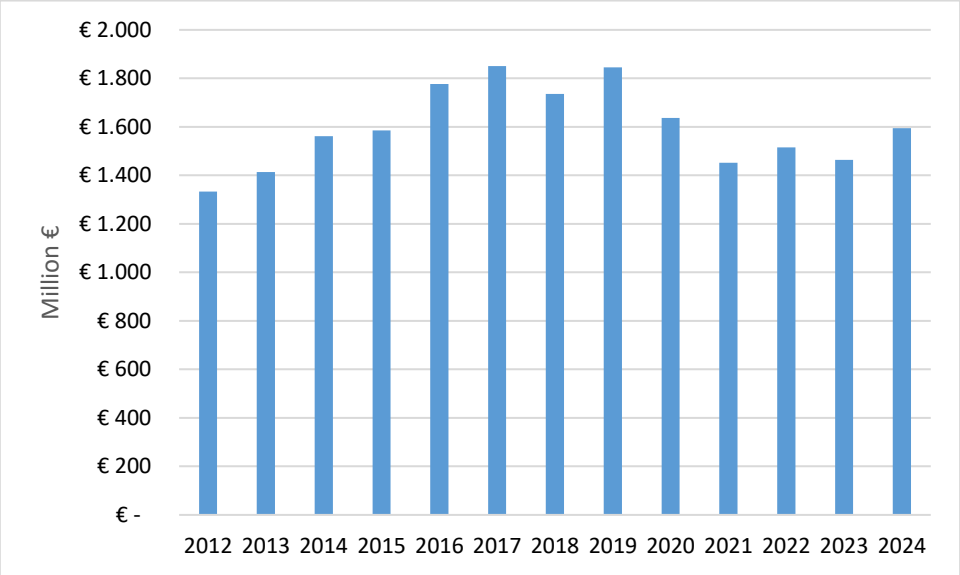
Source: Eurostat/Comext

Since Brexit, the UK and the EU have become third countries to each other. Of the third countries, the UK has significantly increased its imports from Norway in particular. In 2020, the import value of fish products (CN category 3, i.e. mainly fresh and frozen fish products) was approximately EUR 141 million, while by 2022 this had already grown to EUR 777 million. Looking at the top 10 import markets from the UK, no EU MS was included in the top 10 for GN category 3 in 2022. Before Brexit, Germany, Sweden, Denmark, and the Netherlands were among the top 10 most important import countries for fish products from the UK. There are several reasons for the decline in EU exports of fish products to the UK. The main reason is the increased costs due to non-tariff measures and the fact that zero or reduced tariffs no longer apply to fish products that are not originally produced in the EU (Bartelings et al., 2022). The UK has started importing more directly from countries such as Norway (farmed salmon), Iceland (white fish species), Vietnam (tropical farmed shrimp), and China (various but mainly farmed fish products) instead of via the EU (Uberoi et al., 2022). Competition in fish products between the EU and the UK has increased under the TCA

following Brexit. The competitive position of non-EU fish producers such as Norway, Iceland, Southeast Asia, North and South America has improved for trade with the UK to the detriment of the EU. Fish products that are originally produced in the EU and have few substitutes, such as plaice, have remained stable in exports to the UK. EU MS have mainly started selling the fish products that were traded less to the UK within the internal EU market.

Imports of fish products from the EU to the UK have fluctuated before and after Brexit but remained relatively unchanged (Figure 2.11). As EU is a net importer of FAPs the demand for importing raw materials from UK remains important from EU fish processor's perspective. In 2024 the value of imported FAPs from UK was EUR 1 595 million which was slightly lower than 2020 (EUR 1 637 million).

Figure 2.11 Imported volume (thousand tonnes) of FAP by EU-27 to UK, 2012-2024.



Source: Eurostat/Comext

Shifts in consumer preferences: convenience, health, and alternative ingredients

The European Union fish processing industry is significantly influenced by consumer preferences, particularly perceptions of health and nutritional benefits. Consumers perceive fish as a low-fat, heart-healthy, and brain-beneficial food, which drives regular consumption (European Commission, 2025). This perception is especially strong among middle-aged and older adults, who are more likely to include fish regularly in their meals, and among urban professionals seeking nutrient-dense and convenient meal options (EUMOFA, 2024a).

Health-conscious consumers are increasingly interested not only in fresh fish but also in processed and value-added products that retain nutritional quality while offering convenience. These products are particularly appealing to families and working professionals who balance health considerations with busy schedules (EC DG-MARE, 2024). Innovations in processing help ensure that convenience does not compromise perceived healthiness.

Trends in consumer lifestyles and dietary preferences toward convenience foods have accelerated over the past two years, increasing the interest of the EU fish processing industry in expanding the share of value-added products in its output. Value-added products also

facilitate portion control, food safety, and traceability. Retailers are actively promoting these products through dedicated in-store sections and online channels, reflecting the growing demand for meal solutions suited to time-pressed lifestyles.

Consumer preferences are driven by both time constraints and health concerns, leading to strong demand for products that combine convenience with safety and nutritional value. However, rising prices for fresh fish have caused a decline in consumption (EC DG-MARE, 2024). This scenario highlights the need to develop affordable and convenient seafood products to help reverse the decline in consumption amid inflation and rising food prices.

Between 2024 and 2025, there has been a notable shift toward sustainable and alternative marine ingredients, driven by consumer demand for health-conscious and eco-friendly options. Plant-based seafood alternatives have gained significant traction, offering environmentally friendly and allergen-free choices. Marine ingredients such as fish oil, marine collagen, and seaweed are increasingly incorporated into functional foods and dietary supplements. Fish oil remains the most sought-after marine ingredient, followed by marine collagen. Over the past five years, seaweed and spirulina have been the fastest-growing marine ingredients in food and beverage launches, driven by their recognized health benefits.

Towards a Low-Carbon and Circular Transition in the European Fish Processing Industry

The European fish processing industry is undergoing a structural transformation driven by the twin challenges of decarbonisation and circularity. Robust and comparable measurement frameworks are now supported by the EU's Product Environmental Footprint Category Rules (PEFCR) for Marine Fish, which harmonise life-cycle assessment (LCA) boundaries and impact categories across the entire value chain — from catch or farming to processing, packaging, and end-of-life. This provides processors with a shared reference for greenhouse gas (GHG) accounting and hotspot analysis across different product lines and countries.

At both the plant and product levels, LCAs conducted in EU Member States demonstrate where the main impacts occur and how production choices influence results. For instance, a Portuguese LCA of canned sardines identified aluminium cans and the oil used as the main sources of impact, suggesting potential solutions such as using lighter materials, incorporating recycled content, and adopting alternative oils. Similarly, integrating co-products such as pâtés and fish spreads in the Galician tuna-canning sector was shown to lower the overall carbon footprint per sales unit, demonstrating a direct link between circularity and emission reduction.

In Italy, many fish processing companies are implementing specific strategies to reduce CO_2 emissions, increasingly investing in clean energy sources, particularly on-site solar installations, to power processing and cold-storage operations. This transition aims both to cut energy costs and to strengthen environmental sustainability within a policy and market context increasingly oriented towards decarbonisation.

These Italian initiatives align with the broader European roadmap for a low-carbon and circular seafood value chain, where renewable energy adoption, energy efficiency, and by-product valorisation serve as concrete levers for sustainability and competitiveness. Under the EMFAF 2021–2027 programmes, national and regional measures now include funding for sustainability projects, often embedding LCA and carbon-footprint analyses within broader innovation and modernisation investments. These frameworks — active in Italy, Spain,

France, Portugal, and other Member States — support decarbonisation, energy efficiency, eco-design, and by-product valorisation.

Scholars highlight that integrating LCA/PEF metrics into investment decisions helps identify environmental hotspots (such as energy, packaging, and logistics) and maximise environmental and economic co-benefits. Although many circular-economy actions remain in pilot or early implementation stages, public funds are increasingly recognised as essential for scaling such innovations across the EU.

The transition toward a low-carbon and circular blue economy is thus becoming both a regulatory expectation and a strategic pathway for resilience and competitiveness in the fish processing sector.

3. FISH USED AS RAW MATERIAL: DATA COLLECTION STATUS AND POTENTIAL USE FOR MANAGEMENT PURPOSES

Total production of fishery and aquaculture products in Europe is the third highest in the world. This production includes both EU and non-EU countries and products for human and non-human consumption. The total production reached 17.3 million tonnes in 2022, where 13.8 million tonnes were delivered by catch based fisheries and the remaining 3.5 million was covered by aquaculture farmed products. Of this the total EU production within fisheries and aquaculture covered 4.5 million tonnes, this represents approximately one fourth of the European production (EUMOFA, 2024a).

Focusing on the EU and the fish for consumption, the total supply of food products from fishery, aquaculture and imports was 12.71 million tonnes calculated in live weight equivalent. The domestic production from fisheries and aquaculture reached 3.93 million tonnes, which was a decline from 2021 of 4% primarily due to a decline in fisheries catches. Imports covered the remaining 8.78 million tonnes. From the total amount 2.22 million tonnes were exported to countries outside the EU, leaving 10.48 million tonnes for apparent consumption. The self-sufficiency in the EU is calculated to be 37.5%, highlighting that almost two-thirds of products consumed in the EU are based on imported raw materials. On top of the trade between EU and external countries, large amounts of seafood products are traded internally in the EU. In 2022, the EU-Intra trade was covering a total of 6 million tonnes (EUMOFA, 2024a).

To create a link between the primary seafood sectors (fisheries and aquaculture) and the secondary sector (processing industries) in the EU, more information is needed at Member State and regional level, identifying which types of raw materials are entering the local industries and to which product form it is processed. If such information is available, Member State and regional dependency on domestic products can be assessed and information on the robustness of regional processing sectors can be determined, which can be of significant important in time of climate and environmentally induced changes to fish stocks and aquaculture production opportunities.

3.1 Volume of raw material in 2022 and 2023

Information provided on species level, the type of processing, and if the raw material is sourced locally, in EU or globally can also help identify/determine the environmental and climate footprint on seafood products produced and consumed in the EU.

The overall (reported) raw material input for the EU fish processing sector decreased by 7.5% from 2022 to 2023, falling from 2.23 billion to 2.06 billion units though it has to be taken in account that Finland and Hungary did not provide any raw material data for 2022 (if excluding Hungary and Finland, the reduction is more marked). This contraction suggests a general slowdown in processing activity (confirmed by the reduction in production volume emerging from Prodcom data for commodities falling under the fish processed products categories, -5% from 2022 to 2023), driven by lower input availability, increased production costs, and possibly data harmonization delays within national reporting systems.

Data in table 3.1 indicates that the decline is not uniformly distributed across countries — with some maintaining stable input levels while others showing substantial decreases. This uneven pattern could reflect differences in raw material dependency (wild vs. farmed) and market structure (fresh vs. frozen, export-oriented vs. domestic supply chains).Poland (-

11.8%), Germany (−12.0%), and Italy (−14.1%) were the main contributors to the total reduction, jointly accounting for nearly two-thirds of the overall volume drop. Lithuania also reported a notable 8.5% decline, reflecting a likely reduction in raw material imports or changes in product mix. Slovenia recorded the largest relative decrease (−25.9%). Croatia (+23.7%), Greece (+5.5%), and Bulgaria (+4.4%) showed positive trends, possibly reflecting increased utilization of aquaculture products and higher processing capacity. Hungary and Finland entered the reporting series in 2023, together adding over 62.9 million units, partially offsetting the declines elsewhere.

Table 3.1 Raw material used by country (in tonnes)

Country	2022	2023
BGR - Bulgaria	27,355	28,568
DEU - Germany	601,867	529,818
GRC - Greece	61,304	64,688
HRV - Croatia	49,356	61,054
POL - Poland	707,469	623,875
ROU - Romania	15,121	14,111
SVN - Slovenia	2,949	2,185
HUN - Hungary		7,299
FIN - Finland		55,607
ITA - Italy	439,040	377,161
LTU - Lithuania	328,572	300,554
Total	**2,233,032**	**2,064,919**

Source: elaboration by the EWG on MS data submissions under the 2025 Fish processing data call

3.2 Improvements in Data Structure and Detail

The experts reviewed the data available to the EWG, comparing it with the raw material data submitted for 2020–2021. 11 of the 16 reporting countries (MSs collecting data under the DCF framework) provided data for 2022–2023, an improvement from the 8 countries that reported in the previous period. Lithuania provided raw material data for the first time.

The MSs were asked to provide data according to the following criteria:

- Species: 3 alpha codes
- Production environment: Fishery /aquaculture
- Origin: country (Domestic/other EU/ non-EU) or if possible, more detail on the fishing area
- Type of processed material (fresh/frozen/semi-processed material) – if possible [4]

The differences in the level of information provided by each country are presented in Table 3.2.

[4] https://datacollection.jrc.ec.europa.eu/documents/d/dcf/2023_rcg-econ_tm#page=122

Table 3.2 Details of data on raw material provided by MSs under 2025

	NEW					
Country	**Raw materials data**	**Species coding**	**Production environ**	**Country of origin**	**Processed stage**	**Comment**
AUT	No					
BEL	No					
BGR	Yes	3 alpha code	Aquaculture/ fishing/ unknown	Country names	No	Differentiated according to size caterory of enterprises
CYP	No					
CZE	No					
DEU	Yes	Mix comon names and generic categories	Aquaculture/ fishing/ unknown	Domestic/ foreign	fresh/ frozen/ semi-processed	Includes also raw material used in non-main activity companies
DNK	No					
ESP	No					
EST	No					
FIN	Yes	3 alpha code	No	Domestic/ foreign	No	Includes also raw material used in non-main activity companies
FRA	No					
GBR	No					
GRC	Yes	3 alpha code, groups of alpha codes	Aquaculture/ fishing	Domestic/ other EU/ non-EU/ mix categories	fresh/ frozen/ semi-processed /"emtpy"	
HRV	Yes	2022: ALL, 2023: 3 alpha code + ALL	Aquaculture/ fishing/ unknown	Domestic/ other EU/ non-EU/ import	fresh/ frozen/ semi-processed /"emtpy"	Differentiated according to size caterory of enterprises
HUN	Yes (2016, 2017, 2018, 2023)	3 alpha code (2023)	Aquaculture/ fishing	Domestic/ other EU/ other EU and non-EU	fresh/ "empty"	Differentiated according to size caterory of enterprises, therefore some mix of country of origin
IRL	No					
ITA	Yes	3 alpha code	Aquaculture/ fishing/ "empty"	Domestic/ other EU/ non-EU/ "empty"	fresh/ frozen/ semi-processed /"emtpy"	Estimation and survey
LTU	Yes (2022, 2023)	3 alpha code	No	No	No	1st time
LVA	No					
MLT	No					
NLD	No					
POL	Yes	3 alpha code	No	Domestic / import	No	Differentiated according to size caterory of enterprises
PRT	No					
ROU	Yes	3 alpha code + Mix latin and comon names	2022: No; 2023: aquaculture/ fishing	Domestic / import	No	Differentiated according to size caterory of enterprises
SVK	No (just till 2018)					
SVN	Yes	3 alpha code	Aquaculture/ fishing	Country and mix countries	No	
SWE	No					

Source: elaboration by the EWG on MS data submissions under the 2025 Fish processing data call

Regarding Species coding, more Member States now use standardized FAO 3-alpha codes (e.g., GRC, FIN, POL, SVN), improving data comparability. Reporting production environment is still inconsistent, with only a few MSs (DEU, GRC, HRV, ITA, SVN) distinguishing aquaculture from fisheries. Additionally, several MSs currently indicate domestic, EU, and non-EU sources, supporting better traceability and sustainability assessment.

The reporting countries in 2023 include Germany, Bulgaria, Finland, Greece, Croatia, Poland, Romania, Slovakia, Hungary, Italy and Slovenia (Lithuania partially because is the first year of reporting). Those countries continued their reporting from previous years but also improved the level of detail, particularly in species coding and origin. Italy, Germany and Greece further refined their submissions by distinguishing aquaculture from fishing and domestic from imported raw material. Romania and Poland now include clearer information on the origin of raw material, indicating whether it is imported or domestically sourced even if missing details on the specific geographical origin. Other countries do no report data for different reasons: 1) no data collection in place for the whole fish processing sector (i.e., Austria, Cyprus, Czechia, France, Ireland, Latvia, the Netherlands, and Portugal) or 2) only for the raw material in volume (i.e. Denmark, Belgium, Malta, Spain and Sweden).

Improvements in Data Structure and Detail

- Species coding: More Member States now use standardized FAO 3-alpha codes (e.g., GRC, FIN, POL, and SVN), improving data comparability.
- Production environment: Still inconsistent, with only a few MSs (DEU, ITA, GRC, HRV, SVN) distinguishing aquaculture from fisheries.
- Origin and country of supply: Several MSs now indicate domestic, EU, and non-EU sources, supporting better traceability and sustainability assessment.

Compared to previous years, 2023 shows greater participation and reporting detail but with limited participation from major processing nations such as Spain, France, and the Netherlands. While France and Netherlands have not included in their Work Plan the overall fish processing data collection, for Spain having such data collection in place, beside the economic data collection, would further increase the level of information.

The following Table 3.3 illustrates the species codes and names used in the raw material reports submitted by different countries as attempts to provide brief overviews of the species included.

Table 3.3 Weigth (in tonnes) of the main species used as raw materials in fish processing industry from 2020 to 2023 (EWG reconstruction of the species categories)

Species combination	Code	2020	2021	2022	2023	Total
Undefined species		838,101	934,761	49,356	15,010	1,837,228
Salmon	SAL	365,028	443,981	488,816	467,659	1,765,483
Alaska Pollock	ALK	343,167	400,006	203,040	212,875	1,159,088
Finfishes NEI	FIN	399,225	221,265	35,610	29,252	685,352
Herring	HER	200,117	206,083	159,223	168,997	734,420
Marine fishes nei	MZZ	5,432	91	215,764	206,147	427,435
Tunas nei	TUN, TUS	187,382	188,952	46,572	42,474	465,380
Cod	COD	74,786	81,971	96,404	49,778	302,939
European Sprat	SPR	87,612	84,472	75,613	61,034	308,731
Atlantic Mackerel	MAC	38,851	50,973	81,577	61,430	232,832
Rainbow Trout	TRR	70,555	85,420	76,732	72,003	304,710
Mixed Shrimps		50,925	63,517	41,620	34,886	190,947
Hake	HKE	28,264	27,565	41,463	31,570	128,862
Bluefin Tuna	BFT	936	1,137	27,995	27,539	57,606

Source: elaboration by the EWG on MS data submissions under the 2025 Fish processing data call

Regarding raw material by origin reporting, the database reviewed by the experts contained over a thousand entries combining species and countries of origin, reflecting the diversity of reporting formats used by Member States. Despite this issue has been highlighted in the previous Fish Processing EWGs reports, little progress has been encountered so far. If the EWG acknowledges effort realized by some MSs to fulfill comprehensive data (e.g. scientific name of the species can be provided but in a dedicated section), numerous sources of inconsistencies or incompleteness remain problematic to provide a proper analysis of the raw material. The major issues have been listed as follows:

- the use of generic categories: “undefine species” whhich represent the first category of raw material if we consider the 2020-2023. The EWG notes that the proportion of declaration under this category has decreased over the time from 27% of the total in 2020 to less than 1% in 2023. However, these data have been mainly reported to the category “marine fishes nei” which proportion increased from 0,1% in 2020 to 10% in 2023.
- a mix of species identification: by scientific name, by comon name, by 3 alfa code which are combined with various additional information or typo: eg. SPR/ SPRAT/ Sprat/ Sprattus spratus/ SPRAT (= BRISLING).
- item categories are not filled the same way by the different MSs: eg. origin of the product can be found in the column “species” (in addition to the species name), origin, or comment and some MS never specify the origin and declare all their raw product under “unspecified” (Table 3.4).

The EWG reconstructed the identification of the main categories used as raw material. Salmon remains the first species for the all the time series followed by Alaska Pollock, Finfishes, Herring and Tunas nei. However, the importance of the unspecified categories may

modify this ranking. Considering the inconsistencies expressed above, no further analysis of composition or trend was unfortunately possible.

Below is a table that reports an aggregated summary of raw material by general categories of geographical origin (EWG reconstruction). The origin of the raw material is unspecified for 70% of the raw product used in 2023 (see Table 3.4).

Table 3.4 Raw material data aggregated by geographical origin provided by MSs for 2019-2023, in tonnes

Origin	2019	2020	2021	2022	2023
Domestic	624,349	531,832	655,853	464,523	417,795
Other-EU	663,266	371,887	348,356	123,648	108,980
Non-EU	266,678	971,550	1,064,440	89,439	81,637
Unspecified	2,737,957	1,203,670	1,179,765	1,555,422	1,456,507
Total	**4,292,251**	**3,078,939**	**3,248,414**	**2233032.4**	**2,064,919**

Source: elaboration by the EWG on MS data submissions under the 2025 Fish processing data call

Similarly, for production by environment reporting, data inconsistencies limited the ability to summarize results. Specifically, for the 2008–2019 period, the summary tables included values categorized as “empty,” while for 2020–2023, entries were recorded under both “unknown” and “empty” categories – Table 3.5.

Table 3.5 Data on raw material by production environment provided by MSs under 2025 and previous data calls, in tonnes

Value of production by environment	2020	2021	2022	2023
Aquaculture	324,947	324,187	347,197	299,764
Fishing	1,218,226	1,301,551	823,999	776,405
Fishing/Aquaculture	22,586	34,827		
Unknown	147,381	252,343		
Empty	1,365,800	1,335,506	1,061,836	988,750
Total	**3,078,939**	**3,248,414**	**2,233,032**	**2,064,919**

Source: elaboration by the EWG on MS data submissions under the 2025 Fish processing data call

The reporting of raw material by company size varies across countries, with data sometimes presented not only for the four standard size categories but also under additional “empty” or “all” categories – Table 3.6. However, experts consider company size to be of limited analytical value compared to reporting raw material use by processing activity type (e.g., filleting, freezing, canning, etc.), suggested as a future alternative segmentation.

Table 3.6 Data on raw material by company size provided by MSs under 2025 and previous data calls, in tonnes

Value of production by size category	2016	2017	2018	2019	2020	2021	2022	2023
Less or equal 10	18,068	12,736	17,124	19,859	46,725	42,068	41,814	40,777
Between 11 and 49	32,986	37,542	109,499	172,514	77,945	152,025	131,031	126,021
Between 50 and 249	77,169	98,332	256,437	229,932	242,657	282,034	372,720	346,388
More or equal 250			425,924	410,186	481,275	475,926	643,612	584,419
All	619,133	692,052		2,564,916	1,592,301	1,779,849		
Empty	117,201	94,805	15,563	894,844	638,035	516,512	1,043,856	967,314
Total	**864,558**	**935,467**	**824,548**	**4,292,251**	**3,078,939**	**3,248,414**	**2,233,032**	**2,064,919**

Source: elaboration by the EWG on MS data submissions under the 2025 Fish processing data call

3.3 Conclusions

To address the persistent compatibility issues in raw material reporting, the EWG suggests evaluating the possibility that RCG ECON organizes a workshop aimed at developing further harmonized methodologies across Member States. Such an initiative would strengthen the consistency and comparability of data on the volume and origin of raw materials used in fish processing.

Improved harmonization would not only enhance the reliability and transparency of reported figures but also facilitate better integration of production, trade, and sustainability indicators across the seafood value chain. Reliable raw material data are essential to:

- Support more accurate and evidence-based advice on the performance and resilience of the fish processing sector;
- Track resource efficiency and progress toward full traceability from catch or aquaculture to final product;
- Identify sustainability gaps related to sourcing, utilization, and waste management;
- Inform EU policy objectives under the Green Deal and the Circular Economy Action Plan.

4. NOWCAST: EVALUATING APPROACHES FOR PROJECTING ECONOMIC INDICATORS FOR 2024 AND 2025

As requested in the ToR, several approaches for projecting economic indicators for 2024 and 2025 were evaluated during the EWG meeting. Tacking into account that these estimates were expected to be used for providing an outlook not only at national level, but also at EU level, a preliminary step consisted in identifying the data available for 2024 and 2025 for all MS. Therefore, besides the eventual qualitative or quantitative data that each MS expert could provide, the analysis was focused on external data sources allowing the EWG to provide preliminary projections on the economic performance indicators for all MS; projections that can be further amended or refined at MS level by specific information eventually available at this level of detail.

The economic performance indicators selected for providing an outlook at national and EU level for 2024 and 2025 are:

- turnover,
- gross value added (GVA),
- operating cash flow or gross profit (GP).

4.1 2024 nowcast

Given the economic indicators reported above, the only external source of data available for 2024 which can be directly linked to turnover and indirectly to GVA and GP consists in the PRODCOM dataset by EUROSTAT. This dataset includes data on import, export and production in quantity and value for the fish processing sector at MS level and by product for the period 2008-2024. The availability of 2024 data for the production value (PRODVAL) and the expected correlation with the turnover values makes this database particularly interesting for 2024 projections.

The EWG explored two approaches to estimate 2024 turnover values by using the PRODVAL data from the PRODCOM dataset by EUROSTAT:

- M1: for each MS, apply the percent variation from 2023 to 2024 in the total value of PRODVAL to the 2023 value of turnover.
- M2: for each MS, based on the time series available, estimate a regression function based on the relationship “Turnover = α × PRODVAL”, and use the regression coefficient to estimate the 2024 value of turnover.

Once turnover is estimated, for each MS, GVA and GP can be calculated by assuming constant GVA margin and GP margin from 2023 to 2024. Under these assumptions, the 2024 values of GVA and GP can be estimated as quotas of turnover using the same proportions registered in 2023. Even though these assumptions can be very strong in some cases, additional data on the likely evolution of the cost structure in 2024 is not available. Therefore, costs are necessarily assumed to be a fixed quota of turnover from 2023 to 2024.

For several MS, the projections produced by the two methods reported above showed very strong variations in turnover from 2023 to 2024. The main reason for that was identified in a technical issue regarding the PRODCOM database. Indeed, microdata for each product or group of products included in this database are not always reported. In many cases, microdata reported for one year are not available for the subsequent year, where the cell

reports the notation ":" (meaning "not available") without further explanations for the missing data. For the variable PRODVAL, the whole PRODCOM dataset reports that notation in 8,754 cases, equivalent to 44% of the total number of cases.

Given the big number of not available microdata, an appropriate comparison of the total value of production in different years by MS seems to be not feasible. Probably this is also the reason for the strong variations encountered in the 2024 projections carried out with the two methods reported above.

To overcome this issue, all microdata related to the PRODVAL variable that was reported for only one of the years 2023 or 2024 were excluded from the calculation of the total value of production, and therefore in the estimation of the 2023–2024 percentage variations. In other words, the percentage variation in the total value of production from 2023 to 2024 was calculated considering only the comparable products or group of products (i.e., those with available data in both years).

The final methodological approach adopted for estimating the 2024 values of turnover (and the related GVA and GP) was based on the method M1 reported above, after the adjustments to the PRODCOM database described above.

The outcomes of this approach are reported in Table 4.1 for the MS not providing DCF data (turnover is estimated on SBS data from EUROSTAT), and Table 4.2 for the MS providing DCF data.

Table 4.1 2024 nowcast for MS not providing DCF data and based on Eurosta/SBS data (values in thousands of euro)

Member State	2023	*2024*	*% var. 2024-2023*	Notes
Austria*	64.98	*64.98*	*0%*	2023 data not available
Czechia	177.75	*182.82*	*3%*	
Estonia	237.60	*247.66*	*4%*	
France	5284.72	*5101.09*	*-3%*	
Hungary	11.85	*9.72*	*-18%*	
Ireland	608.61	*713.95*	*17%*	
Latvia	308.54	*314.91*	*2%*	
Netherlands	1501.38	*1375.71*	*-8%*	
Portugal	1720.88	*1653.63*	*-4%*	
Slovakia*	29.88	*29.88*	*0%*	2023 and 2024 data not available

** As PRODVAL data is not available, 2024 was assumed to be equal to 2023.*

The percentage variations reported in Table 4.1 and Table 4.2 show values from the strongest reduction expected for Finland (-21%) to the highest increase expected for Bulgaria (+12%). The estimation of 2024 turnover was not possible for Austria, Slovakia, Malta and Slovenia because PRODVAL data are not available for these MS in one or both reference

years. For these MS, 2024 turnover was assumed to be equal to the value registered in 2023.

Table 4.2 -2024 nowcast for MS providing DCF data (values in euros)

Member State	2023	*2024*	*% var. 2024-2023*	Notes
Belgium	1,169,340,826	*1,251,450,761*	*7%*	
Bulgaria	199,631,830	*224,236,532*	*12%*	
Croatia	169,270,332	*168,188,503*	*-1%*	
Denmark	2,398,427,285	*2,441,648,778*	*2%*	
Finland	406,726,963	*322,895,296*	*-21%*	
Germany	2,165,071,264	*2,040,618,398*	*-6%*	
Greece	360,616,979	*385,879,322*	*7%*	
Italy	2,201,279,287	*2,352,137,393*	*7%*	
Lithuania	674,197,592	*728,319,291*	*8%*	
Malta*	73,585,511	*73,585,511*	*0%*	
Poland	5,043,602,189	*5,328,882,961*	*6%*	
Romania	100,127,007	*98,726,002*	*-1%*	
Slovenia*	42,955,970	*42,955,970*	*0%*	no data available
Spain	7,968,253,000	*8,317,784,788*	*4%*	
Sweden	578,621,167	*598,557,328*	*3%*	

** As PRODVAL data is not available, 2024 was assumed to be equal to 2023.*

During the EWG, experts from Bulgaria and Lithuania were able to integrate the historical series of economic data with the year 2024. Furthermore, the expert from Finland provided a preliminary estimate of turnover for the MS. Therefore, for these countries there is no need to provide projections for the 2024 economic performance indicators – turnover, GVA and GP. The values reported in Table 2 for these MS will not be used in the rest of the report.

The availability of 2024 data on turnover for the three MS mentioned above allowed the EWG to compare predicted versus real values for 2024. Table 4.3 shows the 2024 turnover values provided by the experts for Bulgaria, Lithuania and Finland and the comparison with the predicted values for the same year. This preliminary test indicates a good performance of the nowcast method for Lithuania, and a very poor performance for Finland.

Table 4.3 2024 predicted vs. real values for 3 MS with available 2024 data

MS	2024 real data	2024 nowcast	% var.
Bulgaria	175,760,000	224,236,532	-21.6%
Lithuania	735,105,316	728,319,291	0.9%
Finland*	390,800,000	322,895,296	21.0%

** Preliminary data for Finland*

Regarding the remaining MS, it was requested to MS experts to evaluate the performance of the method used to produce projections for 2024. Clearly, it was possible only in some cases where some qualitative information was available to the experts. In details, the following comments were provided:

- Austria: n.a.
- Belgium: Projection is consistent with expected results and outlook for 2024. Although, no formal analyses of 2024 data have been done by the MS.
- Bulgaria: The results from the nowcast for Bulgaria are questionable, due to difference with the real data, e.g. the turnover in the nowcast is 22% higher than the real data.
- Croatia: For 2024, the model projects a slight decline in turnover, GVA, and operating cash flow compared with 2023. However, given the strong growth observed in 2023, a decrease in economic performance indicators in not expected in 2024.
- Czechia: no comment.
- Denmark: The nowcast result for Denmark seems fine and it is in line with data we have collected for the industries production for 2024. It increases slightly from 2023 to 2024.
- Estonia: The prediction should be treated with caution, as the quantities of local fish used as raw material will decrease in 2024. According to the preliminary information, the increase in turnover could be around 2%.
- Finland: Nowcast results seems quite low. We have preliminary data from Statistics Finland, and it shows turnover of EUR 390.8 million in 2024, a 21% higher than the nowcast estimates.
- France: no comment.
- Germany: The Federal Association of the German Fish Industry and Wholesale estimates a decline in turnover of up to 8%, which aligns well with the current projections.
- Greece: The projection aligns with the expected results and outlook for 2024, although no formal analysis of the 2024 data has yet been conducted by the Member State.
- Hungary: The projection is consistent with the sentiment of Hungarian fish processing market, showing downward trend.
- Ireland: no comment.

- Italy: The projection aligns with the expected results and outlook for 2024, although no formal analysis of the 2024 data has yet been conducted by the Member State.
- Latvia: The projection result looks consistent with the preliminary information received for 2024.
- Lithuania: Turnover collected by LAFPMIS was 0.9% larger then estimated, which suggest that usage of nowcast, with further assessments could be used for predictions. However, gross value added, and operating cash flows were estimated lower than data collected by LAFPMIS by, respectively, 11% and 14%. As these values are calculated from all costs, which by design should be estimated separately because of all the different factors influencing these costs, estimation of these two variables is less reliable.
- Malta: no comment.
- Netherlands: Main two challenges are sufficient raw materials to be sourced and sufficient employees which does determine production capacity. It is foreseen that the capacity is less utilized in 2024 compared to 2023 due to these two challenges.
- Poland: Poland’s preliminary figures show growth of more than 6%.
- Portugal: The projection variation goes against Portugal provisional raw data, considering a non-formal analysis by this date.
- Romania: The Romanian sector is stable during the last three years and the results from the nowcast looks reasonable.
- Slovakia: n.a.
- Slovenia: n.a.
- Spain: Currently, no official data on 2024 production in Spain has been published. However, information provided by various industry stakeholders aligns with the positive trend indicated by the nowcast results. Production volume appears to remain stable, although its value is once again increasing. Domestic consumption is growing again after several years of decline.
- Sweden: no comment.

Comments provided by the MS experts indicate that the projections are generally consistent with preliminary information received for 2024. This seems to be particularly true for turnover, with few exceptions, while the possibility of obtaining acceptable projections for GVA and GP simply by applying the same percentage variations estimated on the production value levels seems to be more controversial.

The EWG considers that the method used to produce the turnover projections could also be adopted in the future. However, the criteria used to select the products or group of products could be further refined through a more in-depth analysis on the microdata reported in the PRODCOM database. Excluding the microdata reported for only one of the years 2023 or 2024 from the calculation of the percentage change in the total value of production may, in some cases, lead to misleading results.

4.2 2025 nowcast

Regarding the projections for 2025, the only external monthly data source explored by the EWG, as it is available for that year (at least for several months) and potentially linkable to turnover, is the ComExt database on imports and exports. The ComExt database, managed by Eurostat, provides comprehensive monthly and annual data on international trade in goods. It covers both intra-EU trade (between EU Member States) and extra-EU trade (between EU countries and non-EU partners). This source offers a consistent and harmonised framework for analysing trade flows relevant to the fish processing sector and potentially useful for projectin turnover up to the current year (for this report 2025). However, several important aspects and limitations have been taken into account, suggesting to limit the nowcast to the year 2024:

- ComExt measures trade in goods, not domestic production or processing output. Imports and exports can serve as indirect indicators of market activity, but they do not capture turnover generated by domestic processing.
- The trade value recorded in ComExt includes transaction prices (free-on-board for exports, cost-insurance-freight for imports). These values may not directly reflect turnover from processing activities, as they include trade margins, transport, and distribution costs.
- Some fish products are imported, processed, and then re-exported; distinguishing between these stages is essential to avoid double counting. For example, imported frozen fish later exported as canned or filleted fish would appear twice in trade statistics.

4.3 Conclusions

In the light of the work done during the week and in order to provide more up-to-dated reports for the EU fish processing sector while strengtheIngn the methodological consistency and reliability of future projections, EWG suggests to further investigate the possibility of projections/nowcast in advance to the next EWG dealing with the economic report (2027?) by:

- conducting a detailed analysis of PRODCOM series for product codes relevant to the fish processing sector to identify areas where the series shows gaps or abnormal variations (e.g. products reported for only one year) and assess whether to exclude or recode these cases;
- creating a transparent protocol outlining the logic behind the inclusion/exclusion of codes, ensuring it can be consistently applied in future projections. This means to establish clear criteria for the selection or exclusion of codes, for example, excluding products with a single observation (2023 or 2024), or applying different weighting coefficients to codes showing high volatility or limited use;
- developing a guidance to standardise the projection method for indicators such as turnover, gross value added (GVA) and gross profit (GP);
- considering using ComExt data as an early-warning indicator (or proxy) to estimate the sector’s turnover for the current year (i.e. the year of the report). To this end, it is necessary to further explore import/export flows for products corresponding to

processed fish products (e.g. canned, filleted, and frozen products) and how their trends relate with the sector's turnover;

- evaluating the use of case studies in selected Member States (with different data and industries' profiles) to test analysis and projections.

5. MAIN DATA ISSUES ARISING FROM THE EWG WORK AND ANALYSIS

5.1 Duration of the EWG

The work of the EWG was significantly constrained by limited time availability. Most of the week had to be dedicated to data verification, which required several Member States to resubmit their datasets. As a result, experts were delayed in preparing the final drafts of national chapters. This situation also affected the EU-level analysis: since the EU dataset results from matching DCF/EUMAP and Eurostat data - and requires several calculations that can only be performed once MS data are finalized - substantial follow-up work had to be carried out by the chair and some experts after the meeting. Most importantly, this situation hindered in-depth discussion during the week on key trends and challenges for the sector. Consequently, much of the report's content is based on individual work carried out outside the meeting.

In the light of this, the EWG suggest, for future reports:

- Allowing the JRC sufficient time to perform preliminary data checks and obtain initial feedback from Member States prior to the EWG meeting. For the current round, JRC was engaged in other data verifications (e.g. social data) and meetings, preventing the establishment of a stable dataset for fish processing before the start of the week;
- Holding two separate meetings of 3- 4 days each: the first focused on verifying national data and drafting national chapters, and the second dedicated to preparing the EU-level overview;
- Allocating time between the two meetings to allow the chair to consolidate and construct the EU-wide dataset.

5.2 Harmonisation in data provisions by MSs

The analysis carried out by EWG at EU level was strongly impacted by the heterogeneity of data available, mainly caused by the optionality of the fish processing data collection. Because of this, the obligation to collect or not collect certain data is only determined by what included in the NWPs. The 2025 data call still highlighted heterogeneity in the data provision among MSs in relation to datasets coverage: not all the MSs collecting economic data collect for both the main and non-main segment, also when the dimension of the sector (e.g. Spain) would imply to cover both the segment in order to provide a cohomprensive overview of the sector at EU level. Furthermore, not all MSs follow the RCGECON recommended categories (now in the Regional Work Plan) for the provision of raw material in volume.

5.3 Alternative segmentation

The comparability of the fish processing sector across EU Member States is essential to understanding differences in economic performance and cost structures. However, unlike other sectors such as aquaculture—where comparisons are made between similar activities or species—the fish processing sector is currently compared only by company size classes (e.g. ≤10, 11–49 employees, etc.). This approach has clear limitations, as firms within the same size category may engage in very different types of processing activities across

countries, leading to structural inconsistencies in the analysis. Limitations of segmentation based only on size classes have been raised also in the Raw material section.

EWG suggests considering the inclusion of a further segmentation based on type of processing activities in the future revision of the data collection. Indeed, a segmentation based on the type of processing activity (e.g. filleting, freezing, smoking, canning, packaging, etc.) is more appropriate than one based solely on company size for several reasons:

- Greater operational homogeneity: companies performing the same type of processing use similar technologies, production processes, and inputs, making economic and efficiency comparisons more consistent.
- More comparable cost structures: different processing activities have distinct cost compositions (e.g. raw materials, labour, packaging, energy, transport), which are not reflected by company size alone.
- Improved interpretation of results: this approach helps distinguish performance differences driven by production efficiency from those linked to the type of product or process.
- Higher relevance for policy design: it allows the identification of specific areas that may require targeted interventions, such as technological innovation, waste reduction, or green transition measures.
- Integration of environmental aspects: since processing activities differ in their environmental impacts, segmenting by activity enables clearer links between economic performance and sustainability outcomes.

6. MEMBER STATES SUMMARY

Country	*General judgement (deterioration/stability /improvement)*	*Overview on the 2022/2023 performance*	*Outlook on 2024/2025*
Austria	***Stability***	The fish processing sector is growing dynamically in terms of production volume and turnover but is increasingly struggling to maintain profitability. The decline in value added and the operating result falling below zero in 2023 demonstrate that rising costs (purchases of raw materials, labour, and energy) are outpacing revenue growth.	Despite the dynamic growth in industry revenues, the efficiency of generating added value is declining, which may be a result of rising production costs.
Belgium	**Improvement**	The turnover, among other economic variables, has been increasing in 2022 and 2023. Although wages and salaries of staff was one of the largest costs to bear in 2022 and 2023, the cost of fish and other raw materials for production have declined significantly since 2021 making the Belgian fish processing industry profitable, with EUR 904 million net proft.	The geo-political context is currently complex and volatile, making markets of processed fish products unpredictable. However, if cost of fish and other raw materials can be kept under control, as well as a decline in cost of wage and salaries of staff, the coming years look positive for the Belgian fish processing industry, with expected improved turnover, GVA and gross profit.
Bulgaria	**Improvement**	The Bulgarian processing sector shows a slight decline in 2023, as the number of registered enterprises decreased to 66. In 2023, the number of enterprises increased by 2% compared to 2022 but decreased by 6% compared to 2021. All enterprises are processing fish as their main activity. The total number of employees in 2023 decreased by 2% compared to 2022 and 7% compared to 2021. In 2023, the turnover and total income respectively continued the growth from last the years and compared to the period 2013-2022, the increase is almost twice as high as the average for the period. The economic performance has also shown an improvement during the last three years. The Gross Value Added is increasing each year except in 2020 and in 2023 increased by 3% compared to 2022 and by 104% compared to the period 2013-2022. A similar situation is observed with the operating cash flow and earnings before interest and tax. In 2023, the net profit was almost the same as in 2022 but increased by 32% compared to 2021 and by 106% compared to the average for the 2013-2022 period.	Between 2023 and 2024, the sector showed a moderate decline across key economic indicators. Turnover decreased by around 12% to EUR 175.8 million, while gross value added and operating cash flow fell by 4% and 5% respectively, reaching EUR 95.3 million and EUR 79.9 million. These results suggest a slowdown in economic performance after the strong growth observed in 2022–2023, possibly reflecting market adjustments and cost pressures within the sector. The decrease in both imported and exported seafood in 2024 and in the first half of 2025 is definitely a sign of a decline in the turnover, which cannot be compensated by the domestic production from fisheries and aquaculture.

Croatia	**Improvement**	The Croatian fish processing industry recorded growth across several economic performance indicators in 2023. Compared to 2022, turnover, gross value added (GVA), and net profit increased by 8%, 23%, and 78%, respectively. Total production costs rose by 4% over the same period. The most significant cost components in 2023 were the purchase of fish and other raw materials and other operational costs, accounting for 46.5% and 38% of total costs, respectively. Wage costs increased by 6% compared with 2022, while energy costs declined by 4%. The total number of enterprises decreased by 3% in 2023 relative to 2022, with the number of enterprises in the 11–49 employee and 50–249 employee segments falling by 25% and 13%, respectively.	For 2024, the model projects a slight decline in turnover, GVA, and operating cash flow compared with 2023.
Czechia	**Improvement**	In 2023, GVA increased by 34% to EUR 29.8 million. Although gross profit fell by 41% in 2022, it returned to growth in 2023 and increased by 29% to EUR 6.2 million.	For 2024, the model predicts continued growth in turnover, GVA and gross profit. However, compared to 2023, growth is slowing down.
Denmark	**Improvement**	In 2023, the total income reached EUR 2.4 billion, which was an increase of 7% compared to 2022, but only 2% compared to 2021, respectively. The GVA reached 368 million in 2023, which was an increase of 16% from 2022	For 2024, the model predicts a small increase in turnover, GVA and gross profit. Based on production data for 2024, the prediction seems valid. No data are available for 2025.
Estonia	**Improvement**	The Estonian fish processing industry was able to increase sales revenue and make a profit in 2022 and 2023.Comparing the economic performance indicators between 2022 and 2023, then GVA continued to increase by 22% to EUR 38.1 million in 2023. Gross profit underwent a significant rise (72%) and reached to EUR 15.5 million.	For 2024, the model predicts continued growth in turnover, GVA and gross profit. However, the prediction should be treated with caution, as the quantities of fish used as raw material will decrease in 2024. Due to reduced fishing opportunities of sprat and herring the total catches of the Estonian Baltic Sea fleet fall by 17% in 2024, according to the data from the Agriculture and Food Board of Estonia. Also, the average first-sale prices of the key species as sprat, herring and perch continue to rise in 2024 (38%, 19% and 4% respectively).
Finland	**Improvement**	Turnover of Finnish processing industry decreased in 2022/2023, but the profitability improved. All cost categories declined in 2023, except for other operational costs and unpaid labour. The most notable reduction was in raw material costs, which dropped by 12%. Overall, the sector strengthened its profitability, generating a net profit of EUR 2.2 million in 2023.	The preliminary DCF economic results show improvement in Turnover and profitability of processing sector in 2024. Fish markets are adjusting to a new economic environment, characterized by weakened consumer purchasing power and rising costs. Processing and marketing are increasingly focused on high-quality and specialty products, as growth in mass markets has slowed down.

France	***Deterioration***	Slowdown since 2022, with a 4% decline in the value of this production to EUR 4,355 billion. Gross value added (-7%), had also decreased between 2022 and 2023 and the gross profit has been quite stable since this date.	For 2024 (and 2025), the turnover of the French seafood production industry continues to decline, as does the GVA. Regarding costs rising, some sectors are less profitable than others. This is the case of the canning sector
Germany	***Deterioration***	In 2023, the German fish processing industry comprised 204 enterprises, of which 55 employed 20 or more staff. These larger establishments employed 4,867 people (equivalent to 4,467 FTE) and generated a turnover of EUR 2,165 million, representing a 1% decrease compared to 2021. Purchases of fish and other raw materials accounted for 72% of total production costs (EUR 1,405 million). Gross value added declined by 1% to EUR 442 million (compared to 2021), while operating cash flow rose by 29% to EUR 238 million.	For 2024 (and2025) the industry continues to face the same challenges: the impact of the war in Ukraine, energy and raw materials crises, and heightened geopolitical tensions have driven up costs for energy, materials, logistics, and labour across all segments. Per capita consumption fell by 10%, production volume in fish processing decreased by 1%, and estimated sector turnover is expected to decline by 6–8% in 2024.
Greece	**Improvement**	In 2023, Greece's fish processing industry demonstrated solid performance, producing 53,266 tonnes of final products worth EUR 360.6 million from approximately 64,688 tonnes of raw material. The sector's overall value per kilogram rose to EUR 6.77, up by 3% from 2022 and nearly 27% higher than in 2021, reflecting improved product valorization and stronger market demand. The freezing segment remained the dominant force, accounting for 34,731 tonnes—around 65% of total production—and generating EUR 251.6 million, or nearly 70% of total value, supported by a sharp increase in average price to EUR 7.24/kg. The mussel deshelling activity represented roughly 12% of total output and 4% of total value, maintaining a stable average price of EUR 2.23/kg, which indicates modest but steady margins. Filleted and prepared products achieved one of the highest unit prices (EUR 9.58/kg) and contributed around 8% of volume and 11% of value, underlining their high added-value potential. Standardized and salted products held steady shares with moderate price growth, while canned, cooked, and marinated items—though limited in volume—showed significant price increases, suggesting expanding niche demand. Smoked fish maintained a small yet premium position, confirming the sector's ongoing shift toward diversification and higher-value production.	The projection shows that 2024 is one of the sector's best performing years, with all indicators reaching or approaching record levels: Rise of turnover by 7% compared to 2023, GVA also by 7%, and Operating Cash Flow by 6.9%. This indicates that the growth of 2023 has sustained in 2024 and is not only inflation driven.

Hungary	***Deterioration***	Despite Turnover in Hungary increasing to record high in 2023, gross profits turned negative in 2022 at EUR -0.1 million (a nearly 120% decrease from 2021), because of cost inflation: raw materials increased by 9.6% (2022 - 19%) and peronnel costs surged by 43.9% (2022 - 13%). The also sector saw contraction in number of companies by 26%, sugesting that due to inflation (17.1 in 2023) not all enterprises could withstand higher costs.	The Hungarian fish processing industry saw first signs of slowed growth of turnover from 2021 to 2023 due to COVID restrictions and inflation driven by Russia's invasion of Ukraine. Turnover is expected to decline by up to 18% in 2024, with further decrease possible in 2025. Although inflation was lower in 2024, cost pressures persist. Gross profit is expected to remain negative, likely forcing weaker companies out of the market and leading to further contraction of fish processing sector in 2025.
Ireland	**Improvement**	No comparison in turnover 2022/2023 (no data in 2022). Economic performance indicators suggest that the industry performed better comparably to 2019 with GVA and gross profit increasing 15% and 38% respectively. However, this likely reflects the boost to retail sales leveraged by processors in 2020, which allowed processors to maintain sale activity. Production value increased by 2% to EUR 577 million in 2023 with employment trend which is quite stable but with a rise of labour costs.	The Irish fish processing sector faces on-going uncertainty driven by the Russian-Ukraine conflict lasting negative impacts of Covid-19 restrictions and Brexit. While the Irish fish processing sector adapted well to the economic shock caused by Covid, the continued resilience of the industry will be tested as the sector deals with the fall-out of Brexit, rising input costs caused by conflict in Ukraine and labour supply and retention challenges. Investment into the sector through private and public channels including EMFF and EMFAF and national public investment programmes will be key to supporting the sector effectively respond to these challenges.
Italy	**Stability**	In 2022–2023, Italy's fish processing industry showed resilience amid rising costs and soft demand. The sector counted 404 enterprises, generating EUR 2.2 billion in turnover and achieving a GVA of EUR 377 million (+8%). Employment totalled about 6,000 workers (-4%), with 4,950 FTEs (-3%) and an average labour cost slightly below EUR 50,000 per FTE. Production costs reached EUR 2.63 billion (-3%), mainly driven by raw materials (75% of total), while energy and service expenses eased slightly. Labour productivity rose by 12%, and debt declined by 8%, indicating structural consolidation, efficiency improvements, and gradual financial recovery across an increasingly competitive and innovation-oriented sector.	In 2024–2025, Italy's fish-processing sector entered a structural transition driven by high energy costs and circular economy goals. EMFAF-supported projects fostered energy-efficient technologies, achieving 6-8% savings, while national funds promoted by-product valorisation into fishmeal, biogas, and biomaterials. Despite persistent price pressures, exports and long-shelf-life product demand supported moderate recovery. Growing adoption of environmental certifications (e.g. MSC, ISO 50001) enhanced competitiveness, marking the sector's shift toward a more efficient, resilient, and sustainable production model.

Latvia	**Improvement**	The production value in 2023 corresponded to EUR 296.4 million, an increase of 3% compared to 2022. The value of total purchases of goods and services increased by 4% and corresponded to EUR 248.3 million in 2023. The production value accounted to 96% of total fish processing turnover in 2023. Gross value added increased by 15% compared to 2022, reaching EUR 62.0 million in 2023 and gross profit increased by 33%, reaching EUR 19.6 million over the same period.	The nowcast based on SBS data shows slight increase by 2% in total turnover from 2023 to 2024. The fish processing industry in Latvia is directly dependent on export to global markets and has significant share in Latvian total export. Latvia's total volume and value of export increased by 1% and 8%, respectively, from 2023 to 2024. The volume and value of export to EU countries increased by 9% and 11%, respectively, while export to non-EU countries decreased by 9% and increased by 3% in value from 2023 to 2024.
Lithuania	**Improvement**	The main drivers of economic performance in Lithuania's fish processing industry in 2023 were largely the same as in 2022: the Russian invasion of Ukraine, energy and supply chain disruptions, and persistent inflation, all of which negatively impacted demand and increased costs, forcing net profitability to fall to 6-year low – 2.4%. These factors caused raw material prices to surge in 2022 by 18% while inflation hit multi-year highs (peaking 19.7 in 2022), the energy costs, rose by 76%, and Wages and salaries rose by 16%. Disruptions in transportation and logistics due to fuel costs and supply bottlenecks, inflated operating expenses by 15%. In 2023, these costs fell sharply as energy markets stabilized: Energy costs fell by 16%, supported by diversified supply sources, inflation eased to 9.1% as central banks raised interest rates to curb spending. Raw material purchase costs stabilized, and other operational expenses declined sharply by 24%. Wage cost growth slowed to 5%. However, sales volumes also fell by 10% in 2023 due to weakened demand, though turnover declined only by 1% because of lingering inflation. Because lower expenses and inflation, net profitability increased to 6.2%.	2024 total income from fish processing industry with a main activity increased by 9% mainly due to increase of 7% in processed fish sales. Total production costs in 2024 increased by 5%, with a further 2% rise projected for 2025. The primary drivers of this increase are raw material costs, which rose by 5% in 2024. For 2025, with no significant increase expected in production volume raw material costs are projected to rise only marginally. In 2024 wages and salaries grew by 15%, because of increase of salaries (20%), looking ahead, with rising inflation and expected increases in salaries in LTU, wages in the fish processing sector are forecasted to rise by 4% for 2024. Other operational cost decreased further by 6% during 2024, and energy costs fell by 21%, and for 2025 because of expected growth of inflation, will marginally increase. Turnover is expected to remain flat or grow only marginally, supported solely by inflation and export-price adjustments, as processed volumes have stabilized and instability geopolitical situation.

Malta	***Deterioration***	In 2023, Malta's fish processing industry remained small but showed signs of expansion. The number of enterprises rose to 10, doubling compared with the 2015–2019 average, while turnover reached EUR 74 million, a sharp 255% increase since 2019, largely due to new entrants rather than productivity gains. Employment also grew to 151 people (150 FTEs), marking a 17% rise from 2022, with most workers employed full-time. Despite the sector's growth in scale, activities remained focused on low-value processing such as filleting and portioning, and the average wage fell to its lowest level of the past decade, underscoring the industry's limited value-added orientation and modest profitability.	The sector appears to have achieved a financial stability and steady performance indicators.
Netherlands	**Improvement**	The total income or also named as net turnover in the Eurostat SBS database was estimated at EUR 1 501 million in 2023. This was a strong increase (+43%) compared to 2021 (EUR 1 047 million). Main reason was upscaling in terms of production volumes as most fish processing enterprises extend their cold storage and processing capacity. The total production value (value of output) increased with 37% from 2021 (EUR 951 million) to a total of EUR 1 305 million in 2023. Three clarifications are given: 1) more imported raw materials and 2) an increase of prices per kilogram for most of the sold seafood products. As an indicator of increased sales prices, the export value per kilogram fish products increased with 22% between 2021 and 2023 based on PRODCOM data. Total exported value increased with 20% to EUR 4 032 million in similar period while exported value decreased with 2%. 3) In 2023, there were 182 enterprises in the fish processing industry of the Netherlands whi is +14% compared to 2021 (159 enterprises).	For the nearby future labour shortages and availability of raw materials are the main challenge for the Dutch fish processing industry. In particular, Dutch fish processors foresee challenges to source raw materials for plaice (flatfish) and whitefish such as Alaska pollack with no longer autonomous tariff quotas (ATQs) for imports from Russian Federations. If Dutch fish processors succeed to source sufficient raw materials by imports and recruit or maintain employees, it is expected that economic performances will improve for 2024-2025.

Poland	**Improvement**	In 2023, the economic performance of the fish processing industry in Poland was more successful then in 2022. Turnover increased by 28% and total income by 28 % to EUR 3.4 billion. Other economic indicators also recorded increase: GVA up to 82% and EBIT margin reached 31.1%. Total production costs increased by 7% the highest energy by 66%. In 2023, there were 207 companies involved in fish processing in Poland; 145 of them defined the primary production under the NACE Code 10.20.	In 2024 a continuation of the upward trend in the fish processing industry can be observed. Both turnover and total income increased by 16% and 17% respectively compared to 2023. In 2024 an increase in expenditure and costs was recorded. The purchase of fish and other materials for production increased by 38%, personnel costs by 57% and other operational cost by 34%. Energy costs increased by 5%. Relatively small increase in energy costs was linked to the increase in production from renewable energy sources, which became more competitive. Imports play a major role in the supply of raw material. Further progress in 2024 and 2025 will largely depend on the situation on global markets, including fuel, customs duties and taxes and material costs.
Portugal	**Improvement**	In 2023, from a steady number of companies and employes, the 165 fish processing enterprises in operation presented a turnover of EUR 1.7 billion. GVA and Gross Profit shows a general increasing trend, GVA reaching EUR 306 million (+14% from previous year), and Gross Profit EUR 132.7 million (amazing 2023 with 21% from previous year). Labour productivity (the GVA by FTE) reaches EUR 42.2 thousand in 2023, with 34% growth from previous year. The international trade gain considerable dimension (+6.2% on exports, +5.9% on imports in 2024 by 2023), considering the general high value-added products pattern of the Portuguese industry.	It can be excpected further improvementes on the whole fish industry. Salting sector is over menace, though. Main issues from raw material and competitiveness are very much related with the cod supply chains (Norway/Russia and Norway/Portugal connections), due to the russian-ucranian conflict. If the reported situation related to Norway lasts a while longer there is a real risk of implosion over the whole national salting and drying industry segment. Expected increase on energy costs will also have a significant impact

Romania	**Stability**	According to submitted data, the Romanian fish processing sector consisted of 17 enterprises in 2023. The structure based on the number of employees has changed by a decrease of 50% in the segment <10 employees, and the number of enterprises in the segments between 11-49 and 50-249 employees remains the same as in the previous year. There were no companies which employed more than 250 workers in 2022 and 2023. The economic performance of Romanian fish processing industry has been fluctuating from 2013 to 2023. In 2023, the performance in economic terms has decreased; the turnover was EUR 100 million (down by 22% compared to 2022), average wage also decreased by 18% to EUR 10.2 thousand. Regarding employment indicators, FTE per enterprise has increased by 16% to 63.1 in 2023, and unpaid work has inclined by 26% to 6.3%. As for enterprises doing fish processing not as main activity, in 2023, there were 25 companies and turnover attributed to fish processing increased by 59% to EUR 10.6 million compared to data submitted for 2022. In 2023, the total income for the Romanian fish processing industry reached EUR 106.4 million, which was a decrease of 18% compared to 2022. The GVA reached EUR 38.5 million in 2023, which was a decrease of 13% from 2022. From 2022 to 2023, the net profit increase to EUR 29.9 million, which was an increase of 4%. The EBIT and the operating cash flow decreased from 2022 to 2023, both by 15%.	Overall, the sector remains resilient, though performance in 2023 indicates a period of adjustment following the strong results achieved in 2021–2022. According to preliminary assumptions, a slight decrease in the sector's turnover is expected for 2024.
Slovakia	**Stability**	Production value and total turnover declined significantly between 2020 and 2022, but a slight improvement was observed in 2023. Total turnover almost halved between 2020 and 2022, but in 2023 it reached EUR 29.9 million, compared to a low of EUR 24.9 million in 2022.	The sector has regained the ability to generate some profits and more stable economic values, but it is clear that it is operating on a much smaller scale than a decade ago and is operating under conditions of limited profitability.
Slovenia	**Improvement**	Between 2022 and 2023, the turnover has increase by one percent, while the profit has decreased by 4% in the same period. GVA and OCF have increased for 22% and 29% in the same period. We recorded also increasing of EBIT by 44% in the period from 2022 to 2023. Total operating cost increased by 3% in the period 2022-2023 and amounted EUR 41.2 million in 2023.	In the future, we can expect further development of the fisheries processing industry in Slovenia and therefore higher revenues from this sector. Because of the increased number of enterprises in the future and resulting increased competition we can expect a fall in prices of fish products and thus lower profits.

Spain	**Improvement**	Between 2022 and 2023, the fish processing industry showed clear signs of improvement and recovery. Total income grew slightly (+2%), while production costs declined by around 5%, boosting profitability. Despite a 7% drop in full-time equivalent employment, both value-added (+30%) and net profit (+78%) increased substantially, indicating strong productivity gains. Labour productivity rose sharply (+39%), and operating cash flow nearly doubled, suggesting better cost management and efficiency. The number and size structure of enterprises remained stable, pointing to a consolidation phase rather than expansion. Overall, the sector became more efficient and profitable in 2023, achieving higher output with fewer resources.	Based on the strong rebound observed in 2023, the Spanish fish processing industry is expected to maintain a moderately positive outlook in 2024. Revenues are likely to grow slightly, supported by greater efficiency, stable demand for processed and value-added seafood, and expanding domestic aquaculture production. Profitability should remain solid if production costs—especially energy and raw fish inputs—stay contained. However, inflationary pressure on consumers, potential raw-material shortages in Galicia's shellfish sector, and slower EU seafood consumption could limit further gains. Overall, 2024 is expected to be a year of stabilized growth and consolidation, with continued productivity improvements but only modest increases in output and employment.
Sweden	***Deterioration***	Between 2022 and 2023 the fish processing industry deterioated in several aspects. The total income decreased by -9% and net profit decreased by 4 %. High costs regarding raw material, which increased with another 7 % in 2023 caused effects on the profitability. Other operational costs decreased by -26% but remained on a high level in comparison with the last 10 years and over all caused effects on the profitability of the sector. The number of companies also decreased during the period.	For 2024 and 2025 the cost of raw material remains on a high level and low predictability of access to raw material is creating uncertainties in the sector. However, there are also business opprotunities to be explored when it comes to utilization of food waste streams, circular economy and energy transition.

7. NATIONAL CHAPTERS

7.1 Austria

The Austrian fish processing sector is important in meeting local demand and supplying the domestic food industry. Austria, being landlocked, relies mainly on processing freshwater fish, such as trout and carp. The sector is recognized for its use of modern processing methods and for maintaining strict quality, hygiene, and safety standards to ensure high-quality fish products. Since Austria's own production is limited, many other species - including salmon, tuna, and seafood - are imported mainly from Germany, the Netherlands, Czech Republic, Italy, and Turkey.

According to SBS data, in 2023, the fish processing industry in Austria consisted of 16 enterprises with an estimated total income of EUR 65 million employing 174 people corresponding to 154 full time equivalent. The number of employees has fluctuated over the years independently in relation to the increased number of enterprises. The unpaid labour in 2023 was estimated to be 18 persons representing 10.3% of the total persons employed. The FTE ratio hovered around 0.9 per employee, indicating relatively high work intensity considering the seasonality and small size of most companies.

Table 7.1 Overview, Austria, 2013-2023

Variable	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Δ (2022-23)
Structure (number)												
Total enterprises	6	9	10	9	8	7	6	7	8	13	16	23%
Total employees	129	122		145	137	158	153	152	143	147	174	18%
Unpaid labour	5	8		8	6	6	5	5	7	14	18	29%
FTE	111	105		124	117	137	134	134	124	131	154	18%
Income, expenditure and investments (million €)												
Production value	36.3	38.1		44.1	44.0	44.1	44.0	44.6	43.7	51.9	61.8	19%
Turnover from fish processing												0%
Turnover total	39.4	41.8		46.7	46.7	45.8	44.9	45.7	45.8	54.7	65.0	19%
Total purchases of goods and services	30.1	32.8		35.7	36.9	34.8	35.7	35.2	35.8	46.5	57.9	24%
Personnel costs	5.0	4.8		5.7	5.4	6.7	6.5	7.1	7.0	7.7	8.7	13%
Gross investment in machinery and equipment	0.3	0.6		1.1	0.3	1.0	1.4	0.4	0.2	2.8	0.7	-77%
Economic performance (million €)												
Gross Value Added	9.3	9.3		11.5	9.4	11.0	10.1	10.9	9.8	9.6	7.3	-24%
Gross profit	4.3	4.6		5.8	4.0	4.3	3.6	3.8	2.9	1.9	-1.4	-173%

Source: EWG elaboration from Eurostat (2025) data.

Table 7.1 is giving an overview of the Austrian fish processing industry. Production value almost doubled: from EUR 36.3 million in 2013 to EUR 61.8 million in 2023. Turnover total increased from EUR 39.4 million in 2013 to EUR 65 million in 2023, representing an increase of approximately 65% in a decade. This demonstrates the sector's expansion and increased market share.

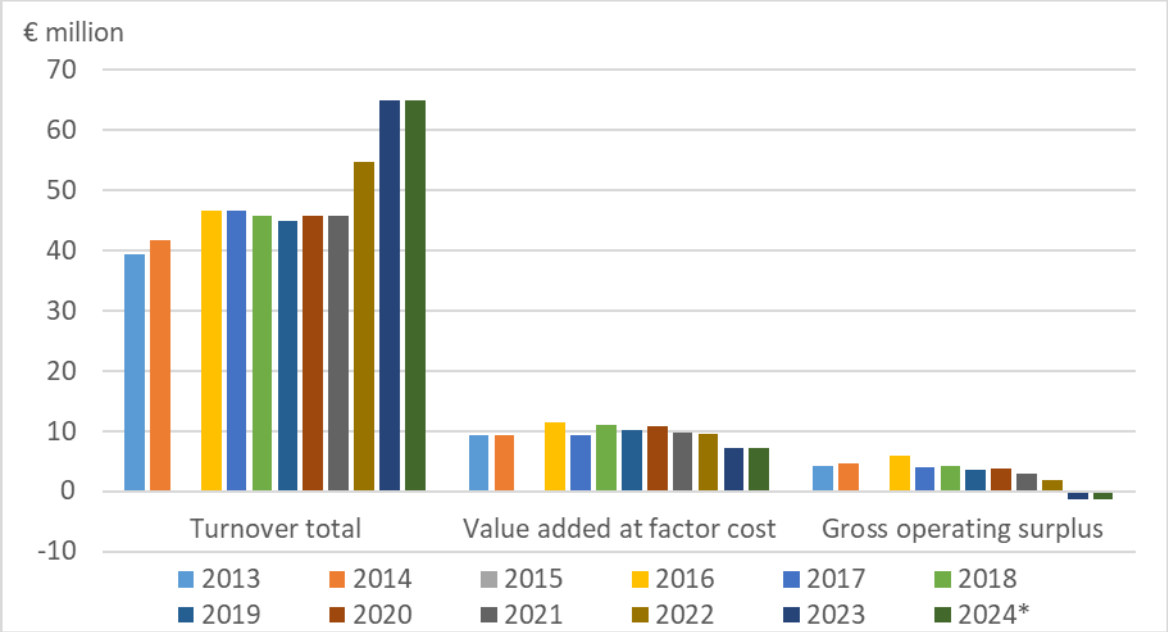
Expenditures on goods and services and wages steadily increased, reflecting the growing scale of the sector. Purchases of goods and services reached up to 75% of revenue, meaning that the sector's profitability is highly sensitive to changes in raw material and energy costs and pricing pressures. Personnel costs accounted for approximately 13–14% of total revenue on average.

Investments in machinery and equipment were irregular – the highest level (EUR 2.8 million) was recorded in 2021, suggesting periods of modernization and replacement of machinery.

The Austrian sector's gross value added remained stable until 2021 (approximately EUR 9–11 million annually) but fell to EUR 7.3 million in 2023. Gross profit has been steadily declining since 2015, with a gross loss of – EUR 1.4 million recorded in 2023, indicating deteriorating profitability despite growth in revenues and production.

The fish processing sector is growing dynamically in terms of production volume and turnover but is increasingly struggling to maintain profitability. The decline in value added and the operating result falling below zero in 2023 demonstrate that rising costs (purchases of raw materials, labour, and energy) are outpacing revenue growth.

Figure 7.1 Turnover, GVA and Gross profit evolution, Austria, 2013-2024



*Source: EWG elaboration from Eurostat (2025) data. *Nowcast not possible, 2024 assumed to be equal to 2023*

The total turnover of the fish processing sector in Austria remained relatively stable at around EUR 40-45 million until 2021, after which it began to grow significantly. The largest increase was recorded in 2023 when turnover exceeded EUR 60 million. This indicates that the industry has experienced very dynamic growth in recent years, which may be due to growing demand or favourable market conditions.

From 2013 to around 2020, value added at factor cost fluctuated around EUR 8–10 million, but in subsequent years, it began to slowly decline, and according to data, in 2023 it was below EUR 6 million. This suggests that despite the dynamic growth in industry revenues, the efficiency of generating added value was declining, which may be a result of rising production costs.

Even more concerning is the trend in gross operating surplus, which has been significantly declining since 2013. While this indicator exceeded EUR 2 million at the beginning of the decade, it remains close to zero in 2023. This means that growing turnover is not translating into profits for companies, which are struggling with increasingly higher operating costs and declining profitability.

Table 7.2 Number of companies by size category, Austria, 2013-2023

Size category	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
From 0 to 9 persons employed	2	5	6	4	4	4	3	4	5	10	12
From 10 to 19 persons employed	1	1	1	2	1	0	0	0	0	0	0
From 20 to 49 persons employed	2	2	3	2	2	1	1	1	2	2	4
From 50 to 249 persons employed	1	1	0	1	1	2	2	2	1	1	0
250 persons employed or more	0	0	0	0	0	0	0	0	0	0	0
Total	6	9	10	9	8	7	6	7	8	13	16

Source: EWG elaboration from Eurostat (2025) data.

Between 2013 and 2023, the number of fish processing plants in Austria showed a clear upward trend, particularly after 2021. The largest increase was recorded by the smallest companies (employing 0 to 9 people) – in 2022, there were 10, while in 2023, there were 12, representing a 120% increase compared to the previous year. A jump was also observed among medium-sized plants (employing 20 to 49 people), whose number doubled from 2 in 2022 to 4 in 2023, translating to a 200% increase year-on-year. The number of larger companies (employing more than 50 people) remains unchanged, with no more than one establishment between 2013 and 2023; no companies employing 250 or more people were registered.

7.1.1 Data coverage and quality

No data were submitted by Austria. For that reason, the EWG prepared a national mini-chapter with limited analyses based on publicly available data (Eurostat).

7.2 Belgium

7.2.1 Overview

In 2022, the fish processing industry in Belgium consisted of 78 enterprises with fish processing as their main activity, and of 181 seafood companies with fish processing as a side activity. The total turnover for the 78 main enterprises was estimated at above EUR 1 088 million, employing a total of 2 207 people (2 171 full-time equivalents, FTE). Activity of the Belgian fish processing industry includes the production of fresh and frozen fillets, smoked fish (salmon, halibut, haring, rainbow trout and others), pickled seafood and prepared dishes. For 2023, the number of fish processing industries with main activity were similar with 77 enterprises in 2023 compared to 78 enterprises in 2022, but with a small increase of turnover in 2023 (EUR 1 169 million) compared to 2022 (7%).

For fish processing, the enterprises are classified by category according to the number of employees (≤ 10; 11-49; 50-249; ≥ 250 employees). Table 7.3 gives an overview of the Belgian fish processing industry, including the size of the enterprise and the level of employment. The sector is dominated by small and middle-sized enterprises. In 2023, more than half (55%) of the Belgian enterprises had less than 10 full time employees. About 38% of enterprises (25) enterprises had between 11 and 49 employees. There were 5 enterprises with more than 50 employees and 1 large enterprise with more than 250 employees. Across the time series (2013-2023) the number of enterprises with less than 10 and between 11 and 49 employees has increased, while the larger enterprises with between 50 and 249 and more than 250 employees have remained stable.

Table 7.3 Overview, Belgium, 2013-2023

Variable	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Δ (2022-23)
Structure (number)												
Total enterprises	60	66	66	62	65	66	65	74	76	78	77	-1%
≤ 10 employees	37	38	37	35	36	37	35	39	41	43	42	-2%
11-49 employees	19	24	26	23	24	24	25	29	29	29	29	0%
50-249 employees	4	4	3	3	4	4	4	5	5	5	5	0%
≥ 250 employees				1	1	1	1	1	1	1	1	0%
Employment (number)												
Total employees	1,489	1,487	1,529	1,469	1,369	1,424	1,426	2,013	2,166	2,207	2,227	1%
FTE	1,385	1,377	1,423	1,373	1,269	1,335	1,378	2,012	2,185	2,171	2,102	-3%
Indicators												
Turnover (million €)	660	701	710	762	866	953	961	1,124	1,133	1,088	1,169	7%
FTE per enterprise	23.1	20.9	21.6	22.2	19.5	20.2	21.2	27.2	28.8	27.8	27.3	-2%
Average wage (thousand €)	42.3	44.4	42.7	42.8	49.0	48.7	46.8	51.3	50.7	63.6	59.0	-7%
Unpaid work (%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0%
Enterprises doing fish processing not as main activity												
Number of entreprises	194	195	193	218	181	180	148	179	181	181	180	-1%
Turnover attributed to fish processing (million €)												

Source: EWG elaboration from Member States submissions to the Fish Processing data call 2025.

The Belgian fish processing industry, although dominated by small enterprises (<10 employees), employs by for the smallest number of people (4% in 2023), while the enterprises with 11 to 49 employees employ by far the largest number of people (68% in 2023). Interestingly, the single enterprise with more than 250 employees, provides jobs for about the

same number of people compared to enterprises with 50-249 employees (14.1% and 14.2%, respectively for 2023). The FTE per enterprise size category nearly the same as number of persons employed indicating that mostly full-time jobs exist or that nearly all FTE can be filled in. Moreover, these employment numbers are rather stable from 2020 to 2023, with small increased in the number of jobs provided by enterprises with less than 10 and between 11 and 49 employees. Related to number of persons employed and FTE's is the average wage. This remained rather stable from 2013 to 2019 with a light increasing trend. From 2020 onwards, average wages have increased more significantly peaking in 2022. The latter trend was a consequence of COVID-19 and economic inflation that followed the COVID-19 crisis. Non-paid labour is not reported by Belgium. Efforts are made to collect such data via questionnaires, but responses are nearly non-existent.

7.2.2 Economic performance

Table 7.4 reports detailed income, costs and the overall economic performance for the Belgian fish processing industry for the time period 2013 to 2023.

For 2023, the total income of the Belgian fish processing industry was estimated at around EUR 1 190 million, an 8% increase compared to 2022. The total income includes turnover, other income (EUR 19 million in 2023) and operating subsidies (EUR 2.2 million in 2023, and an all-time high compared across the time series).

The financial costs decreased by -3% in 2023 compared to 2022 and were estimated at total of EUR 265 million in 2023. The total cast includes the purchase of fish and other raw materials for production (decreased by -5% compared to 2022; not that this includes energy costs), payment for external agency workers (around EUR 15.5 million for both 2022 and 2023) and operational costs which increased by 28% to EUR 4.5 million in 2023 compared to 2022. Interestingly, total costs also include wages and salaries of staff, which decreased by -12% to EUR 124 million in 2023, compared to 2022. This indicates that after a continued increasing trend because of the financial crisis and consequent inflation after COVID-19, wages are becoming more variable again. Remarkably, both for 2022 and 2023 the cost related to wages and salaries of staff was higher (51% and 47% of total costs, respectively) compared to the cost to purchase fish and other raw material products for consumption (42% and 46% of total costs, respectively).

The net investments have decreased by -20% to EUR 7.8 million in 2023 compared to 2022 but is within nominal variation when the time series (2013-2023) is considered. Total value of assets has been steadily increasing over the time series, while debt peaked in 2022, which could be acquitted to financial difficult times post COVID-19. Debt has however decrease by -3% to EUR 292 million in 2023.

Net profit in recent years, especially since 2020 has increased substantially, estimated at a total of EUR 904 million in 2023, an 11% increase compared to 2022. This increased net profit can be acquitted to increased turnover, other income and operating subsidies, but mainly to a significant reduction in purchase of fish and other raw materials for production.

The productivity and economic performance of the Belgian fish processing industry show an increasing trend on all indicators, except financial position which remains stable, from 2016 onwards when values were at an all-time low. Especially from 2019 onwards labour productivity, capital productivity and return on investment show increasing values.

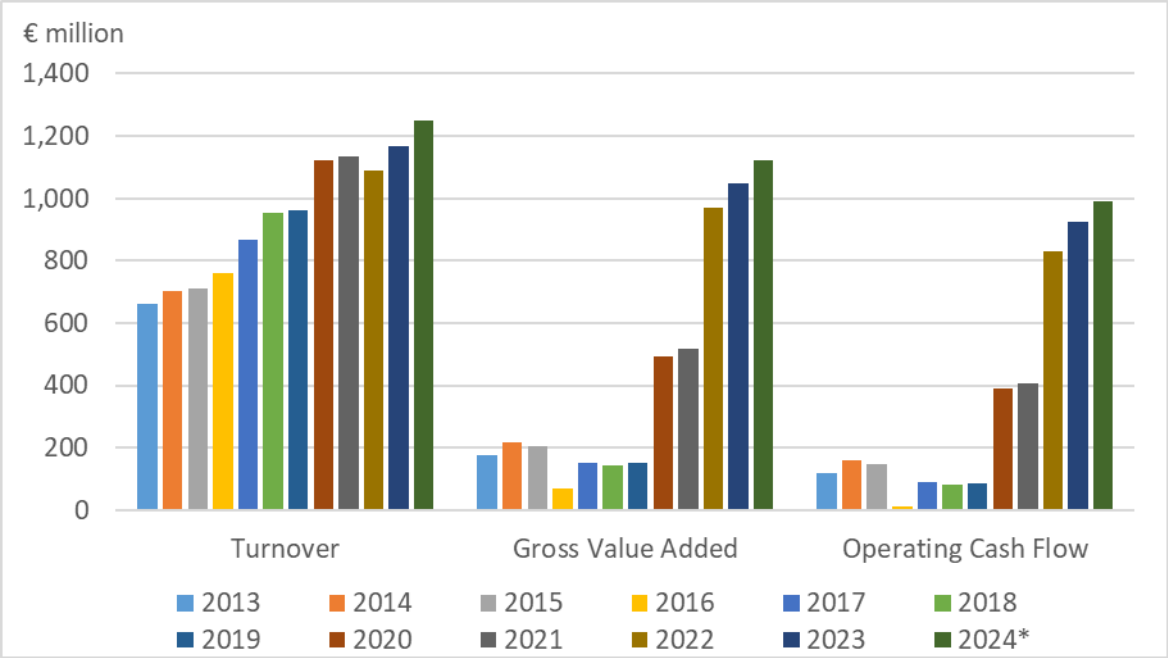
Table 7.4 Economic performance indicators, Belgium, 2013-2023

Variable	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Δ (2022-23)
Income (million €)												
Turnover	659.8	701.1	709.9	761.6	865.7	952.7	961.0	1123.6	1132.9	1088.4	1169.3	7%
Other income	4.2	14.7	12.3	0	8.0	9.1	8.6	15.2	15.1	15.6	18.8	21%
Operating subsidies	1.4	1.5	1.3	0.2	0.3	0.3	0.2	0.4	0.3	0.2	2.2	943%
Total Income	665.4	717.2	723.5	761.8	874.1	962.1	969.9	1139.1	1148.3	1104.2	1190.4	8%
Expenditure (million €)												
Purchase of fish and other raw material for production	428.8	435.9	454.2	627.2	713.1	807.1	808.5	627.7	609.4	115.2	121.0	5%
Wages and salaries of staff	58.5	61.1	60.7	58.8	62.2	65.0	64.5	103.2	110.9	138.2	124.0	-10%
Imputed value of unpaid labour												
Payment for external agency workers (optional)				6.3	5.2	7.5	8.0	13.9	16.6	15.5	15.6	1%
Energy costs	54.8	57.8	58.7	57.5								
Other operational costs	3.2	2.5	2.2		2.5	2.2	2.9	3.2	3.0	3.5	4.5	28%
Total production costs	545.4	557.2	575.8	749.8	782.9	881.7	883.9	747.9	739.9	272.4	265.1	-3%
Capital Costs (million €)												
Depreciation of capital	13.2	11.0	12.4	10.8	11.8	12.3	12.0	17.1	16.8	17.5	18.3	4%
Financial costs, net	2.8	1.4	2.2	2.1	-3.9	-1.0	1.7	-0.7	2.0	2.9	3.0	1%
Capital Value (million €)												
Total value of assets	319.5	330.1	334.9	340.0	372.0	415.6	407.8	497.4	495.6	505.9	517.7	2%
Net Investments	9.7	8.3	9.7	8.0	13.8	5.4	8.6	6.5	7.8	9.8	7.8	-20%
Subsidies on investments				1.0	1.3	2.3	2.3	2.5	2.5	2.1	2.4	15%
Debt	207.3	195.2	200.2	200.1	245.3	266.6	262.6	272.7	300.7	302.0	292.0	-3%
Economic performance (million €)												
Gross Value Added	177.1	219.6	207.1	70.6	153.0	145.0	150.2	494.0	519.0	969.7	1047.0	8%
Operating Cash Flow	120.0	160.0	147.7	12.0	91.1	80.3	86.0	391.2	408.3	831.8	925.3	11%
Earning before interest and tax	106.8	149.0	135.3	1.2	79.3	68.0	74.0	374.1	391.5	814.2	906.9	11%
Net Profit	104.0	147.5	133.1	-0.9	83.2	69.1	72.2	374.8	389.6	811.3	904.0	11%
Productivity and performance Indicators												
Labour productivity (thousand €)	127.9	159.5	145.6	51.4	120.6	108.6	109.0	245.6	237.5	446.6	498.1	12%
Capital productivity (%)	55.4	66.5	61.8	20.8	41.1	34.9	36.8	99.3	104.7	191.7	202.2	
GVA margin (%)	26.7	30.7	28.7	9.3	17.5	15.1	15.5	43.4	45.2	87.8	88.1	
EBIT margin (%)	16.0	20.8	18.7	0.2	9.1	7.1	7.6	32.8	34.1	73.7	76.2	
Net profit margin (%)	15.6	20.6	18.4	-0.1	9.5	7.2	7.4	32.9	33.9	73.5	75.9	
Return on Investment (%)	33.4	45.1	40.4	0.4	21.3	16.4	18.1	75.2	79.0	160.9	175.2	
Financial position (%)	35.1	40.9	40.2	41.1	34.1	35.9	35.6	45.2	39.3	40.3	43.6	

Source: EWG elaboration from Member States submissions to the Fish Processing data call 2025.

The outlook for the Belgian fish processing industry in 2024 appears positive, with growing turnover, GVA and operating cashflow (Figure 7.2.1). Especially if enterprises can keep their production costs low, the outlook in coming years can be positive. However, these are only careful outlooks dependent on data and not on real world scenarios. Indeed, current market fluctuations are difficult to predict due to changing global economies and geo-political relations.

Figure 7.2 Turnover, GVA and Operating cash flow evolution, Belgium 2013-2024



Source: EWG elaboration from Member States submissions to the Fish Processing data call 2025. *2024= nowcasted data

7.2.3 Breakdown by company size

Table 7.5 gives an overview of the economic situation of the Belgian fish processing industry by enterprise size category. The most important size category of enterprises for the Belgian fish processing industry are the enterprises employing between 11 and 49 employees. These enterprises provide most jobs and generate the most turnover (58% of the total turnover in 2023).

The smaller enterprises with less than 10 employees are often one-person enterprises or very small businesses that are flexible in their activities and focus towards being a main fish processor or doing this as rather a side activity. Hence, values such as total income, production costs, gross value added (GVA), and net profit have fluctuated heavily across the time series (2013-2023). Nonetheless, in recent years the economic indicators in this size category are up and in 2023 this size category of enterprises has performed economically best compared to the other size categories and compared to 2022.

The size category of enterprises employing between 11 and 49 persons, and economically the most important size category, has economically the best figures. Income in this category has increased steadily across the time series (2013-2023), while GVA and net profits increased particularly since 2019. Important to note is that production costs have dropped significantly since 2019, although it increased by 6% to EUR 160 million again in 2023 compared to 2022.

The size category of enterprises employing between 50 and 249 employees has economically a reduced performance in 2023 compared to 2022. Although economic growth improved from since 2019, income, GVA and net profit was reduced in 2023. For example, turnover decreased by -11% to EUR 192 million, GVA by -13% to EUR 165 million and net profit by -14% to EUR 144 million in 2023 compared to 2022. However, also costs were reduced significantly since 2021 allowing this segment to remain profitable in the last years.

The largest size category containing enterprises employing more than 250 employees in the Belgian fish processing industry only contains a single enterprise since 2016. This enterprise

has been successful economically with slowly increasing their turnover across the time series (2016-2023). Since 2021 also GVA and net profit increased significantly. Noteworthy, is the large decrease in production costs since 2021 making this single enterprise very profitable.

In conclusion, based on size category analyses, the Belgian fish processing industry is rather profitable in recent years. However, some care must be taken when interpreting this data, as no actual percentage of fish processing activity is given. Although all main fish processing enterprises have more than 50% of their activities directly related to fish processing, this can vary between 51% and 100%. Consequently, how much percent of the income, costs and profits is actually generated by fish processing in currently unknown. It does however appear that alle size categories have reduced their production costs significantly and to a large extend explains the profitability of the fish processing industry.

Table 7.5 Economic performance by company size, Belgium, 2013-2023

Variable	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Δ (2022-23)
less than or equal to 10 employees												
Total Income	113.8	146.8	128.7	60.7	111.9	104.0	104.1	56.9	64.1	42.4	73.5	73%
Total production costs	31.5	24.0	19.4	59.7	104.8	97.7	99.4	3.2	3.3	3.5	5.6	62%
Gross Value Added	88.2	127.5	114.3	6.2	11.9	11.4	9.6	56.7	63.9	42.0	71.4	70%
Operating Cash Flow	82.5	122.9	109.6	1.0	7.2	6.3	4.6	53.7	60.9	38.9	67.9	74%
Earning before interest and tax	80.6	120.8	107.8	-0.5	5.7	4.3	3.0	52.6	59.5	37.2	66.4	79%
Net Profit	80.5	120.7	107.7	-0.8	5.2	3.9	2.5	52.5	59.3	36.8	66.7	81%
between 11 and 49 employees												
Total Income	181.4	214.7	271.1	338.2	354.7	419.6	418.7	590.2	591.3	616.8	686.5	11%
Total production costs	160.8	187.0	243.2	323.4	322.3	398.0	388.3	334.2	326.5	151.1	159.7	6%
Gross Value Added	39.6	49.9	53.3	36.4	53.1	43.9	53.3	309.7	323.8	531.5	596.5	12%
Operating Cash Flow	21.5	28.5	28.5	12.6	30.2	19.1	28.3	248.3	255.0	456.8	517.2	13%
Earning before interest and tax	16.5	23.7	22.7	6.9	24.9	13.8	22.7	237.5	244.6	446.4	506.5	13%
Net Profit	15.5	22.4	21.4	5.5	24.6	14.6	22.3	239.2	243.0	444.3	503.9	13%
between 50 and 249 employees												
Total Income	370.2	355.7	323.8	180.8	205.3	206.6	209.9	244.4	250.7	216.5	192.0	-11%
Total production costs	353.1	346.2	313.2	176.0	177.0	179.8	184.9	182.1	183.1	41.9	40.3	-4%
Gross Value Added	50.7	43.7	40.8	13.2	42.1	40.1	36.9	75.1	80.9	188.9	165.0	-13%
Operating Cash Flow	17.3	10.0	10.8	2.5	26.8	23.9	21.9	58.4	63.1	170.8	148.9	-13%
Earning before interest and tax	11.0	5.9	6.1	1.3	24.2	21.0	19.3	55.2	60.0	167.3	144.6	-14%
Net Profit	9.3	5.9	5.3	0.7	23.2	19.8	18.0	53.9	59.2	166.4	143.5	-14%
greater than or equal to 250 employees												
Total Income				182.2	202.1	231.9	237.2	247.6	242.2	228.6	238.4	4.3%
Total production costs				184.5	173.7	198.7	203.3	214.5	210.4	60.5	43.8	-27.6%
Gross Value Added				14.9	45.9	49.6	50.4	52.4	50.3	207.3	214.2	3.3%
Operating Cash Flow				-4.0	27.0	31.0	31.1	30.8	29.3	165.3	191.2	15.7%
Earning before interest and tax				-6.3	24.5	28.9	29.1	28.7	27.4	163.4	189.4	15.9%
Net Profit				-6.3	30.2	30.8	29.4	29.2	28.1	163.9	190.0	15.9%

Source: EWG elaboration from Member States submissions to the Fish Processing data call 2025.

7.2.4 Trends, drivers and outlook

With its 30 000 km², Belgium is a small country. Due to its central location and good logistics infrastructure, more than 200 million consumers can be reached within a radius of 500 km, providing a unique position on European level.

The Belgian fishing industry has evolved significantly in recent decades and is still in a state of flux. Belgium has only a small fishing fleet that has almost halved in the last twenty years. However, the landing volume could be mostly maintained by means of larger, more efficient vessels. Today, economic and social sustainability must go hand in glove with environmental

sustainability. Like the Belgian fishing industry, the Belgian fish processing industry is a part of agrifood and blue economy systems, which includes all economic activities related to the oceans, seas and coasts. Even though the Belgian fish processing sector is relatively small, at a local level it is of considerable economic importance. Moreover, the sector creates indirect local economic turnover and employment availability.

The year 2020 is recorded in history as 'The Year of Corona'. Besides the impact on public health, the corona crisis also had huge repercussions for daily life activities and on the economy. In Belgium, led to a reduction in total landings of fish by the professional Flemish Sea fishery. However, landings recovered after the difficult years of the COVID-19 crisis.

In 2022, apparent consumption was estimated at 22 kg per capita, a 1% increase compared with 2021. The most consumed species were salmon, shrimps, Alaska pollock and cod tuna (EUMOFA: EFM2024). Regular consumers, namely those who eat fishery and aquaculture products at least once a month, mainly belong to the age group 15-24 and over 55. People between 40 and 54 are less inclined to consume fish in Belgium (EUMOFA: EFM2024). This is different compared to the previous STECF report on fish processing (STECF 23-14), where now younger people consume fisheries and aquaculture derived products more often.

Fish processing companies, specialised in the catering industry saw a large drop in turnover, whereas itinerant traders (market vendors and door-to-door salespeople) prospered. Some wholesalers who also did fish processing tried to reinvigorate their business by tapping into other sales markets (e.g. direct sales via web portals, prospecting for new target groups) and/or extensive restructuring of their company. From the start of the pandemic, there was an exponential increase in the takeaway segment. Because of the increasing prices in the catering industry, due to for example rising energy costs, a rapid reversal of this trend is not expected.

Despite the obstacles that the fish processing sector had to overcome in 2020 and 2021, the fish processing enterprises have kept moving forward during the crisis. Planned investments in machinery and buildings were not postponed. Importantly, the fish processing sector remained focused on innovation and sustainability. Taken together, it appears that innovation driven by the crisis has resulted in severely reduced costs of production and resulting in a profitable sector.

7.2.5 Data coverage and quality

The identification of genuine fish processing enterprise in Belgium remains a continuous challenge. On a regular basis (i.e. with every Work Program cycle, the year of the STECF data call) the list of existing, potential new and liquidated companies is reviewed in detail in order to eliminate enterprises which do not fit the definition of fish processing enterprise and to identify enterprises that may have stopped business. Error checks will focus on the enterprises for which mainly data is collected via financial statements and balance accounts, and by questionnaires. Questionnaires are refined and rebalanced every data call year in order to avoid double data collection and to improve data density and quality.

The sources for the collection of data consist of:

- The Federal Agency for the Safety of the Food Chain (FASFC)
- FPS Economy, S.M.E.s, Self-employed and Energy (Federal Government)
- Balance accounts, National Bank of Belgium
- Questionnaire

There are full, shortened and micro balance sheet types, depending on the number of employees and turnover of the enterprises. Importantly, depending on the type of balance sheet more variables need to be estimated or collected via questionnaires. When data is missing, the

mean per category is calculated in the sample and imputed to estimate totals. For the calculation of turnover Belgium used an improved estimation method, i.e., the use of gross margin as a proxy for turnover. Although all main and non-main fish processing enterprises receive a questionnaire (matched to their type of balance sheet), the response rates are extremely low, despite of calling enterprises several times during the collection year. Census data collection is in place, but data issues remain due to the low response rates. No estimation can be made of unpaid workers or the cost linked to unpaid work. In addition, no estimation can be made of energy cost due to changes in data collection since 2016 and low response rates of enterprises. Among the responding enterprises, none answer the question related to energy costs. Similarly, it proves difficult to gather reliable information on raw materials as only few enterprises responded to questions related to raw material use, sources and value. Too little information to report and to form a reliable conclusion. Belgium will continue to put energy, time and effort to improve questionnaire responses in order to fill in missing variables and improve the data quality of variables that are reported.

7.3 Bulgaria

7.3.1 Overview

The Bulgarian processing sector shows a slight decline in 2023, as the number of registered enterprises decreased to 66. In 2023, the number of enterprises increased by 2% compared to 2022 but decreased by 6% compared to 2021. All enterprises are processing fish as their main activity. Based on the number of employees, the units from the Bulgarian fish processing sector are in the three categories – less than 10 employees, 11-49 employees and 50-249 employees. For the period 2008-2023, there were no enterprises with more than 250 employees.

The total number of employees in 2023 decreased by 2% compared to 2022 and 7% compared to 2021. Compared to the period 2013-2022 the total number of employees in 2023 increased by 16%. In 2023, FTEs increased by 5% compared to 2022 and 10% compared to 2021, which in general shows that even with the decline compared to 2021 the processing sector in the country kept some of the workers. The average wage in 2023 reached EUR 8.1 thousand and, compared to 2022 and 2021, it increased by 4% and by 30% respectively. The wages during the 2019-2021 period were almost stable compared to the period 2013-2018 and following the rising inflation trend since COVID-19, the average wage in 2023 increased by 54% compared to the period 2013-2022.

In 2023, the turnover and total income respectively continued the growth from the recent years and compared to the period 2013-2022, the increase is almost twice as high as the average for the period. The structure of the costs remains the same for all years – the largest proportion is for the purchase of fish and other raw materials, followed by wages and salaries of staff and other operational costs.

Table 7.6 Overview, Bulgaria, 2013-2023

Variable	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Δ (2022-23)
Structure (number)												
Total enterprises	46	44	45	45	46	49	55	64	70	65	66	2%
≤ 10 employees	12	10	11	11	14	18	17	25	31	23	27	17%
11-49 employees	22	22	24	24	20	20	25	29	25	27	24	-11%
50-249 employees	12	12	10	10	12	11	13	10	14	15	15	0%
≥ 250 employees	0	0	0	0	0	0	0	0	0	0	0	-
Employment (number)												
Total employees	1,725	1,879	1,907	1,904	1,756	1,715	2,177	2,161	2,534	2,384	2,346	-2%
FTE	1,653	1,744	1,671	1,618	1,490	1,427	1,814	1,773	1,975	2,070	2,181	5%
Indicators												
Turnover (million €)	64	69	85	78	85	83	122	116	133	188	200	6%
FTE per enterprise	35.9	39.6	37.1	36.0	32.4	29.1	33.0	27.7	28.2	31.8	33.0	4%
Average wage (thousand €)	3.1	3.1	4.2	4.5	5.8	5.3	6.2	5.9	6.2	7.7	8.1	4%
Unpaid work (%)	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-

Source: EWG elaboration from Member States submissions to the Fish Processing data call 2025.

7.3.2 Economic performance

The total income of the Bulgarian fish processing industry increased slightly during the period 2013-2023. In general, for the whole period, 2008-2023 the situation is improving gradually except 2020 when a small decrease was observed. Before 2021 the highest peak of the total income was in 2019 – EUR 122.3 million and in 2021 reached EUR 133.4 million. The total income in 2023 increase by 6% compared to 2022 and by 50% compared to 2021.

Table 7.7 Economic performance indicators, Bulgaria, 2013-2023

Variable	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Δ(2022-23)
Income (million €)												
Turnover	64.4	68.7	85.3	78.1	85.0	82.9	122.3	115.8	133.4	187.6	199.6	6%
Other income	3.8	3.7	1.9	1.8	1.0	1.2	16.9	2.4	1.3	5.2	6.3	20%
Operating subsidies	0.9	0.6	3.2	0.0	0.0	0.0	0.3	0.8	0.5	1.2	1.4	23%
Total Income	69.1	73.0	90.4	79.9	86.1	84.1	139.5	119.0	135.3	193.9	207.3	7%
Expenditure (million €)												
Purchase of fish and other raw material for production	28.7	31.9	38.2	40.6	39.7	35.1	55.0	66.8	56.7	79.6	89.4	12%
Wages and salaries of staff	5.1	5.5	7.1	7.3	8.7	7.6	11.3	10.5	12.2	16.0	17.6	10%
Imputed value of unpaid labour	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Payment for external agency workers (optional)						0.0	0.0	0.2	0.0	0.1	0.0	-70%
Energy costs	1.6	1.4	1.4	1.3	1.1	1.3	2.0	1.9	2.7	5.5	3.3	-40%
Other operational costs	4.7	3.0	6.5	7.4	8.4	5.6	11.1	10.5	14.0	10.9	13.5	24%
Total production costs	40.2	41.9	53.2	56.6	57.9	49.7	79.4	89.9	85.7	112.0	123.8	10%
Capital Costs (million €)												
Depreciation of capital	5.4	5.0	6.0	5.6	8.4	8.3	6.0	5.2	6.4	5.9	5.7	-3%
Financial costs, net	0.9	1.0	0.8	0.8	-1.4	-2.6	-13.1	-13.9	-17.7	-4.5	-2.6	42%
Capital Value (million €)												
Total value of assets	28.5	31.4	38.0	34.5	29.3	35.0	47.7	59.9	54.3	55.9	62.7	12%
Net Investments	14.4	18.2	9.4	2.8	1.5	4.4	2.2	5.2	3.8	4.2	4.1	-2%
Subsidies on investments				0.9	0.4	0.9	0.6	1.1	0.8	1.1	0.8	-32%
Debt	5.6	5.6	9.8	12.2	9.0	20.0	23.0	29.3	27.1	27.0	18.9	-30%
Economic performance (million €)												
Gross Value Added	33.2	36.1	41.1	30.6	36.9	42.0	71.1	38.8	61.3	96.7	99.7	3%
Operating Cash Flow	28.9	31.2	37.2	23.3	28.2	34.4	60.1	29.1	49.6	81.9	83.6	2%
Earning before interest and tax	23.5	26.1	31.2	17.7	19.8	26.1	54.1	23.9	43.1	76.0	77.9	2%
Net Profit	22.6	25.2	30.4	16.8	21.2	28.8	67.2	37.8	60.9	80.5	80.5	0%
Productivity and performance Indicators												
Labour productivity (thousand €)	20.1	20.7	24.6	18.9	24.7	29.4	39.2	21.9	31.0	46.7	45.7	-2%
Capital productivity (%)	116.5	114.9	108.2	88.8	125.7	119.9	148.9	64.9	112.7	173.0	159.1	
GVA margin (%)	48.7	49.8	47.1	38.3	42.8	49.9	51.1	32.9	45.5	50.2	48.4	
EBIT margin (%)	34.0	35.8	34.5	22.1	23.0	31.1	38.8	20.1	31.9	39.2	37.6	
Net profit margin (%)	32.7	34.4	33.6	21.1	24.6	34.2	48.2	31.8	45.0	41.5	38.8	
Return on Investment (%)	82.4	83.3	82.0	51.2	67.5	74.6	113.4	39.9	79.4	136.0	124.3	
Financial position (%)	80.5	82.0	74.3	64.7	69.4	42.9	51.8	51.1	50.1	51.6	69.8	

Source: EWG elaboration from Member States submissions to the Fish Processing data call 2025.

Compared to the average for the 2013-2022 period increased by 95%. The main part of the Total income is the Turnover - approximately 96%. The Other income also increased in 2023

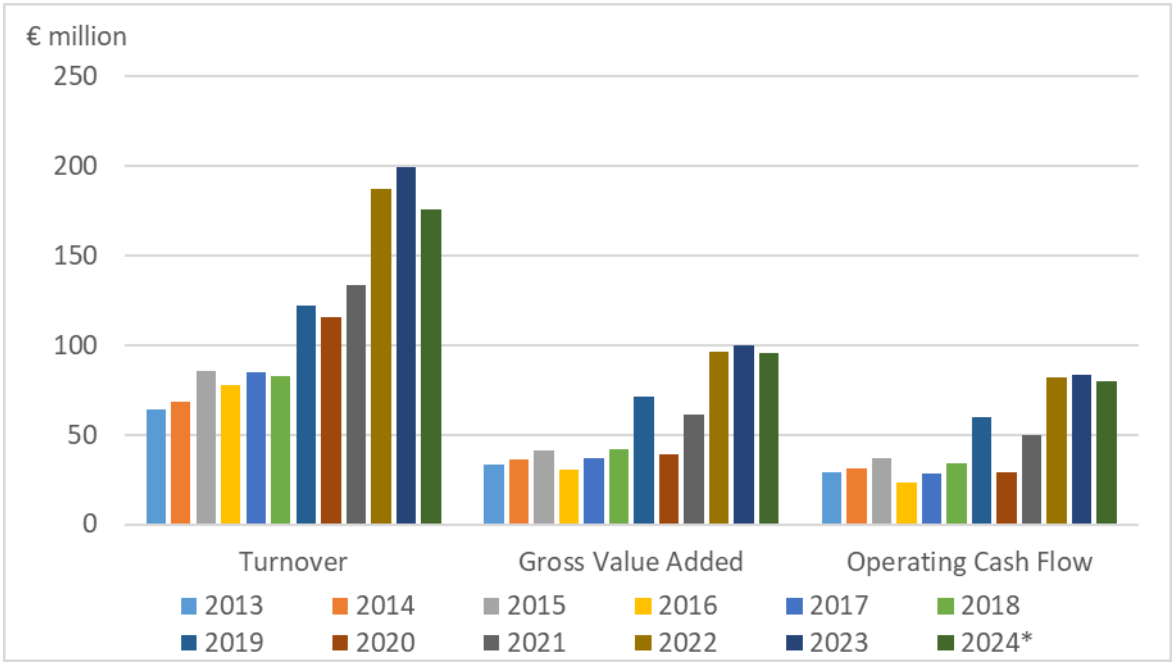
with the value of EUR 6.3 million. The value of “other income” increased not only to the last year but also to 2021. Regarding the subsidies, the value for 2023 reached EUR 1.4 million, 23% higher than 2022 and almost three times higher than 2021.

The total production costs were growing in proportion to income. Compared to 2022, the total costs in 2023 were EUR 123.8 million, which is 11% more than the value. In 2023, total production costs increased by 44% compared to 2021 and by 66% compared to the average for the 2013-2022 period. The largest contributor to the costs is the purchase of fish and other raw materials for production – it is around 72% for last five years. The wages and salaries of staff represent approximately 14% of the costs in 2023, while the other operational costs were 11%. From all the costs that form the total production costs, the energy costs were the most stable during the 2013-2020 period. After a slight increase in 2021, there was a significant increase in 2022 when the increase was 100% compared to 2021, and in 2023 dropped. Compared to 2022 the energy costs decreased by 40% in 2023 but increased by 62% compared to the average for the 2013-2022 period. The value of unpaid labour is very negligible for the whole period. The largest value of this indicator was EUR 11.5 thousand for the whole sector in 2013. It is gradually decreasing and in 2018, 2019 and 2022 was 0, because there was no unpaid labour, while in 2023 is EUR 6 thousand.

The depreciation of the capital formed the capital costs in the last seven years. In 2023, it decreased by 3% from 2022 and by 12% from 2021. The comparison of 2023 to the average for the period 2013-2022 shows a decrease by 9%.

In 2023, the total value of assets increased by 12% compared to 2022 and reached EUR 62.7 million. Compared to the period 2013-2022 in 2023 increase by 51%.

Figure 7.3 Turnover, GVA and Operating cash flow evolution, Bulgaria, 2013-2024



Source: EWG elaboration from Member States submissions to the Fish Processing data call 2025. *2024= real data provided by experts during EWG

The economic performance has also shown an improvement during the last three years. The Gross Value Added is increasing each year except in 2020 and in 2023 increased by 3% compared to 2022 and by 104% compared to the period 2013-2022. A similar situation is

observed with the operating cash flow and earnings before interest and tax. In 2023, the net profit was almost the same as in 2022 but increased by 32% compared to 2021 and by 106% compared to the average for the 2013-2022 period.

The labour productivity is declining by 2% and the capital productivity is also decreasing in 2023 compared to 2022. The GVA margin and the EBIT margin also decreased slightly in the last year, but the performance indicators following the general improvement compared to the 2020-2021 period which indicates profitability from the enterprises and a continuation of the positive trend over the period analysed. The net profit margin decreased in the last two years while ROI increased during the same period.

7.3.3 Breakdown by company size

The structure of the Bulgarian processing sector is consistent over the period 2013-2023. The number of enterprises varied between 44 and 70. There are no enterprises with more than 250 employees. From the other three categories, the largest (41%) is the size category with less than 10 employees. The fish processing units with 11-49 employees and between 50-249 employees represent 36% and 23%, respectively. The main differences in the economic variables during the years are due to the movement of enterprises from one category to another based on staff reduction or new hiring of employees. This is one of the reasons for the increase in the number of enterprises with less than 10 employees, compensated by the decreased number of units in the category with 11-49 employees.

In all size categories, the distribution of the turnover, other income, and subsidies in the total income is similar to that of the whole processing sector. The largest part of the income in the last three years was generated by the turnover, more than 90%.

Regarding the distribution of the total costs – the main costs were for the purchase of fish and other raw materials for production and for the size category with 50-249 employees, the costs for wages and salaries of staff were 19%.

In the last three years, the economic performance of the size category with 50-249 employees can be described as fluctuating while in the size category with less than 10 employees a gradual improvement is observed for the same period. The situation for the category with 11-49 employees is different, and in the last three years, the economic performance has been deteriorating. In 2023, the situation for the size category with less than 10 employees showed significant improvement, with total income reaching EUR 39 million, 85% more than in 2022. The gross value added in 2023 was three times higher than in 2022 while net profit for this size category was increased four times. The general improvement of the segment in 2023 was also helped by the reduction of production costs by 71% compared to 2022.

Even though the economic performance of the size category with 50-249 employees fluctuated in the recent years, there is a significant improvement in the period analysed to due to the increase of the total income and net profit, which explains overall profitability.

In 2022, the enterprises with 50-249 employees reached the highest peak in terms of profitability with a total income of EUR 106.5 million. The segment was unsuccessful during the period 2015-2020, but there was a significant improvement in 2021 and 2022. The total income reached EUR 90.1 million in 2023, which was a 15% decrease compared to 2022 but increased by 35% than in 2021 and by 78% compared to the average for the 2013-2022 period. A similar trend was observed for GVA and net profit.

Table 7.8 Economic performance by company size, Bulgaria, 2013-2023

Variable	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Δ (2022-23)
less than or equal to 10 employees												
Total Income	5.4	5.8	16.6	17.0	3.8	19.6	16.5	16.8	12.4	21.0	39.0	85%
Total production costs	2.0	2.7	11.1	12.2	8.2	10.6	11.3	11.0	3.7	13.6	3.9	-71%
Gross Value Added	3.6	3.3	5.9	5.2	-4.2	9.2	5.7	6.3	9.2	8.9	35.8	303%
Operating Cash Flow	3.8	3.4	5.5	4.8	-4.4	8.9	5.2	5.8	8.7	7.5	35.1	371%
Earning before interest and tax	3.3	2.8	4.9	4.7	-4.5	8.9	4.8	4.7	6.5	6.4	34.5	441%
Net Profit	3.1	2.4	4.8	4.6	-4.2	8.9	4.4	4.8	6.4	6.4	34.4	440%
between 11 and 49 employees												
Total Income	19.1	23.5	38.0	31.0	35.7	28.7	62.4	67.1	56.1	66.4	78.3	18%
Total production costs	16.4	18.6	22.7	26.4	25.4	17.5	39.5	48.2	35.3	51.0	61.4	20%
Gross Value Added	4.1	6.6	17.6	7.0	12.7	13.9	27.8	23.4	24.8	19.4	22.0	14%
Operating Cash Flow	2.9	5.0	15.6	4.5	10.3	11.2	22.9	18.7	20.8	15.4	16.9	9%
Earning before interest and tax	2.0	2.1	12.1	1.3	5.5	6.6	19.3	16.4	18.9	13.3	14.7	11%
Net Profit	1.9	2.0	11.4	1.4	5.6	7.8	30.7	28.2	18.6	14.3	14.8	3%
between 50 and 249 employees												
Total Income	44.6	43.7	35.8	31.9	46.6	35.9	60.5	35.1	66.8	106.5	90.1	-15.4%
Total production costs	21.8	20.5	19.4	18.0	24.3	21.6	28.5	30.4	46.7	47.4	58.5	23.4%
Gross Value Added	26.3	26.7	20.7	18.4	28.4	18.9	37.6	9.1	27.3	68.4	41.9	-38.8%
Operating Cash Flow	23.0	23.3	19.3	13.9	22.4	14.2	32.0	4.6	20.1	59.0	31.6	-46.5%
Earning before interest and tax	19.0	21.8	17.4	11.7	18.7	10.7	30.0	2.7	17.8	56.4	28.6	-49.2%
Net Profit	18.5	21.3	17.3	10.8	19.8	12.2	32.1	4.8	35.8	59.8	31.2	-47.8%

Source: EWG elaboration from Member States submissions to the Fish Processing data call 2025.

7.3.4 Raw materials

In regard to the raw materials, the processing enterprises can be separated into 7 general types: units which are using as raw material fish caught from the Black sea (sprat and other small pelagic fish); units processing crustacean; units processing molluscs; units processing fish from aquaculture farms in Bulgaria (mainly rainbow trout, carp, catfish); processing enterprises for black caviar and enterprises for fisheries delicacies, enterprises producing canned fish.

The National Statistical Institute collects detailed data regarding the import and export of fishery products in the country, which is publicly available in the Annual agricultural report. Based on the data provided in the document, in 2023, totally 40,402 tonnes of fish and fish products were imported into the country, 8.6% more than the previous year.

The imported fish products in 2023 were mainly frozen fish where the group frozen fish without fillets decreased by 17.1% compared to 2022. A serious increase on an annual basis was observed in the import of live fish - freshwater and saltwater - by nearly 17%, fish - dried, salted, smoked - by about 10%, and molluscs – by 5%. Approximately 68% of all imported fish and fish products in 2023 were from EU Member States.

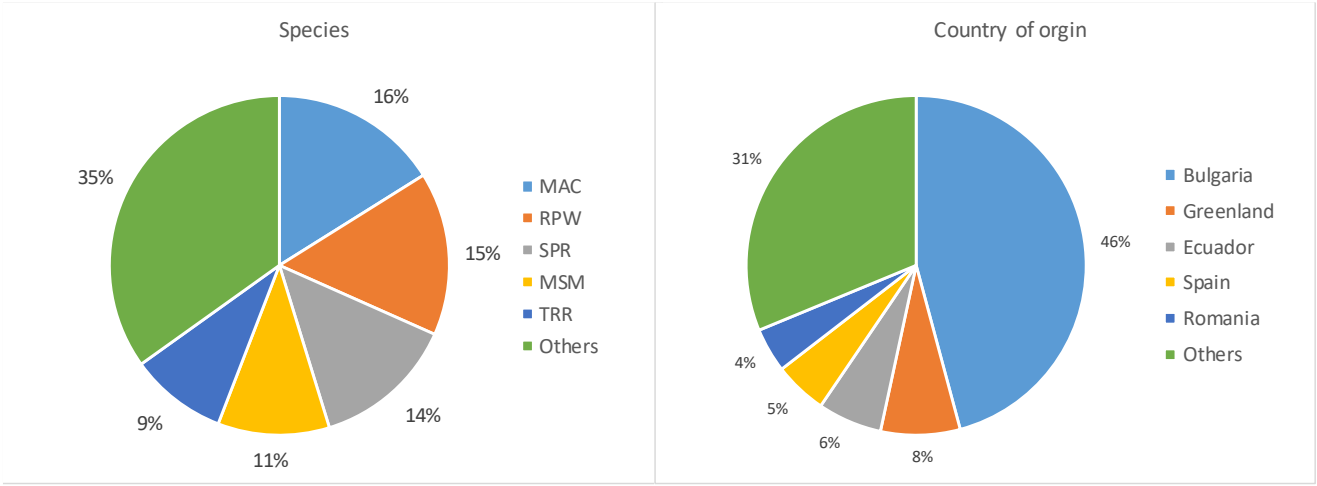
The total exports of fish, other aquatic organisms and fish products in 2023 amounted to 14 650 tonnes – 1.9% decrease compared to 2022. The decrease was mainly due to a decline in the export of prepared foods and canned fish (by 25.8%), salted and dried fish (by 23.8%), and canned crustaceans and molluscs (by 8.4%).

2023 was the third year for which Bulgaria reported the detailed data on raw materials. The information was collected during the same survey for collection of economic variables, which is covering all enterprises. The received information is still extremely heterogeneous, although there is a table in the questionnaire with the fields to be filled in, in some cases the provided table by the processors was more than 3 pages and the level of details was very disaggregated. It terms of the quantities and species there were no problems. The data reported for the origin also improved, the processors managed to report if the imported fish is from aquaculture or from fisheries.

In total 56 species were reported for 2023, without unknown fish. The category of other fish is forming less than 1% of the total reported raw material. The top 5 species are forming 65% of the raw materials. The highest reported value is for the MAC (16% of the raw material), followed by RPW and SPR (15% and 14% respectively), MSM (11%) and TRR (9%). While the majority of processed RPW and SPR are from Bulgarian fisheries, the TRR and MSM are from Bulgarian aquaculture and MAC is only from import.

In regard to the origin, 36 categories were reported for 2023. Only 4% of the raw materials were with no info for the origin. 33% of the processed fish was from Bulgarian fisheries and aquaculture, followed by 6% from Greenland, 4% from Ecuador, 4% from Spain and 3% from Romania. Regarding the production environment, the Bulgarian fish processing industry use 78% raw materials from fisheries and 22% from aquaculture.

Figure 7.4 Origin of raw materials regarding the production environment and the country of origin, Bulgaria, 2023



Source: EWG elaboration from Member States submissions to the Fish Processing data call 2025.

7.3.5 Trends, drivers and outlook

A general comment on the trends in Bulgarian fish processing industry could be the aspect of passing the stabilization period and increase of the production limits (as volume and value) in the last three years. Even though, the number of enterprises decreased in the last year the profitability remained stable.

Definitely, the support provided by the Operational program for 2021-2027 period under EMFAF plays a significant role for the positive influence on the sector. This is also visible from the increase in the generated turnover by the fish processing industry in Bulgaria.

Priority “Promoting sustainable aquaculture activities, processing and marketing of fishery and aquaculture products” under the EMFAF Operational program provides opportunities for building new and modernizing existing enterprises for processing fishery and aquaculture products.

The number of enterprises during 2023 decreased compared to 2021 but remain stable compared to 2022 and 2019. If there is any change, it is expected to be in favour of sustainability or increasing their number due to the opportunities provided by the new EMFAF. Regarding the size categories, it is not expected that there will be enterprises with more than 250 employees because even in the sector between 50 and 249 employees the average FTEs per firm in last three years is 97.

Between 2023 and 2024, the sector showed a moderate decline across key economic indicators. Turnover decreased by around 12% to EUR 175.8 million, while gross value added and operating cash flow fell by 4% and 5% respectively, reaching EUR 95.3 million and EUR 79.9 million. These results suggest a slowdown in economic performance after the strong growth observed in 2022–2023, possibly reflecting market adjustments and cost pressures within the sector.

The imported fish and fish products in 2024 amounted to 39 306 tonnes and marked a decline of 2.7% compared to 2023. In 2024, the total exports of fish, other aquatic organisms and fishery products decreased by 10% compared to 2023. In the first half of 2025, the total exports of fish, aquatic organisms and processed fishery products decreased by another 7% compared to the same period in 2024. The decrease in both imported and exported seafood in 2024 is definitely a sign of a decline in the turnover, which cannot be compensated by the domestic production from fisheries and aquaculture.

The interest in catching and processing rapa whelk and baby clam is increasing and remains strong. While rapa whelk consumption is relatively popular in Bulgaria, the consumption of baby clam is insignificant and both species are of interest mainly because of the possibility of exporting. The increase in the total income together with the GVA and EBIT margins indicates a positive trend for the future improvement of the situation in the whole sector. The consumption of fish and seafood per capita is still very low (7 kg for 2024) compared to the average fish consumption in the other member states. The processors are seeking to expand the variability of mid- and high-value products on the local and export markets.

7.3.6 Data coverage and quality

The data were collected through the annual socio-economic survey using questionnaires, and the Bulgarian data collection scheme follows a full Census approach. All mandatory variables and required datasets were collected and provided by Bulgaria. The 2024 data represent actual figures, not estimations. In terms of data coverage and quality, no issues were identified.

7.4 Croatia

7.4.1 Overview

The fish processing industry in Croatia is primarily based on small pelagic species, particularly sardine and anchovy, which together account for approximately 70% of processed products. This dominance reflects their leading share in the total landings from marine capture fisheries, representing nearly 90% of all landed fish and other marine organisms.

The fish processing industry in Croatia is characterised by the fact that only a limited number of companies are primarily engaged in fish processing, producing a limited range of processed products. Other companies are involved in multiple activities, both related and unrelated to fisheries, as a strategy to remain competitive and less dependent on the availability of raw materials. These activities include aquaculture, capture fisheries, trade and distribution, as well as the processing of other food products.

In 2023, 35 companies operated in fish processing as their main economic activity, compared to 36 companies in 2022. Majority of companies in both years (75% in 2022 and 77% in 2023) fell within the 1–10 and 50–249 employee-size segments, representing 30% and 37%, and 44% and 40% of the total number of companies, respectively.

The total number of employees decreased from 2,698 in 2022 to 2,547 in 2023, representing a 6% reduction in total employment and a 3% decrease in FTE, from 2,171 to 2,099, respectively.

The number of FTE per enterprise was 60.3 in 2022 and 60.0 in 2023, showing an increase compared to 57.1 in 2021. The average annual wage per FTE increased from EUR 16.8 thousand in 2022 to EUR 18.5 thousand in 2023, representing a 10% increase. Labour productivity was EUR 31.1 thousand in 2022 and EUR 39.4 thousand in 2023, representing a 27% increase.

The reported value of unpaid labour in the Croatian fish processing industry is considered negligible. In the period from 2013 to 2023, it was estimated at 0–0.1% of the total wages and salaries paid, as none of the surveyed enterprises indicated that any employees were engaged on a voluntary basis. Nevertheless, given the predominantly family-based structure of small enterprises within the sector, a certain share of unpaid labour may be presumed to remain unreported.

The Croatian fish processing industry in 2022 and 2023 was affected by several external and internal factors that influenced its key economic indicators. These include global shocks in energy and raw material markets, the war in Ukraine and the associated disruptions in supply chains, inflation and rising labour costs, market conditions including exports, consumption and tourism, as well as sector-specific structural challenges. These factors led to a substantial increase in expenditures, particularly for raw materials, energy, other operational costs, and labour, but also prompted the implementation of financial support mechanisms at both EU and national levels, which helped to mitigate some of the economic pressures.

Table 7.9 Overview, Croatia, 2013-2023

Variable	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Δ (2022-23)
Structure (number)												
Total enterprises	37	38	35	31	34	32	34	34	33	36	35	-3%
≤10 employees	20	20	18	11	12	9	10	11	9	11	13	18%
11-49 employees	4	6	3	5	6	5	7	8	8	8	6	-25%
50-249 employees	10	11	13	15	16	18	17	14	14	16	14	-13%
≥250 employees	3	1	1					1	2	1	2	100%
Employment (number)												
Total employees	1,953	1,815	1,800	2,031	2,186	2,219	2,239	2,250	2,229	2,698	2,547	-6%
FTE	1,572	1,819	1,466	1,618	1,838	1,494	1,615	1,712	1,885	2,171	2,099	-3%
Indicators												
Turnover (million €)	58	72	76	82	92	95	116	133	139	157	169	8%
FTE per enterprise	42.5	47.9	41.9	52.2	54.1	46.7	47.5	50.4	57.1	60.3	60.0	-1%
Average wage (thousand €)	8.2	9.0	10.7	11.0	10.5	14.4	15.2	17.5	16.3	16.8	18.5	10%
Unpaid work (%)	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0%
Enterprises doing fish processing not as main activity												
Number of entreprises	21	21	24					25	28	18	23	28%
Turnover attributed to fish processing (million €)	11.5	18.6	20.3					24.9	23.9	28.6	30.3	6%

Source: EWG elaboration from Member States submissions to the Fish Processing data call 2025.

7.4.2 Economic performance

The shares of turnover, other income, and operating subsidies in total income were 49.5%, 49.5%, and 1.0% in 2022, and 49.0%, 48.5%, and 2.5% in 2023, respectively. Compared with 2022, turnover, other income and operating subsidies increased by 8%, 8% and 135% in 2023, while compared with 2021, the increases were even more pronounced, at 22%, 64% and 149%, respectively.

The higher turnover observed in 2022 and 2023 may be associated with an increase in national consumption of fishery and aquaculture products, higher exports of processed goods, and greater consumption by foreign tourists. According to a national study[5], the apparent consumption of fishery and aquaculture products in Croatia rose from 22.90 kg live weight per capita in 2021 to 24.36 kg per capita in 2022, before declining to 22.96 kg per capita in 2023. As a tourist country, Croatia experienced a strong recovery of the tourism sector in 2022 and 2023 following the COVID-19 pandemic, which likely contributed to higher domestic demand for processed aquatic products.

The share of processed aquatic products in the net supply also rose from 50% in 2021 to 67% in 2023, with canned fish showing a notable increase from 9% of the total net supply in 2021 to 21% in 2023. In addition, exports of processed products increased by 2% in 2023 compared with 2021.

The sharp rise in operating subsidies reflects a number of measures adopted by the Government to alleviate the negative effects of global and domestic challenges on the national agriculture sector, including fish processing within the fisheries and aquaculture sector. These measures included national subsidies and other support mechanisms. Furthermore, significantly higher payments were provided for processing-related subsidies within EMFAF.

Total production cost increased by 4% in 2023 compared with 2022, which amounts to EUR 11.2 million, or by 40% compared with 2021, amounting to EUR 83.5 million.

[5] https://podaci.ribarstvo.hr/statisticki-podaci/statisticki-podaci-o-ribarstvu-i-akvakulturi/dostupnost-i-vidljiva-potrosnja-proizvoda-ribarstva-i-akvakulture/

Table 7.10 Overview, Economic performance indicators, Croatia, 2013-2023

Variable	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Δ (2022-23)
Income (million €)												
Turnover	58.1	71.7	75.9	82.4	91.5	95.2	116.5	132.7	139.0	157.1	169.3	8%
Other income	21.5	29.5	35.2	35.4	42.9	44.7	45.5	89.3	102.5	156.6	168.5	8%
Operating subsidies	4.2	2.0	3.8	2.6	1.3	0.7	1.1	2.2	3.6	3.8	9.1	135%
Total Income	83.8	103.2	114.9	120.4	135.7	140.5	163.1	224.1	245.2	317.5	346.8	9%
Expenditure (million €)												
Purchase of fish and other raw material for production	28.6	43.7	42.4	48.0	52.9	42.2	48.6	76.6	81.7	100.4	136.3	36%
Wages and salaries of staff	12.8	16.4	15.7	17.9	19.3	21.5	24.5	29.9	30.7	36.5	38.7	6%
Imputed value of unpaid labour	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Payment for external agency workers (optional)												
Energy costs	3.9	3.7	3.9	4.1	4.9	5.1	5.4	7.1	8.7	10.9	10.4	-4%
Other operational costs	25.6	28.2	14.4	28.4	37.8	54.4	60.0	79.6	89.2	134.9	108.4	-20%
Total production costs	71.0	92.1	76.4	98.4	114.9	123.3	138.4	193.1	210.4	282.7	293.9	4%
Capital Costs (million €)												
Depreciation of capital	4.3	5.3	4.8	6.8	8.8	8.3	9.4	13.6	14.5	12.4	13.6	9%
Financial costs, net	3.4	3.0	0.7	0.4	0.5	1.2	1.5	0.8	1.2	0.9	1.1	22%
Capital Value (million €)												
Total value of assets	138.9	148.4	129.4	127.2	164.8	183.0	184.5	253.4	254.4	263.9	264.7	0%
Net Investments	24.9	5.8	2.1	10.9	16.0	11.7	2.7	12.8	13.2	9.9	1.8	-82%
Subsidies on investments				0.5	1.9	1.2	0.9	3.2	2.1	1.4	1.5	10%
Debt	114.1	111.6	74.9	66.8	80.1	101.2	100.7	130.9	136.7	135.5	118.8	-12%
Economic performance (million €)												
Gross Value Added	21.5	25.6	50.4	37.3	38.8	38.1	48.0	58.8	61.9	67.5	82.7	23%
Operating Cash Flow	12.9	11.1	38.5	22.1	20.8	17.3	24.6	31.0	34.8	34.9	53.0	52%
Earning before interest and tax	8.6	5.8	33.7	15.2	12.0	9.0	15.2	17.4	20.3	22.4	39.4	76%
Net Profit	5.2	2.8	33.0	14.9	11.5	7.8	13.6	16.6	19.1	21.5	38.3	78%
Productivity and performance Indicators												
Labour productivity (thousand €)	13.6	14.1	34.4	23.0	21.1	25.5	29.7	34.3	32.8	31.1	39.4	27%
Capital productivity (%)	15.4	17.2	39.0	29.3	23.5	20.8	26.0	23.2	24.3	25.6	31.2	
GVA margin (%)	27.0	25.2	45.4	31.7	28.8	27.2	29.7	26.5	25.6	21.5	24.5	
EBIT margin (%)	10.2	5.6	29.3	12.7	8.8	6.4	9.3	7.8	8.3	7.1	11.4	
Net profit margin (%)	6.2	2.7	28.7	12.3	8.5	5.5	8.4	7.4	7.8	6.8	11.0	
Return on Investment (%)	6.2	3.9	26.0	12.0	7.3	4.9	8.2	6.9	8.0	8.5	14.9	
Financial position (%)	17.9	24.8	42.1	47.5	51.4	44.7	45.4	48.4	46.3	48.7	55.1	

Source: EWG elaboration from Member States submissions to the Fish Processing data call 2025.

The most significant cost components in 2022 and 2023 were the purchase of fish and other raw materials and other operational costs, which accounted for 35.5% and 48.0% of total costs in 2022, and 46.5% and 37.0% in 2023, respectively. The cost of purchasing fish and other raw materials increased by 36% from 2022 to 2023, while other operational costs decreased by 20%. Compared with 2021, these costs rose by 67% and 21%, respectively. Wage costs rose by 6% in 2023 compared to 2022, and by 26% compared to 2021. Energy costs represented 4% and 3.5% of total production costs in 2022 and 2023, respectively, showing a decrease of

4%. However, compared with 2021, energy costs increased by 19%. These decrease of energy costs in 2023 is probably the results of interventions by the Government in which Regulation on the removing of disturbance in the domestic energy market prescribed special and temporary measures to mitigate the disturbances on the energy market.

The rise in the costs of fish and other raw materials was directly attributable to global shocks in energy and raw material markets and the war in Ukraine, causing disruptions in supply chains. The increase in food and raw material prices was associated with disruptions in global supply chains as well as higher transport and energy costs. Increased energy costs indirectly affected the sector through higher raw material costs and energy intensive services such as freezing and logistics.

Additionally, inflation may have had a significant role in the higher total production costs, as inflation in Croatia in 2022 and 2023 was high according to estimates. For example, the Harmonised Index of Consumer Prices (HICP) inflation rate in 2022 exceeded 10%, the highest in recent decades[6], while in 2023 it declined but remained relatively high at 8.4%[7]. This directly influenced labour costs, energy, and raw material expenditures. This combined effect also possibly influenced net investments, which decreased by 82% from 2022 to 2023, and by 87% compared with 2021.

Furthermore, the Croatian fish processing industry is highly dependent on small pelagic fish landings from marine capture fisheries and is therefore particularly sensitive to fluctuations in their availability, volume, and price. Landings of small pelagic species decreased by 12% in 2022 and by 23.5% in 2023 compared with 2020, and by 11% in 2023 relative to 2021. Conversely, a 2.5% increase in 2022 compared with 2021 illustrates the interannual variability in landing volumes. Such fluctuations exert additional pressure on raw material supply stability and the continuity of processing operations, further constraining the industry's capacity planning and profitability.

Gross Value Added (GVA) increased by 23% in 2023 compared to 2022, reaching EUR 82.7 million, and by 34% compared to 2021. Debt also declined by 12% in 2023 relative to 2022, amounting to EUR 118.8 million. Subsidies on investments increased by 10% compared with 2022, reaching EUR 1.5 million.

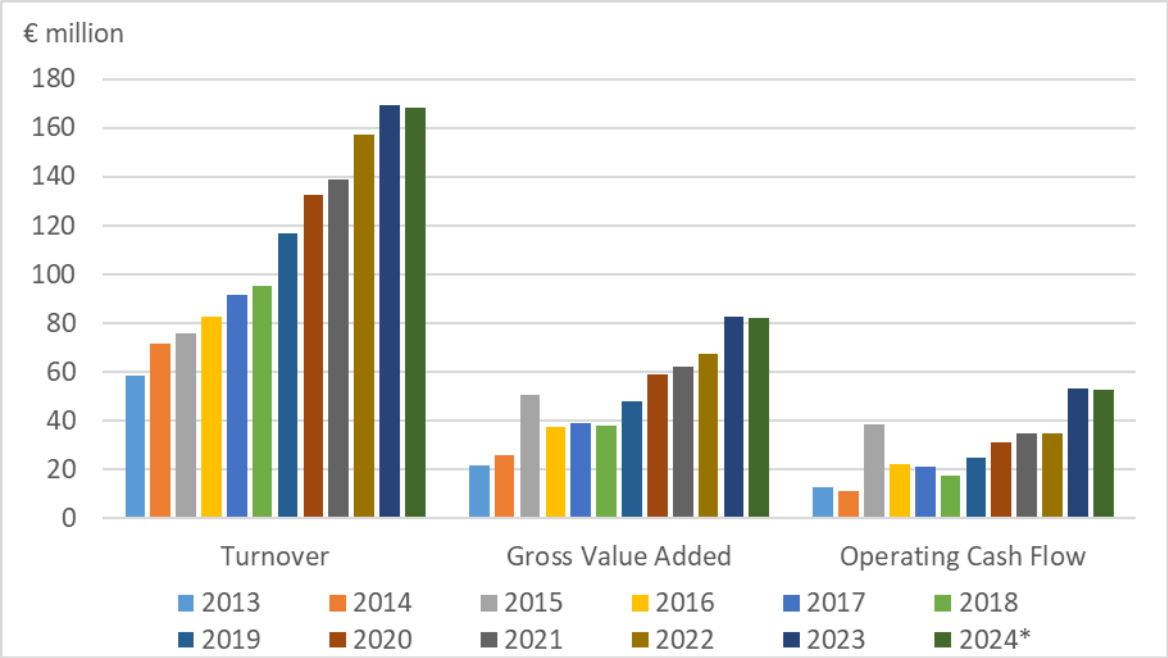
Other indicators of economic performance continued to show a positive trend, in line with previous reporting years. Earnings before interest and taxes (EBIT) increased by 76% in 2023 compared with 2022, net profit rose by 78%, and operating cash flow increased by 52%. The total value of assets remained unchanged between 2022 and 2023, however, compared with 2021, it increased by 4%.

The 2024 nowcast for the Croatian fish processing industry was developed using production, export, and import data obtained from Eurostat's PRODCOM database. These data served as the basis for estimating key economic indicators, including turnover, gross value added (GVA), and operating cash flow. For 2024, the model projects a slight decline in turnover, GVA, and operating cash flow compared with 2023. However, given the strong growth observed in 2023, a decrease in economic performance indicators in not expected in 2024.

[6]https://economy-finance.ec.europa.eu/document/download/ca39aba8-9b5d-4c6c-b3d0-6bf365a6ec47_en?filename=HR_SWD_2023_611_en.pdf

[7]https://economy-finance.ec.europa.eu/document/download/0aa0e1a7-e869-483b-b9b1-513d7df3040e_en?filename=SWD_2024_611_1_EN_Croatia.pdf

Figure 7.5 Turnover, GVA and Operating cash flow evolution, Croatia, 2013-2024



Source: EWG elaboration from Member States submissions to the Fish Processing data call 2025. *2024= nowcasted data

7.4.3 Breakdown by company size

The Croatian fish processing industry in 2022 and 2023 was comprised of four employee-size segments, namely less than or equal to 10, between 11–49, between 50–249, and greater than or equal to 250 employees. In 2022, the largest share of companies belonged to the 50–249 segment (16 companies), whereas in 2023 the majority were in the less than or equal to 10 employees' segment (13 companies).

The ≤10 employees segment shows signs of recovery from previously observed stagnation. However, it remains the most vulnerable part of the fish processing industry, particularly in terms of exposure to market and economic shocks. The number of companies in this segment increased from 11 in 2022 to 13 in 2023, representing a 44% increase compared with 2021. Several economic indicators exhibited a positive trend in 2023 relative to 2022, including total income (+33%), net profit (+1,271%), and GVA (+130%). When compared with 2021, these improvements are even more pronounced.

The 11–49 employees segment consisted of eight companies in 2022 but declined to six in 2023. Despite the decrease in the number of companies, multiple economic indicators displayed positive growth, including GVA (+17%), earnings before interest and tax (EBIT, +65%), and net profit (+76%) in 2023 compared with 2022. However, total income decreased by 13% in 2023 compared with the previous year.

The 50–249 employees segment remains the most important in the Croatian fish processing industry in terms of turnover and the number of employees. In 2023, GVA increased by 7% compared with 2022, EBIT rose by 59.5%, and net profit by 60.3%, confirming the continued economic strength and central role of this segment within the industry.

The number of companies in the ≥250 segment continues to fluctuate between one and two companies. In 2023, GVA increased by 92.4% compared to 2022, EBIT 124.6%, net profit by 118.2% and total income by 84.5%.

Table 7.11 Economic performance by company size, Croatia, 2013-2023

Variable	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Δ(2022-23)
less than or equal to 10 employees												
Total Income	5.5	9.5	15.5	3.6	4.7	3.3	3.1	1.4	1.1	2.0	2.7	33%
Total production costs	5.4	8.7	10.4	2.6	3.2	2.9	2.9	1.6	1.0	1.7	1.6	-4%
Gross Value Added	0.8	1.5	5.9	1.5	2.0	0.6	0.4	-0.1	0.2	0.6	1.4	130%
Operating Cash Flow	0.1	0.8	5.2	1.1	1.5	0.4	0.2	-0.2	0.1	0.3	1.1	210%
Earning before interest and tax	-0.4	0.4	4.9	0.9	1.3	0.3	0.1	-0.3	0.0	0.3	0.9	246%
Net Profit	-0.6	0.3	4.7	1.0	1.2	0.3	0.1	-0.3	0.0	0.1	0.7	1271%
between 11 and 49 employees												
Total Income	4.1	11.0	1.9	2.9	4.6	5.5	8.0	13.9	11.1	18.8	16.3	-13%
Total production costs	3.0	6.7	1.5	2.8	4.3	4.9	7.1	11.7	8.6	16.1	12.7	-22%
Gross Value Added	1.4	5.5	0.9	0.6	1.1	1.6	2.8	4.1	3.7	4.5	5.3	17%
Operating Cash Flow	1.1	4.3	0.4	0.0	0.2	0.6	0.9	2.2	2.5	2.6	3.6	38%
Earning before interest and tax	1.0	4.1	0.4	-0.0	-0.0	0.1	0.0	1.3	1.8	1.6	2.6	65%
Net Profit	0.9	4.0	0.4	-0.1	0.0	0.1	-0.0	1.1	1.6	1.4	2.5	76%
between 50 and 249 employees												
Total Income	53.3	60.6	70.8	113.9	126.5	131.7	152.0	206.6	212.2	265.9	271.0	1.9%
Total production costs	41.6	55.7	51.7	93.0	107.4	115.4	128.5	177.7	184.2	240.6	237.3	-1.4%
Gross Value Added	16.8	13.8	27.4	35.2	35.7	35.9	44.9	52.9	48.5	51.5	55.1	7.0%
Operating Cash Flow	11.7	4.8	19.1	21.0	19.1	16.3	23.5	28.8	28.0	25.3	33.7	33.3%
Earning before interest and tax	9.6	1.6	15.7	14.4	10.7	8.6	15.1	16.2	16.4	15.9	25.4	59.5%
Net Profit	8.8	-0.5	15.2	13.9	10.3	7.4	13.6	15.6	15.7	15.0	24.0	60.3%
greater than or equal to 250 employees												
Total Income	20.9									30.8	56.9	84.5%
Total production costs	20.9									24.2	42.3	74.6%
Gross Value Added	2.4									10.8	20.8	92.4%
Operating Cash Flow	0.1									6.6	14.6	120.7%
Earning before interest and tax	-1.6									4.6	10.4	124.6%
Net Profit	-3.9									5.1	11.0	118.2%

Source: EWG elaboration from Member States submissions to the Fish Processing data call 2025.

7.4.4 Raw materials

The bulk of the raw material used in the Croatian fish processing industry was sourced from domestic marine capture fisheries, predominantly consisting of small pelagic species (sardine and anchovy). Between 2020 and 2023, between 82% and 84% of the total raw material originated domestically, of which 87–91% came from marine capture fisheries.

7.4.5 Trends, drivers and outlook

The backbone of the Croatian fish processing industry in 2022 and 2023 consisted of medium-sized (50–249 employees). The majority of these companies diversified their activities to reduce dependency on raw material availability. Such diversification typically includes fisheries, aquaculture, trade, logistics, and the processing of other food products. Significant public subsidies, both national and EU funded, stimulated technological investments aimed at energy efficiency, digitalisation, and quality control improvements.

The Croatian fish processing industry is highly dependent on small pelagic fish (sardine and anchovy) landed from marine capture fisheries, which represent more than 70% of total raw material input. This dependence effectively defines the upper limit of the industry's processing

capacity and profitability. However, the small pelagic fishery has shown a reduction in landing volumes in recent years due to overexploitation of sardine and anchovy stocks in the Adriatic Sea. Moreover, effort management measures and catch quota systems for small pelagic stocks further constrain the potential for industry expansion.

Following the initial economic shock caused by the COVID-19 pandemic, the Croatian fish processing sector was affected in 2022 and 2023 by new global instabilities, including the war in Ukraine, disruptions in supply chains, and volatility in energy and raw material prices. These factors were among the main drivers of cost increases and financial pressure, as evidenced by the growth in production costs (raw materials, wages, and operational expenditures) and a decline in net investments. Furthermore, high inflation rates accelerated the increase in wages and labour expenditures, while national and EU subsidies acted as the key instruments alleviating these shocks.

Several factors had a positive effect on the sector's performance, primarily domestic demand, tourism recovery, and international trade. Demand, and consequently apparent consumption of processed seafood products rose markedly following the pandemic, supported by the revival of tourism and the increasing consumer preference for value added products. Additionally, a moderate increase in exports of processed commodities contributed positively to the sector's performance. These market opportunities are likely to define future directions for product development, focusing on higher value, convenience, and sustainability.

The main factors influencing the sustainability of the sector include its strong dependence on raw material from marine capture fisheries, the concerning status of small pelagic stocks in the Adriatic[8], as well as geopolitical risks and climate change. Landings of small pelagic species have exhibited high inter annual variability, which has prompted stricter management measures in the Adriatic, including reduced fishing effort, seasonal closures, and catch quotas[9]. The ongoing war in Ukraine, coupled with high energy and raw material prices, supply chain disruptions, and persistent inflation, continues to exert significant pressure on the sector's stability and profitability. Additionally, climate change, through rising sea temperatures, altered species distribution patterns, and broader shifts in ecosystem dynamics (Fanelli et al., 2023)[10], may further threaten the long-term availability of key raw materials.

Possible mitigation measures include further investment in added value processing, diversification of raw material sources (including aquaculture and imported inputs), and adoption of energy-efficient and low-carbon technologies. In parallel, the sector should continue to capitalize on domestic and international market opportunities, particularly those driven by changing consumption trends and demand for sustainable, high quality seafood products.

7.4.6 Data coverage and quality

Considering that only a few companies in Croatia are exclusively engaged in fish processing, the identification of the target population is carried out using multiple approaches. Determining whether a company is involved in fish processing is based on the Register of Approved Establishments Handling Food of Animal Origin, maintained by the Directorate for Veterinary Medicine and Food Safety of the Ministry of Agriculture, Forestry and Fisheries. Questionnaires are then sent to these companies to verify whether they conducted fish processing in the

[8] https://www.fao.org/gfcm/statutory-meetings/detail/en/c/1742819/
[9] https://www.fao.org/gfcm/managementplan-smallpelagic-adriatic/en
[10] https://www.nature.com/articles/s41598-023-40665-w.pdf

reference year or whether fish processing represented an additional activity. The results of these questionnaires are subsequently cross-checked with company balance sheets.

This approach may result in discrepancies in population size and economic indicators when compared with EUROSTAT data. Additional inconsistencies are also observed in the number of recipients of investment subsidies, particularly in relation to measures supporting fish processing.

Furthermore, there are a limited number of companies whose primary activity is aquaculture rather than fish processing. These enterprises generate a substantial share of total income, production, and employment. However, they were included in the population of main activity producers due to their significant contribution to overall production and economic performance within the fish processing sector.

7.5 Czechia

According to Eurostat data, there were 23 enterprises whose main activity was fish processing in Czechia in 2023. Compared to the previous year the total number of enterprises increased by four units (21%). Although the number of enterprises increased, the total number of employees moved towards a slight decrease by 1% to 743, while employment measured in 736 FTE broadly followed the same trend. The unpaid labour in 2023 was estimated to be 42 persons representing 5.4% of the total persons employed. The number of unpaid labours has increased in recent years.

The total income in 2023 has shown increasing trend over the ten-year period and reached EUR 177.8 million and compared to 2022 it increased by 19%. Total purchases of goods and services was recording high (EUR 147.6 million) for the period of 2014-2023 and increased by 13% compared to 2022. Personnel costs for 2023 further increased by 35% to EUR 23.5 million despite lower number of employees.

The amount of gross investment in tangible goods for 2023 was EUR 2.1 million and decreased by 16% compared to 2022.

From 2014 to 2023, the Czechia`s fish processing industry exhibited consistent growth in its Gross Value Added (GVA), with decrease in 2016 and 2022. In 2023, GVA increased by 34% to EUR 29.8 million. Although gross profit fell by 41% in 2022, it returned to growth in 2023 and increased by 29% to EUR 6.2 million. The data suggests that in order to maintain profit, the increase in costs was compensated by increase in the price of production.

Table 7.12 Overview, Czechia, 2013-2023

Variable	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Δ (2022-23)
Structure (number)												
Total enterprises		20	20	21	21	20	19	20	20	19	23	21%
Total employees		718	750	745	762	729	732	764	729	747	743	-1%
Unpaid labour		25	30	24	22	24	24	28	29	36	42	17%
FTE		710	742	741	757	725	723	754	721	739	736	0%
Income, expenditure and investments (million €)												
Production value		72.4	74.1	76.7	79.2	81.8	89.7	95.7	114.4	142.0	167.3	18%
Turnover from fish processing												0%
Turnover total		82.9	84.7	85.9	88.7	92.1	96.4	99.9	120.0	149.6	177.8	19%
Total purchases of goods and services		69.8	71.0	73.0	71.9	73.7	79.6	79.3	100.3	130.1	147.6	13%
Personnel costs		9.0	9.4	10.0	11.5	12.4	13.2	14.9	15.7	17.4	23.5	35%
Gross investment in machinery and equipment		2.6	1.7	3.5	3.3	1.5	2.2	1.2	2.5	2.5	2.1	-16%
Economic performance (million €)												
Gross Value Added		13.7	14.8	14.7	17.6	18.9	18.9	23.2	23.8	22.3	29.8	34%
Gross profit		4.7	5.4	4.7	6.2	6.5	5.6	8.2	8.1	4.8	6.2	29%

Source: EWG elaboration from Eurostat (2025) data.

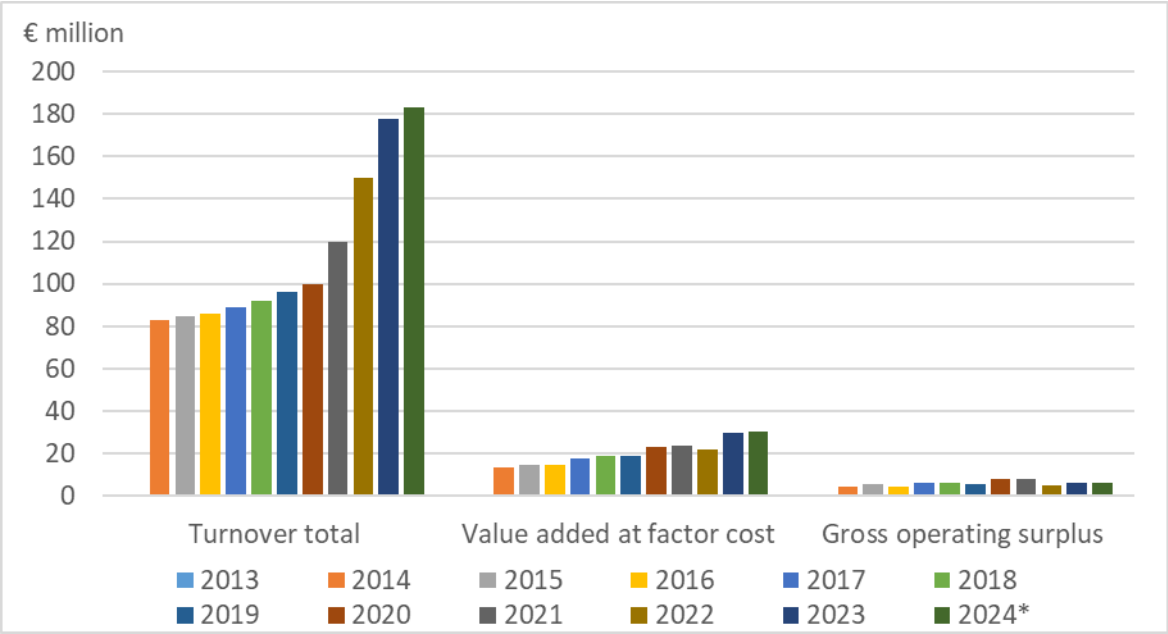
According to the available data of Prodcom[11], the Czechia`s fish processing industry produced 4 455 tonnes (EUR 45.6 million) of fresh or chilled fish fillets and fish meat and 38 tonnes (EUR 0.3 million) of smoked fish in 2023. Compared to 2022, the quantity of fresh or chilled fish fillets and fish meat increased by 3% and the quantity of smoked fish decreased by 35%. Fresh or

[11] https://ec.europa.eu/eurostat/web/prodcom

chilled fish fillets and fish meat was the main export item in 2023 and contributed 44% of the total export value of fish products.

For 2024, the model predicts continued growth in turnover, GVA and gross profit (Figure 7.5.1). However, compared to the previous year, growth is slowing down.

Figure 7.6 Turnover, GVA and Gross profit evolution, Czechia, 2013-2024



Source: EWG elaboration from Eurostat (2025) data. *2024= nowcasted data

In Table 7.13, the number of companies distributed on size categories are shown. The majority (61%) of Czechia`s fish processing companies have less than 10 employees.

Table 7.13 Number of companies by size category, Czechia, 2013-2023

Size category	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
From 0 to 9 persons employed									12	11	14
From 10 to 19 persons employed									1	1	2
From 20 to 49 persons employed									6	6	6
From 50 to 249 persons employed									0	0	0
250 persons employed or more									1	1	1
Total	22	20	20	21	21	20	19	20	20	19	23

Source: EWG elaboration from Eurostat (2025) data.

7.5.1 Data coverage and quality

No data were submitted by Czechia. For that reason, the EWG prepared a national mini-chapter with limited analyses based on publicly available data (Eurostat).

7.6 Denmark

7.6.1 Overview

The Danish fish processing industry is mainly located around the most important fishing harbours in Denmark. These are located in the north and western parts of Jutland. Denmark is in top twenty of the world largest importers and exporter of fish and fish products and the Danish processing industry produces a large variety of products based on many different species. The raw materials for the industry are purchased on the global market for fish and fish products but are also partly provided by the domestic fishing fleet. Domestic caught species like cod, plaice, sole, nephrops, herring, mackerel and fish for reduction are of some importance for the industry. Furthermore, some Danish regions and islands are depending on the local fisheries and processing industries, because alternative job opportunities in these areas are low.

The industry processing salmon is the most important in economic and employment terms in Denmark and salmon dominate the Danish import, export and consumption. The industry uses fresh raw materials produced in aquaculture in Norway and Scotland; however frozen raw material is for most part imported from Chile. A large amount of salmon is passing through Denmark destined for the European marked, especially the market for fresh salmon in France and Germany.

Processing of pelagic species like herring, mackerel and fish for reduction is the second most important industry segment in Denmark. The Danish factories are dependent on domestic catches; however, they are also receiving raw material from countries like Norway, Iceland, UK and Sweden. Shrimp and mussel processing is the third most important segment in Denmark, depending on the import of shrimps from Greenland, whereas the mussels are harvested in Danish waters. Processing of groundfish, such as cod, plaice, and other species are also an important part of the production in Denmark.

In Table 7.14, an overview of the development in the number of fish processing enterprises and the numbers of employees and full-time employees are shown. The overall structural development in the sector can be characterized by a decline in the number of enterprise and employment.

In 2023, there were 89 enterprises in the Danish fish processing sector. From 2013 to 2023, the number of enterprises decreased from 103 to 89, corresponding to a 16% decrease. The sector is dominated by small and middle-sized enterprises. In Denmark, 45 enterprises have less than 10 full time employees, corresponding to 51% of the total number of enterprises. Furthermore, 25 enterprises have between 11 to 49 employees and 19 have between 50 to 249 employees. There is no large fish processing company with more than 250 full time employees.

In total, the Danish fish processing sector employed 3 064 persons in 2023, which was a decrease of 4% compared to 2021, however a slide increase of 5% compared to 2022, respectively. From 2013 to 2023, the numbers employed decreased by 11%. The number of fulltime employees also decreased from 3 039 in 2013 to 2 277 in 2023, corresponding to a decrease of 25%. The average wage per FTE increased 5% from 2022 to 2023. From 2013 to 2023, the average wage increased from EUR 61 thousand to EUR 75 thousand, corresponding to an increase of 23%. The number of persons registered as unpaid labour is of minor importance in the Danish industry, constituting only 0.4% of the workers in 2023.

The number of enterprises processing fish outside the fish processing industry is limited. There were only six enterprises in this segment, in 2023. The number of enterprises has been between four and seven from 2013 to 2023.

Table 7.14 Overview, Denmark, 2013-2023

Variable	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Δ (2022-23)
Structure (number)												
Total enterprises	103	100	108	100	99	97	92	91	90	91	89	-2%
≤ 10 employees	53	47	54	48	45	43	42	40	41	43	45	5%
11-49 employees	29	28	31	29	32	32	31	31	30	28	25	-11%
50-249 employees	21	25	23	23	22	22	19	20	19	20	19	-5%
≥ 250 employees												0%
Employment (number)												
Total employees	3,453	3,613	3,614	3,761	3,757	3,731	3,510	3,220	3,196	2,931	3,064	5%
FTE	3,039	3,028	3,054	3,212	3,153	3,083	2,832	2,707	2,638	2,427	2,277	-6%
Indicators												
Turnover (million €)	2,230	2,269	2,489	2,726	2,610	2,549	2,503	2,319	2,347	2,245	2,398	7%
FTE per enterprise	29.5	30.3	28.3	32.1	31.8	31.8	30.8	29.7	29.3	26.7	25.6	-4%
Average wage (thousand €)	61.3	62.9	65.6	63.1	65.0	66.7	70.0	69.7	69.2	69.6	75.5	8%
Unpaid work (%)	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.5	0.5	0.4	-16
Enterprises doing fish processing not as main activity												
Number of entreprises	5	4	5	7	6	5	4	4	5	6	6	0%
Turnover attributed to fish processing (million €)												

Source: EWG elaboration from Member States submissions to the Fish Processing data call 2025.

7.6.2 Economic performance

In Table 7.15, the economic performance for the Danish processing industry for the period 2013 to 2023 is presented. In 2023, the total income reached EUR 2.4 billion, which was an increase of 7% compared to 2022, but only 2% compared to 2021, respectively. The total income consists of turnover and other income of which turnover and other income make up for 99% and 1%, respectively. There are no registered subsidies in the Danish fish processing industry.

The total cost of production reached EUR 2.2 billion in 2023, which was an increase of 5% compared to 2022, but at the same level as in 2021. The most important cost component is the purchase of fish and other raw materials, which make up for 77% of the total cost. Other operational cost covers 13%, whereas wages and salaries cover 8%. Energy costs make up for 2% and payment for external workers 1% of the total production cost.

In 2023, the depreciation of capital was at the same level as in 2022, whereas the net financial cost increased to EUR 40 million, corresponding to a negative income. Total assets decreased 1% and the net investment was reduced 4%, whereas the net depth remained at approximately the same level as in 2022. The Gross Value Added (GVA) is calculated as the total income deducted by energy cost, fish and other raw material cost and other operational cost. The GVA reached EUR 368 million in 2023, which was an increase of 16% from 2022.

Earnings before interest and tax (EBIT) have been positive throughout the whole period from 2013 to 2023. In 2023, the net profit increase to EUR 122 million, which was an increase of 26% compared to 2022. However, compared to 2017 where the highest profit was obtained over the period from 2013 to 2023, it was a decrease of 57%.

The labour productivity increased by 24% from 2022 to 2023, and most of the other productivity and performance parameters have shown an increase over the years from 2020 to 2023 with smaller fluctuations. Based on the performance parameters 2023 show the best performance since the record year in 2017, which represent an all-time high in this time series. Thus, the sector shows a positive and robust development.

Table 7.15 Economic performance indicators, Denmark, 2013-2023

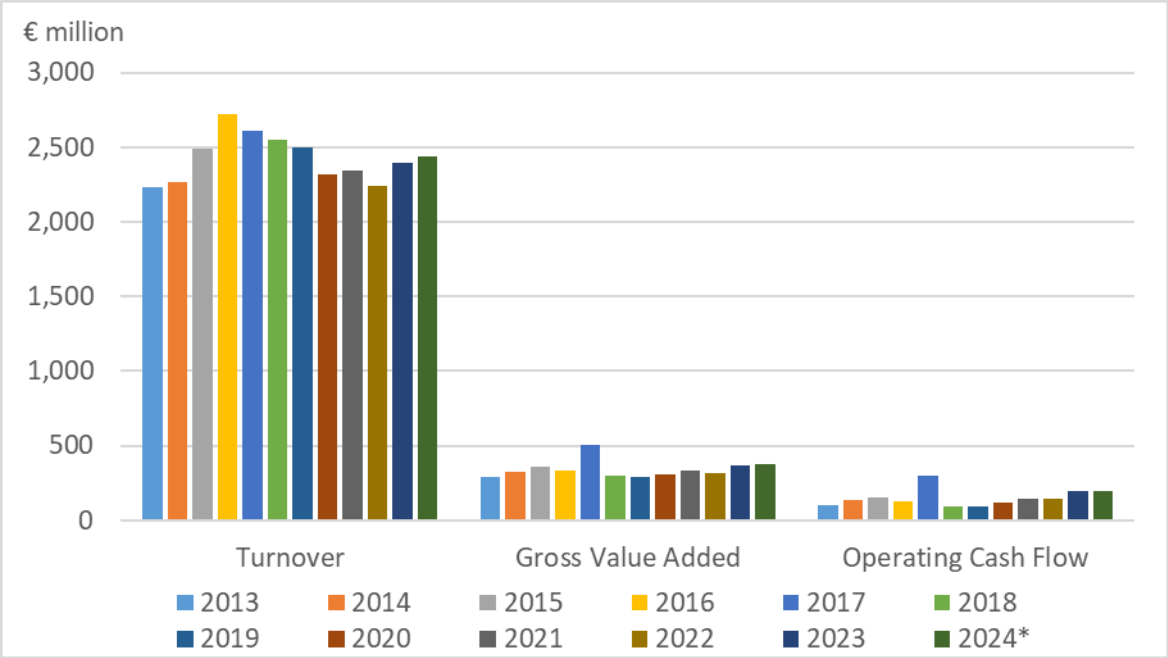
Variable	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Δ(2022-23)
Income (million €)												
Turnover	2229.8	2269.4	2488.9	2726.4	2610.2	2549.0	2503.0	2319.4	2347.3	2244.6	2398.4	7%
Other income	-22.0	23.3	78.2	31.0	24.2	10.4	22.2	16.4	17.1	13.1	21.3	63%
Operating subsidies	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Income	2207.8	2292.7	2567.2	2757.4	2634.4	2559.4	2525.2	2335.8	2364.4	2257.7	2419.8	7%
Expenditure (million €)												
Purchase of fish and other raw material for production	1361.1	1397.7	1616.7	1632.6	1486.0	1840.5	1830.9	1567.1	1612.4	1643.1	1707.4	4%
Wages and salaries of staff	185.2	189.5	199.4	201.9	204.0	204.6	197.5	187.8	181.6	168.1	171.1	2%
Imputed value of unpaid labour	1.0	1.0	1.0	1.0	1.1	1.0	0.8	0.8	0.8	0.8	0.7	-14%
Payment for external agency workers (optional)				5.2	15.6	17.0	18.4	19.7	7.0	10.4	11.5	11%
Energy costs	33.8	34.7	38.9	25.2	21.8	25.6	24.0	19.1	18.5	35.1	38.2	9%
Other operational costs	525.0	531.0	554.9	761.2	608.9	373.1	362.3	418.9	394.8	252.1	294.3	17%
Total production costs	2106.1	2153.9	2410.9	2627.1	2337.4	2461.8	2433.9	2213.4	2215.2	2109.5	2223.2	5%
Capital Costs (million €)												
Depreciation of capital	33.4	31.0	32.1	35.6	34.5	38.1	37.0	33.3	33.7	35.1	35.0	0%
Financial costs, net	11.0	-11.2	-1.5	-6.4	-19.5	-0.7	-5.7	-20.6	-30.9	16.4	39.9	143%
Capital Value (million €)												
Total value of assets	1209.1	1206.1	1355.4	1382.9	1486.6	1548.5	1615.1	1599.1	1477.7	1343.3	1335.8	-1%
Net Investments	40.5	37.2	44.4	70.8	41.7	49.3	36.6	25.1	18.2	28.0	26.7	-4%
Subsidies on investments				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00	
Debt	715.9	668.0	706.5	768.1	799.2	865.8	888.5	850.8	783.2	678.8	675.7	0%
Economic performance (million €)												
Gross Value Added	287.9	329.3	356.7	333.1	502.0	303.2	289.6	311.0	331.7	317.1	368.4	16%
Operating Cash Flow	101.7	138.8	156.2	130.3	297.0	97.5	91.2	122.4	149.2	148.2	196.6	33%
Earning before interest and tax	68.2	107.8	124.1	94.7	262.5	59.4	54.2	89.1	115.5	113.1	161.5	43%
Net Profit	57.2	119.0	125.6	101.1	282.0	60.1	60.0	109.7	146.4	96.7	121.6	26%
Productivity and performance Indicators												
Labour productivity (thousand €)	94.7	108.8	116.8	103.7	159.2	98.3	102.3	114.9	125.7	130.7	161.8	24%
Capital productivity (%)	23.8	27.3	26.3	24.1	33.8	19.6	17.9	19.4	22.4	23.6	27.6	
GVA margin (%)	13.0	14.4	13.9	12.1	19.1	11.8	11.5	13.3	14.0	14.0	15.2	
EBIT margin (%)	3.1	4.7	4.8	3.4	10.0	2.3	2.1	3.8	4.9	5.0	6.7	
Net profit margin (%)	2.6	5.2	4.9	3.7	10.7	2.3	2.4	4.7	6.2	4.3	5.0	
Return on Investment (%)	5.6	8.9	9.2	6.8	17.7	3.8	3.4	5.6	7.8	8.4	12.1	
Financial position (%)	40.8	44.6	47.9	44.5	46.2	44.1	45.0	46.8	47.0	49.5	49.4	

Source: EWG elaboration from Member States submissions to the Fish Processing data call 2025.

The nowcast for 2024 for the Danish processing industry is estimated based on the production, export and impot data from the Eurostat Prodcom statistics. From the data Turnover, GVA and Operating cash flow is estimated.

The now cast show that the positive trend in 2023 continues in 2024 for all three performance parameters turnover, GVA and Operating cash flow compared to 2022.

Figure 7.7 Turnover, GVA and Operating cash flow evolution, Denmark, 2013-2024



Source: EWG elaboration from Member States submissions to the Fish Processing data call 2025. *2024= nowcasted data

7.6.3 Breakdown by company size

In Table 7.16, the numbers of enterprises distributed on size categories are shown. The segment containing enterprises with 10 or less employees is the largest in terms of number of enterprises (45) but are in economic terms the least important. The income increased with 27%, but the cost increased even more with 77%. Overall, this resulted in a negative GVA of EUR 8 million. Thus, the net profit was also negative with EUR 17 million in 2023 which was a reduction from 2022 of more than EUR 17 million.

The segment with 11 to 49 employees covers 25 enterprises. The segment experienced a decrease in total income of 2%, but also a decrease of 4% in total cost. This resulted in an increase in GVA of 43% from 2022 to 2023. Thus, operating cash flow and EBIT also increased. However, the net profit was negative EUR 6.3 thousand in 2023, which was an improvement compared to a negative net profit of EUR 17.8 thousand in 2022.

The segment of the largest enterprises in Denmark employing 50-249 are covering 19 enterprises. This segment covers 52% of the total income and 49% of the total cost for the whole sector. For this segment, the income increased 16% and the cost increased with 14%, resulting in an increase in GVA of 19%. This also resulted in an increase in the operating cash flow and improvement of EBIT. The net profit in 2023 was the second highest net profit achieved in the period from 2013 to 2023, with EUR 145.3 thousand increasing 27% from 2022 to 2023.

Overall, the small enterprises are increasing their income, but at the same time cost have increased even more, resulting in a poor financial result in 2023. The medium enterprises improved their financial position from 2022 to 2023 even though that the net profit is still negative. The largest enterprises improved their financial position on all parameters from 2022 to 2023.

Table 7.16 Economic performance by size, Denmark, 2013-2023

Variable	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Δ (2022-23)
less than or equal to 10 employees												
Total Income	116.6	101.3	99.4	106.6	43.5	43.4	53.4	39.5	50.0	41.1	52.2	27%
Total production costs	112.5	98.0	96.6	103.1	42.1	42.1	52.3	37.5	49.9	38.4	67.9	77%
Gross Value Added	13.5	11.2	11.1	12.6	7.6	8.1	8.5	8.7	7.5	8.7	- 8.4	-197%
Operating Cash Flow	4.0	3.3	2.8	3.4	- 0.1	- 0.1	- 0.4	- 0.1	- 0.3	1.6	- 16.0	-1111%
Earning before interest and tax	2.1	2.0	1.4	1.9	- 1.1	- 1.3	- 1.5	- 1.1	- 1.8	0.5	- 16.9	-3799%
Net Profit	1.4	1.5	1.1	1.8	14.3	1.8	6.7	14.8	- 2.3	0.2	- 17.3	-10246%
between 11 and 49 employees												
Total Income	540.2	509.1	533.4	704.2	671.8	659.6	687.0	502.7	549.6	1,118.3	1,097.7	-2%
Total production costs	519.2	491.7	511.1	681.7	600.7	582.7	664.9	486.9	516.6	1,113.2	1,068.3	-4%
Gross Value Added	67.2	55.7	65.2	66.0	108.8	105.9	57.2	43.5	75.1	44.4	63.4	43%
Operating Cash Flow	21.0	17.4	22.3	21.6	63.2	65.7	10.0	1.3	30.0	0.3	21.7	7177%
Earning before interest and tax	12.7	11.4	14.8	13.2	57.2	59.0	3.1	- 4.6	23.3	- 5.0	15.8	414%
Net Profit	9.3	10.8	15.0	13.6	56.3	57.4	0.3	- 2.9	24.7	- 17.8	- 6.3	65%
between 50 and 249 employees												
Total Income	1,551.0	1,682.3	1,934.3	1,946.6	1,919.0	1,856.3	1,784.8	1,793.6	1,764.8	1,098.3	1,269.8	16%
Total production costs	1,474.4	1,564.2	1,803.3	1,837.1	1,679.0	1,820.0	1,698.4	1,669.2	1,641.7	947.5	1,075.5	14%
Gross Value Added	207.2	262.4	280.4	254.5	385.7	189.1	223.9	258.8	249.1	264.1	313.4	19%
Operating Cash Flow	76.6	118.2	131.1	105.3	233.9	31.9	81.6	121.2	119.5	146.3	190.9	30%
Earning before interest and tax	53.4	94.4	107.9	79.6	206.4	1.7	52.6	94.9	94.0	117.7	162.5	38%
Net Profit	46.6	106.7	109.5	85.6	211.4	1.0	53.0	97.8	124.0	114.4	145.3	27%

Source: EWG elaboration from Member States submissions to the Fish Processing data call 2025.

7.6.4 Raw material

Denmark is not collecting information on raw material used as input for the processing industry, which is in accordance with the Danish data collection program. However, the commodity sales (output) from the industry are collected in order to get information on which species are processed. From this data, it is possible to divide the industry into segments based on the main species produced.

Based on the commodity data the Danish industry is divided into the following segments:

- Cod- and flatfish
- Herring, mackerel, fishmeal and –oil (pelagic species)
- Shrimp and mussels
- Salmonids
- Mixed species

In Table 7.17, the distribution of species in each segment can be seen. The table reveals that the processing industry is quite specialized when it comes to processing of different species.

The most important segment in terms of income and employment is the salmon processing enterprises. They process mostly fresh salmon from the Norwegian aquaculture sector to fresh- and smoked fillets for the EU market. Danish trout produced in aquaculture is also processed in this segment, where the product is mostly smoked fillets.

The second most important segment is processing of herring, mackerel, fishmeal and -oil. The herring processors are producing filets and marinated herring, whereas the mackerel processors are mostly producing canned mackerel with tomato sauce or smoked. The fishmeal and -oil factories use fish for reduction and scrapings from the other processing companies to produce fishmeal and -oil. The products are mainly used in the production of feed for aquaculture, but also in agriculture and for human consumption (fish oil).

Table 7.17 Percentage of commodity production based on different species for each segment, Denmark, 2024

	Cod- and flatfish	Herring and mackerel	Shrimp and mussels	Salmonids	Other species	Sea-weed	Scrapings	Fish for reduction	Total
Cod- and flatfish	**78**	0	1	12	9	0	0	0	100
Herring, mackerel, fishmeal and -oil	0	**29**	0	0	2	0	6	**63**	100
Shrimp and mussels	0	0	**90**	0	10	0	0	0	100
Salmonids	1	0	1	**95**	3	0	1	0	100
Mixed species	**42**	1	2	14	**34**	7	0	0	100

Source: Based on the commodity sales statistics, Statistics Denmark.

The shrimp processors are also an important segment mainly processing cold water shrimp from the North Atlantic, primarily wild caught from Greenland. The mussel production is a mix of fisheries and aquaculture. The mussels fished in Denmark are small and mostly used for canning, whereas the aquaculture produced mussels are larger and sold fresh. The Cod- and flatfish segment produce a mix of fresh and prepared products, such as ready meals and breaded products.

In Table 7.18, the distribution on sales volume in tonnes divided on species is shown. For most species the volume of processed products is rather constant over time. The fluctuation over the years can be explained by changes in quotas, but also prices on the different raw materials.

Table 7.18 Commodity sales divided on species in tonnes, Denmark, 2020-2024

	2020	2021	2022	2023	2024
Salmonids	58.470	62.476	64.618	57.247	57.240
Codfish	37.846	43.363	34.716	14.466	18.157
Shrimp	13.882	12.006	11.707	11.220	13.655
Sild	46.158	41.753	71.213	49.622	51.284
Flatfish	792	678	571	290	151
Mackerel	13.517	*13.797	*13.895	*13.795	*13.912
Mussels	7.602	9.732	8.212	6.162	6.833
Other	19.862	27.710	21.173	18.465	16.903
Seaweed	573	729	746	1.007	1.378
For consumption	**198.704**	**212.244**	**226.850**	**172.273**	**179.515**
Scrapings etc.	106.680	85.367	92.122	83.181	85.798
Fish for reduction	259.667	233.593	191.424	190.833	197.039
Total	**565.052**	**531.204**	**510.397**	**446.287**	**462.352**

Source: Based on the commodity sales statistics, Statistics Denmark.
(*) Data for two commodity numbers for Mackerel is estimated due to inconsistency in reporting.

In Table 7.19, the distribution of sales volume in tonnes for each segment is shown based on the commodity sales from the enterprises. The volume of production has been declining over the years, however, the volume increase from 2023 to 2024. Nevertheless, it can also be seen that the largest share in weight is in the pelagic segment containing herring, mackerel and fish for reduction. The fluctuation in the cod and flatfish segment and mixed species segments between 2022 and 2024 can be explained by enterprises moving from one segment to another.

Table 7.19 Production distributed on species segments in tonnes, Denmark, 2020-2024

	2020	2021	2022	2023	2024
Cod- og flatfish	38.469	44.803	33.222	12.504	12.166
Herring, mackerel, fishmeal and -oil	407.682	*363.173	*364.066	*332.145	*342.322
Shrimp and mussels	22.003	22.500	21.014	19.843	20.686
Salmonids	79.654	79.486	82.728	73.413	70.777
Mixed species	17.243	21.242	9.366	8.381	16.399
Total	**565.052**	**531.204**	**510.397**	**446.287**	**462.352**

Source: Based on the commodity sales statistics, Statistics Denmark.
(*) Data for two commodity numbers for Mackerel is estimated due to inconsistency in reporting.

Based on the above commodity sales statistics, important information on how changes in quotas and prices affect different segments in the Danish fish processing industry can be derived.

7.6.5 Trends, drivers and outlook

The now cast show a positive trend for the Danish processing industry in 2024 compared to 2023 for the economic parameters Turnover, GVA and Operating cash flow. Comparing the now cast results with the collected data for the Danish commodity production this increase seems reasonable considering the larger amount of fish processed and also taking into account the increasing prices on fish products.

The effect of the Covid-19 on the Danish processing industry has only been minor and has not changed the structure of the industry. A reason for this development is that many of the processed products coming from the industry goes to retailers and supermarket chains that have not experienced a decrease in demand, whereas direct sales to consumers and restaurant have been more exposed by lockdowns. Published evidence on both the aquaculture sector (Nielsen et al. 2023), the fishing sector (Asche et al. 2022) and fish value chains (Anderson et al. 2022) also show that the effect of the Covid-19 pandemic in most cases seems to be a short term effect, where there were losers due to the initial chock, but also industries discovering new possibilities.

A major concern for the Danish fisheries and fish processing enterprises has been the economic consequences following the United Kingdom’s decision to leave the European Union (BREXIT). It is not only a matter of the lost fishing opportunities in British waters it also affects the negotiation between Norway and EU, which is also an important fishing ground for Danish fishers. The vessels affected by BREXIT are primarily targeting pelagic species for reduction, herring and mackerel. Nevertheless, there are also demersal trawlers that have been affected. Even though that the Danish processing industry relies on domestic catches, the processing industry mainly purchases raw material at the global marked. That said, there are some specialised enterprises that can experience limitations due to BREXIT and changes in import and export prices do to new custom rules.

The war in Ukraine resulted in an increase in global energy prices, which have affected all enterprises and private consumers. Overall, it is not expected that the fish processing industry is hit harder than other food producing industries. There is an increased cost for processing freezing, drying and transporting the products, but that is also the case for all other industries. Furthermore, energy is a relatively small part of total production cost (2% in 2023) and has as such only a minor effect even if energy prices rise again.

In general, the processing industry relies on a steady inflow of raw materials. For industries that are relying on local/EU stocks a change in the availabilities of these materials can severely affect the industry income, production and employment. For industries that are less dependent on local/EU stocks, raw materials are purchased from all over the world. Most EU stocks are at the moment fully exploited (FAO) and it is not expected that raw materials from EU fisheries will/or can increase in the near future. However, the EU aquaculture sector can, given the right framework condition, increase production and it is considered that the EU aquaculture sector has an unleashed potential to increase production.

In terms of certification, most Danish stocks are managed in accordance with the Marine Stewardship Council (MSC) guidelines and labelled accordingly. Processing companies are dependent on selling their product to supermarket chains, which most often demand that products are labelled to attract consumers and avoid bad publicity for selling non-sustainable products. Thus, the processing industry applies to these demands from the supermarket chains. For the aquaculture sector in Denmark, the labelling scheme Aquaculture Stewardship Council (ASC) has been adopted, and more producers are following these guidelines. In Denmark, there is furthermore a governmental certification scheme for organic products, which can be applied for aquaculture products coming from both land-based farms, marine sea cages farms and mussel producers.

Fish processing as non-main activity is rather limited in Denmark. More than 95% of the fish products that are processed in Denmark can be allocated to the enterprises within the NACE code 10.20, where fish processing is the main activity. There have only been identified between 3-7 enterprise outside NACE 10.20 over the period 2008 to 2023 that have fish processing, but not as their main activity. These companies are identified if they have workplaces/production facilities doing fish processing, but the overall enterprise is not registered under the NACE 10.20. Do to confidentially reasons, the income from these companies cannot be reported.

7.6.6 Data coverage and quality

Data for the Danish fish processing industry is collected by Statistics Denmark. The data covers all enterprises in the business register covered by NACE 10.20. Data is processed to comply with the DCF and EU-MAP in cooperation with the Department of Food and Resource Economics (IFRO). The data collected by Statistics Denmark follows the definition of the Structural Business Statistics (SBS) and is, therefore, comparable with Eurostat data and data from other member states that are using the SBS definition.

In Statistics Denmark, the Account Statistics are available approximately 20 months after the end of the reference year. Data can be disaggregated on to the four segments on numbers of employees as requested by the DCF and EU-MAP. To avoid problems with confidentiality, segments should in general include more than 10 enterprises. In Denmark, the enterprises covered by NACE 10.20 cover more than 95% of the fish processing in Denmark and is a very good estimate of the total income and production of the Danish processing industry.

The data collected and processed for the DCF and EU-MAP can be slightly different from the data that are being published by Eurostat on the processing industry. This is because the data for the DCF and EU-MAP are combined from two different statistics in Statistics Denmark; the Account Statistics and the Industry Commodities Trade Statistics, where data for Eurostat only covers data from the Account Statistics and covers all enterprise under NACE 10.20. However, using the two statistics combined provide more detailed information at the workplace level in contrast to the enterprise level. This allow for a more detailed statistics only including workplaces that are doing fish processing and excluding non-fish processing workplaces. This gives the best and most detailed information on the economic situation for the fish processors

and on how the raw material is use in the fish processing industry. Furthermore, combining the two statistics provide information on the species used in the processing industry.

Under the EMFF and EMFAF, initiatives that have supported the fish processing industry has been launched, however, there are no subsidies registered by Statistics Denmark for the processing industry. An explanation of the missing registration of these funds can be that it is paid to supporting industries and not directly to the enterprises that is registered as having fish processing as their main activity, such as, marketing firms or firm engaged in producing equipment for the processing industry. Overall, the funding corresponds to less than 1% of the industries total income and is assessed to be insignificant to the Danish processing industry.

7.7 Estonia

In 2023, there were 77 enterprises whose main activity was fish processing in Estonia (Table 7.20). Compared to the previous year the total number of enterprises decreased by five (6%). The total number of employees in the Estonian fish processing industry was 1 169, corresponding to 1 146 FTEs. The number of unpaid persons was 19. Compared to 2022, the total number of employees and FTEs decreased 8% and 7% in 2023, respectively

The total income was EUR 237.6 million in 2023 increasing 11% compared to 2022. The value of total purchases of goods and services increased by 10% to EUR 204.4 million. The personnel costs were EUR 22.6 million and remained stable compared to previous year. The net investment in tangible goods increased from EUR 6.1 million in 2022 to EUR 6.4 million in 2023, a rise of 6%.

Comparing the economic performance indicators between 2022 and 2023, then GVA continued to increase by 22% to EUR 38.1 million in 2023. Gross profit underwent a significant rise (72%) and reached to EUR 15.5 million.

Table 7.20 Overview, Estonia, 2013-2023

Variable	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Δ (2022-23)
Structure (number)												
Total enterprises	55	57	70	68	66	60	59	70	79	82	77	-6%
Total employees	1,896	1,837	1,881	1,570	1,376	1,306			1,351	1,265	1,169	-8%
Unpaid labour	3	4	14	13	9	7			22	27	19	-30%
FTE	1,862	1,803	1,844	1,536	1,348	1,276			1,316	1,228	1,146	-7%
Income, expenditure and investments (million €)												
Production value	161.2	168.7	162.9	123.1	125.0	128.0			173.2	207.1	231.8	12%
Turnover from fish processing												0%
Turnover total	164.3	168.4	171.5	126.6	126.8	129.9			181.2	214.8	237.6	11%
Total purchases of goods and services	138.7	143.9	129.4	104.6	106.4	108.8			152.2	186.5	204.4	10%
Personnel costs	21.4	22.4	23.0	20.4	18.4	18.6			21.8	22.3	22.6	1%
Gross investment in machinery and equipment	3.7	5.5	6.1	3.8	3.6	6.6			4.1	6.1	6.4	6%
Economic performance (million €)												
Gross Value Added	29.6	27.5	25.3	22.0	23.4	23.4			26.8	31.3	38.1	22%
Gross profit	8.3	5.1	2.4	1.6	5.0	4.8			5.0	9.0	15.5	72%

Source: EWG elaboration from Eurostat (2025) data.

In Table 7.21, the number of companies distributed on size categories are shown for 2013-2023. The majority (58%) of Estonian fish processing companies have less than 10 employees and compared to 2013, their number has doubled. The number of companies in other size categories has not changed significantly over this time period. The last time a company with 250 or more employees operated was in 2013.

Baltic herring and sprat caught by trawlers from the Baltic Sea are the most important local raw material for the Estonian fish processing enterprises. Estonian coastal fishing provides reasonably large volumes of expensive freshwater fishes like perch, pikeperch and pike which are used as raw material for fillets. Also, salmon from northern countries is imported for

processing[12]. Due to its small size, the fish markets and processing enterprises do not depend on domestic aquaculture production[13].

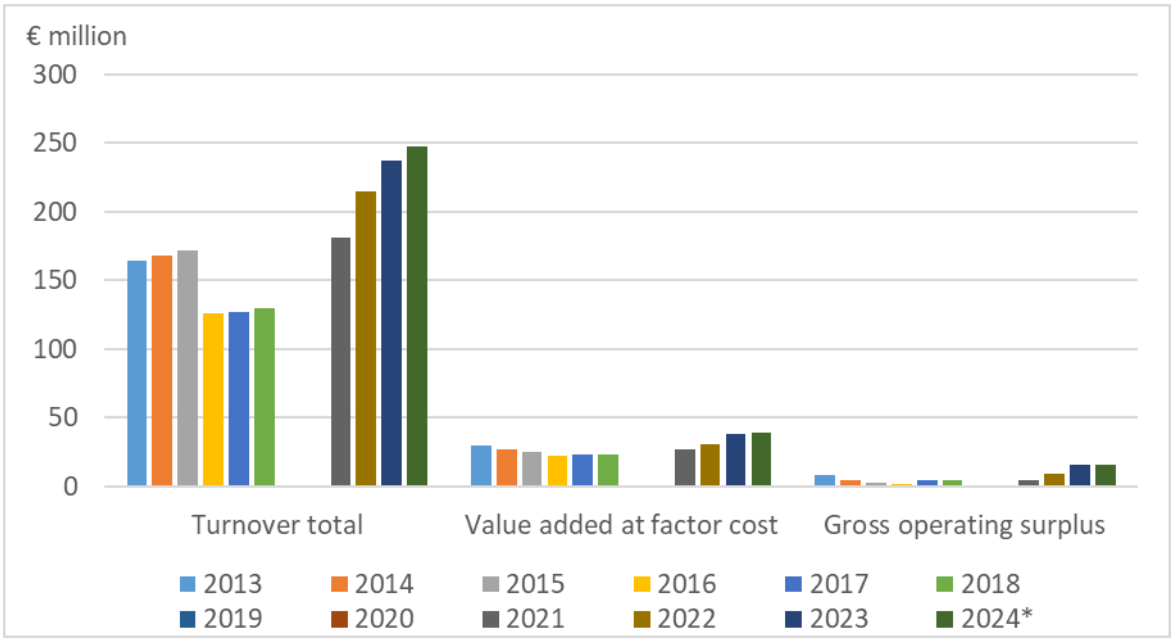
Table 7.21 Number of companies by size category, Estonia, 2013-2023

Size category	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
From 0 to 9 persons employed	22	25	33	36	37	31	31	36	46	48	45
From 10 to 19 persons employed	10	8	10	8	5	10	6	9	11	13	11
From 20 to 49 persons employed	13	14	17	15	15	11	15	17	14	13	14
From 50 to 249 persons employed	9	10	10	9	9	8	7	8	8	8	7
250 persons employed or more	1	0	0	0	0	0	0	0	0	0	0
Total	55	57	70	68	66	60	59	70	79	82	77

Source: EWG elaboration from Eurostat (2025) data.

For 2024, the model predicts continued growth in turnover, GVA and gross profit (Figure 7.8). However, the prediction should be treated with caution, as the quantities of fish used as raw material will decrease in 2024. Due to reduced fishing opportunities of sprat and herring the total catches of the Estonian Baltic Sea fleet fall by 17% in 2024, according to the data from the Agriculture and Food Board of Estonia. Also, the average first-sale prices of the key species as sprat, herring and perch continue to rise in 2024 (38%, 19% and 4% respectively).

Figure 7.8 Turnover, GVA and Gross profit evolution, Estonia, 2013-2024



Source: EWG elaboration from Eurostat (2025) data. *2024= nowcasted data

[12] Expert knowledge based on catch data, import data and production output of processing companies. Information on catches can be found on the website of the Agriculture and Food Board: https://pta.agri.ee/ettevotjale-tootjale-ja-turustajale/kutseline-kalapuuk/puugistatistika. Information on the foreign trade comes from the statistical database of Statistics Estonia: https://andmed.stat.ee/en/stat/majandus.

[13] According to Statistics Estonia the sales volume of fish farms was only 918 tonnes in 2023 and thus aquaculture was not a significant source of raw material (Estonian fish processing industry produced 88,066 tonnes of fishery products in 2023). https://andmed.stat.ee/en/stat/majandus__kalandus

According to the data of PRODCOM, the Estonian fish processing industry produced 88 066 tonnes of fishery products in 2023 (97 427 tonnes in 2022). More than half of this quantity was frozen whole salt-water fish (60%), which mainly was exported to Ukraine. The main products in value were also frozen whole salt-water fish, followed by fresh or chilled fish fillet and fish meat, fish fillets in batter or breadcrumbs including fish fingers and frozen fish fillets.

In 2023, exports accounted for 60% (61% in 2022) of the total sales revenue of companies whose main business is fish processing, indicating the high dependence of the Estonian fish processing industry on exports[14]. The production was exported to 48 countries. The main Estonian export countries for fish and fisheries products in value were Ukraine, Sweden and China in 2023.

Exports of fish and fish products to Ukraine have been affected by the war since 2022. Compared to 2021 (39 251 tonnes), the export volume of products transported to Ukraine decreased to 34 447 tonnes (12%) in 2022, and by 2023 dropped another 8% to 31 810 tonnes. Although the quantity of fish and fish products exported to Ukraine decreased, the value of the exported production was characterised by an increase. If in 2021 the value of fish and fish products going to Ukraine was EUR 17.6 million, then in 2022 and 2023 it reached EUR 21 million and 28.4 million, respectively.

In summary, the keywords of 2022 and 2023 were uncertainty in the markets and general price increases. Russia's invasion of Ukraine at the beginning of 2022 resulted in the temporary suspension of sales of products exported to Ukraine and the interruption or restriction of trade relations with Russia and Belarus. To the relief of fish processing enterprises transporting fish products to the Ukrainian market, the export volume partially recovered in the second half of the year. The impact of the unstable economic environment on the Estonian fish industry varied from company to company. Some of them were forced to stop their production because the cost price of the production increased, but it was not possible to increase the sale price. On the other hand, there were companies that increased both sales revenue and profit by increasing the selling price of their products. State aid helped to alleviate the negative impact of crises as well. Despite the difficulties, the Estonian fish processing industry as a whole was able to increase sales revenue and make a profit in 2022 and 2023.

7.7.1 Data coverage and quality

No Estonian data were submitted in the 2023 fish processing sector data call. Estonia decided not to collect data on the fish processing industry under the DCF / EU-MAP from 2017.

[14] Expert assessment based on the knowledge of the sector (financial statements source).

7.8 Finland

7.8.1 Overview

In 2023, Finland had 139 active fish processing enterprises, which together generated a total turnover of EUR 407 million, and a gross value added of EUR 59 million. The industry employed 820 full-time equivalents (FTEs), corresponding to 955 individuals.

The sector is highly concentrated: the ten largest companies by turnover accounted for 87% of the industry's total revenue. Most enterprises are micro and small businesses, contributing 26% of the total income. Additionally, there were 23 non-main processing enterprises, which generated a combined turnover of EUR 71 million.

According to the Fish Market Review 2024 by the Natural Resources Institute Finland (Luke), the war in Ukraine—beginning in February 2022—accelerated food price inflation as rising costs throughout the supply chain were passed on to consumers in 2022. Disruptions in international salmon trade and limited supply also impacted the Finnish fish market, causing the price of fresh salmon to surge by over 30% within just a few months.

These exceptional increases in food prices, combined with reduced consumer purchasing power and higher fish prices, weakened competitive position of fish products in the market. In 2022, the value of fresh fish sales declined by 3%, while sales volume dropped by more than 25%. Fish processing companies and wholesalers were forced to adapt quickly to the sharp fall in demand for their primary product salmon.

The drop in production volumes led to higher unit costs for many processors. At the same time, the value of raw materials and other operational costs rose due to the war. Although prices for processed fish products increased more gradually than those for fresh fish, companies that had stockpiled raw materials were able to maintain uninterrupted supply to retailers. However, the range of fish products available in retail outlets narrowed.

In 2023, the slow development of the Finnish economy and consumer caution weakened the outlook for the fish market. Fish processing companies were cutting costs, reducing their product range and focusing on producing volume products. The high price of salmon and other fish raw materials in 2023 was affecting the product portfolio of the processing industry. The sales volume of fresh fish declined by 10%, which was reflected in lower revenues for fish processing companies.

In 2023, fish processing enterprises used 56 thousand tonnes of fish as raw material, 32 thousand tonnes were domestic fish, and 24 thousand tonnes were imported. Most of the processed fish was Baltic herring, salmon and rainbow trout and processing of these species accounted for 90% of all processed fish.

The use of domestic fish declined sharply in 2015 following Russia’s embargo on EU food products in autumn 2014, imposed as a countermeasure to EU sanctions related to the Ukraine crisis. Since then, the industry has gradually recovered, and nominal value of turnover has increased until 2022.

In 2023, the processing of Norwegian salmon decreased to 17 million kilograms, alongside a decline in the production of domestically sourced deep-frozen Baltic herring and sprat intended for export. According to fish trade statistics from the Natural Resources Institute Finland (Luke), a total of 76 million kilograms of fish products were exported for human consumption in 2023. This included 26 million kilograms of Norwegian salmon exported to various European markets. The main export destinations for fresh whole salmon were Poland, the Netherlands, France,

Lithuania, and Spain. Other fish products were primarily exported to Estonia, Sweden, and Latvia.

Table 7.22 Overview, Finland, 2013-2023

Variable	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Δ(2022-23)
Structure (number)												
Total enterprises	147	137	136	134	136	131	119	119	123	117	139	19%
≤ 10 employees	125	113	113	112	116	111	100	98	101	95	119	25%
11-49 employees	22	19	20	19	16	16	15	16	18	18	16	-11%
50-249 employees		5	3	3	4	4	4	5	4	4	4	0%
≥ 250 employees												0%
Employment (number)												
Total employees	1,010	1,237	1,004	963	966	1,039	1,100	1,166	1,084	1,036	955	-8%
FTE	808	1,072	803	751	760	823	812	993	872	906	820	-9%
Indicators												
Turnover (million €)	356	397	300	310	353	396	402	414	424	432	407	-6%
FTE per enterprise	5.5	7.8	5.9	5.6	5.6	6.3	6.8	8.3	7.1	7.7	5.9	-24%
Average wage (thousand €)	50.1	39.4	39.6	41.2	40.4	40.8	43.6	40.5	50.7	48.4	51.5	6%
Unpaid work (%)	4.2	3.6	4.8	4.1	3.4	3.4	2.5	2.7	2.8	3.6	3.8	4%
Enterprises doing fish processing not as main activity												
Number of entreprises	21	21	20	20	28	28	31	31	26	26	23	-12%
Turnover attributed to fish processing (million €)	93.8	93.8	102.6	102.6	133.6	133.6	117.5	117.5	73.7	73.7	71.2	-3%

Source: EWG elaboration from Member States submissions to the Fish Processing data call 2025.

7.8.2 Economic performance

Since 2020, the fish market has faced challenges according to the fish market review by Luke. Fish consumption has declined, consumer prices rose sharply in 2022, and the purchasing power of Finnish consumers has weakened. In 2023, consumers were even more cautious in their purchasing decisions than in previous years. Fish has been relatively expensive compared to many meat products, leading some consumers to opt for more affordable alternatives.

Sales volumes and revenues from fish have decreased, and processing companies no longer supply large quantities of fillets to retailers. The contraction of the market has effectively halted the growth of the fisheries sector.

In 2023, the Finnish fish processing sector recorded a turnover of EUR 407 million, marking a 6% decline from the previous year's EUR 432 million. Meanwhile, other income increased by 8% to EUR 8.3 million, while operating subsidies fell to EUR 0.1 million.

Total costs closely mirrored total income, largely due to raw materials accounting for the majority of operating expenses—approximately 74%, or EUR 294 million in 2023. Other key cost components included operational expenses and staff wages and salaries. All cost categories declined in 2023, except for other operational costs and unpaid labour. The most notable reduction was in raw material costs, which dropped by 12%. Energy costs also decreased compared to the previous year, contributing to a positive overall impact on profitability.

Gross value added improved by 24% to EUR 59 million, operating cash flow rose to EUR 16 million, and EBIT reached EUR 6 million marking a return to positive results after two consecutive years of losses. Overall, the sector strengthened its profitability, generating a net profit of EUR 2.2 million in 2023.

Table 7.23 Economic performance indicators, Finland, 2013-2023

Variable	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Δ (2022-23)
Income (million €)												
Turnover	356.0	396.8	299.8	309.8	353.3	395.8	402.4	414.2	424.1	431.6	406.7	-6%
Other income	1.9	1.8	1.9	0.8	1.0	1.5	1.1	1.4	2.2	7.7	8.3	8%
Operating subsidies	0.2	0.2	0.1	0.1	0.1	0.8	0.1	0.2	0.1	0.2	0.1	-43%
Total Income	358.1	398.9	301.8	310.7	354.4	398.2	403.6	415.7	426.4	439.6	415.2	-6%
Expenditure (million €)												
Purchase of fish and other raw material for production	248.1	278.2	220.0	229.3	266.0	295.9	301.9	312.0	311.8	334.0	294.1	-12%
Wages and salaries of staff	38.8	40.7	30.3	29.7	29.7	32.5	34.5	39.1	43.0	42.3	40.6	-4%
Imputed value of unpaid labour	1.7	1.5	1.5	1.3	1.0	1.1	0.9	1.1	1.2	1.6	1.6	0%
Payment for external agency workers (optional)												
Energy costs	4.0	4.3	3.5	2.3	2.4	2.6	2.6	4.7	6.7	10.3	9.5	-8%
Other operational costs	46.8	53.0	33.7	34.8	36.9	42.9	46.3	45.4	56.4	47.9	53.0	11%
Total production costs	339.4	377.8	289.1	297.3	336.1	375.0	386.2	402.3	419.1	436.1	398.8	-9%
Capital Costs (million €)												
Depreciation of capital	7.4	9.7	5.9	6.5	6.3	6.3	7.4	9.5	8.6	10.5	10.6	1%
Financial costs, net	1.0	0.0	1.1	1.2	1.8	0.4	0.8	2.1	1.4	2.4	3.5	49%
Capital Value (million €)												
Total value of assets	169.9	161.5	134.2	139.0	147.8	155.2	172.8	181.8	187.3	215.5	195.0	-10%
Net Investments	3.3	5.9	9.3	11.3	2.7	8.1	30.6	22.5	7.9	7.5	9.0	20%
Subsidies on investments				3.5	0.1	0.5	0.9	0.2	0.2	0.4	0.4	13%
Debt	112.9	100.6	89.0	89.5	93.7	97.3	111.2	119.0	130.9	150.6	141.8	-6%
Economic performance (million €)												
Gross Value Added	59.0	63.1	44.4	44.2	48.9	56.0	52.6	53.5	51.4	47.1	58.5	24%
Operating Cash Flow	18.7	21.1	12.7	13.4	18.3	23.2	17.4	13.5	7.3	3.5	16.3	363%
Earning before interest and tax	11.3	11.4	6.8	6.9	12.1	17.0	10.0	4.0	-1.2	-6.9	5.8	183%
Net Profit	10.3	11.4	5.7	5.7	10.2	16.6	9.2	1.8	-2.6	-9.3	2.2	124%
Productivity and performance Indicators												
Labour productivity (thousand €)	73.1	58.9	55.3	58.8	64.4	68.0	64.8	53.9	58.9	52.0	71.3	37%
Capital productivity (%)	34.7	39.1	33.1	31.8	33.1	36.1	30.4	29.4	27.4	21.9	30.0	
GVA margin (%)	16.5	15.8	14.7	14.2	13.8	14.1	13.0	12.9	12.1	10.7	14.1	
EBIT margin (%)	3.2	2.9	2.3	2.2	3.4	4.3	2.5	1.0	-0.3	-1.6	1.4	
Net profit margin (%)	2.9	2.8	1.9	1.8	2.9	4.2	2.3	0.4	-0.6	-2.1	0.5	
Return on Investment (%)	6.7	7.1	5.1	5.0	8.2	10.9	5.8	2.2	-0.7	-3.2	3.0	
Financial position (%)	33.5	37.7	33.7	35.6	36.6	37.3	35.7	34.5	30.1	30.1	27.3	

Source: EWG elaboration from Member States submissions to the Fish Processing data call 2025.

The gross value added (GVA) of the processing industry have been increasing steadily, reaching EUR 63 million in 2014. However, it declined by 30% in 2015, in line with a drop in turnover when exports to Russia faded. Profitability improved until 2018 but fell in 2019 due to rising production costs, which remained elevated through 2022.

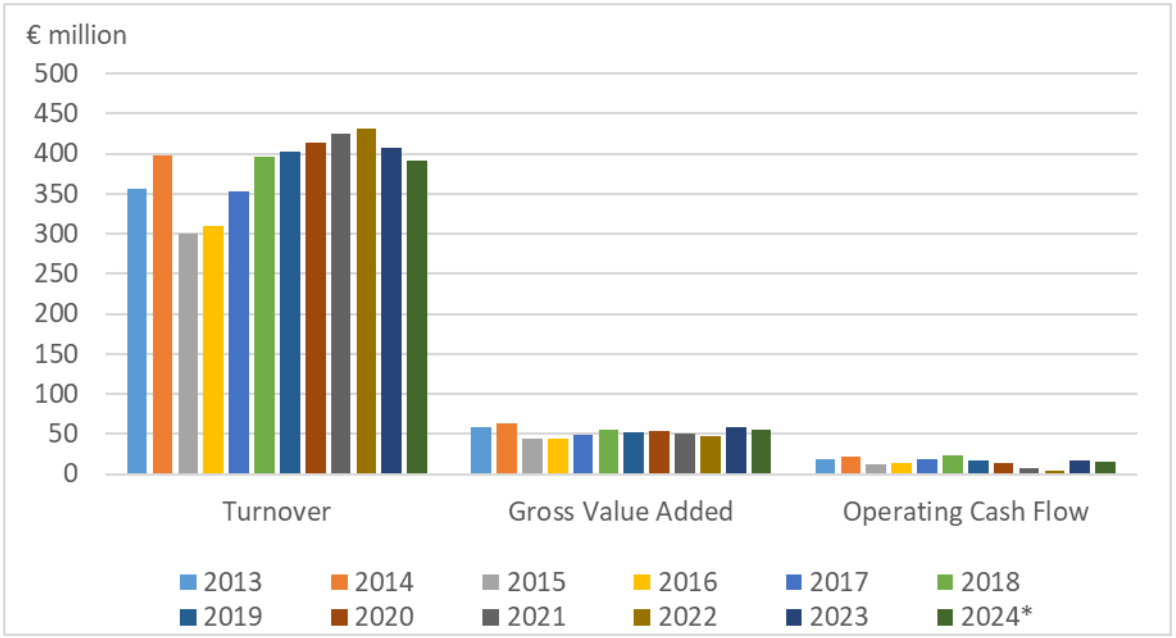
Overall, the sector has operated with a low net profit margin, averaging just 1.6% of total income during 2013-2023 period. In 2023 net profit margin was 0.5%. The highest investments

in the 11-year span were made in 2019 and 2020. In 2023, net investments amounted to EUR 9 million—an increase of 20% compared to the previous year. At the same time, debt volume decreased by 6%, yet the financial position weakened to 27%.

Return on investment peaked in 2018 but followed a downward trend until 2022. In 2023, it rebounded to 3%. Labour productivity improved by 37%, reaching EUR 71,300. Capital productivity, GVA margin, EBIT margin, and net profit margin also showed positive development in 2023. Thanks to easing inflation, the fish processing sector began to recover financially after several years of high operating costs.

Figure 7.9 illustrates the trends in turnover, gross value added, and gross profit in Finland's fish processing sector from 2013 to 2024, with the 2024 figures based on nowcasting. The use of domestic fish dropped sharply in 2015, following Russia's embargo on EU food products in autumn 2014 which was a countermeasure to EU sanctions related to the Ukraine crisis. This led to a significant decline in the sector's turnover in 2015. However, the industry has gradually recovered since then.

Figure 7.9 Turnover, GVA and Operating cash flow evolution, Finland, 2013-2024



Source: EWG elaboration from Member States submissions to the Fish Processing data call 2025. *2024= nowcasted data

When adjusting for the high inflation of recent years, the real turnover figures indicate that the sector reached its peak income in 2021. Turnover has since declined in both 2022 and 2023. Gross value added has remained relatively stable in recent years, showing improvement in 2023. Operating cash flow also rebounded in 2023 after a dip in 2022. The preliminary DCF economic results show decrease in Turnover and improvement in profitability of processing sector in 2024.

7.8.3 Breakdown by company size

The Finnish fish processing sector is predominantly made up of micro enterprises, each employing fewer than 10 people. In 2023, there were 119 micro enterprises, representing 86%

of all main activity businesses in the industry. However, these companies contributed only 8% of the sector's total income. In contrast, four medium-sized enterprises accounted for 75% of the total income, while 16 small enterprises generated 18%. Small and medium-sized enterprises also dominated in terms of employment.

The Russian food embargo had a significant impact on medium-sized enterprises, causing their turnover to nearly halve in 2015. Since then, their revenue has rebounded rapidly, and in recent years, medium-sized enterprises have consistently generated several times more income than small enterprises.

In 2023, small enterprises achieved the highest profitability in the sector, posting a net profit of EUR 4.6 million, while both medium-sized and micro enterprises recorded losses. Medium-sized enterprises were the most profitable group between 2016 and 2018, but rising production costs have eroded their margins, resulting in negative net profits since 2021. Although they generated an operating cash flow of EUR 8 million in 2023, they still posted a net loss of more than EUR 2 million. Micro enterprises saw a slight increase in both income and production costs compared to the previous year, leading to a net loss of EUR 0.2 million.

Table 7.24 Economic performance by size, Finland, 2013-2023

Variable	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Δ (2022-23)
less than or equal to 10 employees												
Total Income	44.2	33.3	28.7	36.0	40.6	38.6	34.1	30.1	29.5	32.1	33.6	5%
Total production costs	43.8	32.5	28.3	35.0	38.5	36.8	32.6	29.4	28.4	30.4	32.2	6%
Gross Value Added	9.0	7.2	6.3	6.7	7.4	7.0	6.4	6.2	7.0	8.2	8.4	3%
Operating Cash Flow	0.4	0.8	0.4	1.0	2.0	1.7	1.5	0.7	1.1	1.7	1.5	-14%
Earning before interest and tax	-0.8	-0.4	-0.6	0.1	1.2	0.9	0.8	-0.0	0.3	0.7	0.3	-62%
Net Profit	-0.9	-0.7	-0.8	-0.1	1.0	0.6	0.7	-0.7	0.1	0.6	-0.2	-141%
between 11 and 49 employees												
Total Income	313.9	134.1	144.2	121.5	111.4	110.0	108.8	57.2	83.0	94.6	73.7	-22%
Total production costs	295.6	127.8	137.3	116.2	105.5	101.7	100.5	53.1	76.4	95.7	66.7	-30%
Gross Value Added	50.0	19.0	22.1	19.3	16.8	18.4	18.7	14.0	19.5	14.6	18.7	28%
Operating Cash Flow	18.3	6.3	6.9	5.3	5.9	8.3	8.3	4.1	6.6	-1.0	7.0	788%
Earning before interest and tax	12.2	3.4	4.2	2.7	3.8	6.2	6.1	1.7	3.8	-5.4	4.7	189%
Net Profit	11.2	3.0	3.3	2.2	3.4	5.7	5.8	1.4	3.6	-6.3	4.6	172%
between 50 and 249 employees												
Total Income		231.4	128.9	153.2	202.4	249.6	260.7	328.5	313.9	312.9	307.9	-1.6%
Total production costs		217.4	123.5	146.1	192.0	236.4	253.2	319.8	314.3	310.1	300.0	-3.2%
Gross Value Added		36.9	16.0	18.2	24.7	30.6	27.5	33.4	24.8	24.4	31.3	28.2%
Operating Cash Flow		14.0	5.4	7.0	10.4	13.2	7.5	8.7	-0.4	2.8	7.9	181.0%
Earning before interest and tax		8.4	3.3	4.1	7.1	9.9	3.1	2.3	-5.3	-2.3	0.7	131.5%
Net Profit		9.1	3.3	3.6	5.8	10.3	2.7	1.2	-6.3	-3.5	-2.1	39.4%

Source: EWG elaboration from Member States submissions to the Fish Processing data call 2025.

7.8.4 Raw materials

According to fish processing statistics from the Natural Resources Institute Finland (Luke), the main species used in Finnish fish processing are salmon, Baltic herring, and rainbow trout. The industry also processes European whitefish, vendace, bream, and various other freshwater species.

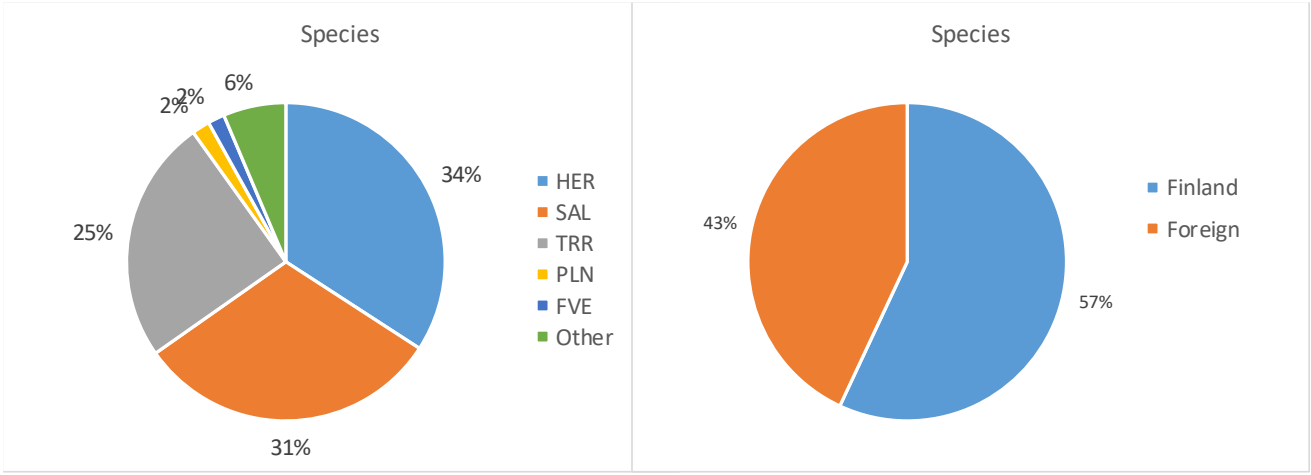
Luke's Fish Market Review highlights that demand for salmonids grew steadily over time, driven by increasing international production of Atlantic salmon. As farmed salmonids became more widely available, they gradually replaced Baltic herring in Finnish food fish production. Today, salmon and rainbow trout are the most important species in the Finnish fish food market, with approximately half of the salmonids available being farmed.

In recent years, rising prices of salmonids have led to a decline in demand. As a result, imports of salmonids for processing have decreased, while demand for domestic fish has remained stable or even increased.

Baltic herring and sprat have traditionally been the most important species in Finnish fish processing in terms of volume, with salmon now ranking second. In 2023, Baltic herring and sprat accounted for 34% of the raw material used in processing, while salmon made up 31%. Although domestic consumption of herring has declined significantly over the past decades, salmon has become the most valuable species in the market. Together with rainbow trout, salmonids represented 56% of the total weight of fish produced in 2023.

Russia was previously the main export market for herring, but following the embargo, most processed herring and sprat are now exported to Estonia. More than half of the raw material used in Finnish fish processing is domestic, while 43% is imported, primarily Norwegian salmon. In 2023, the most significant processed products by weight were deep-frozen Baltic herring and sprat. Other key products included fresh Norwegian salmon fillet, fresh domestic rainbow trout fillet, and smoked rainbow trout. Combined production of Norwegian salmon and mostly domestic rainbow trout reached 31,000 tonnes in 2023.

Figure 7.10 Tunover, Main raw material used by species and origin, Finland, 2023



Source: EWG elaboration from Member States submissions to the Fish Processing data call 2025.

7.8.5 Trends, drivers and outlook

The Finnish fish processing sector has been increasingly concentrated. The ten biggest companies in the sector in terms of turnover made up 87% of the total revenues in 2023. The fish processing industry is undergoing structural changes, and two major players have exited the market in recent years. This shift has temporarily created space in the market and opened up growth opportunities for the remaining companies. In particular, the two largest processors have managed to increase their sales volumes and improve production efficiency.

The competitiveness and performance of the sector is mostly connected to the price developments of fish, mainly Baltic herring, rainbow trout and salmon, but due to high inflation in the recent few years, also developments of the operational costs play increasingly an important role. The price paid for Baltic herring by the processing industry has been on the rise since the early 2000s, and in 2023, the prices of herring for processing, food export, or industrial use were exceptionally high. Wholesale prices for scale fish have also shown long-term growth. In

2022, the price of salmon increased significantly and continued to rise in 2023, whereas the prices of pike-perch, European whitefish, and perch declined.

Alongside salmon, rainbow trout has remained a key product in the domestic fresh fish and processing markets. In autumn 2023, according to the Fish Market Review, the market for rainbow trout was challenging, as global salmon prices were low during the rainbow trout slaughter season. To avoid a price drop, rainbow trout producers increased exports to Eastern European markets. The reduced supply of rainbow trout in the domestic market and the resulting price increase took fish processing companies by surprise. The price of processed rainbow trout products rose, and some institutional kitchens had to suspend their purchases of rainbow trout.

The outlook for fish processing in 2024 is still financially tight. According to the Fish Market Review 2024, fish processing in Finland continues to rely heavily on imported and farmed fish, particularly Norwegian salmon and domestically farmed rainbow trout. The processing volumes of native species (such as roach, bream, and pikeperch) remain small, but efforts have been made to diversify their use.

Processing companies have adapted to high raw material costs and shrinking markets by developing their product ranges and improving production efficiency. The production of private-label products for retail chains has increased, enhancing the operational efficiency of processing companies.

Fish markets are adjusting to a new economic environment, characterized by weakened consumer purchasing power and rising costs. Processing and marketing are increasingly focused on high-quality and specialty products, as growth in mass markets has slowed down. The position of domestic fish may strengthen if its availability and processing are further developed.

It appears that the financial situation in fish processing will remain tight, with costs either rising or staying at a high level. At the same time, the retail sector is putting pressure on the market by sourcing products at increasingly lower prices, which challenges the revenue generation of fish processors.

The Finnish government’s programme to promote domestic fish sets an ambitious goal: to double both fish consumption and domestic fish production by 2027. Achieving this target will require significantly increased use of Baltic herring as a food fish. In 2019, domestic consumption of Baltic herring rose to 0.4 kg per person per year and remained at that level through 2021. However, it declined to 0.2 kg in 2022 and stayed unchanged in 2023.

At the same time, demand for wild domestic fish has been growing, but supply has remained limited in recent years. The Baltic herring stock in the Gulf of Bothnia has weakened, fishing quotas have been reduced, and fishers have scaled back their catches. In 2024, the European Commission proposed a complete ban on commercial herring fishing in the Baltic Sea. Nevertheless, the EU Agriculture and Fisheries Council opted to allow targeted herring fishing to continue, based on scientific recommendations and within reasonable quota limits for 2024.

In Finland, side streams from fish processing have been utilized in various ways as part of circular economy, including as feed for fur farms, composting, biogas production, and the extraction of fish oil for use in food supplements and functional foods. In 2016, the country’s first fishmeal plant began operations, with an estimated annual capacity of 30,000–40,000 tonnes of Baltic herring used as raw material for fish meal and oil. These products are further processed into feed for fish farming. Since 2017, fish meal has also been exported. In 2023, fish meal exports reached approximately 3 million kilograms, valued at EUR 5 million. The prices of fish fats and oils were high, and they were exported for more than EUR 7 million.

Finnish fish processing companies are actively involved in the development of energy efficiency, and the sector is part of the national energy efficiency strategy. Many large fish processing companies publish environmental reports or are involved in voluntary energy efficiency agreements. E.g. Kalaneuvos Oy and Apetit Oyj publish a sustainability report on their websites describing sustainability actions they are taking.

7.8.6 Data coverage and quality

The economic data is compiled by combining data from the structural business and financial statement statistics of Statistic Finland (SF) and production survey data from the Natural Resources Institute Finland (Luke). Financial data covers all enterprises having fish processing as their main activity in Business Register of Statistics Finland in 2023. Luke carries out a survey on production of processed fish every second year. The latest information available for the report is for 2023. The production survey is carried out as a stratified survey with a target population including all enterprises operating in fish processing, including also enterprises that do not have fish processing as their main activity.

7.9 France

The fish processing industry is a small component of the food processing sector in France: its turnover accounts for approximately 2.5% of the turnover of the whole food processing industry.

In 2023, the French fish processing sector encompasses about 381 enterprises and generates a total turnover of EUR 5.3 billion. The dependence of the French sector is limited for the seafood processing industry, which now relies mainly – and even exclusively for certain specialties such as smoked salmon or white fish fillet preparations – on imports to supply its raw materials.

However, the analysis of recent structural trends and current economic performances is impaired by the continuous degradation of the data provided by France regarding this industry in the recent years (see the “data issues” section at the end of this chapter). Two sources may be used to gather data on the French fish processing industry: the results of the survey implemented by FranceAgriMer provided in response to the DCF and the data provided by the French national statistical services to Eurostat. Historically, the DCF data were more complete and more reliable, however the quality of the data degraded continuously over time: no data was transmitted for the years 2016, 2017, 2021 and 2023, and the 2018 data are incomplete. Eurostat data are more consistent over time, nevertheless three limitations have to be highlighted: i) methodological breaks in time series occurred in the years 2014, 2015 and 2017; ii) 2018 data are incomplete; iii) the data for the year 2016 are inconsistent, especially with respect to the number of firms, even though no methodological changes are reported this year. In 2022, the number of employees and FTEs has considerably increased (+2 100 employees); no explanation was provided or found to justify these data; so that the information is considerated unreliable. Due to these numerous information gaps, the present chapter will rely on Eurostat data mainly for analysing structural trends.

General trend since 2013: the number of companies in the sector in France has increased by 9% since 2013, from 351 companies to 381 in 2023. The number of FTEs has fallen by 11%, highlighting the increase in worker productivity (-12% for total employees). Turnover has climbed from EUR 3.6 billion to EUR 5.3 billion over the same period, as have GVA and gross profit (up 31% and 57% respectively).

However, this growth since 2013 should be viewed with caution, as since the Covid-19 crisis, the sector has experienced a slowdown in activity and remains highly unstable. The French market is particularly dependent on imports and gives a contrasting result. In addition, international events such as the war in Ukraine since 2022, the general inflation, and the rising energy and fuel prices, for example, have impacted the sector, its productivity and employment levels. However, “Seafood imports have contributed to sustaining the consumption of seafood products in the EU (France included) and have had positive impacts on the economic activity of the processing and distribution subsectors, as well as on the general economy, especially in the presence of limited domestic supply”[15].

The number of enterprises decreased slightly from 385 to 381 between 2022 and 2023 (-1%) but this does not reflect the trend since 2021, as we can see a 3% increase in this number as well as in the number of employees FTE between 2021 and 2023 (respectively 11 746 and 12 071).

[15] The EU Blue Economy Report *2025 Edition.*

Based on EUROSTAT data between 2021 and 2023, the French fish processing industry production experienced an increase by 6% in value. However, we have seen a slowdown since 2022, with a 4% decline in the value of this production to EUR 4,355.11 billion. Gross value added (-7%), had also decreased between 2022 and 2023 and the gross profit has been quite stable since this date.

Smoked fish (including salmon) occupy the leading position in value within the industry with a sold production value of EUR 1 466.5 millions (130 890 tonnes) in 2023 (Eurostat data) representing 34% of the total production value in the seafood processing industry. The fresh or chilled fillets have been produced for EUR 933.3 million and sold 90 637 tonnes. The prepared dishes, which had been in the first place since 2020, has fallen to second place since 2023 in volume and the fourth place in value with 108 842 tonnes for EUR 753.5 millions. The Crustaceans represented 19% of the total value (EUR 811.8 million) for 84 535 tonnes. For crustacean and smoked products, we see strong growth in value produced between 2021 and 2023 (+30% and +25% respectively), with growth slowing significantly in 2022.

After Covid-19, the customers tent to continue buying more sea products than before the crisis, however they privilege fresh products, being more interested by origin, quality, traceability and animal welfare while buy seafood. The development of direct or semi direct selling system (via mobile or online application) is also a consequence of the changes in the French customers' habits building a new relationship between producer and consumer.

In 2013, half of all companies belonged to the smallest category, and only 3% were companies with more than "250 persons employed or more" In 2023, this latter category remained stable with little variation over the past 10 years and a turnover of EUR 3.8 billion (72% of the sector's total turnover), concentrating economic activity on the largest companies. The smallest companies ("0-9 employees") represent 72% of the number of companies in 2023, with a sharp increase over the past 10 years (+47%), but account for only 3% of turnover, with EUR 137 million concentrating.

Table 7.25 Overview, France, 2013-2023

Variable	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Δ(2022-23)
Structure (number)												
Total enterprises	351	327	380	495	311	316	333	353	369	385	381	-1%
Total employees	13,282	12,480	12,073	13,641	12,003	13,524	12,915	12,777	12,604	14,706	12,957	-12%
Unpaid labour	42	62	49	53	51	41	43	47	152	151	160	6%
FTE	11,661	10,954	11,218	12,665	11,021	12,255	11,769	11,119	11,746	13,495	12,071	-11%
Income, expenditure and investments (million €)												
Production value	3,172.1	3,195.1	3,302.9	3,775.0	3,695.6		4,123.3	3,984.9	4,104.1	4,532.3	4,355.1	-4%
Turnover from fish processing												0%
Turnover total	3,646.1	3,511.5	3,676.8	4,172.5	4,455.1		4,823.4	4,792.6	4,907.3	5,766.3	5,284.7	-8%
Total purchases of goods and services	2,999.4	2,896.4	2,995.2	3,541.0	3,732.0		3,998.8	4,023.3	4,066.6	5,048.3	4,419.0	-12%
Personnel costs	491.0	470.0	477.9	540.2	528.6		601.8	560.3	588.5	674.8	615.2	-9%
Gross investment in machinery and equipment	0.0	0.0	0.0	0.0	0.0		0.0	0.0	80.1	81.7	62.3	-24%
Economic performance (million €)												
Gross Value Added	603.5	599.0	625.1	651.9	699.1		777.8	760.6	836.0	850.1	791.7	-7%
Gross profit	112.5	129.0	147.2	111.6	170.4		176.1	200.3	247.5	175.3	176.5	1%

Source: EWG elaboration from Eurostat (2025) data.

According to nowcast, for 2024 the turnover of the French SFP continues to decline, as does the GVA. Regarding costs rising, some sectors are less profitable than others. This is the case of the

canning sector, where a company was relocated in 2024, resulting in the loss of 155 jobs (Figure 7.11).

Table 7.26 Evolution of the number of enterprises by company size, France, 2013-2023

Size category	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
From 0 to 9 persons employed	186	213	240	308	213	210	222	236	255	270	274
From 10 to 19 persons employed	65	40	45	60	35	38	36	36	41	38	36
From 20 to 49 persons employed	59	45	55	71	34	35	42	44	42	41	37
From 50 to 249 persons employed	30	20	28	40	20	23	25	28	20	21	22
250 persons employed or more	12	9	11	15	10	10	8	9	11	15	12
Total	351	327	380	495	311	316	333	353	369	385	381

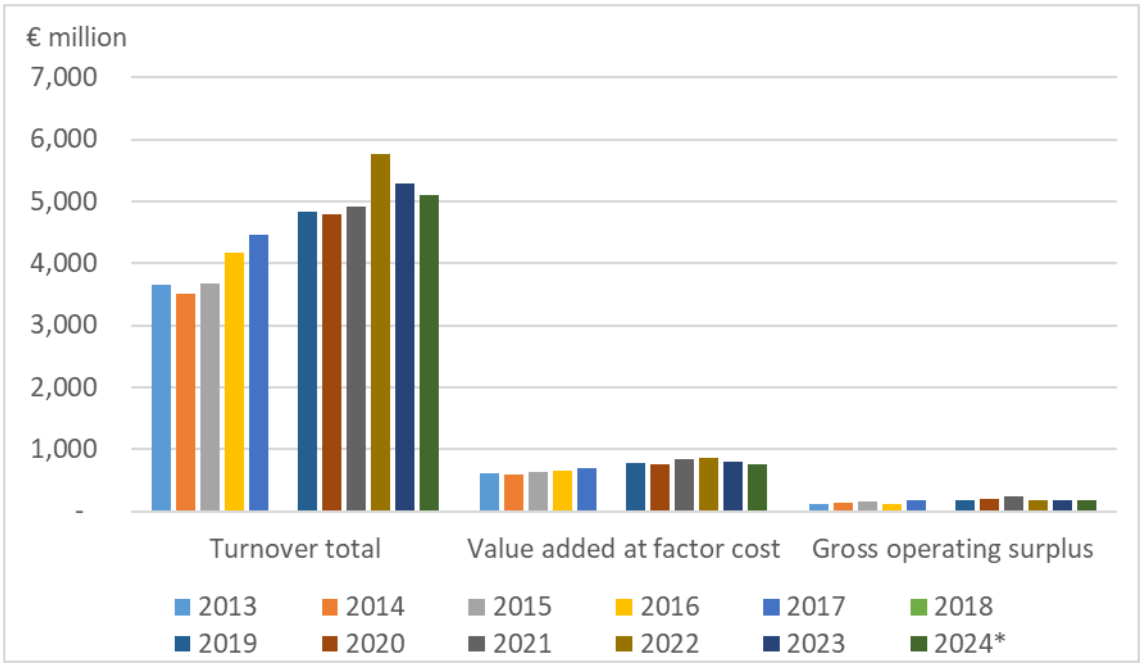
Source: EWG elaboration from Eurostat (2025) data.

Table 7.27 Evolution of the net turnover by company size, France, 2013-2023

Size category	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
From 0 to 9 persons employed	125.8	232.8	172.2	155.1	129.6		127.6	131	124.18	127.82	136.9
From 10 to 19 persons employed	295.2	222.4	223.3	197.3	190.2		127.6	116	135.98	152.86	161.4
From 20 to 49 persons employed	576.7	541	550.4	616.7	296.8		437.6	412.5	407.53	371.13	327.69
From 50 to 249 persons employed	1018.9	885.5	940.9	1254.6	938.1	1144.1	1236.6	1261.2	1092.38	787.37	831.43
250 persons employed or more	1629.6	1629.9	1790.1	1948.9	2900.4		2894	2871.9	3147.27	4327.15	3827.31
Total	3646.1	3511.5	3676.8	4172.5	4455.1		4823.4	4792.6	4907.33	5766.33	5284.72

Source: EWG elaboration from Eurostat (2025) data.

Figure 7.11 Turnover, GVA and Gross profit evolution, France, 2013-2024



Source: EWG elaboration from Eurostat (2025) data. *2024= nowcasted data

7.9.1 Data coverage and quality

France data coverage and quality is deteriorating for various reasons.

No French data were submitted for the 2021 and 2023 fish processing sector data call. France decided not to collect data on the fish processing industry under the DCF / EU-MAP from 2022. Thus, DCF data were only available until 2018, as they were submitted in previous data calls.

Hence, the EWG prepared this section based on Eurostat's Structural Business Statistics data, are publicly available. Global production data by types of products were usually compiled by the Ministry for Food and Agriculture for the PRODCOM database using primary data from professional sources are now provided by the French national statistics service based on a result of an annual survey. Products of the fish processing industry are covered by NACE rev 2 code 10.20Z (processing and preserving of fish, crustaceans and molluscs) and part of NACE rev 2 code 10.85Z i.e. NAF code 10.85.12.00 (prepared dishes with fish, crustaceans and molluscs). Unfortunately, no data are available in the PRODCOM database for smoked salmon in 2019: smoked salmon being one of the most important product categories of the French fish processing industry, the unavailability of these data prevents any comparative analysis of production trends between the main sub-sectors of the industry. For the years 2017 and 2018, FranceAgriMer seems to have restricted the perimeter of the survey to the enterprises affiliated to the 10.20Z industry segment only, while the initial survey was based on an exhaustive list of enterprises gathered from various sources, including sanitary licenses and complementary NACE codes. However, the population of enterprises covered by the DCF survey appeared much lower than the population of the same NACE code recorded by the SBS data of Eurostat for 2017 and 2018. In addition, despite this restrained scope of the survey, the data quality continued to degrade. During the present expert meeting, the data provided by France were missing for the years 2016, 2017 and 2019, and incomplete for 2018.

7.10 Germany

7.10.1 Overview

In 2023, the German processing sector comprised 204 enterprises with fish processing as their main activity (Table 7.28). The segment with the highest number of enterprises (up to 10 employees) accounted for only 3% of the industry's total turnover. In contrast, the small group of large enterprises with more than 250 employees (six enterprises) represented 42% of total employment and 47% of the sector's turnover. The 19 enterprises with between 50 and 249 employees contributed 34% of turnover and 28% of employment, while enterprises with 10 to 49 employees accounted for 25% of employment and 17% of turnover.

Due to this industry structure and given that data under the Structural Business Statistics Regulation are already collected for enterprises with 20 or more employees, Germany reports economic data only for the aggregated segment of 20 or more employees.

Table 7.28 Overview, Germany, 2013-2023

Variable	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Δ (2022-23)
Structure (number)												
Total enterprises	253	258	248	247	244	223	210	208	210	205	204	0%
≤10 employees	176	178	164	157	154	137	118	108	112	114	117	3%
11-49 employees	54	56	54	60	61	59	65	73	71	67	62	-7%
50-249 employees	15	16	22	23	22	20	20	22	20	18	19	6%
≥250 employees	8	8	8	7	7	7	7	5	7	6	6	0%
Employment (number)												
Total employees	6,751	6,561	6,665	6,255	6,141	6,653	6,633	6,095	6,143	4,971	4,867	-2%
FTE	6,476	6,251	6,373	5,876	5,885	6,324	6,305	5,509	5,556	4,575	4,467	-2%
Indicators												
Turnover (million €)	2,060	1,983	2,091	2,080	2,173	2,130	2,196	2,309	2,196	1,822	2,165	19%
FTE per enterprise	25.6	24.2	25.7	23.8	24.1	28.4	30.0	26.5	26.5	22.3	21.9	-2%
Average wage (thousand €)	36.0	38.4	37.6	39.7	40.8	40.4	41.5	48.2	47.8	63.5	45.7	-28%
Unpaid work (%)												-
Enterprises doing fish processing not as main activity												
Number of entreprises								202	202	192	192	0%
Turnover attributed to fish processing (million €)								361.5	307.7	123.6	145.5	18%

Source: EWG elaboration from Member States submissions to the Fish Processing data call 2025.

Between 2013 and 2023, the total number of processing enterprises in Germany decreased by 19%. The number of microenterprises with 10 or fewer employees showed the largest decline, falling from 176 to 117 enterprises, representing a decrease of 34%. The number of enterprises with 11 to 49 employees fluctuated between 54 and 73, indicating a generally increasing trend with an overall growth of 15%. The number of enterprises with 50 to 249 employees varied between 15 and 23, showing an increase of 27% when comparing 2013 and 2023 directly. The group of enterprises with more than 250 employees fluctuated between five and eight. Between 2022 and 2023, the total number of enterprises decreased by one. However, this variation is less the result of company closures or new openings and more related to the fact that several enterprises operate in multiple activities, some of which generate similar levels of turnover. Since classification within an economic sector is determined by the activity generating the highest turnover, the assignment of an enterprise to a specific sector may vary from year to year. In addition, some enterprises have staff numbers fluctuating around the 250-employee threshold, which can also lead to changes in size-class assignment.

Between 2016 and 2021, the number of employees consistently ranged between approximately 6,095 and 6,653. In 2022, employment fell to around 4,971 and declined slightly further to about 4,867 in 2023. Compared with 2021, this represents a reduction of roughly 20% in employment. This decline reflects an overall trend of workforce reduction within the sector, likely linked to structural adjustments, economic constraints, or shifts in production volumes.

In contrast to the relatively small size of the German fleet within the European context, the German processing industry plays a more prominent role at EU level, ranking fifth in terms of processing volume in 2023. In certain key sub-segments, such as fish-finger production, Germany holds a position of global relevance.

Regarding geographical distribution, turnover and employment in fish processing remain strongly concentrated along the North Sea coast. Based on employment data from the Federal Employment Agency[16], more than 60% of all employees in the fish processing sector work in enterprises located in Lower Saxony, primarily in Cuxhaven, and in Bremerhaven. This regional concentration underscores the continued central importance of these coastal cities as hubs of Germany's fish processing industry.

7.10.2 Economic performance

Between 2013 and 2023, *turnover* fluctuated between EUR 1,822 million and EUR 2,309 million. The highest *turnover* was recorded in 2020, while just two years later, in 2022, the lowest value within the period was reached. A comparison between 2022 and 2023 shows an increase of 19%. In addition, enterprises generate turnover from other activities, which vary considerably and range between 3 million and 76 million euros. Since the beginning of the series the value of other income has fluctuated greatly between EUR 3 and 76 million (see Table 7.29).

Total production costs include the *purchase of fish and other raw materials for production*, *wages and salaries*, *energy costs*, and *other operating costs*. In 2022, the *cost of fish and other raw materials* increased by 30% to EUR 1,711 million compared with 2021, followed by an 18% decrease in 2023. *Wages and salaries*, as well as *energy costs*, also peaked in 2022 at EUR 290 million (+10%) and EUR 59 million (+50%) respectively. Both categories declined in 2023 to EUR 204 million (–30%) and EUR 46 million (–22%). *Other operating costs* in 2022 were higher than in the previous year but in line with earlier values before falling by 42% to EUR 250.6 million in 2023. Consequently, total production costs reached their highest level in 2022 at EUR 2,492 million. These figures are consistent with sector reports. The Fish Information Center (FIZ)[17] noted that 2022 was marked by the most severe raw material and energy crisis since World War II.

Since 2016, *depreciation of capital* has increased, reaching a peak of EUR 57.6 million in 2020. Thereafter, the value declined, reaching its lowest level of EUR 28.3 million in 2023.

[16] Federal Employment Agency (2024). Tables on Employees by Economic Sectors (WZ 2008) (Quarterly Data). Nuremberg, Germany. https://statistik.arbeitsagentur.de/ (last retrieved, October 22, 2025).

[17] Fisch-Informationszentrum e.V. (2024): Daten und Fakten 2023 https://www.fischinfo.de/images/broschueren/pdf/FIZ_DF_2023.pdf (last retrieved, October 22, 2025).

Table 7.29 Economic performance indicators, Germany, 2013-2023

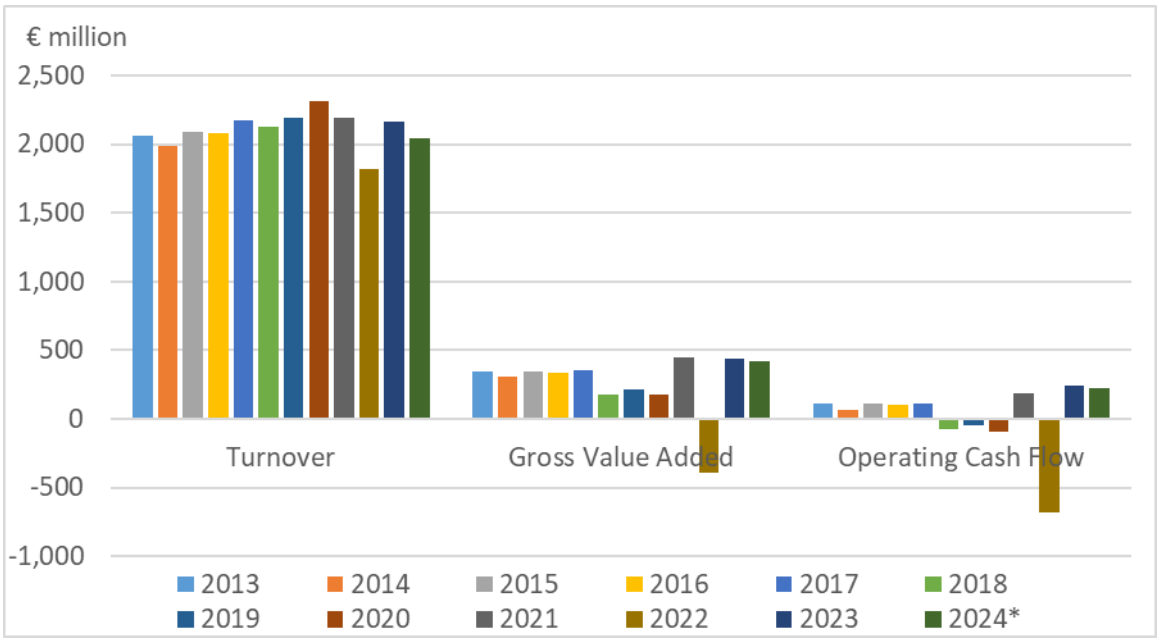
Variable	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Δ (2022-23)
Income (million €)												
Turnover	2059,7	1982,9	2091,4	2079,8	2172,6	2129,5	2195,6	2309,0	2196,0	1822,0	2165,1	19%
Other income	6,2	9,7	16,1	7,2	7,5	20,4	76,2	3,3	9,9	17,5	13,0	-26%
Operating subsidies	0,0	0,0	0,0	0,1	0,1	4,6	-0,4	2,1	1,1	1,0	0,2	-80%
Total Income	2066,0	1992,6	2107,4	2087,0	2180,2	2154,5	2271,4	2314,4	2207,0	1840,5	2178,2	18%
Expenditure (million €)												
Purchase of fish and other raw material for production	1260,3	1212,3	1237,2	1281,6	1359,3	1300,2	1384,7	1381,9	1323,0	1711,0	1404,5	-18%
Wages and salaries of staff	233,4	239,8	239,4	233,4	240,1	255,7	261,3	265,8	265,4	290,3	203,9	-30%
Imputed value of unpaid labour	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	
Payment for external agency workers (optional)	0,0	0,0	0,0	0,0	0,0	214,5	224,7	265,8	28,3	32,5	35,0	8%
Energy costs	47,0	45,8	44,4	35,2	34,6	39,0	36,7	37,0	39,1	58,7	46,0	-22%
Other operational costs	413,2	427,7	479,1	434,6	434,9	420,4	410,4	452,9	366,9	432,4	250,6	-42%
Total production costs	1954,0	1925,6	2000,1	1984,8	2069,0	2229,8	2317,7	2403,4	2022,7	2524,8	1940,0	-23%
Capital Costs (million €)												
Depreciation of capital	41,0	32,9	37,4	32,8	35,9	37,3	38,3	57,6	41,3	46,1	28,3	-39%
Financial costs, net	11,9	10,1	8,1	4,5	4,0	3,8	4,0	-7,1	-10,2	4,6	1,8	-60%
Capital Value (million €)												
Total value of assets	952,7	915,5	932,5	982,9	961,1	1105,7	1167,5	1063,4	1060,0	914,3	1098,8	20%
Net Investments	25,7	25,0	29,1	42,7	33,5	59,9	51,5	49,8	41,2	41,2	28,6	-31%
Subsidies on investments				0,6	1,5	0,3	0,8	0,0	0,5	1,1	0,4	-65%
Debt	802,7	765,5	746,8	541,8	431,8	449,3	519,1	448,1	420,0	506,1	638,8	26%
Economic performance (million €)												
Gross Value Added	345,4	306,8	346,7	335,6	351,2	175,8	215,4	174,7	448,6	-395,0	441,9	212%
Operating Cash Flow	112,0	67,0	107,4	102,2	111,2	-75,3	-46,3	-89,0	184,3	-684,3	238,2	135%
Earning before interest and tax	71,0	34,1	70,0	69,3	75,3	-112,6	-84,6	-146,6	143,0	-730,5	209,9	129%
Net Profit	59,1	24,1	61,9	64,8	71,3	-116,4	-88,6	-139,5	153,2	-735,1	208,1	128%
Productivity and performance Indicators												
Labour productivity (thousand €)	53,3	49,1	54,4	57,1	59,7	27,8	34,2	31,7	80,7	-86,4	98,9	215%
Capital productivity (%)	36,3	33,5	37,2	34,1	36,5	15,9	18,5	16,4	42,3	-43,2	40,2	
GVA margin (%)	16,7	15,4	16,5	16,1	16,1	8,2	9,5	7,6	20,3	-21,5	20,3	
EBIT margin (%)	3,4	1,7	3,3	3,3	3,5	-5,2	-3,7	-6,3	6,5	-39,7	9,6	
Net profit margin (%)	2,9	1,2	2,9	3,1	3,3	-5,4	-3,9	-6,0	6,9	-39,9	9,6	
Return on Investment (%)	7,5	3,7	7,5	7,1	7,8	-10,2	-7,2	-13,8	13,5	-79,9	19,1	
Financial position (%)	15,7	16,4	19,9	44,9	55,1	59,4	55,5	57,9	60,4	44,6	41,9	

Source: Member States submissions to FPI data call 2025 and elaboration by the EWG.

Against this background, the *gross value added* of the German fish processing industry amounted to EUR 477 million, closely matching the previous report. *Net profit* grew by 36% in 2023 compared with 2021, while *earnings before interest and taxes* rose by 47%, and *operating cash flow* by 29%. It should be emphasized that these indicators must be interpreted in the context of irregular developments in sector income, such as company and patent sales or relocations of firms abroad, as explained at the beginning of this section.

In 2022, *turnover* was particularly low while production costs were exceptionally high, resulting in a mathematically negative *gross value added* and *operating cash flow*. However, the data is derived from two distinct statistical sources. Errors or inconsistencies in one source, or differences in enterprise coverage used for extrapolation, cannot be excluded. Consequently, comparison of these data is not meaningful.

Figure 7.12 Turnover, GVA and Operating cash flow, Germany, 2013-2024



Source: Member States submissions to FPI data call 2025 and elaboration by the EWG.

*2024= nowcasted data

7.10.3 Raw materials

According to the Federal Statistical Office, the German fish processing industry produced a total of 385,722 tonnes of products in 2023. This represents a decrease of 3% compared with the previous year and a decline of 5% compared with the figures reported previously. However, ex-factory sales amounted to EUR 2.45 billion, marking an increase of 5.6%. The average ex-factory price was EUR 6.32 per kilogram, 9.1% higher than the previous year's value of EUR 5.79 per kilogram[18]. Since 2009, the production of fish and seafood has shown a downward trend, notwithstanding minor increases observed in 2018 and 2020 compared with the preceding years.

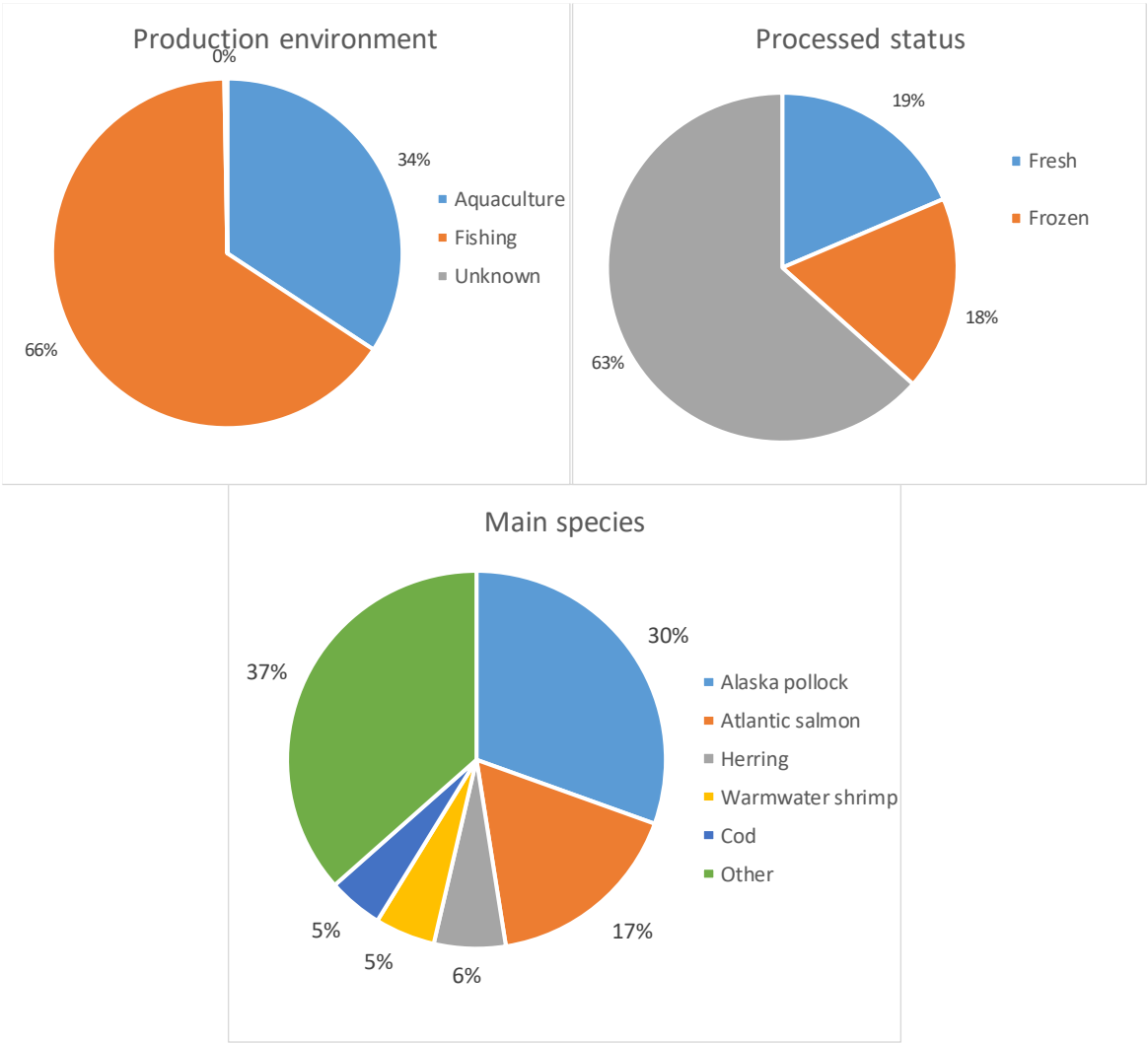
The Federal Statistical Office does not provide information on the quantity, origin, or processing stage of the raw materials used. Therefore, the volume of raw material was estimated using landing data from BLE (the Federal Office for Agriculture and Food) and import statistics from the Federal Statistical Office[19]. The total amount was estimated at approximately 530,000 tonnes of raw material. Of the 160,000 tonnes caught by the German fishing fleet, about 140,000 tonnes were landed in foreign ports, with only a small share subsequently imported into Germany, mainly by truck. German aquaculture accounted for around 30,000 tonnes. In contrast, 506,000 tonnes of raw material were imported.

[18] Fisch-Informationszentrum e.V. (2024): Daten und Fakten 2023.https://www.fischinfo.de/images/broschueren/pdf/FIZ_DF_2023.pdf (last retrieved, October 22, 2025).

[19] The data presented in the previous report were compiled based on a survey conducted among the fish processing industry. Unfortunately, this year's survey achieved a very low response rate, making an extrapolation based on these data unreliable. Therefore, the methodology for the present report was adjusted accordingly, as described above. Consequently, the results are not directly comparable with those of the previous report.

Using FAO data on global production from fisheries and aquaculture, the share of origin was calculated for each main commercial species and applied to the import data. This analysis indicated that 66% of the raw material originated from capture fisheries (see Figure 7.13).

Figure 7.13 Main raw material used by production environment, processed status and Top 5 species, Germany, 2023



Source: EWG elaboration from Member States submissions to the Fish Processing data call 2025.

Landing and trade data were also classified by degree of processing to derive an estimate for Germany. Slightly less than 40% of the raw material used was fresh or frozen and unprocessed, while more than 60% was semi-processed, predominantly in the form of fillets. The species most commonly used in Germany were Alaska pollock, Atlantic salmon, herring, warmwater shrimp, and cod. All of these species were among the most consumed in Germany in 2023 (see section7.10.4 Trends, drivers and outlook).

The main product groups of the fish processing industry in 2023 were fish fingers (55%), fresh and chilled fish fillets (12%), herring products (10%), and prepared fish-based meals (5%).

Prepared salmon products, prepared herring products, and prepared fish-based meals recorded the largest percentage decreases in production volume compared with 2022[20].

7.10.4 Trends, drivers and outlook

In 2023, the German fisheries sector operated in a challenging economic environment. The ongoing consequences of the war in Ukraine, the energy and raw materials crisis, and new geopolitical tensions in international trade led to sharp increases in costs for energy, raw materials, logistics, and personnel across all segments. These cost increases could only partly be offset by higher turnover, resulting in a significantly strained profitability situation for enterprises. Consequently, necessary modernization measures during the transition toward a more sustainable economy could not be fully implemented.

The sector also expressed little understanding of the increasing bureaucratic requirements along the supply chain and in the production and marketing of fish and seafood products. Nevertheless, all segments of the fisheries sector succeeded in maintaining a stable supply of safe and diverse “blue foods” to retail and food service markets.

Domestic production

In 2023, the German fleet recorded landings of 156,924 tonnes, representing an increase of 4% compared to the previous year. The economic results of 2023 for the deep-sea fleet were roughly in line with the average of the previous two years. Developments were shaped by the outcomes of third-country agreements, resulting quota allocations, and national and international quota exchanges. Total landings were 1.6% higher than the previous year. While the demersal sector reported declining catches, the pelagic sector achieved higher volumes through a geographical shift of fishing activities. Fleet modernization continued steadily. In the cutter fishery, the trends of the previous year persisted. Strongly increased energy costs, particularly for fuel, continued to pose a significant burden. Despite rising producer prices, these costs could not be fully compensated.

Aquaculture production has been stagnating for several years. In 2023, a total of 31,353 tonnes of fish and mussels were produced in German aquaculture, corresponding to an increase of more than 1,800 tonnes compared with 2022. Of this total production, 54% was fish and almost 46% blue mussels (produced in the Wadden Sea).

The industry is increasingly concerned about its future competitiveness. More than two decades ago, the fisheries sector took a leading role by implementing numerous measures to promote stock-conserving fisheries and environmentally sound inland fisheries and aquaculture. The success of these efforts is reflected in increasing catches from a growing number of sustainably managed fish stocks both within EU waters and globally. Looking forward, the sector will need to address major challenges arising from climate change, new nutrition policy guidelines, the growing demand for qualified personnel, and the requirements of energy-efficient and climate-friendly production.

Trade

The German market is highly dependent on imports, which account for around 90% of the total supply. In 2023, imports of fish and seafood (raw materials as well as processed products) amounted to 815,722 tonnes, representing an 11% decrease compared to 2022. The total import value fell by 8.3% to EUR 5.52 billion. The main contribution of imports to the German

[20] Geschäftsbericht des Bundesverbandes der deutschen Fischindustrie und des Fischgroßhandels e.V. (2024): https://www.fischverband.de/download/geschaeftsbericht-2023.pdf (last retrieved, October 22, 2025).

fish and seafood market in terms of value consisted of 36% processed fish products, 22% sea fish, 22% freshwater fish, and 20% crustaceans. With a share of 22.7% in import value, Poland remained the most important supplier, followed by other EU partners such as the Netherlands and Denmark. Outside the EU, Norway and China were the key trading partners. Overall, 55% of imports came from EU countries and 45% from non-EU countries.

Consumption

Regarding demand, per capita fish consumption remains below the EU average: it decreased from 15.7 kg in 2011 to 14.3 kg in 2019, and further to 14.3 kg in 2023[21]. This consumption consisted of 55% sea fish, 30% freshwater fish, and 15% crustaceans. The most consumed species were Alaska pollock (23%), salmon (17%), tuna (14%), herring (9%), and crustaceans (8%)[22]. These products were mainly purchased as frozen (30%), fresh (18%), preserved (17%), or marinated (16%) products.

Household expenditure on fish and seafood rose by 3.6% to EUR 5.07 billion. Compared with the pre-COVID year 2019, this represents an increase of 10.2%. Fish and seafood thus remain among the most popular food products in Germany, contributing to a healthy, balanced, and sustainable diet, reflecting the continued high appreciation of fish and seafood among consumers[23].

Fish processing industry

All the aspects outlined in this subchapter have an impact on the German fish processing industry. As noted in 7.10.3, the volume of products produced in Germany has been showing a gradual decline over time.

A clear example of how unpredictable raw material availability can affect fish processing operations is the case of Euro-Baltic GmbH, located on the island of Rügen in the Baltic Sea. Established in 2003, the company became one of Europe's largest and most modern herring processors, with a capacity exceeding 50,000 tonnes of herring per year. In March 2022, primary processing was discontinued due to the complete closure of herring fisheries in the Baltic Sea and, in the longer term, the uncertain availability of North Sea herring resulting from the Brexit agreement. The company initially planned to focus on the refinement of herring products and further species. However, by spring 2023 it became evident that, despite partial restructuring and the implementation of a new production concept, operations could no longer be maintained on an economically viable basis. The main reasons were sharply rising costs for energy, labour, and raw material procurement. Consequently, further sections of product refinement were shut down in May 2024. The areas of cooling and warehouse logistics, as well as technical services, IT, wastewater management, and administration, remained fully operational[24].

Outlook

In 2024, the sector once again faced significant challenges. Ongoing geopolitical tensions, particularly the repercussions of the war in Ukraine, combined with rising energy costs and

[21] https://www.bmel-statistik.de/ernaehrung/versorgungsbilanzen/fisch (last retrieved, October 22, 2025).

[22] https://www.thuenen.de/de/fachinstitute/seefischerei/service/zahlen-und-fakten/welcher-fisch-und-welche-meeresfruechte-landen-auf-unseren-tellern-und-woher-kommen-sie#c99553 (last retrieved, October 22, 2025).

[23] Fisch-Informationszentrum e.V. (2024): Daten und Fakten 2024 https://www.fischinfo.de/wp-content/uploads/2025/04/FIZ_Fischwirtschaft_2024.pdf

[24] https://www.fischmagazin.de/willkommen-seriennummer-107471.htm (last retrieved, October 22, 2025), https://www.regierung-mv.de/Landesregierung/lm/Service/Presse/Aktuelle-Pressemitteilungen/?id=178063&processor=processor.sa.pressemitteilung ((last retrieved, October 22, 2025)

fluctuating purchasing power to place considerable strain on the market environment. At the same time, a persistent shortage of skilled labour added further pressure across production and processing stages. Nevertheless, the industry demonstrated cohesion and solidarity, qualities that continue to distinguish it within the broader food sector.

Germany currently occupies a leading position in the sector, a status achieved through the collective commitment of industry stakeholders[25]. Going forward, this position must be leveraged strategically to capture emerging opportunities and proactively shape the sector's future. In 2024, per capita consumption continued its downward trajectory, falling to just 12.1 kg per resident, representing a 10% decrease compared to the previous year[26]. Concurrently, production volume in German fish processing declined by 1%, a development that has had a direct impact on overall sector performance. While total income fell by 6 to 9%, demand in several product categories nevertheless remained robust, a sign of sustained market momentum. These dynamics underscore the importance of supporting growth areas while also stabilizing segments under pressure, in order to create fresh opportunities for individual businesses and for the sector as a whole.

What is required now are clear decisions rather than convenient compromises. The priority is to position fish more strongly as a distinctive and forward-looking food category and to actively shape public perception. Fish represents taste, health, and climate responsibility and, through its unique combination of wild catch and aquaculture based on sound scientific knowledge, holds a special position within the food landscape.

An increasing share of 62% of consumers now consciously choose sustainable fish products, an encouraging trend that defines the industry's mission. It is our responsibility to communicate the benefits of our product categories even more clearly and to shape consumer awareness in a lasting way[27].

7.10.5 Data coverage and quality

The Federal Statistical Office in Germany (Destatis) maintains a database containing data on the number of enterprises and employees. In addition to this enterprise register, Destatis conducts a probability sample survey on several cost items, covering companies with 20 or more employees. These data sets are well established and provide reliable and validated time series. To avoid duplication in data collection, these primary data are used for the purpose of data collection in the fish processing sector. The quality of the available data can be regarded as very high, as the data on the fish processing industry collected by Destatis are based on the European Structural Business Statistics (SBS) standards. It should be noted, however, that different Destatis statistics apply different methods for data collection and extrapolation. As a result, values for the same variable may differ between statistical publications, for example, the variable *turnover* is reported in several series but may vary depending on the underlying methodology.

For the variables where data are not available via other administrative bodies (as it is the case for *financial income*, *subsidies on investments*, the Thünen Institute of Sea Fisheries conducts an additional standardised survey.

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[25] Geschäftsbericht des Bundesverbandes der deutschen Fischindustrie und des Fischgroßhandels e.V. (2025): https://www.fischverband.de/download/geschaeftsbericht-2024.pdf (last retrieved, October 22, 2025)

[26] https://www.bmel-statistik.de/ernaehrung/versorgungsbilanzen/fisch (last retrieved, October 22, 2025)

[27] Geschäftsbericht des Bundesverbandes der deutschen Fischindustrie und des Fischgroßhandels e.V. (2025): https://www.fischverband.de/download/geschaeftsbericht-2024.pdf (last retrieved, October 22, 2025).

Normally, data on the weight of *raw material by origin*, *production environment*, *processed status*, and *species* are also collected through the survey conducted among the fish processing industry. However, this year's survey achieved a very low response rate, making extrapolation based on these data unreliable. Therefore, the methodology for the present report was adjusted, and the volume of raw material was estimated using landing data from the BLE (the Federal Office for Agriculture and Food) and import statistics from the Federal Statistical Office. Using FAO data on global production from fisheries and aquaculture, the share of origin was calculated for each main commercial species and applied to the import data. Landing and trade data were also classified by degree of processing to derive an estimate for Germany. The names of species were provided as common names, based on the Main Commercial Species in EUMOFA. The survey data mainly contain common names and often even product categories, such as shrimp or salmon, making a match to the 3 alpha code difficult or sometimes impossible. In contrast, the trade data can be matched to the EUMOFA categories easily by using their conversion tables, since each CN 8 code corresponds to a specific main commercial species. Finally, some species had to be aggregated due to small quantities.

Data on the variables *gross debt* and *total values of assets* are not included in any of the available national statistics. Therefore, publicly available financial accounts of the biggest German fish processing companies were used with a sample size that amounted to 80-85% of the *turnover* published by Destatis for 2022 and 2023.

7.11 Greece

7.11.1 Overview

The historical evolution of fish processing in Greece progressed from ancient methods of salting and drying for preservation and trade, through a period of limited large-scale commercial processing due to local constraints, to modern times where processing facilities are now often a limiting factor for the fishing sector. Ancient processing included techniques like salting, drying, and pickling, evidenced by literary sources and specific products like garum, though archaeological evidence for large-scale production is scarce.

The last 50 years, the Greek fish processing sector has evolved from a traditional industry to a modern, large-scale one. Until the late 1990s, the sector was focused on wild catch and methods like salting and canning, but the expansion of the aquaculture and the trade evolution led to the development and restructuring of the sector into its current form. Today, the aim of the sector is to produce quality products and entering the delicatessen market. It is worth mentioning that a substantial portion of Greece's fish production comes from aquaculture, with a strong focus on exports (fillets– secondary activity for aquaculture), especially to other EU countries.

Nowadays, the fish processing sector in Greece includes activities such as freezing, processing (filleting, salting, drying, smoking, marinating, cooking, canning) and deshelling of shellfish, mostly mussels. Most processing units have been developed in proximity to large urban centres to ensure ease of access and distribution of products. It must be pointed out though that several companies of significant size are in cities in remote areas without access to ports or fish auction sites. For the financial year 2023, a total of 178 active small and medium-sized enterprises were recorded in fish processing activity. The remaining companies with fish processing veterinary registration codes were not included in the sample, either due to termination of operations, suspension of processing activity, change of business activity and delay in updating registration codes, or because they showed very limited processing activity, representing less than 3% of total sales or a value below EUR 50 000.

In 2023, Greece’s fish processing industry produced a total of 53 266 tonnes of final products, valued at EUR 360.6 million, with the use of 64 688 tonnes of raw material. The average value per kilogram reached EUR 6.77, marking an increase of about 3% compared with 2022 (EUR 6.57/kg) and nearly 27% higher than in 2021 (EUR 5.29/kg). The freezing segment continued to dominate the sector, accounting for 34,731 tonnes or roughly 65% of total production, with a revenue of EUR 251.6 million, almost 70% of total value. Its average price rose sharply from EUR 5.01/kg in 2021 to EUR 7.24/kg in 2023, showing strong market demand for preserved products. The mussel deshelling activity represented around 12% of total volume and 4% of total value, with a stable average price of EUR 2.23/kg, indicating modest margins but a consistent activity as well. Filleted and prepared fish products accounted for about 8% of output and 11% of total value, achieving an average price of EUR 9.58/kg, one of the highest among categories, reflecting their significant added value. Standardized products made up 6% of total production and 6.4% of value, with prices showing a gradual upward trend (EUR 7.15/kg in 2023, EUR 6.5/kg in 2022). Salted fish contributed 4.2% of production and 4% of value, maintaining stable levels with a slight decline compared to 2021. Canned, cooked, and marinated products, though limited in production and value terms (2.6% and 2.1% respectively), showed a notable price growth—from EUR 3.10/kg in 2021 to EUR 5.47/kg in 2023—suggesting growing demand in niche markets. Smoked fish, despite its small share (2.6% of production), generated 3% of total value, with a high average price of EUR 8.02/kg, confirming its position as a premium category. The above structure of production indicates that the sector

relies mainly on freezing and filleting, while other specialised product types such as salted, smoked, and marinated, greatly enhance the potential of Greek processing to increase it exports.

The total number of enterprises has stayed largely stable over the decade, though a small drop of about 2% was recorded in 2023 compared to the previous year. Most businesses remain small, with those employing up to 10 people forming the bulk of the sector. A moderate reduction occurred among companies with 11–49 employees, while those in the 50–249 employee category fell by 13%. No large enterprises employing over 250 workers were recorded, confirming the dominance of small and medium-sized operations in Greek fish processing.

Employment saw a noticeable decline in 2023. The total workforce dropped by 10%, and full-time equivalent (FTE) positions decreased by 11%, indicating some restructuring or reduced activity among firms. This marks a shift after several stable years. Despite this decline in employment, turnover increased by 9%, rising from EUR 330 million to EUR 361 million. This suggests improved efficiency, better product pricing, or a stronger export performance. Average wages remained stable at around EUR 22,200, while unpaid work increased slightly from 2.8% to 3.2%, possibly reflecting more family involvement in smaller units. The number of FTE per enterprise fell by 9%, which may point to leaner management structures or productivity adjustments.

Table 7.30 Overview, Greece, 2013-2023

Variable	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Δ (2022-23)
Structure (number)												
Total enterprises	144	133	145	159	169	168	155	170	169	181	178	-2%
≤ 10 employees	111	100	112	121	129	130	119	130	130	136	135	-1%
11-49 employees	27	29	29	31	32	30	28	32	31	37	36	-3%
50-249 employees	6	4	4	7	8	8	8	8	8	8	7	-13%
≥ 250 employees												0%
Employment (number)												
Total employees	2,183	1,964	2,062	2,277	2,392	2,292	2,357	2,463	2,500	2,500	2,257	-10%
FTE	1,763	1,606	1,690	2,033	2,130	2,048	2,144	2,231	2,263	2,263	2,016	-11%
Indicators												
Turnover (million €)	195	214	239	251	296	254	235	240	269	330	361	9%
FTE per enterprise	12.2	12.1	11.7	12.8	12.6	12.2	13.8	13.1	13.4	12.5	11.3	-9%
Average wage (thousand €)	12.8	13.2	15.8	13.2	15.9	16.4	13.9	18.1	18.8	22.1	22.2	0%
Unpaid work (%)	4.5	4.4	4.4	4.6	3.1	3.8	3.6	3.6	3.5	2.8	3.2	14
Enterprises doing fish processing not as main activity												
Number of entreprises	10	9	10	10	11	11	13	14	13	13	13	0%
Turnover attributed to fish processing (million €)	0.7	0.7	0.7	0.8	0.9	0.9	1.1	2.6	2.5	9.4	14.9	57%

Source: EWG elaboration from Member States submissions to the Fish Processing data call 2025.

Firms engaged in fish processing as a secondary activity maintained their number at 13 but increased their turnover from EUR 9.4 million to EUR 14.9 million—a rise of 57%. This indicates that several companies from related sectors, such as aquaculture or seafood trading, are expanding into processing to enhance product value and reduce dependency on external suppliers.

Overall, the Greek fish processing industry in 2023 operated with fewer employees but achieved stronger financial performance. The data reflects a sector that is consolidating, becoming more efficient, and increasingly integrated within the broader seafood value chain.

7.11.2 Economic performance

Between 2022 and 2023, the total income of the sector rose by 20%, reaching EUR 634.9 million. This increase came mainly from a 9% rise in turnover (from EUR 330.3 million to EUR 360.6 million) and a 38% increase in other income, which includes revenue mostly from parallel activities. Many companies in the sector maintain parallel activities alongside fish processing, like trading (fresh or frozen fish), or act as intermediaries or repackagers for other companies. These activities generate liquidity on an annual basis and support the processing activity. Furthermore, operating subsidies decreased by 32%, indicating fewer public support compared to previous years, especially after the Covid-19 years. The sector's expansion is evident from its improved performance over the 2013–2023 period, during which turnover nearly doubled.

Total production costs rose by 11% in 2023, due to higher energy costs (+11%) and raw material purchase costs (+7%), results from inflation and international price volatility. At the same time, wages and salaries decreased by 11%, which may be attributed to workforce reduction or efficiency measures. The other operational costs category grew notably by 20%, suggesting increased expenses in logistics, maintenance, or compliance.

Capital depreciation remained stable, but net financial costs increased by 23%, reflecting higher borrowing costs under rising interest rates. Net investments doubled (+104%), reaching EUR 30.3 million, indicating strong willingness for new investments and confidence in future production capacity. Debt fell sharply by 30%, marking a positive turn in financial management, while the total value of assets decreased slightly (−6%).

The sector's profitability improved significantly. Gross Value Added (GVA) increased by 60%, while Operating Cash Flow rose by 204%, showing improved liquidity. Earnings before interest and tax (EBIT) surged by 379%, and net profit jumped by over 2 000%, from EUR 2.2 million in 2022 to EUR 47.6 million in 2023. This major improvement reflects better market conditions, higher productivity, and possibly cost optimization after a challenging 2022.

Labour productivity improved by 80%, reaching EUR 56 700 per employee, while capital productivity grew by 71%, showing better use of both human and physical resources. In 2022, a major processing company with more than 200 employees went bankrupt, affecting the overall performance of the sector. Profitability indicators also followed this positive trend: EBIT margin rose to 9.5%, and net profit margin reached 7.5%, compared to almost zero the previous year. Return on investment increased more than four times over (from 2.8% to 14.1%), confirming higher profitability on capital employed. The financial position indicator also strengthened (from 8.3% to 31.5%), signalling healthier liquidity and balance-sheet conditions.

Overall, 2023 was a recovery year for the Greek fish processing sector. The data reveal higher profitability, stronger productivity, and improved financial stability, despite moderate cost inflation and reduced public subsidies. Compared with the earlier decade (2013–2018), the industry has evolved into a leaner but more capital-efficient system, increasingly focused on added value and export-oriented processing.

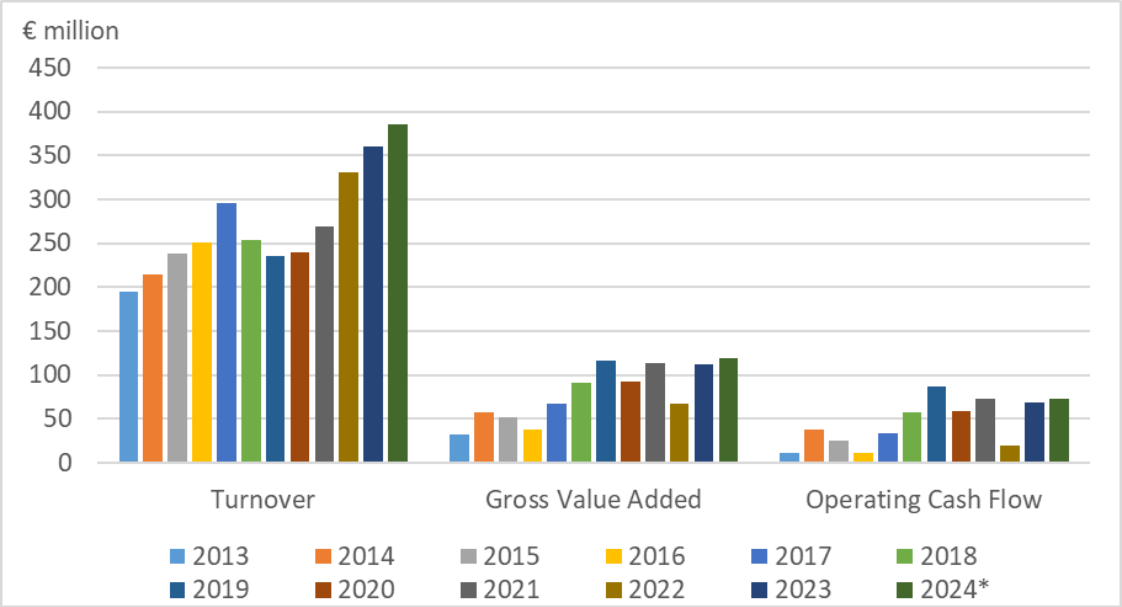
Regarding the nowcast, the projection shows that 2024 is one of the sector's best performing years, with all indicators reaching or approaching record levels: Rise of turnover by 7% compared to 2023, GVA also by 7%, and Operating Cash Flow by 6.9%. This indicates that the growth of 2023 has sustained in 2024 and is not only inflation-driven.

Table 7.31 Economic performance indicators, Greece, 2013-2023

Variable	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Δ (2022-23)
Income (million €)												
Turnover	195.2	214.3	238.8	251.0	295.9	253.6	235.2	240.0	269.0	330.3	360.6	9%
Other income	2.4	2.2	1.7	118.4	153.1	137.5	177.9	222.1	310.2	197.3	272.9	38%
Operating subsidies	2.0	1.9	0.4					6.2	1.8	2.1	1.4	-32%
Total Income	199.6	218.3	240.9	369.4	449.0	391.1	413.1	468.4	581.1	529.7	634.9	20%
Expenditure (million €)												
Purchase of fish and other raw material for production	139.6	143.3	156.9	159.8	177.6	160.0	151.3	182.0	203.0	195.8	210.0	7%
Wages and salaries of staff	21.6	20.2	25.5	25.5	32.9	32.3	28.6	38.8	41.0	48.6	43.3	-11%
Imputed value of unpaid labour	1.0	0.9	1.2	1.2	1.0	1.3	1.1	1.5	1.5	1.4	1.4	2%
Payment for external agency workers (optional)						0.1	0.1	0.1	0.1	3.3	2.6	-21%
Energy costs	11.9	7.5	13.3	28.7	35.7	26.4	27.3	29.9	30.8	36.5	40.7	11%
Other operational costs	14.3	8.0	19.0	143.0	168.5	113.8	117.6	157.8	232.1	224.0	268.6	20%
Total production costs	188.4	179.9	215.9	358.2	415.7	333.8	326.0	410.1	508.5	509.7	566.6	11%
Capital Costs (million €)												
Depreciation of capital	6.7	11.2	5.9	7.3	8.1	4.8	6.4	9.3	10.4	10.7	10.4	-2%
Financial costs, net	27.2	26.3	12.3	8.0	10.9	7.3	7.1	11.6	9.0	10.5	12.9	23%
Capital Value (million €)												
Total value of assets	435.5	397.7	315.7	233.4	323.9	255.0	263.1	380.7	420.2	458.0	429.6	-6%
Net Investments	14.9	6.9	-0.6	0.7	2.8	5.2	5.3	14.2	15.3	14.8	30.3	104%
Subsidies on investments				0.4	0.1	0.3	0.1	1.1	2.4	2.4	3.6	52%
Debt	409.3	419.1	254.4	206.0	280.1	199.1	201.7	356.3	389.2	419.9	294.4	-30%
Economic performance (million €)												
Gross Value Added	31.8	57.7	51.2	37.9	67.2	90.8	116.7	92.4	113.3	67.9	111.6	64%
Operating Cash Flow	11.3	38.4	24.9	11.2	33.3	57.3	87.0	58.3	72.6	20.0	68.3	242%
Earning before interest and tax	4.5	27.3	19.0	3.9	25.1	52.4	80.6	49.1	62.2	9.3	57.9	521%
Net Profit	-22.7	0.9	6.7	-4.1	14.2	45.1	73.5	37.4	53.2	-1.1	45.0	4037%
Productivity and performance Indicators												
Labour productivity (thousand €)	18.0	35.9	30.3	18.6	31.6	44.3	54.4	41.4	50.1	30.0	55.4	84%
Capital productivity (%)	7.3	14.5	16.2	16.2	20.8	35.6	44.4	24.3	27.0	14.8	26.0	
GVA margin (%)	16.1	26.7	21.3	10.3	15.0	23.2	28.3	20.0	19.6	12.9	17.6	
EBIT margin (%)	2.3	12.5	7.9	1.1	5.6	13.4	19.5	10.5	10.7	1.8	9.1	
Net profit margin (%)	-11.3	0.4	2.8	-1.1	3.2	11.5	17.8	8.0	9.2	-0.2	7.1	
Return on Investment (%)	1.0	6.9	6.0	1.7	7.8	20.6	30.6	12.9	14.8	2.0	13.5	
Financial position (%)	6.0	-5.4	19.4	11.8	13.5	21.9	23.3	6.4	7.4	8.3	31.5	

Source: EWG elaboration from Member States submissions to the Fish Processing data call 2025.

Figure 7.14 Turnover, GVA and Operating cash flow evolution, Greece, 2013-2024



Source: EWG elaboration from Member States submissions to the Fish Processing data call 2025. *2024= nowcasted data

7.11.3 Breakdown by company size

The performance of Greek fish processing enterprises in 2023 varied notably by company size, though all size groups showed overall improvement compared to 2022, continuing a recovery trend that began after 2020.

For the <11 category, total income increased by 12% to EUR 136.3 million, while production costs rose 8%. This is reflected in the 23% rise in Gross Value Added (GVA).

Profitability indicators improved: Operating Cash Flow doubled (+105%), and net profit rose by 145%, marking a strong performance after 2022's weaker results. Small companies in Greece proved resilient and efficient maintaining cost level in recent years and increasing their income throughout the 2013-2023 period.

Enterprises in the 11-49 category reported a 19% growth in income, reaching EUR 194.2 million, production costs rose by only 5%, improving overall profitability, while GVA almost doubled (+89%), demonstrating a high level of productivity.

Operating and net profitability indicators performed well: Operating Cash Flow rose by 242%, EBIT by 336%, and Net Profit by more than four times over (+435%).

The companies of 50-249 were the main driver of the sector's financial performance. Large enterprises generated the highest figures, with total income up 24% to EUR 304.4 million and production costs rising 17%. GVA increased by 63%, confirming improved efficiency despite the increased expenses.

Operating Cash Flow rose 225%, and EBIT performed exceptionally well by over 1 100%, recovering from near-zero profitability in 2022. Net profit also surged more than 250%, from a negative result to EUR 11.1 million due to the cessation of operations of a company significant to the category and the whole sector. This is evident in the improved performance of large processing companies in 2023, which explains the recovery of profitability following the financial losses recorded in 2022.

Across the 10-year period, all enterprise categories showed periods of growth and decline, attributed mostly to changes of raw material prices and energy costs. However, 2023 proved to be a recovery year for all size categories, marked by higher turnover, stronger operating margins, and rising profitability.

Table 7.32 Economic performance by company size, Greece, 2013-2023

Variable	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Δ (2022-23)
less than or equal to 10 employees												
Total Income	33.7	20.5	39.3	52.8	119.1	113.3	107.2	114.8	162.5	121.4	136.3	12%
Total production costs	32.2	33.3	37.9	66.8	77.8	65.4	56.3	76.9	115.9	116.1	125.5	8%
Gross Value Added	6.6	-9.9	7.3	-6.5	50.8	58.6	61.1	47.6	57.0	18.3	23.0	25%
Operating Cash Flow	1.5	-12.8	1.4	-14.0	41.3	47.8	50.9	37.9	46.5	3.1	8.5	174%
Earning before interest and tax	-2.5	-19.5	0.7	-14.9	40.5	47.2	50.4	37.2	45.9	2.1	8.1	286%
Net Profit	-20.9	-33.9	-0.1	-15.6	39.6	46.5	50.2	36.9	45.5	2.0	8.0	295%
between 11 and 49 employees												
Total Income	62.4	82.1	94.6	142.7	147.4	135.8	163.5	100.2	120.5	163.5	194.2	19%
Total production costs	85.3	69.7	91.5	115.0	130.4	131.4	134.0	91.6	110.4	154.2	162.4	5%
Gross Value Added	-14.9	19.6	12.4	35.3	27.0	14.4	39.5	19.5	22.7	23.0	45.1	96%
Operating Cash Flow	-22.9	12.5	3.1	27.7	17.0	4.4	29.5	8.6	10.1	8.4	31.7	277%
Earning before interest and tax	-23.7	11.6	0.5	26.3	15.1	3.3	27.2	6.5	7.0	5.7	28.5	404%
Net Profit	-24.2	7.3	-2.9	25.3	13.1	1.6	25.0	5.1	5.6	4.0	25.9	553%
between 50 and 249 employees												
Total Income	103.5	115.7	107.0	173.9	182.5	142.0	142.3	253.4	298.1	244.9	304.4	24.3%
Total production costs	70.8	76.9	86.5	176.4	207.5	137.0	135.7	241.4	282.1	236.1	276.0	16.9%
Gross Value Added	40.1	48.0	31.6	9.0	-10.6	17.8	16.1	25.3	33.6	26.6	43.6	63.9%
Operating Cash Flow	32.7	38.8	20.4	-2.5	-25.0	5.0	6.6	11.8	16.0	8.5	28.1	230.9%
Earning before interest and tax	30.7	35.2	17.8	-7.4	-30.4	1.9	3.0	5.3	9.3	1.6	21.3	1264.4%
Net Profit	22.5	27.5	9.7	-13.9	-38.6	-3.1	-1.7	-4.8	1.8	-7.3	10.9	250.2%

Source: EWG elaboration from Member States submissions to the Fish Processing data call 2025.

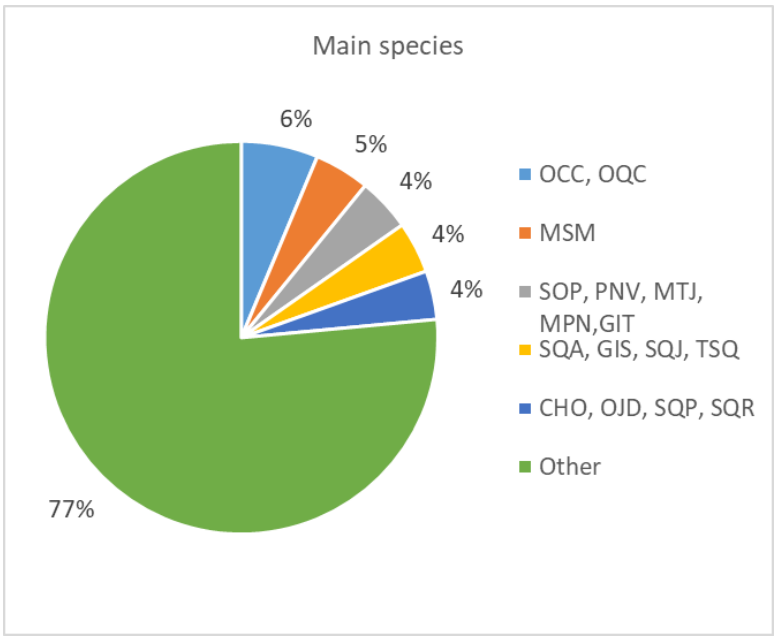
7.11.4 Raw materials

In Greece, the fish-processing industry obtains raw material from four main sources: a) direct purchase at landing sites or fish auction markets, b) aquaculture (fish farms) units domestically or abroad, c) imports (from other EU and non-EU countries) and d) catches made by vessels owned or affiliated with the processor. For 2023, in Greece, raw material purchased by the processing industry was 64.9 thousand tonnes: 47 % domestic, 13.9 % EU, 39.1 % non-EU. In 2022: 61.3 thousand tonnes: 51.5% domestic, 13.2% EU, 35.3% non-EU.

The raw material purchased from aquaculture units for 2023 was ~8.1% and for 2022 ~8.2%. This applies for the companies with processing activity as their main one. For aquaculture companies in Greece who fillet their farmed fish (either in house or outsource) those numbers are presented as other income in their balanced sheets and the additional data are categorized as non-main activity.

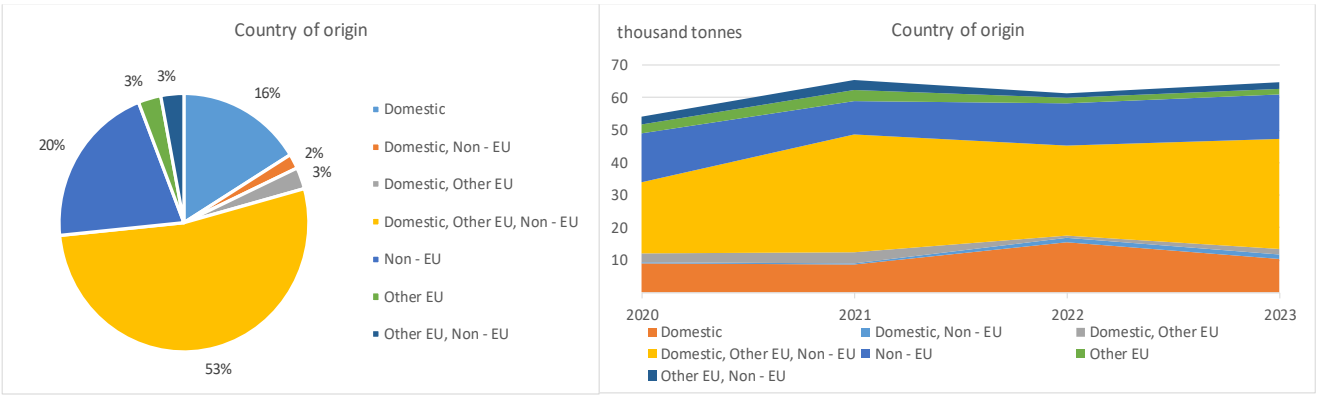
The processing industry in Greece deals with a wide variety of species including small pelagic fish (e.g., sardine, anchovy), squid, octopus, prawns. For 2023 data show that the main processed species by volume were e.g. sardine (~3.98 thousand tonnes), squid (~3.95 thousand tonnes), octopus (~3.85 thousand tonnes), prawn (~3.48 thousand tonnes) and mussel (~2.85 thousand tonnes) — these five together accounted for ~28% of raw material purchases.

Figure 7.15 Distribution of raw material volume by species categories, Greece, 2023



Source: EWG elaboration from Member States submissions to the Fish Processing data call 2025.

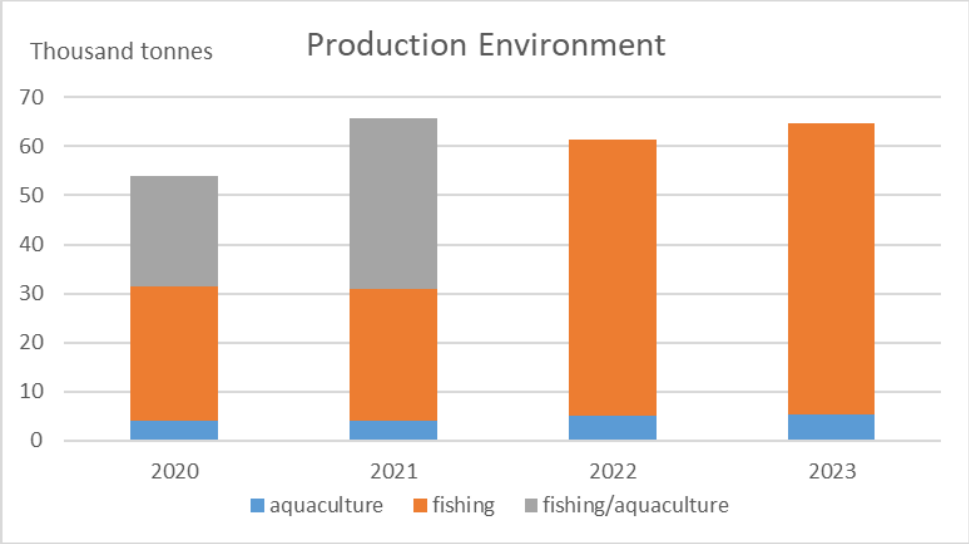
Figure 7.16 Distribution of raw material weight by country of origin, Greece, 2013 (left), 2020-2023 (right)



Source: EWG elaboration from Member States submissions to the Fish Processing data call 2025.

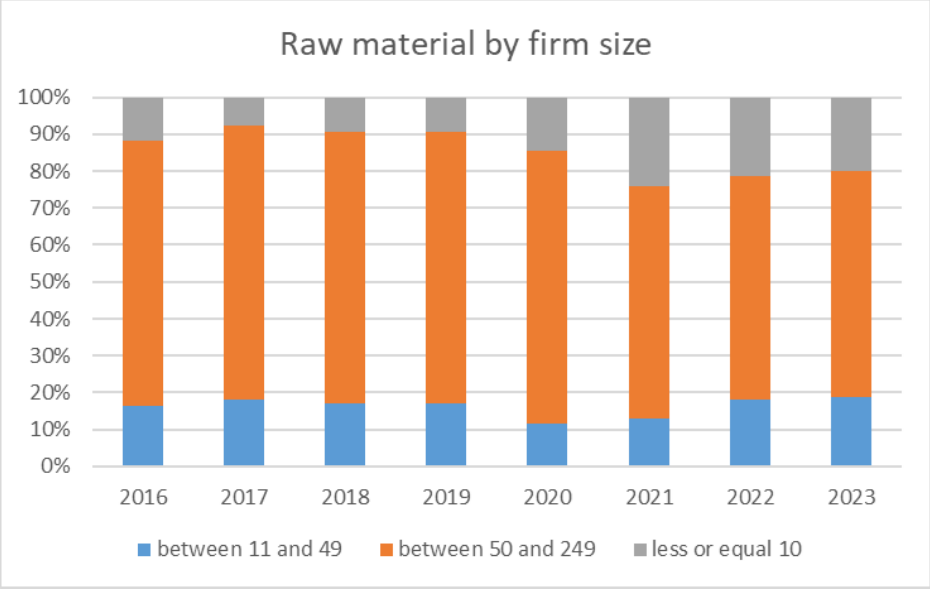
There was an increase of 5.5% in terms of quantities of raw materials used in 2023 compared to 2022. For 2023, companies with less than 10 employees used 40% of total raw materials, the segment 11-49 employees purchased 38% of the total raw material and the segment 50-249 purchased only the 22%. For year 2021, the segments 11-49 employees and the segment 50-249 employees occupied 26% of the raw material each. The last 2 years one major company with more than 200 employees went bankrupt and more than 12 companies (4 with less than 10 employees and 8 with 11-49 employees) changed or added to their activity from salting and drying of fish to filleting and freezing of fish and the deshelling of mussels (increase of raw material usage).

Figure 7.17 Distribution of raw material weight by production environment categories, in thousand tonnes, Greece, 2020-2023



Source: EWG elaboration from Member States submissions to the Fish Processing data call 2025.

Figure 7.18 Distribution of raw material weight by firm size categories, in %, Greece, 2016-2023



Source: EWG elaboration from Member States submissions to the Fish Processing data call 2025.

7.11.5 Trends, drivers and outlook

During the 2022-2023 period, the fish processing industry in Greece continued to perform positively and increased its total revenue, net profit, and assets, and in 2023 doubled the new net investment. Also, while production costs kept rising, debt significantly increased in 2023 as well.

In Greece, the market for processed fish and seafood products — including canned, frozen, smoked, and ready-to-eat items — is expanding, fuelled by consumer demand for convenience, healthier diets, and the rise of online retail. Although the processing sector remains relatively small in terms of employment and value added, there is a growing awareness of the need to

move beyond fresh fish toward more value-added processed products. Seafood continues to be viewed as a healthy source of protein, and the increasing popularity of convenient, ready-to-eat options caters to busy lifestyles. Additionally, domestic demand for processed seafood is expected to stay strong, supported by consistently high levels of tourism and the steady consumption of more affordable products such as frozen crustaceans and cephalopods.

Increase in price of raw materials is expected for aquaculture products and high value fisheries products. The prices of imported low value crustaceans and fish expected to remain stable or with small increase. Energy costs are expected to steadily increase on a lower. Several major processing companies in Greece operate in remote areas with limited access to ports or fish auction sites, making them particularly vulnerable to rising transportation costs. The global price of edible oils has risen by over 10%, while the ongoing war in Ukraine continues to drive up the cost of many supplementary raw materials. Despite higher production costs, the sector’s recent upward trend, combined with growing demand for processed fish products, has motivated companies to undertake substantial new investments.

Moreover, during onsite interviews, company representatives voiced concerns about price competition from imported products originating in non-EU countries. The sector is largely made up of small-scale enterprises, which are particularly vulnerable to the effects of global market competition. Nonetheless, the same representatives noted a positive trend in 2022 — a rise in demand for frozen fish. This increase was linked to the higher prices of wild-caught fish, which in turn led to stronger wholesale sales of frozen fish to restaurants and hotels.

7.11.6 Data coverage and quality

In accordance with the Greek National Work Plan for 2022-2024, data collection for the fish processing sector was carried out by the Hellenic Agricultural Organisation-Demeter (HAO Demeter), of the Greek Ministry of Rural Development and Food. The data collection involved gathering financial information obtained from the annual balance sheets and yearly financial statements of both SA and Ltd companies that adhere to the International Financial Reporting Standards (IFRS). As for small companies in the sector and the additional necessary information related to social data and the detailed cost structure of production, this data was acquired through questionnaires completed by the companies. The responses from these questionnaires were then consolidated with on-site visits and interviews. The data were supplemented and cross-checked by data from Prefectural Chambers of Commerce, Industry and Trade, Prefectural Directorates of Fisheries and Veterinary Services, as well as the National Food Control Agency (EFET), Hellenic Ministry of Rural Development and Food business and professional online data bases. The methodology for the data collection of the fish processing sector for 2022-2023 was Non-Probability Sample Survey (NSS), according to National Work Plan.

7.12 Hungary

7.12.1 Overview

Hungary is landlocked country and does not have a marine fishing fleet. Also, it stopped commercial fishing on its inland waters beginning 1 January 2016. Therefore, most of the domestic fish supply comes from aquaculture – 17.8 thousand tonnes in 2023, a 4.6% decrease from 2022. Hungary's aquaculture production is consistent throughout the period of 2013-2023 and averages out to 17.3 thousand tonnes per year, and Hungary produces 1.7 of total EU aquaculture output. According to Eurostat data, Common carp dominates at 61.8% of total aquaculture products volumes in 2023, 3% decrease from 2022 and it accounts for 18.9% of all EU common carp production.

According to Eurostat data, in 2023, Hungary's fish and seafood sector consumption is largely driven by imported and prepared products. Domestic production surged in 2023 compared to prior years, reaching 5 011 tonnes, which may indicate investments in aquaculture or processing facilities. Nearly all of production (99%) was prepared or preserved, whole or in pieces. Exports from Hungary in 2023 totalled 1 003 tonnes and decreased by 20% from 2022. The trade balance was significantly negative, showing that Hungary's position as a consumer rather than a producer or exporter in this market. Hungary imported approximately 25 078 thousand tonnes of fish and seafood products. This represents a decline in volume from 2022 by 11% but a slight increase in value, because of inflation. Main imported products were inedible products of fish, crustaceans, etc., frozen fish fillets, prepared or preserved tuna, other prepared or preserved fish, frozen whole saltwater fish, which represented over 70% of import volume, indicating a focus on processed and frozen items suitable for retail and foodservice.

Domestic consumption of fish and seafood in Hungary has shown steady growth over the 2019–2023 period. Volume grew from 25.4 thousand tonnes in 2019 to 29.1 thousand tonnes in 2023, representing an annual growth of 3.4%. According to Eurofish data, in the past decade fish consumption in Hungary has been increasing but still remains one of the lowest per capita levels in Europe. According to Eurobarometer data, about 19% consumers never buy fisheries and aquaculture products. Exception made for carp, for which consumption Hungary is at the highest level in EU, per capita fish consumption is about a quarter of the EU average, equal to 6.52 kg (live weight) in 2021.

According to SBS data, in 2023, the fish processing industry in Hungary consisted of 14 enterprises, a 26% decline since last year. Despite that, total income from fish processing industry in Hungary reached highest throughout the period of 2013-2023 and accounted to EUR 11.9 million, suggesting revenue concentration in fewer, possibly larger firms. However, profitability eroded amid soaring costs: gross profits turned negative in 2022 at EUR -0.1 million (a nearly 120% plunge from 2021), and net profits in 2023 deepened to nearly EUR -1 million. The primary driver was dramatic cost inflation. The largest portion of expenses are attributed to purchases of raw materials that accounts for 90% of the total turnover in 2023 (94% in 2022) and increased by 9.6% (19% in 2022). Personnel costs also surged - 2022 saw an increase of 13%, and in 2023 – 43.9%, partly affected by an increase of employees working in Hungarian fish processing sector from 97 in 2022 to 104, or by 7% (however, unpaid labour decreased by 71%, from 27 to 7 unpaid workers). Therefore, personal cost surge was attributed by the growth of average salary increase by 61.9% in 2022 and 34.2% in 2023, which coincide with the growth of annual salaries in Hungary (33% in 2023).

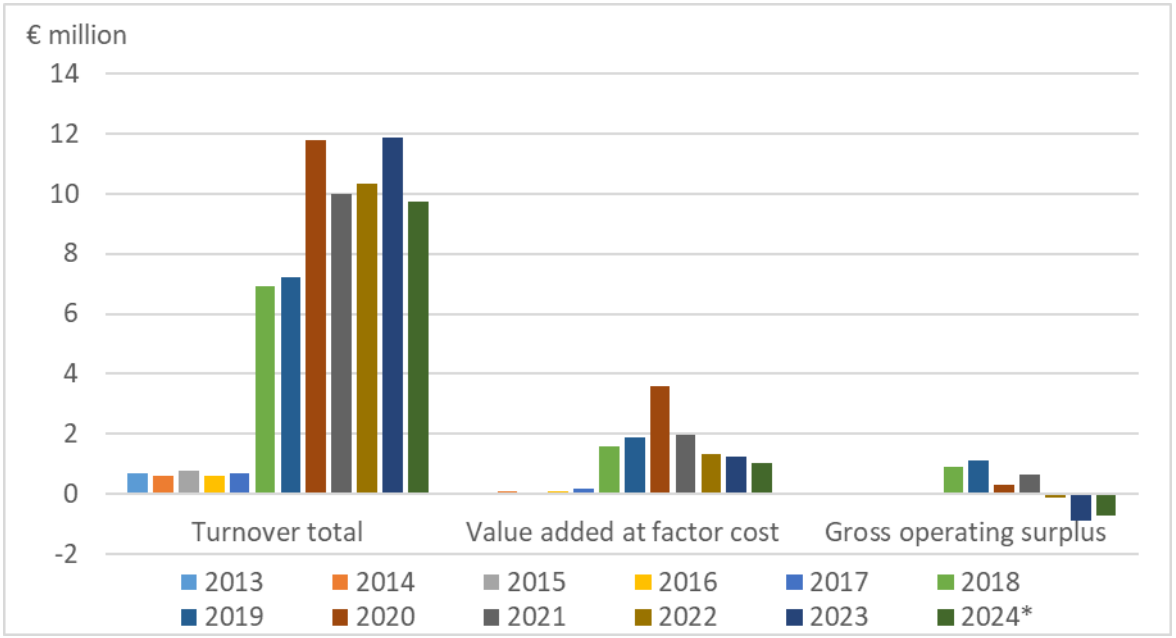
These trends signal to profitability issues due to high inflation (according to World Bank data, inflation in 2023 reached 17.1%), and elevated raw materials prices and personnel cost.

Table 7.33 Overview, Hungary, 2013-2023

Variable	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Δ (2022-23)
Structure (number)												
Total enterprises	10	9	9	8	8	9	11	13	17	19	14	-26%
Total employees	12	49	7	8	18	65	62	309	139	97	104	7%
Unpaid labour	6	3	3	4	3	1	9	12	19	27	7	-74%
FTE	11	47	6	8	14	60	53	296	131	88	93	6%
Income, expenditure and investments (million €)												
Production value	0.5	0.3	0.5	0.3	0.4	6.2	6.5	11.1	9.0	9.1	11.6	27%
Turnover from fish processing												0%
Turnover total	0.7	0.6	0.8	0.6	0.7	6.9	7.2	11.8	10.0	10.3	11.9	15%
Total purchases of goods and services	0.6	0.6	0.6	0.5	0.6	5.3	5.3	8.5	8.2	9.8	10.7	10%
Personnel costs	0.1	0.0	0.0	0.0	0.1	0.7	0.8	3.3	1.3	1.5	2.1	44%
Gross investment in machinery and equipment	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.9	0.0	2.7	0.6	-78%
Economic performance (million €)												
Gross Value Added	0.0	0.1	0.0	0.1	0.2	1.6	1.9	3.6	2.0	1.4	1.3	-7%
Gross profit	0.0	0.0	0.0	0.0	0.0	0.9	1.1	0.3	0.7	-0.1	-0.9	577%

Source: EWG elaboration from Eurostat (2025) data.

Figure 7.19 Turnover, GVA and Gross profit evolution, Hungary, 2013-2024

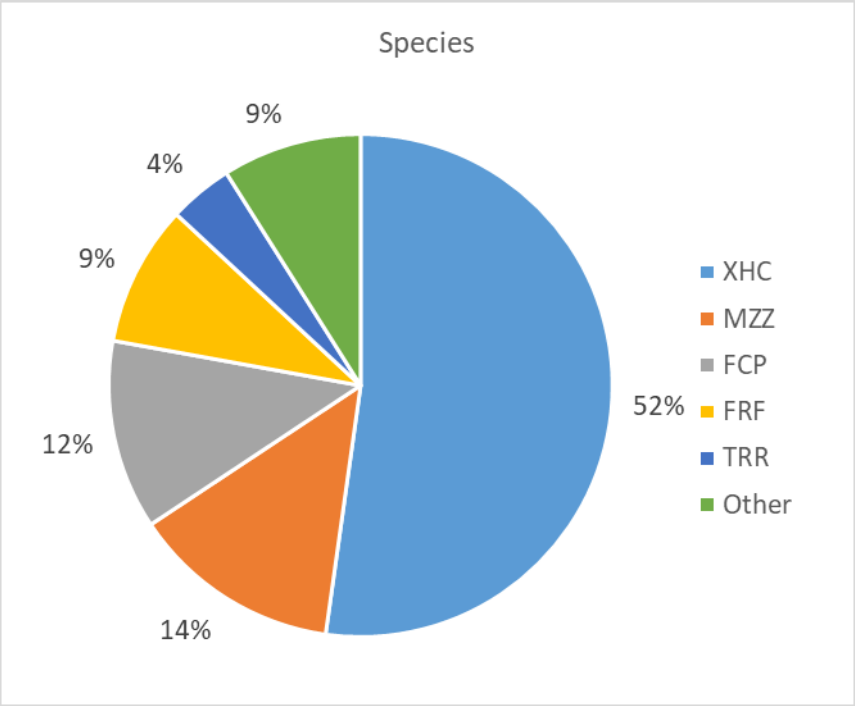


Source: EWG elaboration from Eurostat (2025) data. *2024= nowcasted data

7.12.2 Raw materials

In 2023, Hungary, according to data submissions under the 2023 Fish processing data call, fish processing companies utilized a total of approximately 7 298 tonnes of raw materials. Due to incorrect classification of fish species, only some species can be analysed. 12% of all raw materials was represented by common carp, 4% by rainbow trout.

Figure 7.20 Main raw material used by species and origin, Hungary, 2023



Source: EWG elaboration from Member States submissions to the Fish Processing data call 2025.

7.12.3 Data coverage and quality

Data were submitted by Hungary for the period of 2023, including raw materials data, for the data call. However, there is many inconsistencies and discrepancies with this data, there for it is not suited for reliable analysis. For this reason, the EWG prepared a national mini-chapter with limited analyses based on publicly available data (Eurostat) and other external sources for quantitative information (FAO, Eumofa and Eurofish), also information available in surveys and national Hungarian statistical information venues.

7.13 Ireland

7.13.1 Overview

SBS data for Ireland is used for analysis in this national chapter and the EU Overview of this report. However, in years prior to 2020, data was provided under the EU data call. The SBS data refers to a smaller frame population than data previously presented for the EU MAP. It defines fish processors by the strict NACE 10.20 definition and does not include enterprises with less than 3 persons employed. For data submitted under previous fish processing data calls, a wider definition of fish processing enterprises was used defined by national certification methods and expert knowledge. Estimates for enterprise numbers, employment and turnover are given for 2020 and 2021 using this wider frame population to give some consistency to the previous time series data. In this chapter trends in SBS and DCF data, where available, are discussed. The SBS tables do not provide data for 2022 for the Irish seafood processing industry. Then, the analysis will focus on the trend between 2021 and 2023.

Irish fish processors include operators in the pelagic, whitefish, shellfish, and salmon (smoked) sectors. Roughly, two thirds of Irish processors are involved in whitefish and shellfish operations. The largest enterprises in the sector include predominantly whitefish and pelagic processor firms. The majority of pelagic processors are larger enterprises with estimated yearly turnover of over EUR 10 million. They are largely based in the northwest of Ireland. While the EU remained the largest export market for pelagic products, exports to Africa increased significantly in 2020. The whitefish sector has 14 large enterprises in operation. Roughly, half of the fish processors in this category are smaller processing firms earning on average less than EUR 1 million in turnover annually. The majority of both salmon (smoked) and shellfish fish processors are small and medium sized enterprises earning less than EUR 10 million annually, however, there are a small number of larger enterprises (earning EUR >10 million) operating in these sectors. The main export markets for shellfish are the EU and Asia.

The distribution of enterprise type by employment category has remained relatively stable in the last number of years. On average, half (~60%) of Irish processors employ less than 10 persons and a third (~30%) employing between 11 and 49 persons with larger enterprises employing more than 50 employees attributing to the remainder. Turnover increased from EUR 594 million in 2021 to EUR 609 million in 2023. Following global reduction in demand for seafood globally driven by closures in the hospitality industry during the Covid-19, the sector showed signs of recovery.

The largest segment was multi-species/whitefish, contributing 68% of the turnover with 61% of the companies and 67% of the employees. The pelagic segment accounted for 13% of the total turnover (11% of the companies, 10% of the employees), shellfish for 11% of the total turnover (14% of the companies, 16% of the employees), and salmonids for 8% of the total turnover (14% of the companies, 7% of the employees).

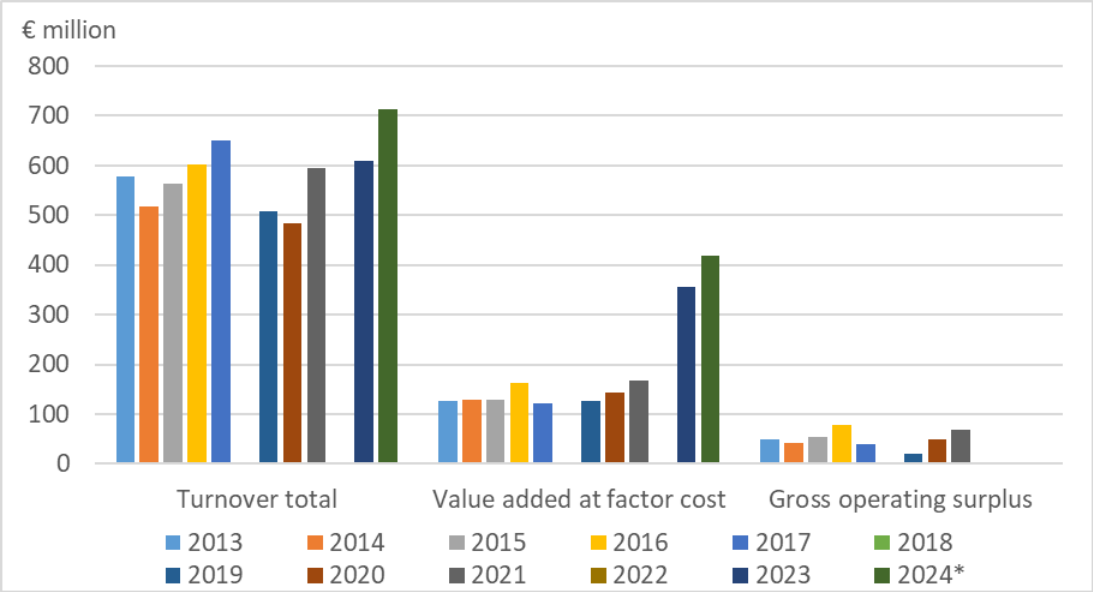
Data from 2013 to 2023 is used for analysis. According to SBS data, there were 112 fish processing enterprises in Ireland in 2023. These enterprises had a production value of EUR 577 million and employed 2 483 persons. Enterprise numbers is quite stable from 113 to 112. Between 2013 and 2017 numbers of processors grew 9% from 105 to 114. Similarly, employee figures grew 10% over this time. Growth in enterprise numbers may in part be driven by a number of smaller processors amalgamating and expanding to greater than 3 employees, which includes them in the SBS figures. Enterprises with less than 10 employees grew 16% between 2013 and 2017.

Table 7.34 Overview, Ireland, 2013-2023

Variable	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Δ (2022-23)
Structure (number)												
Total enterprises	105	101	108	115	114		106	107	113		112	0%
Total employees	2,226	2,360	2,284	2,429	2,454		2,504	2,371	2,455		2,483	0%
Unpaid labour	15	13	15	16	15		229	13	15		14	0%
FTE	2,087	2,233	2,147	2,313	2,279		2,409	2,235	2,340		2,365	0%
Income, expenditure and investments (million €)												
Production value	543.1	498.1	535.6	580.8	615.4		492.1	473.7	539.2		576.9	0%
Turnover from fish processing												0%
Turnover total	576.8	517.1	563.1	602.3	649.1		507.1	483.1	594.2		608.6	0%
Total purchases of goods and services	452.1	389.1	428.0	437.2	484.6		382.5	346.0	430.4		488.1	0%
Personnel costs	76.5	85.7	77.0	84.4	84.1		104.1	94.3	97.3		108.2	0%
Gross investment in machinery and equipment	2.4	4.3	2.3	4.4	2.3		2.0	2.7	1.0		2.2	0%
Economic performance (million €)												
Gross Value Added	125.6	127.9	130.1	163.2	122.6		125.3	144.2	166.4		356.9	0%
Gross profit	49.1	42.3	53.1	78.8	38.6		21.1	49.9	69.1		0.0	0%

Source: EWG elaboration from Eurostat (2025) data.

Figure 7.21 Turnover, GVA and Gross profit evolution, Ireland, 2013-2024



Source: EWG elaboration from Eurostat (2025) data. *2024= nowcasted data

Production value increased by 2% to EUR 577 million in 2023 as personnel costs increased by 11% from EUR 97 million to EUR 108 million. This cannot be explained by employment trend which is quite stable (+1% from 2 455 to 2 483. Employment has recovered to 2 483 since 2021 yet remains below pre-Covid levels. In 2021, Gross Value Added (GVA) was EUR 166.4 for the sector and gross profit was EUR 66.1 million (in 2023, the GVA in the SBS database seems to be too high to be credible). These economic performance indicators suggest that the industry performed better comparably to 2019 with GVA and gross profit increasing 15% and 38% respectively. However, this likely reflects the boost to retail sales leveraged by processors in 2020, which allowed processors to maintain sale activity. While processors serving consumer retail channels could leverage increased demand in domestic consumption and some processors partially mitigated against the negative shock by diversifying into the domestic seafood market, other processors such as shellfish operators were more exposed to the shock

as international export markets contracted sharply. Net profit was not available for analysis in this section, which would give a more holistic view into economic health of processors in the market.

7.13.2 Trends, drivers and outlook

The Irish fish processing sector faces on-going uncertainty driven by the Russian-Ukraine conflict lasting negative impacts of Covid-19 restrictions and Brexit. While the Irish fish processing sector adapted well to the economic shock caused by Covid, the continued resilience of the industry will be tested as the sector deals with the fall-out of Brexit, rising input costs caused by conflict in Ukraine and labour supply and retention challenges. Investment into the sector through private and public channels including EMFF and EMFAF and national public investment programmes will be key to supporting the sector effectively respond to these challenges.

Covid-19

The industry showed signs of recovery in 2021 although seafood trade continued to be affected by Covid restrictions globally. Exports to main markets such as Italy, Spain, France, and China largely recovered particularly in the second half of 2021 following rebounds in national economies as Covid restrictions were eased. However, export value of seafood products to China remained below pre-Covid levels in 2021.

The industry faces on-going challenges driven by Covid as logistics costs increase and freight bottlenecks are experienced, particularly in the Asian market. Operators in shellfish are significantly exposed to the on-going restrictions in the Asian food services sector[28].

Brexit

The EU/UK Trade & Cooperation Agreement (TCA) agreed between the UK and the European came into effect on the 1st of January 2021. Under this agreement, there was a transfer of quota from EU member states to the UK. Under the terms of the trade agreement, Ireland faces a 15% reduction in overall value of quota as compared to 2020, which is comparably larger than other EU member state.

The processing sector was impacted as quota transfer causes structural imbalances between fleet capacity and resource availability resulting in market distortion, impacting logistics and route to market options for processors and the availability of raw material inputs. Brexit has increased barriers to trade for Irish processors of both exports and imports. Important trade routes previously facilitated through the land-bridged via the UK were impacted, increasing logistical constraints, and associated administrative and freight costs. Imports from the UK represented a key input into Irish retailers and the processing supply chain. As competition in sourcing raw materials increased, input costs also rose for enterprises. While processors across the sector faced challenges securing raw materials, pelagic and Nephrops operators were particularly impacted as Irish quota for mackerel and Nephrops faced initalreductions of 26% (EUR 28 million) and 14% (EUR 8 million), respectively. Shore based processing enterprises will be challenged with a consequent reduction in raw materials available.

[28] BIM. (2021). The Business of Seafood 2020.

Industry has already taken steps to mitigate against the negative impacts of Brexit. Imports of products from the UK to Ireland have declined year on year since 2019 indicating that Irish importers are diversifying into new markets. Public investment has also been leveraged to support enterprises, including processors, impacted by the deal. Resulting from the substantial impact Brexit had on the Irish economy, just over EUR 1 billion in funding was allocated to Ireland under the Brexit Adjustment Reserve (BAR) fund which aimed to provide financial support to the Member States, regions and sectors most affected by Brexit. BAR funding came on stream in 2022.

BAR delivered EUR 37 million to Ireland's seafood processing sector in 2023, followed by a further EUR 1.3 million under the EU and Government co-funded Seafood Development Programme in 2024. These supports have driven investment in energy efficiency, automation, cold storage, and product innovation strengthening competitiveness and preparing the sector for future challenges.

Processing remains a vital coastal employer. Multispecies processors, particularly those handling salmon and whitefish, now account for most of the sector's value and employment. While pelagic and shellfish processors face lower volumes and volatile prices, they continue to adapt and show resilience. Regionally, the northeast (including Dublin) retains the highest value and employment, though modernisation is driving growth in the west and south. With raw material supply under pressure from reduced pelagic quotas and shellfish constraints, continued investment in efficiency, innovation, and sustainability is critical[29].

War in Ukraine

The conflict in the Ukraine represents a significant threat to enterprise nationally and internationally, as energy prices rise. The fish processing industry will face increased production costs driven by rising energy prices and input costs as inflation continues, negatively impacting revenue for the sector. In addition, rising consumer prices may impact demand for seafood products and increase competition in markets.

Outlook

Lower quotas in 2025 and the projected cuts for 2026 Total Alllowable Catches (TACs), especially for Pelagic species (Mackerel, Blue Whiting, and Boarfish), will put added pressure on pelagic processors throughput, shortening supply seasons, and tightening margins. To keep lines running, processors will need to explore new raw material sourcing, exploring targeted imports within existing approvals, and using toll-processing arrangements to irregular supply. At the same time, more value must be taken from each tonne landed with a shift towards a greater share into premium and value-added formats. For blue whiting, prioritising human-consumption grades and better use of co-products can lift returns over bulk fishmeal.

Early landings should be used to build frozen inventory to maintain steady market programmes between seasons. A skilled core workforce should be retained, supported by flexible staffing for peak periods; short, targeted training and a clear focus on safety will help sustain productivity when activity is concentrated. Processors should also maintain close engagement with public agencies on market access, certification and working capital supports. These measures include earlier supply planning, higher unit value per tonne, and tighter plant operations may offer the

[29] IIEA. (2021). Brexit's implications for fisheries.
BIM. (2021). Report of the Seafood Task Force.
Irish Seafood Task Force. (2021). Interim Report.

most effective means to sustain revenue and employment while the 2026 quota position is finalised and enable a rapid scaling of throughput when volumes recover.

7.13.3 Data coverage and quality

The years 2020 and 2021 represent a break in the time series data for Irish fish processors. Submission of fish processing data is voluntary under Commission Delegated Decision (EU) 2021/1167. Ireland does not currently follow the extended programme of data collection for fish processing and has not submitted data since 2020, representing a time break in the data. However, a submission of enterprise number by category, employment and turnover for main-activity enterprises was provided.

Besides this data, SBS data is provided and analysed. The population frame for fish processing enterprises differs from data previously submitted under the data collection framework. SBS data report refers to enterprises which fall under NACE code 10.20. SBS data is compiled using two main sources on the fish processing sector: the Annual Census of Industrial Production (CIP) and the Annual Irish Industrial Production by Sector (Prodcom). Given the discrepancies between the EU MAP and SBS data, it may be prudent to use the SBS data for NACE 10.20 as the main data source for Ireland's annual reporting to the Scientific, Technical and Economic Committee for Fisheries (STECF) on fish processing. The great degree of overlap between datasets, the statutory nature of the survey, and its alignment with other SBS data, which may allow comparisons and further analysis, are some of the advantages of using CSO SBS data. The remaining issue is that the frame population has differed between the DCF estimates and the SBS data. The CIP and Irish Industrial Production by Sector (Prodcom) do not include surveys to enterprises with less than 3 persons engaged. DCF data submissions attempted to estimate for the processors with less than 3 persons engaged which resulted in discrepancies in the two data sets as is evident in this report. It should be noted that for this analysis, SBS data for 2018 and 2022 were missing. 2021 data for the majority of variables excluding employment and income variables were also unavailable for analysis. In addition, SBS data does not allow for the analysis of processing enterprises by employment category. Disaggregation of variables under enterprise type unavailable due to confidentiality reasons.

7.14 Italy

7.14.1 Overview

In the present chapter, the Italian fish processing industry (NACE 10.20) is analysed over the period 2022–2023, based on data collected under the Fish Processing Data Call (2025). The analysis also considers the most recent developments observed in 2024–2025, with the aim of highlighting key trends, structural changes, and emerging challenges for the sector.

In 2023, the number of fish processing enterprises (NACE 10.20) in Italy totalled 404 units, showing a slight decrease of 2% compared with 2022. This contraction was mainly driven by a reduction in medium-sized companies (11-49 employees, -7%), which continue to represent the most dynamic and vulnerable segment of the processing sector. Micro-enterprises (≤10 employees) remained almost unchanged (-1%), confirming their structural predominance, while larger enterprises (50-249 employees) showed a modest increase (+4%), maintaining around 25 active units.

This configuration indicates a phase of consolidation and relative stability, with the sector increasingly characterised by a predominance of small operators alongside a stable presence of medium and large enterprises. These structural dynamics are reflected in the employment patterns, where changes across enterprise size classes help to further explain the sector's adaptive capacity and resilience.

Employment dynamics in the Italian fish processing industry remain more variable among small-scale and family-run enterprises, where seasonal contracts, part-time arrangements, and individual circumstances can significantly affect workforce size from year to year.

Between 2021 and 2023, total employment fell from 6,585 to 6,047 workers (-8%), while full-time equivalent (FTE) positions declined from 5,319 to 4,958 (-7%). The most recent variation, between 2022 and 2023, shows a further contraction of about 4% in employment and 3% in FTEs, confirming the gradual adjustment of labour demand after the post-pandemic recovery period. The reduction mainly affected smaller enterprises, which rely more heavily on flexible and temporary labour, while medium and large firms maintained relatively stable employment levels.

The total turnover of the sector reached EUR 2.2 billion in 2023, slightly down (-2%) compared with 2022, after the strong growth recorded between 2020 and 2021 (+18% in 2020 and +15% on 2019). The average turnover per enterprise rose from approximately EUR 5.1 million to EUR 5.3 million, and the average annual wage per FTE remained slightly below EUR 50 000, showing a small increase compared with 2019. This reflects a higher proportion of stable and contracted employees in medium-sized and larger companies, compared with the more flexible workforce typical of micro-enterprises.

The fish processing sector continues to be dominated by the canning segment, which accounts for about 67% of enterprises, followed by companies engaged in frozen seafood production. According to ANCIT (2023), national tinned tuna production amounted to 77 411 tonnes in 2022 (-7.7% on 2021), with 150 660 tonnes available on the domestic market (-5%), corresponding to a per-capita consumption of 2.55 kg.

Fish and seafood consumption in Italy remains among the highest in the EU. According to EUMOFA (2023), the average per-capita consumption stood at around 30 kg, about 4% higher than in 2019. In 2021, fresh products (from both fisheries and aquaculture) represented 49% of total consumption, followed by canned products (22%), packaged frozen seafood (15%), smoked products (9%) and bulk frozen seafood (5%). Recent analyses EUMOFA (2024) and

ISMEA (2025) indicate that the biennium 2024–2025 has been characterised by sectoral stabilisation and a moderate increase in production value, supported by recovering domestic demand and stronger exports to EU markets. The overall turnover of the Italian fish processing industry is estimated at around EUR 3 billion in 2024, marking an increase of about 1.5% compared with 2023 (EUMOFA 2024; ISMEA 2025).

The sector continues to face rising energy and raw material costs, which compress profit margins, especially for small enterprises, although the partial decline in energy prices during 2024 helped ease some financial pressure (EUMOFA 2025). There is also a trend toward greater industrial concentration, with mergers and vertical integration aimed at improving efficiency and market access. At the same time, innovation and sustainability are increasingly becoming key drivers of competitiveness, with companies investing in digitalisation, waste reduction, and recyclable packaging, in line with the EU Aquaculture Strategy 2021–2030 and the European Green Deal. Furthermore, the growing promotion of sustainable aquaculture products and the emphasis on national origin have strengthened consumer interest in certified Italian seafood (Coldiretti, 2025). According to ISMEA (2025) and EUMOFA (2025), consumption patterns are shifting toward processed and ready-to-eat products, while the share of fresh seafood purchases is slightly declining. Nonetheless, quality, health, and local origin remain the key drivers of consumer choice (Deloitte 2021; ISMEA 2025). Overall, the Italian fish processing industry in 2025 shows moderate but stable growth potential, supported by resilient domestic demand, ongoing innovation, and a gradual transition toward more efficient and sustainable production models.

Table 7.35 Overview, Italy, 2013-2023

Variable	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Δ (2022-23)
Structure (number)												
Total enterprises	587	574	577	445	433	434	427	452	467	413	404	-2%
≤ 10 employees	444	430	447	321	295	291	268	307	317	271	269	-1%
11-49 employees	127	126	112	106	117	121	124	120	128	118	110	-7%
50-249 employees	16	18	18	18	21	20	30	25	22	24	25	4%
≥ 250 employees						2	5					0%
Employment (number)												
Total employees	6,292	5,628	5,926	5,905	5,968	6,101	6,037	6,258	6,585	6,326	6,047	-4%
FTE	5,426	4,422	4,778	4,572	4,568	4,859	4,804	4,990	5,319	5,110	4,958	-3%
Indicators												
Turnover (million €)	2,287	2,235	2,243	2,196	2,109	2,077	2,165	2,105	2,482	2,251	2,201	-2%
FTE per enterprise	9.2	7.7	8.3	10.3	10.6	11.2	11.2	11.0	11.4	12.4	12.3	-1%
Average wage (thousand €)	37.1	43.2	39.5	46.3	47.1	44.3	47.4	45.2	46.8	47.6	47.9	1%
Unpaid work (%)	8.0	8.1	8.2	7.4	5.4	5.3	5.3	4.9	5.1	4.9	4.7	-3
Enterprises doing fish processing not as main activity												
Number of entreprises	185	205	208	208	214	207	206	210	204	199	201	1%
Turnover attributed to fish processing (million €)	383.8	501.8	550.6	552.0	583.3	563.5	555.8	570.2	566.1	492.0	522.1	6%

Source: EWG elaboration from Member States submissions to the Fish Processing data call 2025.

7.14.2 Economic performance

During 2022-2023, the Italian fish processing industry demonstrated its resilience by maintaining stability in the face of rising costs and shifts in market demand. Following the post-pandemic recovery, the sector entered a consolidation phase, with 404 active enterprises and a total turnover of approximately EUR 2.2 billion in 2023, which was slightly lower than in 2022 (-2%). Overall income reached EUR 2.77 billion, confirming a good recovery compared with pre-2020 levels, even if revenues were affected by a slowdown in trade and the normalisation of household consumption. Meanwhile, operating subsidies fell by 23%, as temporary public support measures introduced in previous years came to an end.

Table 7.36 Economic performance indicators, Italy, 2013-2023

Variable	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Δ (2022-23)
Income (million €)												
Turnover	2287.3	2234.9	2243.0	2195.7	2108.5	2076.7	2164.7	2105.2	2481.8	2250.9	2201.3	-2%
Other income	0.0	0.0	0.0	404.3	525.0	513.4	534.2	520.3	608.2	560.5	557.5	-1%
Operating subsidies	5.8	4.0	6.3		4.5	4.5	5.0	5.9	7.6	9.6	7.4	-23%
Total Income	2293.1	2238.9	2249.3	2600.0	2638.0	2594.6	2704.0	2631.4	3097.6	2821.0	2766.2	-2%
Expenditure (million €)												
Purchase of fish and other raw material for production	1657.0	1596.1	1613.0	1985.1	1938.1	1888.4	1936.2	1823.7	2175.9	2002.4	1949.8	-3%
Wages and salaries of staff	201.4	191.1	188.9	211.7	215.0	215.1	227.5	225.5	249.1	243.4	237.7	-2%
Imputed value of unpaid labour	17.5	16.8	16.9	16.9	12.4	12.0	12.7	11.7	13.3	12.5	11.8	-6%
Payment for external agency workers (optional)				2.0	6.5	6.6	1.8	2.2				
Energy costs	81.4	79.4	78.5	141.3	103.3	100.9	104.9	101.3	119.1	110.6	107.1	-3%
Other operational costs	285.0	304.2	268.0	238.2	275.6	272.4	301.6	329.5	373.2	350.4	324.7	-7%
Total production costs	2242.4	2187.5	2165.4	2593.2	2544.4	2488.8	2583.0	2491.7	2930.7	2719.3	2631.0	-3%
Capital Costs (million €)												
Depreciation of capital	49.3	49.1	53.4		50.4	45.7	52.6	53.0	59.2	58.7	58.2	-1%
Financial costs, net	27.8	30.4	26.1		17.9	16.8	16.2	13.8	14.6	17.4	32.0	84%
Capital Value (million €)												
Total value of assets	1976.5	1811.8	1724.3	1284.2	1905.1	1914.4	1990.3	2129.1	2265.4	2270.5	2150.9	-5%
Net Investments	-19.6	55.0	55.9	44.9	52.4	55.1	74.5	153.7	137.9	109.4	73.9	-32%
Subsidies on investments						18.0	38.8	4.0	6.9	5.6	4.0	-29%
Debt	1373.0	1245.8	1174.3	951.5	1278.8	1290.1	1301.3	1355.7	1466.4	1426.9	1310.8	-8%
Economic performance (million €)												
Gross Value Added	263.9	255.2	283.5	235.4	316.5	328.4	356.2	371.0	421.9	348.0	377.2	8%
Operating Cash Flow	50.8	51.4	83.9	6.8	93.6	105.8	120.9	139.7	166.9	101.7	135.1	33%
Earning before interest and tax	1.5	2.2	30.5		43.2	60.1	68.4	86.8	107.8	42.9	76.9	79%
Net Profit	-26.4	-28.2	4.4		25.3	43.3	52.2	73.0	93.2	25.5	45.0	76%
Productivity and performance Indicators												
Labour productivity (thousand €)	48.6	57.7	59.3	51.5	69.3	67.6	74.2	74.4	79.3	68.1	76.1	12%
Capital productivity (%)	13.4	14.1	16.4	18.3	16.6	17.2	17.9	17.4	18.6	15.3	17.5	
GVA margin (%)	11.5	11.4	12.6	9.1	12.0	12.7	13.2	14.1	13.7	12.4	13.7	
EBIT margin (%)	0.1	0.1	1.4	0.3	1.6	2.3	2.5	3.3	3.5	1.5	2.8	
Net profit margin (%)	-1.2	-1.3	0.2	0.3	1.0	1.7	1.9	2.8	3.0	0.9	1.6	
Return on Investment (%)	0.1	0.1	1.8	0.5	2.3	3.1	3.4	4.1	4.8	1.9	3.6	
Financial position (%)	30.5	31.2	31.9	25.9	32.9	32.6	34.6	36.3	35.3	37.2	39.1	

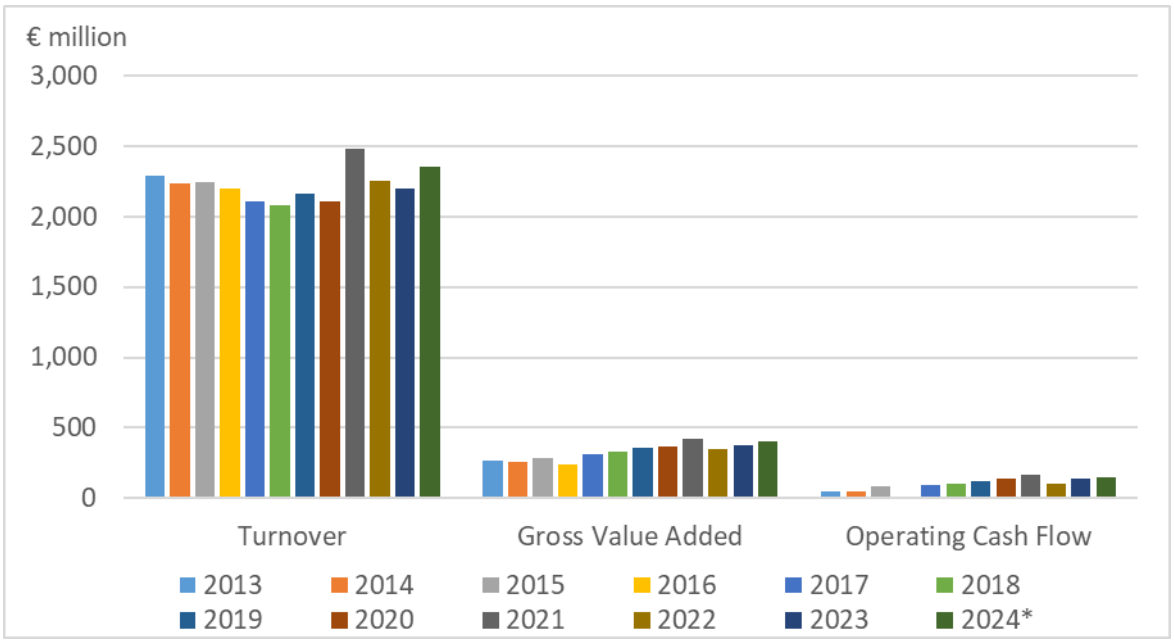
Source: EWG elaboration from Member States submissions to the Fish Processing data call 2025.

Production costs followed a moderate downward trend, totalling EUR 2.63 billion in 2023 (-3%). The purchase of fish and other raw materials remained the largest cost, accounting for around three-quarters of total expenditure at EUR 1.95 billion (-3%). Labour costs accounted for around 9%, while energy and service costs decreased slightly thanks to the easing of energy prices in

2023. Depreciation expenses remained stable, reflecting ongoing investments in modernisation and energy-efficient technologies, which are supported by EU and national programmes. In contrast, financial costs increased sharply by 84% due to higher interest rates and limited access to concessional loans. In terms of performance, the sector achieved a gross value added (GVA) of EUR 377 million in 2023, an increase of 8% compared to 2022. Net profit also improved, reaching EUR 45 million, although margins remained modest at 1.6% and 3.6% for the net profit margin and return on investment, respectively. Labour productivity increased to approximately EUR 76 000 per employee, reflecting a gradual improvement of 12%, driven by efficiency gains and improved process organisation, particularly among medium-sized enterprises. At the same time, the sector reduced its debt levels by 8%, signalling more cautious financial management and progressive stabilisation of company balance sheets. In conclusion, the Italian fish processing industry demonstrated economic resilience and growing structural efficiency in 2022-2023.

The nowcast provides an early estimate of the sector's current economic performance, anticipating official statistics through short-term modelling based on recent market data. In this case, the analysis focuses on three core indicators, which together describe the financial health and resilience of Italy's fish-processing industry. Turnover reflects overall market activity, GVA measures the sector's capacity to generate added value, and operating cash flow indicates liquidity and short-term sustainability. Their combined evolution helps assess structural stability, efficiency trends, and the sector's adaptive capacity in a changing economic environment. Thus, between 2013 and 2025, turnover remains relatively stable over the decade, fluctuating around EUR 2.1-2.5 billion, with a moderate recovery projected after 2021 following the pandemic slowdown. GVA shows gradual improvement, reflecting higher productivity and added-value capacity, while operating cash flow remains limited but positive, indicating persistent pressure on liquidity and margins. The overall trend suggests a structurally stable yet low-profit sector, increasingly dependent on efficiency gains and value-added diversification to sustain competitiveness amid rising energy and raw-material costs in 2023–2024.

Figure 7.22 Turnover, GVA and Operating cash flow evolution, Italy, 2013-2024



Source: EWG elaboration from Member States submissions to the Fish Processing data call 2025. *2024= nowcasted data

7.14.3 Breakdown by company size

The analysis of company performance by size class confirms the structural polarization of the Italian fish processing sector, where small enterprises remain numerous but contribute less to overall economic value, while medium-sized companies continue to drive most of the production and turnover. For confidentiality reasons, enterprises with more than 250 employees are aggregated within the 50-249 class, as in previous data collections.

Table 7.37 Economic performance by company size, Italy, 2013-2023

Variable	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Δ (2022-23)
less than or equal to 10 employees												
Total Income	455.7	347.9	369.3	286.6	294.1	255.5	231.9	276.8	390.0	257.6	289.5	12%
Total production costs	444.2	349.8	351.7	284.6	286.5	250.2	226.1	269.2	371.6	252.2	282.3	12%
Gross Value Added	58.3	31.0	50.9	33.6	38.3	33.3	31.5	35.3	48.5	34.5	36.6	6%
Operating Cash Flow	11.4	-1.9	17.5	2.1	7.6	5.4	5.8	7.6	18.4	5.4	7.2	33%
Earning before interest and tax	-2.7	-13.0	5.2	-6.0	-0.6	-1.3	-0.1	0.6	11.6	-0.7	-0.5	33%
Net Profit	-11.6	-20.2	-1.6	-7.5	-3.9	-3.6	-2.1	-1.8	8.9	-2.7	-3.8	-41%
between 11 and 49 employees												
Total Income	1042.9	905.0	857.5	925.2	1183.8	1266.7	1136.7	1143.2	1404.9	1277.8	1167.4	-9%
Total production costs	1011.3	886.9	843.9	904.3	1147.0	1220.9	1095.2	1098.9	1338.3	1237.9	1115.3	-10%
Gross Value Added	127.6	99.4	86.1	94.5	122.2	134.4	123.7	128.5	165.6	132.1	141.2	7%
Operating Cash Flow	31.6	18.1	13.6	21.0	36.8	45.8	41.5	44.3	66.5	39.9	52.2	31%
Earning before interest and tax	14.4	-0.9	-0.0	21.0	18.5	24.3	24.8	26.0	47.3	20.1	31.8	58%
Net Profit	3.6	-12.5	-8.1	21.0	8.9	15.4	18.1	19.4	40.8	11.2	16.4	47%
greater than or equal to 50 employees												
Total Income	794.6	986.0	1022.5		1160.1	1072.4	1335.4	1211.4	1302.7	1285.6	1309.2	1.8%
Total production costs	786.9	950.9	969.7		1111.0	1017.8	1261.7	1123.6	1220.7	1229.3	1233.4	0.3%
Gross Value Added	78.0	124.8	146.4		156.0	160.6	201.0	207.3	207.8	181.4	199.5	9.9%
Operating Cash Flow	7.7	35.1	52.8		49.2	54.6	73.7	87.9	82.0	56.4	75.8	34.5%
Earning before interest and tax	-10.2	16.1	25.4		25.3	37.1	43.7	60.1	48.9	23.6	45.6	93.7%
Net Profit	-18.4	4.4	14.1		20.2	31.5	36.2	55.4	43.5	17.0	32.3	89.6%

Source: EWG elaboration from Member States submissions to the Fish Processing data call 2025.

In 2023, enterprises with 11-49 employees continued to represent the core of the sector, generating around 45% of total income, followed by medium-sized enterprises (50-249 employees) with 42%, while micro-enterprises (≤10 employees) accounted for about 13%. Compared with 2022, total income declined across all size classes, particularly among micro and small companies (-11%), reflecting their higher exposure to fluctuations in raw material costs and local market demand. Medium-sized enterprises showed greater resilience, maintaining relatively stable revenues (EUR 1.31 billion, -2% on 2022) and stable production costs, supported by more structured supply chains and long-term commercial partnerships. However, their net profits decreased by 48%, mainly due to rising logistics and energy costs, which significantly affected processing and distribution margins. The increase in cold storage and refrigerated transport expenses, particularly for imported raw materials, was a key factor limiting profitability. Smaller companies, often family-run and locally integrated, demonstrated more flexibility in sourcing and processing, reorganizing their supply networks to rely on regional suppliers and shorter value chains. This strategic adjustment partially mitigated cost increases and supported the maintenance of employment levels, although income and added value remained limited in absolute terms.

The GVA for the 11-49 employee class reached EUR 141 million in 2023 (-6% on 2022), confirming its central role in sectoral productivity. By contrast, the micro-enterprise class showed a modest GVA of about EUR 37 million, indicating structural fragility but also persistence in niche and artisanal segments, such as local seafood specialties and small-scale canning. Throughout 2022-2023, the Italian fish processing industry displayed a dual structure. Medium-sized enterprises-maintained production stability and competitiveness in export and distribution, while small enterprises promoted regional diversification and product identity. A period of decline in profitability was marked by an increase in productivity and a shift in focus

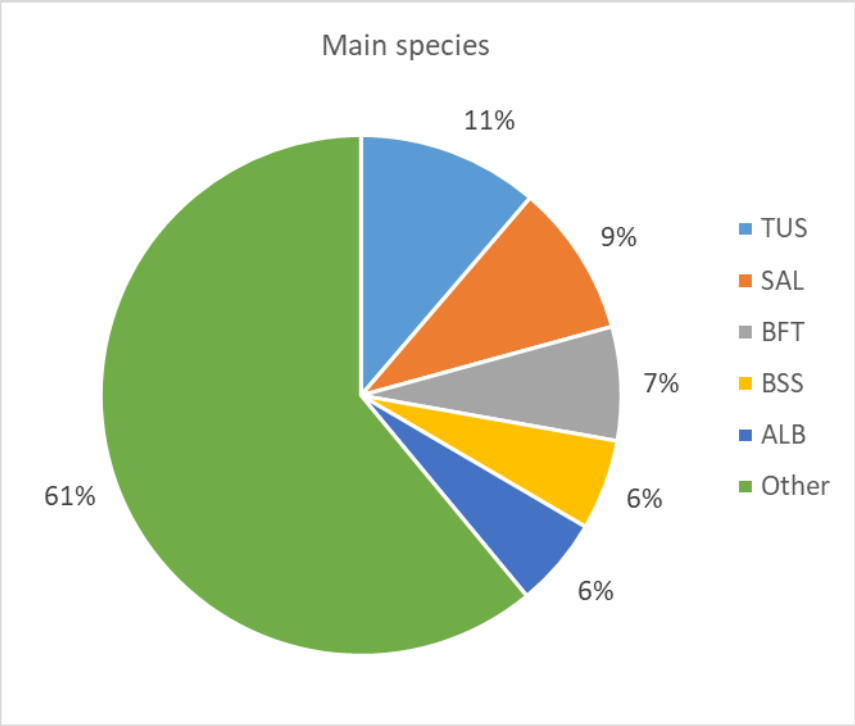
towards efficiency, energy management and innovation as key factors in ensuring future resilience.

7.14.4 Raw materials

Between 2022 and 2023, the Italian fish processing sector underwent a complex evolution shaped by both structural and cyclical factors that significantly affected the composition and value of raw materials. The total production value declined from approximately EUR 439 million in 2022 to EUR 377 million in 2023, marking a 14% decrease. This downturn reflects a general slowdown in industrial activity, driven by rising energy and logistics costs and by a gradual readjustment of supply chains following the global disruptions caused by the pandemic and the 2021 energy crisis. Compared with pre-2020 levels, the sector continues to show reduced processing volumes and a more selective use of species, with direct consequences for production chain structures.

In 2023, the “Other” category remained dominant, accounting for around 89% of total raw material value, though it declined in absolute terms. Among individual species, albacore (ALB) and anchovies (ANE) retained their traditional importance but fell slightly in value (-3% and -16% respectively), mainly due to international price volatility and intensified competition in the global tuna and anchovy markets. Conversely, some secondary species displayed more dynamic growth: meagre (AMB) increased by 43%, while the common anchovy or *alaccia* (ACH) nearly doubled in value, indicating a strategic effort to diversify sourcing and reduce dependence on a few dominant species. Moreover, the variation observed in the values of some species, can be due to a refinement of the data collection and estimation methodology. The recent methodological update introduced more accurate criteria for classifying and aggregating raw material in volume by species and origin, improving the consistency and reliability of national datasets.

Figure 7.23 Distribution of raw material by main species, in %, Italy, 2023



Source: EWG elaboration from Member States submissions to the Fish Processing data call 2025.

The 2023 contraction results from a combination of cost pressures, fluctuating fish prices, and lower availability of key species. The tuna value chain was particularly affected by competition from European and Asian processors and by higher transport and storage costs for frozen or loin products, Italy's main import form. The anchovy and sardine segments also faced constraints linked to seasonal availability and higher local catch prices, prompting some firms to rely more on extra-EU imports. The increased use of species such as meagre and *alaccia* thus reflects an adaptive strategy aimed at ensuring production continuity through a more diversified supply portfolio.

Finfish-based products, although declining in value, remain central to produce fresh and frozen fillets. Unlike canned goods, these processes generate lower waste and offer higher environmental sustainability potential. Nonetheless, high processing and cold-storage costs remain major barriers, especially for small and medium-sized enterprises, which make up most of the Italian industry.

Overall, the 2022–2023 period highlights a strategic but fragile sector undergoing structural readjustment. Rising energy costs and global price volatility have challenged the economic sustainability of traditional production models, encouraging firms toward efficiency and diversification. Compared with 2020–2021, the post-pandemic recovery phase has been followed by a slowdown, particularly affecting low-value segments and those heavily reliant on imported raw materials.

Strategically, the sector's resilience will depend on three main directions: 1) diversification of species and sourcing markets to mitigate price volatility; 2) valorization of local, sustainable, and aquaculture-based raw materials; and 3) technological innovation aimed at waste reduction and by-product recovery in line with circular economy principles.

The trends observed in 2022–2023 therefore represent not a definitive contraction, but a transition toward more efficient, resilient, and sustainability-aligned production models consistent with the EU Green Deal and the Farm to Fork strategy.

7.14.5 Trends, drivers and outlook

During 2024–2025, the Italian fish processing sector entered a phase of structural transition driven by high energy costs, raw material constraints, and new policy frameworks supporting decarbonisation and circular economy objectives. Although energy prices moderated compared to the 2022–2023 peak, they remained well above pre-pandemic levels, continuing to pressure margins, particularly for energy-intensive operations such as freezing, canning, and cold storage. A key policy driver has been the implementation of EMFAF 2021-27-supported pilot projects, which promote energy efficiency and carbon reduction within the processing industry. These initiatives enabled companies to adopt and test innovative technologies such as heat-recovery systems, high-efficiency motors, and integrated photovoltaic units, with the dual goal of reducing energy dependency and contributing to national decarbonisation targets. Early results from these pilots indicate operational energy savings of 6-8% and improved production stability, supporting both environmental and economic resilience.

In parallel, national structural funds have been channelled into projects targeting material and energy recovery from processing residues, in line with the EU circular economy and "From Waste to Value" strategies. Several demonstration initiatives launched in 2024 across coastal regions (e.g. Liguria, Sicily, Apulia, and Marche) are transforming fish by-products, such as heads, bones, skins, into high-value derivatives such as fishmeal, fish oil, biogas, and marine-

based biomaterials. This evolution marks a strategic shift from waste disposal to resource valorisation, contributing to both sustainability and diversification of the processing sector.

From a market perspective, 2024 was characterised by constrained supply and persistent price inflation. In 2025, the sector experienced moderate recovery, supported by stable consumption of long-shelf-life products (mainly canned tuna and frozen fillets) and expanding export opportunities toward Northern Europe and Asia. The gradual uptake of environmental and energy management certifications (e.g. MSC, Friend of the Sea, ISO 50001) is further strengthening competitiveness, particularly for export-oriented enterprises. Nevertheless, domestic demand remains fragile due to weak real household income and the shift toward low-cost or private-label seafood products. Thus, the 2024–2025 period confirms an ongoing structural transformation of the Italian fish processing industry, from a traditional, energy-intensive model towards a more efficient, diversified, and sustainable production system. The combined action of EMFAF financial support and national measures fostering circular economy investments is accelerating this transition, helping companies reduce fossil-fuel dependency, enhance resource recovery, and align with EU climate-neutral and blue economy strategies.

7.14.6 Data coverage and quality

There are no major data issues in the Italian DCF data for the fish processing sector submitted under the current data call. The Italian data in this report was collected through a diversified approach and access to different data sources: national register of enterprises and financial statements for number of enterprises, employment and economic data; use of external sources (e.g. Eurostat) as a complement of estimation; access to administrative data for subsidies on investments. As specified when replying to the data call, economic data for enterprises belonging to the size class >250 employees have been clustered to the size class 11-49 employees for confidentiality reasons. Starting with the reference year 2022 and in line with the Work Plan, the estimation of the raw material in volume has been refined, including in the estimation data collected through a survey, aimed at interviewing processors to collect information on species and origin of raw material. For this reason, data on raw material are not completely comparable over time.

7.15 Latvia

Fish processing is a well-developed old tradition in Latvia. The processing sector is based on the local natural resources and on the supply of raw materials for production from the neighbouring countries Lithuania, Poland and Sweden. The most of fish processing enterprises are located in Riga and Roja cities. Large amount of the enterprises is also situated along the Latvian coast and in the Kurzeme region. Some of them are in Tukums, Engure, Carnikava and Kekava cities. The small enterprises with less than 10 employees had the biggest share in the sector around 57% (Table 7.39). Such enterprises usually are family business and are situated near the fishermen settlements.

Table 7.38 provides an overview of the Latvian fish processing industry. According to SBS data, in 2023 there were 93 enterprises in Latvia which main activity was fish processing, with a total turnover of EUR 308.5 million, 6% increasing compared to 2022.

The total number of enterprises decreased by 18, or 16%, between 2013 and 2023, while gross value added (GVA) per enterprise increased by 19%. During the analysed period the sector was profitable with an average annual gross profit of approximately EUR 154 000 per year per enterprise.

Gross investment in tangible goods in 2023 amounted to EUR 47.9 million. Investments in machinery and equipment in recent years averaging EUR 9.7 million per year, contributed to improved working conditions for employees between 2013 and 2023, which in turn assisted in increase of the labour productivity by 52% during the same period.

The total number of persons employed in the Latvian fish processing industry was 2 568, corresponding to 2 387 full-time equivalents (FTEs). Compared to 2013, the total number of persons employed and FTEs in 2023 decreased by 59% and 50%, respectively. The number of unpaid workers in 2023 was estimated to be 36 persons, representing 1.4% of the total employment in fish processing industry.

Table 7.38 Overview, Latvia, 2013-2023

Variable	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Δ (2022-23)
Structure (number)												
Total enterprises	111	111	112	115	112	108	106	91	96	97	93	-4%
Total employees	6,217	5,712	4,170	3,741	3,478	3,186	2,888	2,625	2,743	2,685	2,568	-4%
Unpaid labour	8	44	88	63	43	63	33	18	33	30	36	20%
FTE	4,791	5,282	3,588	3,258	3,125	2,911	2,507	2,360	2,406	2,498	2,387	-4%
Income, expenditure and investments (million €)												
Production value	224.0	209.7	156.0	148.8	173.9	188.3	195.8	220.5	233.4	287.2	296.4	3%
Turnover from fish processing	204.3	194.7	146.6	139.0	164.9	179.0	189.3	215.0				0%
Turnover total	254.6	228.1	169.0	153.0	183.2	198.5	209.4	225.8	238.2	290.8	308.5	6%
Total purchases of goods and services	201.8	182.8	131.4	121.7	152.6	160.9	170.3	179.0	189.3	238.6	248.3	4%
Personnel costs	36.5	36.1	27.3	25.5	27.8	29.8	28.7	30.0	34.9	39.3	42.3	8%
Gross investment in machinery and equipment	12.4	7.5	7.9	2.2	1.5	4.9	7.0	3.9	2.8	8.4	47.9	473%
Economic performance (million €)												
Gross Value Added	59.7	52.6	44.5	39.3	34.8	41.3	44.4	50.3	50.6	54.0	62.0	15%
Gross profit	23.2	16.5	17.2	13.8	7.0	11.5	15.7	20.3	15.7	14.8	19.6	33%

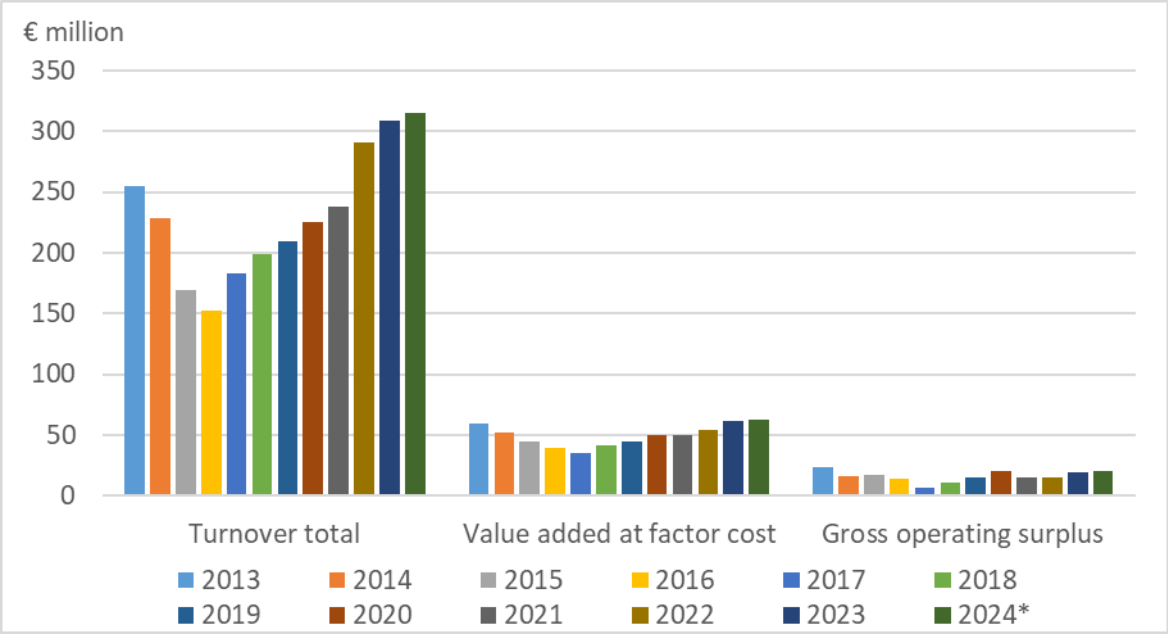
Source: EWG elaboration from Eurostat (2025) data.

Personnel costs in 2023 amounted to EUR 42.3 million, an increase of 16% compared to 2013. The average full-time wage in the fish processing sector increased by 57% compared to 2013 but is still 4% below the average wage in Latvia in 2023.

The production value in 2023 corresponded to EUR 296.4 million, an increase of 3% compared to 2022. The value of total purchases of goods and services increased by 4% and corresponded to EUR 248.3 million in 2023. The production value amounted to 96% of total fish processing turnover in 2023.

Figure 7.24 provides an overview of the evolution of the key performance indicators of the Latvian fish processing industry. Comparing economic performance indicators for the period from 2013 to 2023, it can be noted that gross value added (GVA) increased by 4%, reaching EUR 62.0 million in 2023 while gross profit underwent a fall by 15%, reaching EUR 19.6 million.

Figure 7.24 Turnover, GVA and Gross profit evolution, Latvia, 2013-2024



Source: EWG elaboration from Eurostat (2025) data. *2024= nowcasted data

Table 7.39 Number of enterprises by size category, Latvia, 2013-2023

Size category	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
From 0 to 9 persons employed	52	54	57	60	65	63	64	49	51	55	53
From 10 to 19 persons employed	12	10	13	14	8	7	7	9	13	10	8
From 20 to 49 persons employed	23	25	23	23	20	23	21	20	18	18	19
From 50 to 249 persons employed	17	14	14	17	17	13	12	12	13	13	13
250 persons employed or more	7	8	5	1	2	2	2	1	1	1	0
Total	111	111	112	115	112	108	106	91	96	97	93

Source: EWG elaboration from Eurostat (2025) data.

All fish processing enterprises operate according to European Union standards. The enterprises which export its production are certificated in accordance with the standards of the buyer's country.

The most common types of certifications are:

- IFC (International Food Standard);

- MSC (Chain of Custody Standard); is a traceability and segregation standard that is applicable to the full supply chain from a certified fishery or farm to final sale;

- GOST standard is a system of certification maintained by the Euro-Asian Council for Standardization, Metrology and Certification (EASC), a regional standard operating underthrew auspices of the Commonwealth of Independent States (CIS).

The fish processing industry production has significant share in Latvian total export and also supplies the domestic market. The fish products were exported to 75 countries and imported from 55 countries in 2024. The total volume and value of export in 2024 amounted to 87.4 tonnes and EUR 304.5 million. Latvia's total volume and value of export increased by 1% and 8%, respectively, from 2023 to 2024. The volume and value of export to EU countries increased by 9% and 11%, respectively, while export to non-EU countries decreased by 9% and increased by 3% in value from 2023 to 2024.

The most significant countries for the export of Latvian fish processing products in 2024 were Ukraine, Germany, Lithuania, Estonia, Poland, and Denmark, contributing for 59% and 55% to total fish processing products export volume and revenue, respectively. The main countries for the production import were Lithuania, Sweden, Estonia, Poland, United Kingdom, Norway and Denmark, accounting 65% and 66%, respectively to the total fish processing import volume and value in 2024.

The main types of imported products by volume were "Fresh or chilled fish, excluding fish fillets and other fish meat" and "Frozen fish, excluding fish fillets and other fish meat". These products accounted share for 30% and 26%, respectively, of total fish production imports in 2024. "Prepared or canned fish" was the main product type for the export with the share of 45% and 51%, respectively from the total export volume and revenue in 2024.

The raw materials for exported production are mainly being made Baltic Sea and the Atlantic Ocean catches obtained by the Latvian fishing vessels or imported from the neighbouring countries. The fish species range in catches of the Latvian vessels is not very wide. The main species are sprat and herring. North Sea and Northeast Atlantic Herring and Scomber imported from Norway also were used as the raw material for the production of canned fish. The biggest fish markets are concentrated in the Riga, Daugavpils, Liepaja and Jelgava cities.

7.15.1 Data coverage and quality

No data were submitted by Latvia EU Fish Processing Industry sector data call. For that reason, the EWG prepared this section based on Eurostat’s Structural Business Statistics data and Latvian Central Statistical Bureau (CSB) database for import and export data which are publicly available.

7.16 Lithuania

7.16.1 Overview

In 2023, the Lithuanian fish processing industry consisted of 47 enterprises whose main activity was fish processing. Compared to 2022, this number remained stable, with a slight annual decrease of 2%. Total income of fish processing industry, including 93.5% from processing and 6.5% from other income, rose modestly by 1% to its highest level since 2013. This modest growth reflects cautious optimism amid economic challenges, potentially driven by steady demand for processed fish products in domestic market and strong competition in export markets. In addition, there were 36 enterprises engaged in fish processing as a non-main activity in 2023. This number declined by 3% compared to 2022, accompanied by an 8% decrease in turnover. However, when compared to the multiannual average for 2013–2022, both the number of enterprises and turnover in this category were significantly higher in 2023 - by 31% and 120%, respectively. This growth reflects shift, mostly from aquaculture producers toward high-value products, such as premium smoked, canned, or ready-to-eat products. Additionally, access to EU funding and investments in sustainable practices may have bolstered their ability to differentiate products, enhancing competitiveness despite a recent 8% turnover decline.

The Lithuanian fish processing industry is highly dependent on imported raw materials. In 2023, approximately 94.8% of the total raw material quantity (104.9 thousand tonnes) was imported. This trend has remained stable throughout the 2013-2023 period. Marine fisheries supplied 95.4% of the processed raw material, with the remaining 4.6% from the freshwater sector, primarily aquaculture.

Table 7.40 Overview, Lithuania, 2013-2023

Variable	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Δ (2022-23)
Structure (number)												
Total enterprises	30	34	51	42	39	42	40	49	44	48	47	-2%
≤ 10 employees		3	20	14	12	17	13	17	14	18	19	6%
11-49 employees	14	14	12	11	11	10	11	16	14	14	13	-7%
50-249 employees	11	11	12	11	10	9	10	10	10	10	8	-20%
≥ 250 employees	5	6	7	6	6	6	6	6	6	6	7	17%
Employment (number)												
Total employees	4,471	5,165	5,373	4,743	4,855	4,815	5,115	5,106	5,149	5,321	5,020	-6%
FTE	3,502	3,868	4,132	3,673	3,744	3,870	3,706	3,861	3,573	3,902	4,110	5%
Indicators												
Turnover (million €)	319	419	443	457	504	512	570	561	575	678	674	-1%
FTE per enterprise	116.7	113.8	81.0	87.5	96.0	92.1	92.6	78.8	81.2	81.3	87.4	8%
Average wage (thousand €)	10.4	10.7	9.0	13.1	14.0	15.1	17.4	16.4	19.5	20.8	20.7	-1%
Unpaid work (%)			0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	-5%
Enterprises doing fish processing not as main activity												
Number of entreprises	6	6	21	31	23	33	33	43	42	37	36	-3%
Turnover attributed to fish processing (million €)	5.3	7.2	9.7	10.7	3.9	4.8	9.2	10.9	15.3	24.0	22.3	-7%

Source: EWG elaboration from Member States submissions to the Fish Processing data call 2025.

In total, fish processing production for human consumption in 2023 amounted to 115 thousand tonnes, of which 110.4 thousand tonnes were produced by companies whose main activity was

fish processing. Compared to 2022, total production declined by 8.6%. This contraction may indicate reduced demand or supply chain constraints.

Surimi and smoked fish (including fillets) were the leading commodities, accounting for 38% and 20% of production volume, respectively. However, smoked fish and fillets contributed 40% to the total production value, while surimi accounted for 21%, highlighting the higher value-added nature of smoked products. Frozen fillet production continued its downward trend, falling to 16.6 thousand tonnes (14% of total output) in 2023, potentially reflecting shifts in consumer preferences or export market dynamics.

In 2023, in terms of production value, the most important species was Atlantic salmon, which contributed 46% of the total production value and 24% of the total production weight. However, the volumes of processed Atlantic salmon have a declining trend. The weight of processed Atlantic salmon declined by 18% from 2022, while the total weight of production by the industry decreased by 8.6%. The steeper drop in processed volumes compared to the industry's overall decline suggests specific vulnerabilities in the salmon segment including increased production cost, inflation and supply chain disruptions, mostly in countries producing Atlantic Salmon. For example, based on the data from fish processing industry, raw material price for Atlantic salmon during 2021-2022 increased by34% and remained at this level in 2023. Around 14% of the total production weight was from processed Atlantic herring (mostly salted in brine) and 6% from Atlantic cod (mostly frozen fillets), which also have a declining trend in production. For the companies with non-main activity, the dominant species were carps and African catfish from aquaculture contributing by 25% and 11% of production value in this segment.

In 2023, the value of sales in the internal market surged by 47.1%, reaching EUR 454.1 million, up from EUR 308.8 million in 2022. Data of consumption of fish products indicates stable consumption per capita with slightly decreasing trend during 2022-2023, so surge in the internal market sales may encompass intermediate sales to domestic wholesalers, distributors, or traders rather than end-consumer purchases. These entities often re-export processed fish products to third countries or other EU members, effectively using the internal market as a hub for logistics. Consequently, exports from fish processing industry enterprises declined by 41.7%, to EUR 221.8 million. Approximately 92% of exported production was directed to the EU market.

The Lithuanian processing industry employed 5 020 employees in 2023, a 6% decrease compared to 2022. However, in terms of full-time equivalent (FTE) employment, there was a 5% increase, reaching 4 110 FTEs. The average annual wage, which had been rising since 2008, stabilized in 2023 at EUR 20.7 thousand.

7.16.2 Economic performance

In 2023, the Lithuanian fish processing industry achieved record-high total revenues of EUR 720.9 million, a 1% increase from 2022 and 31% above the 2013–2022 multiannual average. This growth was driven mostly by strong demand, favourable prices of processed fished products and increased production efficiency.

Table 7.41 Economic performance indicators, Lithuania, 2013-2023

Variable	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Δ (2022-23)
Income (million €)												
Turnover	318.7	419.2	443.1	457.0	504.2	512.2	570.0	560.6	575.1	678.0	674.2	-1%
Other income	44.2	66.3	78.2	35.7	44.0	52.6	33.2	31.7	50.0	39.3	46.7	19%
Operating subsidies			0.8		0.1	0.1	0.2	0.1	0.1	0.0	0.0	-61%
Total Income	362.9	485.5	522.1	492.8	548.3	564.9	603.4	592.4	625.2	717.3	720.9	1%
Expenditure (million €)												
Purchase of fish and other raw material for production	222.6	305.5	341.4	361.8	368.9	368.0	405.1	381.1	407.8	482.6	484.1	0%
Wages and salaries of staff	36.4	41.5	37.3	48.1	52.3	58.3	64.4	63.3	69.6	81.1	84.8	5%
Imputed value of unpaid labour			0.0	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0%
Payment for external agency workers (optional)				1.5	1.6	0.8	1.3	1.2	1.6	2.1	1.5	-27%
Energy costs	7.1	8.1	7.6	7.1	8.1	7.9	8.1	7.6	9.0	15.7	13.1	-16%
Other operational costs	61.4	109.3	85.1	79.8	73.1	78.2	80.8	87.8	92.6	106.6	81.3	-24%
Total production costs	327.6	464.4	471.4	498.3	504.0	513.3	559.7	541.0	580.7	688.2	665.0	-3%
Capital Costs (million €)												
Depreciation of capital	22.6	8.5	10.1	9.0	8.8	9.7	10.9	12.9	12.6	11.9	11.0	-7%
Financial costs, net	1.9	1.7	3.1	-0.9	3.0	0.1	-0.2	2.2	0.3	-0.8	2.3	370%
Capital Value (million €)												
Total value of assets	193.6	231.5	243.4	252.5	302.1	286.6	292.9	286.8	265.8	323.2	315.2	-2%
Net Investments	19.3	17.5	4.7	7.1	6.5	11.9	18.0	2.2	10.6	14.9	10.2	-32%
Subsidies on investments				0.1	0.1	0.8	0.3	0.1	0.2	0.2	1.2	541%
Debt	135.5	148.5	161.2	174.3	166.1	173.2	166.0	145.1	143.2	176.9	171.6	-3%
Economic performance (million €)												
Gross Value Added	71.8	62.6	87.3	42.6	96.5	109.9	107.9	114.6	114.1	110.3	140.9	28%
Operating Cash Flow	35.3	21.1	50.7	-5.5	44.3	51.6	43.6	51.4	44.6	29.1	56.0	92%
Earning before interest and tax	12.7	12.6	40.6	-14.5	35.5	41.9	32.7	38.5	32.0	17.3	44.9	160%
Net Profit	10.8	10.9	37.5	-13.6	32.5	41.9	32.9	36.3	31.6	18.1	42.6	135%
Productivity and performance Indicators												
Labour productivity (thousand €)	20.5	16.2	21.1	11.6	25.8	28.4	29.1	29.7	31.9	28.3	34.3	21%
Capital productivity (%)	37.1	27.1	35.9	16.9	31.9	38.4	36.8	40.0	42.9	34.1	44.7	
GVA margin (%)	19.8	12.9	16.7	8.6	17.6	19.5	17.9	19.4	18.3	15.4	19.5	
EBIT margin (%)	3.5	2.6	7.8	-2.9	6.5	7.4	5.4	6.5	5.1	2.4	6.2	
Net profit margin (%)	3.0	2.2	7.2	-2.8	5.9	7.4	5.5	6.1	5.1	2.5	5.9	
Return on Investment (%)	6.6	5.4	16.7	-5.7	11.8	14.6	11.2	13.4	12.0	5.3	14.2	
Financial position (%)	30.0	35.8	33.7	30.9	45.0	39.6	43.3	49.4	46.1	45.3	45.6	

Source: EWG elaboration from Member States submissions to the Fish Processing data call 2025.

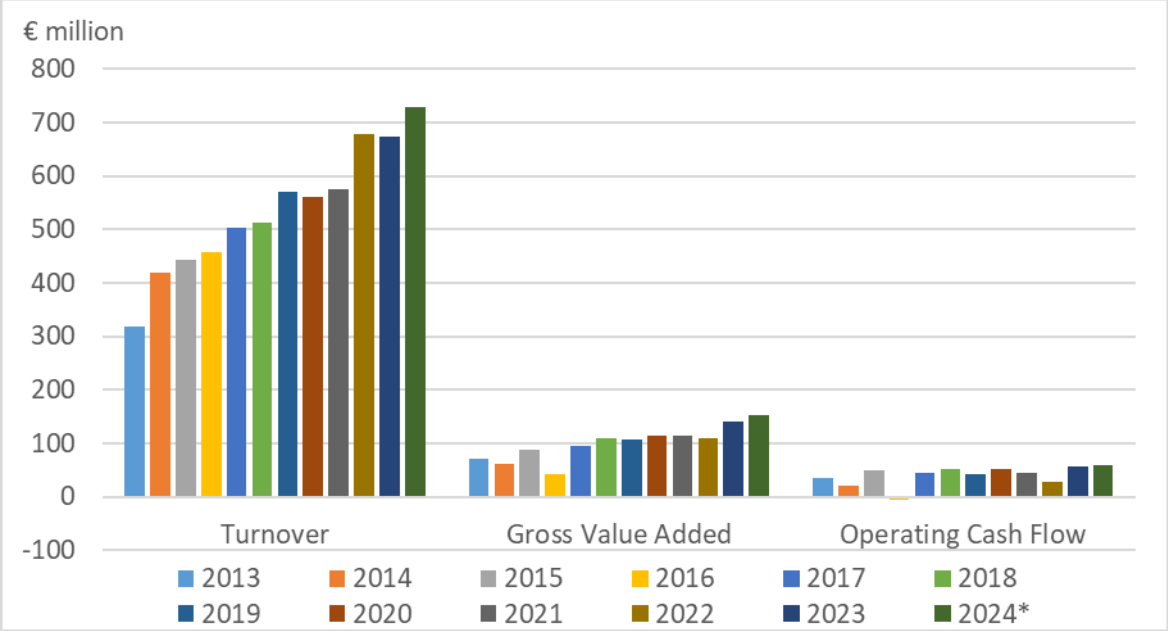
The structure of total production costs remained stable over the 2013–2023 period. Raw material purchases accounted for 73% of total production costs, rising by 4% compared to 2022 due to higher raw material prices and supply chain constraints. Wages and salaries, representing 13% of total costs, increased by 8% annually, reflecting rising labor costs amid

skilled worker shortages and average wage growth in Lithuania. Energy costs, constituting only 2% of total production costs, declined by 14% from 2022, primarily due to falling global energy prices after peak, reached in 2022 related to war in Ukraine. During 2022-2023 total production costs declined by 3%.

In 2023, the Lithuanian fish processing sector generated a gross value added (GVA) of EUR 142.4 million, a 27% annual increase, reaching the highest level since 2013. This growth was driven by a 20% surge in labour productivity, reaching EUR 34.6 thousand GVA per FTE, resulted by improved operational efficiencies and higher output per worker.

Net profit doubled in 2023 to EUR 44.1 million, rebounding from a significant decline in 2022, and was 9% higher than the 2013–2022 multiannual average. The net profit margin rose by 3.3 percentage points from 2022 to 6.1%, though it remained 1.8 percentage points below the 2013–2022 multiannual average. Improved profitability was primarily driven by a 24% decline in other operational costs, which had peaked in 2022 at their highest level since 2013. The surge in operational costs in 2022 was largely due to the war in Ukraine, which triggered trade sanctions, global supply chain disruptions, elevated transportation and logistics expenses, market redistribution costs, and other indirect cost increases. The 2023 cost reduction reflected improved supply chain stability and optimized logistics.

Figure 7.25 Turnover, GVA and Operating cash flow evolution, Lithuania, 2013-2024



Source: EWG elaboration from Member States submissions to the Fish Processing data call 2025. *2024= real data provided by experts during EWG

7.16.3 Breakdown by company size

Fish processing enterprises, employing more than 250 persons. Economic performance of Lithuanian fish processing sector is mostly represented by large-scale enterprises which focus on the processing of surimi products, smoked fish and frozen fillets. Surimi products and smoked fish represented 43% and 27% of production value in this segment. Companies, employing more than 250 people in 2023 generated 80.5% of national turnover and 65% of total persons employed. In 2023, total income for this segment increased by 7% compared to 2022, reaching EUR 580 million. These companies generated EUR 107.7 million in Gross Value

Added (GVA) and EUR 39.1 million in net profit, with the net profit margin improving to 6.3%. Approximately 75% of total production costs were spent on fish and other raw materials, 11% on wages and salaries, and only 1.8% on energy costs. The increase in profitability was due to a 27% decline in other operational costs, which had reached record-high levels in 2022 due to market disruptions following the war in Ukraine. Compared to the 2013–2021 (excluding 2022) multiannual average, other operational costs in 2023 were approximately 4% lower. Raw material costs rose by 4.5%, and personnel costs increased by 12% due to rising national wage trends. In 2023, these companies employed 3 256 employees, equivalent to 2 534 Full-Time Equivalents (FTEs). The number of enterprises in this size category increased by 17% to seven companies, primarily due to re-segmentation, where changes in employee numbers caused certain companies to be reclassified into another segment.

Fish processing enterprises, employing 50-249 persons. In 2023, this segment contributed by 15.7% to the national turnover from fish processing industry. Segments production relies on the production of smoked fish - 26% of value, frozen fillets – 22% of value, dried and salted fish – 13% of value. Compared to 2022, total income declined by 23.5% to EUR 113.9 million. The segment generated EUR 28.6 million in GVA and EUR 5.6 million in net profit in 2023, representing declines of 30% and 64%, respectively, compared to 2022. The largest share of total expenses was attributed to raw material purchases and personnel costs – 65% and 18% respectively. The average annual wage in this segment decreased by 20% to EUR 14 900 compared to 2022. The number of employees fell by 16% to 1 329 persons, equivalent to 1 302 FTEs in 2023.

Table 7.42 Economic performance by size, Lithuania, 2013-2023

Variable	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Δ (2022-23)
less than or equal to 10 employees												
Total Income		0.6	1.9	2.4	1.8	2.2	2.2	1.4	1.9	2.1	3.1	47%
Total production costs		0.5	1.7	2.4	2.1	2.1	2.2	1.4	1.9	2.2	3.4	55%
Gross Value Added		0.1	0.4	0.3	-0.1	0.5	0.6	0.4	0.5	0.5	0.5	12%
Operating Cash Flow		0.0	0.2	-0.0	-0.3	0.1	0.0	0.0	0.0	-0.1	-0.3	-233%
Earning before interest and tax		0.0	0.2	-0.1	-0.4	0.0	-0.0	-0.0	-0.0	-0.2	-0.4	-126%
Net Profit		0.0	0.2	-0.1	-0.6	0.0	-0.0	-0.0	-0.0	-0.3	-0.4	-59%
between 11 and 49 employees												
Total Income	14.3	15.4	14.7	15.4	17.2	17.6	17.1	21.1	20.1	21.2	23.9	13%
Total production costs	12.7	14.0	12.3	13.2	14.4	15.8	15.8	18.9	19.4	20.0	22.4	12%
Gross Value Added	4.5	4.5	3.8	3.9	4.4	3.7	3.5	5.5	4.2	4.5	5.5	23%
Operating Cash Flow	1.7	1.4	2.4	2.2	2.7	1.7	1.2	2.2	0.7	1.2	1.5	25%
Earning before interest and tax	1.1	1.1	2.0	1.7	2.3	1.3	0.8	1.6	0.3	0.7	0.8	12%
Net Profit	1.1	1.0	2.0	1.7	2.3	1.2	0.7	1.6	0.2	0.7	0.7	-2%
between 50 and 249 employees												
Total Income	85.6	115.9	134.9	105.2	112.4	87.7	95.0	117.0	128.2	148.9	113.9	-23.5%
Total production costs	57.3	93.9	111.2	112.5	109.4	81.8	92.2	109.4	116.2	131.0	104.6	-20.1%
Gross Value Added	35.5	30.5	32.8	5.2	17.7	21.6	21.6	25.2	30.9	40.8	28.3	-30.7%
Operating Cash Flow	28.3	22.1	23.7	-7.3	3.0	5.8	2.8	7.6	11.9	17.8	8.9	-50.0%
Earning before interest and tax	11.0	19.5	20.5	-9.6	1.1	3.6	0.3	4.8	9.4	15.5	6.6	-57.6%
Net Profit	9.9	19.0	19.4	-10.4	-0.4	3.1	-0.0	4.2	9.0	15.2	5.6	-63.5%
greater than or equal to 250 employees												
Total Income	263.0	353.6	370.6	369.8	416.9	457.4	489.1	452.8	475.0	545.2	580.0	6.4%
Total production costs	257.7	356.0	346.2	368.7	376.5	412.7	448.2	410.2	441.5	532.9	533.0	0.0%
Gross Value Added	31.8	27.5	50.3	33.3	74.4	84.0	82.1	83.6	78.5	64.6	106.5	65.0%
Operating Cash Flow	5.4	-2.4	24.3	-0.4	38.9	44.0	39.6	41.6	32.0	10.2	45.9	349.6%
Earning before interest and tax	0.6	-8.1	17.9	-6.5	32.5	37.0	31.6	32.1	22.4	1.2	37.9	2937.2%
Net Profit	-0.2	-9.1	15.9	-4.8	31.2	37.6	32.2	30.5	22.5	2.4	36.8	1408.4%

Source: EWG elaboration from Member States submissions to the Fish Processing data call 2025. Note: Data for companies less than or equal to 10 employees in 2013 is merged with segment between 11 and 49 employees due to confidentiality.

Fish processing enterprises, employing 11-49 persons. In 2023, fish processing enterprises in this segment generated EUR 23.9 million in total income, showing a 12.8% increase compared to 2022. Production value in this group was mainly concentrated in smoked fish and fresh fillets

representing 35% and 15% of production value respectively. GVA increased by 23%, reaching EUR 5.5 million, while net profit declined by 2% to EUR 0.69 million. Approximately 63% of total operating costs in this segment were spent on the purchase of fish and other raw materials, 18% on wages and salaries, and 3% on energy. The decline in net profit was mainly due to a significant increase in other operational costs, unlike in other segments where these costs decreased. The average annual wage in companies employing 11–49 people increased by 19%, reaching EUR 18.0 thousand. These companies employed 343 persons, corresponding to 226 FTE. Compared to 2022, the number of employees remained stable, while FTE increased by 3%.

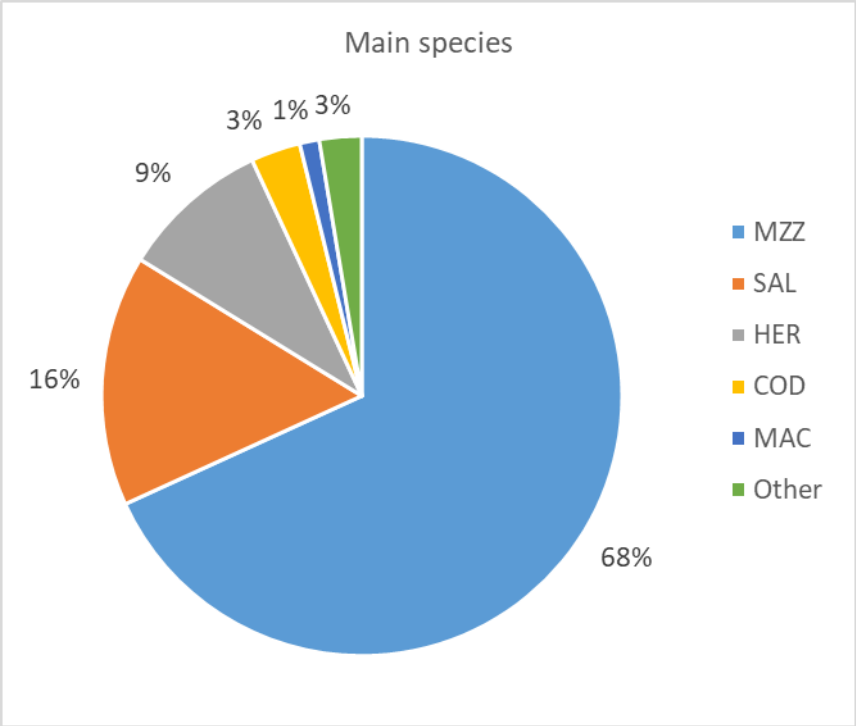
Fish processing enterprises, employing less than 10 persons. In 2023, small-scale processing enterprises generated a total income of EUR 3.1 million, marking a 46% increase compared to 2022. The production in this segment was primarily driven by smoked fish, accounting for 41% of the value, and salted, dried, or brined fillets, contributing 21% of the value. The segment generated EUR 0.52 million GVA in 2023, reflecting a 12% increase from 2022. Enterprises employing fewer than 10 persons reported net losses of EUR 0.42 million, continuing a trend of negative profitability. The purchase of raw materials and personnel costs accounted for 47% and 22% of total production costs, respectively. Additionally, other operational costs represented 25% of total production costs in 2023 and, along with personnel costs, were the primary drivers of reduced segment profitability. The average annual wage in companies with fewer than 10 employees rose by 35% to EUR 15.2 thousand in 2023, which was 84% higher than the 2013–2022 multi annual average. The number of employees increased by 37% to 92 persons, equivalent to 48 FTE.

7.16.4 Raw materials

In 2023, Lithuanian fish processing companies utilized a total of approximately 300.5 thousand tonnes of raw materials, marking an 8.5% decrease from the 328.5 thousand tones recorded in 2022. Notably, around 97.8% of these raw materials were imported, with only 2.2% sourced domestically. Due to data collection constraints in the industry questionnaire, the largest category consists of marine fishes not elsewhere included (nei), which are not itemized separately. This category accounted for 68.2% of all raw materials, or 204 thousand tonnes—a 4.7% decline from 215.0 thousand tonnes in 2022. Within this marine fishes' category, approximately 33.2% (or 68.0 thousand tonnes) was dedicated to surimi production, reflecting a 5% decrease of these raw materials compared to 2022.

Atlantic salmon represented 15.6% of total raw materials (46.9 thousand tonnes), down 26.2% from 63.6 thousand tonnes in 2022. Of this, 96.1% was processed by larger enterprises (those with 50–249 employees and ≥250 employees). Around 80% of raw Atlantic salmon was processed into smoked fish products, including fillets. Atlantic herring comprised 9.3% of the total (27.9 thousand tonnes), an 8.4% increase from 25.7 thousand tonnes of 2022. Similarly, 91.4% of Atlantic herring was handled by enterprises in the 50–249 and ≥250 employee segments, primarily processed into fish fillets (38% of output).

Figure 7.26 Main raw material used by main species, Lithuania, 2023



Source: EWG elaboration from Member States submissions to the Fish Processing data call 2025.

7.16.5 Trends, drivers and outlook

The main drivers of economic performance in Lithuania's fish processing industry in 2023 were largely the same as in 2022: the Russian invasion of Ukraine, energy and supply chain disruptions, and persistent inflation, all of which negatively impacted demand and increased costs.

In 2022, the invasion triggered global supply chain disruptions, causing raw material prices to surge by 18% while inflation hit multi-year highs (peaking 19.7% in 2022). The energy costs, due to supply shortages and geopolitical tensions that drove up costs for energy, rose by 76%. Wages and salaries rose by 16%, driven primarily by a 3% increase in the number of workers as part of the post-COVID economic rebound, with firms hiring to meet expected production demand. Transportation and logistics expenses increased due to fuel costs and supply bottlenecks, inflating operating expenses by 15%.

In 2023, these costs fell sharply as energy markets stabilized. Energy costs fell by 16%, supported by diversified supply sources, milder weather reducing demand, and efforts in Lithuania to build strategic stockpiles. Inflation eased to 9.1% as central banks raised interest rates to curb spending. Raw material purchase costs stabilized, and other operational expenses declined sharply by 24%. Wage cost growth slowed to 5%, influenced by a 6% reduction in the workforce due to lower demand and easing inflation.

As costs decreased, so did sales in the fish processing sector. Sales volumes fell by 10% in 2023 due to weakened demand, though turnover declined by only 1% because of lingering inflation. Enterprises where fish processing was not the primary activity showed signs of stabilization; after a multi-year growth period from 2018–2022 with average annual turnover growth of 50%, turnover attributed to fish processing decreased by 7% in 2023.

According to Lithuanian Agricultural and Food Product Market Information System (LAFPMIS) data, following a 4-year hectic period, in 2024 total income from fish processing industry with a

main activity increased by 9% to EUR 735 million (Figure 7.25), mainly due to increase of 7% in processed fish sales. Turnover collected by LAFPMIS was 0.9% larger then estimated, which suggest that usage of nowcast, with further assessments could be used for predictions. However, gross value added and operating cashflows were estimated lower than data collected by LAFPMIS by, respectively, 11% and 14%. As these values are calculated from all costs, which by design should be estimated separately because of all the different factors influencing these costs, estimation of these two variabls is less reliable.

According to LAFPMIS, rest of income increase is attributed to the negligible increase of average prices of sales – by 3%. It is expected, that despite projected inflation increase in 2025 to 3,2%, turnover and quantity of fish produce sales will stay stagnant, or will increase only marginally, as the market, following previous years is overheated.

According to preliminary LAFPMIS data, total production costs in 2024 increased by 5%, with a further 2% rise projected for 2025. The primary drivers of this increase were raw material costs, which rose by 5% in 2024, and wages, which grew by 15% over the same period.

In Lithuania, average wages in the food processing sector have been steadily rising, with a multi-year (2020–2023) average yearly growth rate of 10%. In contrast, the fish processing subsector experienced slower wage growth at 8% over the same period. Moreover, average wages in fish processing were 22% lower than in the broader food processing sector, indicating that compensation in this subsector had been lagging. In 2024, however, average wages in fish processing surged by 20%. Despite this sharp increase, wages and salaries costs grew by only 15%, due to a decline in the number of employees. Looking ahead, with rising inflation and expected increases in both minimum and average wages in LTU in 2025, wages in the fish processing sector are forecasted to rise by 4%.

Raw material costs increased by 5% in 2024, driven primarily by a 7% rise in production volume. Notably, 98% of raw materials used in production are imported. Despite this high import dependency, average prices of imported materials decreased by 1% in 2024. For 2025, with no significant increase expected in production volume and a continued decline in imported raw material prices, raw material costs are projected to rise only marginally—by 1%. Other operational cost decreased further by 6% during 2024, and energy costs fell by 21%, following huge spike during 2022. However, due to expected growth of inflation, other operational costs is expected to increase by 8% in 2025

Preliminary data show that net profit in 2024 rose by EUR 3 million to approximately EUR 44 million – the highest level in the past five years. This improvement was driven by a 7 % increase in sales volume and a 9 % rise in revenue from processed products. For 2025, net profit is projected to decline slightly due to rising inflation (3.2 %), higher salaries and wages, and other operating-cost increases. Turnover is expected to remain flat or grow only marginally, supported solely by inflation and export-price adjustments, as processed volumes have stabilised and reached a local plateau at around 130 thousand tonnes annually.

Atlantic salmon remains the most valuable species, accounting for 46.9 % of the total value of processed production in 2023. Raw material is predominantly imported from Sweden (78.8 % of fresh-salmon imports). In 2023, industry imported 30.5 thousand tonnes of fresh salmon, 19% decrease from 2022. Average price in 2023 decreased by 2% to 7.62 EUR/kg, following a spike in prices in 2022 of 37.9% from 2021. In 2024 average price decreased further by 6.8% to 7.1 EUR/kg. Overall import of fish production in 2023 decreased by 10.9% to 133 thousand tonnes, and the value of imported production decreased by 13%. For 2024 overall import quantities and value of fish production increased respectively by 2.7% and 2.2%, and by preliminary data for 2025 is expected overall import quantities and value of fish production will decrease respectively by 5% and 7%.

The export of surimi products is staying consistent. In 2022, exports of surimi products grew by 0.6%, in 2023 exports fell by 3%, reaching total of 40 thousand tonnes. In 2025, it is expected that exports will increase by 6.2%. The price of surimi products grew by 10.3% in 2023, however, fell by 4.9% in 2024 and is expected to decline by another 5.8% in 2025. Export of salted and smoked salmon (CN 0305 41) saw steep decline during 2022-2024 period, by 47.3%. However, preliminary data indicates that salted and smoked salmon exports is expected to increase by 11.2%. Alternatively, average export price for salted and smoked salmon increased from 16.56 EUR/kg in 2022 to 17.31 EUR/kg in 2023. For 2024 price for salted and smoked salmon decreased by 3.4% to 16.72 EUR/kg and has tendency to decrease further by 3.7% in 2025.

7.16.6 Data coverage and quality

Population of commercial fish processing units for data collection is derived from Lithuanian State Food and Veterinary Service, register of entities, producing food of animal origin, activity fish processing. Data collection scheme is census for all enterprises, which have a veterinary number and licence to produce fishery products. Based on production NACE code enterprises are divided to main activity (NACE code 10.20) and non-main activity of fish processing. Semi-annual production report contains information on used raw material by species, and origin, whereas production section disaggregated by type of product, species, weight and value as well as employment. For the main activity enterprises, income from fish processing and income from other activities are distinguished separately. From 2015 increase in size of sector was mainly due to the higher number of small fish processing units (size category less than 10 employees) included into Register of State Food and Veterinary Service according to new requirements to obtain veterinary number and permission to carry out fish processing activities. The preliminary 2024 economic data and production from processing industry is provided using LAFPMIS data source. The same data source is used for reporting data to STECF. Data for companies less than or equal to 10 employees in 2013 is merged with segment between 11 and 49 employees due to confidentiality.

Turnover real data provided by experts during EWG and reported in Figure 7.25 correlates well with nowcast estimations produced during the EWG for Lithuania Turnover, GVA and GP trend.

7.17 Malta

7.17.1 Overview

The Maltese fish processing industry is small and underdeveloped, especially compared with the aquaculture and capture production side of the country. The enterprises mainly partake in the preservation and processing of tuna, sardines, and other marine fish. The activity of processing is characterised as low-value (filleting, portioning) rather than high value (canning, new product development).

In 2022 and 2023, the number of enterprises in the Maltese fish processing industry was 8 and 10, respectively. An increase by 100% over the rather constant industry size of 5 recorded since 2015 to 2019. In 2023, the industry generated EUR 74 million in turnover, a ~255% increase over 2019. However, this may not necessarily be entirely indicative of the industry's performance improvement but rather the contribution of the new enterprises that entered the sector.

In 2022 and 2023, the number of people employed in fish processing was 129 and 151, respectively. These are equivalent to 127 and 150 FTEs, respectively. The ever-present trend that the industry employs most of its labour force on a full-time basis remained prevalent over these two years as well. The 17% increase in employment and FTE in 2023 from 2022 could be attributed to the increase of the number of companies (from 8 to 10). The average number of employees through the years hasn't changed significantly (15-16 employees per company since 2015). In 2023 despite the increase in employees' number, the highest in the 2015-2023 period, the average wage records its lowest value in the 10-year period.

Table 7.43 Overview, Malta, 2013-2023

Variable	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Δ (2022-23)
Structure (number)												
Total enterprises	6	6	5	5	5	5	5	7	7	8	9	13%
≤ 10 employees	3	3	3	3	3	3	3	5	5	5	7	40%
11-49 employees	3	3	2	2	2	2	2	2	2	3	3	0%
50-249 employees												0%
≥ 250 employees												0%
Employment (number)												
Total employees	114	114	82	85	85	74	80	97	112	129	151	17%
FTE	109	109	71	72	72	72	77	94	110	127	150	18%
Indicators												
Turnover (million €)	46	36	23	23	24	24	28	40	47	58	74	27%
FTE per enterprise	18.2	18.2	14.2	14.4	14.4	14.4	15.4	13.4	15.7	15.9	16.7	5%
Average wage (thousand €)	22.9	26.2	31.8	32.4	33.0	25.3	25.3	20.7	22.1	21.1	20.0	-5%
Unpaid work (%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0%
Enterprises doing fish processing not as main activity												
Number of entreprises		2	2	2	2	4	4	4	4			0%
Turnover attributed to fish processing (million €)		0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1			0%

Source: EWG elaboration from Member States submissions to the Fish Processing data call 2025.

7.17.2 Economic performance

The industry's income is 100% composed of the turnover generated throughout the financial year. For 2023 the total income amounts to EUR 73.6 mil, a 27% increase from 2022. All expenditure indicators in 2023 show a notable increase compared with 2022.

Purchases of raw materials for production is the main cost component of the industry, as this variable consistently makes between 79% to 87% of the cost structure (79% for 2023 and 80% for 2022), followed by wages, energy costs and other operational costs respectively. Capital costs rose significantly for 2023 as well, with a 25% increase of Depreciation of capital and 15% increase of financial costs.

Between 2022 and 2023, all major indicators for the Maltese fish processing sector show improvement, as in terms of capital value, the total value of assets increased from EUR 11.7 million to EUR 13.1 million, a 12% rise, while et investments remained stable at around EUR 0.3 million, corresponding to a modest 7% increase, while debt declined from EUR 6.0 million to EUR 5.5 million, marking an 8% reduction.

Economic performance indicators also improved substantially during the same period. Gross Value-Added rose by 31% and Operating cash flow expanded by 39%, while both EBIT and net profit grew by more than 40%. Productivity and performance indicators followed in a positive trend. Labour productivity increased by 11%, at EUR 73 000 per employee, while capital productivity advanced from 71.7% to 83.4%. Profitability indicators such as the GVA margin, EBIT margin, and net profit margin continued to increase, with almost 9% rate. The return on investment raised from 40.4% to 51.2%, and the financial position index improved from 48.8% to 57.8%.

7.17.3 Breakdown by company size

The Maltese fish processing industry is constituted by two segments, with segment 1 being enterprises that employ less than or equal to 10 employees, which has 7 enterprises operating within it, and segment 2 being enterprises that employ between 11 and 49 people, which has 3 enterprises operating within it for the fiscal year 2023.

For 2022, companies with 0-10 employees generated EUR 25.1 million and EUR 32.5 million for 2023. While this continues the increasing trend started in 2016, the increases are predominantly driven by the increase in size of the segment (from 8 to 10 companies). Nevertheless, the almost 30% increase in turnover in 2023 over 2022 shows positive signs for the future development of the sector. For the second segment, companies with 11-49 employees, the total income increased by 25% from 2022 to 2023 (EUR 8.3 million). Production costs followed a similar fluctuating trend in both segments, where for the segment 1 was recorded an increase 29% between years 2022-2023 and an increase of 46% from 2021 to 2023. Also, for segment 2 an increase of production cost was recorded through the years, specifically for 2022 to 2023, the increase was up to 22.8% and for years 2021 to 2023 was 56.5%.

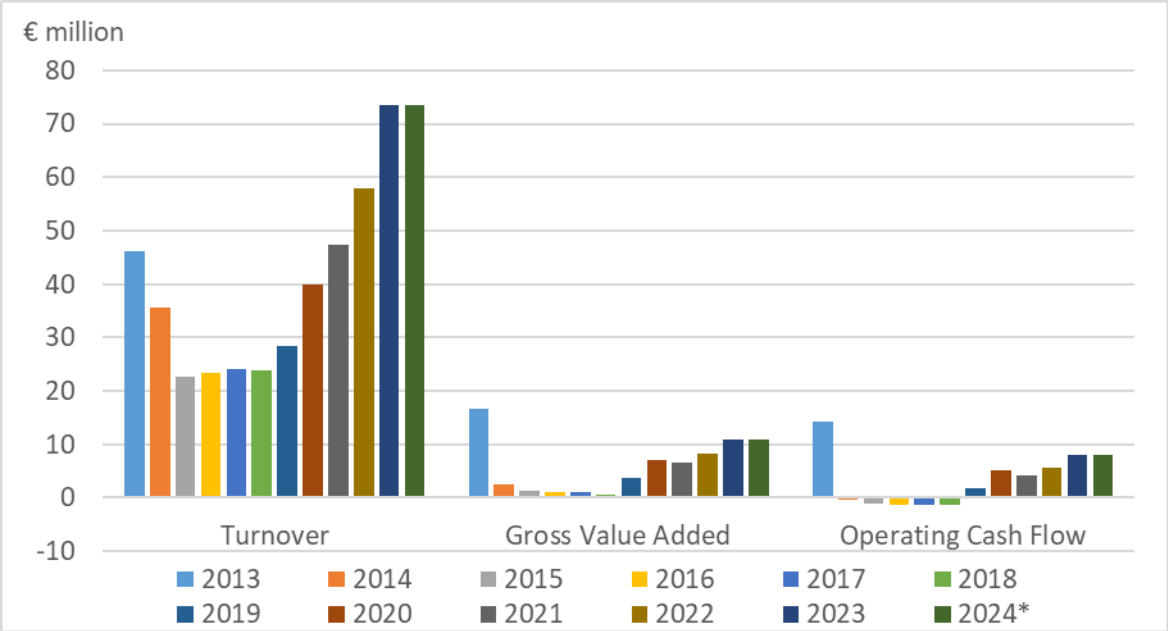
For both segments, although costs increased, the increased income generated positively affected the segments since net profits were recorded for both 2022 and 2023. Both segments have shown continued development in profitability trends, respectively.

Table 7.44 Economic performance indicators, Malta, 2013-2023

Variable	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Δ (2022-23)
Income (million €)												
Turnover	46.2	35.6	22.7	23.5	24.1	23.8	28.5	39.9	47.3	57.9	73.6	27%
Other income								0.0	0.0	0.0	0.0	-25%
Operating subsidies												
Total Income	46.2	35.6	22.7	23.5	24.1	23.8	28.5	39.9	47.3	57.9	73.6	27%
Expenditure (million €)												
Purchase of fish and other raw material for production	27.1	31.2	20.3	21.1	21.6	21.8	23.3	30.8	38.4	46.5	58.7	26%
Wages and salaries of staff	2.5	2.9	2.3	2.3	2.4	1.8	1.9	1.9	2.4	2.7	3.0	12%
Imputed value of unpaid labour				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Payment for external agency workers (optional)												
Energy costs	0.3	0.3	0.2	0.4	0.4	0.4	0.4	0.7	1.0	1.4	2.0	47%
Other operational costs	2.1	1.6	0.9	1.0	1.0	1.1	1.0	1.3	1.5	1.6	2.0	19%
Total production costs	32.0	35.9	23.7	24.7	25.3	25.1	26.6	34.7	43.3	52.2	65.6	26%
Capital Costs (million €)												
Depreciation of capital	0.4	0.5	0.3	0.3	0.4	0.4	0.5	0.7	0.8	1.0	1.2	25%
Financial costs, net	-0.1	-0.1	-0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15%
Capital Value (million €)												
Total value of assets	15.4	12.3	7.5	7.6	7.8	8.6	8.3	9.8	10.8	11.7	13.1	12%
Net Investments	1.3	0.9	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.2	0.3	7%
Subsidies on investments												
Debt	16.6	13.8	9.5	8.6	8.5	8.2	7.6	6.6	6.5	6.0	5.5	-8%
Economic performance (million €)												
Gross Value Added	16.7	2.6	1.2	1.1	1.1	0.6	3.8	7.1	6.5	8.4	11.0	31%
Operating Cash Flow	14.2	-0.3	-1.0	-1.2	-1.2	-1.2	1.8	5.2	4.1	5.7	7.9	39%
Earning before interest and tax	13.8	-0.8	-1.3	-1.5	-1.6	-1.7	1.4	4.5	3.3	4.7	6.7	42%
Net Profit	13.9	-0.7	-1.3	-1.6	-1.6	-1.7	1.3	4.5	3.3	4.7	6.7	43%
Productivity and performance Indicators												
Labour productivity (thousand €)				15.6	15.7	8.3	49.3	76.0	59.4	66.0	73.0	11%
Capital productivity (%)	108.1	20.8	16.6	14.8	14.5	7.0	45.8	73.3	60.4	71.7	83.4	
GVA margin (%)	36.2	7.2	5.5	4.8	4.7	2.5	13.3	17.9	13.8	14.5	14.9	
EBIT margin (%)	29.8	-2.3	-5.8	-6.6	-6.7	-7.0	4.7	11.3	7.0	8.2	9.1	
Net profit margin (%)	30.0	-2.1	-5.7	-6.7	-6.7	-7.1	4.7	11.2	6.9	8.1	9.1	
Return on Investment (%)	89.1	-6.6	-17.6	-20.4	-20.6	-19.4	16.3	46.2	30.5	40.4	51.2	
Financial position (%)	-7.5	-12.5	-26.2	-13.8	-9.6	4.8	8.4	32.7	40.2	48.8	57.8	

Source: EWG elaboration from Member States submissions to the Fish Processing data call 2025.

Figure 7.27 Turnover, GVA and Operating cash flow evolution, Malta, 2013-2024



*Source: EWG elaboration from Member States submissions to the Fish Processing data call 2025. *Nowcast not possible, 2024 assumed to be equal to 2023*

Table 7.45 Overview, Economic performance by company size, Malta, Italy, 2013-2023

Variable	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Δ (2022-23)
less than or equal to 10 employees												
Total Income	11.6	10.1	8.8	9.2	9.7	10.5	11.7	17.7	21.2	25.1	32.5	29%
Total production costs	7.7	10.0	8.9	9.4	9.8	10.2	10.6	15.4	20.2	22.9	29.6	29%
Gross Value Added	4.5	0.8	0.4	0.4	0.4	0.9	1.7	2.9	2.1	3.2	4.0	24%
Operating Cash Flow	3.9	0.2	-0.1	-0.2	-0.2	0.3	1.0	2.3	1.0	2.2	2.8	28%
Earning before interest and tax	3.8	0.1	-0.2	-0.2	-0.3	0.1	0.9	2.1	0.7	1.9	2.5	28%
Net Profit	3.8	0.1	-0.2	-0.2	-0.3	0.1	0.9	2.1	0.7	1.9	2.5	28%
between 11 and 49 employees												
Total Income	34.6	25.5	13.9	14.3	14.4	13.4	16.8	22.2	26.1	32.8	41.1	25%
Total production costs	24.2	26.0	14.8	15.3	15.5	14.9	16.0	19.3	23.0	29.3	36.0	23%
Gross Value Added	12.3	1.7	0.8	0.7	0.7	-0.3	2.1	4.2	4.4	5.1	6.9	35%
Operating Cash Flow	10.3	-0.5	-0.9	-1.0	-1.1	-1.5	0.8	2.9	3.1	3.5	5.1	47%
Earning before interest and tax	10.0	-0.9	-1.1	-1.3	-1.3	-1.8	0.5	2.4	2.6	2.8	4.2	52%
Net Profit	10.1	-0.8	-1.1	-1.3	-1.4	-1.8	0.4	2.4	2.5	2.8	4.2	53%

Source: EWG elaboration from Member States submissions to the Fish Processing data call 2025.

7.17.4 Trends, drivers and outlook

The Maltese fish processing sector shows a consistent upward trend since 2018, consolidating a strong post-pandemic recovery that appears to have stabilised in 2023. Turnover remains at approximately EUR 73.6 million, matching 2023 levels and marking a sustained doubling of value compared to pre-2020 figures. GVA also remains stable at around EUR 10.9 million, maintaining the significant gains achieved between 2021 and 2023 – Figure 7.27.

7.17.5 Raw materials

The raw materials for Malta's fish processing sector include both wild-caught fish and farmed species, such as bluefin tuna, swordfish, and demersal species like shrimp. Tuna by-products are a significant raw material, processed into fish meal and oil for the pet food industry. Additionally, the aquaculture sector cultivates fish like sea bass and sea bream, which also

become raw material. Malta exports to other countries of Europe but mainly the highest quantities of exports are made to Japan and the Republic of Korea. In 2021 Malta exported most of the processed seafood, in terms of quantities, to Japan (48%), Italy (14%) and the Republic of Korea (12%). In terms of value, largest turnover is obtained through exports to Japan (62%), Republic of Korea (21%) and Italy (5%). Malta mainly exports bluefin tuna and gilthead seabream to these countries, whereby such seafood is exported as frozen amongst them.

7.17.6 Data coverage and quality

The total company size (9) does not match with the total of <10 (7) and 11-49 (3) size categories. No raw material data was reported.

7.18 Netherlands

7.18.1 Overview

The Netherlands is one of the major fish processing countries in the EU. In particular, the EU share of processing cod (mainly *Gadus morhua* and *Gadus ogac*), warm water shrimps (*Penaeus species*), salmon (*Salmo salar*) and tuna (*Thunnus species*). The terminology of 'processing' is in this context broader than only the activity of processing. Included in this definition and scope is the trade (import and export) of processed seafood products. The Dutch fish processing industry is more and more transformed as essential importer beside processor of fisheries and aquaculture fish products (FAPs) for the EU consumer market. The Netherlands is renowned as one of the main ports and logistic linchpin for the other EU MS. By the smart geographically located harbor of Rotterdam and the airport Schiphol of Amsterdam, the Netherlands has an excellent infrastructure for trade in goods like frozen and fresh fish products. The Netherlands together with Poland are not well equipped for processing salmon, but also physiological these countries are ideally located. Within 48 hours the fresh and chilled salmon harvest from Norwegian open netpen aquacultured could be transported by truck. This is exactly the duration required for rigor mortis before filetting this fish species. This ideal infrastructure has been established in the past by the Dutch flower and horticulture. Therefore, also the Dutch fish processing and wholesaling industry, as a whole, has an important function as trading hub for other EU countries as its hinterland. The Dutch seafood companies have a major role in the food security (SDG2) within the EU, as on average 80% of the Dutch export value of fish products is generated within the EU market[30].

The demand for processed FAPs is larger than the supply from domestic production of it in the Netherlands. The growing diversity of fish products on the EU market has resulted in growing imports of fish products. In particular, in the last seven years (2017-2023) there was a scarcity for raw materials among Dutch fish processor, due to decreasing landed fish volumes in Dutch harbours, to meet the demand from the market. The importance of sourcing sufficient raw materials for fish processing and circular re-use into high value-added products is increasing. Almost 2/3 of the total Dutch seafood production volume is imported however still 1/3 comes from landings from the North Sea fisheries fleet. Many Dutch fish processors are specialized from origin in North Sea flatfish species like Common sole (*Solea solea*), plaice (*Pleuronectes platessa*), turbot (*Psetta maxima*) and crustaceans mainly Brown shrimps (*Crangon crangon*) and *nephrops* also knows as Norwegian lobster (*Nephrops norvegicus*). However, due to decreasing landing volumes at Dutch fish and Brown shrimp auctions since 2017, more and more fish processors have implemented a diversified range of species. In particular, the introduction of farmed Atlantic salmon and cod was successful for many enterprises. The Netherlands has grown to one of the major processors of Norwegian salmon within Europe last decade.

The landings of wild caught fish (e.g. flatfish like plaice and sole), Brown shrimps (*Crangon crangon*) and mussels (*Mytilus edulis)* next to pelagic species (e.g. herring and mackerel) from the North Sea are still crucial for the distinctiveness (unique selling point) of many fish processors reliant on these species. The fresh landed North Sea fish species such as flatfish could be substituted by imports like Pacific plaice. However, as these imports are frozen with

[30] Hoekstra, G. (2019). Visverwerkende industrie en visgroothandel in Nederland. Wageningen Economic Research. Rapport 2019-079f.

Wageningen Economic Research, national social economic fish statistics of production and trade: https://agrimatie.nl/PublicatiePage.aspx?subpubID=2526&sectorID=2860&themaID=2276&indicatorID=2872

another texture it does not have similar quality and freshness as local or regional fresh landed fish. Another hurdle regarding substitution, flatfish filleting machines could not (easily) be utilized to process species like salmon. It requires investment for new filleting machines next to the current one specialized for flatfish species like plaice. With all the challenges for the fisheries at the North Sea (Brexit, pulse ban, closing fishing areas and landing obligation) there is a high need for more opportunities to import (autonomous tariff quotas = ATQs) and innovation for circular processing in order to efficient (re) use the scarce raw materials.

Other challenges that not solely for the Netherlands applies but to multiple EU MS, is geopolitical tensions. No longer reduced or zero tariff quota to import fish from the Russian Federation for EU MS as counterreaction to the war in Ukraine, requires fish processors to source fish from elsewhere. The Netherlands is a major importer and processor of cod, Alaska pollack and flatfish from the Russian Federation. More whitefish is imported from North America (United States) to produce the battered fish products, regionally known as the 'kibbeling' familiar to fish and chips. With the tariff duties implemented by President Trump this gives another challenge for importing and exporting fish products from the US. Processed salmon is an important export product to the US while large volumes of Alaska pollack are imported by the Netherlands.

According to Eurostat data, in 2023, there were 182 enterprises in the fish processing industry of the Netherlands (Table 7.46). This is an increase of 14% compared to 2021 (159 enterprises). The number of persons employed per enterprise was similar in 2023 and 2021 (19 persons/enterprise). The size of the industry, in terms of number of enterprises with fish processing as main activity, is dependent on the selection criteria. More and more seafood companies integrate fish processing and wholesale activities. Therefore, the distinction between either a fish processing, trader and fish wholesale company is not always clear. Another reason that complicates the distinction between processing and wholesale or trading is the trend of consolidation, which means joint ventures as well as vertical integration upstream and downstream of the fish value chain. If fish processing companies with NACE codes 46.32 (*Wholesale of meat, meat products, fish and fish products*) and 46.38 (*Wholesale of other food, including fish, crustaceans and molluscs*) are included, there were more registered enterprises in the Netherlands. According to a national research study there were 206 fish processing and wholesale enterprises active in the Netherlands 2021[31]. An increasing number of fish processors combine wholesale activities (importing and exporting) with processing activities (NACE code 10.20).

The total turnover in the Eurostat SBS database was estimated at EUR 1 501 million in 2023. This was a strong increase (+43%) compared to 2021 (EUR 1 047 million). Main reason was upscaling in terms of production volumes as most fish processing enterprises extend their cold storage and processing capacity. The total production value (value of output) increased by 37% from 2021 (EUR 951 million) to a total of EUR 1 305 million in 2023. While production volumes of many wild-caught North Sea species which were locally landed decreased, production volumes and -value for imported species has increased. For instance, cod, farmed salmon, warm water shrimps and tuna are increasing in terms of produced value. Another clarification of the higher total income (net turnover) is an increase in prices per kilogram for most of the seafood products sold. As an indicator of increased sales prices, the export value per kilogram fish products increased with 22% between 2021 and 2023 based on PRODCOM data. Total

[31] Hoekstra, F. F., de Valk, Y., & Deetman, B. (2023). *Fish clusters in the Netherlands (baseline): size and dependence of the chain and supply industry on North Sea fisheries: Impact analysis of policy decisions on the chain of Dutch fishing regions*. (Report / Wageningen Economic Research; No. 2023-030EN). Wageningen Economic Research. https://doi.org/10.18174/671793

exported value increased by 20% to EUR 4 032 million in similar period while exported volume decreased by 2%.

Table 7.46 Overview, Netherlands, 2013-2023

Variable	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Δ (2022-23)
Structure (number)												
Total enterprises	147	141	144	150	153	151	154	158	159	169	182	8%
Total employees	3,172	3,109	3,072	3,123	3,182	2,976	2,985	2,998	2,879	2,754	3,351	22%
Unpaid labour	90	88	90	87	94	91	83	88	86	89	87	-2%
FTE	2,126	2,114	2,181	2,186	2,227	2,083	2,119	2,189	2,092	1,948	2,444	25%
Income, expenditure and investments (million €)												
Production value	758.7	840.1	813.1	869.9	896.7	947.9	1,002.6	863.7	950.6	929.4	1,305.3	40%
Turnover from fish processing												0%
Turnover total	879.7	935.4	915.2	965.4	977.8	983.8	1,039.2	969.2	1,047.1	1,030.2	1,501.4	46%
Total purchases of goods and services	734.7	779.3	747.0	809.8	834.4	833.3	893.5	804.9	862.0	875.8	1,236.5	41%
Personnel costs	98.9	113.2	106.9	102.9	101.6	99.1	101.1	110.8	130.4	127.5	149.7	17%
Gross investment in machinery and equipment	12.5	9.4	13.5	15.5	19.4	17.6	20.0	8.2	11.3	0.0	12.5	0%
Economic performance (million €)												
Gross Value Added	151.2	174.2	170.1	167.1	155.4	153.1	148.7	164.9	187.3	183.1	215.5	18%
Gross profit	52.4	61.0	63.2	64.2	53.8	54.0	47.6	56.6	56.9	55.6	65.8	18%

Source: EWG elaboration from Eurostat (2025) data.

Several fish processors had economically spoken challenging years by scarcity in resources (raw materials). Landings for important flatfish species (e.g. plaice) decreased in volume, which resulted in higher first sales prices at fish auctions for processors since 2017. Dutch fish processors increasingly import raw materials to fulfill the demand from the market. Import prices per kilogram of fish increased as well (+23%) in 2021-2023. The total costs of purchasing fish and other raw material for production has increased by 43% to a total of EUR 1 237 million in 2023 compared with 2021.

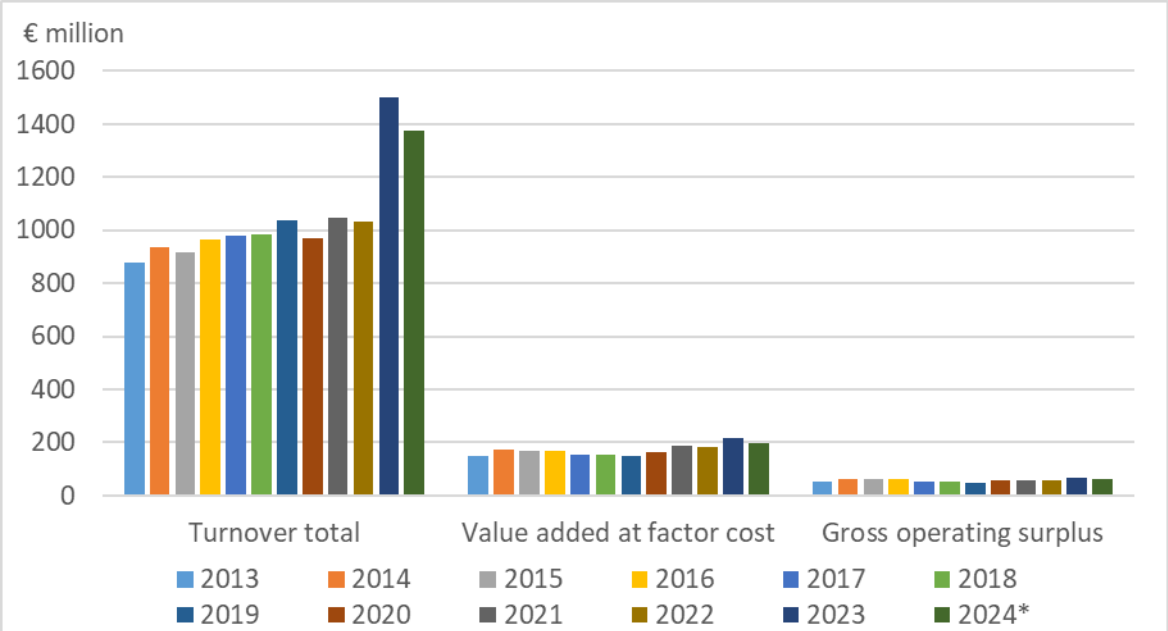
Higher purchases prices per kilogram of fish to be processed (raw material) could be explained by decreasing supply volumes for several commercially important species. Decreased supply in Dutch harbors is caused by lower catch per unit effort of the demersal fisheries. For unknown (likely ecological) reasons, there was a decrease of catch per unit effort (lower catch success rate) and therefore decreased landed volumes for certain species (in particular flatfish) from the North Sea (STECF, 2024)[32]. On the contrary, there are historical large stocks for many fish species in the North Sea like plaice according to the scientific stock assessments by ICES (2024)[33]. Last decade there is more and more need for employees. Before 2021-2023, there was already an aging trend among staff of most fish processing enterprises, however since COVID-19 it is more accepted to work remotely by online meetings. Many industries, including fishing, experience difficulties attracting new employees as many other branches do promote remote work with less travel time and accepting more work from home. Working from home is often not possible for production employees in the fish processing industry as an extra reason

[32] Scientific, Technical and Economic Committee for Fisheries (STECF) - The 2024 Annual Economic Report on the EU Fishing Fleet (STECF 24-03 & 24-07), PRELLEZO, R., SABATELLA, E.C., VIRTANEN, J., TARDY MARTORELL, M. and GUILLEN, J. (editors), Publications Office of the European Union, Luxembourg, 2024, https://data.europa.eu/doi/10.2760/5037826, JRC139642.

[33] ICES (2024). Plaice (Pleuronectes platessa) in Subarea 4 (North Sea) and Subdivision 20. (Skagerrak). In Report of the ICES Advisory Committee, 2024. ICES Advice 2024, ple.27.420, https://doi.org/10.17895/ices.advice.25019441.

for labor people to consider other industries to optimize their work-life balance. According to the Dutch fish processing industry itself, the image of production work in fish processing factories is also unpopular as salaries and labor conditions in other industries are often in favor with labor market shortages in general (Hoekstra et al., 2023) [34]. Many processing enterprises did try to recruit new employees, however similar to many other sectors it is difficult to hire sufficient personnel. Due to labor shortage, multiple fish processors are discovering ways to automate by investing in new techniques such as packaging robotics or filleting machines. Due to a trend of higher customization in processing (including packaging and presentation such as private label brands) requested for the product by customers (often retailers or wholesalers) this means more additional working tasks for similar production volumes. Also, higher standards for sustainability certifications (e.g. MSC, ASC, IFS, Global GAP) and traceability with CSRD reporting require more administration and therefore higher labor input by the fish processors. As UK has become a third country after Brexit it also requires health certificates to import and export wild caught fish products between EU and UK.

Figure 7.28 Turnover, GVA and Operating cash flow evolution, Netherlands, 2013-2024



Source: EWG elaboration from Eurostat (2025) data. *2024= nowcasted data

Due to the scarcity of available labor, personnel costs (wages and salaries) increased by 13% compared to 2021 with a total of EUR 123 million in 2023. The number of employees increased (+16%) to a total of 3 351 persons (2 444 FTE) in 2023. This was 2 879 (2 092 FTE) in 2021. For similar reasons as registered number of enterprises, when including those companies with both fish processing and wholesale activities the number of employees was more than these registered by the Eurostat SBB data. Namely, in 2021 there were 9 600 employees (5 200 FTE)

[34] Hoekstra, F.F., Valk, Y. de, Deetman, B., (2023). Visclusters in Nederland (nulmeting): omvang en afhankelijkheid voor de keten en toeleverende industrie van Noordzeevisserij; Impactanalyse beleidsbeslissingen op de keten van Nederlandse visserijregio's. Wageningen, Wageningen Economic Research, Rapport 2023-030. 98 pp.; 25 fig.; 12 tab.; 46 ref. ISBN 978-94-6447-654-5: https://edepot.wur.nl/590869.

working in the Dutch fish processing industry within the 206 enterprises according to Hoekstra et al. (2023)[35].

Costs for purchasing raw materials (e.g. landed or imported fish etc.) also defined as purchases of goods and services (total) dominated with 90% of the total costs (EUR 1 237 million) in 2023. Personnel costs accounted for 9% with EUR 123 million of the total expenditure and costs rounded. The other 1% of total costs were made by gross investments in tangible non-current assets. These three cost categories cumulated to a total of EUR 1 377 million in 2023. This was a 38% increase between 2021 and 2023.

The Dutch fish processing industry exhibited growth (+15%) in its (Gross) Value Added (GVA), with an increase in 2021-2023 (figure 7.28). Total Value Added was EUR 215 million in 2023. With regards to gross profits (gross operating surplus) a total of EUR 66 million was realized in 2023 which is a 16% increase compared to 2021. Apparently, the increasing economic performance (in terms of GVA and gross profits) could be explained by higher sales price per kilogram rather than labour productivity or gross operating rate as these two indicators decreased with 1% and 19% respectively. As previously described, total turnover or also named as net turnover was estimated at EUR 1 501 million in 2023. This was a strong increase (+43%) compared to 2021 (EUR 1 047 million).

Table 7.47 Numbers of companies by company size, Netherlands, 2013-2023

Size category	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
From 0 to 9 persons employed	103	98	103	105	110	110	114	115	117	131	141
From 10 to 19 persons employed	14	13	12	16	14	15	14	16	17	13	13
From 20 to 49 persons employed	14	15	13	13	12	11	11	12	10	9	8
From 50 to 249 persons employed	16	15	16	16	17	15	15	15	15	16	20
250 persons employed or more	0	0	0	0	0	0	0	0	0	0	0
Total	147	141	144	150	153	151	154	158	159	169	182

Source: EWG elaboration from Eurostat (2025) data.

In terms of company size, most enterprises (78%) had less than 10 persons employed in 2023 (table 7.47). The other enterprises were categorized as 50-249 persons (11%), 10-19 persons (7%) and 20-49 persons (4%). Compared to 2021 there was an increase for the categories 0-9 persons (+21%) and 50-249 persons employed (+33%). Decreased has the categories 10-19 persons (-24%) and 20-49 persons (-20%) employed in 2021-2023.

PRODCOM data demonstrates an increased imported volume and value in 2021-2023. With a total import value of EUR 3 080 million (2023) this was 25% more than in 2021. Prices per kilogram increased more than volumes as this last one was only 2% more in 2023 compared to 2021. Eurostat/Comext data registered a higher imported value and volume as also final fish products (already processed) are included next to raw materials. According to Eurostat/Comext the Netherlands imported a total value of EUR 4 976 million in 2023. This was just EUR 2 544 million in 2013 and EUR 4 204 million in 2021. In terms of volumes (weight) this was corresponding to 1 108 million tonnes (1.1 billion kilograms) in 2023. In terms of value (EUR) the top 5 importer countries for the Dutch fish processing industry were Iceland, Norway, Germany, Belgium and Denmark. Iceland and Norway are increasing important for the raw

[35] Ibidem.

material availability of cod, flat fish species and farmed salmon. Expressed in volumes (weight), Germany and Lithuania are important suppliers for the Netherlands for small pelagic species as being frozen on board and landed in EU harbours.

The exported value increased strongly: from EUR 2 912 million (2013) to EUR 5 289 million (2021) and EUR 6 122 million (2023) based on Eurostat/Comext data. In terms of volumes (weight) exports decreased slightly from EUR 1 304 million tonnes (2021) to EUR 1 247 million tonnes (2023). Major export markets in value (EUR) were Germany, Belgium, France, Spain and Italy in 2023. Expressed in volumes (weight), Nigeria has to be included as largest trade partner in the top 5 export markets for frozen small pelagic products.

7.18.2 Outlook

For the nearby future (2024-2025) labour shortages and availability of raw materials are the main challenge for the Dutch fish processing industry. In particular, Dutch fish processors foresee challenges to source raw materials for plaice (flatfish) and whitefish such as Alaska pollack with no longer autonomous tariff quotas (ATQs) for imports from Russian Federations. In 2023 there was a decommissioning for 51 cutters which was a large share of the Dutch beam trawling fleet targeting especially flatfish (Katell et al., 2023)[36]. The trend of decreasing of landed volumes by the North Sea fisheries fleet is a concern for processors as production capacity is underutilized. This trend of decreasing landed volumes by Dutch fisheries fleet will be enhanced by the challenge of less fishing area coming years due to the expansion of offshore windfarms and marine protected areas. Therefore, self-sufficiency will further decrease. Since the demand for seafood products is larger than the supply by landings, the industry becomes more dependent on imports. This is in line with the trend for the entire EU as net importer (Turenhout et al., 2025)[37]. The importance of increasing ATQs is crucial for the Dutch fish processing enterprises for sufficient raw materials and to optimize personnel and machinery capacity. If Dutch fish processors succeed in importing sufficient raw materials and recruiting or retaining enough workers, economic performance is expected to improve further for 2024-2025.

The COVID-19 pandemic and geopolitical tensions like the war in Ukraine and in Middle-East (Gaza and Jemen) emphasized the importance of logistics and transports within global supply chains. Other challenges are expected in nearby future like increasing energy (electricity and fossil fuel) costs, expected taxes on CO_2 emissions and increased transparency and reduction of the footprint required by EU retailers (in particular supermarkets), EU legislations and non-governmental organisations (NGOs).

Despite these multiple disruptions and challenges for the Dutch fish processing industry it is expected that enterprises will continue with modernizing their production capacity and supply channels. This could be realized by investments into robotics for processing (sorting, filleting) and packaging using artificial intelligence software. Another strategy to add maximum value to FAPs is by directly source raw materials from country of origin and to process it as one-stop-shop for the EU market in a high-quality premium and food safe way.

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[36] Hamon, K. G., Hoekstra, F. F., Klok, A., Kraan, M., van der Veer, S., Deetman, B., van Oostenbrugge, J. A. E., & Taal, K. (2023). *Decommissioning of the Dutch cutter sector: Impact analysis of management measures on the fishery.* (Report / Wageningen Economic Research; No. 2023-068). Wageningen Economic Research. https://doi.org/10.18174/631351.

[37] Turenhout, M.N.J., Melgaard Jensen P., Eisenbeck T., Kuyk A., Sipic K., (2025). *EU Seafood Supply Synopsis 2025.* SEAFOOD EUROPE report, Brussels. https://seafoodeurope.eu/wp-content/uploads/2025/10/EU-Seafood-Supply-Synopsis_2025.pdf.

7.18.3 Data coverage and quality

No Dutch data were submitted in the EU fish processing sector data call. The Netherlands decided not to collect data any longer on the fish processing industry under the DCF/EU-MAP from 2016-17. Thus, DCF data were only available until 2014, as they were submitted in previous data calls.

Hence, the EWG prepared this section based on Eurostat's SBS and PRODCOM data, which are publicly available complemented with quantitative data from scientific reports and expert judgment of the national expert within the STECF meeting EWG 2025-15.

7.19 Poland

7.19.1 Overview

Poland is one of the most important fish processors in the European Union and large importer of fish both for sale and production. Demand for raw material for fish processing enterprises significantly exceeds both the catch and resource capacity of Polish fisheries.

The increasing problems in sea fishing in Poland caused by very low resources in the Baltic Sea, restrictions in fishing and low fishing efficiency make the imports the main source of fish supplies. Domestic aquaculture and freshwater fishing in inland waters are also important sources of supply.

In 2023, there were 207 companies involved in fish processing in Poland; 145 of them defined the primary production under the NACE Code 10.20. In the period 2013-2023, a downward trend can be observed in the number of enterprises dealing with fish processing, which is mainly a consequence of merges, change in business profile or diversification, acquisitions and also liquidation. The share of enterprises for which fish processing was not the main activity is increasing and represented 14-30% of the total number of processing companies. The rising trend stems from companies' need to diversify their activities, which helps them respond quicker and adapt faster to market and economic changes.

Due to market disruptions caused by Russia's invasion of Ukraine, enterprises in the fisheries and aquaculture sector have been provided with financial support for the additional costs they have incurred and its impact on the supply chain.

In terms of the number of processing plants, the Polish processing industry with fish production as the main activity is dominated by small and medium-sized companies. In 2023, the largest number of plants (34% of the total) employed between 11 and 49 persons, then 31% less or equal to 10, 26% between 50 and 249, and 8% employed greater or equal to 250 persons. However, the production in Polish fish processing industry was highly concentrated. In 2023, most of production value (68% of value) was concentrated in large fish processing companies with more than 250 employees.

The distribution of processing activity across Poland remained consistent with previous years. There is a continued dominance of processing activity in the coastal region in the Pomorskie and Zachodniopomorskie region where about 50% of the Polish fish processing industry was located in 2023.

The turnover that remains at the same level proves the stable position of the Polish fish processing industry. In the years 2013-2023, the value of turnover in Polish enterprises dealing mainly with fish processing increased by over 137%, which proves the continuous development of Polish processing.

In 2023, the average number of employees decrease of 5% to 20 514 compared with the previous year and an increase of 39% compared to 2013. Most employees worked full-time and FTE amounted to 20 312 FTE demonstrated an increasing tendency from 2013. The average size of the enterprises measured by FTE was 140 employees and increased by 55% FTE from 2013. The average salary per employee (in FTE) per year reached EUR 15.9 thousand and increased 3% year on year and 30% compared to 2013.

Table 7.48 Overview, Poland, 2013-2023

Variable	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Δ (2022-23)
Structure (number)												
Total enterprises	183	180	185	181	170	164	163	156	159	152	145	-5%
≤ 10 employees	49	51	52	35	31	35	35	31	33	48	45	-6%
11-49 employees	78	65	68	77	72	63	63	61	62	54	50	-7%
50-249 employees	43	50	53	57	53	51	51	50	52	38	38	0%
≥ 250 employees	13	14	12	12	14	15	14	14	12	12	12	0%
Employment (number)												
Total employees	14,783	16,775	17,743	18,947	18,633	19,503	19,850	19,030	19,561	21,631	20,514	-5%
FTE	13,974	16,042	16,937	17,873	17,578	18,845	19,180	18,678	19,198	19,962	20,312	2%
Indicators												
Turnover (million €)	2,128	2,252	2,503	2,514	2,760	3,346	3,326	3,312	3,423	3,954	5,044	28%
FTE per enterprise	76.4	89.1	91.6	98.7	103.4	114.9	117.7	119.7	120.7	131.3	140.1	7%
Average wage (thousand €)	12.2	12.0	12.7	13.1	14.2	14.7	15.1	17.0	17.2	15.4	15.9	3%
Unpaid work (%)	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0
Enterprises doing fish processing not as main activity												
Number of entreprises	38	45	42	41	42	40	38	32	39	46	49	7%
Turnover attributed to fish processing (million €)	100.5	93.4	70.3	66.3	80.8	60.5	142.8	262.5	280.8	353.1	509.8	44%

Source: EWG elaboration from Member States submissions to the Fish Processing data call 2025.

7.19.2 Economic performance

In Table 7.48, the economic performance for the Polish processing industry for the period 2013 to 2023 is presented. In 2022, the economic activity of the fishing industry in Poland was very satisfactory, taking into account economic indicators. All productivity and efficiency indicators showed a positive trend at the turn of 2021 and 2022.

In 2023, the economic performance of the fish processing industry in Poland was more successful than in 2022. After a period of general economic uncertainty caused by Russia's aggression against Ukraine, limited opportunities to increase production of certain product groups, rising energy costs and rapid inflation the Polish fish processing industry recorded significant growth in 2023.

The total income increased by 28% up to EUR 5.1 billion in 2023 compared to the previous year. Taking 2013 as the basis of comparisons, an increase of 138% can be noted. Turnover from the main activity created a significant part of the total income (99%).

Growing revenues were also accompanied by an increase in operating costs by 7%. Total production costs increased to EUR 3.4 billion in 2023. The highest increase in costs was recorded in energy costs (66%) and other operating costs (31%). Purchase of fish and other raw materials for production labour costs recorded a slight increase by 2%. Production costs currently account for 89% of total income.

The most important cost component is the purchase of fish and other raw materials, which make up for 69% of the total production cost. Other operational cost covers 19%, whereas wages and salaries amount to 9.4%. Energy cost accounts for 2.3% of the total production cost.

The fastest rate of growth of production costs were energy costs, an increase of 306% compared to 2013. The rise in the costs of energy for processing fish in 2022 and 2023 was driven by a combination of several key factors like rising gas and CO^2 emission costs, global energy crises induced by the war in Ukraine, and hight tax and fees in Poland.

Table 7.49 Economic performance indicators, Poland, 2013-2023

Variable	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Δ (2022-23)
Income (million €)												
Turnover	2127.7	2251.8	2503.3	2514.1	2760.2	3346.4	3326.3	3312.1	3423.0	3954.0	5043.6	28%
Other income	15.7	20.8	19.5	383.7	289.3	19.1	24.2	22.4	35.3	30.3	47.2	56%
Operating subsidies	8.8	9.4	10.5	11.1	9.4	15.9	15.6	18.1	3.7	11.8	22.2	
Total Income	2152.1	2282.0	2533.4	2908.9	3058.8	3381.4	3366.0	3352.6	3462.0	3996.1	5113.0	28%
Expenditure (million €)												
Purchase of fish and other raw material for production	1567.1	1602.5	1768.5	2166.3	1964.6	2216.5	2302.1	1803.2	2232.0	2348.1	2383.5	2%
Wages and salaries of staff	169.8	192.8	214.3	234.1	249.2	275.8	289.3	317.4	329.8	306.6	322.7	5%
Imputed value of unpaid labour	0.1	0.1	0.0	0.1	0.3	0.3	0.3	0.2	0.1	0.2	0.2	8%
Payment for external agency workers (optional)												
Energy costs	26.2	26.4	27.7	28.2	29.4	37.8	39.7	38.0	34.4	48.3	80.1	66%
Other operational costs	298.1	309.7	361.6	382.3	361.8	450.3	465.7	434.2	500.4	505.8	661.2	31%
Total production costs	2061.2	2131.4	2372.2	2811.0	2605.3	2980.8	3097.1	2593.0	3096.7	3208.9	3447.8	7%
Capital Costs (million €)												
Depreciation of capital	46.0	51.1	54.6	55.2	64.5	68.1	61.9	64.2	67.6	65.5	74.0	13%
Financial costs, net	9.1	18.2	-17.2	-68.4	48.3	10.5	16.8	31.0	-13.1	-34.2	-14.8	57%
Capital Value (million €)												
Total value of assets	1307.3	1321.8	1420.7	1669.4	1896.9	1750.1	1746.3	1690.3	1827.9	1860.5	2080.7	12%
Net Investments	82.6	90.4	73.1	79.3	87.7	10.0	6.5	111.5	74.9	73.0	119.9	64%
Subsidies on investments						5.5	9.9	2.1	2.0	3.3	4.9	46%
Debt	819.1	817.4	872.9	1074.4	1023.8	1050.7	1113.6	1087.8	1296.2	1359.8	1554.5	14%
Economic performance (million €)												
Gross Value Added	252.0	334.0	365.1	321.0	693.7	660.9	542.9	1059.1	691.5	1082.2	1966.0	82%
Operating Cash Flow	90.9	150.6	161.2	98.0	453.6	400.6	268.9	759.6	365.4	787.1	1665.3	112%
Earning before interest and tax	45.0	99.5	106.6	42.8	389.0	332.5	207.0	695.4	297.7	721.6	1591.3	121%
Net Profit	35.9	81.3	123.8	111.2	340.7	322.0	190.2	664.4	310.8	755.9	1606.1	112%
Productivity and performance Indicators												
Labour productivity (thousand €)	18.0	20.8	21.6	18.0	39.5	35.1	28.3	56.7	36.0	54.2	96.8	79%
Capital productivity (%)	19.3	25.3	25.7	19.2	36.6	37.8	31.1	62.7	37.8	58.2	94.5	
GVA margin (%)	11.8	14.7	14.5	11.1	22.7	19.6	16.2	31.8	20.0	27.2	38.6	
EBIT margin (%)	2.1	4.4	4.2	1.5	12.7	9.8	6.2	20.7	8.6	18.1	31.1	
Net profit margin (%)	1.7	3.6	4.9	3.8	11.1	9.5	5.7	19.8	9.0	18.9	31.4	
Return on Investment (%)	3.4	7.5	7.5	2.6	20.5	19.0	11.9	41.1	16.3	38.8	76.5	
Financial position (%)	37.3	38.2	38.6	35.6	46.0	40.0	36.2	35.6	29.1	26.9	25.3	

Source: EWG elaboration from Member States submissions to the Fish Processing data call 2025.

The rate of growth of other operational cost increased by 121.8% and 30.7%, respectively to 2013 and 2022. The share of labour costs seems still lower in comparison to the other EU countries like for example Germany, Finland and Sweden.

Gross Value Added (calculated as the total income deducted by energy cost, fish and other raw material cost and other operational cost) increased in 2023 by 82% compared to 2022 and reached its highest level since 2013 after it declined by 35% in 2021. An increase in production and revenues translated into higher efficiency of the processing industry sector.

Since 2021, there has been a steady increase in Operating Cash Flow, which peaked in 2023 (an increase of 112% compared to 2022). In 2023 net investment amounted to EUR 119.9 million – an increase of 64% compared to the previous year. At the same time debt volume increased by 14%.

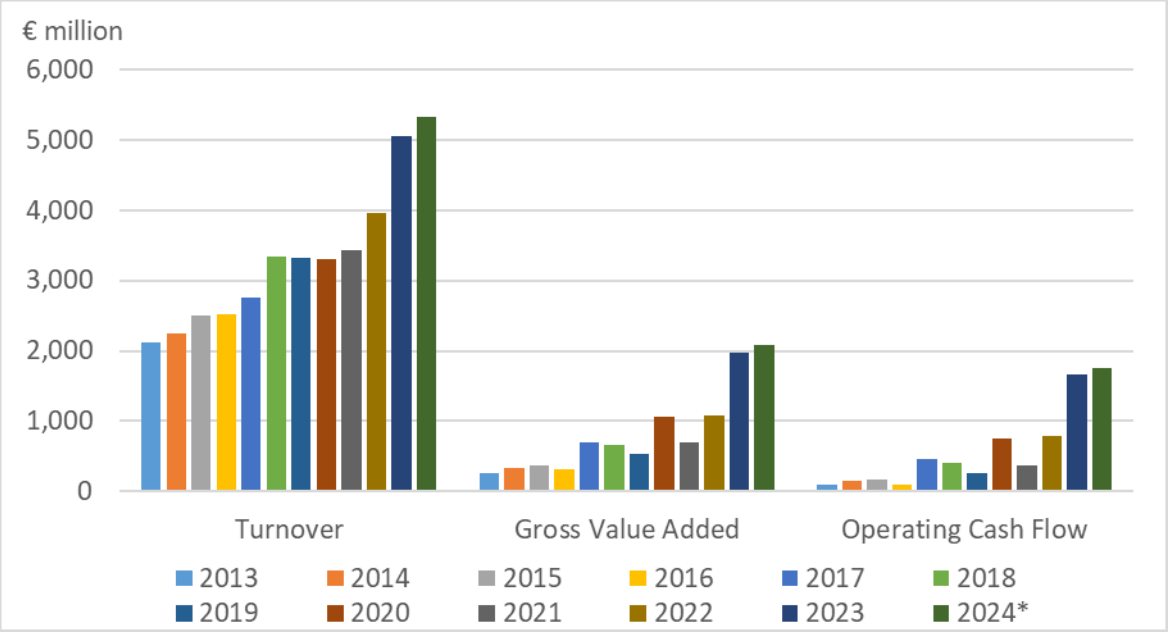
From 2022 to 2023, the depreciation of capital increased by 13% and reached EUR 74 million, whereas the net financial cost decreased to EUR - 14.8 thousand, corresponding to a positive income. Total value of assets increased by 12%.

Increase in other economic indicators like GVA margin, return on investment, EBIT margin reaching 31.1%, capital productivity peaked at EUR 94.5 thousand, confirm a steady growth of the fish processing sector and its further development from 2021 onward.

The Financial position has decreased slightly to the level of 25.3% in 2023, compared to 26.9% in 2022, which doesn't affect the financial stability of the Polish fish processing enterprises.

In 2023, fish processing enterprises in Poland received operating subsidies of EUR 22.2 thousand and in 2022 in the amount of EUR 11.8 thousand. Investment subsidies amounted to EUR 3.3 thousand in 2022 and 4.9 thousand in 2023.

Figure 7.29 Turnover, GVA and Operating cash flow evolution, Poland, 2013-2024



Source: EWG elaboration from Member States submissions to the Fish Processing data call 2025. *2024= nowcasted data

7.19.3 Breakdown by company size

The economic performance of the Polish fish processing sector is mostly represented by large scale enterprises. In 2023, the largest enterprises generated 67% of the total income (EUR 3.43 billion). Fish processing enterprises with between 50 and 249 employees achieved 26.0%

(EUR 1 319 million) of the national total income, and small-scale enterprises 6% of the total turnover.

Table 7.50 Economic performance by company size, Poland, 2013-2023

Variable	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Δ (2022-23)
less than or equal to 10 employees												
Total Income	23.2	25.0	26.8	17.6	22.3	12.3	20.3	19.7	19.3	54.7	48.8	-11%
Total production costs	21.4	22.1	23.6	14.1	13.4	16.7	21.8	23.4	30.1	44.2	36.2	-18%
Gross Value Added	4.2	4.6	5.0	4.3	10.6	-3.0	-1.6	-1.9	-9.1	10.5	14.5	38%
Operating Cash Flow	1.8	3.0	3.2	3.5	8.9	-4.4	-1.5	-3.8	-10.8	10.5	12.6	20%
Earning before interest and tax	1.2	2.5	2.6	3.2	8.5	-8.8	-2.3	-4.3	-11.2	9.8	11.7	19%
Net Profit	1.1	2.4	2.8	3.2	8.4	-8.8	-2.5	-4.3	-11.3	9.6	11.5	19%
between 11 and 49 employees												
Total Income	229.0	177.5	199.7	210.2	242.2	239.9	199.0	114.7	217.7	323.7	311.7	-4%
Total production costs	211.8	165.3	181.8	195.6	208.3	216.6	171.1	139.8	228.8	243.0	158.3	-35%
Gross Value Added	31.9	24.7	30.3	26.7	48.3	34.4	42.8	-11.8	11.3	97.0	170.1	75%
Operating Cash Flow	17.2	12.1	17.9	14.6	34.0	23.3	27.9	-25.1	-11.1	80.7	153.4	90%
Earning before interest and tax	11.5	6.9	12.0	8.1	26.5	14.6	21.6	-28.8	-16.1	76.0	148.2	95%
Net Profit	9.6	5.7	10.9	8.3	28.6	15.7	20.4	-29.5	-19.0	73.0	147.4	102%
between 50 and 249 employees												
Total Income	487.4	578.8	728.9	797.7	823.5	726.8	742.5	543.1	841.2	1,003.6	1,319.0	31.4%
Total production costs	448.8	528.5	677.1	771.1	676.9	617.8	623.1	614.7	843.9	790.3	817.7	3.5%
Gross Value Added	81.4	100.0	114.5	89.7	211.6	172.8	179.5	-24.7	72.2	267.8	562.4	110.0%
Operating Cash Flow	38.6	50.4	51.8	26.5	146.6	109.0	119.4	-71.6	-2.7	213.3	501.2	135.0%
Earning before interest and tax	23.5	32.9	34.4	9.0	124.4	90.4	99.0	-87.2	-23.7	192.2	482.0	150.8%
Net Profit	19.4	27.1	28.6	1.0	122.8	84.4	94.6	-89.0	-26.0	184.5	474.9	157.4%
greater than or equal to 250 employees												
Total Income	1,412.5	1,500.7	1,578.0	1,883.5	1,970.8	2,402.4	2,404.3	2,675.1	2,383.8	2,614.1	3,433.6	31.3%
Total production costs	1,379.2	1,415.6	1,489.6	1,830.1	1,706.8	2,129.6	2,281.2	1,815.1	1,993.9	2,131.4	2,435.5	14.3%
Gross Value Added	134.5	204.7	215.3	200.3	423.2	456.7	322.2	1,097.6	617.1	706.9	1,219.1	72.5%
Operating Cash Flow	33.3	85.1	88.4	53.4	264.1	272.8	123.1	860.0	389.9	482.7	998.0	106.8%
Earning before interest and tax	8.7	57.3	57.6	22.5	229.6	236.3	88.7	815.7	348.8	443.6	949.4	114.0%
Net Profit	5.8	46.0	81.6	98.7	180.8	230.7	77.7	787.1	367.2	488.8	972.4	98.9%

Source: EWG elaboration from Member States submissions to the Fish Processing data call 2025.

Micro-enterprises employing less than or equal to 10 employees significantly increased their total income from 2022. Production cost in 2023 decreased by 18% compared to 2022. At the same time number of enterprises in this segment increased to 48 in 2022 (15 more than in 2022). In 2022, and 2023 increase in all economic indicators were recorded. GVA increased in 2022 to EUR 10.5 million and in 2023 up to EUR 14.5 million. Return on investment was at the level of 55% and financial position at 16%.

Financial support received for additional costs incurred in connection with market disruptions caused by Russia's war against Ukraine and its impact on the supply chain and the fall in prices in the second half of 2023 allowed this sector to return to growth trends in the market.

Bigger size fish processing enterprises between 11 and 49 employees recorded decrease of turnover by 4% compared to 2022. The most notable reduction was in raw material costs, which dropped by 79%. Meanwhile, other income increased by 253% to EUR 6.4 million contributing to a positive overall impact on profitability and positive net profit value.

Fish processing enterprises with between 50 and 249 employees achieved significant increase of net profit value in 2023. Compared to 2022, total income increased by 32% and total production costs by 3%. Companies in this size category generated EUR 562.4 million GVA. Productivity and efficiency indicators in this group increased and the sector strengthened its profitability, generating a net profit of EUR 474.8 million in 2023.

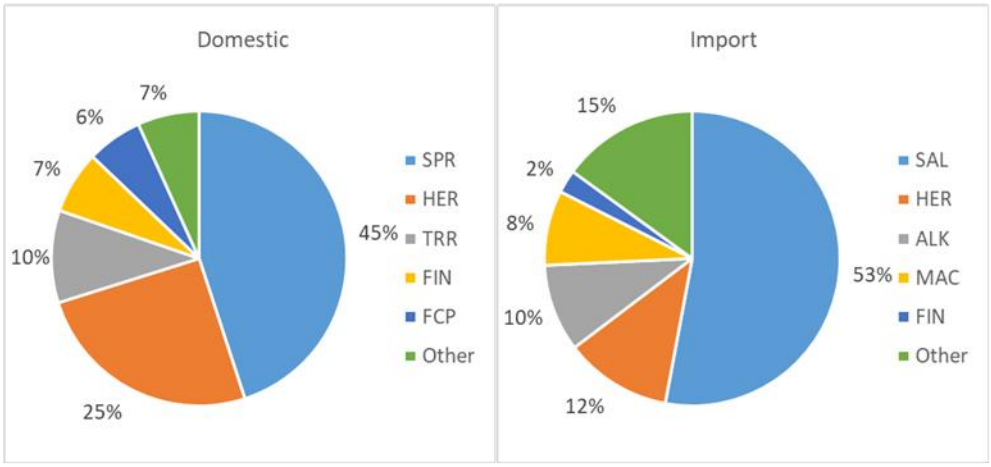
Groups of large enterprises recorded increase in total income by 31% and net profit reached EUR 972.4 million in 2023 (compared to EUR 488.8 million in 2022). GVA increased to EUR 1.2 billion (72%). Productivity and efficiency indicators have decreased but are still at a satisfactory level.

7.19.4 Raw materials

In 2023, the reported volume of fish raw material supply to all fish processing plants for production was 623 thousand tonnes, i.e., 707 thousand tonnes less than in 2022 (12% decline). The majority of fish raw materials (83%) were imported directly by processing plants, which was higher than in 2022 by 1%. Due to the ban on directed fishing for cod, introduced by EU regulations in mid-2019, has been extended for the following years and continued in 2022 and 2023, domestic supplies were lower than in previous years. Domestically, processing plants sourced both raw materials from Polish Baltic fisheries, and direct imports. An important source of supply for the market was the domestic aquaculture and fishing of freshwater fish in inland waters. Raw materials were also imported through commercial intermediaries. The structure of domestic supplies of raw material in 2023 was dominated by sprat (24%), herring (14%), and trout (5%).

In 2023, the main fish species used in processing was Atlantic salmon (44% share), which was purchased over 272 thousand tonnes. The second species in terms of weight of supply was herring, which accounted for 14% of the total supply of plants with fish raw material (of which 69% was imported). The third most frequently purchased raw material was sprat - 54 thousand tonnes, i.e., 15 thousand tonnes less than in 2022 (down by 12%). The share of sprat in the total supply in 2023 was 9%. Alaska pollock came fourth (8% share), with 49 thousand tonnes purchased (up by 3%).

Figure 7.30 Main raw material used by species and origin, Poland, 2023



Source: EWG elaboration from Member States submissions to the Fish Processing data call 2025.

In the species structure of imports in 2023, salmon had the largest share (53% of the volume), followed by herring (12%), Alaska pollock (10%), cod (7%) and mackerel (8%). In 2023, as in previous years, salmon was imported mainly in the form of fresh fish (83% of the volume), but this share is decreasing. Most of them come from Norway (78%), but indirectly these fish are also sent from Sweden (the real share of Norwegian fish may therefore be approximately 88%)[38].The commodity structure of herring imports consisted mainly of frozen fillets (44%) and frozen meat (24%), as well as preserves and canned (26%, most of which are pre-prepared for

[38] Hryszko, K. (red.). 2023. Rynek ryb. Stan i perspektywy. Nr 35. Analizy tynkowe. IERiGŻ PIB.

further processing). The main countries supplying herring to the Polish market in 2023 were: Norway, Iceland, and Denmark. Poland imports cod and mackerel mostly as frozen fish (69 and 79%, respectively), and Alaska pollock, saithe, hake, silverfish and pangasius almost exclusively in the form of frozen fillets. Mackerel available on the Polish market comes from the Netherlands (33%) and Iceland (25%), Alaska pollock from China, Russia and the USA, cod from Russia and Norway, saithe from Norway and Iceland, trout from Norway, Italy and Denmark.

The quantitative structure of imports is dominated by products with a small degree of processing, the vast majority of which are sent to domestic processing plants (fresh, chilled, frozen fish, fillets and fish meat).

7.19.5 Trends, drivers and outlook

The fish processing market in Poland is still one of the most developed and growing sectors of the food industry. In recent years, fish processing has been characterized by the highest revenue dynamics in the food industry. The development of this sector took place mainly through sales on foreign markets.

In 2024 a continuation of the upward trend in the fish processing industry can be observed. Both turnover and total income increased by 16% and 17%, respectively compared to 2023.

In 2024 an increase in expenditure and costs was recorded. The purchase of fish and other materials for production increased by 38%, personnel costs by 57% and other operational costs by 34%. Energy costs increased by 5%. Relatively small increase in energy costs was linked to the increase in production from renewable energy sources, which became more competitive. If this trend continues it can translate into favorable financial results and further growth in the industry. The volume of raw material supply for production increased by 5%. An increase was in the production of smoked and frozen fish by 7% and in fresh fish by 8%.

When comparing the nowcast indicators for Poland with the collected data provided with questionnaires they confirm the continuation of the upward trend in the fish processing industry despite rising material and labour costs.

In the first eight months of 2025, the production of fish and fish products in medium and large fish processing plants (with more than 49 employees) was 4.5% higher than in the previous year and amounted. The largest increase was in the production of smoked fish by 17.9%. There was also a significant increase in the production of frozen products by 11.5%, mainly frozen fillets by 18.1% and frozen meat by 14.9%.

7.19.6 Data coverage and quality

Economic and social variables of the processing industry are based on the information provided with questionnaires. The study was a census and questionnaire with economic variables, it was sent to all fish processing companies approved by the General Veterinary Inspectorate to intra-community trade according to Council Regulation (EC) no. 853/2004 of April 29, 2004, which sets forth detailed requirements regarding hygiene in foodstuffs of animal origin, Appendix IIII Section VIII Fishery Products.

Answering the questionnaire is mandatory but the response rate was 80% in 2023 for companies that defined the primary production under the NACE Code 10.20.

Data on the nationality and educational level of employees should be treated as approximations, due to the low response rate.

There is also a problem in the data on the origin of the raw material. Due to the highly developed internal trade, the respondents mistakenly enter country of origin as Poland when buying raw material from a Polish intermediary i.e., for halibut or salmon. Therefore, these data were not estimated.

7.20 Portugal

7.20.1 Overview

According to FAO and EUMOFA, Portugal stands out as the higher EU consumer of fishery and aquaculture products. This was again confirmed in 2022, although its per capita apparent consumption peaked in 2018 at close to 61.0 kg LWE but has been on a downward trend since, with the actual 54.5 Kg LWE.

Household consumption of fresh fishery and aquaculture products has been growing since 2018, and in 2023 reached EUR 535 million, meaning a per capita expenditure of EUR 456 in 2023, more than three times the EU average of EUR 138 (*The EU Fish Market report 2024*, EU Commission, 2024).

Considering this framework, and the Portuguese market as a huge final consumer for fish and sea products, fish industry as a huge roll either on the domestic and international supply and consumption chain. That configures Portugal within a unique UE profile, combining tradition and experience, innovation and know-how, and provides a major opportunity for the fish processing companies. But, at same time, also implies a negative balance in international trade, where the imports of a large amount of products come to be the essential supply for the industry (about 512 million tonnes of imports, valued over EUR 2.7 billion in 2024, +6% from 2023).

According to Eurostat data, in 2013 there were 154 fish processing enterprises in operation and then 165 enterprises in 2023, with an actual total income of EUR 1.7 billion.

After some years of a decreasing number of enterprises (203 to 153 between 2008 in 2014) an increase became from 2015, resulting in a steady situation of fish processors around the actual 165 producers. Most enterprises are located in the coastal regions of the north and centre of the country and around 15 in the outermost regions of Azores and Madeira.

Table 7.51 Overview, Portugal, 2013-2023

Variable	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Δ (2022-23)
Structure (number)												
Total enterprises	154	153	157	160	168	166	161	150	157	166	165	-1%
Total employees	6,414	6,790	6,936	7,244	7,439	7,747	8,156	8,071	8,046	8,561	8,578	0%
Unpaid labour	312	278	212	208	229	354	352	362	387	253	208	-18%
FTE	6,380	6,774	6,913	7,221	7,415	7,725	8,110	8,036	8,022	8,527	8,524	0%
Income, expenditure and investments (million €)												
Production value	920.7	915.1	940.2	968.8	996.1	1,026.4	1,070.9	1,024.3	1,107.9	1,332.2	1,418.0	6%
Turnover from fish processing												0%
Turnover total	1,129.3	1,130.5	1,167.6	1,230.1	1,285.8	1,316.6	1,353.5	1,257.6	1,364.6	1,601.0	1,720.9	7%
Total purchases of goods and services	999.1	918.4	1,032.2	1,058.5	1,133.6	1,141.0	1,164.0	1,061.4	1,148.8	1,438.9	1,460.5	2%
Personnel costs	95.2	98.6	103.3	109.8	116.0	126.3	135.4	140.3	144.1	158.8	173.4	9%
Gross investment in machinery and equipment	20.4	25.9	51.8	17.6	24.1	34.7	38.2	23.7	24.3	33.5	33.7	1%
Economic performance (million €)												
Gross Value Added	168.2	172.3	174.3	182.4	195.3	208.0	222.1	216.2	241.9	268.3	306.1	14%
Gross profit	73.0	73.7	71.0	72.5	79.3	81.7	86.8	75.8	97.7	109.5	132.7	21%

Source: EWG elaboration from Eurostat (2025) data.

Traditionally, there are three main segments in fish processing in Portugal, each one with their own national and international market and specificity and needs: frozen and fresh industry,

cannery and preparation and the salting and drying industry. Some new companies, technology supported, are emerging outside usual pattern.

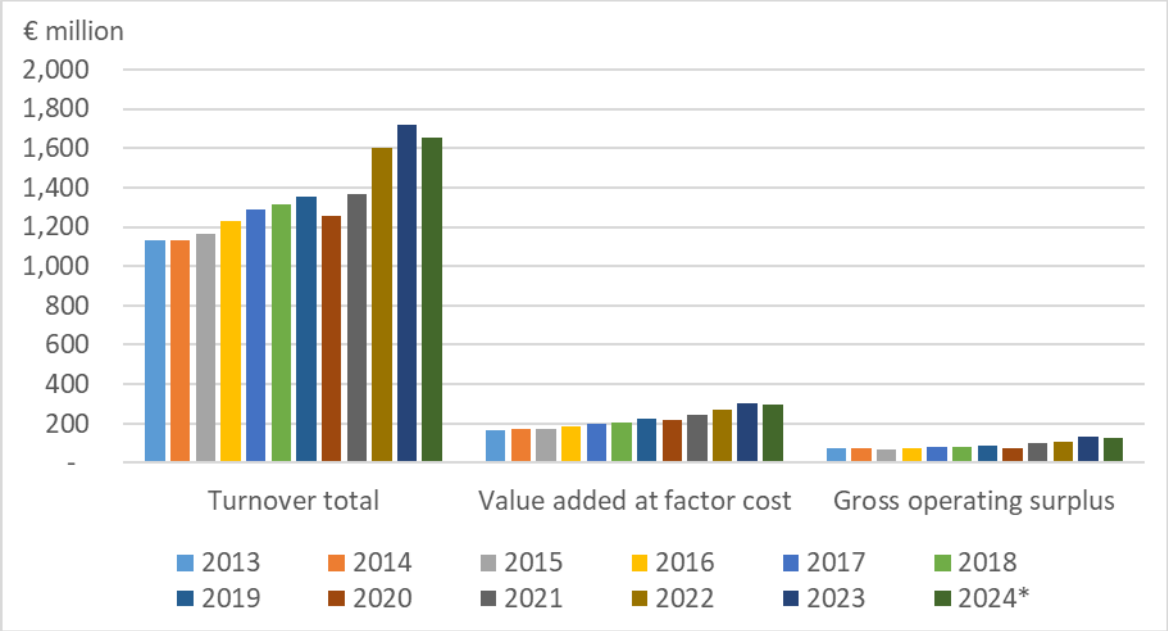
7.20.2 Economic performance and production

All together Portuguese enterprises employed 8 578 people in 2023, with an average personnel cost (personnel costs per employee) up to EUR 20.3 thousand (+9.4% from the previous year). In average the number of persons employed per enterprise remain steady around 54 persons per company. The total personal costs in 2023 went up to EUR 173.4 million, with wages and salaries up to EUR 134.7 million (+9% from previous year).

In total, in 2023, Portuguese fish industry produced 262.7 thousand tonnes (135.6 in the frozen and fresh sector, 59.4 in the salting sector and 67.7 in cannery and preparation). Despite the steadiness around the number of fish processing firms over the last years, their total income followed one increasing trend, even considering the 2020 minor decreasing. Production value over EUR 1.4 billion (+6% from 2022) confirms the significance and dynamics of the whole sector.

Some important economic indicators, as GVA and Gross Profit and labour productivity shows a general increasing trend for the decade, as by far with the highest values ever in 2023.

Figure 7.31 Turnover, GVA and Gross profit evolution, Portugal, 2013-2024



Source: EWG elaboration from Eurostat (2025) data. *2024= nowcasted data

The Gross Value Added value reached EUR 306.1 million (+14% from previous year) and set a constant growth since 2013. Specifically, GVA steadily increased from 2013 to 2023, by around 71% in accumulated total, even considering the COVID crisis impact and BREXIT in the between. The Portuguese labour productivity measured as the GVA produced by a unit of labour (FTE) reaches EUR 42.2 thousand in 2023 (EU average is EUR 56.8 thousand), with 34% growth from previous year.

The same pattern can be found for Gross Profit, with an accumulated value of 82% for the period, reaching EUR 132.7 million in an amazing 2023 (21% from previous year). In general,

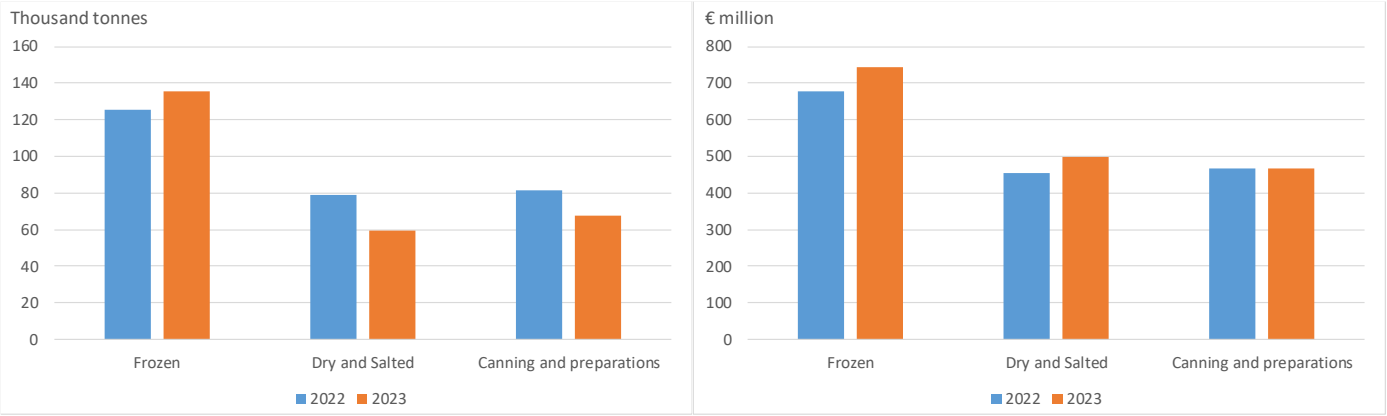
the investments reflect the increase of profit ratio with virtuous efficiency (e.g., +1% in investment in machinery from previous year, and comparable +14% value added).

Investments made under de EMFF goes up to EUR 75 million (408 approved projects), while by Portugal's Recovery and Resilience Plan goes to EUR 4.3 million, in general directed to digital and green transition and food safety.

The Portuguese processing industry embraces a large variety of products based on a considerable amount of species, from sardine and mackerel to tuna, from hake, redfish and salmon to cod, from cephalopod to crustaceous. The huge domestic demand for transformed fish and seafood products is anchored mostly on salted codfish, which almost became as a natural national identity, but also over an enormous variety of species, fresh and frozen, and both supplied by an international chain of suppliers, mostly third-country's.

The raw materials for the industry are acquired on the global market, including aquaculture sources, and the dependency on domestic landings is somehow limited.

Figure 7.32 Production and Turnover (fresh and frozen, salted and canned), Portugal, 2022-2023



Source: INE, Annual industry production inquiry

Table 7.52 Production distributed on species segments in tonnes, Portugal, 2021-2023

Species segments	2021	2022	2023
Frozen total	131,933	125,603	135,622
Cod	28,720	32,887	34,211
Invertebrate (squid, cuttlefish, octopus, clams and others)	22,917	12,672	15,186
Sardine	8,858	8,787	10,247
Hake	9,055	12,375	9,036
Redfish	6,306	5,979	5,709
Fish fillets	5,587	5,773	5,584
Salted total	68,350	78,555	59,427
Dry salted cod	40,899	36,707	32,032
Cannery total	65,835	81,229	67,740
Tuna	19,832	18,573	18,216
Sardine	11,265	11,479	13,277
Mackerel	3,219	3,313	3,073

Source: INE, Fishery Statistics 2025

7.20.3 Trends, drivers and outlook

It is expected that production from Portuguese fish industry, either for domestic market and exports, continues to grow in the next years.

From 2021, above all, the Portuguese economic and social performance that affects the sector is increasingly stabilized, even growing. The fish industry expectations (under a strong demand from the domestic market, including the tourism and gastronomic sector, but also increased exports) are now based on product valorisation, in energy and technologic innovation and achieving state of the art modernized processes, such as digital transition and circular economy.

Those are clear investments in a process of discovering new possibilities and adapting the supply chain to availability and international prices pressure.

The actual sector objective seems to be based on a general strategic intervention to develop a structural, lasting and impactful response, considering the energy and manpower costs impact, paving the way for a competitive yet cohesive and inclusive economy, also more decarbonised and sustainable.

Overall, besides the national specialized offer mainly from small pelagic, the industry relies on a steady inflow of raw materials both from third countries and EU suppliers, which seems to be relatively solid, considering the uncertainty of world geopolitical.

The international trade, import and export, gain considerable dimension (+6.2% on exports, +5.9% on imports in 2024 by 2023), considering the general high value-added products pattern of the national industry.

The geopolitical instability, mainly the Ukrainian and Middle East conflicts, put considerable pressure on prices and raw material availability. Yet Portugal dependence in imports of raw material still increased: tourism did grow considerable and with it a higher demand for fish and seafood products, depict the international price general increase. The aquaculture products seem to gain a decisive space over the traditional fishing ones, better responding to the economic pressure.

Nevertheless, the main issues from raw material and competitiveness are very much related with the cod supply (Norway/Russia and Norway/Portugal connections) because from this, if the situation lasts a while longer, there is a real risk of implosion over the whole national salting and drying industry segment.

This happens while Norway gains as a double beneficiary (by accepted unfair competition as to the Portuguese eyes). Meaning, Norway still have access to Russian raw-material (big size cod, for salting) and didn’t went along with the EU ban to Russia companies and trade, by far the most important raw material supplier to the Portuguese salting industry. The remaining international big size cod offer is under shortage, with logical high prices from producers such as Canada, Pacific United States or Greenland).

In a different level, as Norway proves to be a direct competitor within the Portuguese salted dry cod market, then benefits from contingents for tax reduction (25 thousand tonnes GATT contingent (General Agreement on Tariffs and Trade) and then with the special 13 thousand tonnes’ contingent for only Norwegian salted cod, zero tax), given by EU side. So, Norway supplies raw-material and final product with low or nil taxes, in part purchased from Russia under the EU ban over their major supply companies. And at the same time exports final product, also earning to the competition (including de EU one) by tax reduction gained from those EU contingents.

By 2024 Portugal main suppliers were, within EU, Spain (frozen fish, cannery, crustaceous and molluscs), Denmark (fresh and frozen fish) and Sweden and Netherlands (frozen and salted cod, after Norwegian preparation). As extra-EU suppliers came Russia (frozen and salted cod), South Africa (frozen fish), China (salted fish and cannery) and India (crustaceous and molluscs).

7.20.4 Data coverage and quality

No Portuguese data were submitted in the 2025 fish processing sector data call. Portugal did not to collect data on the fish processing industry under the DCF / EU-MAP from 2017. Thus, DCF data were only available until 2015, as they were submitted in previous data calls.

The above analytics are based on Eurostat’s Structural Business Statistics data, which are publicly available.

7.21 Romania

7.21.1 Overview

According to submitted data, the Romanian fish processing sector consisted of 17 enterprises in 2023. The structure based on the number of employees has changed by a decrease of 50% in the segment <10 employees, and the number of enterprises in the segments between 11-49 and 50-249 employees remains the same as in the previous year. There were no companies which employed more than 250 workers in 2022 and 2023.

Romanian fish processing plants are employing 1 042 people, corresponding to 1 010 full-time equivalent. The number of employees has fluctuated over the years independently in relation to the wavered number of enterprises.

The economic performance of Romanian fish processing industry has been fluctuating from 2013 to 2023. In 2023, the performance in economic terms has decreased; the turnover was EUR 100 million (down by 22% compared to 2022), average wage also decreased by 18% to EUR 10.2 thousand. Regarding employment indicators, FTE per enterprise has increased by 16% to 63.1 in 2023, and unpaid work has inclined by 26% to 6.3%. As for enterprises doing fish processing not as main activity, in 2023, there were 25 companies and turnover attributed to fish processing increased by 59% to EUR 10.6 million compared to data submitted for 2022.

Table 7.53 Overview, Romania, 2013-2023

Variable	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Δ (2022-23)
Structure (number)												
Total enterprises	7	10	8	19	17	18	13	18	18	17	16	-6%
≤ 10 employees			1	5	2	1	3	3	4	2	1	-50%
11-49 employees	5	7	4	7	11	9	5	10	9	9	9	0%
50-249 employees	2	3	3	7	4	8	4	4	5	6	6	0%
≥ 250 employees							1	1				0%
Employment (number)												
Total employees	438	510	483	1,203	1,015	1,255	1,038	1,182	1,182	1,177	1,042	-11%
FTE	438	510	483	1,203	1,006	1,211	1,025	1,161	1,071	922	1,010	10%
Indicators												
Turnover (million €)	20	16	15	32	99	99	88	102	135	129	100	-22%
FTE per enterprise	62.6	51.0	60.4	63.3	59.2	67.3	78.8	64.5	59.5	54.2	63.1	16%
Average wage (thousand €)	1.7	2.8	4.0	3.7	7.1	8.3	6.5	9.0	12.2	12.5	10.2	-18%
Unpaid work (%)	11.1	4.0	1.7	4.6	4.2	4.2	6.1	4.6	4.3	5.0	6.3	0
Enterprises doing fish processing not as main activity												
Number of entreprises	24	14	18	12	15	13	12	19	19	23	25	9%
Turnover attributed to fish processing (million €)		3.6	0.5	6.6	6.8	7.7	5.3	10.0	14.3	6.7	10.6	59%

Source: EWG elaboration from Member States submissions to the Fish Processing data call 2025.

7.21.2 Economic performance

In 2023, the total income for the Romanian fish processing industry reached EUR 106.4 million, which was a decrease of 18% compared to 2022. The total income consists of turnover, other income and subsidies of which turnover and other income make up for 94% and 6%, respectively. There are registered operating subsidies in the Romanian fish processing industry by EUR 0.1 million in 2023 (0.1%).

Table 7.54 Economic performance indicators, Romania, 2013-2023

Variable	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Δ (2022-23)
Income (million €)												
Turnover	19.6	15.8	14.7	31.9	98.8	98.8	87.6	101.5	135.4	128.7	100.1	-22%
Other income		0.2	9.4	0.7	2.0	5.8	1.0	0.6	1.4	1.0	6.1	512%
Operating subsidies			0.0			0.0		0.2	0.5	0.6	0.1	-83%
Total Income	19.6	16.1	24.1	32.6	100.8	104.6	88.6	102.3	137.3	130.4	106.4	-18%
Expenditure (million €)												
Purchase of fish and other raw material for production	9.7	7.4	1.9	22.7	45.3	49.0	36.5	59.0	60.8	62.8	49.0	-22%
Wages and salaries of staff	0.7	1.4	1.9	4.2	6.8	9.7	6.3	10.0	12.5	10.9	9.7	-11%
Imputed value of unpaid labour	0.1	0.1	0.0	0.2	0.3	0.4	0.4	0.5	0.6	0.6	0.7	13%
Payment for external agency workers (optional)							0.1	0.4	0.1	0.1	0.0	-87%
Energy costs	0.1	0.3	0.3	0.3	0.9	1.2	1.4	1.3	1.9	2.3	1.9	-18%
Other operational costs	0.1	0.1	0.2	3.1	24.3	30.2	11.4	17.0	16.7	20.2	16.8	-17%
Total production costs	10.6	9.3	4.3	30.5	77.7	90.5	56.1	88.2	92.5	96.9	78.0	-19%
Capital Costs (million €)												
Depreciation of capital	0.6	0.5	0.4	0.6	3.2	3.1	3.6	2.4	3.9	3.7	3.1	-16%
Financial costs, net	0.2	0.2	0.3	3.5	1.2	-2.2	0.9	0.4	-0.1	0.8	-4.7	-676%
Capital Value (million €)												
Total value of assets	16.7	15.9	16.0	13.1	47.4	50.6	56.6	63.7	64.6	57.5	62.2	8%
Net Investments	0.2	0.5	0.6	0.5	3.8	7.9	7.7	5.4	2.4	4.0	4.8	20%
Subsidies on investments				0.1	0.0	0.8	0.4	0.3	0.7	0.3	1.0	190%
Debt	11.5	1.1	12.5	9.4	35.2	39.5	37.6	38.5	36.4	41.7	21.9	-48%
Economic performance (million €)												
Gross Value Added	9.8	8.2	21.7	6.5	30.2	24.2	39.2	24.4	57.4	44.3	38.5	-13%
Operating Cash Flow	9.0	6.8	19.8	2.1	23.1	14.1	32.5	14.1	44.8	33.4	28.3	-15%
Earning before interest and tax	8.4	6.3	19.4	1.4	19.9	10.9	28.9	11.8	40.9	29.7	25.2	-15%
Net Profit	8.2	6.1	19.1	-2.0	18.7	13.1	28.0	11.4	40.9	28.9	29.9	4%
Productivity and performance Indicators												
Labour productivity (thousand €)	22.3	16.1	45.0	5.4	30.1	19.9	38.2	21.1	53.5	48.1	38.2	-21%
Capital productivity (%)	58.5	51.8	135.4	49.6	63.8	47.7	69.2	38.4	88.8	77.0	62.0	
GVA margin (%)	49.8	51.3	90.3	19.9	30.0	23.1	44.2	23.9	41.9	34.1	36.3	
EBIT margin (%)	43.0	39.3	80.4	4.4	19.8	10.5	32.6	11.5	29.8	22.8	23.7	
Net profit margin (%)	41.8	37.9	79.3	-6.2	18.6	12.5	31.7	11.1	29.8	22.2	28.1	
Return on Investment (%)	50.6	39.6	120.7	11.0	42.0	21.6	51.1	18.4	63.2	51.6	40.5	
Financial position (%)	30.9	93.2	21.9	28.6	25.7	22.0	33.5	39.6	43.7	27.5	64.8	

Source: EWG elaboration from Member States submissions to the Fish Processing data call 2025.

The total cost of production reached EUR 78 million in 2023, which was a decrease of 19% compared to 2022. The most important cost component is the purchase of fish and other raw materials, which make up for 63% of the total cost. Other operational cost covers 18%, whereas

wages and salaries cover 22%. Energy cost make up for 2% of the total production cost. It is worth noting that operational costs have consequences.

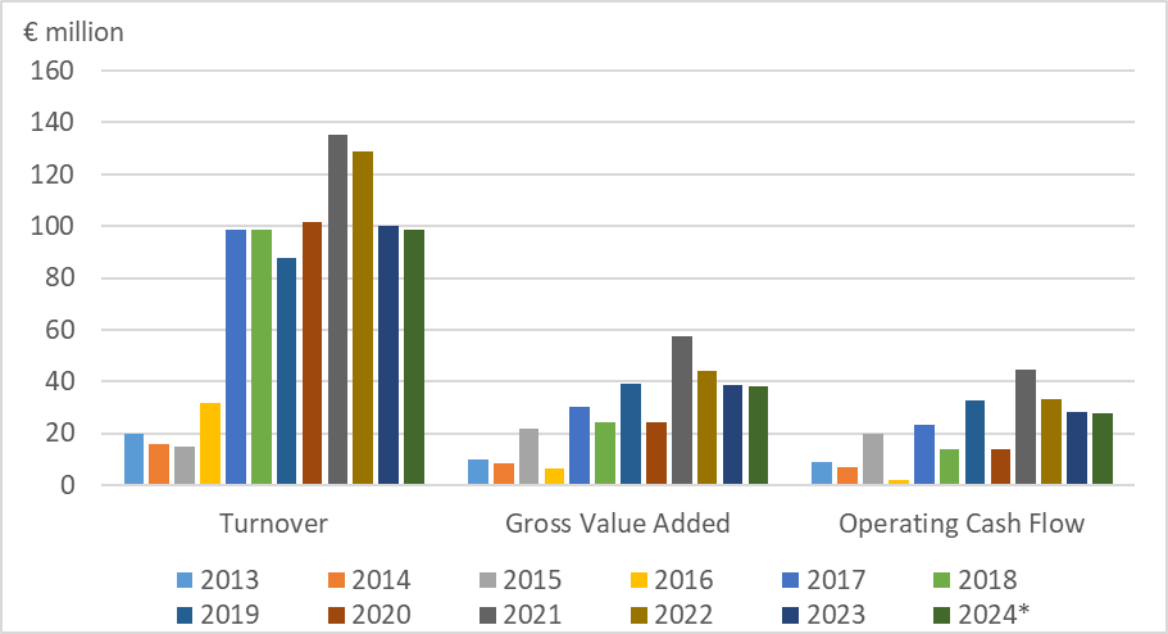
The depreciation of capital decreased by 16% to EUR 3.1 million, whereas the net financial cost decreased to EUR -4.7 million. Total value of assets increased by 8%, and net investments increased to EUR 4.8 million. Subsidies on investment increased to EUR 1 million. Debt decreased by 48% and reached the level of EUR 21.9 million.

The Gross Value Added (GVA) is calculated as the total income deducted by energy cost, fish and other raw material cost and other operational cost. The GVA reached EUR 38.5 million in 2023, which was a decrease of 13% from 2022.

In 2016, the Romanian fish processing industry experienced a negative net profit, but since then the net profit has been positive. From 2022 to 2023, the net profit increase to EUR 29.9 million, which was an increase of 4%. The EBIT and the operating cash flow decreased from 2022 to 2023, both by 15%.

All the productivity and performance parameters have deteriorated from 2022 to 2023. Labour productivity decreased by 21%, and capital productivity, EBIT, GVA, and the net profit margin all declined compared to previous years. Ratio return on investment decreased to 40.5%.

Figure 7.33 Turnover, GVA and Operating cash flow evolution, Romania, 2013-2024



Source: EWG elaboration from Member States submissions to the Fish Processing data call 2025.

*2024= nowcasted data

7.21.3 Breakdown by company size

There are many fluctuations regarding number of enterprises in the segments, so it is hard to analyse and explain some of the specificities of the economic performance of the Romanian fish processing industry.

In 2023, the segment with less than 10 employees showed a mix trend regarding economic variables compared to data showed in 2022. Total income decreased by 69% nine to EUR 0.5 million, while the net profit increased to EUR 0.1 million.

For companies with between 11 and 49 employees, total income decreased by 18% to EUR 12.3 million with a decrease in costs of 2% to EUR 9.4 million. In 2023, the economic performance of enterprises employing between 11 and 49 persons deteriorated compared to 2022. Gross value added decreased by 34%, and net profit dropped to EUR 3.4 million, marking a 41% reduction on an annual basis.

In 2023, medium-sized enterprises employing between 50 and 249 persons continued to demonstrate the strongest financial performance among the size classes, despite a moderate decline compared to 2022. Total income decreased by 17.8% to EUR 93.6 million, while total production costs fell by 19.6% to EUR 68.3 million. Gross value added declined by 11.8% to EUR 33.9 million and EBIT by 11.1% to EUR 22.5 million. In contrast, net profit increased by 10.7%, reaching EUR 26.4 million, indicating improved cost efficiency and profitability despite the overall contraction in revenues. Compared to the average for the period 2013-2022 the total income in 2023 increased by 57%, GVA increased by 53%, and net profit increased by 68%.

Table 7.55 Economic performance by company size, Romania, 2013-2023

Variable	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Δ (2022-23)
less than or equal to 10 employees												
Total Income			0.1	1.1	1.3	0.8	1.5	0.3	2.7	1.5	0.5	-69%
Total production costs			0.0	0.8	0.3	0.5	0.8	0.2	2.6	2.3	0.3	-85%
Gross Value Added			0.0	0.4	1.1	0.3	1.0	0.1	1.8	-0.7	0.2	127%
Operating Cash Flow			0.0	0.3	1.0	0.3	0.7	0.1	0.2	-0.8	0.1	116%
Earning before interest and tax			-0.0	0.1	1.0	0.3	0.7	-0.0	0.0	-0.8	0.1	114%
Net Profit			-0.0	-0.1	1.3	0.2	0.5	0.0	0.0	-0.8	0.1	114%
between 11 and 49 employees												
Total Income	2.3	3.4	1.8	4.9	14.1	11.6	8.7	17.4	27.4	15.0	12.3	-18%
Total production costs	2.0	2.2	1.4	8.8	11.4	10.0	6.7	10.5	18.6	9.6	9.4	-2%
Gross Value Added	0.8	1.9	0.6	-3.1	4.1	3.0	3.4	8.4	10.6	6.7	4.4	-34%
Operating Cash Flow	0.3	1.1	0.4	-3.9	2.7	1.5	2.0	6.6	8.7	5.5	2.9	-46%
Earning before interest and tax	0.1	0.9	0.3	-4.0	2.0	1.3	1.9	6.3	8.5	5.2	2.6	-50%
Net Profit	0.1	0.9	0.3	-7.2	0.1	1.6	1.7	6.5	8.5	5.8	3.4	-41%
greater than or equal to 50 employees												
Total Income	17.3	12.7	22.3	26.7	85.4	92.3	78.4	84.7	107.2	113.8	93.6	-17.8%
Total production costs	8.6	7.0	2.9	21.0	66.0	80.0	48.5	77.1	71.2	85.0	68.3	-19.6%
Gross Value Added	9.0	6.4	21.0	9.2	25.1	20.9	34.8	15.9	45.0	38.3	33.9	-11.5%
Operating Cash Flow	8.7	5.6	19.4	5.7	19.4	12.3	29.8	7.4	35.9	28.7	25.3	-12.0%
Earning before interest and tax	8.4	5.4	19.1	5.3	16.9	9.4	26.4	4.0	32.3	25.3	22.5	-11.1%
Net Profit	8.1	5.1	18.8	5.3	17.4	11.3	25.9	3.3	32.3	23.9	26.4	10.7%

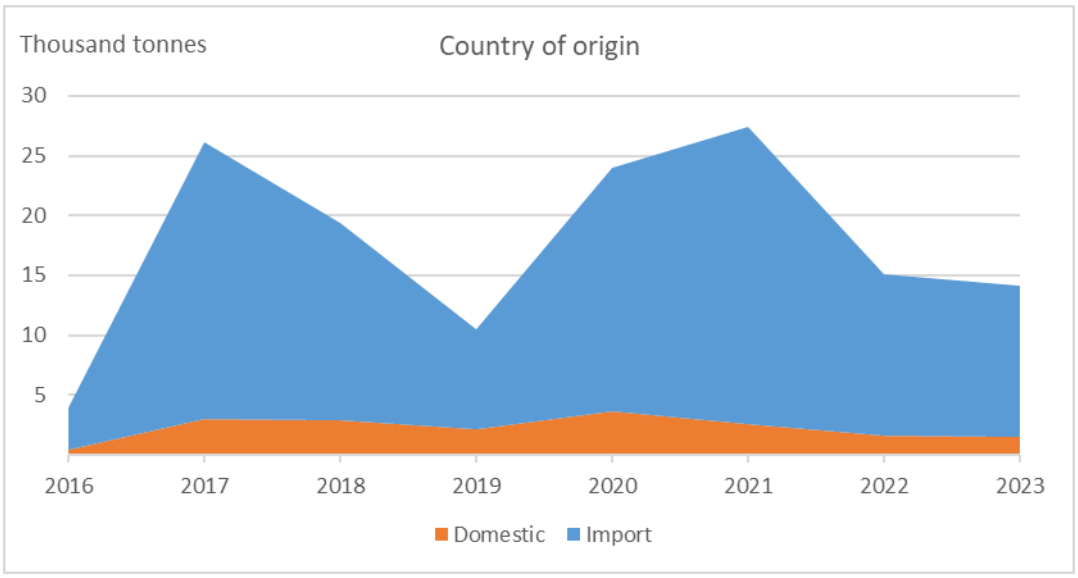
Source: EWG elaboration from Member States submissions to the Fish Processing data call 2025.

7.21.4 Raw materials

For 2023, Romania's fish processing industry purchased 14 111 tonnes of raw material. Only 11% came from domestic raw material sources (1 488 tonnes). For 2022, the respective raw material purchases amounted to 15 121 tonnes of which only 1 600 tonnes were domestic.

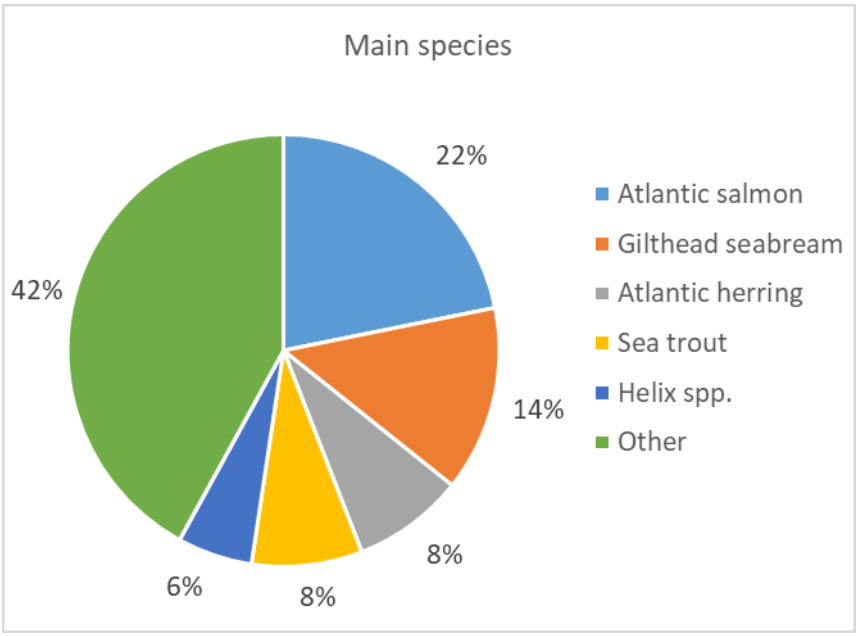
The top six raw material species used in processing, in ordered quantities, were salmon, mackerel, trout, herring, seabream and carp, corresponding to almost 70% of the total raw material.

Figure 7.34 Main raw material used by origin, Romania, 2016-2023



Source: EWG elaboration from Member States submissions to the Fish Processing data call 2025.

Figure 7.35 Main raw material used by species, Romania, 2023



Source: EWG elaboration from Member States submissions to the Fish Processing data call 2025.

7.21.5 Trends, drivers and outlook

In 2023, the Romanian fish processing sector showed a moderate decline in most financial indicators compared to the previous year. Total income and production costs decreased by around one fifth, mainly due to lower turnover and reduced expenditure on raw materials and energy.

Despite the general contraction, net profit remained stable, supported by higher other income and reduced debt levels. Investment activity increased slightly, and the value of assets continued to grow, suggesting ongoing efforts to maintain production capacity.

Overall, the sector remains resilient, though performance in 2023 indicates a period of adjustment following the strong results achieved in 2021–2022. During the EWG, a nowcast analysis was performed based on the most recent Eurostat data for 2024. According to preliminary assumptions, a slight decrease in the sector's turnover is expected for 2024 (figure 7.21.3). This projection reflects early estimates derived from available data and should be interpreted with caution until official DCF data becomes available.

7.21.6 Data coverage and quality

Although the data collection was planned to cover all 17 fish processing enterprises in Romania, information was received from 16 companies. As a result, the dataset provides nearly complete coverage of the sector, but a small gap remains, which may slightly affect the overall representativeness of the results.

7.22 Slovakia

7.22.1 Overview

Slovakia is a landlocked country, so its fish processing industry relies primarily on imported raw materials, particularly marine fish. Poland is a key supplier of fish and fish products to the Slovak market, accounting for approximately 37% of salted and smoked fish imports and 24% of fish fillets[39]. Slovak fish processing plants primarily focus on canning, salting, and freezing fish, and their operations are largely local in nature.

According to SBS data, in 2023, the fish processing industry in Slovakia consisted of 4 enterprises with an estimated production value of EUR 29.9 million. These fish processing plants were employing 152 people corresponding to 152 full time equivalent. Between 2020 and 2023, the number of businesses remained low (3–4 per year). The number of employees during this time dropped significantly, from 357 to 152. This indicates a strong trend toward downsizing and possibly automation or consolidation of operations.

Table 7.56 Overview, Slovakia, 2013-2023

Variable	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Δ (2022-23)
Structure (number)												
Total enterprises	10							3	4	3	4	33%
Total employees	576							357	322	180	152	-16%
Unpaid labour	1							0	0	0	0	0%
FTE	569							354	322	180	152	-16%
Income, expenditure and investments (million €)												
Production value	34.0							38.6	34.9	24.8	29.9	20%
Turnover from fish processing												0%
Turnover total	72.2							49.3	41.8	24.9	29.9	20%
Total purchases of goods and services	70.8							40.9	32.5	19.3	22.8	18%
Personnel costs	7.2							5.1	5.2	3.0	3.3	11%
Gross investment in machinery and equipment	1.3							2.6	4.5	1.7	1.7	-2%
Economic performance (million €)												
Gross Value Added	1.5							8.4	6.9	6.1	6.2	1%
Gross profit	-5.4							3.3	1.7	3.1	2.8	-8%

Source: EWG elaboration from Eurostat (2025) data.

The fish processing sector in Slovakia has shrunk in recent years, reflecting consolidation trends. Production value and total turnover declined significantly between 2020 and 2022, but a slight improvement was observed in 2023. Total turnover almost halved between 2020 and 2022, but in 2023 it reached EUR 29.9 million, compared to a low of EUR 24.9 million in 2022.

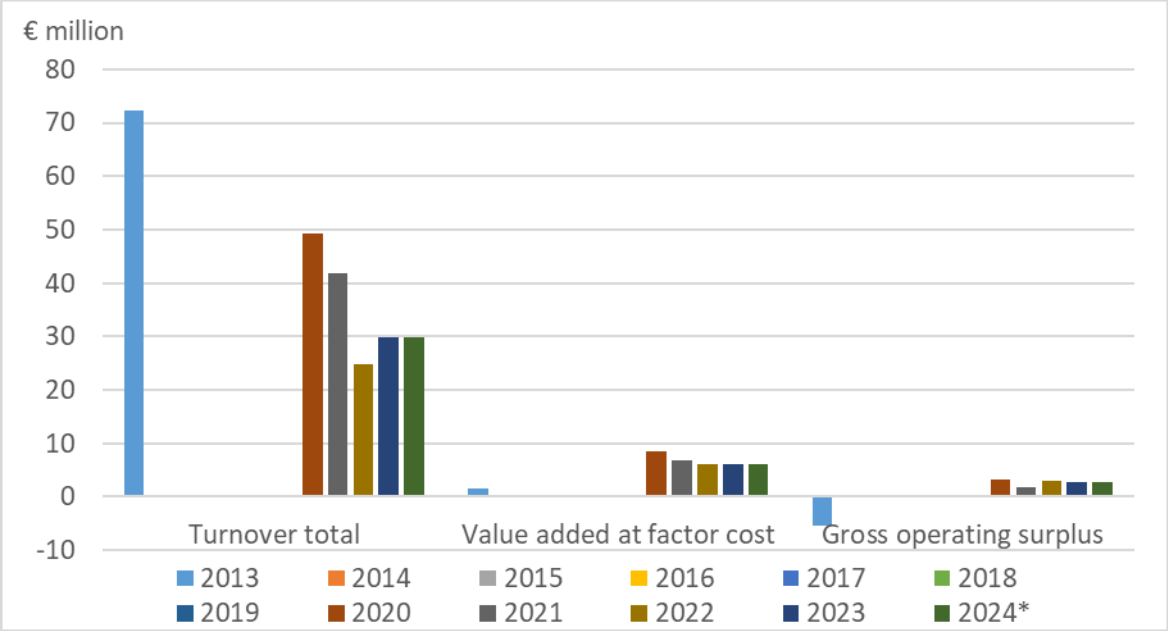
Personnel costs, as well as purchases of goods and services, decreased, reflecting the reduction in the scale of operations. Gross fixed asset investment was volatile, peaking in 2021 (EUR 4.5 million), and fluctuating between EUR 1.7 and EUR 2.6 million in the remaining years.

The value-added indicator and gross profit correlate with production volume. Value added decreased from EUR 8.4 million in 2020 to EUR 6.2 million in 2023, while gross profit remained positive, stabilizing at around EUR 2.8–3.3 million over the past three years.

[39] https://www.gov.pl/web/maritime-china/slowacja

The largest declines occurred in employment and turnover, although some indicators began to increase in 2023. The continued positive financial results demonstrate cost rationalization and the operational stability of companies in the sector despite the challenging environment.

Figure 7.36 Turnover, GVA and Gross profit evolution, Slovakia, 2013-2024



*Source: EWG elaboration from Eurostat (2025) data. *Nowcast not possible, 2024 assumed to be equal to 2023*

Fish processing in Slovakia was characterized by significant volatility and economic activity disruptions between 2013 and 2023. In 2013, the sector recorded a record turnover of EUR 72.2 million, although value added was only EUR 1.5 million and the operating surplus was significantly negative (EUR -5.4 million), indicating significant challenges with the industry's profitability and efficiency. No statistical data is available for the years 2014 to 2019.

In 2020 total turnover reached EUR 49.3 million, falling to EUR 24.87–29.9 million in subsequent years. At the same time, value added at factor costs stabilized at EUR 6.09–8.4 million, and the gross operating surplus reached EUR 1.68–3.3 million. The sector has regained the ability to generate some profits and more stable economic values, but it is clear that it is operating on a much smaller scale than a decade ago and is operating under conditions of limited profitability.

In 2023, the industry's turnover was estimated at EUR 29.9 million, value added EUR 6.17 million, and operating surplus EUR 2.83 million. These figures are virtually unchanged from 2022-2023, confirming that the sector has achieved stabilization.

7.22.2 Data coverage and quality

No data were submitted by Slovakia. For that reason, the EWG prepared a national mini-chapter with limited analyses based on publicly available data (Eurostat). The years 2014–2019 were a blank period in the statistics – no activity was reported.

7.23 Slovenia

7.23.1 Overview

In 2023, there were 16 companies in the Slovenian fish processing sector. According to the number of employees, that suggest 13 companies with less than 10 employees and three companies with 11-49 employees. Among them are eight companies with fish processing as not main activity. These companies generate EUR 17.4 million of turnover from fish processing (an increase of 11% according to 2022), which representing 40% of the whole turnover from fish processing activities.

In 2023, the turnover was EUR 43 million. Between 2013 and 2023, the turnover of Slovenian fish processing industry increased by 30% (see Table 7.19.10), while an increase of 1% is recorded in the period 2022-23.

The value of raw material decreased by 3% from 2013 to 2023 and amounted EUR 9.8 million in 2023 (decrease of 21% from 2022 to 2023).

Table 7.57 Overview, Slovenia, 2013-2023

Variable	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Δ (2022-23)
Structure (number)												
Total enterprises	14	13	12	16	18	17	15	15	17	16	16	0%
≤ 10 employees	9	7	7	11	14	13	11	10	13	13	13	0%
11-49 employees	2	4	3	5	4	4	4	5	4	3	3	0%
50-249 employees	3	2	2									0%
≥ 250 employees												0%
Employment (number)												
Total employees	351	221	209	122	132	129	126	118	116	183	179	-2%
FTE	325	211	209	112	130	117	111	85	91	171	167	-2%
Indicators												
Turnover (million €)	30	24	26	31	33	34	33	31	42	43	43	1%
FTE per enterprise	23.2	16.2	17.4	7.0	7.2	6.9	7.4	5.7	5.3	10.7	10.5	-2%
Average wage (thousand €)	22.4	26.9	24.9	26.6	24.9	28.3	32.1	36.3	33.9	28.7	34.2	19%
Unpaid work (%)	0.3	0.5	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0
Enterprises doing fish processing not as main activity												
Number of entreprises	6	6	4	6	8	8	8	10	11	8	8	0%
Turnover attributed to fish processing (million €)	7.0	6.8	7.0	12.8	14.4	16.2	16.6	13.6	14.2	15.7	17.4	11%

Source: EWG elaboration from Member States submissions to the Fish Processing data call 2025.

In the Slovenian fish processing sector, there were 179 employees in 2023. According to the FTE there were 167 FTE employees in 2023. The level of employment increased between 2013 and 2023, with total employed increasing by 5% whiles the number of FTEs decreased by 7% over the period.

Mean wage per employee in the Slovenian fishing processing industry amounted EUR 34.2 thousand in 2023 and it was 26% higher from average wage in Slovenia in the same year, which was EUR 27.1 thousand. Mean wage in fish processing sector increased by 20% from 2013 to 2023, while an increase of 19% was recorded in last period 2022-2023.

The Slovenian fish processing industry heavily relies on imported raw materials. While the industry sources its raw materials globally, the majority come from the EU (particularly Italy and Spain), as well as from Vietnam, Indonesia, Iceland, and the Faroe Islands.

The main products in Slovenian fish processing industry are various fish cans, Tuna pate, dried cod spread, and products from cephalopods, Atlantic salmon and hake filet. Turnover from the Fish cans and tuna pate represents more than 70% of all turnovers from Slovenian fish processing sector.

In the period 2010-2023, especially from 2010-2013, Slovenian fisheries processing sector underwent major structural changes. Small businesses are brought together in larger companies which have more impact on the market. Some of the larger companies that are dealing with different types of processing activities, separated fish processing from other activities formed a new smaller company which are exclusively engaged in the processing of fish and other marine organisms. Consequently, the share of other costs (packing costs, insurance costs etc.) in total costs has increased significantly in the period 2013-2023 (+44%). The structural changes made in Slovenian fish processing sector had impact also in Slovenian employment trends in period 2013-2023.

Most of the Slovenian fish processing companies were located on the Slovenian coast before structural changes were made in the period 2010-2013. Now we can notice even distribution of fish processing companies throughout the country.

7.23.2 Economic performance

The total amount of income generated by the Slovenian fish processing industry, in 2023, was EUR 283.7 million. This consists of EUR 43 million in turnover and EUR 240.8 million in other income.

Slovenia has just a few processing companies that are entirely committed to fishery products. Most companies do have different types of processing activities, of which fish may be one, but not necessarily the most important one. That is the reason for large share of other incomes in total income. Other income of companies with less than 50% activities in fish processing (8 companies) amounted EUR 237.3 million in 2023 which is 98% of all other income in 2023. Most of this share, EUR 211.7 million or 88% of all other income, contributed just one company which is, on the other hand, one of the largest fish processing companies and thus of great important for Slovenian fish processing industry.

In the period 2008 – 2023, Slovenian fisheries processing sector underwent major structural changes. Small businesses are brought together in larger companies which have more impact on the market. Some of the larger companies that are dealing with different types of processing activities separated fish processing from other activities formed new smaller companies which are exclusively engaged in the processing of fish and other marine organisms. There was also a general tendency to reduce primary processing, so some enterprises also switched to resale.

Between 2022 and 2023, the turnover has increased by 1%, while the profit decreased by 4% in the same period. GVA and OCF have increased by 22% and 29% in the same period. We recorded also increasing in EBIT by 44% in the period from 2022 to 2023.

The increased value of performance indicators is mainly due increased value of other income which increased by 128% in the period 2022-2023.

Table 7.58 Economic performance indicators, Slovenia, 2013-2023

Variable	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Δ (2022-23)
Income (million €)												
Turnover	30.0	24.4	25.7	30.9	32.9	33.6	33.1	31.2	41.7	42.6	43.0	1%
Other income	216.7	211.3	222.3	178.0	187.2	177.2	181.0	182.0	192.9	219.2	240.8	10%
Operating subsidies			0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0%
Total Income	246.7	235.7	248.3	30.9	32.9	33.6	33.1	31.2	41.7	42.6	43.0	1%
Expenditure (million €)												
Purchase of fish and other raw material for production	8.3	7.7	8.8	11.0	10.9	10.4	10.5	9.6	11.3	12.4	9.8	-21%
Wages and salaries of staff	7.2	5.6	5.2	3.0	3.3	3.3	3.6	3.1	3.1	4.9	5.7	16%
Imputed value of unpaid labour	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0%
Energy costs	1.5	1.0	1.2	0.3	0.5	0.8	0.6	0.3	0.8	1.7	1.6	-8%
Other operational costs	14.5	11.1	13.1	14.8	21.1	15.9	15.2	15.7	25.4	21.2	24.2	14%
Total production costs	31.5	25.5	28.4	29.0	35.7	30.3	29.9	28.7	40.6	40.2	41.2	3%
Capital Costs (million €)												
Depreciation of capital	1.1	0.9	1.0	1.3	1.2	0.7	1.1	1.0	1.0	1.4	1.4	3%
Financial costs, net	0.6	0.3	0.2	-0.0	-0.1	-0.4	-0.6	-0.7	-0.7	-0.9	0.4	-145%
Capital Value (million €)												
Total value of assets	32.1	22.2	25.7	34.3	37.9	34.5	34.3	31.5	37.4	43.3	69.6	61%
Net Investments	0.3	0.5	4.1	1.0	0.6	5.7	0.5	3.5	3.0	0.4	4.2	1066%
Subsidies on investments				0.3			0.1	0.1	0.8	1.1	1.0	-14%
Debt	20.2	11.1	11.8	15.0	17.5	13.9	12.7	10.3	14.4	18.6	15.9	-15%
Economic performance (million €)												
Gross Value Added	222.5	215.9	224.8	182.8	187.7	183.8	187.8	187.6	197.0	226.5	248.2	10%
Operating Cash Flow	215.2	210.2	220.0	179.8	184.5	180.5	184.3	184.5	194.0	221.6	242.5	9%
Earning before interest and tax	214.2	209.4	219.0	178.5	183.3	179.8	183.2	183.6	193.0	220.3	241.1	9%
Net Profit	213.5	209.1	218.8	178.5	183.4	180.2	183.8	184.3	193.7	221.1	240.7	9%
Productivity and performance Indicators												
Labour productivity (thousand €)	684.9	1025.2	1077.6	1636.4	1439.0	1573.3	1695.9	2212.4	2168.9	1324.4	1482.7	12%
Capital productivity (%)	692.2	971.4	875.8	533.6	495.0	532.1	547.0	595.8	527.2	523.0	356.9	-32
GVA margin (%)	90.2	91.6	90.7	87.5	85.3	87.2	87.7	88.0	84.0	86.5	87.5	1
EBIT margin (%)	86.8	88.8	88.2	85.5	83.3	85.3	85.5	86.1	82.3	84.1	85.0	1
Net profit margin (%)	86.5	88.7	88.1	85.5	83.3	85.5	85.8	86.4	82.6	84.5	84.8	0
Return on Investment (%)	666.2	942.0	853.3	521.2	483.3	520.5	533.4	583.0	516.3	508.5	346.6	-32
Financial position (%)	37.2	50.2	54.0	56.3	53.8	59.7	63.1	67.2	61.5	57.0	77.2	35

Source: EWG elaboration from Member States submissions to the Fish Processing data call 2025.

Note: The total value of other income is taken into account in the total income.

Variable	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Δ (2022-23)
Income (million €)												
Turnover	30.0	24.4	25.7	30.9	32.9	33.6	33.1	31.2	41.7	42.6	43.0	1%
Other income	2.0	1.5	3.1	3.3	3.4	1.1	1.4	0.9	2.5	1.5	3.4	128%
Operating subsidies			0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0%
Total Income	32.0	25.9	28.8	34.2	36.3	34.7	34.5	32.1	44.2	44.1	46.4	5%
Expenditure (million €)												
Purchase of fish and other raw material for production	8.3	7.7	8.8	11.0	10.9	10.4	10.5	9.6	11.3	12.4	9.8	-21%
Wages and salaries of staff	7.2	5.6	5.2	3.0	3.3	3.3	3.6	3.1	3.1	4.9	5.7	16%
Imputed value of unpaid labour	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0%
Energy costs	1.5	1.0	1.2	0.3	0.5	0.8	0.6	0.3	0.8	1.7	1.6	-8%
Other operational costs	14.5	11.1	13.1	14.8	21.1	15.9	15.2	15.7	25.4	21.2	24.2	14%
Total production costs	31.5	25.5	28.4	29.0	35.7	30.3	29.9	28.7	40.6	40.2	41.2	3%
Capital Costs (million €)												
Depreciation of capital	1.1	0.9	1.0	1.3	1.2	0.7	1.1	1.0	1.0	1.4	1.4	3%
Financial costs, net	0.6	0.3	0.2	-0.0	-0.1	-0.4	-0.6	-0.7	-0.7	-0.9	0.4	-145%
Capital Value (million €)												
Total value of assets	32.1	22.2	25.7	34.3	37.9	34.5	34.3	31.5	37.4	43.3	69.6	61%
Net Investments	0.3	0.5	4.1	1.0	0.6	5.7	0.5	3.5	3.0	0.4	4.2	1066%
Subsidies on investments				0.3			0.1	0.1	0.8	1.1	1.0	-14%
Debt	20.2	11.1	11.8	15.0	17.5	13.9	12.7	10.3	14.4	18.6	15.9	-15%
Economic performance (million €)												
Gross Value Added	7.8	6.1	5.6	8.1	3.9	7.6	8.2	6.5	6.7	8.9	10.8	22%
Operating Cash Flow	0.5	0.4	0.8	5.2	0.6	4.3	4.6	3.4	3.6	4.0	5.1	29%
Earning before interest and tax	-0.6	-0.4	-0.2	3.9	-0.6	3.6	3.5	2.5	2.6	2.6	3.7	44%
Net Profit	-1.2	-0.7	-0.4	3.9	-0.5	4.0	4.1	3.2	3.3	3.5	3.3	-4%
Productivity and performance Indicators												
Labour productivity (thousand €)	23.9	29.0	26.9	72.8	29.6	65.4	73.6	76.6	73.4	51.8	64.8	25%
Capital productivity (%)	24.2	27.5	21.8	23.7	10.2	22.1	23.7	20.6	17.8	20.5	15.6	-24
GVA margin (%)	24.3	23.6	19.5	23.8	10.6	22.0	23.7	20.2	15.1	20.1	23.4	16
EBIT margin (%)	-1.9	-1.7	-0.6	11.4	-1.6	10.5	10.1	7.7	5.9	5.9	8.0	37
Net profit margin (%)	-3.8	-2.7	-1.4	11.4	-1.2	11.7	11.9	10.0	7.5	7.8	7.2	-8
Return on Investment (%)	-1.9	-2.0	-0.7	11.4	-1.5	10.5	10.2	7.8	6.9	6.0	5.3	-11
Financial position (%)	37.2	50.2	54.0	56.3	53.8	59.7	63.1	67.2	61.5	57.0	77.2	35

Source: EWG elaboration from Member States submissions to the Fish Processing data call 2025.

Note: In the table above just data regarding Other Income from companies which fish processing is main activity, are presented. For the calculation of economic performance indicators (GVA, OCF, labour productivity etc.) only other income from companies which fish processing is the main activity was used.

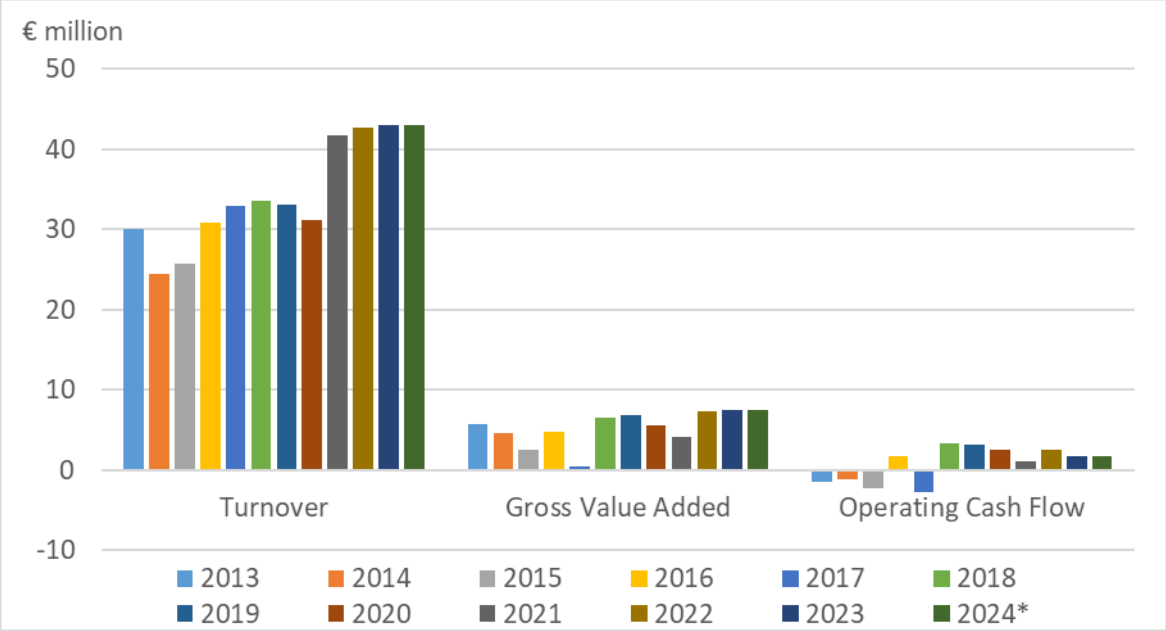
Total operating costs increased by 3% in the period 2022-2023 and amounted EUR 41.2 million in 2023. Other operational costs are the most important cost item covers 59% of the total operating cost (+44% from 2013-2023). The cost of raw materials (fish) is the second most important input in the processing industry and covers 24% of the total running cost. Raw material costs decrease by 3% from 2013 to 2023 (-21% between 2022 and 2023). Two main species used in Slovenian fish processing sector are mackerel and tuna. Wages and salaries of staff cover 14% and energy costs 3% of total operating costs in 2023. Wages and salary cost increased in the period 2022-2023 for 16%, while energy cost recorded a decrease of 8% in the same period.

The operational costs in the fish processing sector can be impacted by various factors. Transportation costs, influenced by fuel prices and transportation expenses, play a significant role as the sector relies on the movement of raw materials and finished products. Investments in technology and equipment can enhance efficiency and product quality, but these upgrades often come with upfront costs that increase operational expenses. Global events, such as the COVID-19 pandemic, have highlighted the vulnerability of supply chains, leading to higher operational costs due to delays and increased logistics expenses. Changes in packaging requirements towards more sustainable options can also contribute to increased packaging costs. Expanding into new markets and distribution networks can drive up operational expenses as companies invest in marketing and distribution efforts. Additionally, the pursuit of innovation in product development and quality improvement through research and development initiatives can further add to operational costs in the fish processing sector.

In 2023, the gross value added (GVA) per employee in the sector amounted to EUR 60.6 thousand, exceeding both the national average GVA per employee (EUR 57.5 thousand) and the average recorded in the overall Slovenian agricultural sector (EUR 31.3 thousand).

The Slovenian fish processing industry had an estimated value of assets of EUR 69.6 million and a return on investment of +5.3% (decrease of 11% between 2022 and 2023).

Figure 7.37 Turnover, GVA and Operating cash flow evolution, Slovenia, 2013-2024



Source: MS data submissions under the 2023 Fish processing data call and elaboration by the EWG.
**Nowcast not possible, 2024 assumed to be equal to 2023*

Note: In the figure above just data regarding Other Income from companies which fish processing is main activity, are presented. For the calculation of economic performance indicators (GVA, OCF, labour productivity etc.) only other income from companies which fish processing is the main activity was used.

7.23.3 Breakdown by company size

In 2023, there were 16 companies in the Slovenian fish processing sector. Among them were 13 companies with less than 10 employees and three companies with 11-49 employees. In Slovenia, there is no middle or large fish processing company with more than 50 employees.

- **Sector less or equal 10 employees**

The total amount of income generated by this sector, in 2023, was EUR 9.4 million. This consists of EUR 9 million in turnover and EUR 0.4 million in other income. Total income decreases by 16% over the period 2022-2023.

The value of Total production costs decreased by 20% from 2022 to 2023 and amounted EUR 9 million in 2023.

Table 7.59 Economic performance by size, Slovenia, 2013-2023

Variable	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Δ (2022-23)
less than or equal to 10 employees												
Total Income	56.2	54.0	49.7	3.5	16.2	4.5	3.7	2.2	13.1	11.1	9.0	-19%
Total production costs	2.5	1.5	1.9	3.4	18.2	4.3	3.5	2.4	13.1	11.3	9.0	-20%
Gross Value Added	54.4	52.8	48.1	19.1	21.0	21.5	22.7	22.0	22.3	23.5	27.5	17%
Operating Cash Flow	53.7	52.5	47.9	18.4	19.7	20.6	21.8	21.4	21.5	22.4	26.1	16%
Earning before interest and tax	53.6	52.4	47.8	18.2	19.0	20.3	21.6	21.2	21.3	22.1	25.7	16%
Net Profit	53.6	52.4	47.7	18.1	19.0	20.3	21.6	21.2	21.3	22.0	25.6	16%
between 11 and 49 employees												
Total Income	3.3	4.6	4.8	27.4	16.7	29.1	29.5	29.1	28.6	31.5	34.0	8%
Total production costs	3.0	4.3	4.3	25.7	17.5	26.0	26.3	26.3	27.5	28.8	32.2	12%
Gross Value Added	0.8	1.2	1.1	163.7	166.7	162.3	165.2	165.6	174.8	203.1	220.8	9%
Operating Cash Flow	0.3	0.3	0.4	161.4	164.8	159.9	162.5	163.1	172.5	199.2	216.4	9%
Earning before interest and tax	0.2	0.1	0.3	160.3	164.3	159.4	161.6	162.3	171.7	198.1	215.3	9%
Net Profit	0.2	0.1	0.3	160.4	164.4	159.9	162.2	163.1	172.4	199.1	215.1	8%
between 50 and 249 employees												
Total Income	187.2	177.1	193.8									
Total production costs	26.0	19.7	22.2									
Gross Value Added	167.3	161.9	175.6									
Operating Cash Flow	161.2	157.5	171.7									
Earning before interest and tax	160.4	156.8	170.9									
Net Profit	159.8	156.6	170.8									

Note: The total value of other income is taken into account in the total income.

Source: EWG elaboration from Member States submissions to the Fish Processing data call 2025.

Variable	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Δ (2022-23)
less than or equal to 10 employees												
Total Income	2.5	1.6	2.3	3.8	19.2	4.6	3.8	2.4	13.8	11.2	9.4	-16%
Total production costs	2.5	1.5	1.9	3.4	18.2	4.3	3.5	2.4	13.1	11.3	9.0	-20%
Gross Value Added	0.7	0.4	0.7	1.1	2.4	1.2	1.1	0.7	1.4	0.9	1.8	90%
Operating Cash Flow	0.0	0.0	0.5	0.4	1.0	0.3	0.2	0.1	0.7	-0.1	0.4	451%
Earning before interest and tax	-0.1	-0.0	0.4	0.2	0.4	0.1	0.1	-0.1	0.4	-0.4	0.1	119%
Net Profit	-0.1	-0.0	0.3	0.2	0.4	0.0	0.0	-0.1	0.4	-0.5	-0.1	80%
between 11 and 49 employees												
Total Income	3.3	4.6	4.8	30.4	17.1	30.0	30.7	29.7	30.4	32.9	36.9	12%
Total production costs	3.0	4.3	4.3	25.7	17.5	26.0	26.3	26.3	27.5	28.8	32.2	12%
Gross Value Added	0.8	1.2	1.1	7.0	1.5	6.4	7.0	5.8	5.2	7.9	9.1	14%
Operating Cash Flow	0.3	0.3	0.4	4.8	-0.4	4.0	4.4	3.4	2.9	4.1	4.7	16%
Earning before interest and tax	0.2	0.1	0.3	3.7	-1.0	3.6	3.4	2.6	2.1	3.0	3.6	21%
Net Profit	0.2	0.1	0.3	3.7	-0.9	4.0	4.1	3.3	2.9	4.0	3.4	-14%
between 50 and 249 employees												
Total Income	187.2	177.1	193.8									
Total production costs	26.0	19.7	22.2									
Gross Value Added	167.3	161.9	175.6									
Operating Cash Flow	161.2	157.5	171.7									
Earning before interest and tax	160.4	156.8	170.9									
Net Profit	159.8	156.6	170.8									

Source: EWG elaboration from Member States submissions to the Fish Processing data call 2025.

Note: In the table above just data regarding Other Income from companies which fish processing is main activity, are presented. For the calculation of economic performance indicators (GVA, OCF, labour productivity etc.) only other income from companies which fish processing is the main activity was used.

The results for enterprises with 10 or fewer employees show a significant overall improvement in 2023 compared to 2022. Gross Value Added almost doubled (+90%), indicating stronger productivity and value creation. Operating Cash Flow improved markedly, rising from a negative value to EUR 0.4 million (+451%), suggesting a substantial recovery in liquidity and operational efficiency. Earnings before interest and tax (EBIT) also turned positive, increasing by 119%, which points to improved profitability and better cost management. Although Net Profit remained negative, it improved by 80%, showing that losses were significantly reduced. Overall, these results reflect a notable rebound in financial performance and operational stability among smaller enterprises in 2023.

The main products in the present sector are various fish cans, dried cod spread and products from cephalopods.

- **Sector 11-49 employees**

The total amount of income generated by this sector, in 2023, was EUR 36.9 million. This consists of EUR 34 million in turnover and EUR 2.9 million in other income. Total income decreases by 8% over the period 2022-2023.

The value of Total production costs decreases by 10% from 2022 to 2023 and amounted EUR 32.2 million in 2023.

The results for enterprises with between 11 and 49 employees indicate moderate growth in most key financial indicators in 2023 compared to 2022. Gross Value Added increased by 14%, while Operating Cash Flow rose by 16%, suggesting a stable improvement in operational performance and efficiency. Earnings before interest and tax (EBIT) grew by 21%, reflecting stronger profitability from core activities. However, Net Profit declined by 14%, which may indicate higher costs, depreciation, or other financial burdens that offset the operational gains. Overall, these enterprises demonstrated solid operational growth, though profitability pressures slightly reduced the net result.

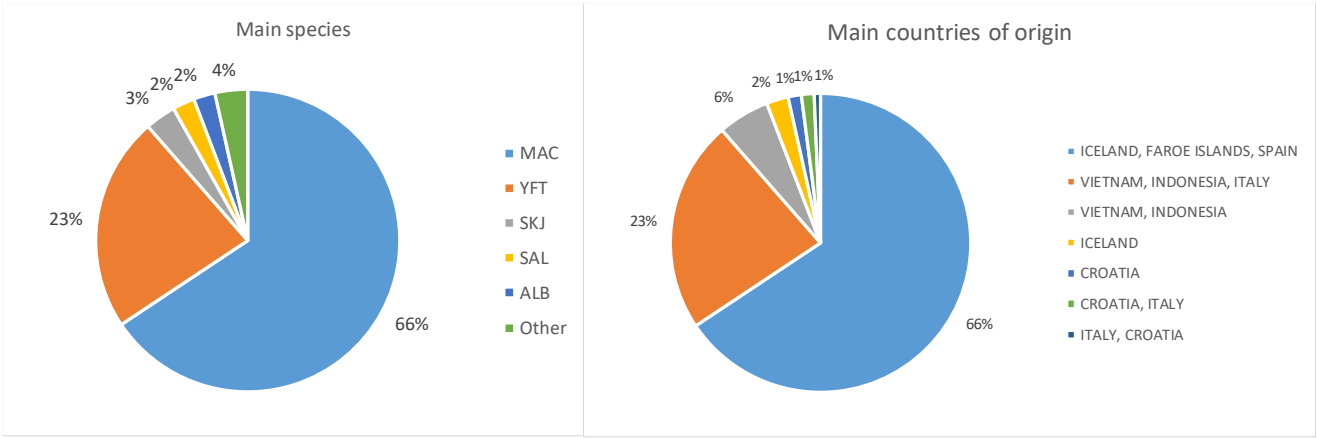
The main products in the present sector are tuna pate, various fish cans and products from Atlantic salmon and trout.

7.23.4 Raw material

In 2022, imports of raw materials were dominated by mackerel (MAC), representing about two thirds of total import weight of 2 184 tonnes, followed by yellowfin tuna (YFT) with around one quarter. Other species such as skipjack tuna (SKJ), albacore (ALB), and salmon (SAL) made up much smaller shares. The main supplier countries were Iceland, the Faroe Islands, and Spain, providing most of the mackerel, while Vietnam and India were key sources of tuna.

In 2023, the same two species remained dominant, but mackerel imports decreased, while yellowfin tuna volumes declined more moderately, slightly reducing the overall concentration in just two species. Salmon imports increased notably, suggesting a modest diversification in raw material sources. Regarding origins, Iceland, the Faroe Islands, and Spain continued to lead for pelagic species, but among Asian suppliers, Indonesia replaced India as a more important source of tuna.

Figure 7.38 Distribution of raw material by species (left) and country of origin (right) in 2023



Source: EWG elaboration from Member States submissions to the Fish Processing data call 2025.

7.23.5 Trends, drivers and outlook (including Covid-19 impact)

The Slovenian fish processing industry is shaped by several key drivers. Over the past decade, the sector has undergone major structural changes, with smaller enterprises merging into larger ones and some companies creating separate entities dedicated exclusively to fish processing. This consolidation has improved efficiency and market presence but also increased operational costs, especially in packaging and logistics.

The industry depends heavily on imported raw materials, mainly from the EU, Southeast Asia, and the North Atlantic, as domestic supply is limited. This reliance makes it sensitive to global supply chain disruptions and price fluctuations. At the same time, companies have diversified their activities, with many generating substantial income from non-fish processing operations.

Production focuses primarily on canned fish, tuna pate, dried cod spreads, and products made from cephalopods, salmon, and hake, with canned products dominating the market. Employment patterns reflect growing part-time and seasonal work, while wages in the sector remain above the national average, highlighting the need for skilled labour.

Overall, the main trends are consolidation, diversification, import dependence, and increasing operational costs. The sector continues to modernize and expand product variety but remains vulnerable to external market conditions and raw material supply risks.

The Slovenian seafood trade balance is relatively stable over the years, and it presents a negative balance. Slovenia is a net importer of fish and fish products. In 2023, imports were approximately four times larger than export and amounted to 14 540 tonnes (EUR 102 million) of fish and other fish product (source; https://pxweb.stat.si/SiStatData/pxweb/sl/Data/-/2490101S.px). Exports amounted to 4 327 tonnes (EUR 27 million) in the same year. The majority of the imported fish and fish products come mainly from the EU. The largest Slovenian seafood import partners are Italy, Spain and Croatia. Concerning exports, the largest partners are Croatia, Austria and Germany. The most important imports are fresh and frozen fish and fish products for consumption, as well as fish and other marine organisms intended for the fish processing industry. The main Slovenian export fish products are various fish cans, Tuna pate and Dried cod spread.

In general, the Slovenian processing sector relies on a steady inflow of raw materials. For industries that are relying mainly on EU stocks a change in the availabilities of these materials can heavily affect the industry income, production and employment.

Slovenian market for marine products is fragmented and disorganized. A large number of producers and dealers are unorganized and acting individually. Most of the products are sold directly to known customers.

The increasing awareness of the health benefits associated with consuming fish products has been also one of the drivers for the growth of the fish processing sector in Slovenia. So in the future, we can expect further development of the fisheries processing industry in Slovenia and therefore higher revenues from this sector. Because of the increased number of enterprises in the future and resulting increased competition we can expect a fall in prices of fish products and thus lower profits. High growth in energy costs, especially in 2021 and 2022, will have an additional negative impact on the business results of companies engaged in the fishing processing industry in Slovenia.

Covid-19 impact

COVID 19 did not have a noticeable negative impact on the fishing processing industry in Slovenia. Revenues of the entire sector remain relatively stable in 2021 compared to 2019. The initial contraction and large losses in the tourism sector (closure of restaurants, hotels, etc.) were offset by fish-processing companies selling to households, which greatly increased demand during this time. Sales in physical stores have largely shifted to online sales, which increase significantly, especially during first waves of pandemic.

There were a lot of problems, especially with supply chains. Problems include waiting times for trucks at border crossings and the fact that drivers are unable to enter countries because of the fear of not having to exit. Given that the agri-food supply chain is complex and multinational, any travel barriers disrupt business. To mitigate disruption, companies adjust their supply chains according to their specific circumstances.

Some problems were also caused by a number of infections in companies and related quarantines. Due to the lack of employees, some companies even had to stop or limit production for a while.

To navigate the challenges posed by the pandemic, businesses in the Slovenian fish processing sector have had to adopt flexible strategies, enhance safety measures, diversify their product portfolios, and explore alternative distribution channels to ensure business continuity and resilience in the face of ongoing uncertainties.

7.23.6 Data coverage and quality

Slovenia reported data also from companies with fish processing not as main activity to avoid confidentiality issues and because these companies are of great importance for Slovenian processing industry. In this case there is a high proportion of other income.

Because of the large differences between turnover and total income, mainly because of high value of other income, only other income from companies which fish processing is the main activity and turnover was used in calculating the economic performance indicators (GVA, OCF, labour productivity, etc.).

Target populations in Slovenia for collecting economic data are all companies who have, according to the data from Veterinary Administration of the Republic of Slovenia (VURS), a license for the processing of maritime organisms and the processing involved in practice. The number of such enterprises in Slovenia in 2023 was 16. In June 2024, the questionnaires for 2023 were sent to all enterprises.

In cases where a questionnaire, as the only source, was used the response rate was 100%. In cases where the data from annual accounts of business enterprises was used the response rate was also 100%, because we have economic reports for all investigated companies.

Slovenia has a few processing companies that are entirely committed to fishery products. Most companies do have different types of processing activities, of which fish may be one, but not necessarily the most important one. This was taken into account when putting together the questionnaires and in the subsequent analysis of the data provided. Therefore, all the provided data refers just to fish processing part of all companies' activities.

7.24 Spain

7.24.1 Overview

The Spanish agri-food industry generated a turnover of EUR 178 923 million and employed 493 123 people in 2023 (25% and 2.85% more compared to 2021, respectively) (MAPAMA, 2025a)[40]. The Spanish food industry occupies fourth place at EU level in terms of turnover (11.7%), behind Germany (18.5%), France (17.6%), and Italy (12.5%). In Spain, the food and beverage industry is the leading manufacturing branch within the industrial sector, accounting for 25.7% of the manufacturing sector's turnover, 23.3% of employment, 17.9% of enterprises, and 20.4% of its added value. The 96.1% of the enterprises in the agri-food sector have less than 50 employees (26 806), and 77.3% have fewer than 10 employees (21,576). The most important production is the meat industry, which accounts for almost 23.1% of total turnover, followed by the manufacture of drinks (13.6%), the manufacture of other food products (11.5%), and animal feed products (11.2%) (MAPAMA, 2025a).

The seafood processing industry is not one of the main activities in an industry as important as the Spanish agri-food industry, within which it contributes with 5.1% and 4.45% of employment and turnover in 2023, respectively (MAPAMA, 2025a). However, enterprises in the Spanish seafood processing industry employed 25 355 people, and generated incomes of almost EUR 8 000 million in 2023 (MAPAMA, 2025a). This activity implies that the Spanish seafood processing industry is the most important within the EU sector. According to the latest available data for 2023, Spain is home to 19% of the EU seafood processing enterprises, which generate 23% of employment, and 24% of turnover.

In recent years the industry has experienced a positive evolution, not only in the number of companies, but also in terms of employment, turnover and added value. This demonstrates the competitiveness and resilience of the Spanish industry, which has managed to continue growing in the medium term despite Covid-19. During 2022 and 2023, the industry has maintained relative stability in terms of its productive structure, although employment, after an upward trend during 2021 and 2022, underwent a downward adjustment in 2023. Economic results show an upward trend in turnover, subsidies, and total income. Despite the context of rising prices and operating costs, nearly all cost items decreased in 2023. This reduction, together with the decline in employment, may indicate a lower level of productive activity within the industry, which is consistent with the negative trend observed in the domestic consumption of these products in recent years in Spain. Furthermore, rising costs and challenges in accessing raw materials may be impacting activity; however, overall figures indicate that the industry has the ability to pass on price increases throughout the value chain. If this is the case, the increase in turnover would be driven more by price rises (inflation) than by an increase in production.

The Spanish seafood processing industry includes the processing and preservation of fish and fish-based products of different types, such as: chilled fish; frozen fish; dried, salted, brined, and smoked fish; processed or canned fish; frozen crustaceans, molluscs and other frozen aquatic invertebrates; canned or processed crustaceans; canned or processed molluscs and other aquatic invertebrates; fish flour, paste and pellets unfit for human consumption; waste of fish, crustaceans, molluscs and other aquatic invertebrates; and processing, boiling and other

[40] MAPAMA (2025a). Informe Annual de la Industria Alimentaria Española. Periodo 2024-2025. Ministerio de Agricultura, Pesca y Alimentación. Gobierno de España. Available at: https://www.mapa.gob.es/es/alimentacion/temas/industria-agroalimentaria/cifras-industria

services for the production of fish articles. Production in 2023 achieved 999 529 tonnes valued EUR 7 034 million (MAPAMA, 2025b)[41]. The most important processed product items in value are those concerning prepared or canned fish (47%); frozen fish (11%); frozen molluscs and other aquatic invertebrates (9%); and canned or prepared molluscs and other aquatic invertebrates (8%) (MAPAMA, 2025b). Within the industry, the main processed product is canned tuna, which generates 34% of the total value, and its weight in the industry has continued to increase in recent years. Regarding recent developments, between 2021 and 2023 seafood processing industry volume of production decreased by 11%, while the value increased by 19% (MAPAMA, 2025b). This evolution is consistent with the industry's economic indicators (incomes and cost), which also suggest a decline in activity but a rise in prices. Specifically, production volumes fell across the four main categories mentioned, and the value of output increased only in the case of canned tuna, where the average value per kilogram produced rose from EUR 5.30/kg to EUR 8.57/kg over the period in question. Frozen products (fish, molluscs and crustaceans) production falls in both volume and value of production.

Spanish exports of processed seafood products have followed a positive trend in recent years. In 2023, exports increased by 10.8% in value compared with the previous year, while imports decreased by 3.2%. Between 2019 and 2023, export activity rose by 40.1% in value and 9.6% in volume. Although export volumes declined slightly in 2021 and 2022, they returned to growth in 2023. In the case of imports, while their value increased by 20.2% since 2019, imported volumes fell by almost 3%, a trend that continued in 2023. The trade balance in 2023 was positive. Regarding trading partners, in 2023 Italy was the main purchaser (32%), while Ecuador was the leading supplier (21.9%). In the ranking of the world's main processed seafood products exporters, Spain rose two positions compared with 2022, reaching 4th place (share of 4.6%), behind China (27.3%), Thailand (10.5%), and Vietnam (7.2%). In terms of importers, the United States ranked first (18.6%), followed by Japan (10.6%) and Italy (6%). Spain occupied 6th position, with a share of 4.9% (MAPAMA, 2024)[42].

Another relevant aspect when understanding the seafood processing industry in Spain is its importance as a socio-economic activity, particularly in coastal areas. It is a key economic activity, which acts as a driver for the entire seafood production, both for fishing and aquaculture, and it is a step in the value chain that creates and sustain enterprises, industrial activity, employment and added value to seafood products. Traditionally, enterprises have been established in areas close to fishing activities to ensure proximity to their raw materials. Today, despite the decline in fishing, seafood processing companies continue to generate wealth, even in regions where fishing has lost its former importance. In addition, the processing industry has traditionally played a key role in the social and cultural organization of coastal regions, being a source of employment and incomes, particularly for women. Currently, the seafood processing industry represents a driver for the development of business innovations, the increase in the added value of seafood production and products, the creation of job opportunities for young people, and the setting of population in coastal regions. A recent indicator of the deep-rooted nature and social value of this activity in coastal communities can be found in the increase in the "imputed value of unpaid work" within the cost structure of seafood processing companies in Spain during 2021 and 2022. At that time, the labour market experienced greater instability and

[41] MAPAMA (2025b). Estadísticas pesqueras: Productos de las Industrias de procesado de pescado. Ministerio de Agricultura, Pesca y Alimentación. Gobierno de España. Disponible en: https://www.mapa.gob.es/es/estadistica/temas/estadisticas-pesqueras/industrias-procesado-pescado/productos-procesado-pescado

[42] MAPAMA (2024). Informe de producto: Preparaciones y conservas de productos de la pesca y la acuicultura - Año 2023. Comercio Exterior. Informes de Productos Pesqueros. Disponible en: https://www.mapa.gob.es/es/ministerio/servicios/analisis-y-prospectiva/comercio-exterior/productos_pesqueros

uncertainty due to COVID-19, and this cost quadrupled, before decreasing again by half in 2023. This development may be partly explained by the role of an industry largely composed of family-owned, medium-sized, and small enterprises, which served as a refuge and source of employment security for individuals whose job stability was affected by the pandemic.

The Spanish seafood processing industry comprised 604 enterprises in 2023, with a turnover of EUR 7.97 billion, 2% higher compared to 2022. This represents the highest figure in the historical series considered and a 72% growth relative to a decade earlier. The distribution by size segments (number of employees as a proxy variable of size) shows a fragmented industry composed mainly by small firms. The 83% of the industry are companies below 50 workers, and companies under 10 employees represent 45%. Since 2013, the number of micro-companies (less than 10 employees) has decreased by 22%, while the rest of the segments, small (11-49 employees), medium (50-249) and large companies (250 or more employees) increased by 12%, 14% and 100%, respectively.

Although small companies are still predominant, the traditional industry based on small firms has evolved into a more diverse industry. Increasingly, a greater part of the activity is concentrated in medium and large companies, more technological, more vertically integrated (fisheries and aquaculture production activities), and internationalized, both in import and export activities. As a result, main companies accumulate a large part of the activity. In 2023, the 18 largest companies generated more than EUR 4.4 billion in turnover, 55% of the industry total.

Table 7.60 Overview, Spain, 2013-2023

Variable	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Δ (2022-23)
Structure (number)												
Total enterprises	640	542	598	600	606	648	584	614	604	604	604	0%
≤ 10 employees	356	258	320	310	301	352	267	294	277	277	277	0%
11-49 employees	203	201	196	202	219	206	221	222	227	227	227	0%
50-249 employees	72	74	71	76	75	79	82	82	82	82	82	0%
≥ 250 employees	9	9	11	12	11	11	14	16	18	18	18	0%
Employment (number)												
Total employees	18,448	18,340	19,033	20,497	20,367	21,984	23,781	24,325	26,042	26,324	25,354	-4%
FTE	17,592	17,564	18,052	19,873	19,826	21,674	23,064	22,405	25,471	25,999	24,283	-7%
Indicators												
Turnover (million €)	4,634	4,605	4,944	5,752	6,050	6,520	6,930	6,871	7,498	7,796	7,968	2%
FTE per enterprise	27.5	32.4	30.2	33.1	32.7	33.4	39.5	36.5	42.2	43.0	40.2	-7%
Average wage (thousand €)	25.6	26.2	25.3	26.4	27.1	29.5	29.9	32.4	31.3	31.7	33.2	5%
Unpaid work (%)	2.8	5.3	1.0	1.5	2.1	3.5	1.6	1.6	5.3	5.8	2.8	-52
Enterprises doing fish processing not as main activity												
Number of entreprises												
Turnover attributed to fish processing (million €)												

Source: EWG elaboration from Member States submissions to the Fish Processing data call 2025.

Despite this transformation, within the Spanish industry, two business models still coexist depending on the company size. Small companies committed to differentiation through the quality of raw materials and processing, more dependent on domestic fisheries and aquaculture production. These companies base their competitive advantage in the use of high quality national (sometimes imported) raw materials. There are also examples of enterprises producing a differentiated product based on the quality and degree of processing, maintaining stable prices if front of the volatility of other national competitors. Medium and large companies are committed to diversified productions, in terms of species, qualities and markets. Large companies can have their own fleet, particularly the freezer industry. Moreover, they started to be involved in aquaculture activities and have fishery subsidiaries in those countries with the main fishing grounds for their targeted species. In addition, another positive evolution of the

industry is that attributes such as internationalization, innovation and the use of technology are no longer exclusive to large companies. Nowadays these factors are increasingly present in medium-sized and even in small companies. Collaboration and cooperation among companies for the development of innovations have enabled small and medium-sized enterprises to access new resources and technologies, making them more efficient and competitive. The RDI center (National Center for Knowledge and Technology for the Marine, Aquaculture, and Food Industry) established within the framework of the National Association of seafood processor (ANFACO), is the clearest example of this reality. Within these SME´s, there is a growing group of companies that have become international, that is, they export part of their production, looking for markets in which their products get a better price. Even, there are examples of medium size companies that are multinational, with production investments in third countries.

If we consider the business structure based on the type of processing activity carried out, we can split the industry into two main groups. Firstly, freezer companies, where there is a small group of large companies vertically integrated to get access to raw materials through investments in third countries using subsidiaries (fishing fleets, aquaculture facilities and processing plants). In recent years, these companies have diversified their activities towards value added convenience products, ready to cook and ready to eat. These innovations generate greater value added that increases their competitiveness. Also, in this segment, there is a large number of medium-sized companies that produce frozen products. Most of these companies are intermediaries or wholesalers not integrated with production activities (fisheries and aquaculture), who purchase the product from large freezers or through imports. Secondly, the canning industry, where there are representatives of two business models. On the one hand, there are large canning companies vertically integrated backwards that have production subsidiaries in third countries. On the other hand, there is a significant number of small-medium canneries differentiated through high quality products and artisanal processing. In addition to these two large segments, there is a segment of small and medium size firms dedicated to the production of salted and smoked fish, producing traditional and high-quality products. Finally, there is an increasing number of companies producing fresh packed seafood with different degrees of processing. In recent years, changes in society and in consumer habits have led to an increase in demand, and therefore in the supply of these packed products, especially in big retailers. This new trend is led by the large integrated and diversified companies in the sector, with the necessary scale to supply and negotiate with large retailers.

Employment continued its upward trend until 2023, rising 37% and 38% over the past decade in terms of total employees and full-time equivalents (FTE), respectively. During 2021 and 2022, periods characterized by heightened productive activity driven by domestic consumption, employment growth was even more pronounced. However, 2023 witnessed a downward adjustment, apparently resulting from a contraction in productive activity.

The companies with less than 50 employees represent 83% of industry structure in 2023. However, this segment only employs 22% and 20% of total workers and FTEs respectively. On the other hand, only 16% of the companies employ more than 50 workers but gather 78% of employment. This distribution indicates an even greater concentration of employment in larger companies. This evolution is consistent with a greater concentration of production in large companies. The Spanish fish processing industry provides, in general, full-time jobs. Despite the increase in the number of employees and full-time work, the industry still suffers a high degree of temporary contracts.

In a context of small businesses, increasing large ones, and rising in employment, the natural consequence is that the number of FTEs per business has increased. Despite the decrease observed in this indicator in 2023 compared to 2022, caused by the decline in employment, the number of FTE per company appears to have stabilized above 40. In the case of the average

salary, it seems that the positive evolution of the production and the incomes of the industry have also increased salaries since 2015. In 2020 the average salary has exceeded EUR 30 000 for the first time and 2023 represented the highest value recorded in the past decade.

With regard to employment in the fish processing industry in Spain, the overall growth trend is accompanied by a clear feminization of the sector. Women consolidated their majority presence, representing 63% of the workforce compared to 38% of men (CES, 2023)[43]. This evolution confirms the sector's historical feminization, reinforced by the industrial expansion of the canning segment, although still constrained by a marked occupational segregation. Despite the predominance of women in processing roles, their representation in managerial, professional, and technical positions remains limited, which affects their relative status and hampers generational renewal and talent attraction. On the other hand, the distribution of employment within the processing industry is closely related to fishing activity across different coastal areas, reflecting a strong interconnection between fisheries and industry. This linkage is also evident in other industrial activity groups and, increasingly, in service sectors associated with fisheries, where ports function as hubs of clusters with high economic and employment-generating potential. This territorial model underscores the strategic importance of the processing industry in coastal development and in the consolidation of value chains that integrate fishing, processing, and specialized services.

7.24.2 Economic performance

In Spain, in the last decade, the fish processing industry has been immersed in a process of technification, especially for medium and large companies. This strategy has increased production efficiency and improved the global position of the industry in processes such as the adoption of the circular economy and the decarbonisation of production. It has also reinforced already successful strategies such as product differentiation and vertical integration. It is also an industry that is generally internationalized and has been able to adapt to changes in value chains and take advantage of the opportunities offered by globalization.

All these changes and advances have strengthened the competitive position of companies and contributed to a more resilient sector that has improved its performance in the aftermath of the pandemic. The COVID-19 pandemic interrupted the positive trend in the sector's turnover performance, although the effects were moderate and temporary. In 2020, turnover declined slightly from EUR 6 930.5 million in 2019 to EUR 6 870.8 million, representing a decrease of 0.9%. However, 2021 saw a significant recovery, with an increase of 9.1%, reaching EUR 7 498.4 million. This positive trend continued in 2022, with a further 4% growth to EUR 7 796.5 million, and consolidated in 2023 with an additional 2% increase, reaching EUR 7 968.3 million. These figures indicate that the pandemic did not produce a deep or lasting structural impact on the sector.

The main operating cost of the Spanish fish processing industry remains the purchase of raw materials, which amounted to EUR 4 755.8 million in 2021, representing approximately 72.6% of total production costs. In 2022, the share of raw materials within the industry's cost structure increased to 72.9%, and in 2023 it reached 73.62%. The remainder of the operating cost structure has remained stable in recent years, comprising other operational costs (12.7%), wages and salaries (11.6%), and energy (1.7%). In 2023, the total cost of raw material

[43] Consejo Económico y Social de España. (2023). La pesca, la acuicultura y la industria transformadora en España. Retos para su sostenibilidad. Madrid, España.

purchases decreased by 4%, to EUR 4 968.5 million compared to the previous year. This development may be interpreted as a possible stabilization or adjustment in raw material prices following the sharp increase observed in 2021. However, an analysis of trends in other variables, such as production and consumption, seems to indicate a reduction in productive activity, which may be influenced not only by raw material prices but also by production volumes, the composition of processed products, and the regulatory and commercial context of the maritime-fishing sector.

Table 7.61 Economic performance indicators, Spain, 2013-2023

Variable	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Δ (2022-23)
Income (million €)												
Turnover	4633.7	4604.9	4944.4	5751.9	6050.4	6520.0	6930.5	6870.8	7498.4	7796.5	7968.3	2%
Other income	25.4	14.9	13.8	20.7	26.2	40.7	37.8	52.8	54.7	51.6	50.8	-2%
Operating subsidies	27.4	20.8	26.8	22.0	23.5	22.7	23.1	18.9	25.2	24.2	32.4	34%
Total Income	4686.5	4640.7	4984.9	5794.5	6100.1	6583.4	6991.4	6942.5	7578.3	7872.3	8051.4	2%
Expenditure (million €)												
Purchase of fish and other raw material for production	2707.6	2754.1	3449.1	3990.9	4212.4	4222.4	4453.3	4107.0	4755.8	5160.4	4968.5	-4%
Wages and salaries of staff	438.0	435.8	451.6	517.8	527.0	616.8	677.9	713.8	756.0	776.2	784.7	1%
Imputed value of unpaid labour	12.4	24.4	4.5	7.8	11.1	22.4	11.3	11.4	42.2	47.4	22.2	-53%
Payment for external agency workers (optional)												
Energy costs	78.2	76.3	76.4	69.4	73.8	80.7	103.4	78.9	113.1	164.8	115.0	-30%
Other operational costs	506.4	511.3	555.3	620.1	640.2	757.5	844.2	871.9	883.1	924.1	858.0	-7%
Total production costs	3742.6	3801.9	4536.9	5206.0	5464.5	5699.9	6090.1	5782.9	6550.3	7072.9	6748.4	-5%
Capital Costs (million €)												
Depreciation of capital										173.0	185.4	7%
Financial costs, net	74.5	66.3										
Capital Value (million €)												
Total value of assets												
Net Investments	81.4	94.1	76.7	71.9	109.1	170.8	118.9	160.5	187.9	229.3	235.6	3%
Subsidies on investments												
Debt												
Economic performance (million €)												
Gross Value Added	1366.9	1278.1	877.3	1092.1	1150.1	1500.1	1567.4	1865.9	1801.1	1598.8	2077.5	30%
Operating Cash Flow	943.9	838.8	448.0	588.6	635.6	883.5	901.3	1159.6	1028.0	799.4	1303.0	63%
Earning before interest and tax										626.4	1117.6	78%
Net Profit												
Productivity and performance Indicators												
Labour productivity (thousand €)	77.7	72.8	48.6	55.0	58.0	69.2	68.0	83.3	70.7	61.5	85.6	39%
Capital productivity (%)												
GVA margin (%)	29.3	27.7	17.7	18.9	18.9	22.9	22.5	26.9	23.8	20.4	25.9	
EBIT margin (%)										8.0	13.9	
Net profit margin (%)												
Return on Investment (%)												
Financial position (%)												

Source: EWG elaboration from Member States submissions to the Fish Processing data call 2025.

The cost of wages and salaries increased by 1% in 2023, but its importance within the industry's cost structure remained stable. The increase in labour costs, despite the decline in employment levels, appears to be explained by a rise in the average wage. Energy costs, which amounted to EUR 113.1 million in 2021, experienced a sharp increase in 2022, reaching EUR 164.8 million, in the context of the international energy crisis. However, in 2023 they decreased significantly to EUR 115.0 million, representing a 30% decline compared to the previous year. This reduction may be linked not only to a possible slowdown in productive activity, but also to energy efficiency measures implemented by companies, as well as a moderation in energy prices. It is noteworthy that, although energy costs account for less than 2% of total costs, they remain one of the most sensitive components to market fluctuations. Finally, other operating costs have followed a mixed trajectory. In 2021, they amounted to EUR 883.1 million, increasing to EUR 924.1 million in 2022, but declining to EUR 858.0 million in 2023, a 7% decrease. Although their share within the overall cost structure has not increased significantly, these costs have grown steadily since 2013, reflecting greater investment in areas such as marketing, logistics, access to international markets, and business management. This trend may be associated with the consolidation of large companies in the sector, which possess greater resources and capabilities to meet the competitive challenges of the global market.

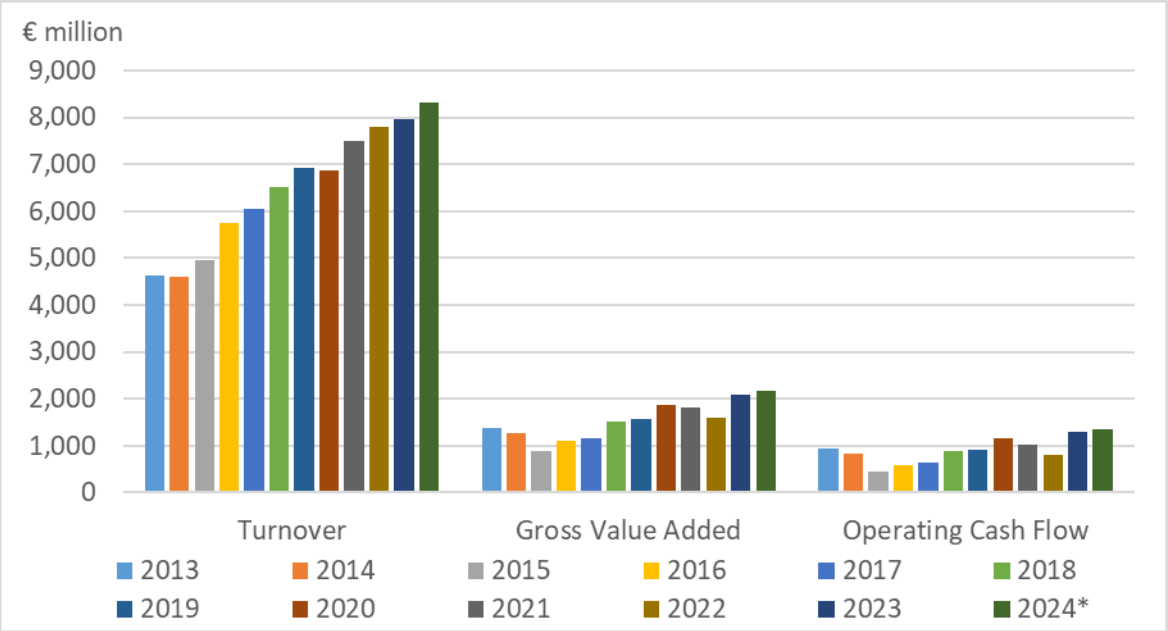
Net investment in the Spanish fish processing industry has shown a positive trend in recent years. Following the rebound observed in 2020 and 2021, with year-on-year increases of 35% and 17% respectively, the trend continued in 2022 and 2023, with growth of 22% and 3%, reaching EUR 235.6 million in the latest year. This sustained growth reflects the sector’s dynamism in terms of modernization, particularly in areas such as R&D&I, the acquisition of specialized machinery, and the attraction of foreign direct investment, which has contributed to the expansion of processing plants across the country.

Economic performance in the Spanish fish processing industry has shown a generally positive trend over the past decade. Gross Value Added (GVA) increased from EUR 1 366.9 million in 2013 to EUR 2 077.5 million in 2023, a growth of 52%. After a decline in 2022 (EUR 1 598.8 million) driven by rising costs—particularly energy—GVA rebounded by 30% in 2023, largely due to variations in energy, other operating, and raw material costs. Considering the reduction in production volumes, this increase likely reflects higher-value products, greater value addition, price adjustments, or a combination thereof.

Operating cash flow mirrored this pattern, reaching EUR 1 028 million in 2021, falling to EUR 799.4 million in 2022, and recovering to EUR 1 303 million in 2023—the highest level of the decade. The stronger growth relative to GVA may be linked to a sharp decline in the imputed value of unpaid labour, suggesting improved operational efficiency and liquidity generation.

Labour productivity has also improved over the decade. Following a decline between 2015 and 2017, productivity rose to EUR 83.3 thousand per worker in 2020, dipped slightly in 2021–2022, and surged to EUR 85.6 thousand per worker in 2023, a 39% increase over the previous year and the highest in the 2013–2023 period, highlighting more efficient use of human capital.

Figure 7.39 Turnover, GVA and Operating cash flow evolution, Spain, 2013-2024



Source: EWG elaboration from Member States submissions to the Fish Processing data call 2025. *2024= nowcasted data

7.24.3 Breakdown by company size

The Spanish fish processing industry is a diverse and fragmented sector, composed primarily of small and medium-sized enterprises alongside a group of large companies that account for the majority of economic activity. There is a clear regional concentration within Spain, with just four regions—Galicia (25.5%), Andalucía (13.2%), Cantabria (12%), and the Comunidad Valenciana (10.7%) dominating the sector (CES, 2023).

Over the 2013–2023 period, production, value added, and employment have increasingly concentrated in larger companies. Although companies with 50 or more employees represent only a minority of all enterprises, they generate more than 85% of the sector's total income and GVA, consolidating their dominant role within the productive structure.

Comparing the evolution of economic performance by company size reveals significant differences in recent years. In 2021, all segments recorded an increase in total revenue. However, this growth was accompanied by an even larger rise in operating costs, negatively affecting economic results. In 2022, this trend persisted, with cost increases surpassing revenue growth, particularly among companies with more than 50 employees, where revenue grew by 8% while costs rose by 12%.

In 2023, there was a clear recovery in economic indicators, especially in the medium and large segments. Companies with ≥250 employees increased their revenue to EUR 4 445.3 million (3.4%), while their operating cash flow rose by 46.8%, reaching EUR 851.8 million. GVA also grew by 25.1%, reaching EUR 1 240 million. Medium-sized companies also showed notable improvement, with GVA increasing by 52.3% and operating cash flow by 138.5%.

In contrast, microenterprises (≤10 employees) faced a critical situation in 2023. Although their revenue remained stable (EUR 139.9 million, +1%), operating cash flow was negative (–EUR 7.2 million) and GVA fell by 57%, reflecting a loss of competitiveness and profitability. This

historically vulnerable segment has been the most affected by recent crises and shows signs of structural weakening. It was the only segment in which production costs increased in 2023, specifically by 15%.

Small companies (11–49 employees), despite a slight decline in revenue (–4% in 2023), managed to improve operational results, with operating cash flow rising by 86% and GVA by 26%. This suggests greater efficiency and adaptability, possibly linked to investments in technology and training

Table 7.62 Economic performance by company size, Spain, 2013-2023

Variable	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Δ (2022-23)
less than or equal to 10 employees												
Total Income	198	111	172	141	135	182	148	126	143	138	140	1%
Total production costs	153	94	156	124	120	171	137	112	129	128	147	15%
Gross Value Added	66	32	28	29	27	27	28	30	31	28	12	-57%
Operating Cash Flow	45	17	15	16	16	11	12	14	14	10	- 7	-169%
Earning before interest and tax										6	- 11	-274%
Net Profit												
between 11 and 49 employees												
Total Income	822	1,017	1,053	965	1,052	955	989	929	1,260	1,076	1,034	-4%
Total production costs	689	863	960	885	984	859	883	782	1,096	1,001	894	-11%
Gross Value Added	242	265	197	185	188	209	223	264	307	215	270	26%
Operating Cash Flow	132	154	93	80	68	95	107	147	165	75	139	86%
Earning before interest and tax										53	116	117%
Net Profit												
between 50 and 249 employees												
Total Income	2,063	1,879	1,918	2,029	2,118	2,063	2,036	2,019	2,116	2,357	2,432	3.2%
Total production costs	1,579	1,473	1,683	1,926	2,020	1,863	1,832	1,777	1,919	2,224	2,114	-5.0%
Gross Value Added	665	601	419	303	296	410	416	459	418	364	555	52.3%
Operating Cash Flow	484	406	234	103	98	200	204	241	197	134	319	138.5%
Earning before interest and tax										85	266	211.6%
Net Profit												
greater than or equal to 250 employees												
Total Income	1,604	1,634	1,843	2,660	2,795	3,384	3,818	3,869	4,059	4,300	4,445	3.4%
Total production costs	1,321	1,372	1,737	2,271	2,341	2,806	3,239	3,112	3,407	3,720	3,593	-3.4%
Gross Value Added	393	380	234	575	640	855	901	1,112	1,045	991	1,240	25.1%
Operating Cash Flow	283	262	106	389	454	577	579	757	652	580	852	46.8%
Earning before interest and tax										481	747	55.2%
Net Profit												

Source: MS data submissions under the 2025 Fish processing data call and elaboration by the EWG.

7.24.4 Trends, drivers and outlook

The disruptions in the global raw materials markets, the logistics crisis, and the decline in domestic consumption has led to a drop in canning production. Faced with these crises, the sector's strategies are, on the one hand, to transfer the increase in raw materials to the final product and, on the other hand, to offer products with greater added value and more differentiation.

Throughout 2024, most industry segments appear to have returned to positive performance in terms of employment, production, and exports.

The concentration of the activity in large companies continues in the freezing and canning industries. The growth in the figures of production and employment, is led by medium and large companies. Along these large companies, vertical integration and internationalization have become a key part of their business strategy, as a solution to access and control the supply of raw material. This practice was more extended between freezer industries, owning their own fleets, but today it is increasingly common in canning industries, accessing to facilities and processing plants near the raw material, mainly in third countries. This is the case of mussel and anchovy canning companies, with investments in Chile and Peru.

Recently there were also examples of medium size companies accessing international markets not only for exporting their products, but also for the sourcing of raw materials, even those that mainly base the business model in the quality of the domestic seafood production. This is a consequence of the increasing relevance of diversification as a business strategy, both in the supply of raw materials and in the range of products marketed. The product diversification portfolio has two main objectives, the reduction of risk generated by the dependency of production on one or few species, and on the other, to meet the new trends in consumption, which compared to traditional processing (frozen, salted, canned), demand products with a higher degree of processing, preparation, and a greater variety in terms of elaborations (cuts, sauces, packaging). Freezer and canning companies are increasing their activity in the market for ready to cook and ready to eat meals.

Some of the most relevant strategic lines for the industry are related with the competitiveness of the production process, such as digitization, sustainable production and circular economy, biotechnology and social commitment. In the field of digitalisation, aspects such as traceability and the use of block-chain, advanced sensorisation in production plants and the use of tools to support decision-making based on big data and artificial intelligence stand out. Regarding sustainability, highlights the use of R&D&i to optimize the consumption of water, energy, reuse of by-products, or efficiency in production processes, with the aim of further enhancing the circular economy. The improvement and evolution in the materials used in packaging is another relevant aspect for companies.

The sustainability of the industry does not reside only in the production process, but also in the relationship of the company with the environment. More and more companies have introduced sustainability criteria in the supply of raw materials, and in product traceability. The use of certifications has also a relevant role, mainly associated with the origin of the raw material. In the case of large companies, certification in most cases occurs to meet the demand of retail customers. In the case of small businesses, as a tool to differentiate their product. Many of these measures require research, innovation, and high investment, which is why it is usually only reachable by large companies. Producer organizations and the administrations that support them are fundamental drivers for these changes to take place.

International trade is one of the main drivers for development of the Spanish fish processing industry. On one hand, imports of raw material are key for the supply, diversification and competitiveness of the industry. On the other hand, exports are becoming more and more relevant in the industry turnover. The supply context in an industry increasingly dependent on imports will become more complex in recent years due to disruptions in value chains caused by the geopolitical situation. Longer routes, more unstable prices, and uncertainty regarding trade agreements… The industry will continue to depend on imports in a more uncertain and challenging environment.

With regard to exports of canned and processed seafood, a positive trend was observed from 2019 to 2025. In 2021, exports reached 1 089 052 tonnes (+7%) with a total value of EUR 4 541 million. In 2024, exports increased by 8% in value and 3.72% in volume. The main destinations were Italy, France, Portugal, the Netherlands, and the United States, with a growing presence in Asia and Latin America. Brexit generated uncertainty and led to a 60% drop in exports to the United Kingdom, mainly due to increased bureaucracy and the United Kingdom’s trade agreements with third countries. The industry reported unfair competition from countries such as Thailand, which operate under lower labour and environmental standards. As a response, the

sector requested the expansion of tariff quotas—particularly for tuna loins—and advocated for its inclusion in fairer trade agreements (Fernandez-Gonzalez. et al. 2025)[44].

Between 2021 and 2023, the consumption of frozen fish in Spain followed a downward trajectory, marked by a gradual decline in its relevance within household consumption (MAPAMA, 2023; 2022; 2021)[45]. In 2021, this segment experienced a sharp contraction, with a 15.3% decrease in volume and an 11.8% decline in value compared to the previous year. This negative trend continued in 2022, with an additional 12.8% drop in volume and a 5.2% decrease in value. Although in 2023 the decline in volume was more moderate (−4%), a slight rebound in purchase value (+2.3%) was observed, indicating that, despite consuming less, households paid more for these products, probably due to rising prices. Per capita consumption also reflects this trend. In 2021, each person consumed 2.27 kg of frozen fish, a figure that decreased to 1.98 kg in 2022 and 1.88 kg in 2023. This cumulative reduction of nearly 17% over three years indicates a lower presence of frozen fish in the regular diet. Regarding average expenditure, it fell from EUR 21.11 per capita in 2021 to EUR 20.10 in 2023. Although overall spending declined, the average price per kilogram increased steadily: EUR 9.30/kg in 2021, with further rises in subsequent years, reaching EUR 10.70/kg in 2023—representing a 15% increase over two years. Distribution channels have also undergone significant changes. Supermarkets and self-service outlets remained the main purchasing channel, although they experienced year-on-year declines in volume. Traditional stores lost market share more sharply, while hypermarkets and discount stores showed signs of recovery in 2023, with increases of 4.9% and 2.3%, respectively, suggesting a growing preference for more affordable options. The e-commerce channel, although representing a smaller share, recorded the highest prices— EUR 12.38/kg in 2023 compared to EUR 10.15/kg in discount stores, which consolidated their position as the most accessible channel. The profile of frozen fish consumers has remained relatively stable. Households with adults over 50 years of age—particularly retirees, childless couples, and independent adults—show the highest consumption levels. These groups mostly belong to upper-middle and high socioeconomic classes. In 2023, individuals over 65 years old stood out with a total per capita consumption of 33.54 kg of seafood products. At the regional level, Galicia, Asturias, Castilla y León, and the Basque Country consolidated their positions as the areas with the highest demand, exceeding expected consumption levels relative to their population size (ANFACO, 2024)[46]. The trends observed over these three years point to a structural transformation in the frozen fish market. The exceptional rebound in 2020, driven by the pandemic, failed to consolidate, and the segment has since lost prominence compared with other seafood products such as canned seafood and cooked shellfish. The rise in prices, coupled with the growing preference for more affordable retail channels, reflects increasing pressure on consumers' purchasing power.

Regarding the consumption of canned fish and mollusks in Spain between 2021 and 2023, the data reveal a trend characterized by stability in volume and sustained growth in value (MAPAMA, 2023; 2022; 2021). In 2021, volume decreased by 6.8% compared to 2020, following the significant surge driven by COVID-19 mobility restrictions. In 2022, the decline was

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[44] Fernandez-Gonzalez, R., Ricoy-Casas, R. M., Pereira, Z. G. T., & Biglieri, J. E. V. (2025). Analysis of circular strategies: A case study of the food processing industry. E & M EKONOMIE A MANAGEMENT.

[45] Ministerio de Agricultura, Pesca y Alimentación (2023). Informe del Consumo alimentario en España 2023. Madrid,España.

Ministerio de Agricultura, Pesca y Alimentación (2022). Informe del Consumo alimentario en España 2022. Madrid, España.

Ministerio de Agricultura, Pesca y Alimentación (2021). Informe del Consumo alimentario en España 2021. Madrid, España.

[46] ANFACO. (2024). Revista Industria Conservera 156. ANFACO-CECOPESCA. Vigo. España. Depósito Legal: VG618-1994

more pronounced, reaching 10.5%. However, in 2023, the market stabilized, with only a slight reduction of 0.4%. In contrast, market value increased each year: by 4.7% in 2021, a modest 1.2% in 2022, and a notable 9.0% in 2023. This pattern can be explained by the continuous rise in the average price, which increased from EUR 10.58/kg in 2021 to EUR 11.67/kg in 2022 and EUR 12.77/kg in 2023. Per capita consumption also declined slightly each year, from 4.52 kg in 2021 to 4.05 kg in 2022 and 3.99 kg in 2023. Nevertheless, average expenditure per person increased progressively, from EUR 47.77 in 2021 to EUR 47.23 in 2022 and EUR 50.91 in 2023. This indicates a trend in which Spanish households consume smaller quantities but are spending more on these products. Regarding distribution channels, supermarkets remained the main purchasing channel throughout the three-year period, with a market share exceeding 50%, although some variations were observed: a decline of 8.3% in 2021, 9.3% in 2022, and only 0.3% in 2023. Hypermarkets also recorded annual decreases in volume, while discount and traditional stores showed a recovery in 2023, with increases of 4.3% and 4.2%, respectively. The e-commerce channel was the most affected in 2023, registering a 7.2% decline. In terms of pricing, traditional stores maintained the highest average price each year, reaching EUR 16.69/kg in 2023, whereas discount stores remained the most affordable channel, with EUR 11.05/kg. The consumer profile remained stable: independent adults, young independents, retirees, and adult couples without children were the groups with the highest consumption levels, exceeding the national average. In 2021 and 2022, the Basque Country, Extremadura, and Aragon stood out as the regions with the highest consumption, while in 2023 the Region of Murcia emerged as the leading area, with 4.9 kg per capita. Navarra, La Rioja, and the Balearic Islands continued to show the lowest consumption levels. By type of canned product, tuna was the most consumed over the three-year period, although it recorded a slight decline in volume, from 2.19 kg in 2021 to 2.02 kg in 2022 and 1.99 kg in 2023. However, its market value increased each year due to the rise in average price. Canned sardines, mackerel, and mussels showed similar patterns, with stable or slightly decreasing volumes and growth in value. Canned cockles and anchovies experienced more pronounced decreases in volume, although higher prices partially offset the decline in turnover. In contrast, canned octopus and smoked trout recorded increases in both volume and value in 2023, standing out as expanding product categories.

Innovation and sustainability have become strategic pillars of the sector. In Spain, the National Association of seafood Manufacturers (*Asociación Nacional de Fabricantes de Conservas y Productos Transformados de Pescados y Mariscos*- ANFACO) led more than 100 R&D&I projects, including initiatives such as ALEHOOP, BIOCENPLAS, IMPRESS, OPTIPROT, VALORISH, NEPTUNUS, RE-FISH TO FOOD, and Digi Safe Cage. These projects promoted the valorisation of by-products, the development of bioplastics, the production of alternative proteins, and the decarbonisation of thermal processes through technologies such as induction, ultrasound, and ohmic heating. Omics technologies, bacterial fermentation, digital twins, and blockchain were applied to enhance traceability. The industry positioned itself as a benchmark in marine biotechnology and the blue economy, with applications in food, cosmetics, sustainable packaging, and fertilisers. The implementation of these projects also contributed to the development of analytical capabilities in heavy metals, marine toxins, veterinary drug residues, molecular biology, and metagenomics. A recent development highlighting the Spanish industry's commitment to innovation and added value is ANFACO's official announcement in June 2025 that its corporate name will be changed to "ANFACO-CYTMA", incorporating the name of its R&D+i center established in 2016: the National Center for Knowledge and Technology for the Marine, Aquaculture, and Food Industry (CYTMA). This change reflects the organization's growth in technological capabilities and its desire to integrate the "CYTMA" brand, emphasizing its role as a driving force for knowledge and innovation.

The outlook for the seafood processing industry is conditioned on this occasion by the uncertainty associated with the behaviour of factors in the generic environment, that is, variables that affect the entire economy. On the one hand, the evolution of macroeconomic variables such as inflation and household consumption. On the other hand, the evolution of raw materials and energy prices.

Among the challenges faced by the sector between 2021 and 2024 were the shortage of raw materials (particularly sunflower oil), the rise in energy and logistics costs, generational renewal, and the decline in fish consumption (below 20 kg per capita per year). The exclusion of the marine industry sector from the Agri-Food Strategic Project for Economic Recovery and Transformation Plan (PERTE) was publicly denounced, and the creation of a specific PERTE with EUR 400 million in funding was requested. The sector also called for a reduction in VAT on fishery products, the expansion of tariff quotas, and protection against unfavourable trade agreements. The industry positioned itself as a key player in the sustainability and competitiveness of the European food system, advocating for fiscal measures, direct support, and legal certainty for facilities located within the public maritime-terrestrial domain.

In 2024-25, high energy costs, price volatility, and supply chain constraints persisted. Frozen seafood profitability remains under pressure, with moderate sales growth unable to offset rising costs. The market continues to focus on home-consumption and convenience. In the canning sector, exports support financial stability, while domestic consumption declines due to the impacts of price increases in demand. Inflation and higher transport and packaging costs are also limiting export growth.

Inflation has moderated but continued to grow during 2024 and 2025. Prices in Spain grew by 5.6% in general and 4.1% in food (INE, 2025). Consumer purchasing power continued to decline. Household consumption of fish products in Spain in 2024 decreased by 3.7% in volume and raised 1.55% in value.

7.24.5 Data coverage and quality

Fish processing industry data comes from the Spanish National Institute of Statistics (*Instituto* Nacional de Estadística). Total value of assets, subsidies on investments, payment for external agency workers (optional), and debt are not available for all the periods. Financial income and financial expenditures are not available between 2015 and 2023. Depreciation of capital is not available between 2013 and 2021. These issues do not allow us to estimate beyond the GVA and the Operational Cash Flow indicators. Raw material data are not available for Spain.

7.25 Sweden

7.25.1 Overview

The fish processing industry sector in Sweden is spread throughout the country with small family businesses processing their own landings as well as larger enterprises with large-scale industrial production. In terms of volumes processed, the majority of Swedish catches are processed on the west and south coast of Sweden, where the larger fishing fleet segment is also located. The raw material supplying the fish processing industry is both nationally produced as well as imported in origin.

In 2022, Statistics Sweden (SCB) shifted statistical unit in the business statistics. This means that the number of companies are since then measured in enterprise units, thus creating a break in time series, as SCB moved from activity-based units to a more ambitious implementation of statistical units. This change provides a more accurate view of corporate structures, highlighting the dominant role of large companies and improving international comparability in line with Eurostat requirements. Previously, one company could be split into several units by industry code, while now all activities are consolidated under one enterprise unit, reducing the number of statistical entities. While totals such as turnover, investments, and employment remain comparable over time, structural measures like number of firms and industry distribution are not, since this shift of unit measurement.

In 2023, there were 315 enterprises in total in the fish processing segment out of which 166 had fish processing as their main activity and 149 processed fish but not as their main activity. This chapter concerns enterprises that have fish processing as their main activity, although one of the biggest producers of fisheries products in Sweden is since 2013 represented in the non-main category. The number of enterprises having fish processing as their main activity has declined over the past years. This reduction has mainly occurred due to mergers and acquisitions.

A large proportion of the enterprises processing fish are quite small. Many of them are financially connected to the fishery operations since they often process their own landings. In 2023, 86% of the enterprises had less than 10 employees suggesting that the share of small-scale operators is increasing over time. Companies with 50 employees or more has been stable in the last years and only accounted for 3 % of the total number of companies.

The total number of employees decreased by 1% between 2022 and 2023 but have been fluctuating over time. The lowest number yet regarding number of employees during the time of the data collection was registered in 2023 and was 1 439 employees. This is partly caused by the lower volumes of fish available for processing. The average wage level has been quite stable for a couple of years but increased by 8% between 2022 and 2023.

The number of companies having fish processing as non-main activity increased successively from 2008 to 2023. The number of companies remained stable during the years 2015-2021. Since the statistical shift to enterprise units in the overall business statistics in 2022, the number of companies having fish processing as non-main activity increased significantly. An analysis on the development will have to wait a few years since this is a break in the time series.

The remaining part of this chapter concerns only companies that have fish processing as its main activity, although the analysis in the final chapter also includes companies with fish processing as its secondary activity.

Table 7.63 Overview, Sweden, 2013-2023

Variable	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Δ (2022-23)
Structure (number)												
Total enterprises	222	224	224	213	209	209	206	206	206	173	166	-4%
≤ 10 employees	185	188	183	177	171	168	163	163	176	139	141	1%
11-49 employees	29	28	33	28	33	35	37	37	30	28	19	-32%
50-249 employees	8	8	8	8	5	6	6	6	4	6	6	0%
≥ 250 employees												
Employment (number)												
Total employees	2,199	2,174	2,171	2,113	2,022	2,015	1,894	1,853	1,740	1,457	1,439	-1%
FTE	1,658	1,587	1,662	1,650	1,591	1,592	1,533	1,388	1,281	1,539	1,331	-14%
Indicators												
Turnover (million €)	542	500	512	565	590	566	517	488	475	638	579	-9%
FTE per enterprise	7.5	7.1	7.4	7.7	7.6	7.6	7.4	6.7	6.2	8.9	8.0	-10%
Average wage (thousand €)	48.5	45.8	45.0	44.9	47.2	47.9	48.4	50.1	54.3	48.8	52.9	8%
Unpaid work (%)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0%
Enterprises doing fish processing not as main activity												
Number of entreprises	125	126	132	132	134	133	131	133	136	144	149	3%
Turnover attributed to fish processing (million €)	238.2	237.7	223.3	245.0	211.8	201.3	185.6	202.2	195.6	271.7	289.1	6%

Source: EWG elaboration from Member States submissions to the Fish Processing data call 2025.

7.25.2 Economic performance

The performance of the Swedish fish processing industry is highly dependent on the prices of raw material, which amounted to approximately 41 – 49% of the total production costs during 2022 - 2023. During 2020-2021 the raw material amounted to 55 - 60% of total production costs. This proportion of costs was a general trend for many years. This development is not caused by a decrease in raw material prices. Prices of raw material is in fact increasing in value, which can be seen in the price statistics, but during the years studied in this report other costs increased at a dramatic rate at the same time. The industry is dependent on raw material of the right quality and quantity. If such materials cannot be found within the EU, the industry has to import it from third countries. Large companies import the majority of their total raw material, mainly from Norway. The industry's need for imported raw material varies between years. In most recent years, imports of herring from Norway have increased. In general, smaller and mid-sized companies such as primary recipients of landings relying on local landings for their production. Larger companies focusing on secondary processing use mostly imported raw material. Therefore, in addition to variations in the prices of raw material and tariff rates, the industry is also sensitive to fluctuations in exchange rates.

All production costs have increased from 2021 to 2022 and 2023. This is shown in the case of energy costs as well as other operational costs. A slight increase in wages can also be observed. As a whole, the production costs increased in 2022 by 36%, and decreased by 10% in 2023. The total income of the sector increased between 2021 and 2022 with 33% (EUR 170.7 million). Between 2022 and 2023 it decreased by 10%.

Other operational costs fluctuate between years but from 2022 to 2023 the costs increased by 120%, breaking a long time period of quite low production costs, and even a decrease in the years prior to 2022. Packaging, transports and costs for operating the production facilities all increased during this period. This is also evident for the energy costs that increased by 80 % from 2021 to 2022, and a slight decrease was seen in 2023.

The development of the economic performance expressed in Euro is affected by the exchange rate. During 2022 and 2023 the Swedish Krona lost value compared to the Euro. Operational subsidies are negligible in relation to the total turnover.

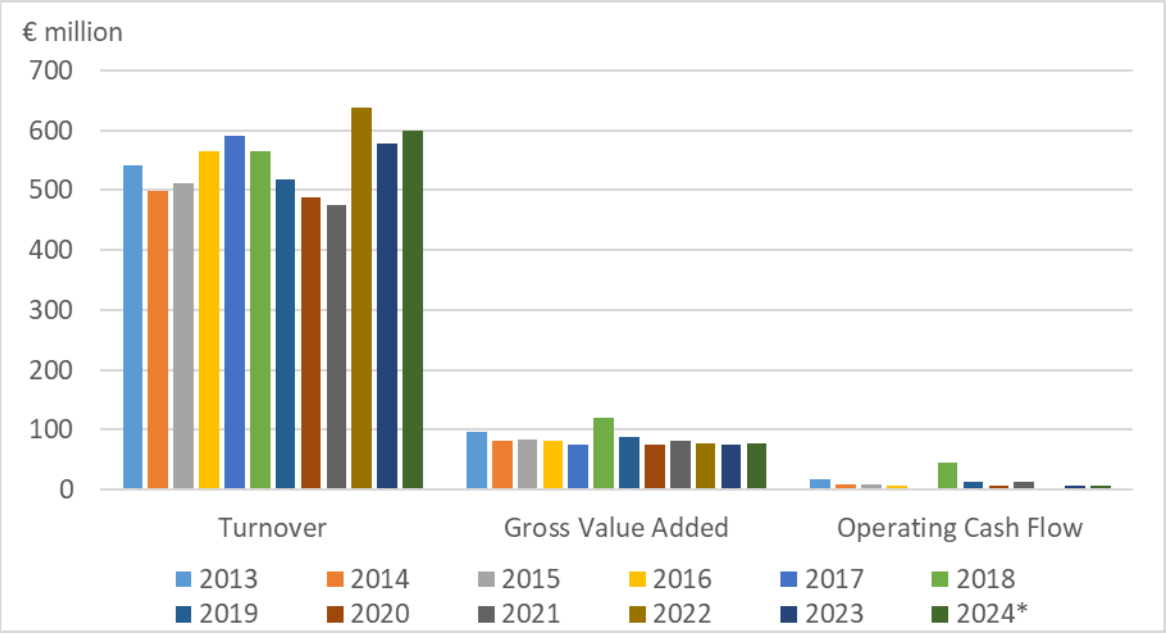
When it comes to subsidies from the EMFF, the Swedish processing industry has mainly received subsidies for investments in processing of fisheries and aquaculture products. Net investment increased significantly in 2022 only to fall back to a lower level 2023.

Table 7.64 Economic performance indicators, Sweden, 2013-2023

Variable	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Δ (2022-23)
Income (million €)												
Turnover	542.0	499.8	512.5	565.1	590.4	566.2	517.1	488.3	474.6	637.7	578.6	-9%
Other income	14.6	4.8	5.0	5.2	4.9	5.5	7.4	5.0	8.6	6.3	7.3	15%
Operating subsidies	1.0	0.5	0.3	0.7	1.5	1.4	0.6	0.6	1.2	1.3	1.6	23%
Total Income	556.6	504.6	517.4	571.0	596.9	573.2	525.1	493.9	484.4	645.3	587.5	-9%
Expenditure (million €)												
Purchase of fish and other raw material for production	342.3	313.2	309.3	328.7	322.5	333.1	289.2	256.0	263.9	264.9	284.7	7%
Wages and salaries of staff	80.4	72.6	74.8	74.0	75.1	76.2	74.2	69.5	69.6	75.1	70.4	-6%
Imputed value of unpaid labour	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Payment for external agency workers (optional)												
Energy costs	7.9	7.0	6.3	6.6	7.0	7.7	5.6	5.7	6.7	12.1	10.3	-15%
Other operational costs	108.7	102.9	117.7	154.1	190.2	109.8	142.0	156.3	131.1	289.8	215.5	-26%
Total production costs	539.3	495.7	508.1	563.4	594.9	526.8	511.1	487.5	471.2	641.9	580.9	-10%
Capital Costs (million €)												
Depreciation of capital	11.9	9.7	9.7	9.1	9.7	9.1	9.1	9.4	9.5	11.5	7.3	-37%
Financial costs, net	2.3	48.7	5.6	-3.3	-1.8	0.8	9.9	7.8	-6.4	9.0	17.1	89%
Capital Value (million €)												
Total value of assets	394.9	335.1	289.8	317.7	311.2	284.5	268.0	249.2	275.1	345.7	256.3	-26%
Net Investments	7.8	15.1	9.6	16.3	4.6	7.7	-2.2	2.4	9.1	12.6	4.9	-62%
Subsidies on investments				0.2	0.3	0.1	0.1	0.2	0.2	0.7	0.2	-65%
Debt	218.2	188.2	183.4	203.0	207.8	195.6	176.5	251.8	120.2	343.5	167.0	-51%
Economic performance (million €)												
Gross Value Added	97.7	81.5	84.1	80.9	75.5	121.2	87.6	75.4	81.6	77.2	75.4	-2%
Operating Cash Flow	18.3	9.4	9.6	7.6	2.0	46.4	14.0	6.5	13.2	3.4	6.5	93%
Earning before interest and tax	6.3	-0.2	-0.0	-1.5	-7.6	37.3	4.9	-3.0	3.7	-8.1	-0.8	90%
Net Profit	4.0	-48.9	-5.6	1.8	-5.9	36.5	-5.0	-10.8	10.0	-17.2	-17.9	-4%
Productivity and performance Indicators												
Labour productivity (thousand €)	58.9	51.3	50.6	49.0	47.5	76.1	57.2	54.3	63.7	50.2	56.6	13%
Capital productivity (%)	24.7	24.3	29.0	25.5	24.3	42.6	32.7	30.2	29.7	22.3	29.4	
GVA margin (%)	17.6	16.2	16.3	14.2	12.7	21.2	16.7	15.3	16.9	12.0	12.9	
EBIT margin (%)	1.1	-0.0	-0.0	-0.3	-1.3	6.5	0.9	-0.6	0.8	-1.3	-0.1	
Net profit margin (%)	0.7	-9.7	-1.1	0.3	-1.0	6.4	-0.9	-2.2	2.1	-2.7	-3.0	
Return on Investment (%)	1.6	-0.1	-0.0	-0.5	-2.5	13.1	1.8	-1.2	1.3	-2.4	-0.3	
Financial position (%)	44.8	43.8	36.7	36.1	33.2	31.2	34.2	-1.0	56.3	0.6	34.8	

Source: EWG elaboration from Member States submissions to the Fish Processing data call 2025.

Figure 7.40 Turnover, GVA and Operating cash flow evolution, Sweden, 2013-2024



Source: EWG elaboration from Member States submissions to the Fish Processing data call 2025.

*2024= nowcasted data

7.25.3 Breakdown by company size

86 % of the Swedish fish processing companies have 0 - 10 employees. This segment contributes with 9% of the total turnover of the sector, which is a level that is quite constant over time. The economic performance in this size segment, expressed as net profit increased during the time period. A negative development can however be observed in earning before interest and tax. During the period 2022-2023, companies with a maximum of ten employees have had an upturn in economic performance. Total income rose by 19 %, while production costs increased by 17 %, which provides a marginal improvement in the margin. The gross value increase of 40 % shows strong value creation, and operating cash flow increased by 226 %. EBIT improved by 64 % but remains negative, while net profit turned from a loss to a small positive figure with an increase of 83 %. In summary, revenue and value creation have grown significantly and liquidity has been significantly strengthened, but profitability is still close to zero.

Companies with 11 - 49 employees make up 11 % of the total number and account for about 18 % of the sectors total turnover, which is a decrease compared to previous periods. The number of companies also decreased. Companies with 11 – 49 employees as a whole have experienced a significant decline in economic performance during the years 2022 - 2023. Total revenues have decreased by 40 % and production costs have followed with a 39 % decrease, which only gives a narrow margin. Gross Value Added has fallen by 35 %, operating cash flow is 65 % lower, and EBIT has decreased by 78 % – close to zero. Although net profit is still positive, it has fallen by 66 %. In summary, the segment is in a phase with weaker profitability and liquidity.

The segment with more than 50 employees makes up only 3 % of companies but account for 72 % of the sector turnover. The number of companies in this category is quite stable at 6 companies. In the segment with 50 - 249 employees, total income has increased marginally with 1 % during 2022 – 2023. It increased from 2021 to 2022 with 126 % after a few years decline. Production costs have been kept almost the same in 2022 - 2023 but increased rapidly from the

year before with 126 %. The gross value increased by 15% during 2023. Liquidity has improved significantly shown by an increase in operating cash flow by 194% during 2022 - 23 and EBIT has turned upwards by 89%. Net profit remains negative and unchanged compared to the previous year. Companies with over 249 employees are also represented in this segment due to confidentiality reasons.

Overall conclusions by size segment show that small companies with up to ten employees have recovered strongly in terms of revenue, value creation and cash flow which have increased significantly, but profitability is only barely positive. Medium-sized companies with 11 – 49 employees have suffered sharp declines in both revenue and profitability during the time period. Larger companies with 50 – 249 employees have stable sales and clear improvements in cash flow and EBIT, but the net result is still negative.

2022 – 2023 were difficult years for the fish processing industry in Sweden, mainly caused by a lack of raw material for processing as well as the high operational costs for the industry.

Table 7.65 Economic performance by company size, Sweden, 2013-2023

Variable	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Δ (2022-23)
less than or equal to 10 employees												
Total Income	98.8	94.9	84.4	76.3	81.5	54.2	46.1	54.0	99.9	47.9	57.1	19%
Total production costs	94.1	88.8	79.7	72.2	77.0	50.8	42.0	48.8	93.1	48.4	56.4	17%
Gross Value Added	20.0	20.8	17.0	16.3	16.2	13.4	12.5	15.3	22.5	7.2	10.1	40%
Operating Cash Flow	4.7	6.1	4.7	4.0	4.4	3.4	4.0	5.3	6.8	-0.5	0.7	226%
Earning before interest and tax	1.9	3.9	2.6	2.2	2.6	2.0	2.8	3.8	4.7	-1.6	-0.6	64%
Net Profit	-1.7	-46.3	-4.6	6.8	7.4	1.9	3.1	7.1	18.0	-1.4	-0.2	83%
between 11 and 49 employees												
Total Income	196.9	178.5	194.8	209.6	268.9	249.7	219.8	204.2	199.3	177.7	106.2	-40%
Total production costs	191.4	175.6	189.4	204.3	268.1	241.0	214.8	196.8	190.8	170.3	103.6	-39%
Gross Value Added	30.7	25.5	31.9	30.6	34.0	40.6	37.6	36.1	38.1	30.9	20.1	-35%
Operating Cash Flow	5.5	2.9	5.4	5.3	0.8	8.6	4.9	7.4	8.5	7.4	2.6	-65%
Earning before interest and tax	3.0	0.5	3.0	2.9	-3.1	4.6	0.9	3.2	4.3	4.8	1.1	-78%
Net Profit	3.7	1.0	4.0	2.3	-5.4	4.8	0.2	1.3	3.5	3.0	1.0	-66%
between 50 and 249 employees												
Total Income	260.9	231.2	238.2	285.2	246.5	269.3	259.3	235.7	185.3	419.7	424.2	1.1%
Total production costs	253.8	231.3	239.0	286.9	249.7	234.9	254.2	241.9	187.4	423.2	420.9	-0.5%
Gross Value Added	46.1	34.7	34.9	34.0	25.3	67.2	37.6	23.9	21.0	39.1	45.1	15.4%
Operating Cash Flow	7.1	-0.1	-0.8	-1.7	-3.3	34.4	5.1	-6.2	-2.1	-3.5	3.3	193.7%
Earning before interest and tax	0.4	-5.2	-5.9	-6.6	-7.1	30.7	1.2	-10.0	-5.4	-11.3	-1.2	89.1%
Net Profit	1.0	-4.2	-5.3	-7.2	-7.9	29.9	-8.2	-19.2	-11.5	-18.7	-18.7	0.2%

Source: EWG elaboration from Member States submissions to the Fish Processing data call 2025.

7.25.4 Trends, drivers and outlook

There are strong political signals in Sweden to increase all food production nationally. This is outlined in the national food strategy, which is a growth strategy with increased production and export as focus areas. The Swedish Sea food sector has expressed its will to increase production for human consumption, in line with the goals of the previously mentioned strategy. One reason for this focus, apart from the goals of increased competitiveness for Swedish producers, is the need for strengthened national contingency planning. This includes the need to improve Sweden’s capacity to produce and distribute food also in a crisis situation.

The emphasis on increased production also includes improved production of fish products, use of new species in the production and developing the aquaculture production and its distribution on the Swedish market. Therefore, in the last years, work has been carried out to strengthen the blue value chain all the way from capture fisheries to consumer products.

The Swedish Board of Agriculture has presented two government assignments with the aim to contribute to a more efficient blue value chain and identify proper measures in order to increase national landings for human consumption. Several fish processing industries has a raw material shortage. A development in the fish processing sector for human consumption would strengthen

the resource efficiency and profitability of the whole value chain. This could be done without increasing total catch quotas since today large proportion of the catches are used for industrial purposes rather than for direct human consumption.

In Sweden a limited number of species are caught, produced and consumed on the national market which increase the vulnerability for price increase of the consumed species. Herring has traditionally been consumed in connection to Christmas, Easter and Midsummer and is perceived as a traditional summer meal. Fish processors and buyers are trying to explore new products and species to level out the costs. Product development and use of nationally produced seafood in public meals can play a part in changing these behaviours. Herring hamburgers and herring mince are new products at the market which have been used in public meals with good results.

According to a report from RISE (2025), Swedish seafood consumption in 2023 consisted of 73% imports, while the remaining 27% came from Swedish commercial fishing, recreational fishing and aquaculture. Consumption has decreased slightly over time, which is a trend noted throughout the EU. In Sweden, consumption in 2023 amounted to approximately 1.6 portions per person per week. This can be compared with 1.9 portions per person per week in 2019 and the Swedish National Food Agency's recommendation to eat seafood 2 – 3 times per person per week (Nordic Food Agency, 2025). According to the Nordic nutritional recommendations launched in 2023, intake should be even higher, approximately 2.5 – 3.5 times per person per week (Nordic Council, 2023). The species eaten by Swedish consumers the most are salmon, herring, shrimp and cod, which account for 77 % of consumption. The latest years high inflation and interest rate increases have led to increased capital costs for companies throughout the food chain, which has meant that cost increases in primary production are often passed on to the consumer. A large part of Swedish fish processing is dependent on imported raw materials, which makes the entire chain vulnerable to price fluctuations. Consumer purchasing behaviour has changed due to reduced consumption space, which has reduced a general demand for more expensive or organic products.

Swedish aquaculture farms transport their fish produce to slaughterhouses, which can be mobile facilities or a stationary facility at the farm. The slaughterhouse can also be located in other countries, most common for Swedish producers is to transport the fish to Finland or Åland. One of the largest aquaculture companies in Sweden transport all their fish for further processing in Åland. Whole fish on ice may also be sold for export to other countries in Europe. Both gutted whole fish and fish fillets are sold, fresh and frozen. Some farmers also sell rainbow trout roe and char roe for consumption. Fish producers in Sweden sell their products through farm sales and/or to various wholesalers, food industry, auctions, grocery bags and market halls. Wholesalers sell on to restaurants and grocery stores where the end consumer can buy the products. There can be none or up to three links (or more) between producer and the consumer depending on which sales channel is chosen. Fish processors who buy the fish from the fish farmers can in turn sell, for example, pickled, cold- and hot-smoked char and rainbow trout. Initiatives on product development based on aquaculture products are evident, for example there is rainbow trout mince meat available on the market. Increased aquaculture production is also a goal in the National Food Strategy.

To increase fish and aquaculture production, a new report[47] by the Swedish Board of Agriculture highlights several potential measures. Simplified permit processes with shorter processing times for aquaculture production is needed as well as long-term permits allowing companies to plan and implement investments. An important part is to increase the proportion of pelagic landings

[47] ”Proposals for goals and monitoring methods for Swedish food production”
Förslag på mål och uppföljningsmetoder för svensk livsmedelsproduktion - Årsrapport 2025

for human consumption which can partly be done with the use of existing infrastructure. To increase production with a longer time horizon, investment in better landing infrastructure and processing infrastructure are needed. Changed consumer behaviour and increased market demand is also an area of development.

Efforts to increase production must be sustainable. The availability of fisheries resources is crucial for the survival and profitability of Swedish fisheries and its fish processing industry. For several stocks, the situation is critical, which is why measures that strengthen and rebuild these stocks need to be prioritized in order to enable increased seafood production. Climate change is also an area that needs a bigger focus, and increased production can be developed through energy transition in fisheries and aquaculture, to meet both production and environmental goals. Climate change could be a threat to cold-water species such as salmon and herring and affects both farming conditions and reproductive capacity in wild stocks, which in turn may limit future seafood production.

Even with the increased focus on national production in the national food strategy the Swedish fish processing industry still faces several critical challenges. There are difficulties for many companies in obtaining raw material and the prices for raw material remain on a high level. High raw material prices affect profitability. The current critically low levels of many commercial fish stocks in combination with low predictability regarding access to raw material in the future leaves the fish processing industry with many uncertainties. Trade related issues such as tariffs and exchange rate are also important factors. High energy prices are also having an impact on the possibility of operating fish processing business. For instance, frozen products have increased production costs and with low margins the future in uncertain. Many species are sold on a global market and small fishing quotas can create market disturbances when trade flows are shifting. With these challenges in mind, this is motivating the National Food Strategy and all associated partners to continue in its efforts of creating a blue value chain with increased productivity and profitability so that consumers can continue to enjoy Swedish seafood in the future.

7.25.5 Data coverage and quality

There are no major data issues in the Swedish DCF data. The Swedish data in this report was bought by the Swedish Board of Agriculture from Statistics Sweden and reported by the Swedish Board of Agriculture. The reported data are consistent with the data reported to Eurostat by Statistics Sweden. The calculations of indicators from the data collected under the data collection framework may however slightly differ from figures reported to Eurostat, due to different methods of calculation or different exchange rates.

8. DATA QUALITY AND COVERAGE

As foreseen in the Regulation No 2017/1004, the Commission asked Member States to provide aggregated scientific data from within their National Data Collection programs to support scientific advice.

The data requested refers to 2022 and 2023; while previous years (2008-2021) could be submitted or resubmitted in cases where the already submitted data are considered incomplete or require correction. Data requested for 2016 to 2023, in accordance with their National Data Collection programs, can be provided under the provisions of Regulation 2017/1004. Previous years' data can be provided under the provisions of Regulation 199/2008.

Under the provisions of Commission Decision 2010/93/EU (Appendix XII), there are requested the variables: Income (turnover, subsidies and other income), Personnel costs (Wages and salaries of staff and Imputed value of unpaid labour), Energy costs, Purchase of fish and other raw material for production, Other operational costs, Capital costs (depreciation of capital and financial costs), Extraordinary costs, Total value of assets, Net Investments, Debt, Employment (Number of persons employed, gender and FTE national) and number of enterprises pertaining to the EU fish processing sector. Moreover, for enterprises that carry out fish processing but not as a main activity, it is mandatory to collect the Number of enterprises and Turnover attributed to fish processing, in the first year of each programming period. Member States who have decided to follow the extended programme are invited to submit the previously mentioned data following the segmentation by size category set out in the Commission Decision 2010/93/EU. The segmentation is set out in the Appendix XII of the Commission Decision.

Under the provisions of Council Regulation 2017/1004, there are requested the economic variables for the aquaculture sector detailed in Table 11 of the Commission Decision (EU) 2016/1251. In particular, Income (gross total sales, operating subsidies and other income), Personnel costs (Personnel costs and Imputed value of unpaid labour, and optionally Payment for external agency workers), Energy costs, Purchase of fish and other raw material for production, Other operational costs, Capital costs (consumption of fixed capital), Financial income and Financial expenses, Total value of assets, Net Investments, Subsidies in investments, Debt, Employment (Number of persons employed their FTE national, number of unpaid labour and their FTE, and Number of hours worked by employees and unpaid labour) and number of enterprises pertaining to the EU fish processing sector. Moreover, for enterprises that carry out fish processing but not as a main activity, it is possible to report the Number of enterprises and Turnover attributed to fish processing. Member States who have decided to follow the extended programme are invited to submit the previously mentioned data following the segmentation by size category set out in the Commission Decision 2010/93/EU.

The Data Collection Framework (DCF) and EU-MAP requires data quality assurance by Member States. Data checks were performed by the JRC through the comprehensive analysis of the data submitted and by experts attending the meeting to elaborate this report. As a consequence of these data checks data have been resubmitted by some of the countries after the deadline and during the EWG meeting.

This was the ninth call for data on the EU fish processing sector. Although overall data quality was rather good, there are still few issues that have to be improved by the Member States. Coverage has been slightly worse than the previous data call (see Table 9.1), as under the EU-MAP, the fish processing sector data collection is done on a voluntary basis.

All countries submitted the data before the deadline. Only minor data resubmissions took place afterwards, and before the deadline to correct the initial data sets. The dedicated STECF expert working group took place from 20 to 24 October 2025.

Coverage main economic data

The collection of fish processing data under the EU-MAP is voluntary. 16 MS collected and submitted data for 2022 and 2023 in this 2025 dedicated data call: Belgium, Bulgaria, Croatia, Denmark, Finland, Germany, Greece, Hungary, Italy, Lithuania, Malta, Poland, Romania, Slovenia, Spain, and Sweden.

Austria, Czechia and Slovakia have never submitted any data on the fish processing sector.

Cyprus, Estonia, France, Ireland, Latvia, Netherlands, and Portugal reported fish processing data for some years, but discontinued to do it (excluding the data collection for the fish processing sector from their Work Plans).

Hungary provided data for 2023, but not for 2022 (and 2020-21 as well, even if a data issue vas raised after the past data call).

Table 8.1 Data submission by MS in the 2025 fish processing data call

Submitted data	Not submitted data
Belgium	Austria
Bulgaria	Cyprus
Croatia	Czechia
Denmark	Estonia
Finland	France
Germany	Ireland
Greece	Latvia
Hungary	Netherlands
Italy	Portugal
Lithuania	Slovakia
Malta	
Poland	
Romania	
Slovenia	
Spain	
Sweden	

For all countries reporting data in the 2025 fish processing data call, this data was used as the basis of their national chapters and analysis. For the remaining countries, Eurostat's Structural Business Statistics (SBS) were used. In particular, SBS data were used for Hungary, as only a few years were covered under the data call, while for Cyprus no data were available.

Table 8.2 Coverage of the economic data for the companies doing fish processing as main activity, 2013-2023

Country	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
BEL	X	X	X	X	X	X	X	X	X	X	X
BGR	X	X	X	X	X	X	X	X	X	X	X
CYP	X	X	X								
DEU	X	X	X	X	X	X	X	X	X	X	X
DNK	X	X	X	X	X	X	X	X	X	X	X
ESP	X	X	X	X	X	X	X	X	X	X	X
EST	X	X	X								
FIN	X	X	X	X	X	X	X	X	X	X	X
FRA	X	X	X			X					
GRC	X	X	X	X	X	X	X	X	X	X	X
HRV	X	X	X	X	X	X	X	X	X	X	X
HUN				X	X	X					X
IRL	X	X	X	X	X	X	X				
ITA	X	X	X	X	X	X	X	X	X	X	X
LTU	X	X	X	X	X	X	X	X	X	X	X
LVA	X	X	X	X	X	X	X				
MLT	X	X	X	X	X	X	X	X	X	X	X
NLD	X	X									
POL	X	X	X	X	X	X	X	X	X	X	X
PRT	X	X	X								
ROU	X	X	X	X	X	X	X	X	X	X	X
SVN	X	X	X	X	X	X	X	X	X	X	X
SWE	X	X	X	X	X	X	X	X	X	X	X

Source: EWG elaboration from Member States submissions to the Fish Processing data call 2025.

In addition, Spain did not provide data for 2022 and 2023 for the Total value of assets, Financial income, Financial expenditures, and Debt even if planned in the Work Programme. Without these variables, net profit cannot be estimated and included to EU overview as well as national chapter.

Belgium did not provide data for 2022 and 2023 for the Weight of raw material per species and origin even if planned in the Work Programme. While Energy costs were reported together with Other operational costs.

Moreover, Croatia reported the existence of unpaid labour (1 and 3 persons in 2022 and 2023, respectively), but a Value of unpaid labour of 0. Sweden reported 0 for the total Number of hours worked by employees and unpaid workers

Of the countries reporting the economic data for the companies doing fish processing as main activity, Germany and Hungary did not report the economic data by size category. The other 14 MS reported data by size category.

Coverage data on enterprises that carry out fish processing but not as a main activity

Bulgaria and Malta did not submit data for the companies doing fish processing but not as main activity (for Bulgaria not in the Work Plan). Hungary submitted data only for 2023.

Belgium and Denmark only reported the number (nor the turnover) of companies doing fish processing not as main activity. Denmark did not report their turnover because of confidentiality issues given the low number of companies (6 companies). For Belgium the issue was already raised in past data calls.

Spain reported that there are no of companies doing fish processing not as main activity, but it is likely a mistake as the collection of the non-main activity industries it is not planned under the WP. However, this raises some uncertainties for the analysis considering the relevance of the Spanish fish processing sector at EU level.

Table 8.3 Coverage of the economic data for the companies doing fish processing but not as main activity, 2013-2023

Country	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
BEL	X	X	X	X	X	X	X	X	X	X	X
BGR	X	X	X								
CYP	X	X	X								
DEU								X	X	X	X
DNK	X	X	X	X	X	X	X	X	X	X	X
ESP	X	X	X			X	X	X	X	X	X
EST	X	X	X								
FIN	X	X	X	X	X	X	X	X	X	X	X
FRA		X	X								
GRC	X	X	X	X	X	X	X	X	X	X	X
HRV	X	X	X					X	X	X	X
HUN											X
IRL	X	X	X	X	X	X	X				
ITA	X	X	X	X	X	X	X	X	X	X	X
LTU	X	X	X	X	X	X	X	X	X	X	X
LVA	X	X	X	X	X	X	X				
MLT	X	X	X	X	X	X	X	X	X		
NLD	X	X									
POL	X	X	X	X	X	X	X	X	X	X	X
PRT			X								
ROU	X	X	X	X	X	X	X	X	X	X	X
SVN	X	X	X	X	X	X	X	X	X	X	X
SWE	X	X	X	X	X	X	X	X	X	X	X

Source: EWG elaboration from Member States submissions to the Fish Processing data call 2025.

Coverage data on raw materials

11 countries reported raw materials data for 2023, but 2 of them did not report raw materials data for 2022: Finland collect data on raw material on biennial basis, and the latest data is from 2023. Hungary di not report data for 22 (as well as for previous data call's years 2019-2021.

In addition to the missing data, the level of information varies a lot among the countries and creates discrepancies for any comparative analysis, even if it some MS have align to RCG ECON recommendations to ease comparability and analysis.

Table 8.4 Coverage of the raw materials data for the fish processing sector, 2013-2023

Country	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
BGR				X	X	X	X	X	X	X	X
DEU							X	X	X	X	X
FIN				X	X		X		X		X
GRC				X	X	X	X	X	X	X	X
HRV				X	X	X	X	X	X	X	X
HUN				X	X	X					X
ITA							X	X	X	X	X
LTU										X	X
POL				X	X	X	X	X	X	X	X
ROU				X	X	X	X	X	X	X	X
SVK	X	X	X	X	X	X					
SVN				X	X	X	X	X	X	X	X

Source: EWG elaboration from Member States submissions to the Fish Processing data call 2025.

Social (socio-demographic) data was not collected in this 2025 fish processing data call. That data was collected under a specific data call, together with data for the fleet and aquaculture sectors, and will be published under the STECF 25-13 report.

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ANNEXES

ANNEX 1 - GLOSSARY OF VARIABLES AND INDICATORS REPORTED UNDER THE DCF AND EUMAP

Parameters requested under the DCF

Turnover:

"Turnover" comprises the totals invoiced by the observation unit during the reference period, and this corresponds to market sales of goods or services supplied to third parties.

Turnover includes all duties and taxes on the goods or services invoiced by the unit with the exception of the VAT invoiced by the unit vis-à-vis its customer and other similar deductible taxes directly linked to turnover.

It also includes all other charges (transport, packaging, etc.) passed on to the customer, even if these charges are listed separately in the invoice. Reduction in prices, rebates and discounts as well as the value of returned packing must be deducted. Income classified as other operating income, financial income and extraordinary income in company accounts is excluded from turnover. Operating subsidies received from public authorities or the institutions of the European Union are also excluded (Structural Business Statistics (SBS) Code 12 11 0, Commission Regulation (EC) No 2700/98).

Subsidies:

"Subsidies" are the financial assistance received from public authorities or the institutions of the European Union which are excluded from turnover.

It includes direct payments, e.g. compensation for stopping trading, refunds of fuel duties or similar lump sum compensation payments; excludes social benefit payments and indirect subsidies, e.g. reduced duty on inputs such as fuel or investment subsidies.

Other income:

"Other income" refers to other operating income included in company accounts which are excluded from turnover; income coming from other activities than aquaculture, e.g. the licensing of ponds for recreational fishery purposes.

Wages and salaries:

"Wages and salaries" is equivalent to "Personnel costs" on the Structural Business Statistics.

"Personnel costs" are defined as the total remuneration, in cash or in kind, payable by an employer to an employee (regular and temporary employees as well as home workers) in return for work done by the latter during the reference period. Personnel costs also include taxes and

employees' social security contributions retained by the unit as well as the employer's compulsory and voluntary social contributions.

Personnel costs are made up of:

- wages and salaries
- employers' social security costs

All remuneration paid during the reference period is included, regardless of whether it is paid on the basis of working time, output or piecework, and whether it is paid regularly or not. Included are all gratuities, workplace and performance bonuses, ex gratia payments, thirteenth month pay (and similar fixed bonuses), payments made to employees in consideration of dismissal, lodging, transport, cost of living and family allowances, commissions, attendance fees, overtime, night work etc. as well as taxes, social security contributions and other amounts owed by the employees and retained at source by the employers. Also included are the social security costs for the employer. These include employer's social security contributions to schemes for retirement pensions, sickness, maternity, disability, unemployment, occupational accidents and diseases, family allowances as well as other schemes. These costs are included regardless of whether they are statutory, collectively agreed, contractual or voluntary in nature. Payments for agency workers are not included in personnel costs. (Structural Business Statistics (SBS) Code 13 31 0, Commission Regulation (EC) No 2700/98).

Wages and salaries: Wages and salaries are defined as "the total remuneration, in cash or in kind, payable to all persons counted on the payroll (including homeworkers), in return for work done during the accounting period." regardless of whether it is paid on the basis of working time, output or piecework and whether it is paid regularly or not. Wages and salaries include the values of any social contributions, income taxes, etc. payable by the employee even if they are actually withheld by the employer and paid directly to social insurance schemes, tax authorities, etc. on behalf of the employee. Wages and salaries do not include social contributions payable by the employer. Wages and salaries include: all gratuities, bonuses, ex gratia payments, "thirteenth month payments", severance payments, lodging, transport, cost-of-living, and family allowances, tips, commission, attendance fees, etc. received by employees, as well as taxes, social security contributions and other amounts payable by employees and withheld at source by the employer. Wages and salaries which the employer continues to pay in the event of illness, occupational accident, maternity leave or short-time working may be recorded here or under social security costs, depending upon the unit's accounting practices. Payments for agency workers are not included in wages and salaries. (Structural Business Statistics (SBS) Code 13 32 0, Commission Regulation (EC) No 2700/98).

Social security costs: Employers' social security costs correspond to an amount equal to the value of the social contributions incurred by employers in order to secure for their employees the entitlement to social benefits. Social security costs for the employer include the employer's social security contributions to schemes for retirement pensions, sickness, maternity, disability, unemployment, occupational accidents and diseases, family allowances as well as other schemes. Included are the costs for all employees including homeworkers and apprentices. Charges are included for all schemes, regardless of whether they are statutory, collectively agreed, contractual or voluntary in nature. Wages and salaries which the employer continues to pay in the event of illness, occupational accident, maternity leave or short-time working may be recorded here or under wages and salaries, dependent upon the unit's accounting practices. (Structural Business Statistics (SBS) Code 13 33 0, Commission Regulation (EC) No 2700/98).

Imputed value of unpaid labour:

Unpaid workers normally refer to persons who live with the proprietor of the unit and work regularly for the unit, but do not have a contract of service and do not receive a fixed sum for the work they perform. This is limited to persons who are not included on the payroll of another unit as their principal occupation.

Thus, imputed value of unpaid labour estimates the value of the salaries that these unpaid workers would have received if their work was remunerated.

The chosen methodology to estimate this imputed value of unpaid labour should be explained by the Member State in their national programme.

Energy costs:

“Energy costs” corresponds to the “Purchases of energy products (in value)” on the Structural Business Statistics.

Purchases of all energy products during the reference period should be included in this variable only if they are purchased to be used as fuel. Energy products purchased as a raw material or for resale without transformation should be excluded. This figure should be given in value only. (Structural Business Statistics (SBS) Code 20 11 0, Commission Regulation (EC) No 2700/98).

Other operational costs:

Other operating costs should comprise outsourcing costs, property or equipment rental charges, the cost of raw materials and supplies that cannot be held in the inventory and have not been already specified (i.e. water, small items of equipment, administrative supplies, etc.), insurance premiums, studies and research costs, external personnel charges, fees payable to intermediaries and professional expenses, advertising costs, transportation charges, travel expenses, the costs of meetings and receptions, postal charges, bank charges (but not interest on bank loans) and other items of expenditure.

On the Structural Business Statistics is included inside 13 11 0 “Total purchases of goods and services”.

Depreciation of capital:

Depreciation refers to the decline in value of the assets. In accounting, it is used as the allocation of the cost of tangible assets to periods in which the assets are used, in order to reflect this decline in their value.

The chosen methodology to allocate these costs over periods should be explained in the national programme. ESA (6) 6.02 to 6.05 European System of Accounts 1995 (Regulation (EC) No 2223/96, Regulation (EC) No 1267/2003, Eurostat ESA 1995 manual).

Financial costs, net:

“Financial costs, net” should be calculated as costs, coming from financial activity of the enterprise, minus the financial income.

Extraordinary costs, net:

“Extraordinary costs, net” is the difference between “Extraordinary charges” and “Extraordinary income”.

“Extraordinary income” and “Extraordinary charges” are the income and costs that arise otherwise than in the course of the company's ordinary activities (Article 29 of the Fourth Council Directive 78/660/EEC of 25 July 1978).

Total value of assets:

This parameter corresponds to the Balance sheet total of the Structural Business Statistics and the Capital value in the European System of Accounts.

Balance sheet total consists of the sum of items 1 to 16 of the asset side of the balance sheet or of the sum of items 1 to 14 of the liability side of the balance sheet. (Structural Business Statistics (SBS) Code 43 30 0, Commission Regulation (EC) No 2700/98).

Capital value is the total accumulated value of all net investments in the enterprise at the end of the year. ESA 7.09 to 7.24 European System of Accounts 1995 (Regulation (EC) No 2223/96, Regulation (EC) No 1267/2003, Eurostat ESA 1995 manual).

Net Investments:

“Net investments” refers to the difference between Purchase (Gross investment in tangible goods) and Sale (Sales of tangible investment goods) of assets during the year.

Gross investment in tangible goods is the Investment during the reference period in all tangible goods. Included are new and existing tangible capital goods, whether bought from third parties or produced for own use (i.e. Capitalised production of tangible capital goods), having a useful life of more than one year including non-produced tangible goods such as land. The threshold for the useful life of a good that can be capitalised may be increased according to company accounting practices where these practices require a greater expected useful life than the one-year threshold indicated above.

All investments are valued prior to (i.e. gross of) value adjustments, and before the deduction of income from disposals. Purchased goods are valued at purchase price, i.e. transport and installation charges, fees, taxes and other costs of ownership transfer are included.

Own produced tangible goods are valued at production cost. Goods acquired through restructurations (such as mergers, take-overs, break-ups, split-off) are excluded. Purchases of small tools which are not capitalised are included under current expenditure. Also included are all additions, alterations, improvements and renovations which prolong the service life or increase the productive capacity of capital goods. Current maintenance costs are excluded as is the value and current expenditure on capital goods used under rental and lease contracts. Investment in intangible and financial assets are excluded. Concerning the recording of

investments where the invoicing, delivery, payment and first use of the good may take place in different reference periods, the following method is proposed as an objective:

i) Investments are recorded when the ownership is transferred to the unit that intends to use them. Capitalised production is recorded when produced. Concerning the recording of investments made in identifiable stages, each part-investment should be recorded in the reference period in which they are made.

In practice this may not be possible and company accounting conventions may mean that the following approximations to this method need to be used:

i) investments are recorded in the reference period in which they are delivered,

ii) investments are recorded in the reference period in which they enter into the production process,

iii) investments are recorded in the reference period in which they are invoiced,

iv) investments are recorded in the reference period in which they are paid for.

Gross investment in tangible goods is based on Gross investment in land (15 12 0) + Gross investment in existing buildings and structures (15 13 0) + Gross investment in construction and alteration of buildings (15 14 0) + Gross investment in machinery and equipment (15 15 0). (Structural Business Statistics (SBS) Code 15 11 0, Commission Regulation (EC) No 2700/98).

Sales of tangible goods includes the value of existing tangible capital goods, sold to third parties. Sales of tangible capital goods are valued at the price actually received (excluding VAT), and not at book value, after deducting any costs of ownership transfer incurred by the seller. Value adjustments and disposals other than by sale are excluded. (Structural Business Statistics (SBS) Code 15 21 0. Commission Regulation (EC) No 2700/98).

Debt:

Financial assets created when creditors lend funds to debtors, either directly or through brokers, which are either evidenced by non-negotiable documents or not evidenced by documents.

Short-term loans: loans whose original maturity is normally one year or less, and in exceptional cases two years at the maximum, and loans repayable on demand.

Long-term loans: loans whose original maturity is normally more than one year, and in exceptional cases more than two years at the minimum.

“Debts” account for provisions and long- and short-term debt (STECF meeting SGECA 06-01).

Number of persons employed (Total employment):

This indicator refers to the number of people employed (including full-time and part-time employees) (SGECA-09-03). It corresponds to the Number of people employed of the Structural Business Statistics.

The number of persons employed is defined as the total number of persons who work in the observation unit (inclusive of working proprietors, partners working regularly in the unit and unpaid family workers), as well as persons who work outside the unit who belong to it and are paid by it (e.g. sales representatives, delivery personnel, repair and maintenance teams). It includes persons absent for a short period (e.g. sick leave, paid leave or special leave), and also persons on strike, but not those absent for an indefinite period. It also includes part-time

workers who are regarded as such under the laws of the country concerned and who are on the pay-roll, as well as seasonal workers, apprentices and home workers on the pay-roll. The number of persons employed excludes manpower supplied to the unit by other enterprises, persons carrying out repair and maintenance work in the enquiry unit on behalf of other enterprises, as well as those on compulsory military service. Unpaid family workers refer to persons who live with the proprietor of the unit and work regularly for the unit, but do not have a contract of service and do not receive a fixed sum for the work they perform. This is limited to those persons who are not included on the payroll of another unit as their principal occupation. (Structural Business Statistics (SBS) Code 16 11 0, Commission Regulation (EC) No 2700/98).

The number of employees should be reported by gender.

FTE National:

“FTE national” is the number of employees converted in full time equivalents (calculation methodologies vary between countries).

It corresponds to the “Number of employees in full time equivalent units” of the Structural Business Statistics.

The number of employees converted into full time equivalents (FTE). Figures for the number of persons working less than the standard working time of a full-year full-time worker, should be converted into full time equivalents, with regard to the working time of a full-time full-year employee in the unit. Included in this category are people working less than a standard working day, less than the standard number of working days in the week, or less than the standard number of weeks/months in the year. The conversion should be carried out on the basis of the number of hours, days, weeks or months worked. (Structural Business Statistics (SBS) Code 16 14 0, Commission Regulation (EC) No 2700/98).

Reporting the number of FTE national by gender is optional.

Number of enterprises:

The “Number of enterprises” parameter corresponds to a count of the number of enterprises active during at least a part of the reference period (SGECA-09-03).

A count of the number of enterprises registered to the population concerned in the business register corrected for errors, in particular frame errors. Dormant units are excluded. This statistic should include all units active during at least part of the reference period. (Structural Business Statistics (SBS) Code 11 11 0, Commission Regulation (EC) No 2700/98).

Both definitions are similar. However, there are often some divergences with Eurostat data. This is mostly due to the use of the Veterinary list (which is necessary to trade with food products) to update the business register and so companies that are dormant or focusing on other products have been excluded.

Moreover, under the DCF regulation, the number of companies should be disaggregated by the number of persons employed (in ≤5; 6-10 and >10 FTE) (Structural Business Statistics (SBS) Code 16 14 0, Commission Regulation (EC) No 2700/98).

Indicators calculated under the DCF

Average wage:

The average salary or mean wage estimates the salary an employee working full time is receiving on this sector. It includes the salaries themselves, the social security costs and imputed value of unpaid labour.

Mean wage = (Wages and salaries + Imputed value of unpaid labour) / FTE

Gross Value Added (GVA):

Gross Value Added measures the contribution of the sector to the economy.

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.

Value added at factor cost as defined in the Structural Business Statistics is the gross income from operating activities after adjusting for operating subsidies and indirect taxes. It can be calculated from turnover, plus capitalised production, plus other operating income, plus or minus the changes in stocks, minus the purchases of goods and services, minus other taxes on products which are linked to turnover but not deductible, minus the duties and taxes linked to production. Alternatively, it can be calculated from gross operating surplus by adding personnel costs. Income and expenditure classified as financial or extra-ordinary in company accounts is excluded from value added. Value added at factor costs is calculated "gross" as value adjustments (such as depreciation) are not subtracted. (Structural Business Statistics (SBS) Code 12 15 0, Commission Regulation (EC) No 2700/98).

Thus, Gross Value Added is calculated on this report as:

GVA = Turnover + Other Income – Energy costs – Purchase of fish and other raw material for production - Other Operational costs.

GVA margin or GVA to Revenues:

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 (the sum of Turnover and Other Income). Expressed as a percentage.

$$GVA\ to\ Revenue = \frac{GVA}{Turnover + Other\ Income} 100\%$$

Operating Cash Flow (OCF)

Also referred to as gross cash flow or, i.e. the flow of cash into and out of a sector or firm over a period of time. Under the EUMAP, the indicator is calculated as follows:

OCF = Turnover + Other Income+ Operating subsidies +Subsidies on Investments – Energy costs – Wages and salaries - Imputed value of unpaid labour - Payment for external agency workers – Purchase of fish and other raw material for production – Other Operational costs.

Earnings Before Interest and Tax (EBIT):

“Earnings before interest and taxes (EBIT)” or “Operating profit” is a measure of a firm's profitability that excludes interest and income tax expenses.

EBIT = OCF – Depreciation of capital

EBIT margin:

EBIT margin is a measure of the economic performance of a sector or enterprise expressed in relative terms. It is a difference between total income and all incurred costs except for the (operating, capital and financial). Expressed in percentage. Under the EUMAP, the indicator is calculated as follows:

$$EBIT\ margin = \frac{EBIT}{Turnover\ +\ Other\ Income +\ Operating\ Subsidies} 100\%$$

Net profit:

“Net profit” is a measure of a firm's profitability that includes the results of financial activity of the enterprise.

Net profit = EBIT – Financial_costs_net

Net profit margin:

Net profit margin is a measure of the economic performance of a sector or enterprise expressed in relative terms. It is a difference between total income and all incurred costs (operating, capital and financial). Expressed in percentage.

$$Net\ profit\ margin = \frac{Net\ profit}{Total\ Income} 100\%$$

Return on Investment (ROI):

Return on investment is a performance measure to evaluate the profitability (efficiency) of an investment.

During the SGECA-10-04 meeting it was decided that it was more appropriate to calculate the Return on Investment using the “Earnings Before Interest and Tax (EBIT)”, rather than the Net profit.

$$ROI = \frac{EBIT}{Total\_Value\_of\_Assets} * 100\%$$

Earnings Before Interest and Tax (EBIT) margin:

“Earnings before interest and taxes (EBIT) to revenue ratio” measures the margin of the companies’ profit. Expressed in percentages.

$$EBIT\ to\ Revenue = \frac{EBIT}{Total\ Income} * 100\%$$

Labour productivity:

Labour productivity is calculated as the average output per worker or per time unit. It can be calculated as Gross Value Added (GVA) divided by Full Time Equivalents (FTE). This indicator describes the value added to the economy from the activity, in this case the value added to the economy by one FTE.

$$Labour\_productivity = \frac{GVA}{FTE}$$

When a MS cannot report the level of employment in FTEs, the number of employees is used as a second-best alternative. However, these alternative compromises the comparison and should be clearly stated in the report.

Capital productivity:

Capital productivity is calculated as the average output per unit of capital. It can be calculated as Gross Value Added (GVA) divided by Capital value (total value of assets) in percentage. The indicator describes the value added to the economy by one unit of capital.

$$Capital\ productivity = \frac{GVA}{Total\ value\ of\ assets} 100\%$$

Parameters requested under the EUMAP

Turnover: corresponds to the DCF variable “Turnover”.

Operating Subsidies: corresponds to the DCF variable “Subsidies”. It refers to direct payments which general government or the institutions of the European Union make to resident producers. (ESA D.3).

Other Income: corresponds to the DCF variable “Other Income”.

Wages and salaries: corresponds to the DCF variable “Wages and salaries”.

Imputed value of unpaid labour: corresponds to the DCF variable “Imputed value of unpaid labour”.

Energy Costs: corresponds to the DCF variable “Energy Costs”.

Purchase of fish and other raw material for production: corresponds to the DCF variable “Purchase of fish and other raw material for production”.

Other operational costs: corresponds to the DCF variable “Other operational costs”.

Consumption of fixed capital: corresponds to the DCF variable “Depreciation of capital”.

Total Value of Assets: corresponds to the DCF variable “Total Value of Assets”.

Net Investments: corresponds to the DCF variable “Net Investments”.

Debt: corresponds to the DCF variable “Debt”.

Persons employed: corresponds to the DCF variable “Total employees”.

Persons employed FTE: corresponds to the DCF variable “Total FTE”.

Financial Expenditure minus Financial Income: corresponds to the DCF variable “Financial Costs, net”.

Payment for external agency workers: is an optional new variable to account for the costs of outsourced labour.

Subsidies in investments: Direct payments which general governments or the institutions of the European Union make to resident producers to finance all or part of the costs of their acquiring assets related to the company.

Number of hours worked by employees and unpaid labour: The aggregate number of hours worked by the persons employed and the unpaid labour during the reference period.

Unpaid labour: Number of workers that have not received compensation in the form of wages, salaries, fees, gratuities, piecework pay or remuneration in kind.

Indicators calculated under the EUMAP

Average wage:

The average salary or mean wage estimates the salary an employee working full time is receiving on this sector. It includes the salaries themselves, the social security costs and imputed value of unpaid labour.

Under the EUMAP, the indicator is calculated as follows:

Mean wage = (Wages and salaries + Imputed value of unpaid labour) / (Persons employed FTE)

$$\text{Mean wage } = \frac{Wages\ and\ salaries\ +\ Imputed\ value\ of\ unpaid\ labour}{Persons\ employed\ FTE\ +\ Unpaid\ labour\ FTE}$$

Gross Value Added (GVA):

Gross Value Added measures the contribution of the sector to the economy.

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.

Value added at factor cost as defined in the Structural Business Statistics is the gross income from operating activities after adjusting for operating subsidies and indirect taxes. It can be calculated from turnover, plus capitalised production, plus other operating income, plus or minus the changes in stocks, minus the purchases of goods and services, minus other taxes on products which are linked to turnover but not deductible, minus the duties and taxes linked to production. Alternatively, it can be calculated from gross operating surplus by adding personnel costs. Income and expenditure classified as financial or extra-ordinary in company accounts is excluded from value added. Value added at factor costs is calculated "gross" as value adjustments (such as depreciation) are not subtracted. (Structural Business Statistics (SBS) Code 12 15 0, Commission Regulation (EC) No 2700/98).

Thus, under the EUMAP, the indicator is calculated as follows:

GVA = Turnover + Other Income – Energy costs – Purchase of fish and other raw material for production - Other Operational costs - Payment for external agency workers.

GVA margin or GVA to Revenues:

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 (the sum of Turnover and Other Income). Expressed as a percentage. Under the EUMAP, Gross Value Added is calculated as under the DCF:

$$GVA\ to\ Revenue = \frac{GVA}{Turnover + Other\ Income} 100\%$$

Operating Cash Flow (OCF)

Also referred to as gross cash flow or, i.e. the flow of cash into and out of a sector or firm over a period of time. Under the EUMAP, the indicator is calculated as follows:

OCF = Turnover + Other Income+ Operating subsidies +Subsidies on Investments – Energy costs – Wages and salaries - Imputed value of unpaid labour - Payment for external agency workers – Purchase of fish and other raw material for production – Other Operational costs.

Earnings Before Interest and Tax (EBIT):

“Earnings before interest and taxes (EBIT)” or “Operating profit” is a measure of a firm's profitability that excludes interest and income tax expenses. Under the EUMAP, the indicator is calculated as follows:

EBIT = OCF – Consumption of fixed capital.

EBIT margin:

EBIT margin is a measure of the economic performance of a sector or enterprise expressed in relative terms. It is a difference between total income and all incurred costs except for the (operating, capital and financial). Expressed in percentage. Under the EUMAP, the indicator is calculated as follows:

$$EBIT\ margin = \frac{EBIT}{Turnover\ +\ Other\ Income +\ Operating\ Subsidies} 100\%$$

Net profit:

“Net profit” is a measure of a firm's profitability that includes the results of financial activity of the enterprise. Under the EUMAP, the indicator is calculated as follows:

Net profit = EBIT – (Financial Expenditure - Financial Income)

Net profit margin:

Net profit margin is a measure of the economic performance of a sector or enterprise expressed in relative terms. It is a difference between total income and all incurred costs (operating, capital and financial). Expressed in percentage. Under the EUMAP, the indicator is calculated as follows:

$$Net\ profit\ margin = \frac{Net\ profit}{Turnover\ +\ Other\ Income\ +\ Operating\ Subsidies} 100\%$$

Return on Investment (ROI):

Return on investment is a performance measure to evaluate the profitability (efficiency) of an investment.

During the SGECA-10-04 meeting it was decided that it was more appropriate to calculate the Return on Investment using the “Earnings Before Interest and Tax (EBIT)”, rather than the Net profit. Under the EUMAP, the indicator is calculated as under the DCF:

$$ROI = \frac{EBIT}{Total\_Value\_of\_Assets} * 100\%$$

Earnings Before Interest and Tax (EBIT) margin:

“Earnings before interest and taxes (EBIT) to revenue ratio” measures the margin of the companies’ profit. Expressed in percentages. Under the EUMAP, the indicator is calculated as follows:

$$EBIT\ to\ Revenue = \frac{EBIT}{Turnover\ +\ Other\ Income\ +\ Operating\ Subsidies} * 100\%$$

Labour productivity:

Labour productivity is calculated as the average output per worker or per time unit. It can be calculated as Gross Value Added (GVA) divided by Full Time Equivalents (FTE). This indicator describes the value added to the economy from the activity, in this case the value added to the economy by one FTE. Under the EUMAP, the indicator is calculated as follows:

$$Labour\_productivity = \frac{GVA}{Persons\ employed\ FTE\ +\ Unpaid\ labour\ FTE}$$

When a MS cannot report the level of employment in FTEs, the number of employees is used as a second-best alternative. However, these alternative compromises the comparison and should be clearly stated in the report.

Capital productivity:

Capital productivity is calculated as the average output per unit of capital. It can be calculated as Gross Value Added (GVA) divided by Capital value (total value of assets) in percentage. The indicator describes the value added to the economy by one unit of capital. Under the EUMAP, the indicator is calculated as under the DCF:

$$Capital\ productivity = \frac{GVA}{Total\ value\ of\ assets} 100\%$$

ANNEX 2 – DATA PROTOCOL USED BY EWG 25-15 FOR THE 2025 REPORT

The protocol approved by STECF 19-02 for data imputations/estimation was not applied tout court by EWG 25-15 as the submissions status has changed for some MSs: ror the 2025 report, based on the data series 2013-2023, the EWG agreed it was useless and inefficient to impute data in some cases missing for a 4 (i.e. Ireland and Latvia, 2020-2023) or 8-years period (i.e. Estonia, France, Netherlands and Portugal 2016-2023) and more logical and efficient to use directly Eurostat data.

For sake of clarity, in the table below the Structural Business Statistics variables, published by Eurostat on the webpage of the Annual detailed enterprise statistics for industry (NACE Rev. 2, B-E)[48] and also available for the NACE code Activity 10.20 Processing and preserving of fish, crustaceans and molluscs are reported.

As already highlighted in the Economic report of the EU fish processing sector 2017 (STECF-17-16), there is not a complete match between DCF/EUMAP variables and Eurostat/SBS ones. Indeed, during the STECF EWG 17-16, a preliminary exercise to identify potential matches was done. EWG 25-15, in line with the work done by EWG 21-14 and 23-14, used these preliminary results, further elaborating on it. The matches used for the current report are reported in the following Table A.

Table A. Matching table between DCF and Eurostat SBS variables and estimation note

Variable DCF/EUMAP and related indicators	**SBS variable name up to 2020**	**SBS variable name since 2021**	**EWG 23-14 note of estimation**
Number of enterprises	Enterprises	Enterprises	
Turnover	Turnover from the principal activity at 3-digit level NACE Rev. 2	*Net turnover*	*Turnover or gross premiums written instead of Turnover from the principal activity as the latest not available for most non-DCF MSs*
Personnel costs	Personnel costs	*Employee benefits expense*	
Energy costs	Purchases of energy products	Purchases of energy products	Both are in value terms
Purchase of fish and other raw material for production	*Total purchases of goods and services*	Purchases of goods and services (total)	*Total purchases of goods and services used as a proxy of* Purchase of fish and other raw material for production *the DCF/EUMAP requirements*
Net Investments	*Gross investment in machinery and equipment*	*Gross investment in machinery and equipment*	*SBS variable is only a proxy of the DCF/EUMAP one as it relates only to machinery and equipments while DCF/EUMAP include both investments in tangible and intangible and it is Gross while in DCF ise Net*
Number of persons employed	Persons employed	Persons employed	

[48] https://appsso.eurostat.ec.europa.eu/nui/show.do

Total employees	Employees	Employees	
FTE national	Employees in full-time equivalent units	Employees in full-time equivalent units	
Unpaid labour (number)	Unpaid persons employed	It can be calculated by:	It can be calculated by: Persons employed - Employees
Total income	Production value	Value of output	
Gross Value Added	Value added at factor cost	Value added	
Operating Cash Flow	Gross operating surplus	Gross operating surplus	

In particular, the following DCF/EUMAP variables are not covered by SBS and cannot be estimated:

- Operating subsidies
- Subsidies on investments
- Consumption of fixed capital
- Total value of assets
- Financial income
- Financial expenditures
- Debt
- Number of enterprises (non-main activities)
- Turnover (non-main activities)

For these reasons, some profitability indicators have been calculated and reported, in the EU overview, only for the DCF/EUMAP group of countries.

Furthermore, some elaboration on Eurostat/SBS data have been done only for estimating EU wide data series, to be used in the EU overview. In case of missing data for some years, simple averages have been calculated to avoid data gaps impacting on EU totals (an example is reported for energy costs):

$$\text{Purchase of energy costs (year 2018)} = \frac{\text{Purchase of energy costs (year 2017)} + \text{Purchase of energycosts (year 2019)}}{2}$$

11. LIST OF FIGURES

12. LIST OF TABLES

13. LIST OF BACKGROUND DOCUMENTS

Background documents are published on the meeting's web site on:
https://stecf.ec.europa.eu/document/d5be39aa-78ad-454d-bfb5-b12d8f467191

List of background documents:

EWG-25-15– Doc 1 - Declarations of invited and JRC experts (see also the section of this report 'Contact details of EWG-25-15 participants')

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