



RECOMMENDATION

36th Annual Meeting of the NAFO Convention

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The 36th Annual Meeting of the NAFO regional fisheries organisation will take place from the 22nd to the 26th of September in Vigo, Spain; at which the 14 Contracting Parties will be represented with a view to discuss and make decisions on diverse management issues, focusing especially on adopting sustainable exploitation rates for fish stocks of commercial interest. The dynamics of the marine ecosystem and of the fisheries developed in the NAFO regulatory area are very closely and regularly monitored by this Advisory Council, given the importance that this fishing area in international waters has always had for its members. Safeguarding the criteria aligned with the main principles of the Common Fisheries Policy, namely reconciling environmental sustainability with the well-being of fishing communities, recommend consolidating the active partnership between the LDAC and the delegation from the European Commission, which has been taking place in the last few years. It is along such lines that we submit this recommendation on the issues to be decided upon at the annual meeting in 2014, informing that we are available to cooperate in all that we may be requested.

1. GENERAL ASSESSMENT OF THE ORGANISATION'S OPERATIONS

NAFO is a regional fisheries organisation with a solid track record of almost 4 decades, and its foundation took place practically at the same time when the United Nations Convention on the Law of the Sea (UNCLOS) was adopted. This coincidence fostered the institution of an operative environment at this RFMO, characterised by a high level of respect to the legal framework brought about by the Convention in the domain of balanced utilization, protection and exploitation of the manifold living and inert resources that the Oceans may provide to the Community. It is therefore no surprise that the NAFO Contracting Parties, in particular those that most depend on fishing activities in the areas under its jurisdiction and management, are making significant efforts to endow the organisation with the necessary human, technical and logistic resources in order to fulfil its mission. It is thus generally recognised that the organic structure of NAFO, based on specialised assessment and decision committees, is the most suitable one to give credibility to the work carried out, from a viewpoint of long-term sustainability. The permanent existence of the Scientific Council and the establishment, by the Fisheries Commission, of working groups with the mandate to research into specific matters, are an added value that must be preserved, and whose knowledge increases with the data provided by professional fishing. This organisational model, despite its virtues, may be perfected with efficacy if the managers achieve to perceive the right time for decision-making, keeping risks under control.

The high seas managed by the NAFO Convention, located beyond the 200 nautical miles of the Coastal States, correspond to an ecosystem with morphological features and availability of nutrients that foster the formation of diverse and abundant biological communities, habitually valued for human consumption. These are mostly straddling fish stocks that evolve either in international waters or in the adjacent Exclusive Economic Zones, which situation is determining when influencing the positions adopted by the Contracting Parties whenever they must decide on measures for the exploitation of such stocks. The European Union represents, in NAFO, countries with historical fishing rights, conquered throughout decades of commitment and sacrifice, that cannot be offended, even if they are seen as competing against others for the same

space and resources. The external dimension of the European Union Fisheries Policy has in the NAFO regulatory area a vast field to develop and expand, in the respect for codes of best practices, ensuring alternatives in order to diversify and strengthen Community fishing, reducing dependency on imports. Such goals must be achievable in an environment that is immune to the strategies of Coastal States, whose priorities are to disengage the fishing area, making it difficult to adopt decisions based on sustainability.

The main challenge faced by NAFO operations is to adopt management measures that maintain the resources exploited by fishing within safe biological limits, endeavouring for decisions to be grounded on scientific knowledge, whose major sources are long data-time series issuing from research surveys and catches per unit of effort by commercial vessels. In order for the scientific advice on which management is based to improve its certainty, it is essential to identify limit reference points for the mortality and size of halieutic stocks, suggesting exploitation rates within maximum sustainable yield levels. The European Union must defend, at the NAFO annual meeting, that means and time be made available to the scientific advice, in order to pursue studies whose aim is to obtain the essential reference indicators for proper management of stocks, whose assessment must preferentially be structured on analytical models, operating on long data-time series. Under pressure and guidance by the Canadian scientists, the efforts by the Scientific Committee have been directed, obstinately and with recourse to arguable methods, to the identification of vulnerable marine ecosystems, with a merely residual expression, neglecting investment in the research and development of models to assess the living resources. Since at least 2010, NAFO has been complying judiciously with the decisions by United Nations on ecosystem management, whose disproportionate efforts invested in the area must be redressed. Canada is aware that by consuming the managers' attention and the time of Science with lateral aspects, the safety of the recommendations for the management of fisheries and resources is harmed, generating the right climate to divert the discussion away from the organisation's main goals. The USA, whose fishing stakes in NAFO are non-existent, foster this strategy, using and abusing delay tactics, acting as allies of CAN, to make consensus difficult.

In the decades of the 1980s and 1990s some fish stocks were subjected to exaggerated exploitation rates, requiring that directed fishing be interrupted for long periods in order to enable the respective limit biomasses to recover. The Community fleets, that had always been the leaders in production in the regulatory area, were capable of readjusting to the cycles of diminished fishing opportunities, facing loss of income as an investment in a sustainable future for NAFO. In recent years, low mortality rates and a continued reduction of the effective fishing days, borne with sacrifice by EU operators, have enabled recruitments to survive, leading to an increase in the exploitable components of the stocks. The European Commission is encouraged at the annual NAFO meeting to adopt a technical and political attitude, in order to defend the fishing stakes of the Member States, making the most of the positive signs that the Science and the fishermen have been detecting in open fisheries. Despite the visible recovery of the majority of commercial stocks, a reduction of 13% has been recorded in the fishing effort in 2013 compared to 2012, which is equivalent to 800 days less of presence in the area. The indicators of restrained catches have been consistent for the last decade, and they are the result of the EU vessels' effort to adjust their operational model, as well as guaranteeing that the recovery of the stocks will not suffer from regression, making NAFO a noteworthy case study.

In contrast to the optimism described above, the LDAC is concerned that fisheries, especially at the Flemish Cap, in offshore waters located beyond Canada's 200 miles, are being disturbed, without prior warning, by oil prospecting operations. There have been frequent interventions of vessels serving such project, that demarcate areas in which fishing is restricted or even banned,

without there being a perception of legitimacy and legal security in the instructions transmitted to fishing vessel skippers. The secretariat of NAFO should not be left to one side of this process, as has occurred, in order that it may provide timely notice to whomsoever is in command of the vessels about any prospecting exercises that may be programmed. The LDAC, as well as the European Commission, have taken part in good faith in the consultation connected to the strategic environmental assessment of this project and they understand that Fishing and oil exploration are compatible activities. In order for such coexistence to be peaceful, it is urgent to foresee communication channels, to order the maritime space, and to adopt a regime of compensation for the economic losses caused to fishing by these new economic activities.

2. EU LEADERSHIP IN FISHING ACTIVITIES IN NAFO.

In the recommendation forwarded to the European Commission in 2013 we included a summary assessment of the fishing production in NAFO, based on the official catch records for the previous year, having treated it after the analysis made to the state of conservation of the different stocks and of the proposed recommendation for their management in 2014. This year we have opted to reverse the order, as we believe that it is more suitable to start by having a perception of the specific importance that each species and stock entail for the EU fishing industry. The production statistics of the Contracting Parties, expressed in the table below, do not only confirm Europe's leadership in NAFO, but also reveal a high rate of utilisation of the available fishing opportunities. These results are uniform and have become reinforced during the last decade, especially after regulating 3 new stocks, in 2005, for which the European Union achieved majority fishing rights in the relevant TACs. We could say, without exaggerating, that the vessels from the Member States operate in international NAFO waters as if they were at home, and therefore they have the added responsibility to comply with the rules adopted by the organisation, and the European Commission' duty is to reassert such leadership without hesitating nor yielding, when other Contracting Parties, less dependant on fishing, are taking recourse to reprehensible strategies. It is not unreasonable to remember that the EU is representing fleets with 9 different flags.

NAFO		CATCHES OF STOCKS OPEN TO FISHING							2013
Species	Stock	EU	CAN	RUS	FAR	NOR	USA	OTH	Total
Species managed by quotas	G. Halibut	2+3	6,835	6,389	1,469	199			14,892
	Cod	3M	8,567		896	3,145	1,256		13,864
	Redfish	3M	5,712		1,812	73			7,597
		3O	6,341		1,450				7,791
		3LN	1,500	2,729	1,791				6,020
	Skates	3LNO	3,816	21	392				4,229
	White hake	3NO	57	110	18				185
	Yellowtail F	3LNO	806	7,918	172			1,073	9,969
Shrimp	3L	764	6,095		592			92	7,543
By-catch	SA 3	3,417	1,189	786		21	113		5,526
Total catch CP		37,815	24,451	8,786	4,009	1,277	1,186	92	77,616
Catches with quota		34,398	23,262	8,000	4,009	1,256	1,073	92	72,090
Total quotas held		36,260	40,321	21,207	3,519	1,401	165	6,850	109,723
Utilisation rate		95%	58%	38%	114%	90%	651%	1%	66%
Ratio over the total		49%	32%	11%	5%	2%	2%	0%	100%
Ratio without Canada		71%		17%	8%	2%	2%	0%	

- √ Out of the 9 stocks considered, the European Union leads the production in 5. In the absence of quota for yellowtail flounder, the catches are regularised through the rules for by-catch.
- √ Taking into account only the 3 Contracting Parties with the largest catch volumes, the EU is the one that makes the most of the available quotas (95%).
- √ Canada is wasting almost half of its rights and Russia slightly less than 2/3.
- √ The fishing production of the Community fleet is half of the total catch taken from waters under NAFO management, rising to 71% if we are to exclude Canada, that is a Coastal State.
- √ The Faroe Islands, Norway and the USA focus on fishing one single resource. Canada transfers to the USA, with no compensation, 1,000 t of yellowtail flounder, strengthening their bilateral alliance.

3. MANAGEMENT STRATEGIC EVALUATION / GREENLAND HALIBUT 2+3KLMNO

G. HALIBUT		SA 2+3			TAC 2013		15,510		TAC 2014		15,441		-0,4%	
CP	EU	CAN	CUB	FAR	SPM	ISL	JAP	KOR	NOR	RUS	UKR	USA	OTH	
2013	Quota	6,738	5,741		199	188		1,178			1,466			
	Catch	6,835	6,389		199					1,469				
	Used	101%	111%							100%				
2014	Quota	6,708	5,715		199	187		1,173			1,459			
	Share	43%	37%		1%	1%		8%			9%			

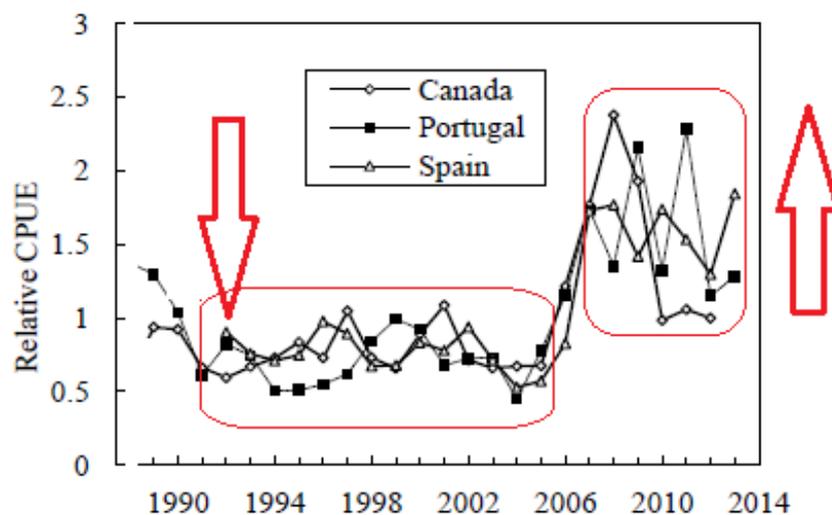
With the decline of spawning cod biomasses at the Grand Banks and Flemish Cap, that justified the introduction of fishing moratoriums in the 1990s, Greenland halibut, due to its significant presence in the entire sub-area 3 of NAFO, emerges as a substitution species in order to maintain income levels for the fleets that used to have cod at the core of their respective fishing plans. With the regulation of the fishery through maximum catch limits, the Contracting Parties with most significant fishing rights compensated partially for the loss of cod quotas. The high utilisation rates of the quotas confirm that there is a market demand to cater for the production, and therefore it is of the essence for the fishing exploitation rate to enable to preserve the stock's reproductive capacity, keeping it within biological safety limits.

The Fisheries Commission adopted in 2003, upon a proposal by the EU, a 15-year recovery plan for this stock, that was not assessed previously by the Scientific Council, namely with the purpose of reconstituting the exploitable biomass 5+ above 140,000 t. The stock assessment, through the XSA (*Extended Survivor Analysis*) method, evidenced persistent inconsistencies among the decreasing indices of biomass from the scientific surveys and the robust increase of catches per unit of effort by commercial fishing. Despite the uncertainties of the assessment, recognised by the Scientific Council, at no time there was any openness to test other methods. The ongoing recommendation for lower mortality rates hinted support to a fishing moratorium, totally out of tune with the catch yields obtained by the fishing vessels up until 2010.

Upon an initiative by the fishing industries of Canada, the EU and Japan, that did not agree to the negative results of the assessment model, an independent expert was hired, of an unquestionable scientific quality, whose forecasts, based on a method normally used to assess demersal stocks, offered a much more positive prospect for the size of the stock. The NAFO

Fisheries Commission approved to establish a working group that developed a strategic management tool for the stock, whose operational models use the catches and the indices from the scientific surveys as primary indicators to perceive the stock's conservation status. The harvest control rule (HCR), by which the TAC is determined, operates with the average of the indices from 3 surveys in the last 5 years. Annual catches may fluctuate 5% in successive years, ensuring the precautionary criteria, because it depends on indicators that reasonably estimate the size of the stock. This management strategy was adopted in 2010, for 4 years, and later on extended for a further 2, and it is expected to be reassessed by the Scientific Council and by the Fisheries Commission in 2016. We insist on some considerations made in 2013 and we add some new data:

- Greenland halibut, in the NAFO convention area, is a part of a complex biological unit that includes sub-areas 0 and 1, in waters under the jurisdiction of Canada and Greenland, and sub-areas 2 and 3, situated further to the south, in which competing fleets from the Coastal States are fishing. Despite this affinity, confirmed by densities of Greenland halibut that are similar in all the sub-areas, the perception of the status of the stocks to the north has always been more positive than in sub-areas 2 and 3.
- It is unfortunate for the Scientific Council, having been prevented by the Fisheries Commission from using catch estimates in 2011 / 2013 in agreement with its own sources and methods, to have discontinued the long series of catches recorded by commercial fishing, by year-classes. This position was reflected in the impossibility to select secondary indicators, such as mortality rates, recruitment and the biomass 5+ of Greenland halibut, useful for the MSE.
- The CPUE (catch-rate) of commercial fishing has experienced a strong and consistent increase in the period from 2007 to 2012, and is way above the average for that indicator since the 1990s for 3 national fleets analysed, as may be seen in the chart drafted by the Scientific Council, which proves that with the same effort and without altering selectivity, the weight of catches per haul is on the rise. The XSA assessment model neglected this reality when estimating the exploitable biomass.



- Out of the 4 annual scientific surveys that assess the stock of Greenland halibut all across and in deeper strata reached by trawler nets, the Canadian autumn survey campaign bears a weight over 70%, covering divisions 2J+3K, the natural grounds for the reproductive component of the stock of Greenland halibut. It is encouraging to verify increased biomass indices in this survey, indicating a reinforcement of mature Greenland halibut, of age-class 10+, which will most likely have a beneficial effect to sustainably restore the amounts caught by fishing.

- The Scientific Council recognises that the series of abundance from the surveys in recent years have some deficiencies related to the spatial and depth coverage, that do not allow for contrast among results from different years. It would be useful, in order to better understand the dynamics of the stock, to conduct a survey encompassing sub-areas 2 and 3. As it is suspected that there is a component of Greenland halibut, of age-class 14+, living in depths that are inaccessible to scientific trawling, it would be advisable to use other techniques to be able to assess the biomass below 1,500 m in order to increase the confidence of the assessment.
- The Canadian spring survey, with less weight in the assessment of Greenland halibut, records an index below the confidence interval for the simulated distribution of the survey using the XSA operational model, which is an exceptional circumstance. It must be referred that out of 6 possible comparisons, only 1 lies below the confidence threshold, which does not justify, in our point of view, neglecting the forecasts based on the MSE model.

Recommendation: The LDAC recommends that the TAC for Greenland halibut, in 2015, be calculated using the HCR (Harvest Control Rule) formula, taking into account the average slope of 0.0089 in the 3 research surveys, which translates into a TAC = 15,578 T. It would be of interest for the assessment to conduct a survey with trawling gear at levels below 1,500 m.

4. ASSESSMENTS REQUESTED BY THE FISHERIES COMMISSION

4.1 - COD 3M

COD		3M		TAC 2013		14,113		TAC 2014		14,521		3%	
CP	EU	CAN	CUB	FAR	SPM	ISL	JAP	KOR	NOR	RUS	UKR	USA	OTH
2013	Quota	8,049	113	522	3,154				1,305	913			56
	Catch	8,567			3,145				1,256	896			
	Used	106%	0%	0%	100%				96%	98%			
2014	Quota	8,281	116	537	3,245				1,343	940			58
	Share	57%	1%	4%	22%				9%	6%			0.4%

4.1.1 – General framework for the stock and fishery

This stock is limited in its entirety to NAFO international waters, without any migratory movements into Canadian waters. It is no surprise that this has always been a fishery in which vessels with flags from the Member States and from the Faroe Islands have prevailed. The shares of the TAC of the 2 above mentioned Contracting Parties add up to 80%, which means that they must assume their responsibilities in a concerted manner, either whenever supporting initiatives, based on science, to improve the knowledge on the stock's biology, or in the adoption of sustainable management and exploitation measures for such an important species. Norway, with 10% of the TAC, will be divided between the interest of its economic agents in fishing, and the indifference when facing strategies to reduce the TAC, because it dominates the market. Directed fishing was banned from 1998 to 2009, because from 1986 to 1995 the total catches, on average, exceeded 30,000 t / year, weakening the stock's reproductive capacity. The Science even suggested that this cod stock would never recover, however, in 2010, with the

arrival of strong, successive year-classes, the spawning biomass enabled fishing to be resumed. It is expected that the stock may bear catches of 20,000 t in the long term, without jeopardising its productivity, provided that the environmental and feeding conditions remain unchanged.

4.1.2 – The importance of the value of natural mortality (M) for assessment and management

The LDAC, in the 2 previous recommendations submitted relevant to NAFO, has questioned the suitability of the proxy value for maximum sustainable yield mortality (F_{msy}), which the Scientific Council designated as F_{max} = 0.145, in the lack of appropriate studies to identify MSY limit reference points. The value in question offers strong doubts, and there are several scientists who are researching and assessing cod stocks which they understand are being estimated by default. This conclusion is relatively easy to reach if we compare the value of the FMSY proxy for cod 3M with the same proxy for cod 3NO, and with fishing mortality rates that have been considered to be sustainable for most cod stocks in the North Atlantic.

Natural mortality (M) is perhaps the most determining parameter in the assessment of demersal stocks; and identifying natural mortality influences, directly and at a large scale, the perception of the stock's productivity, the reference indicators for mortality and the recommendation for long-term sustainable TACs. Natural mortality and the vector of partial recruitment are variables that feed the yield per recruit curve (YPR), from which the values for F_{max} and F_{0.1} are drawn, as being the limit reference points for correctly managing yields. The EU, aware of this reality and of the conjectures issuing around the reliability of the indicator (M), has funded a research study conducted by Spanish scientists who are assessing the stock of cod 3M, in which several scenarios may be tested based on data-time series since 1972.

This research assumes different backgrounds for natural mortality (M), keeping it constant or assuming variations, as a function of 3 age-classes and along 3 different periods, in the long data-time series 1972 / 2012. This exercise has generated 4 scenarios combining all the possibilities of variation for natural mortality, by ages and in time, estimating the relevant values for M according to the assumptions taken into account. The following chart records the results obtained with this study:

Median of M for the four different scenarios.			
Assess 1	1-8+		
1972-2012	0.15		
Assess 2	1-2	3-5	6-8+
1972-2012	0.20	0.15	0.21
Assess 3	1-8+		
1972-1995	0.13		
1996-2008	0.20		
2009-2012	0.24		
Assess 4	1-2	3-5	6-8+
1972-1995	0.20	0.14	0.18
1996-2008	0.21	0.18	0.25
2009-2012	0.23	0.25	0.21

Some of the conclusions reached by the researchers who conducted this study; the most significant one is literally quoted from the report they submitted:

The M value estimated in Assess 1 (M constant for ages and time) is the second lowest of all the scenarios (0.15) and is very low compared with the M value assumed in other cod stocks of the NAFO area. The other scenarios present similar means M values, around 0.2. This value is more similar to the M value assumed in other cod stocks of the NAFO area

- Based on the values of the Deviance Information Criterion (DIC) it is acknowledged that the best scenario seems to be 4, with natural mortality varying by year-classes and in time. The worst is scenario 1, in which M remains constant for all ages and from 1972 to 2012.
- Despite some studies stating that the value of M for cod stocks increased strongly in the mid-1990s and up until the middle of the last decade, the study funded by the EU shows that the highest values for M occur in the last few years (2009/2012), during which period the biomass and the abundance of cod increased significantly.
- The estimated average natural mortality for the 4 working hypotheses considered are as follows: scenario 1 = 0.15, scenarios 2-3 = 0.19 and scenario 4 = 0.21.
- The results for spawning biomass (SSB) and recruitment (R) and for mortality rate (F) are similar throughout the data-time series for the 4 scenarios, whereby the impact of M on such indicators is very low. The impact will most likely be higher when calculating the **limit reference points**, as the Spanish researchers acknowledge.

According to our reflections, and having listened to other sensitivities with a scientific background, it is highly unlikely that the natural mortality rate has been constant by age and throughout the data time-series used to assess the cod stock. The assessment model had assumed a value for $M = 0.218$ that the assessment adopted changed, in 2013, to 0.146, just because it was the value that best adjusts to the selected Bayesian model. The natural mortality rate (M) that is being considered, abnormally low for cod stocks, drags the fishing mortality rate (F target) to an exceptionally low value (0.145). The stock/recruitment ratios (YPR and SPR), that generate limit reference points for fishing mortality, are being distorted by the value of natural mortality, as a rule close to F 0.1, just because they fit better into the model. It is surprising that a stock that has been studied by Science for 4 decades and for which there are long data-time series from surveys and from fishing is enveloped in such uncertainty. We conclude, because the studies and the scientific experience so refer, that the F target = F Max for this stock ought to be situated in the proximity of F 0.25.

4.1.3 - Stock assessment and stochastic forecasts for its management in 2015

The recovery of this cod stock, that evolves in an area situated half-way between the cod stocks of Greenland and of the Grand Banks, is a success history issuing from low by-catches during the period of moratorium, with the indispensable contribution of the mass presence of shrimp and redfish in division 3M, and with this resource maintaining high levels of biomass and abundance since 2004. The stock is assessed based on a scientific survey coordinated by the EU, fishing down to a depth of 1,400 metres, that calculates the indices of abundance and biomass by ages. Commercial fishing brings forward data that enable to make a distribution of lengths per age, with a very representative sampling in the various fleets. After the TAC was set above 14,000 t in 2013 and 2014, it comes as a surprise that the forecast yield made by the Scientific Council for 2015, based on F target = F Max 0.145, is of 10,838 t, even taking into consideration that the biomass forecast in 2013 for 2014 was revised downwards. A more moderate growth of abundance was identified, that did not invert the increasing trend in the size of the stock, which trend has been perceived continuously since 2005. On the assessment and forecasts for this stock we make the following comments:

- The biomass limit (Blim) below which fishing is not to be authorised is of 14,000 t. For stocks as resilient and voracious as cod, this indicator is normally 30% of the biomass of maximum sustainable yield (Bmsy). In the absence of this reference point, and assuming this correlation, the spawning biomass MSY will be around 47,000 t. The assumption, in 2014, of a spawning biomass of 45,000 t places this stock fully within the safety zone and recording the highest level of SSB in the entire data-time series.

- All the forecasts for the evolution of the reproductive biomass, in any scenario chosen for F mortality, point towards growth in that component of the stock, with the forecast for 2015 being 1.5 Bmsy, and for 2016 this reference indicator may double.
- Despite having corrected the abundance by ages, more significant for ages 2 and 4, that called for a revision of the estimated SSB for 2014, the spawning stock will have a weight of 58,000 t in 2015, very close to the 62,000 t estimated in 2013 for 2014. Therefore, it is hard to understand that for an F target that remains the same, the TAC proposed for 2015 is reduced by 3,700 t, going from 14,521 t in 2014 to 10,838 T the following year.
- It is important not to lose sight of the fact that the value for F target = Fmax used in the stochastic forecasts is clearly estimated by default, taking into account the doubts on natural mortality connected to this assessment model. Admitting that F is to be revised to a current value in cod stock management, for example by ICES and even by NAFO at the Grand Banks, the F resulting from the forecast $0.75F_{2013} = 0.259$, corresponding to a TAC of 17,926 t, would be suitable for 2015 in a logic of sustainable management of this stock.
- On the other hand, the fishing mortality rate estimated in 2013 at 0.346 can only be understood in the light of the high degree of uncertainty in the determination of natural mortality M, because the catch with which the SC operated is that which issues from NAFO statistics, based in turn on the daily catch reports from the vessels, and on landing and inspection records.
- All the scenarios for SSB / Yield considered are associated to a very low risk (-5%) of breaking the Blim or of leading SSB 2016 below the levels of SSB 2013.
- Finally, and despite the preliminary nature of the data, which will not be taken into account to set the TAC for 2015, we believe we know the results of the survey in 2014 at the Flemish Cap reveal an exponential growth of the indices of cod biomass, which have almost tripled.

Recommendation: No stock grows forever, being the target of good management that stabilises it at a high level (MSY). The most robust TACs must be extracted during years of growing SSB and not when SSB regresses. Given that such a reality is measurable for cod 3M, the LDAC proposes in 2015 to roll-over the TAC of 2014, at an almost zero risk. To ask Scientific Council on the risk analysis of setting TAC at the current level and its response to be considered in the shaping the final decision.

4.2 - REDFISH 3LN

REDFISH		3LN			TAC 2013		6,500		TAC 2014		7,000		8%	
CP	EU	CAN	CUB	FAR	SPM	ISL	JAP	KOR	NOR	RUS	UKR	USA	OTH	
2013	Quota	1,185	2,769	637						1,870			39	
	Catch	1,500	2,729							1,791				
	Used	127%	99%	0%						96%				
2014	Quota	1,276	2,982	686						2,014			42	
	Share	18%	43%	10%						29%			1%	

The physical area corresponding to this redfish stock is divided equally between Canada's Exclusive Economic Zone and the NAFO regulatory area. This fish is much demanded at the marketplace, and so the quotas of the Contracting Parties are usually exhausted. Overfishing of the TACs in the 1980s and 1990s, originated by the Canadian fleet, eliminated the reproductive stock and gave rise to a fishing moratorium from 1998 to 2009. The biomass has been increasing subsequently since the mid-1990s, fruit of residual mortality rates and rather strong annual

classes recruited. Canada holds almost 50% of the TAC, and the European Union's quota is important for the Baltic countries. The total catch by the EU fleet exceeds the quota because transfers from other Contracting Parties have been made.

- The average catch of 21,000 t, occurring during the period prior to the decade of overfishing the TAC for this stock, shall be the reference for an MSY catch in the long term, once having revised the value of 25,000 t that was stated as the target in the assessment made in 2013.
- The relative spawning biomass is 40% above Bmsy, indicator estimated at 200,000 t.
- The fishing mortality rate of Fmsy is 0.12. The TACs adopted between 2010 and 2014 were based on mortality rates of 1/6 Fmsy, having fluctuated between 3,500 / 7,000 t.

Canada is pressing hard for more ambitious management measures for this stock, such as the LDAC defended, as a matter of fact, in its recommendation of 2013, proposing the TAC to issue from a mortality of 1/3 Fmsy, given that the biomass was above MSY. The Canadian fishermen, as far as is public, have requested their Administration more fishing opportunities. Such attitude may contribute towards Canada reviewing strategies originally designed to turn away competitor fleets, by artificially compressing the TACs.

The Scientific Council proposes to increase the level of F in 2015 from 1/6 Fmsy to twice that much, relative to the F of 2014, which translates into a TAC = 10,130 t. On the other hand, upon request by the Fisheries Commission, it developed an MSE management strategy based on 6 operational models and on 4 HCR (Harvest Control Rules). There are 2 exploitation rules that place the TAC immediately at 20,000 t, that may bear an excessive risk for a fishery reopened 5 years ago. We note that none of the HCR sets the TAC depending on the scientific surveys, as opposed to the MSE for Greenland halibut and to the conservation plan discussed at the WGFMS-CPRS for cod 3M.

Recommendation: To support the proposed TAC for 2015 at 10,130 t, issuing from a fishing mortality rate of 1/3 Fmsy. Taking into account that this stock is fully inside the safety zone and its reproductive biomass is growing, it is acceptable to support Canada's eventual interest in having a slightly more robust TAC, though always below 2/3 Fmsy. Such disposition on behalf of the EU must have some compensation from Canada, namely to support the roll-over for the cod TAC or adjusting the TAC for redfish 3M, which shows a biological status as stable and consistent as that of redfish 3LN.

4.3 - SKATE 3LNO

SKATES		3LNO		TAC 2013		7,000		TAC 2014		7,000		0%	
CP	EU	CAN	CUB	FAR	SPM	ISL	JAP	KOR	NOR	RUS	UKR	USA	OTH
2013	Quota	4,408	1,167							1,167			259
	Catch	3,816	21							392			
	Used	87%	2%							34%			
2014	Quota	4,408	1,167							1,167			259
	Share	63%	17%							17%			4%

This is a straddling stock whose physical area is shared between Canadian waters and NAFO international waters, with skate in division 3Ps under separate management by Canada, despite belonging to a common stock for divisions 3LNO. The first TAC was adopted in 2005, with

the EU receiving the most robust share in the allocation key, for having proven that it is the most active Contracting Party in the production of skate, at least in the last 15 years. Inside the EU, Spain dominates this fishery, holding a quota of almost 50% of the TAC. Canada, supported by the USA, pressed hard to lower the TAC, due to the lack of interest by Canadian fishermen to catch skate. From an initial TAC of 13,500 t, maintained during the first 5 years, for 2 years now this TAC is of 7,000 t, having been successively reduced since 2010. The EU quota is insufficient for the average level of catches by the Community fleet since 2005, whereby the time has come to reject any attempt by Canada to lower the TAC. Such an initiative, autonomously or concerted, would have the sole aim of harming, surreptitiously, European fishing operators, as the stock, despite being in a cycle of low productivity, has been giving signs, albeit modest ones, of increasing its size. Recruitment between 2010 and 2013 was higher than the average for the data-time series, forecasting greater availability of skate in the coming years, maintaining the low mortality rates of the last decade.

Recommendation: The Scientific Council recommends catches not to exceed 5,000 t, the average for 2006-2013. As only the EU is utilising its quota efficiently, the LDAC recommends for 2015 to roll-over the TAC (7,000 T), enabling the EU to maintain catches around 4,000 t.

4.4 - STOCKS ASSESSED FOR WHICH DIRECTED FISHING IS BANNED

4.4.1 – WITCH FLOUNDER 3NO

Stock status	Assessed in 3 scientific surveys, showing increasing biomass indices. Weak recruitments, though low mortality rates since the mid-1990s have enabled recruits to survive. Stock above Blim since 2011. Proxies calculated for MSY limit reference points for SSB and F.
Fishery	Average annual catch is stabilised at 300 / 400 t, therefore biomass is increasing and mortality falling. Stock supports a slight increase of F
Recommendation	It is reasonable to maintain the ban on directed fishing in order to consolidate the increasing trend for SSB. It is defensible to adapt by-catch from 5% to 10% in order to regularise the increased presence of this species in fisheries exercised under quota. (NB: S.A.R. prefers the by-catch level unchanged)

4.4.2 – AMERICAN PLAICE 3NO

Stock status	Input data for assessment model issuing from 3 surveys and length and weight-at-age from commercial fishing. Biomass estimated at 36,000 t for a Blim of 50,000 t. Recruitment is by rule scarce with SSB below Blim. Increasing since 2007 below the average. Stock with approved management strategy, with reference points for SSB and F.
Fishery	High by-catch in Canada's yellowtail flounder fishery. By-catch of 15% only applicable to this fishery. Catch estimates by the Scientific Council are greater, twice as much, than official NAFO statistics.
Recommendation	With moderate by-catches, Blim may be overcome in 2017. Support to continue with moratorium. By-catch in yellowtail flounder fishery is high, and still does not allow to exert quotas complying with the NCEM rules

4.4.3 – AMERICAN PLAICE 3M

Stock status	Stock with qualitative assessment. Total and spawning biomass with discrete increase since 2007. Good recruitment in 2006, without continuity. No proxies for reference points have been identified. F and F0.1 are indicative.
Fishery	Residual by-catch under 100 t / year. Important to collect catch data by ages, in number, weight and length.
Recommendation	Maintain the fishing moratorium and current by-catch levels.

5. STOCKS THAT ARE MONITORED, BUT NOT ASSESSED

5.1 - STOCKS WITH DIRECTED FISHING ACTIVITY

5.1.1 - REDFISH 3M

REDFISH		3M			TAC 2013		6,500		TAC 2014			6,500		0%	
CP	EU	CAN	CUB	FAR	SPM	ISL	JAP	KOR	NOR	RUS	UKR	USA	OTH		
2013	Quota	7,813	500	1,750	69	69		400	69		9,137		69	124	
	Catch	5,712			73					1,812					
	Used	73%	0%	0%	106%	0%		0%	0%	20%		0%			
2014	Quota	7,813	500	1,750	69	69		400	69		9,137		69	124	
	Share	39%	3%	9%	0.3%	0.3%		2%	0.3%		46%		0.3%	1%	

This fishery is very important for the European Union, because it is the Contracting Party with the largest presence of vessels in division 3M, in waters that have no biological or territorial connections whatsoever to the EEZ of the Coastal States. Such presence is justified by possessing the best total ratio of quotas at the Flemish Cap from among all the Contracting Parties. The productive activity in this division, with borders fully included in the high seas, has been reinforced when Poland and the Baltic states joined the EU, as they received fishing rights in the area, which they have exercised every year with good utilisation rates. As opposed to Russia, that holds the largest share of the TAC, the European Union efficiently utilises its quota and the transfers received.

The management model for this resource has 2 specificities that deserve being highlighted:

- The existence of a reference TAC of 20,000 t, from which the quotas of the Contracting Parties are calculated based on a fixed allocation key. It does not influence the total catches, indexed to the real TAC, issuing from scientific advice and negotiation, whereby the reference TAC does not entail any hazard to the stock's biological safety.
- For two years now, according to footnote no. 8 of Annex I-A of NAFO CEM, up until the 1st of July catches of redfish 3M may not exceed 50% of the actual TAC adopted. If fishing were to be interrupted for such reason, before July 1st, by-catch is limited to 5%.

There seem to be insufficient grounds to change the management model concerning the reference TAC, because the real TAC safeguards a sustainable exploitation of the stock, taking into consideration the assessment and the scientific advice. Any changes to the model would harm EU stakes and benefit those with low or even zero utilisation rates of the quotas they hold, such as is the case for Russia and Canada, as Cuba catches through chartering. Canada has submitted proposals to eliminate the reference TAC, precisely because they do not ignore that the measure would only have an impact on the EU. Such initiatives, brought forward in tactical cooperation with the USA, cannot be dissociated from the ultimate goal to reduce fishing at the Flemish Cap to the lowest possible levels, freeing the space to make way for the expansion of prospecting activities. Russia would not be affected by management using real quotas, because the quota it would eventually retain would be sufficient to regularise its usual catches. Only the EU would lose out by changing the management model for this stock, as may be proven with the catch inventory between 2008 and 2013:

REDFISH		EUROPEAN UNION				RUSSIA			
Year	Real TAC	Ref. quota	7,813	39.07%	Missing	Ref. quota	9,137	45.69%	Excess
		Catch	Used	Real quota		Catch	Used	Real quota	
2008	5,000	5,783	74%	1,953	-3,830	1,215	13%	2,284	1,069
2009	8,500	7,473	96%	3,321	-4,152	0	0%	3,883	3,883
2010	10,000	7,105	91%	3,907	-3,199	927	10%	4,569	3,642
2011	10,000	6,734	86%	3,907	-2,828	0	0%	4,569	4,569
2012	6,500	5,170	66%	2,539	-2,631	1,711	19%	2,970	1,259
2013	6,500	5,712	73%	2,539	-3,173	1,812	20%	2,970	1,158
TOTAL		Deficit with actual quota			-19,812	Surplus with actual quota			15,579

Only in the last 6 years, if the quotas were calculated based on the real TAC and not on the reference TAC, the EU would have ceased to fish almost 20,000 t of redfish, while Russia would not have had any difficulty to regularise the catches by its vessels, and would still have 15,000 t left over. Since this regime does not lead to any risk to keep the species within the safety zone, because it is the real TAC that is being fished, the European Union must oppose any attempt to subvert or change it.

It is worrying that in the last 2 years the real TAC is exhausted by the middle of the year. The biomass and abundance indices for this stock have been increasing, despite the proliferation of cod in the same division resulting in higher levels of predation. With falling spawning biomass, in 2010 and 2011, the actual TAC was of 10,000 t and even so, the trend was inverted. With B and SSB on a rising trend, it is hard to understand that the TAC remains at 6,500 t, which in turn leads to early closure of the fishery and the difficulty to prevent discards.

Recommendation: To maintain the management model for this redfish stock, whose biological results are positive. To set out a moderate increase of the TAC, as the status of the resource allows so, inserting the proposal into a broader negotiation package that does not harm essential values. NB: S.A.R. is in favour of keeping the current TAC, not diverging on the management model.

5.1.2 - REDFISH 3O

REDFISH		3O		TAC 2013		20,000		TAC 2014		20,000		0%	
CP	EU	CAN	CUB	FAR	SPM	ISL	JAP	KOR	NOR	RUS	UKR	USA	OTH
2013	Quota	7,000	6,000				150	100		6,500	150		100
	Catch	6,341	75							1,450			
	Used	91%	1%				0%	0%		22%	0%		
2014	Quota	7,000	6,000				150	100		6,500	150		100
	Share	35%	30%				1%	1%		33%	1%		1%

The fishery for this redfish stock, spatially divided between offshore NAFO waters and Canada's EEZ, was regulated in 2005 throughout all its area. The EU holds slightly over 1/3 of the TAC and utilises most of its quota every year. Canada and Russia hold similar shares of the TAC, but their vessels are hardly or not at all active in the fishery. There is sufficient information from the 2 Canadian surveys and from commercial fishing in order to develop a quantitative assessment model, that the Scientific Council has delayed due to the manifest lack of interest by Canada. The last complete assessment of the stock confirmed its good state of conservation, and the surveys conducted in 2013 did not change this perception, despite a slight decline in the biomass indices, not detected by commercial fishing, by vessels of the European Union. There are no grounds to change the management measure.

▪ Possible aggregation of redfish stocks 3O and 3LNO in one single biological unit

- √ Redfish 3LN has been subject to a fishing moratorium from 1998 to 2009. The stock evidences signs of high productivity and the TAC may be in a condition to be increased from 3,500 t in 2010 to 20,000 t in 2018, total catch considered as MSY by the Scientific Council.
- √ Redfish 3O shows increasing biomass indices since 2002, and resilience to fishing mortality rates corresponding to the current intensity of the fishery.
- √ There is apparently no genetic difference between these 2 redfish stocks, comprising deep-sea components (*mentella*) and mid-water components (*fasciatus*), and catch reports are made jointly because their features are not easy to be distinguished.
- √ During the period in which 3O was open to fishing and stock 3LN was under moratorium, any reflection on integrating both stocks into one single unit would be considered unreasonable. In the current stage in which both 2 stocks are healthy, this option deserves to be discussed.
- √ The quotas of the Contracting Parties, holding fishing rights on these redfish populations, in a united stock would be the sum of quotas 3O and 3LN.

Recommendation: Roll-over the TAC of 20,000 t. Propose the Fisheries Commission to ask the Scientific Council if aggregating the 2 stocks is a viable hypothesis.

5.1.3 – WHITE HAKE 3NO

WHITE HAKE		3NO		TAC 2013		1,000		TAC 2014		1,000		0%	
CP	EU	CAN	CUB	FAR	SPM	ISL	JAP	KOR	NOR	RUS	UKR	USA	OTH
2013	Quota	588	294							59			59
	Catch	57	110							18			
	Used	10%	37%							31%			
2014	Quota	588	294							59			59
	Share	59%	29%							6%			6%

This stock was initially regulated by a TAC of 8,500 t in 2005. The EU, taking into account the high levels of catches by its fleet in 2002 and 2003, has the largest share of the TAC. The stock behaves atypically, because the availability of white hake for commercial catches depends on strong recruitments in the previous 2 to 3 years. Catches have been insignificant in the last decade, both in the regulatory area and inside Canada's zone. The scientific surveys have detected in 2011 and 2013 good year-classes at age 1, which may provide more significant commercial catches in the next 2 years, provided that they survive. Despite the fact that the stock is not under pressure from fishing, for the reasons above mentioned, Canada has done what it could to see the TAC reduced down to 1,000 t. Moreover, it is expected, according to footnote no. 27 of the quota chart, that the fishery may reopen with a TAC of up to 2,000 t if the vessels record and prove CPUE above the average, after the CP have adopted such measure via electronic vote.

Recommendation: To keep the management measure in force, as it is the minimum admissible standard.

5.1.4 – YELLOWTAIL FLOUNDER 3LNO

Y. FLOUNDER		3LNO		TAC 2013		17,000		TAC 2014		17,000		0%	
CP	EU	CAN	CUB	FAR	SPM	ISL	JAP	KOR	NOR	RUS	UKR	USA	OTH
2013	Quota		16,575		340								85
	Catch	806	7,918							172		1,073	
	Used		48%		0%								
2014	Quota		16,575		340								85
	Share		98%		2%								1%

The 3 surveys conducted in 2013 monitored biomass and abundance indices that continue to be high and above the indicators that may lead to MSY. The abundance indices for juveniles are within the average of the data-time series. The recommendation to set the TACs is based on mortalities of 85% Fmsy, corresponding to amounts around 25,000 t. Since 2009, the TAC adopted is of 17,000 t, because catches by Canada, whose fishing rights add up to 98% of the TAC, are on average lower than 10,000 t. The yellowtail flounder fishery is usually accompanied by high levels of by-catch of American plaice, which may lead to delays in the recovery of its SSB

Recommendation: The EU lacks any quota for this resource. The EU vessels must be allowed fishing under by-catch rules of NCEM. Accept the management proposed by Canada.

5.2 - STOCKS WITHOUT DIRECTED FISHING OR WITH LOW PRODUCTIVITY

Species	Stock	Comments / Recommendation
Cod	3NO	Surveyed biomass indices show increasing trend. Stock below Blim. Maintain moratorium. Increased presence of cod hinders management of by-catch of 4% in fishing directed to other species. Reinstate 5% as previously.
Cod	2J+3K	Propose the assessment to be back in the competence of the Scientific Council.
Witch F.	2J+3KL	Increasing size of stock, though below Blim. Maintain moratorium.
Capelin	3NO	Propose acoustic survey, interrupted in 1994. Maintain moratorium.
Squid	SA 2+3	Stock in a cycle of low productivity. Maintain TAC at 34,000 t

6. SHRIMP STOCKS TO BE ASSESSED AT THE ANNUAL MEETING

6.1 - SHRIMP 3L

SHRIMP		3L		TAC 2013		8,600		TAC 2014		4,300		-50%	
CP	EU	CAN	CUB	FAR	SPM	ISL	JAP	KOR	NOR	RUS	UKR	USA	OTH
2013	Quota	479	7,163	96	96	96	96	96	96	96	96	96	96
	Catch	764	6,095		592	178	92						
	Used												
2014	Quota	240	3,580	48	48	48	48	48	48	48	48	48	48
	Share	6%	83%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%

Shrimp is Canada's most important internal fishery because this species is in high demand at the domestic and at neighbouring USA marketplaces, as this is the most consumed seafood there according to recent statistics. The shrimp stock has been subjected to fishing above 25,000 t up until 2010, and after that year its productivity was visibly diminished. The SC will only disclose information on its assessment before the annual meeting, so it would be premature for us to state an opinion without knowing the survey results. It is hard to understand why the EU has not demanded Canada to effect the promised compensation through transferring redfish quota for having been authorised to fish for shrimp 3L in the regulatory area.

6.2 - SHRIMP 3M

The fishery was banned at the annual meeting of 2010, and the situation has been maintained until 2014 due to the significant fall of the biomass index for shrimp 3M. The strong comeback of cod at the Flemish Cap and the fact that shrimp is at the base of the food chain are the immediate reasons to explain such decline, as fishing mortality has never been a threat to this stock. Extending the concept of ecosystem management to the role that fishing may play in helping restore the equilibrium in the habitats of living resources should make room for a reflection on adapting the TAC levels adopted for cod in this same area. Its biological status, at the level of MSY and expanding towards an even higher SSB, is having a disproportionate impact on shrimp, and this deserves a reflection from such a viewpoint.

Recommendation: A trial commercial fishery to be undertaken, with one European vessel, as being the robust CP with fishing rights on this stock, must be foreseen, in order to collect add-value data to the information gathered through the scientific survey at the Flemish Cap area.

7. VULNERABLE MARINE ECOSYSTEMS

7.1 - ECOSYSTEM APPROACH. MEASURES ADOPTED BY NAFO

The development of civilisation, to which the process of globalisation of the world economy belongs, has brought urgent challenges to Humankind in matters of sustainability for our Planet that were not envisaged a few decades ago regarding their complex interdependencies, both on land as well as at sea, 7 times vaster than land. Nowadays it is totally assumed, especially by the geopolitical blocks that lead international forums, that policies must be adopted which combine environmental sustainability with obtaining dignified sources of income for human communities, and that the long-term conservation of living resources is a mix of exploitation rates adapted to the prevention of impacts on the surrounding natural environment. The General Assembly of the United Nations is precisely the most broadly accepted world-wide forum to discuss and adopt codes of conduct and specific measures destined to protect public values and assets in the broadest sense. During the last decade, many guidance documents have been issued in this multi-lateral political front for the sustainable management and exploitation of marine biological resources within a framework of an integrated approach to ecosystems. The resulting guidelines of this new vision must be adopted by RFMOs in the governance of the high seas, in order to protect sensitive structures on the seabed, whose characteristics and dimensions are relevant to ensure the equilibrium of the various subsystems.

NAFO has pioneered research of the seabed in the area of its jurisdiction, as well as the adoption of measures with the aim to prevent or minimise adverse effects from fishing activities in areas that may indicate the existence of vulnerable marine ecosystems. The resolutions by United Nations, containing provisions on ecosystem management, have been transposed to NAFO regulations and led to the establishment of working groups made up of scientists and managers, whose proposals have been validated by the Fisheries Commission, with the endeavour to safeguard the proportionality between the goals intended and the resulting potentially negative effects on the profitability of catch operations. Such a record of equilibrium is what the LDAC advocates as a fundamental value, assuming it is correctly reflected in the measures adopted by NAFO in recent years, that are described in summary as follows:

- Introduction in the NCEM of a chapter totally dedicated to ecosystem management.
- Delimitation of protection zones around 6 sea mounts, inside which bottom fishing is prohibited, by the 31st of December of 2014.
- Delimitation of 13 zones in which fishing is prohibited in order to prevent harming live coral structures, sponge fields and the habitat of other vulnerable invertebrates.
- Mapping the fishing area, by superimposing vessel tracking since the 1980s, whose borders may not be crossed without taking appropriate precautionary measures.
- Definition and successive reduction of the limits for accidental encounter with VMEs by the fishing footprint, compelling vessels to move on and to report the event to the relevant bodies.
- Strict regulations to be met when starting exploratory fishing in new fishing areas.
- Exhaustive listing of organisms likely to fall under the category of VME and of elements of diverse hydro-physical nature that may indicate the presence of VMEs.

7.2 - METHODS TO ASSESS THE PRESENCE OF RELEVANT VME.

On a yearly basis, the Fisheries Commission, subjected to the duty of monitoring the efficiency of the process of global ecosystem management and not only of the halieutic stocks that evolve in the area of the convention, asks the Scientific Council for technical advice on the matter. The annual report of 2014 acknowledges that most of the existing information on VMEs is collected during routine scientific surveys of the biological stocks, because the NEREIDA project was stopped precociously, and it used to be the primary and specific source of information. The LDAC recommended that this project be continued, facilitating the means necessary to characterise the ecosystem in sub-area NAFO 3, in which the fishing effort is concentrated. The recommendation is reiterated, because qualitative knowledge about the seabed is only reliable through directed projects and not with surveys and methods designed for other purposes.

The Scientific Council took recourse to the kernel method to analyse densities, which method does not enjoy consensus in its acceptance by this body, considering the limitations in spatial resolution, raising serious doubts as to the design of the areas in which VMEs occur or may occur. Nor does the definition of VME according to this method take into account environmental information that is relevant to characterise fragile ecosystems, such as the kind of substratum, currents, temperature, etc. On the other hand, the criteria used to qualify VMEs enable to propose areas that were subjected to a great fishing effort and which present, through this method and merely by reason of such circumstance, high concentrations of VME indicators. In areas subjected to trawling for decades, it is pertinent to doubt whether such indicators are real or whether they have been virtually generated by the kernel methodology using minimum samples that should not be extrapolated until they may be confirmed by survey campaigns, of the NEREIDA kind, using real analysis procedures.

The LDAC is still concerned that the NAFO Scientific Council, under the influence of the weight of Canadian scientists (60%), is making disproportionate efforts in the ecosystem dimension, reducing the time and allocation of human resources to assess biological resources, while NAFO is satisfactorily executing the UNGA resolutions. This option cannot be separated from the considerations already made regarding the leadership of EU fishing in NAFO.

7.3 - REASSESSMENT OF CLOSED AREAS AND NEW AREAS

The Scientific Council reassessed the efficiency and the extension of areas closed to fishing, pursuant to the protection of VMEs of several typologies, in reply to a request by the Fisheries Commission, since according to the NCEM they must decide on suitable measures to this respect in 2014. Additionally, the Scientific Council identifies new areas in which it has recorded the marginal presence of VME indicators, netted by the scientific surveys and whose weights start at 150 g for small gorgonians, at 600 g for large gorgonians and at 1.4 kg for sea pens. Already when signalling locations with sponges, the recording criterion was 75 kgs. The Scientific Council considers that the majority of closed areas fully meet the standards to prevent adverse impacts on VMEs, with the exception of areas adjacent to zones 3 and 4, despite the fact that collection in these ecosystems take as a reference the above mentioned weights. Moreover, 3 new areas have been identified, 1 at the Tail of the Grand Banks and 2 at the Flemish Cap (13 and 14). It makes sense to recall that NAFO provisions, which regulate the move-on rules for vessels from locations where VMEs are encountered, take as reference 300 kgs for sponges, 60 kgs for live coral and 7 kgs for sea pens. These are the amounts that the Fisheries Commission designated as being relevant in order to impose conditions on extractive

activities, with the aim to reconcile, in a balanced manner, the protection of environmental and socio-economic values. It must be underlined that the WGEAFM itself refers textually in its report the following:

It was emphasized that the polygons were not necessarily proposed closure boundaries but rather hot spots where VME could be located, as noted in 6.a.i.

Given that NAFO has responsibly taken efficient measures to comply with the UNO resolutions, with a degree of demand that is exemplary for other RFMOs, the LDAC recommends additional research to clarify the relation existing between the low weights of the samples collected in VMEs during the scientific surveys and the effective presence of significant concentrations of such organisms. Only when such work is concluded must the new areas be assessed.

8. TECHNICAL MEASURES AND EVENTUAL CHANGES TO THE NAFO CEM

The NAFO Conservation and Enforcement Measures (NCEM) are a code of rules that encompass technical, control and monitoring domains of fishing and ecosystem sustainability, which have been perfected by NAFO committees, with recourse to the experience and knowledge of the experts that advise the organisation. The recent recommendations by the Performance Review Panel have already been partially transposed to this internal regulation, with the aim to align it to FAO guidelines on sustainable fishing in the high seas. Since there are as of yet no closed documents, however progressive and innovative they may be, it is understood that the systematic revision of the NCEM, especially in the case of questions of mere detail, may be more detrimental than beneficial. No legal regime, in whichever setting, may bear annual changes if the aim is for it to be complied with responsibly. The LDAC reiterates the recommendation made in 2013 on the urgency to stabilise NAFO regulations in order for skippers not to be obliged to change routines that were acceptable the previous year.

8.1 - DURATION OF THE EXPERIMENTAL HAUL (STATIC WP 14/12)

The fishing area in NAFO international waters, given the geomorphological features of the seabed and by the availability of food at the lower level of the trophic chain, fosters the fixation of diverse biological resources, whose stocks possess significant spatial connections. The NAFO regulatory area, due to such a rich ecosystem, originates fisheries that although targeting predefined species, always lead to a certain level of by-catches.

Recognition of the inevitable nature of this circumstance, that must not be regarded as a negative one as it reflects the endogenous richness of this fishing ground, has led to the regulation of the procedures to be followed by skippers whenever facing excessive levels of by-catch. One of the measures that the Fisheries Commission has adopted was the experimental haul, after a vessel returns from a division from which it has had to move on in order not to violate authorised levels of by-catch. In accordance with Article 6.6 b) iii), the experimental haul may not exceed 3 hours. Canada is now proposing such period to be reduced to 1 hour, alleging that a 3-hour haul may cause too much harm to species that the vessel should abstain from fishing.

We recall that the experimental haul is a relatively recent rule, which was adopted by consensus among the Contracting Parties, understanding that a haul of such duration enables the vessel's skipper to collect the minimum necessary information on the catch composition in the area in which such a fishing operation was performed. Reducing the time from 3 hours to 1 hour may reveal an experimental haul that complies with the limits for by-catch, due to the

short time in which the fishing gear is deployed, which situation might not be the case if the haul is performed for 3 hours. On the other hand, the operational costs of such a short-lasting haul must not be underestimated, as the technical manoeuvres to cast the gear to the bottom and then hauling it back on board are very complex. During a 3-hour haul, usually representing less than 30% of the time involved in a trawling haul, the absolute weight of by-catch shall be, in the vast majority of cases, an amount with very limited risk for the stocks in question. It is not sensible to support the Canadian proposal, as it offends a realistic, balanced rule.

8.2 - LABELLING BY PROCESSING DATE (STATIC WP 14/14)

Canada's history in the attempt to enforce the recording of dates on fish blocks is rather unfortunate, including from the viewpoint of the ethics of the procedures it has taken recourse to. Confronted with the uselessness for the monitoring process of recording the catch date, as neither the stowage of processed catches, nor their landing could be organised respecting such a reference, Canada dropped this goal. However, as for a rule, the underlying goal of Canada's proposals is not just efficiency for the monitoring systems, the catch date was replaced by the processing date. The reasons to reject the proposal are exactly the same on which the NAFO Fisheries Commission based the non-adoption of introducing the catch date. It is yet another task for the crews on board, that would increase stress levels, high enough as it is, in complying with routine tasks. Operations on board this kind of vessels involve processing large amounts of fish in confined spaces in the shortest time possible, in order for the catch not to lose quality. Crew members are required to perform a multiplicity of tasks until the catches are stored in the hold, involving separation by species, sizes, estimating weights, without exceeding tolerance margins, freezing, packaging, etc. It is unacceptable, even because Community regulations do not provide for it, to impose new labelling requirements for fish blocks other than such as are already adopted under the NCEM. The European Union has been firm in opposing this whim of Canada's and must maintain the same position.

9. EASTERN NEWFOUNDLAND STRATEGIC ENVIRONMENTAL ASSESSMENT REPORT

On August 5, 2014, The Canada- Newfoundland and Labrador Offshore Petroleum Board (C-NLOPB) has released the final Eastern Newfoundland Strategic Environmental Assessment (ENSEA)

Long Distance Advisory Council (LDAC), which took part in the process of public consultation on the draft ENSEA, and sent its comments to C-NLOPB on April 10, 2014, would like to present its opinion on the final version of ENSEA. In our letter from April 10, 2014, we have raised the following concerns and questions:

- a) How will oil and gas operations affect the state of fishing resources;
- b) How will oil and gas operations affect the fishing activities;
- c) How will oil and gas operations affect VMEs;
- d) What measures will C-NLOPB take to mitigate the adverse influence of oil and gas operations on the marine environment?
- e) What steps will C-NLOPB take to monitor the influences as described above?
- f) Will C-NLOPB set up a compensation plan for the affected parties for the loss of access to fishing grounds and for deterioration of the state of fishing resources?

Regarding questions a, b and c, the ENSEA has not given a comprehensive answers but has confirmed definitively that all oil and gas exploratory activities undertaken by C-NLOPB in NAFO Regulatory Area will have adverse and harmful impact on the state of fishing resources and VMEs, and will disturb fishing activities, mainly by decreasing fishing areas and fishing effectiveness (Chapter 4).

Despite the fact that whole Chapter 5 of the ENSEA is dedicated to the mitigation measures, there are presented only general information regarding some typical environmental protection measures which may be implemented to avoid or reduce adverse effects on marine fish and fish habitat. There is no clear declaration that sensitive and special areas such as VMEs will be closed for oil and gas operations.

Even though we welcome the fact that a monitoring system of fishing resources, seabirds and mammals is foreseen to be implemented, there is no information if the fishing vessels, which are obviously the nearest to the marine environment, will be included in this system.

We are also surprised that ENSEA has found our question regarding establishment of a compensation plan for the affected parties for the loss of access to fishing grounds as a political and outside of its scope, whereas the system of compensation to affected parties in the event of a spill is presented in details in Chapter 3.

In our opinion, all issues raised by LDRAC, EC, NAFO and other stakeholders, concerning impact of the oil and gas operations on the commercial fisheries in the NAFO Regulatory Area are crucial for the future existence and functioning of this RFMO. Regrettably, the ENSEA has not taken them seriously into consideration.

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Knowing the desire of the European Union to hold, as the last year, a shark fining proposal to the analysis of the Fisheries Committee, LDAC supports the establishment of a level-playing field for the EU fleets and third country fleets. In this sense, the EU should promote its achievements on this topic to different operators that fish in NAFO jurisdiction area.

We conclude this previous view on the most important issues to be discussed at the annual NAFO meeting by urging the European Union to assume a leading role in tune with the dynamics of the flag fleets represented at this RFMO, that position the EU in an outstanding leadership in matters of monitored fish production. It is expected that the EU delegation may have a mandate that is sufficiently broad and realistic to enable to bring continuity, during the next annual meeting in Vigo, to the quality performance perceived during the last 2 years. The LDAC will be available to support the adoption of management measures that keep or contribute to bring NAFO biological stocks into the safety zone, a primary condition in order to consolidate the external dimension of the Common Fisheries Policy in this irreplaceable fishing area.

Madrid, 18th of August of 2014

LDAC / SUMMARY OF THE MAIN RECOMMENDATIONS

Area	Species	SC	LDAC	Comments
MSE	Greenland Halibut 2+3	15,578	15,578	HCR Management. Lacking a survey below 1,500 m to assess the size of the spawning stock
Stocks assessed in 2014	Cod 3M	10,838	RO 2014	Fmsy proxy estimated by default. SSB increasing. 2014 survey tripled biomass indices of 2013.
	Redfish 3LN	10,130	10,130	A slightly higher TAC is sustainable. CAN may press. EU must demand compensation.
	Skates 3LNO	Maintain catches	7,000	Stable stock, with slight recovery. Only EU utilises its quota. Maintaining the TAC entails no risk.
	Witch 3NO	TAC = 0	TAC = 0	SSB above Blim. Fishery could open, but it is wise not to increase fishing mortality.
	American Plaice 3LNO	TAC = 0	TAC = 0	Stock size increasing though below Blim. Limit by-catch in CAN fishing for Yellowtail
	American Plaice 3M	TAC = 0	TAC = 0	Stock recovering very slowly. By-catch must remain at current level.
Stocks monitored in 2014	Redfish 3M	6,500	Slight increase	TAC to be exhausted in 7 months. SSB at high levels. Admissible to return to 2012 TAC (8,500 t).
	Redfish 3O	20,000	20,000	Stable stock. Indices from surveys regressed after being high for 1 decade. Join with RED 3LN?
	White Hake 3NO	1,000	1,000	Keep management model. Recent recruitments may indicate species return.
	Yellowtail Flounder 3LNO	17,000	17,000	Stock status admits TAC = 25,000 t. Only Canada has quota. EU must keep away.
	Cod 3NO	TAC = 0	TAC = 0	Biomass recovering though below Blim
	Witch 2J+3K	TAC = 0	TAC = 0	Stock recovering, though SSB below Blim
	Capelin 3NO	TAC = 0	TAC = 0	Lacking acoustic survey since 1994.
	Squid SA3+4	34,000	34,000	Stock under regime of low productivity.
	Cod 2J+3KL	Sentinel		Assessment must be devolved from CAN to the SC
Others	Shrimps 3L	N/A		Assessment not available. CAN leads fishery
	Shrimps 3M	N/A		Shrimp is part of the trophic chain for cod.
VME	NAFO has travelled a long way approaching compliance with United Nations resolutions. Areas closed or adjusted based on kernel method and collection of insignificant VME amounts during surveys are of dubious proportionality.			
TM	Experimental haul to draw information on by-catch levels must be kept at 3 hours. Technical labelling measures are suitable. Proposal by CAN to include processing date must be rejected for its uselessness.			
Key	RO 2014	Roll-over of the TAC of 2014 = 14,521 t		
	N/A	Shrimp stock assessments to be performed before the annual meeting		
	TM	Technical Measures (NAFO Conservation and Enforcement Measures)		