

Fisheries TAC's and Quotas 2019

Sustainability Impact Assessment

November 2018

Sustainability Impact Assessment of EU Commission Proposal

“Proposal for a Council Regulation fixing for 2019 the fishing opportunities for certain fish stocks and groups of fish stocks, applicable in Union waters and, for Union vessels, in certain non-Union waters.”

-COM (2018) 732 final

1. Summary

This Sea Fisheries Sustainability Impact Assessment (SIA) on the EU Commission’s proposals for certain fishing opportunities for 2019 draws its conclusions from a consultation process with all major stakeholders and expert contributions from The Marine Institute (MI) and Bord Iascaigh Mhara (BIM). The Commission’s proposal is in relation to mainly whitefish stocks and does not cover some pelagic stocks. The proposal does not include inshore fish and shellfish stocks not subject to TAC & Quotas.

Negotiations are at present continuing for mackerel which economically is Ireland’s single most important stock. This TAC and others’ such as blue whiting, are not in the proposal as more international negotiations are still ongoing. These negotiations, EU/Norway and EU/Faeroes will hopefully be concluded before Council.

In its proposal, the Commission links the sustainability imperative to the Common Fisheries Policy (CFP) stating that:

“All fishing opportunities regulations must limit the harvesting of the fish stocks to levels which must be consistent with the overall objectives of the Common Fisheries Policy (CFP). In this respect, Regulation (EU) No 1380/2013 of the European Parliament and of the Council on the Common Fisheries Policy (“the Basic Regulation”) sets out the objectives for the annual proposals for catch and fishing effort limitations to ensure that Union fisheries are ecologically, economically and socially sustainable.”

It goes on to state:

“As usual, the Commission has reviewed the situation to which the fishing opportunities proposals must respond via its annual Communication from the Commission concerning a consultation on Fishing Opportunities (COM(2017)368), hereinafter “Communication”). The Communication provides an overview of the state of the stocks based on the findings of the scientific advice available.”

The Communication’s conclusion notes that:

“The Commission will continue to pursue full implementation of the CFP and will propose fishing opportunities for 2018 in line with the MSY targets in the CFP. With the first multiannual plan under the CFP now in place, the stage is set for the gradual introduction of this priority management instrument in other EU sea basins, as a means of achieving the main CFP objectives. The economic performance of many fleets continues to improve and progress towards better alignment of fishing

capacity with fishing opportunities has been good. The EU must do more in areas where progress is slow. Regional cooperation – in close consultation with all stakeholders concerned, as enshrined in the CFP – will play a key part in making that happen.”

The fishing opportunities exercise represents an annual management cycle (biennial in the case of deep sea stocks). The proposal contains fishing opportunities that the Union establishes autonomously. It also features fishing opportunities resulting from multilateral or bilateral fisheries consultations. The outcome is implemented by providing for internal allocation among Member States on the principle of *relative stability*. This annual exercise does not stand in the way of the introduction of long-term management approaches. The EU has made progress in this regard and certain stocks of commercial interest are now subject to multi-annual management plans; yearly TACs and effort ceilings must comply with those plans. The Council and European parliament are currently discussing the Western Waters Plan has significant interest to Ireland. It is hoped these discussions will conclude in the coming weeks.

The landing obligation introduced by the basic regulation of the CFP is fully applicable from 2019 having been phased in since 2015. All species subject to catch limits, (i.e. managed under the TAC & Quota system), fall under the landing obligation. All catches of these species retained on board must be recorded and will be counted against national quota. In recognition that all catches of certain stocks must be landed, there are some exemptions. The landing obligation does not apply to fish species covered by a high survivability exemptions, those falling under de minimis exemptions, catches of prohibited species and fish which have damaged by predators (e.g. seals).

Biological Assessment

In its Impact Assessment, the Marine Institute, summaries the pressure on the 74 stocks dealt with in the 2018 Stock Book and compares with the same evaluation presented in previous years Stock Books. There is a higher number of sustainably fished stocks (32) and percentage (43%) in 2018 compared with last year. The percentage (22%) and number of stocks (16) overfished has decreased in 2018 whereas the stocks with unknown status declined again from 28 to 26 or 38% to 35%.

Thirty-five percent or 26 stocks are above biomass trigger points. This is similar to the situation last year. The number of depleted stocks has increased slightly and 22% of stocks are assessed to be depleted. The number of stocks with unknown SSB, no assessments or undefined Btriggers has remained the same at 43% this year.

Over time the percentage of stocks with unknown status has been declining. There are multiple reasons why stocks have unknown status including: short time series of biological data, low catches and/or insufficient sampling data or missing catch information (e.g. angling catches or discards). ICES have been developing so called “data limited assessment methodologies” to try to estimate stock status for these data limited stocks. It is likely that some stocks will remain in this unknown status category and the management and advisory framework should take that into account.

Specific details of the status and scientific advice on a stock by stock basis can be found in the SIA and in the Marine Institute's Stock Book.

Socio-Economic Assessment

Bord Iascaigh Mhara (BIM) has advised that this assessment considers the proposed Total Allowable Catch (TAC) and member state shares (quota) for 33 of the 56 managed fish stocks of interest to Ireland. While these 33 stocks represent for 59% of stocks managed by quota, they amount to only 42% of Ireland's share of fishing opportunities by weight and 68% by value. In volume terms they include 75% of Ireland's share of demersal (whitefish & prawns) but only 32% of Ireland's share of pelagic species. The current proposals exclude a number of important stocks where the final European Union total allowable catch (and member states quotas) depend on external agreements.

It is important to note that the estimates are based on the Commission proposal as it stands and are subject to change.

For the stocks allocated the current set of proposals will see a net reduction in fishing opportunity (quotas) of -15% by volume (tonnes) and -17% by value (€). This amounts to a direct income decrease of -€34.67 million.

A -5.7% decrease in fishing opportunity for the demersal sector (whitefish and *Nephrops*/prawns) by volume (tonnes) and -15% by value (€): with direct income loss of €20 million.

A net reduction in fishing opportunity for the pelagic sector of -18% by volume and -20% by value with a direct income reduction of -€14.67 million. This is due primarily to a decrease in mackerel (down 20%) and Celtic Sea herring. The figure for mackerel is a minimum decrease. Negotiations are ongoing and the final reduction could be greater.

In a regional analysis of Irish Sea, Celtic Sea and West Coast (area 7) stocks it is estimated that there will be a -14% decrease in fishing opportunities for the demersal fleet. This reduction is valued at -€23.31 million and will directly impact the ports of Clogherhead, Howth, Dunmore East, Kilmore Quay, Dingle, Castletownbere and ROs an Mhil, as well as other smaller ports.

On the basis of the most recent employment surveys of the catching sector, that these reductions could lead to some 500 fewer equivalent full and part time jobs in the sector when the full impact of these reductions on the processing and ancillary sectors are taken into account; either through reduced incomes, partial lay-offs or redundancies, or a combination of these.

The proposal does not include the Hague Preferences. These are negotiated annually at the Fisheries Council and, if agreed, offer additional quotas to Ireland. The loss of these allocations in 2019 will amount to 1,222 tonnes of fish with a direct value of €2.4 million and an associated impact on between 40 - 50 full and part time jobs either through reduced incomes, partial lay-offs or redundancies.

2. Background

Fishing opportunities for each Member State are agreed on an annual basis in the EU Fisheries Council of Ministers on the basis of a proposal produced by the European Commission. A proposal which sets out the 2019 fishing levels for certain stocks was published by the EU Commission on the 07th November 2018.

This proposal covers stocks which are not subject to third party international agreements and are, in the main, whitefish (demersal) stocks.

The Sea Fisheries Sustainability Impact Assessment is conducted on an annual basis and is done in consultation with all major stakeholders. It is brought before the Dáil annually in advance of the December EU fisheries negotiations.

3. Objectives

The objective of this document is to look at the overall impacts the proposal could have on the sustainability of the fishing sector from a biological, economical, social perspective and to put these conclusions before the houses of the Oireachtas for debate.

4. Process

4 (a) Consultation:

Stakeholders were asked to comment on the Commission proposal for fishing opportunities for 2019 – COM (2018) 732 final.

From 07 November, 2018 an online web portal on www.fishingnet.ie was activated to facilitate electronic submissions to be forwarded for consideration. The closing date for this call for submissions was close of business 21 November, 2018.

In addition, a meeting of stakeholders was held on the 23 November to further assist and inform consideration on the proposal.

In all 3 submissions were received by the closure date. The submissions were received from the KFO, Birdwatch Ireland and IFPEA. The full contents of the submissions received are available on the website www.fishingnet.ie.

4 (b) Summary of main points submitted to the Consultation:

- In written submissions and at the Sustainability Impact Assessment Stakeholder's meeting, all stakeholders welcomed the opportunity to express their views on the Commission proposals for 2019. They value the process and the Minister's commitment to undertake a complete analysis of the proposal.
- Irish industry representatives expressed concern at the Commission focusing solely on the proposal from a sustainability stand point but not including other factors such as socio-economic impacts. They also expressed a concern of a lack of proposals from the Commission with regard to the possible impacts arising from the full implementation of the

Landing Obligation. The view was also expressed that the Commission was not following the Maximum Sustainable Yield (MSY) advice on a number of stocks.

- The proposal for non-allocated Union TACS is a major concern for industry, as well as the cuts for Mackerel, Nephrops and Herring. Industry also requested the removal of the separate TAC for FU 16.
- Industry was also concerned of the economic sustainability of the fleet in light of the points they raised.
- Irish NGOs supported the proposals goal to have all species fished at Maximum Sustainable Yield (MSY) as soon as possible and noted the possible economic benefits of having all species at MSY in the future.
- NGOs also noted concerned about quota management and transparency. The current state of Seabass and European eel was also mentioned.

5. The Marine Institutes assessment of the Biological Impacts

5(a) Methodology

The Stock Book is produced annually by the Marine Institute's (MI) Fisheries Ecosystems Advisory Services (FEAS) team and provides up to date scientific information on the state of the fisheries resources exploited by the Irish fleet. It provides the latest scientific advice developed in 2018, which informs fishing opportunities for 2019. The Stock Book has been published by the Marine Institute (MI) since 1993 and has evolved considerably over time. It continues to evolve in a changing fisheries advisory environment.

The majority of the scientific advice presented in the Stock Book is formulated by the International Council for the Exploration of the Seas (ICES). Relevant scientific advice from the EU's Scientific, Technical and Economic Committee for Fisheries (STECF) and the International Commission for the Conservation of Atlantic Tunas (ICATT) are also used.

The majority of the ICES scientific advice is released in June each year. This is to facilitate consultation with industry and managers on available fishing opportunities for the coming year. ICES produces the remaining scientific advice in October and November. The STECF may also review the status of or give advice on certain fish stocks. The Stock Book draws on both the ICES and relevant STECF material and the resultant scientific advice it contains relates to those stocks exploited by the Irish fleet which are managed under the Common Fisheries Policy (CFP). The provision of scientific advice on fisheries resources is a key pillar of the CFP and informs the basis for the management decisions made under the CFP (e.g. annual fishing opportunities and technical measures).

Scientific fisheries advice is developed by the Marine Institute working with other international scientists, and produced via International organisations such as ICES and ICCAT, and expert

committees of the EU such as STECF. This advice is based upon the latest available research, assessments and information on the fisheries resource. It is formulated by consensus, which does not imply unanimity of all experts but allows the expert groups and the international scientific organisations to communicate an advice based on best available science.

The Stock Book is presented annually to the MI's primary client, the Department of Agriculture, Food and the Marine (DAFM) each December. The information contained within the Stock Book is of vital importance in serving Ireland during the annual Total Allowable Catch (TAC) negotiations at the various EU Council of Fisheries meetings, but principally at the December Council meeting. It also serves as a valuable reference throughout the year at other fisheries management meetings with the EU. The Stock Book is also of interest to a wider audience, including the fishing industry, marine scientists, managers, environmental NGO's, third level institutes, financial institutions and those with an interest in the status and management of marine fisheries resources in the waters around Ireland. For those reading the Stock Book without technical or scientific background, there are many terms and abbreviations the explanation of which can be found at the end of the book. The MI meets with stakeholders on a regular basis throughout the year, e.g. quarterly meetings between the MI & Industry using the Irish Fisheries Science Research Partnership forum, where a key agenda item focuses on how the data was collected and the advice was formulated. The MI also has regular meetings with the environmental NGO's for the same purpose.

The Stock Book is also available electronically on the Marine Institute's web site at www.marine.ie and this year an informatics interactive version of the book (and most recent editions) can be found at <https://shiny.marine.ie/stockbook/>.

While every effort has been made to ensure that the Stock Book contains the most up to date and accurate information, the final ICES, ICCAT, STECF reports and various cited reports should be consulted for the latest advice. More detailed information on specific stocks is available in the relevant ICES Working Group Reports. Definitive information on TAC areas and quota allocations should be obtained from the official EU Journal.

5 (b) The Fisheries Resource

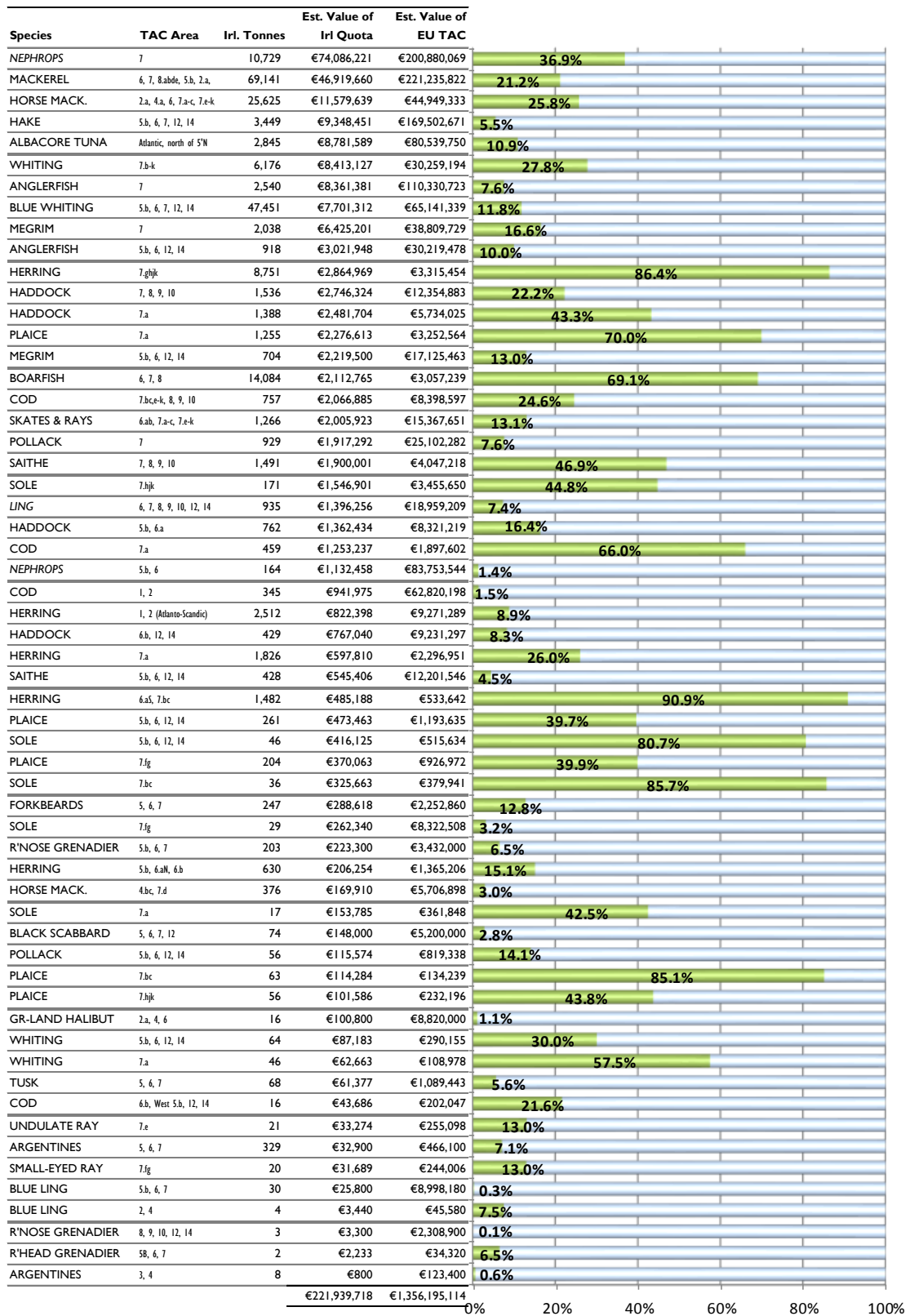
The seas around Ireland are among the most productive and biologically sensitive areas in EU waters. Most of the fisheries resources within the area come under the remit of the Common Fisheries Policy (CFP). The overall 2018 fishing opportunities (i.e. Total Allowable Catches, TAC's species) for stocks to which the Irish fleet has access to, were 1.25 million tonnes of fish, with an estimated landed value of €1.37 billion (Figure 2.1). Ireland's total share of these TAC's in 2018 amounted to 215,511 tonnes with a value of €222 million. These figures represent stocks in Areas 6 and 7 as well as other areas and international waters. This economic value is based on 2017 average prices and represents a conservative estimate. Ireland's share of these fishing opportunities for 2018 represents 17% by tonnage and 16% by value.

These values do not include the valuable inshore fisheries (e.g. lobster, whelk) which are not managed using internationally agreed TACs but do come within the remit of the CFP. These inshore fisheries resource represents a very important resource base for the coastal communities around Ireland.

Ireland's share of a TAC (the Irish quota) varies depending on the stock concerned. Ireland has 86% of the Celtic Sea herring TAC; 69% of the boarfish; 37% of Nephrops in Area 7; 26% of horse mackerel

and 21% of mackerel. For other stocks it has a much lower share of the TAC; 8% of anglerfish in Area 7; 25% of Celtic Sea cod and 6% of northern hake (Figure 1).

Figure 1 % Share of 2018 EU TAC By Ireland & Other EU¹ Members and approximate² value of Irish Quota & EU TAC



¹ Only TAC areas where Ireland has a share of the TAC > 1 t are included above.

² Estimated value per tonne based on 2017 average values of Irish landings in Irish ports.

■ % Irl ■ % Other EU

5 (c) Marine Institute Stock Book

The Stock Book is divided into the following parts:

- Introduction
 - About the Stock Book
 - Fish Production, Fishing Fleets, Employment
 - The Fisheries Resource
 - Organisation of the Stock Book
- Data Quality and Assurance
- Rationale for ICES Advice and the Commission Proposal on Fishing Opportunities for 2019
- Long Term Management Plans
- Marine Institutes Summary on the Status, Scientific Advice and Proposed 2019 Fishing Opportunities for those stocks of interest to Ireland
- The Sustainability Assessment
- Mixed Fisheries
- Good Environmental Status of Commercial Fish and Shellfish Stocks
- Species Overviews
- Stock Advice with ICES Advisory Sheets

The introduction to the Stock Book gives some general statistics on the fisheries resource, fish production, the fishing fleets and employment for the EU and for Ireland. It also provides an overview of the format of the Stock Book and the approach taken in the formulation of the ICES advice and the EU Commission proposals for fishing opportunities for 2019.

The approach to data quality in the MI is outlined in a new section. This section details the processes which underpin the quality assurance of data produced by the MI upon which scientific fisheries advice is dependent.

The main part of the Stock Book contains the species information and the individual stock advice. The format is organised by species and then stocks rather than on an area based approach (e.g. Irish Sea). The species overview provides information on the general biology, national and international landings distributions, Irish landings and values.

The individual stock advice provides a summary of the advice for 2019, outlines key points in relation to the stock (i.e. ICES stock category, Advice Basis; Management Plan options – where relevant; Landing Obligation). The current management of the stock is also summarised and key considerations of relevance to the stock for Ireland is given. The complete ICES advice for the stock is also given.

This advice is principally based on MSY (Maximum Sustainable Yield) considerations or agreed Management Plan considerations. The status of the stock in relation to the landing obligation and management plans are also given. The long-term management plans in place for stocks of Irish interest are shown.

The current management section gives information on the past TAC, and describes the match between assessment area and management area and quota allocations by country.

The Stock Book also contains a series of annexes which include definitions of the technical terms and acronyms used throughout the text. The ecosystem overview can be found in an annex this year, as it is not due to be updated before the book is printed. In the online version the most recent ecosystem overview will be added.

5 (d) Rationale for ICES Advice and the Commission Proposal on Fishing Opportunities

ICES give advice in the context of the policy objectives of its clients. Thus ICES advice is based on a maximum sustainable yield (MSY) approach. ICES provides analytical forecasts with a catch option consistent with FMSY (or FMSY ranges) for 2019. Where the SSB in 2019 is forecasted to be below the MSY Btrigger, ICES advises on a lower F, decreased by the proportion by which biomass in 2019 is below the trigger point. For stocks where analytical forecasts are not possible, ICES provides advice according to a set of procedures that follow the Precautionary Approach to Fisheries Management. For stocks where SSB is below Blim and there is no catch option which results in an SSB above Blim in the catch year, ICES gives a zero catch advice. In these cases, (subsequent to the release of the ICES advice) the Commission asked ICES to estimate for each case of a zero catch advice, the amount in tonnes that would be likely to be caught by operators who fish for other species in the area (bycatch/non-targeted), assuming that the other TACs in the same area would be set based on the latest ICES advice. In this context, ICES may revise the way in which it gives advice for stocks below Blim in the future.

The European Commission has first competency in making TAC proposals for the year ahead. The Commission has set out its approach to formulating these proposals, which are based on a consultative approach. Whereas previously the proposals were based on “top-ups” to landings advice, for 2019 the European Commission has said it will subtract de minimis exemptions from the ICES catch advice to generate TAC proposals.

The MI provides the summary below explaining the Commission’s approach as outlined in the communication “COM (2018) 452 final” published on June 11th 2018. The document sets out key considerations in the way the Commission would propose TAC’s for 2019. These considerations are framed around implementing the MSY and landing obligation in the CFP bearing in mind that:

1. some stocks that are subject to negotiations with other parties (Norway and Coastal states)
2. many demersal stocks are now covered by multi species Multi-annual plans (MAP’s)
3. the advice for some stocks is qualitative and they are managed by MSY proxies
4. there are a small number of bycatch stocks (which will be managed according to PA).

The Commission states that the proposed TACs shall be in line with ICES catch advice. In the cases where there is a de minimis exemption, the Commission will subtract this from the ICES catch advice (topping-down). Where, as a result of a recent benchmark the ICES catch advice is for a large change, the Commission will consider capping large variations on a case-by-case basis in order to phase in the advice and to buffer its impact on TAC setting, whilst respecting the legal framework in place. The points below furthermore apply to certain categories of stocks

1. For stocks that are shared with non-EU countries (straddling stocks), the Commission will continue to seek agreement with other parties while trying to advance the achievement of FMSY. However, several of these stocks have, to date, been managed on the basis of agreed long-term management strategies which are not necessarily compatible with achieving FMSY in 2019.
2. For stocks under MAP’s, the TAC proposals are to be set in accordance with the plans. This will apply also for the Atlantic area even though that plan has not been adopted. These plans include an FMSY range for the stocks listed, whereby the TAC can be set above FMSY at the upper part of the range under certain conditions. These conditions require that the stock is above MSY Btrigger and any of the following apply; that it is necessary from a mixed fisheries consideration; that, on the basis of science advice, it is necessary to avoid harm from intra-species stock dynamics; in order to limit variation in fishing opportunities to 20% between consecutive years. In the case of plans adopted before 2013, the Commission will propose TAC’s based on FMSY in 2019 taking mixed fisheries into consideration.

3. For stocks where the assessment is qualitative, the Commission will follow the same approach as for stocks with a quantitative assessment.
4. For the so called “statement stocks” (those implicitly considered as bycatches under the MAP’s) the Commission will assess the best approach for the future taking into account: ICES advice; the fact that they represent only 5% of landings under TACs and; the need to avoid choke situations for economically important target fisheries. The management objective for these stocks is the PA approach.

It is not explicit in the Commissions communication how they will deal with proposing TAC’s in the cases where there is a high survivability exemption. In principle this is not the same as the de minimis exemption (for which the proposal is to subtract the de minimis proportion from the ICES catch advice) because not all of the unwanted catch (i.e. discards) are dead when returned to the sea.

5 (e) Sustainability

In its simplest sense, sustainable use of renewable resources, whether it be forests or fish stocks, means that the resource can be used indefinitely. There are many definitions of sustainability. Fisheries can be defined as sustainable when they can be conducted over the long term at an acceptable level of biological and economic productivity, without leading to ecological changes that reduce the options available to future generations. These desired levels of biological and economic productivity are in part management decisions, but it is clear that for many stocks both could be greater than they are today.

Overfishing does not necessarily mean that a fish stock is at risk of extinction or collapse – it simply means that more could be caught with less fishing activity. Fishing at levels that maintain maximum sustainable yields means taking each year a proportion of fish that allows the remainder to grow and reproduce at their most productive level. Under these conditions, the long-term catches from fish stocks will be at their maximum sustainable yield (MSY). Fishing too hard means that fish will be caught too soon, too small and using too much fuel. The European Union and Member States have committed themselves to reach the objectives of fishing at MSY by 2015, where possible and by 2020 at the latest. For several stocks, high discarding has been an issue. Improving selectivity to reduce this will also help in achieving MSY, for example for haddock and whiting in the Celtic Sea.

The Commission have outlined the benefits of MSY in COM (2015) 239. The move to MSY should bring significant benefits and will mean a change from fishing intensively on scarce resources to fishing lightly on larger stocks. The same or larger quantities of fish should be caught, but with lower impact on the environment. Impacts of fishing on sea bottoms will be less, bycatches of vulnerable organisms, including porpoises, dolphins and other marine mammals will decrease because the overall intensity of fishing will be less. Fuel costs will decrease significantly because it takes less fishing time to catch a tonne of fish from an abundant stock than from a scarce one. This will reduce carbon emissions as well as the fuel expenditure of fishing vessels.

To assess progress towards GES the average ratio of $F/FMSY$ and $B/BMSY$ is presented for demersal, pelagic and *Nephrops* stock separately below (Figure 2). It should be noted the trends by fish groups have not been updated since last year, owing to problems with the data received from ICES. These plots show that pelagic stocks have on average been fished below FMSY since the mid-2000s. The

Nephrops stocks have fluctuated around FMSY throughout the time series. The largest change can be seen in demersal stocks where on average F was three times FMSY up to the mid-2000s and there has been a declining trend towards FMSY since then. Average biomass for *Nephrops* and pelagic stocks has fluctuated above MSY $B_{trigger}$ through the time series. The average biomass of demersal stocks shows an increasing trend since the mid-2000s and is now above MSY $B_{trigger}$.

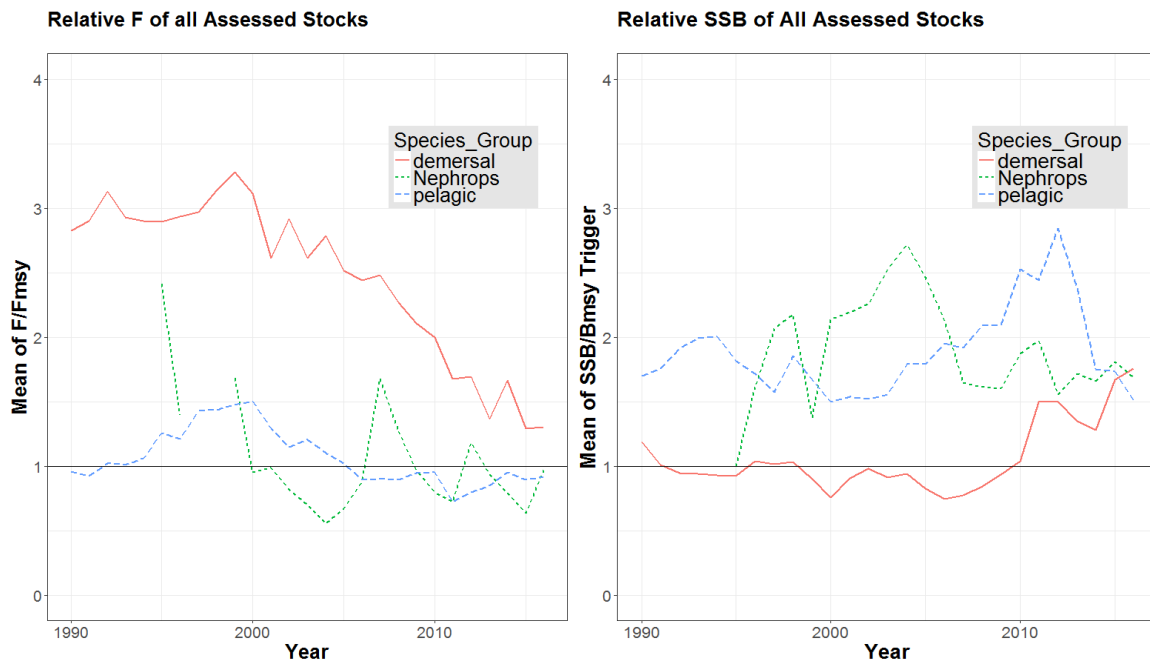


Figure 2. Relative F and Relative SSB of all assessed stocks.

5 (f) Summary of the Resource Base Status Assessment

ICES and the MI evaluate the state of the resource base in relation to pressure and state indicators. These are fishing mortality (F) in the last year of the assessment relative to F_{MSY} (the fishing mortality which is expected to deliver maximum sustainable yield) and SSB in the year of the assessment in relation to a defined biomass trigger point (below which the stock is at risk of recruitment impairment). The MI gives an overview of the scientific status and advice on 72 fish stocks of which Ireland has a share of the TAC.

Table 1 summarises the pressure on the 74 reference stocks and compares with the same evaluation presented in previous years' Stock Books. There is a higher number of sustainably fished stocks (32) and percentage (43%) in 2018 compared with last year. The percentage (22%) and number of stocks (16) overfished has decreased in 2018 whereas the stocks with unknown status declined again from 28 to 26 or 38% to 35%.

Table 2 compares the state of the resource base in terms of SSB in relation to biomass trigger points with the same evaluation presented last year. Thirty-five percent or 26 stocks are above biomass trigger points. This is about the same as last year. The number of depleted stocks has increased slightly and 22% of stocks are assessed to be depleted. The number of stocks with unknown SSB, no assessments or undefined $B_{triggers}$ has remained the same at 43% this year.

Over time, the percentage of stocks with unknown status has been declining. There are multiple reasons why stocks have unknown status including: short time series of biological data, low catches and/or insufficient sampling data or missing catch information (e.g. angling catches or discards).

ICES have been developing so called “data limited assessment methodologies” to try to estimate stock status for these data limited stocks. It is likely that some stocks will remain in this unknown status category and the management and advisory framework should take that into account.

Table 1 Summary of MI evaluation of fishing mortality in relation to F_{MSY} for stocks of interest to Ireland.

	2012		2013		2014		2015		2016		2017		2018	
Fishing pressure status	Num	%	Num	%	Num	%	Num	%	Num	%	Num	%	Num	%
Fished Below F_{msy}	24	41%	20	34%	25	34%	26	36%	28	38%	29	39%	32	43%
Fished Above F_{msy}	14	24%	14	24%	22	30%	19	26%	15	20%	17	23%	16	22%
F Unknown, F_{msy} or not defined	21	36%	25	42%	26	36%	27	38%	31	42%	28	38%	26	35%
Total number of stocks	59		59		73		72		74		74		74	

Table 2 Summary of MI evaluation of SSB in relation to biomass reference points for stocks of interest to Ireland.

	2012		2013		2014		2015		2016		2017		2018	
Stock biomass status	Num	%	Num	%	Num	%	Num	%	Num	%	Num	%	Num	%
Stock biomass above $MSY B_{trigger}$	19	32%	19	32%	17	23%	20	28%	22	30%	27	36%	26	35%
Stock biomass between B_{lim} $MSY B_{trigger}$	1	2%	0	0%	0	0%	0	0%	1	1%	0	0%	0	0%
Stock biomass below $MSY B_{trigger}$	9	15%	6	10%	12	16%	14	19%	18	24%	15	20%	16	22%
Stock Biomass unknown or $MSY B_{trigger}$ not defined	30	51%	34	58%	44	60%	38	53%	33	45%	32	43%	32	43%
Total number of stocks	59		59		73		72		74		74		74	

Detailed analysis

A detailed breakdown of the Marine Institute evaluations of stock status in relation to sustainable fishing rates and biomass levels as given in the last seven Stock Books are presented in Table 3. The stock status as evaluated by ICES/ICCAT varies over time. Table 4 shows a list of the 12 stocks for which the assessed status changed between 2017 and 2018.

Separate assessments of the 2 species of anglerfish in 7 & 8 (*Lophius piscatorius* and *Lophius budagessa*) show that both species are fished sustainably, and that white bellied anglerfish (*L. piscatorius*) has a good stock status, whilst that of black bellied anglerfish is unknown as $MSY B_{trigger}$ has not been defined for this stock yet.

An updated assessment of Cod in the Irish Sea has revised the SSB estimate downwards, moving the biomass status of that stock back to below $MSY B_{trigger}$ in 2018. It is important to note that this is not a deterioration in the stock in 2018 versus 2017, but rather that the assessment process has re-estimated the stock biomass trajectory over time (as happens every year through stock assessment) and now shows a trajectory which has not increased above $MSY B_{trigger}$, since the decline in the late 1980's.

A revision of reference points alongside the updated assessment for herring in 1 & 2 shows that fishing mortality continues to increase and is now above F_{MSY} , but the new lower $MSY B_{trigger}$ reference point means that the stock biomass status has been above the new safe biomass level since the late 1980's.

The fluctuation of *Nephrops* stocks around reference points continues, and may reflect uncertainty (noise) in the measurement in some cases. Fishing mortality in FU 17 & FU 22 decreased below F_{MSY} in 2017 although for FU16 the fishing mortality increased above F_{MSY} in 2017. The biomass in FU17 increased above $MSY B_{trigger}$ in 2017 (as expected), but the biomass in FU19 & FU22 decreased below $MSY B_{trigger}$.

The revised assessment for sea bass (benchmarked in 2017) showed fishing mortality now below F_{MSY} , although the biomass is increasing it still remains below $MSY B_{trigger}$.

Table 3 Details of MI evaluation of fishing mortality in relation to F_{MSY} and SSB in relation to biomass reference points for stocks of interest to Ireland.

Stock	Fishing Mortality Status							SSB Status						
	2012	2013	2014	2015	2016	2017	2018	2012	2013	2014	2015	2016	2017	2018
Albacore tuna North Atlantic	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Anglerfish 6, 2.a, 3.a, 4.a	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Anglerfish 7 & 8	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Anglerfish L. budegassa 7, 8	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Anglerfish L. piscatorious 7, 8	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Basking Shark in the NE Atlantic	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Blue whiting Northeast Atlantic	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Bluefin tuna East Atlantic & Mediterranean	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Boarfish 6, 7, 8	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Cod 6.a	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Cod 6b	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Cod 7.a	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Cod 7.e-k	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Dipturus species 6 and 7	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Grey gurnard 6 & 7 (excl. 7.d)	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Haddock 4, 3.a and 6.a	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Haddock 6.b	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Haddock 7.a	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Haddock 7.bce-k	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Hake 2, 3, 4, 6, 7, 8	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Herring in the NE Atlantic 1 & 2	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Herring 6.aN	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Herring 6.aS 7.bc	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Herring 6.aN & 6.aS 7.bc	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Herring 7.aN	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Herring 7.aS 7.gj	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Leucoraja circularis 6 and 7	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Leucoraja fullonica_VI and VII	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Leucoraja naevus 6, 7, and 8.a,b,d	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Ling 3.a, 4.a, 6, 7, 8, 9, 12, 14	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Megrim 6.a and 4	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Megrim 6.b	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Megrim 7.b-k & 8.abde	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
NEA mackerel_Northeast Atlantic	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Nephrops FU11	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Nephrops FU12	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Nephrops FU13	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Nephrops FU14	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Nephrops FU15	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Nephrops FU16	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Nephrops FU17	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Nephrops FU18 & other rectangles	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Nephrops FU19	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Nephrops FU20-21	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Nephrops FU22	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Nephrops 6 rectangles outside FUs	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
North Sea horse mackerel	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Other skates 6 and 7	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Plaice 7.a	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Plaice 7.bc	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Plaice 7.fg	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Plaice 7.hjk	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Pollock 6	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Pollock 7	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Porbeagle in the NE Atlantic Northeast Atlantic	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Raja brachyura 7.a,f,g	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Raja clavata 6	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Raja clavata 7.a,f,g	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Raja microcellata 7.f,g	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Raja montagui 6 & 7.b,j	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Raja montagui 7.a,e,f,g	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Raja undulata 7.b,j	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Saithe 4 & 6 and 3.a	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Sea bass 4.bc, 7.a, 7.d-h	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Sea bass 6.a, 7.b, 7.j	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Skates & Rays 6 & 7 (excl. 7.d)	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Sole 7.a	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Sole 7.bc	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Sole 7.fg	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Sole 7.hjk	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Sprat 6 and 7 (excl. 7.d and 7.e)	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Spurdog in the NE Atlantic	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Swordfish North Atlantic	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Western Horse mackerel 2.a, 4.a, 5, 7.a-c, 7.e-k,	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Whiting 6.a	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Whiting 7.a	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Whiting 7.bc,e-k	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Raja brachyura 6 & 4.a	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green
Raja undulata 7.d,e	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green	Green

= $F < F_{msy}$
 = $F > F_{msy}$
 = F unknown or F_{msy} undefined
 = Stock not included

= $B > MSY B_{trigger}$
 = $B < MSY B_{trigger}$
 = B unknown $MSY B_{trigger}$ undefined
 = $B > Blim < MSY B_{trigger}$

Table 4 Stocks with a status change between the 2017 and 2018 Stock Books.

Stock	Fishing Mortality Status							SSB Status						
	2012	2013	2014	2015	2016	2017	2018	2012	2013	2014	2015	2016	2017	2018
Anglerfish L. budegassa 7, 8							Green							Green
Anglerfish L. piscatorious 7, 8							Green							Green
Cod 7a	Red	Red	Red	Red	Red	Red	Green	Red	Red	Red	Red	Red	Red	Green
Dipturus species 6 and 7			Red	Red	Red	Red	Grey			Red	Red	Red	Red	Grey
Grey gurnard 6 & 7 (excl. 7.d)	Grey	Grey	Grey	Grey	Grey	Grey	Green	Grey	Grey	Grey	Grey	Grey	Grey	Green
Herring in the NE Atlantic 1 & 2	Green	Green	Green	Green	Green	Green	Red	Green	Green	Red	Green	Green	Red	Green
NEA mackerel_Northeast Atlantic	Red	Grey	Green	Red	Red	Red	Red	Green	Grey	Green	Green	Green	Green	Red
Nephrops FU16	Green	Green	Green	Green	Green	Green	Red	Grey	Grey	Grey	Grey	Grey	Grey	Grey
Nephrops FU17	Green	Red	Red	Red	Red	Red	Green	Grey	Grey	Green	Red	Red	Red	Green
Nephrops FU19	Green	Red	Red	Green	Green	Green	Green	Grey	Grey	Grey	Red	Red	Green	Red
Nephrops FU22	Green	Green	Green	Green	Green	Red	Green	Grey	Grey	Grey	Red	Red	Red	Red
Sea bass 4.bc, 7.a, 7.d-h			Red	Red	Red	Red	Green			Red	Red	Red	Red	Red

 = $F < F_{msy}$	 = $B > MSY B_{trigger}$
 = $F > F_{msy}$	 = $B < MSY B_{trigger}$
 = F unknown or F_{msy} undefined	 = B unknown MSY $B_{trigger}$ undefined
 = Stock not included	 = $B > Blim < MSY B_{trigger}$

6. Bord Iascaigh Mhara (BIM) assessment of the Socio Economic Impacts

COM(2018) 732 final: *Proposal for a COUNCIL REGULATION fixing for 2019 the fishing opportunities for certain fish stocks and groups of fish stocks, applicable in Union waters and, for Union fishing vessels, in certain non-Union waters provides Total Allowable Catch (TAC) and member state shares (quota) advice on some 250 fish stocks for 2019. It should be noted however, that the TAC and quota proposals for 2019 are presented as ‘total catch’ and include catches which had previously been discarded at sea.*

While 56 of the stocks in the Commission’s proposal are ones from which Ireland receives a quota, 24 are presented *without* advice (PM) and cannot be further analysed. In addition, 11 deep-water stocks are dealt with in a separate regulation and are not considered further here. This assessment therefore considers the proposed Total Allowable Catch (TAC) and member state shares (quota) for 33 of the 56 managed fish stocks of interest to Ireland.

While these 33 stocks represent for 59% of stocks managed by quota, they amount to only 42% of Ireland’s share of fishing opportunities by weight and 68% by value. In volume terms they include 75% of Ireland’s share of demersal (whitefish & prawns) but only 32% of Ireland’s share of pelagic species. The current proposals exclude a number of important stocks where the final European Union total allowable catch (and member states quotas) depend on external agreements.

6 (a) General Assessment of Economic Impact

- For the stocks allocated the current set of proposals will see a net reduction in fishing opportunity (quotas) of -15% by volume (tonnes) and -17% by value (€). This amounts to a direct income decrease of -€34.67 million. These figures can be further explained, as follows:
- A -5.7% decrease in fishing opportunity for the demersal sector (whitefish and *Nephrops*/prawns) by volume (tonnes) and -15% by value (€): with direct income loss of €20 million.

Changes in 2019 include a -32% decrease in the area VII Nephrops (Dublin Bay prawns) with the quota falling from 10,729 tonnes (2018) to 7,296 tonnes in 2019. This reduction will cost the sector some €26.5 million in lost revenue.

Conversely, it is proposed to increase the north west (VIb, west of Scotland) haddock quota by 392 tonnes, an increase of 90% in volume and €0.7 million in value. The Hake quota will see an increase of 951 tonnes, an increase of 28% in volume and €2.2 million in value, while area VII megrim quota will increase by 963 tonnes, an increase of 47% in volume and €3.5 million in value. However reductions are proposed for 12 stocks including Saithe in Area VII (down 597 tonnes, -40%, -€0.87 million) and Celtic Sea Haddock (down 217 tonnes, -14%, -€0.40 million).

- A net reduction in fishing opportunity for the pelagic sector of -18% by volume and -20% by value with a direct income reduction of -€14.67 million. This is due primarily to a decrease in mackerel (down 20%) and Celtic Sea herring.

Demersal sector regional Analysis

- Northwest (Area VI) Stocks

26% **increase** in fishing opportunity, valued at €2.10 million, for the demersal (whitefish and prawn) fleets in the Northwest. This will positively impact the ports of Greencastle and Killybegs.

- Irish Sea, Celtic sea and west coast (Area VII) Stocks

-14% **decrease** in fishing opportunity, valued at -€24.31 million, for the demersal fleet. This will directly impact the ports of Clogherhead, Howth, Dunmore East, Kilmore Quay, Dingle, Castletownbere, and Ros an mhíl, as well as other, smaller, ports.

- Shared (Area VI and VII) Stocks

27.5% **increase** in fishing opportunity, valued at €2.21 million, for the demersal (whitefish and prawn) fleets. This will directly impact all ports.

6 (c) Employment

BIM further estimates, on the basis of the most recent employment surveys of the catching sector, that these reductions could lead to some 500 fewer equivalent full and part time jobs in the sector when the full impact of these reductions on the processing and ancillary sectors are taken into account; either through reduced incomes, partial lay-offs or redundancies, or a combination of these.

6 (d) Hague Preferences

At its meeting on 30 October 1976 in The Hague, the Council of the EEC adopted a resolution that, amongst other things, provided Ireland (and a number of other member states, including Great Britain) with additional fishing opportunities, on an annual and ongoing basis under certain circumstances.

While these additional fishing opportunities, traditionally referred to as *'The Hague Quotas'*, have been allocated to Ireland each year since the late 1980's, in the current proposal they are not awarded. The loss of these allocations in 2019 will amount to 1,222 tonnes of fish with a direct value of €2.4 million and an associated impact on between 40 - 50 full and part time jobs either through reduced incomes, partial lay-offs or redundancies.

(1) AREA VI WHITEFISH STOCKS

Species	Management Unit	2018	2019
Cod	Vlb	16	9
Cod	Vla	0	0
Megrims	VI	704	749
Monkfish	VI	918	1,145
Haddock	Vlb XII XIV	429	824
Haddock	Vla Vb		
Whiting	VI		
Norway lobster	VI	164	204
Plaice	VI	261	240
Pollack	VI	56	56
Saithe*	VI		
Common sole	VI	46	46
Total		2,594	3,273

(2) AREA VII WHITEFISH STOCKS

Species	Management Unit	2018	2019
Cod	VIIa	459	377
Cod	VII b-k		
Megrims	VII	2,038	3,001
Monkfish	VII	2,540	2,501
Haddock	VII b-k	1,536	1,319
Haddock	VIIa	1,388	1,619
Whiting	VIIa		
Whiting	VIIb-k		
Norway lobster	VII	10,729	7,296

Plaice	VIIa	1,255	1,230
Plaice	VII bc	63	59
Plaice	VII fg	204	111
Plaice	VII hjk		
Pollack	VII	927	929
Saithe	VII	1,491	894
Common sole	VIIa	17	50
Common sole	VII bc	36	35
Common sole	VII fg	29	26
Common sole	VII hjk	171	171
Total		22,883	19,618

(3) AREA VI, VII AND OTHER WHITEFISH STOCKS

Species	Management Unit	2018	2019
Tusk*	V, VI, VII		
Hake	VI, VII	3,449	4,400
Blue Ling*	Vb,VI,VII		
Blue Ling	II, IV	4	4
Ling*	VI - IX, X, XII, XIV		
Skates & Rays	VI, VIIa-c, & e-k		
Greenland Halibut*	IIa, IV, VI		
Spurdog*	I, V - VIII, XII, XIV		
Cod*	I,II		
Redfish	V, XII, XIV (Shallow)		
Redfish	V, XII, XIV (Deep)		
Total		3,453	4,404

(4) PELAGIC STOCKS

Species	Management Unit	2018	2019
Greater silver smelt	III, IV	8	8
Greater silver smelt	V, VI, VII	329	329
Boarfish	VI, VII, VIII	14,084	15,086
Herring	VIaN		
Herring	VIaS, VIIbc	1,482	1,482
Herring	VIIa	1,826	1,795
Herring	VII ghjk	8,751	4,097
Blue whiting*	I - VIII a,b,d,e XII, XIV		
Mackerel*	VI, VII	69,141	55,313
Horse mackerel*	IVb, IVc, and VIId		
Horse mackerel*	IIa, IVa, VI, VIIa-c, e-k, VIIIabe		
Herring*	I, II		
Albacore	North Atlantic		
	Total	95,621	78,110