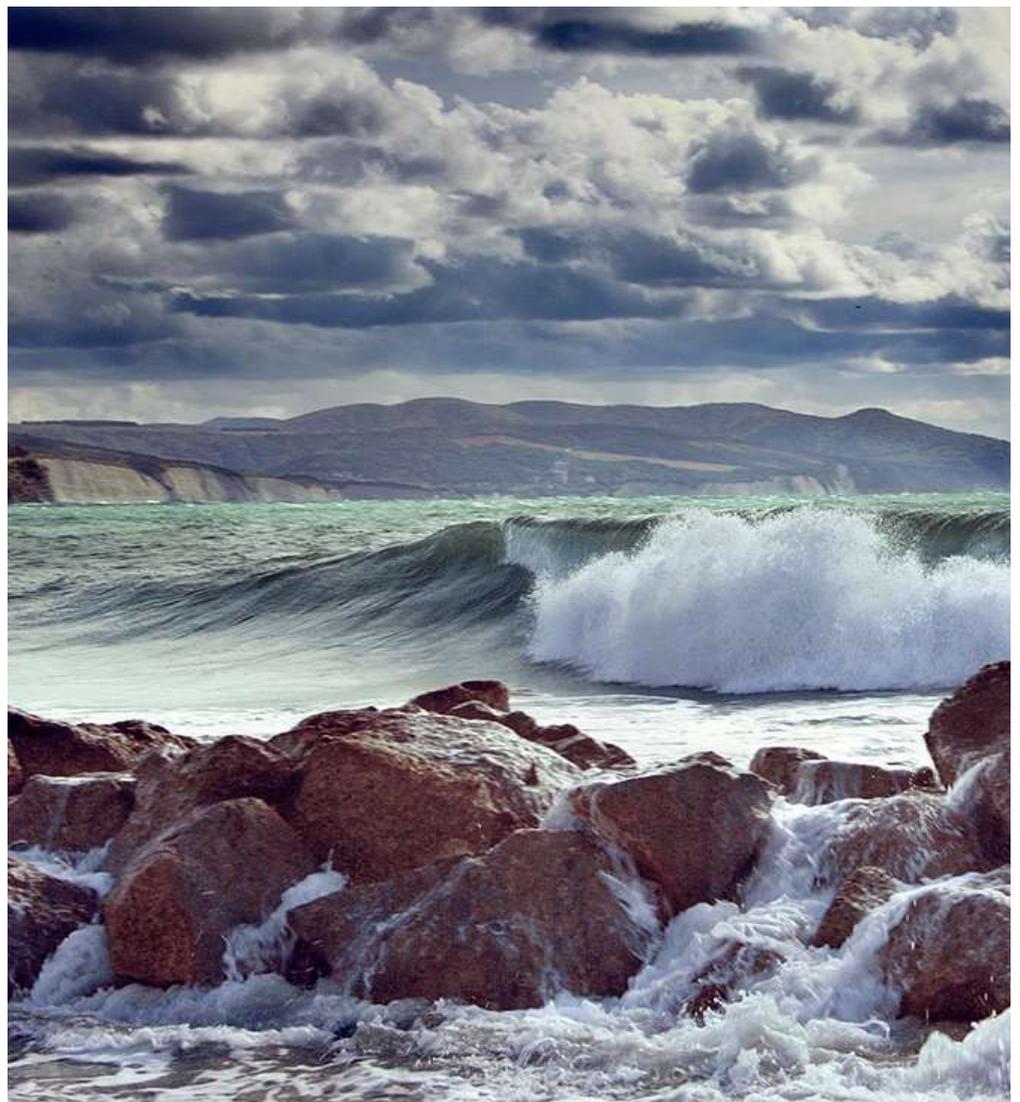


# WORKSHOP TO REVIEW AND PROGRESS THE REPORTED LISTS OF EU MSFD DESCRIPTOR (WKD3LISTS)

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## i Executive summary

The European Union Marine Strategy Framework Directive (MSFD) aims to protect the marine environment and to achieve Good Environmental Status (GES) by 2020 and explicitly requires fishing activity to be managed to ensure that conservation objectives for the broader marine ecosystem might be achieved.

The [Commission Decision \(EU\) 2017/848](#) sets out that populations of commercial fish and shellfish (MSFD Descriptor 3 (D3)) are within safe biological limits and exhibit a population age and size distribution that is indicative of a healthy stock. Member States shall establish a list of commercially-exploited fish and shellfish to be assessed and reported for MSFD Descriptor 3. This decision provides criteria for the development of these lists and these lists form the basis for the assessment of MSFD D3.

The ICES workshop WKD3lists worked remotely to:

In updating the operational (reference) list compiled by the European Commission using the European Environment Agency list of MSFD D3 stocks and the lists of D3 reported by Member States in the 2018 exercise, WKD3lists identified gaps at species level and at MSFD region-sub-region level and provided a list of stocks under national management plans, which could be added to the reference list. It should be noted that most but not all EU member states had submitted their D3 assessments at the time of WKD3Lists taking place. Potential scenarios for making the reference list consistent with member states' reporting were identified.

By reviewing the lists of D3 reported by Member States in 2018 against the reference list. This exercise led to the identification of important species at small scale-coastal level at a MSFD region-subregion level, for inclusion.

Building on previous ICES advice, WKD3Lists evaluated if revisions of the criteria used to define species were required WKD3lists considered the criteria for selection of D3 species according to the Commission Decision 848/2017, the definition of commercial species (D3) and considered whether the use of thresholds by value or tonnage should be used by Member States. WKD3lists discussed the overlap between marine species reported under MSFD D1 (biological diversity) and commercial species reported under D3. In addition, WKD3lists explored the possibility of including extra stocks for assessment of D3 based on ICES work on MSY reference points for data limited stocks. A note was made of those newly exploited in for instance cleaner fish in salmonid farming were considered.

The workshop also evaluated if changes to the reference D3 lists were required to fully meet the requirements of the Commission Decision. This process examined the status of non-indigenous species reared in aquaculture but escaping to intermingle with wild populations, of species being harvested for fattening in aquaculture

## ii Expert group information

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<b>Expert group name</b>	Workshop o to review and progress the reported lists of EU MSFD Descriptor (WKD3Lists)
<b>Expert group cycle</b>	Annual
<b>Year cycle started</b>	2020
<b>Reporting year in cycle</b>	1/1
<b>Chair(s)</b>	Maurice Clarke, Ireland
<b>Meeting venue(s) and dates</b>	22-30 June 2020, by correspondence (44 participants)

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# 1 Terms of Reference

## WKD3lists – Workshop to review and progress the reported lists of EU’s MSFD Descriptor 3

2020/2/FRSG45 The Workshop to review and progress the reported lists of MSFD Descriptor 3, D3, in support of DGENV, chaired by Maurice Clarke, Ireland, will meet by correspondence from 22-30 June to:

- a) Review the operational (reference) list compiled by the European Commission for assessments of Descriptor 3 for each MSFD marine region and sub-region.
- b) Review the lists of commercially-exploited fish and shellfish species, D3, reported by Member States in 2018 under Article 17 against the reference list.
- c) In light of previous ICES advice, evaluate and if required propose revisions of the criteria used to define commercially-exploited fish and shellfish species (this should be in relation to a region/subregion and how a national list relates to that regional/subregional approach).
- d) Based on the outcome of the above ToRs, propose changes to the reference D3 lists to fully meet the requirements of the GES Decision and for regionally and subregionally agreed lists, differentiated by Member State where necessary.

The review of the D3 lists will be done following the criteria under “specifications” in the GES decision ((EU) 2017/848). A working document, the ICES D3 reference list, will be prepared by ICES Secretariat and the chair prior to the workshop and will highlight issues that need to be considered discussed at the workshop.

WKD3lists will report by 15 of August 2020 for the attention of ACOM.

### Supporting information

Priority	High, in response to a special request from DGENV on the Commission Decision on criteria and methodological standards for Good Environmental Status ((EU) 2017/848) and the reporting under MSFD Article 17 (on updates for MSFD Articles 8, 9 and 10. The advice will feed into ongoing efforts to provide guidance on the operational implementation of the MSFD.
Scientific justification	<p>The Marine Strategy Framework Directive aims to protect the marine environment and to achieve Good Environmental Status (GES) by 2020. For assessments of D3, the European Commission (EC) compiled operational (reference) lists of commercially-exploited species (fish and shellfish) for each marine region (Baltic Sea and Black Sea) and sub-region (NE Atlantic and Mediterranean) from which Member States could select those to be reported and/or add new ones if needed.</p> <p>This workshop focuses on both the EC reference list (ToR a) and the reported lists of MSFD Descriptor 3 by Member States (ToR b) and aims to first review the lists and second to propose changes to the lists. During the review of the reference list special attention will be given to:</p> <ol style="list-style-type: none"> <li>1. Provide clarity in the mapping of ICES areas (where necessary including FAO areas) against MSFD regions and subregions.</li> <li>2. Identify stocks under national management plans.</li> </ol>

3. Describe the attribution of stocks to each MSFD marine region and subregion, especially where scientific stock assessment units and total allowable catches (TAC) areas do not match.
4. Identify important species at regional or national scale for small-scale/local coastal fisheries.

ICES Secretariat and the chair will prepare a working document, the ICES reference list, with a collation of all the issues identified. More preparatory work will be developed through online meetings with relevant national experts ahead of WKD3lists. The workshop participants will address the issues and prepare a report that will feed the ICES advisory process and assist the EC with the next round of reporting in 2024.

Previous ICES advice on MSFD D3, (ICES 2014a, ICES 2014b, ICES 2016, ICES 2017) set criteria and operational guidance for assessment of D3.

Building from that, WKD3lists will re-evaluate the concept of commercially-exploited species (ToR c) and will propose changes to the lists of D3 to be reported by Member States to fully meet the requirements of the GES Decision to report on all commercially-exploited fish and shellfish in the next (2024) updates under Article 17 (ToR d). The proposal will include regional and subregional agreed lists, differentiated by Member State where necessary and other outstanding issues identified during the workshop. For example:

-Should information on the contribution of populations (stocks) to landings be used to further refine the lists?

-With regards to the use of secondary indicators for assessment of GES, SPiCT is used widely now as an analytical approach for MSY proxy reference points for category 3 and 4 stocks/ data limited stocks (ICES 2018). Potential inclusion of secondary indicators will be considered in the context of including them as secondary indicators for reporting of Descriptor D3.

#### References

- ICES. 2014a. EU request on draft recommendations for the assessment of MSFD Descriptor 3. In Report of the ICES Advisory Committee, 2014. ICES Advice 2014, Book 1, Section 1.6.2.1.
- ICES. 2014b. EU request to ICES for review of the Marine Strategy Framework Directive Descriptor 3 – Commercially exploited fish and shellfish. Technical service. In Report of the ICES Advisory Committee, 2014. ICES Advice 2014, Book 11, Section 11.2.1.3.
- ICES. 2015. EU request on revisions to Marine Strategy Framework Directive manuals for Descriptors 3, 4, and 6. In Report of the ICES Advisory Committee, 2015. ICES Advice 2015, Book 1, Section 1.6.2.1.
- ICES. 2016a. EU request to provide guidance on operational methods for the evaluation of the MSFD criterion D3C3. In Report of the ICES Advisory Committee, 2016. ICES Advice 2016, Book 1, Section 1.6.2.2.
- ICES 2016b. EU request to provide guidance on the practical methodology for delivering an MSFD GES assessment on D3 for an MSFD region/subregion
- ICES 2018. ICES reference points for stocks in categories 3 and 4. Technical guideline

Resource re-requirements	Secretariat support and advice process,
Participants	Workshop with experts from Member States, RSC, RFMOs, and stakeholders. If requests to attend exceed the meeting capacity available, ICES reserves the right to allocate participants based on the experts' relevant qualification. Participation of stakeholders is not committed.
Secretariat facilities	Secretariat support and meeting rooms
Financial	Covered by DGENV special request to ICES
Linkage to Advisory Committees	The products from WKD3lists will be peer-reviewed and enter into the ICES Advisory process to be approved by ACOM.
Linkages to other committees or groups	Links to SCICOM.
Linkages to other organizations	Links to RSCs and EC.

## 2 Update the operational (reference) list compiled by the European Commission: new species, list of stocks under national management plans, MSFD region-subregion

### The ICES D3 Reference list

Prior to the workshop, ICES Secretariat together with the chair developed the ICES D3 reference list. This list updates the EC operational list using the Member States MSFD D3 reports from 2018 and ICES information on D3 stocks on the contribution to EEA work on the *Status of fish and marine shellfish in European seas*<sup>1</sup>. The list is presented in Annex I. The approach taken was the following:

Using the EC operational list as a background document:

1. Extract the list of D3 species according to European Environment Agency (Annex 7)
2. Extract the list of D3 species from Member States in their 2018 reporting exercises from the central data repository (<https://cdr.eionet.europa.eu/>) and the compliance module<sup>2</sup> (<https://wise-test.eionet.europa.eu/marine/compliance-module> at EEA *EIONET* portal. The lists of D3 by Member States (MS D3lists) contain information on species name, stock code (if available), fishing area and MSFD region- subregion or MRU depending on the MS submission.
3. Gap analysis between the EC operational list and D3 EEA list and MS D3 lists to:
  - a. identify D3 species reported by Member States and not present in the operational list (yellow highlight in ICES D3 list)
  - b. identify gaps of D3 species at MSFD region-subregion level: D3 species present in the list but assigned to a different MSFD region-subregion
4. Include information on known multiannual management plans and national management plans and MSFD region- subregion

A draft version of the ICES D3 reference list was presented by ICES Secretariat to WKD3lists. Participants were asked to edit and complement the list based on their expertise at national/regional level. The final version of the ICES D3 reference list is included in Annex 1.

### Caveats

The ICES D3 reference list is based on the EC operational list and the 2018 MSFD D3 reports by Member States. Some Member State submissions are missing thus the ICES D3 reference list can be further updated whenever new data is available.

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<sup>1</sup> <https://www.eea.europa.eu/data-and-maps/indicators/status-of-marine-fish-stocks-4/assessment>

<sup>2</sup> Access granted by DGENV

The operational list contains D3 *spps* with only the genus information, for example *Beryx spp.*, *Epinephelus spp.* The MS reports contains full species name (e.g. *Beryx decadactylus*, *Beryx splendens*, *Epinephelus caninus*, *Epinephelus aeneus*, *Epinephelus marginatus*).#

Some countries have yet to report on D3 to the Commission. These member states are shown in the Table 1 below.

**Table 1: Reporting of MSFD obligation, Descriptor 3 by Member States.**

Member State yet to report on D3 as of 25 <sup>th</sup> June 2020	Member States having already reported
Ireland	France
Greece	Spain
United Kingdom	Denmark
Bulgaria	Germany
	Sweden
	Finland
	Portugal
	Italy
	Croatia
	Malta
	Latvia
	Lithuania
	Poland
	Estonia
	The Netherlands
	Romania
	Slovenia
	Cyprus
	Belgium

WKD3Lists was tasked to analyse the match between the species reported by MS and the list compiled by ICES and the EEA to analyse potential gaps in the reporting.

Table 2 contains the species that are included in the (ICES) D3 reference list (D3RL), but have not yet been reported on by any member state or may not be commercially exploited in the relevant

regions. Note that the region codes are shown in Annex 6. These species merit further consideration in relation to whether they indicate gaps in the member states' reporting within the relevant marine regions/sub-regions (recognising that not all member states have reported yet), or whether they are not commercially exploited in the (sub)region and should be removed from the list. An additional consideration is that non-indigenous species in each (sub)region should not be reported under D3, as specified in the Commission Decision (EU) 2017/848, and therefore should be removed from the list (e.g. *Rapana venosa* in the Black Sea).

According to Table 2 there seem to be gaps in the reporting on stocks of relevant commercial species, especially in the Mediterranean sub-regions. This finding is probably due to two reasons: 1) the taxonomic diversity is higher in the Mediterranean than in other marine regions, 2) several member states have not yet submitted their national reports hence these gaps might be filled once these reports become available.

**Table 2. Species that are in the D3 reference list, by region, but are not reported on by any member state. Landings are the sum of 2017-2018 in tonnes.**

Species	FAO Code	MWE	MIC	MAL	MAD	BLK	BAL	ABI	ACS	ANS	AMA	Countries
<i>Aphia minuta</i>	FIM	1	0	0	1	0	0	0	0	0	0	4
<i>Atherina boyeri</i>	ATB	0	0	0	1	0	0	0	0	0	0	7
<i>Callista chione</i>	KLK	1	0	0	0	0	0	0	0	0	0	5
<i>Chamelea gallina</i>	SVE	1	0	0	1	0	0	0	0	0	0	6
<i>Crystallogobius linearis</i>	YTN	1	0	0	0	0	0	0	0	0	0	1
<i>Diplodus puntazzo</i>	SHR	1	1	1	1	0	0	0	0	0	0	11
<i>Dipturus spp.*</i>	DRJ	0	0	0	0	0	0	1	1	1	0	
<i>Gymnamodytes cicereus</i>	ZGC	1	0	0	0	0	0	0	0	0	0	1
<i>Gymnamodytes semiquamatus</i>	ZGS	1	0	0	0	0	0	0	0	0	0	1
<i>Hippoglossoides platessoides</i>	PLA	0	0	0	0	0	0	0	0	1	0	11

Species	FAO Code	MWE	MIC	MAL	MAD	BLK	BAL	ABI	ACS	ANS	AMA	Countries
<i>Homarus gammarus</i>	LBE	1	1	1	1	0	0	0	0	0	0	16
<i>Leucoraja circularis</i>	GPP	0	0	0	0	0	0	0	1	1	0	
<i>Leucoraja fullonica</i>	GPP	0	0	0	0	0	0	0	1	1	0	
<i>Maja squinado</i>	SCR	1	0	0	0	0	0	0	0	0	0	13
<i>Molva dypterygia</i>	BLI	0	0	0	0	0	0	0	1	1	0	11
<i>Mugil cephalus</i>	MUF	0	1	0	1	0	0	0	0	0	0	11
<i>Murex spp.*</i>	MUE	1	0	0	0	0	0	0	0	0	0	5
<i>Mytilus galloprovincialis</i>	MSM	1	0	0	1	0	0	0	0	0	0	5
<i>Orcynopsis unicolor</i>	BOP	0	0	0	1	0	0	0	0	0	0	4
<i>Pseudaphya ferrerii</i>	EDE	1	0	0	0	0	0	0	0	0	0	1
<i>Raja asterias</i>	JRS	1	0	0	0	0	0	0	0	0	0	7
<i>Rajidae*</i>	RAJ	0	0	0	0	0	0	0	0	1	0	7
<i>Rapana venosa</i>	RPW	0	0	0	0	1	0	0	0	0	0	2
<i>Reinhardtius hippoglossoides</i>	GHL	0	0	0	0	0	0	0	0	1	0	11
<i>Scorpaena porcus</i>	BBS	0	0	1	0	0	0	0	0	0	0	10
<i>Trachyrincus scabrus</i>	TSU	0	0	0	0	0	0	0	0	1	0	2
<i>Trisopterus minutus</i>	POD	1	1	1	1	0	0	0	0	0	0	10
<i>Venerupis spp.*</i>	VEN	1	1	1	1	0	0	0	0	0	0	1

Species	FAO Code	MWE	MIC	MAL	MAD	BLK	BAL	ABI	ACS	ANS	AMA	Countries
<i>Venus verrucosa</i>	VEV	1	1	1	1	0	0	0	0	0	0	6

In many cases landings are reported on genus level (e.g. *Mullus spp.* or *Rajidae*) Where possible, these should be disaggregated into the individual species (see Table 2). However, it is not always possible to disaggregate these records into species-specific catches, thus the D3RL needs to be as flexible as possible to allow for the reporting at the genus taxon level if necessary. Table 3 sketches some potential solutions to account for problems when checking D3RL for congruency with national species lists.

**Table 3. Potential scenarios in making the D3RL consistent with member state reporting. D3 Reference list, MS: Member state**

Scenario	Potential solution
MS has only Genus level	Include genus level taxon to D3RL (e.g. <i>Raja spp.</i> )
One MS has only genus level, other MS has species level	Include genus level AND species level taxa into D3RL ( <i>Raja spp.</i> , <i>Raja clavata</i> , <i>Raja montagui</i> , etc.)
D3RL contains genus level taxon, but no MS has reported on it	Check whether reporting has occurred on species level taxa, eventually remove genus level taxon from D3RL
No reporting on species level taxa	Check whether reporting has occurred on genus level taxon
MS has records on genus and species taxon level, e.g. from different fishing métiers	Disaggregate genus level records by proportion of species level records (e.g. 1.000 Kg plaice and 200 Kg dab and 120 kg <i>Pleuronectiformes</i> , results in 1.100 kg plaice and 220 Kg dab.)

### 3 Review the Member States lists against the reference list: proposal for regional/subregional list, criteria for stocks selection (national and regional/subregional level), list of important species at small scale-coastal level.

A thorough review of the lists of D3 reported by Member States led to the identification of commercial fish and shellfish species important locally; at a marine region or subregion level (Table 4)

Table 4 shows the list of species that were identified as locally important in the highlighted marine regions and sub-regions. Several of these species were listed by member states in their national 2018-reports or identified by workshop participants and thus should be included in the D3RL. There may be additional locally-important species for Mediterranean sub-regions and for the Black Sea, for which not all member states have reported yet.

With eleven new stocks the Baltic Sea region (BAL) appears to be a region in which the current D3RL has not been comprehensive so far. As mentioned before, however, this might also be the case for other marine regions such as the Mediterranean, as several MS have not yet submitted their national reports and hence the list of amended species might become considerably longer than that shown in Table 4.



Species	FAO Code	MWE	MIC	MAL	MAD	BLK	BAL	ABI	ACS	ANS	AMA
<i>Illex coindetii</i>	SQM		1								
<i>Illex illecebrosus</i>	SQI							?			
<i>Katsuwonus pelamis</i>	SKJ	?									1
<i>Loligo vulgaris</i>	SQR		1								
<i>Lophius piscatorius</i>	MON		1								
<i>Macrourus berglax</i>	RHG							1			
<i>Martialia hydesi</i>	SQS								?	?	
<i>Merlangius merlangus*</i>	WHG						?				
<i>Mustelus mustelus</i>	SMD		1								
<i>Mytilus edulis *</i>	MUS									1	
<i>Mytilus spp.*</i>								?			
<i>Octopus vulgaris</i>	OCC		1					1			
<i>Osmerus eperlanus</i>	SME						?			?	
<i>Ostrea edulis</i>	OYF							?	?	?	
<i>Palaemon serratus</i>	CPR						?				
<i>Perca fluviatilis</i>	FPE						1				
<i>Platichthys spp.**</i>							?				

Species	FAO Code	MWE	MIC	MAL	MAD	BLK	BAL	ABI	ACS	ANS	AMA
<i>Prionace glauca</i>	BSH		1								1
<i>Raja circularis</i>	RJI								1	1	
<i>Raja clavata</i>	RJC		1								1
<i>Raja montagui</i>	RJM		1								
<i>Rutilus rutilus</i>	FRO						1				
<i>Salmo trutta</i>	TRS						?			?	
<i>Sander lucioperca</i>	FPP						1				
<i>Scomber colias</i>	VMA										?
<i>Scyliorhinus canicula</i>	SYC		1								
<i>Sepia officinalis</i>	CTC								?		
<i>Solen spp</i>	RAZ									?	
<i>Spicara smaris</i>	SPC				1						
<i>Squalus acanthias</i>	DGS		1							0	
<i>Squalus blainville</i>	QUB		1								
<i>Squatina squatina</i>	AGN							1	1		
<i>Thunnus alalunga</i>	ALB										1
<i>Thunnus obesus</i>	WEG							1	?		1

Species	FAO Code	MWE	MIC	MAL	MAD	BLK	BAL	ABI	ACS	ANS	AMA
<i>Thunnus thynnus</i>	BFT										1
<i>Trachinus draco</i>	WEG							?	?	?	
<i>Xiphias gladius</i>	SWO										1

**1** = spp is reported by a member state in this (sub)region and it should be added to the Ref list

**?** = spp may be important at a local level in the (sub)region, based on information from workshop participants

\*Note that *Mytilus* aquaculture activities rely on wild capture of juveniles. It is unclear whether it is covered under D3 or not.

\*\* It is acknowledged that there are two different flounder species in the Baltic Sea, and in all of the management units there is a mix of these two species, however no separation is attempted during the assessment process.

## 4 Evaluate and if required propose revisions of the criteria used to define species: Updated definition of commercially-exploited species (D3)

### 4.1 Commission Decision

The European Commission has issued a decision (Commission Decision 848/2017) which lays down the criteria for which species/stocks to be included in national submissions under the MSFD. *“A list of commercially-exploited species”* [stocks] *“for application of the criteria in each assessment area shall be established by Member States through regional or subregional cooperation and updated for each 6-year assessment period, taking into account Council Regulation (EC) No 199/2008 and the following:*

- (a) all stocks that are managed under Regulation (EU) No 1380/2013; 18.5.2017 L 125/52 Official Journal of the European Union EN*
- (b) the species for which fishing opportunities (total allowable catches and quotas) are set by Council under Article 43(3) of the Treaty on the Functioning of the European Union;*
- (c) the species for which minimum conservation reference sizes are set under Regulation (EC) No 1967/2006;*
- (d) the species under multiannual plans according to Article 9 of Regulation (EU) No 1380/2013;*
- (e) the species under national management plans according to Article 19 of Regulation (EC) No 1967/2006;*
- (f) any important species on a regional or national scale for small-scale/local coastal fisheries.*

*For the purposes of this Decision, commercially-exploited species which are non-indigenous in each assessment area shall be excluded from the list and thus not contribute to achievement of good environmental status for Descriptor 3.”*

### 4.2 Previous ICES advice on D3

In 2016, ICES advised that “commercial fish and shellfish” relevant for assessing GES are those stocks considered important to any EU Member State and those recorded in national lists under the EU Data Collection Framework. The total landings of these stocks should represent a very high proportion of the landings (e.g. >90%) in weight by that EU Member State (ICES, 2016b).

In 2014, ICES advised that Descriptor 3 applies for all the stocks covered by the Data Collection Framework (DCF) as described in Council Regulation (EC) No. 199/2008 (within the geographical scope of Directive 2008/56/EC) and similar obligations under the Common Fisheries Policy. The identification of commercial stocks is the first step to undertake in order to conform to the MSFD Descriptor 3. This was conducted for each of the MSFD regions and subregions. A common approach was followed for the Baltic Sea region and for the Northeast Atlantic region, by selecting the stocks that are internationally assessed by either ICES or ICCAT and cross-referencing them with the stocks that represent 99% of the total landings by weight. A comparison to DCF stocks was carried out previously by ICES (ICES, 2012b).

In the 2014 ICES advice it was noted that while the selections of species in the MSFD regions were made on the basis of landed weight, ranking stocks by the commercial value of the landings could be considered a valid alternative to retain small stocks which are subject to intense targeting because of high resale value.

Other issues identified in the 2014 advice included:

1. The rules for selecting stocks for Descriptor 3 applied by Member States are not identical across all Member States.
2. Aggregation of current and/or historical information on landings across several species can hamper the selection process of stocks (landings not registered by species but by group of species, such as skates and rays).

Finally, the following recommendations were made in 2014:

1. The Member States' lists of commercial stocks should first be derived at the MSFD regional (subregional in the case of the Northeast Atlantic) level by including stocks that are assessed at the international level.
2. In addition to the internationally assessed stocks, there may be several fish and shellfish stocks that are important for small-scale/local coastal fisheries on a regional or national scale. Member State should identify these stocks and add them to their national list.
3. It should be ensured that the list set up in accordance with point 1 and 2 covers a very high proportion of the landings (e.g. >90%) in weight.
4. The selection of stocks based on the ranking of the landings by weight (or commercial value) should be applied using the longest available time-series in order to also include depleted stocks that in the past had much larger landings. Extirpated species should not be included but would be covered under Descriptor 1.

### **4.3 Common Implementation Decision**

The Common Implementation Strategy 2018, for the MSFD, began the process for Descriptor 3, to make available operational lists from which Member States can select those to be reported (or add new ones if needed). The European Commission has compiled draft lists of commercial fish and shellfish for use in 2018 reporting.

### **4.4 WKD3Lists Considerations**

WKD3Lists considered the criteria for inclusion in the D3 lists, and whether revisions were required. The following section summarises these discussions. Much of preparation for the reporting under the current round of the MSFD, along with previous ICES advice predates the current Commission Decision of GES (848/2017). Therefore, it should be noted that the considerations below in some instances do not agree with the latest GES Decision.

### What constitutes a commercial stock?

According to Task Group 3 report (European Commission, 2010): Commercially-exploited populations applies to all living marine resources taken for economic profit. Fish and shellfish represent all marine vertebrate and invertebrate taxa including boney-fish, elasmobranchs, starfish, crayfish, bivalves, molluscs (including cephalopods) and extended to also include jellyfish. ICES advises (2016b) that “commercial fish and shellfish” relevant for assessing GES are those stocks considered important to any EU Member State and those recorded in national lists under the EU Data Collection Framework. Landings deriving from each (sub)region could be compiled (see below), and could be cross-checked against the (sub)regional lists. Any species that do not appear in the landings (or only at a very low level) could be removed from the (sub)regional lists.

### Thresholds in terms of weight and value of catches/landings

Previous (2016) ICES advice has suggested the use of thresholds to ensure that the stocks reported represent ‘a very high proportion of the landings (e.g. >90%) in weight by that EU Member State’. Earlier (2014) advice recognised the validity of considering value as a complementary approach to retain small stocks which are subject to intense targeting because of high resale value, as European lobster in Celtic Sea region. WKD3List recognises that the use of thresholds is pragmatic, but appears:

1. Member states should select stocks based on weight of catches or landings obtained within their national waters. Thus MS should not only report on the catches of their national fleets, but on catches of *all* operations occurring in their national waters.
2. Additionally, member states can select relevant stocks by catch/landing value. However, based on the results presented in Annex II member states should not use landing values only, but should use weight and values of landings in combination.
3. If stock/species lists are compiled by weights and values of catches/landings, these should be two separate lists. Selected stocks/species meeting the selection criteria of landing weights should be merged with the selected stocks/species meeting the selection criteria of landing values.
4. The fisheries dependent information (FDI) database by the Joint Research centre (<https://stecf.jrc.ec.europa.eu/reports/fdi>) is a useful resource for determining catches (volume and value) from all member states (combined) within the national waters of a member state. The catch and effort data is resolved by ICES statistical rectangle for Atlantic waters and GFCM GSA (Geographical SubAreas) for the Mediterranean Sea and includes both volume and value, but due to confidentiality of data, catches are not specified by member state. Efforts to regularly compile and update this dataset, and make it easily accessible, are strongly encouraged to continue. The Annual Economic Report (AER) by the STECF contains a database with landing volumes and values for the majority of relevant stocks and species. This includes catches by member state, at the spatial resolution of FAO subregion (e.g. 27.4.c). Therefore it is useful for determining catches by member state within an ecoregion as the ecoregions do track relatively well with FAO sub regions; however in most cases would be spatially too coarse to identify landings from an individual member state’s waters.
5. Member states are encouraged to apply a thresholding rule to weight or value of catches/landings to identify stocks of commercial relevance.
6. There is an argument for not having a threshold at all, i.e. that threshold = 100%. This argument would be supported by the fact that GES is to be calculated across all stocks. However on the other hand, there are stocks with negligible data (including very small

landings), and meaningless information. This is often the case for many MS, especially those with a Mediterranean coastline, but not exclusively. For example, French landings in Mediterranean GSA7 division are made up of 269 different species, 160 of which make up less than 1% of total landings in weight. Landings from GSA1, GSA5 and GSA6 (roughly equating to Spain's waters) comprise 2,178 species or species groups over the period 2012-2016. 2,064 of these make up less than 0.0% (to 1d.p.) of total landings in weight. Hence there may be a case for pragmatism. A particular example could be west of Scotland cod, where data may be negligible, but the information available is not meaningful. Thus, stocks that would be thresholded out, should not be stocks with meaningful information. As an example from the German data, a threshold of 100% at one decimal place, still doesn't encompass all catches in the German area.

7. Any threshold should be set in such a manner that it includes an appropriate suite of stocks and species, thereby being in compliance with the wording of D3: "*Populations of all commercially-exploited fish and shellfish are within safe biological limits, exhibiting a population age and size distribution that is indicative of a healthy stock*".
8. Threshold options discussed by WKD3Lists were cumulative values between 90 % to 100 % of all catches/landings within a MS national waters, or minimum species thresholds of 1 % to 0.1 % of all catches/landings. A list of stocks thresholded out, or number of stocks, per MS should be included. It is important that there is a picture of how comprehensive the reporting is. Therefore MS -in cooperation with neighbouring MS on a regional and/or subregional basis - could be asked to provide a list of those stocks that have been excluded because of for example being thresholded out. There would need to be a consistent process to produce that long list. In the HELCOM region there has been some movement towards this objective.

In following points (a) to (e) on pages 52-53 of Commission Decision 848/2017, any threshold criteria could apply to the identification of additional stocks of regional or national scale under point (f) of this Decision, rather than being used to threshold out any stocks covered by points (a) to (e) of the Commission's GES decision. WKD3Lists discussed whether thresholds on landings and values could be applied per species group (*sensu* Commission Decision 848/2017), namely Pelagic Shelf Fish, Demersal Shelf Fish, Coastal Fish, Deep-sea Fish, rather than globally across all stocks. This follows the Common Implementation Strategy and would expand the number of species. However, the categorisation of stocks and species to each group is not straight forward and is not yet standardised.

WKD3Lists considered at length whether thresholds could be considered using value as well as landed weight. Many of the considerations above would also relate to thresholds by value. The earlier ICES advice in 2014 noted that ranking stocks by the commercial value of the landings would be a valid alternative to retain small stocks which are subject to intense targeting because of high resale value.

The Common Implementation Strategy considered that weight of landings is advantageous because this information is readily and consistently available for all MSFD regions.

As an example, Portugal approach was that species which represented the highest proportion of landings (>90%) in weight and in value were included following the criteria proposed at Commission Decision 848/2017). Following those points the final list of species represented 90-99% of the landings.

A detailed analysis of various thresholds in terms of both weight and value for a selection of member states is provided in Annex II. This analysis shows that applying thresholds by weight generally identifies more species than when thresholds are applied to value. However, there is some difference in the species between the lists; applying thresholds by value can identify additional species of importance that are not picked up when applying thresholds by weight only.

Another detailed analysis was compiled by France, evaluating various thresholds across the four relevant maritime regions. In all cases the increase in the threshold percentage (90%-99%) in terms of value or weight of landings, led to an increase in the number of species. The results are best illustrated by way of comparison between the North Sea and the Mediterranean. In the Eastern Channel, an increase in the threshold from 90 to 99% more than doubles the number of stocks. In the Mediterranean, the increase is almost threefold. Thus, higher thresholds (95-99%) in areas such as the Mediterranean with greater species diversity, may disproportionately increase the number of stocks. For many MS as France, the definition of a large list of stocks, as exhaustive and relevant as possible, remains confronted with a concern for operationality in a context of implementation. There may be consequences of this.

#### **National management plans (Mediterranean only)**

The Commission Decision makes reference to the species under national management plans according to Article 19 of Regulation (EC) No 1967/2006, which relates to the Mediterranean only. This regulation called upon Member States to adopt management plans for fisheries by trawl nets, boat seines, shore seines, surrounding nets and dredges within their territorial waters. It should be noted that many of these management plans refer to fisheries rather than to stocks. For this reason it may be difficult to evaluate which stocks are indeed covered by Management Plans. A list of management plans (mostly from Mediterranean areas) known to the European Commission and complemented by the workshop participants is presented in Annex 4 whilst EU management plans known to ICES are listed in Annex 5.

#### **TAC stocks**

It is clear from the Commission Decision that stocks for inclusion are not confined to those having total allowable catches (TACs) set for them.

#### **Stocks without advice in relation to MSY reference points**

The Commission Decision does not confine itself to stocks having MSY reference points. Indeed the Decision goes further and states that *“the extent to which good environmental status has been achieved shall be expressed [...] the populations of commercially-exploited species in the assessment area which were not assessed.”*

The Commission Decision goes further and proposes – as examples - alternative methods for assessments including catch/biomass ratios as a proxy for D3C1 and trends over time in abundance for D3C2. Thus, there is latitude on the part of the MS to develop alternative methods for stocks without MSY reference points.

ICES classify fish stocks into six main categories on the basis of available knowledge:

**Category 1** – Stocks with quantitative assessments. Includes stocks with full analytical assessments, and forecasts that are either age-/length-structured or production models.

**Category 2** – Stocks with analytical assessments and forecasts that are only treated qualitatively. Includes stocks with quantitative assessments and forecasts which, for a variety of reasons, are considered indicative of trends in fishing mortality, recruitment, and biomass.

**Category 3** – Stocks for which survey-based assessments or exploratory assessments indicate trends. Includes stocks for which survey, trends-based assessments, or other indices are available that provide reliable indications of trends in stock metrics, such as total mortality, recruitment, and biomass.

**Category 4** – *Nephrops* stocks where information on possible abundance can be inferred and stocks for which a reliable time-series of catch can be used to approximate MSY. This is where there are reasonable scientific grounds to use life-history information and density information from neighbouring areas to provide advice.

**Category 5** – Stocks for which only landings or a short series of catches are available.

**Category 6** – Negligible landings stocks and stocks caught in minor amounts as bycatch. Includes stocks where landings are negligible in comparison to discards, as well as stocks that are primarily caught as bycatch species in other targeted fisheries.

For category 1 and 2 stocks, ICES provides advice in accordance with agreed management plans/strategies evaluated to be consistent with the precautionary approach when requested. If such plans/strategies are not agreed or have been evaluated by ICES as not being precautionary, ICES will give advice on the basis of the ICES MSY approach<sup>1</sup>.

As the knowledge available is insufficient to apply the ICES MSY approach to category 3–6 stocks, the advice rule is based on the precautionary approach.

ICES has, however, developed an approach to determine proxies for MSY reference points for some stocks in categories 3 and 4. Based on these proxies, ICES will assess the state of the stocks and their exploitation relative to MSY criteria<sup>2</sup>.

ICES is in a good position to provide extra stocks for inclusion in future MSFD D3 assessments, based on the development of MSY-proxies through ICES WKLIFE . This valuable exercise will augment the number of stocks for which assessment of D3C1 and D3C2 can be provided. A list of every published category 3 and 4 ICES stock in 2019 with indication on available fishing and biomass reference points is provided in Annex III.

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<sup>1</sup> [https://www.ices.dk/sites/pub/Publication%20Reports/Advice/2019/2019/Introduction\\_to\\_advice\\_2019.pdf](https://www.ices.dk/sites/pub/Publication%20Reports/Advice/2019/2019/Introduction_to_advice_2019.pdf)

<sup>2</sup> [http://ices.dk/sites/pub/Publication%20Reports/Guidelines%20and%20Policies/16.04.03.02\\_Category\\_3-4\\_Reference\\_Points.pdf](http://ices.dk/sites/pub/Publication%20Reports/Guidelines%20and%20Policies/16.04.03.02_Category_3-4_Reference_Points.pdf)

### **Interaction between D3 and D1 for commercially exploited stocks**

WKD3Lists discussed the overlap between D3 and D1 in relation to commercially exploited stocks that might also be relevant for D1. Participants discussed whether the reporting of a stock/species under D1 or D3 was mutually exclusive. WKD3Lists concluded that the Commission Decision 2017/848/EU explicitly implies the potential for reporting commercially exploited stocks under D1 as well as under D3. The group noted that there are unresolved issues relating to the stock vs species assessments under D3 and D1 respectively.

WKD3Lists identified four possible situations:

- Commercially exploited species that are representative of the D1 species groups can be reported under both descriptors e.g. cod, commercially exploited but also representative of commercial fish in D1.
- Commercially exploited species that have become rare, that are of ecological importance or national or international conservation concern (i.e. being red listed), can also be reported under both descriptors. For example, a commercially exploited stock may have become so rare that a fishing moratorium has been issued recently. In this case the stock should still be reported under D3 for several years. Depending on the status of the stock and prevailing environmental conditions (e.g. distributional shifts due to climate change), it may be concluded that the stock should no longer be considered as a viable commercial stock in the assessment area and then be listed only under D1. Alternatively, if the stock recovers, it might be kept under D3. Examples of this could be rays or spiny dogfish in the North Sea. However there are other commercial stocks, such as northern-hake, which recovered after being in poor condition some years ago, and there would not have been appropriate to exclude it from any putative D3 list at that time.
- Conversely, when new fisheries develop (e.g. wrasse and lumpsucker fisheries supplying the salmon farming industry for sea lice control), a species that was previously reported only under D1 might also become relevant to D3.
- Another case might occur when a species is regularly caught by commercial fishing fleets, but not sold on the market, or included in data collection schemes. In this case the species might be reported under D1, but not under D3. An example of this would be *Zeus faber* in German waters.
- Species at the edge of their distribution being caught infrequently and in low numbers in a MS' waters, and thus would not be relevant under D3, rather in D1, e.g. cod in Estonian waters

*It should be noted that the some of the commercial fish and shellfish species reported by MS are listed as protected species in IUCN, OSPAR and redlist and enumerate the species and refer to the list in the annex.*

### **Important species on a regional or national scale for small-scale/local coastal fisheries**

The Commission Decision calls upon MS to include such stocks in their submissions. It is not possible, at an international vantage point, to be aware of all potential stocks of national importance. Firstly, catch data for such stocks may not be readily available at an international level. Catches reported to FAO FishStat are usually not adequately defined by species/stock, to offer a means to evaluate outtake. However, the FDI and AER data may offer an alternative means to identify species of national interest. There may still be small scale coastal fleets for which only nationally available data may be able to identify relevant stocks.

However, there may be a basis to offer a definition of what constitutes stocks of regional or national importance based on inter alia, thresholds by value or weight, perhaps by species groupings referred to in the Commission Decision.

According to the Common Implementation Strategy there is no need to agree with the other Member States bordering the same MSFD (sub)region on one consistent approach as applies for the “regional” stocks, i.e. those that fall under Common Fisheries Policy (CFP) or support international fisheries and which occur more or less throughout the region.

#### **Non-indigenous species**

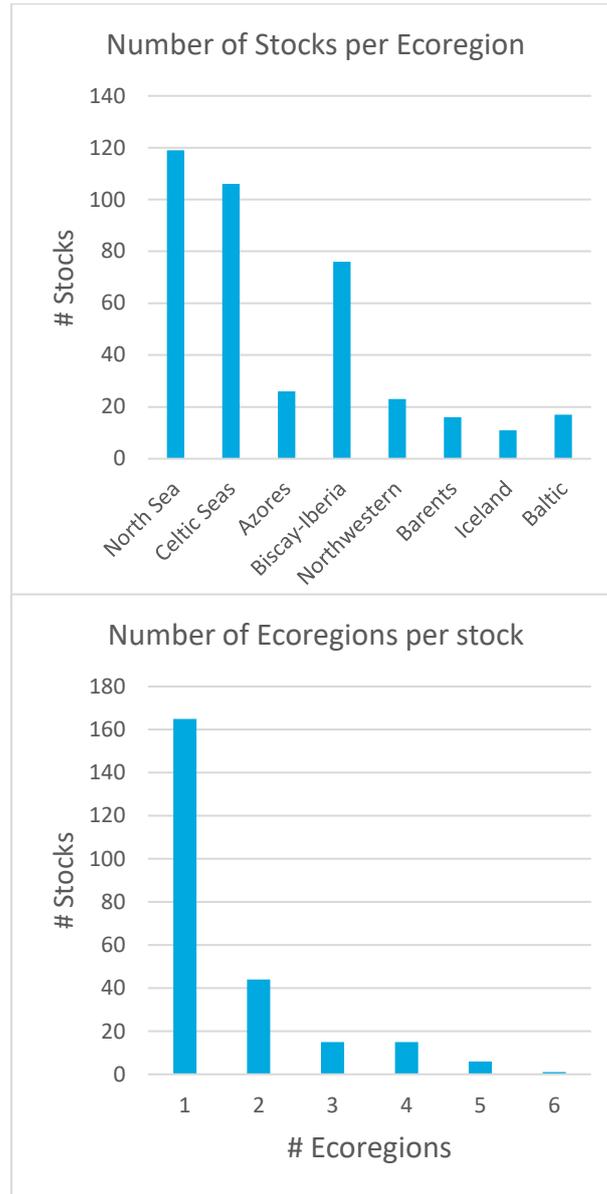
According to the Commission Decision 848/2017, commercially exploited non-indigenous species, should not be included in D3 assessment lists.

#### **Stocks straddling more than one MSFD region**

WKD3lists discussed the issue of D3 stocks belonging to more than one MSFD region or subregion. For the Fisheries and Ecosystem Overviews, ICES assigns stocks to one or more ecoregion, which closely align with MSFD ecoregions, though are not identical (Figure 1, upper). Of the 246 stocks considered so far for these overviews, 165 (67%) are found entirely within a single ecoregion (Figure 1, lower). (ICES 2020)

#### **Stocks at the edge of their distributions in a MS' waters**

An example of this situation is Eastern Baltic Sea cod in Estonian waters. Although the stock is assessed, the landings by Estonia in the Estonian coastal waters are negligible, always < 1% of total landings. In this case Estonia has considered cod as not relevant to the Estonian waters as it has negligible commercial importance (particularly compared with other species such as perch and pikeperch for instance). It would, of course, not be difficult to report the stock on the basis of ICES advice, but it may not be meaningful if the stock distribution barely overlaps the MS waters.



**Figure 1. Number of stocks per ICES ecoregion (left) and the number of ecoregions per stock (right) as used in the ICES Fisheries and Ecosystem overviews.**

In its advice to the EU on guidance on the practical methodology for delivering an MSFD GES assessment on D3 (ICES, 2016b), ICES recommended that GES be assessed at the unit of stock, and that for widely distributed stocks that straddle more than one MSFD region or subregion, the overall stock criteria should be included in each region or subregion when assessing GES. While for stocks spread across two ecoregions it may be reasonable to use the overall stock criteria to judge GES, for certain stocks the impact of catches in a particular member state's waters may have little to no impact on the GES of the stock.

A mapping exercise will be required in the future, to show the attribution of stocks to each MSFD marine region and sub-regions.

**Stocks caught in the MSFD waters by other countries**

WKD3Lists considered it appropriate that national submissions should include stocks which are fished in a country's waters, even if that country is not involved in the fishery. Thus, a national D3 assessment can be seen as an evaluation of the status of fish stocks that occur in the member states waters, rather than an evaluation of the MS' performance as a fishing nation. So a stock fished by a MS exclusively outside its national waters should not be included in the national MSFD D3 assessment.

**Criterion D3C3**

In 2017, ICES advised that until the proof of concept has been validated, D3C3 be considered as a surveillance indicator for size distribution and that several time-series assessment methods may be appropriate to track relative changes in the indicator metrics. Based on this advice, there is no reason for D3C3 considerations to bear upon choice of species/stocks for inclusion.

**List of non-assessed stocks**

Commission Decision 848/2017 is clear that reporting needs to not only include the populations that have been assessed but also those that have not been assessed. This means that lack of assessment is not a valid basis for exclusion of a stock or stocks from the list to be reported upon.

## 5 Propose changes to the reference D3 lists to fully meet the requirements of the GES Decision: Proposals informed in the work above.

It is proposed to change/update the operational list with the findings of Table 3 above. However this analysis is not complete as some member states have yet to report (see Table 1). The species in Table 2 also merit further consideration in relation to whether they indicate gaps in the member states' reporting within the relevant marine regions/sub-regions (recognising that not all member states have reported yet), or whether they are not commercially exploited in the (sub)region and should be removed from the list.

There are several species, for instance Bluefin tuna (*Thunnus thynnus*), glass eel (*Anguilla anguilla*) and blue mussel (*Mytilus* spp.) where aquaculture relies on wild capture of juveniles. It is unclear whether this extraction activity is relevant under D3. Clarification is required.

It is also unclear if escapees from aquaculture which intersperse with wild populations and are caught in fisheries are relevant for inclusion in D3.

For the purposes of this Decision, commercially-exploited species which are non-indigenous in each assessment area shall be excluded from the list and thus not contribute to achievement of good environmental status for Descriptor 3. Therefore species such as *Rapana venosa*, in the Black Sea, should not be included in any D3 lists.

To help refine the reference lists at regional or subregional level – in addition to the lists compiled by member states - an analysis of catches from those regions could be used to facilitate updating of the lists. It is also necessary to understand stock structure. This is particularly important in southern waters where there is great species diversity.

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## Annex 1: ICES D3 Reference List

This list is based on the original European Commission D3 operational list complemented with what Member States have reported in 2018. There may be other stocks of local importance that have not been reported, but could be added to this list based on an analysis of volume/value of landings by (sub)region or by Member State waters.

Reported by Member State (2018) *	Species (extra lines of same species used to account for multiple stocks in column C and management plans per stock in column D)	WoRMS	ICES Stock name	Management plans ***	Fishing area ICES	Corresponding MSFD regions (regions newly reported by Member States in 2018 marked in red)	Member State that reported new MSFD region in 2018
Germany	<i>Abramis brama</i> **	154281	NA	NA	Subarea 3d	BAL	DE
France, Portugal	<i>Alopias spp</i>	105740	thr.27.nea, Thresher sharks ( <i>Alopias spp.</i> ) in Subareas 10, 12, Divisions 7.c-k, 8.d-e, and Subdivisions 5.b.1, 9.b.1, 14.b.1 (Northeast Atlantic)	NA	Subareas 10, 12, Divisions 7.c-k, 8.d-e, and Subdivisions 5.b.1, 9.b.1, 14.b.1 (Northeast Atlantic)	ABI, ACS, ANS, AMA	PT
France	<i>Amblyraja radiata</i>	105865	rjr.27.23a4 , Starry ray ( <i>Amblyraja radiata</i> ) in Subareas 2 and 4, and Division 3.a (Norwegian Sea, North Sea, Skagerrak and Kattegat)	NA	Subareas 2 and 4, and Division 3.a (Norwegian Sea, North Sea, Skagerrak and Kattegat)	ANS	
Denmark, France, Germany, Sweden	<i>Ammodytes spp</i>	125909		NA		ANS, BAL	DK
	<i>Ammodytes spp</i>		san.sa.1r Sandeel ( <i>Ammodytes spp.</i> ) in Divisions 4.b and 4.c, Sandeel Area 1r (central and southern North Sea, Dogger Bank)	NA	Divisions 4.b and 4.c, Sandeel Area 1r (central and southern North Sea, Dogger Bank)		

Reported by Member State (2018) *	Species (extra lines of same species used to account for multiple stocks in column C and management plans per stock in column D)	WoRMS	ICES Stock name	Management plans ***	Fishing area ICES	Corresponding MSFD regions (regions newly reported by Member States in 2018 marked in red)	Member State that reported new MSFD region in 2018
	<i>Ammodytes spp</i>		san.sa.2r Sandeel (Ammodytes spp.) in Divisions 4.b and 4.c, and Subdivision 20, Sandeel Area 2r (Skagerrak, central and southern North Sea)	NA	Divisions 4.b and 4.c, and Subdivision 20, Sandeel Area 2r (Skagerrak, central and southern North Sea)		
	<i>Ammodytes spp</i>		san.sa.3r Sandeel (Ammodytes spp.) in Divisions 4.a and 4.b, and Subdivision 20, Sandeel Area 3r (Skagerrak, northern and central North Sea)	NA	Divisions 4.a and 4.b, and Subdivision 20, Sandeel Area 3r (Skagerrak, northern and central North Sea)		
	<i>Ammodytes spp</i>		san.sa.4 Sandeel (Ammodytes spp.) in divisions 4.a and 4.b, Sandeel Area 4 (northern and central North Sea)	NA	divisions 4.a and 4.b, Sandeel Area 4 (northern and central North Sea)		
	<i>Ammodytes spp</i>		san.sa.5r Sandeel (Ammodytes spp.) in Division 4.a, Sandeel Area 5r (northern North Sea, Viking and Bergen banks)	NA	Division 4.a, Sandeel Area 5r (northern North Sea, Viking and Bergen banks)		
	<i>Ammodytes spp</i>		san.sa.6 Sandeel (Ammodytes spp.) in subdivisions 20-22, Sandeel Area 6 (Kattegat)	NA	subdivisions 20-22, Sandeel Area 6 (Kattegat)		

Reported by Member State (2018) *	Species (extra lines of same species used to account for multiple stocks in column C and management plans per stock in column D)	WoRMS	ICES Stock name	Management plans ***	Fishing area ICES	Corresponding MSFD regions (regions newly reported by Member States in 2018 marked in red)	Member State that reported new MSFD region in 2018
Denmark, France, Germany, Sweden	<i>Anguilla anguilla</i>	126281	eel.2737.nea European eel ( <i>Anguilla anguilla</i> ) throughout its natural range	<a href="#">Council Regulation (EC) No 1100/2007 of 18 September 2007</a>	subareas 1, 2, 4-8, 10, and 14, and divisions 3.a, 9.a, and 12.b (Northeast Atlantic and Arctic Ocean)	MWE, MIC, MAL, MAD, BAL, ABI, ACS, ANS	
France, Portugal	<i>Aphanopus carbo</i>	127085	bsf.27.nea Black scabbardfish ( <i>Aphanopus carbo</i> ) in subareas 1, 2, 4-8, 10, and 14, and divisions 3.a, 9.a, and 12.b (Northeast Atlantic and Arctic Ocean)	NA	subareas 1, 2, 4-8, 10, and 14, and divisions 3.a, 9.a, and 12.b (Northeast Atlantic and Arctic Ocean)	ABI, ACS, ANS, AMA	
<i>not reported</i>	<i>Aphia minuta</i>	126868	NA	NA		MWE, MAD,	
France, Portugal, Sweden	<i>Argentina silus</i>	126715		NA		ACS, ANS, <b>AMA</b>	PT
	<i>Argentina silus</i>		aru.27.123a4 Greater silver smelt ( <i>Argentina silus</i> ) in subareas 1, 2, and 4, and in Division 3.a (Northeast Arctic, North Sea, Skagerrak and Kattegat)	NA	subareas 1, 2, and 4, and in Division 3.a (Northeast Arctic, North Sea, Skagerrak and Kattegat)		
	<i>Argentina silus</i>		aru.27.123a4 Greater silver smelt ( <i>Argentina silus</i> ) in subareas 1, 2, and 4, and in Division 3.a (Northeast Arctic, North Sea, Skagerrak and Kattegat)	NA	subareas 1, 2, and 4, and in Division 3.a (Northeast Arctic, North Sea, Skagerrak and Kattegat)		

Reported by Member State (2018) *	Species (extra lines of same species used to account for multiple stocks in column C and management plans per stock in column D)	WoRMS	ICES Stock name	Management plans ***	Fishing area ICES	Corresponding MSFD regions (regions newly reported by Member States in 2018 marked in red)	Member State that reported new MSFD region in 2018
	<i>Argentina silus</i>		aru.27.5b6a Greater silver smelt ( <i>Argentina silus</i> ) in divisions 5.b and 6.a (Faroes grounds and west of Scotland)	NA	divisions 5.b and 6.a (Faroes grounds and west of Scotland)		
	<i>Argentina silus</i>		aru.27.6b7-1012 Greater silver smelt ( <i>Argentina silus</i> ) in subareas 7-10 and 12, and Division 6.b (other areas)	NA	subareas 7-10 and 12, and Division 6.b (other areas)		
Portugal	<i>Argyrosomus regius**</i>	127007	NA	NA		ABI	PT
Malta, Italy	<i>Aristaeomorpha foliacea</i>	158326	NA	NA		MIC, MWE	
Portugal	<i>Aristaeopsis edwardsiana**</i>	240796	NA	NA		ABI	PT
Spain, Italy, Portugal	<i>Aristeus antennatus</i>	107083	NA	NA		ABI, MWE, MIC	
not reported	<i>Atherina boyeri</i>	272027	NA	NA		MWE, MAD	
Portugal, Malta	<i>Auxis rochei rochei</i>	236487	ICCAT stock	NA		MWE, MAD, ABI, MIC	PT, MT
Portugal	<i>Balistes capriscus**</i>	154721	NA	NA		AMA	PT
Germany	<i>Belone belone</i>	126375	NA	NA		MAD, BAL	

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France, Portugal	<i>Beryx spp. (Beryx decadactylus, Beryx splendens)</i>	125700	alf.27.nea Alfonsinos ( <i>Beryx</i> spp.) in subareas 1-10, 12 and 14 (the Northeast Atlantic and adjacent waters) <i>Beryx</i> Arctic Ocean Ecoregion, Azores Ecoregion, Bay of Biscay and the Iberian Coast Ecoregion, Barents Sea Ecoregion, Celtic Seas Ecoregion, Faroes Ecoregion, Greenland Sea Ecoregion, Iceland Sea Ecoregion, Greater North Sea	NA	subareas 1-10, 12 and 14 (the Northeast Atlantic and adjacent waters) <i>Beryx</i> Arctic Ocean Ecoregion, Azores Ecoregion, Bay of Biscay and the Iberian Coast Ecoregion, Barents Sea Ecoregion, Celtic Seas Ecoregion, Faroes Ecoregion, Greenland Sea Ecoregion, Iceland Sea Ecoregion, Greater North Sea	ABI, ACS, ANS, <b>AMA</b>	PT
Cyprus, Malta, Portugal	<i>Boops boops</i>	127047	NA	NA		MIC, MAL, <b>ABI</b>	PT
France, Sweden	<i>Brosme brosme</i>	126447		NA		BAL, ABI, ACS, ANS	
	<i>Brosme brosme</i>		usk.27.1-2 Tusk ( <i>Brosme brosme</i> ) in subareas 1 and 2 (Northeast Arctic)	NA	subareas 1 and 2 (Northeast Arctic)		
	<i>Brosme brosme</i>		usk.27.12ac Tusk ( <i>Brosme brosme</i> ) in Subarea 12, excluding Division 12.b (southern Mid-Atlantic Ridge)	NA	Subarea 12, excluding Division 12.b (southern Mid-Atlantic Ridge)		

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	<i>Brosme brosme</i>		usk.27.3a45b6a7-912b Tusk ( <i>Brosme brosme</i> ) in subareas 4 and 7-9 and divisions 3.a, 5.b, 6.a, and 12.b (Northeast Atlantic)	NA	subareas 4 and 7-9 and divisions 3.a, 5.b, 6.a, and 12.b (Northeast Atlantic)		
	<i>Brosme brosme</i>		usk.27.5a14 Tusk ( <i>Brosme brosme</i> ) in Subarea 14 and Division 5.a (East Greenland, and Iceland grounds)	NA	Subarea 14 and Division 5.a (East Greenland, and Iceland grounds)		
	<i>Brosme brosme</i>		usk.27.6b Tusk ( <i>Brosme brosme</i> ) in Division 6.b (Rockall)	NA	Division 6.b (Rockall)		
France	<i>Buccinum undatum</i>	138878	NA	NA		ANS, ACS	FR
not reported	<i>Callista chione</i>	141906	NA	NA		MWE	
Germany	<i>Cancer pagurus</i>	107276	NA	NA		ANS	
France	<i>Capros aper</i>	127419	boc.27.6-8 Boarfish ( <i>Capros aper</i> ) in subareas 6-8 (Celtic Seas, English Channel, and Bay of Biscay)	NA	subareas 6-8 (Celtic Seas, English Channel, and Bay of Biscay)	ABI, ACS, ANS	
Malta	<i>Centrophorus granulatus</i> **	105899	NA	NA		MIC	MT
France, Portugal	<i>Centrophorus squamosus</i>	105901		NA		ABI, ACS, ANS, AMA	PT

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	<i>Centrophorus squamosus</i>		cyo.27.nea Portuguese dogfish ( <i>Centroscymnus coelolepis</i> , <i>Centrophorus squamosus</i> ) in subareas 1-10, 12 and 14 (the Northeast Atlantic and adjacent waters)	NA	subareas 1-10, 12 and 14 (the Northeast Atlantic and adjacent waters)		
	<i>Centrophorus squamosus</i>		guq.27.nea Leafscale gulper shark ( <i>Centrophorus squamosus</i> ) in subareas 1-10, 12 and 14 (the Northeast Atlantic and adjacent waters)	NA	subareas 1-10, 12 and 14 (the Northeast Atlantic and adjacent waters)		
France, Portugal	<i>Centroscymnus coelolepis</i>	105907	cyo.27.nea Portuguese dogfish ( <i>Centroscymnus coelolepis</i> , <i>Centrophorus squamosus</i> ) in subareas 1-10, 12 and 14 (the Northeast Atlantic and adjacent waters)	NA	subareas 1-10, 12 and 14 (the Northeast Atlantic and adjacent waters)	ABI, ACS, ANS, <b>AMA</b>	PT
Portugal	<i>Cetorhinus maximus</i>	105837	bsk.27.nea Basking shark ( <i>Cetorhinus maximus</i> ) in Subareas 1-10, 12 and 14 (Northeast Atlantic and adjacent waters)	NA	subareas 1-10, 12 and 14 (Northeast Atlantic and adjacent waters)	<b>AMA</b>	PT
not reported	<i>Chamelea gallina</i>	141907	NA	NA		MWE, MAD	
France, Malta	<i>Chelidonichthys cuculus</i>	127259	gur.27.3-8 Red gurnard ( <i>Chelidonichthys cuculus</i> ) in subareas 3-8 (Northeast Atlantic)	NA	subareas 3-8 (Northeast Atlantic)	ABI, ACS, ANS, <b>MIC</b>	MT

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Germany	<i>Chelidonichthys lucerna</i>	127262	NA	NA		ANS	
Portugal	<i>Chelon labrosus</i> **	126977	NA	NA		AMA	PT
Denmark, Estonia, Finland, France, Germany, Latvia, Lithuania, Netherlands, Poland, Sweden	<i>Clupea harengus</i>	126417				BAL, ACS, ANS	
	<i>Clupea harengus</i>		her.27.1-24a514a Herring (Clupea harengus) in subareas 1, 2, 5 and divisions 4.a and 14.a, Norwegian spring-spawning herring (the Northeast Atlantic and Arctic Ocean)	NA	subareas 1, 2, 5 and divisions 4.a and 14.a, Norwegian spring-spawning herring (the Northeast Atlantic and Arctic Ocean)		
	<i>Clupea harengus</i>		her.27.20-24 Herring (Clupea harengus) in subdivisions 20-24, spring spawners (Skagerrak, Kattegat, and western Baltic)	for herring (Clupea harengus) in subdivisions 20-21, spring spawners (Skagerrak, Kattegat): NA; for herring (Clupea harengus) in subdivisions 22-24, spring spawners (western Baltic): Baltic Multiannual Plan, (EU) 2016/1139 <a href="http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32016R1139&amp;from=EN">http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32016R1139&amp;from=EN</a>	subdivisions 20-24, spring spawners (Skagerrak, Kattegat, and western Baltic)		

Reported by Member State (2018) *	Species (extra lines of same species used to account for multiple stocks in column C and management plans per stock in column D)	WoRMS	ICES Stock name	Management plans ***	Fishing area ICES	Corresponding MSFD regions (regions newly reported by Member States in 2018 marked in red)	Member State that reported new MSFD region in 2018
	<i>Clupea harengus</i>		her.27.25-2932 Herring ( <i>Clupea harengus</i> ) in subdivisions 25-29 and 32, excluding the Gulf of Riga (central Baltic Sea)	Baltic Multiannual Plan, (EU) 2016/1139 <a href="http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32016R1139&amp;from=EN">http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32016R1139&amp;from=EN</a>	subdivisions 25-29 and 32, excluding the Gulf of Riga (central Baltic Sea)		
	<i>Clupea harengus</i>		her.27.28 Herring ( <i>Clupea harengus</i> ) in Subdivision 28.1 (Gulf of Riga)	Baltic Multiannual Plan, (EU) 2016/1139 <a href="http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32016R1139&amp;from=EN">http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32016R1139&amp;from=EN</a>	Subdivision 28.1 (Gulf of Riga)		
	<i>Clupea harengus</i>		her.27.3031 Herring ( <i>Clupea harengus</i> ) in Subdivisions 30 and 31 (Gulf of Bothnia)	Baltic Multiannual Plan, (EU) 2016/1139 <a href="http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32016R1139&amp;from=EN">http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32016R1139&amp;from=EN</a>	Subdivisions 30 and 31 (Gulf of Bothnia)		
	<i>Clupea harengus</i>		her.27.3a47d Herring ( <i>Clupea harengus</i> ) in Subarea 4 and divisions 3.a and 7.d, autumn spawners (North Sea, Skagerrak and Kattegat, eastern English Channel)	NA	Subarea 4 and divisions 3.a and 7.d, autumn spawners (North Sea, Skagerrak and Kattegat, eastern English Channel)		

Reported by Member State (2018) *	Species (extra lines of same species used to account for multiple stocks in column C and management plans per stock in column D)	WoRMS	ICES Stock name	Management plans ***	Fishing area ICES	Corresponding MSFD regions (regions newly reported by Member States in 2018 marked in red)	Member State that reported new MSFD region in 2018
	<i>Clupea harengus</i>		her.27.5a Herring ( <i>Clupea harengus</i> ) in Division 5.a, summer-spawning herring (Iceland grounds)	NA	Division 5.a, summer-spawning herring (Iceland grounds)		
	<i>Clupea harengus</i>		her.27.6a7bc Herring ( <i>Clupea harengus</i> ) in divisions 6.a and 7.b-c (West of Scotland, West of Ireland)	NA	divisions 6.a and 7.b-c (West of Scotland, West of Ireland)		
	<i>Clupea harengus</i>		her.27.irls Herring ( <i>Clupea harengus</i> ) in divisions 7.a South of 52°30'N, 7.g-h, and 7.j-k (Irish Sea, Celtic Sea, and southwest of Ireland)	NA	divisions 7.a South of 52°30'N, 7.g-h, and 7.j-k (Irish Sea, Celtic Sea, and southwest of Ireland)		
	<i>Clupea harengus</i>		her.27.nirs Herring ( <i>Clupea harengus</i> ) in Division 7.a North of 52°30'N (Irish Sea)	NA	Division 7.a North of 52°30'N (Irish Sea)		
Portugal, Spain	<i>Conger conger</i> **	126285				ABI, AMA	PT, ES
Finland	<i>Coregonus lavaretus</i>	127180	NA	NA		BAL	
Portugal	<i>Coris julis</i> **	126963	NA	NA		AMA	PT
Malta	<i>Coryphaena hippurus</i>	126846	NA	NA		MWE, MIC	MT
France, Sweden	<i>Coryphaenoides rupestris</i>	158960		NA		ABI, ACS, ANS, AMA	

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	<i>Coryphaenoides rupestris</i>		rng.27.1245a8914ab Roundnose grenadier ( <i>Coryphaenoides rupestris</i> ) in subareas 1, 2, 4, 8, and 9, Division 14.a, and in subdivisions 14.b.2 and 5.a.2 (Northeast Atlantic and Arctic Ocean)	NA	subareas 1, 2, 4, 8, and 9, Division 14.a, and in subdivisions 14.b.2 and 5.a.2 (Northeast Atlantic and Arctic Ocean)		
	<i>Coryphaenoides rupestris</i>		rng.27.3a Roundnose grenadier ( <i>Coryphaenoides rupestris</i> ) in Division 3.a (Skagerrak and Kattegat)	NA	Division 3.a (Skagerrak and Kattegat)		
	<i>Coryphaenoides rupestris</i>		rng.27.5a10b12ac14b Roundnose grenadier ( <i>Coryphaenoides rupestris</i> ) in Divisions 10.b and 12.c, and Subdivisions 12.a.1, 14.b.1, and 5.a.1 (Oceanic Northeast Atlantic and northern Reykjanes Ridge)	NA	Divisions 10.b and 12.c, and Subdivisions 12.a.1, 14.b.1, and 5.a.1 (Oceanic Northeast Atlantic and northern Reykjanes Ridge)		
	<i>Coryphaenoides rupestris</i>		rng.27.5b6712b Roundnose grenadier ( <i>Coryphaenoides rupestris</i> ) in subareas 6-7 and divisions 5.b and 12.b (Celtic Seas and the English Channel, Faroes grounds, and western Hatton Bank)	NA	subareas 6-7 and divisions 5.b and 12.b (Celtic Seas and the English Channel, Faroes grounds, and western Hatton Bank)		

Reported by Member State (2018) *	Species (extra lines of same species used to account for multiple stocks in column C and management plans per stock in column D)	WoRMS	ICES Stock name	Management plans ***	Fishing area ICES	Corresponding MSFD regions (regions newly reported by Member States in 2018 marked in red)	Member State that reported new MSFD region in 2018
Denmark, Germany	<i>Crangon crangon</i>	107552	NA	NA	Subarea 4b	ANS	
<i>not reported</i>	<i>Crystallogobius linearis</i>	126878	NA	NA		MWE	
France, Portugal	<i>Dalatias licha</i>	105910	sck.27.nea Kitefin shark ( <i>Dalatias licha</i> ) in subareas 1-10, 12 and 14 (the Northeast Atlantic and adjacent waters)	NA	subareas 1-10, 12 and 14 (the Northeast Atlantic and adjacent waters)	ABI, ACS, ANS, <b>AMA</b>	PT
Cyprus	<i>Dentex dentex</i>	273962	NA	NA		MWE, MIC, MAL	
France, Malta, Netherlands, Sweden, Portugal	<i>Dicentrarchus labrax</i>	126975				MWE, MIC, MAL, MAD, ABI, ACS, ANS	
	<i>Dicentrarchus labrax</i>		bss.27.4bc7ad-h Seabass ( <i>Dicentrarchus labrax</i> ) in Divisions 4.b-c, 7.a, and 7.d-h (central and southern North Sea, Irish Sea, English Channel, Bristol Channel, and Celtic Sea)	NA	Divisions 4.b-c, 7.a, and 7.d-h (central and southern North Sea, Irish Sea, English Channel, Bristol Channel, and Celtic Sea)		
	<i>Dicentrarchus labrax</i>		bss.27.6a7bj Seabass ( <i>Dicentrarchus labrax</i> ) in divisions 6.a, 7.b, and 7.j (West of Scotland, West of Ireland, eastern part of southwest of Ireland)	NA	divisions 6.a, 7.b, and 7.j (West of Scotland, West of Ireland, eastern part of southwest of Ireland)		

Reported by Member State (2018) *	Species (extra lines of same species used to account for multiple stocks in column C and management plans per stock in column D)	WoRMS	ICES Stock name	Management plans ***	Fishing area ICES	Corresponding MSFD regions (regions newly reported by Member States in 2018 marked in red)	Member State that reported new MSFD region in 2018
	<i>Dicentrarchus labrax</i>		bss.27.8ab Seabass ( <i>Dicentrarchus labrax</i> ) in divisions 8.a-b (northern and central Bay of Biscay)	The EU multiannual plan (MAP; EU, 2019) for stocks in the Western Waters and adjacent waters applies to these stocks. <a href="https://eur-lex.europa.eu/eli/reg/2019/472/oj">https://eur-lex.europa.eu/eli/reg/2019/472/oj</a>	divisions 8.a-b (northern and central Bay of Biscay)		
	<i>Dicentrarchus labrax</i>		bss.27.8c9a Seabass ( <i>Dicentrarchus labrax</i> ) in divisions 8.c and 9.a (southern Bay of Biscay and Atlantic Iberian waters)	The EU multiannual plan (MAP; EU, 2019) for stocks in the Western Waters and adjacent waters applies to these stocks. <a href="https://eur-lex.europa.eu/eli/reg/2019/472/oj">https://eur-lex.europa.eu/eli/reg/2019/472/oj</a>	divisions 8.c and 9.a (southern Bay of Biscay and Atlantic Iberian waters)		
Portugal	<i>Dicologlossa cuneata**</i>	127154	NA	NA		ABI	PT
Malta	<i>Diplodus annularis</i>	127049	NA	NA		MWE, MIC, MAL, MAD	
not reported	<i>Diplodus puntazzo</i>	127052	NA	NA		MWE, MIC, MAL, MAD	
Portugal, Malta	<i>Diplodus sargus</i>	127053	NA	NA		ABI, MWE, MIC, MAL, MAD, AMA	PT
Portugal	<i>Diplodus vulgaris</i>	105762	NA	NA		ABI	PT
France	<i>Dipturus batis</i>	105762		NA		ABI, ACS, ANS	

Reported by Member State (2018) *	Species (extra lines of same species used to account for multiple stocks in column C and management plans per stock in column D)	WoRMS	ICES Stock name	Management plans ***	Fishing area ICES	Corresponding MSFD regions (regions newly reported by Member States in 2018 marked in red)	Member State that reported new MSFD region in 2018
	<i>Dipturus batis</i>		rjb.27.3a4 Common skate complex (Blue skate ( <i>Dipturus batis</i> ) and flapper skate ( <i>Dipturus intermedius</i> ) in Subarea 4 and Division 3.a (North Sea, Skagerrak and Kattegat)	NA	Subarea 4 and Division 3.a (North Sea, Skagerrak and Kattegat)		
	<i>Dipturus batis</i>		rjb.27.67a-ce-k Common skate complex (Blue skate ( <i>Dipturus batis</i> ) and flapper skate ( <i>Dipturus intermedius</i> ) in Subarea 6 and divisions 7.a–c and 7.e–k (Celtic Seas and western English Channel)	NA	Subarea 6 and divisions 7.a–c and 7.e–k (Celtic Seas and western English Channel)		
	<i>Dipturus batis</i>		rjb.27.89a Common skate complex (Blue skate ( <i>Dipturus batis</i> ) and flapper skate ( <i>Dipturus intermedius</i> ) in Subarea 8 and Division 9.a (Bay of Biscay and Atlantic Iberian waters)	NA	Subarea 8 and Division 9.a (Bay of Biscay and Atlantic Iberian waters)		
not reported	<i>Dipturus spp</i>	105762	NA	NA		ANS	
Portugal	<i>Donax trunculus</i>	137906	NA	NA		ABI	PT
Italy	<i>Eledone cirrhosa</i>	140600	NA	NA		MWE, MAD	
Italy	<i>Eledone moschata</i>	140601	NA	NA		MWE, MAD	

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Croatia, France, Germany, Romania, Spain, Slovenia, Hungary, Italy, Portugal	<i>Engraulis encrasicolus</i>	126426		Croatian management plan for purse seiners includes European anchovy		MWE, MIC, MAL, MAD, BLK, ABI, AMA, ANS	DE
	<i>Engraulis encrasicolus</i>		ane.27.8 Anchovy ( <i>Engraulis encrasicolus</i> ) in Subarea 8 (Bay of Biscay)	NA	Subarea 8 (Bay of Biscay)		
	<i>Engraulis encrasicolus</i>		ane.27.9a Anchovy ( <i>Engraulis encrasicolus</i> ) in Division 9.a (Atlantic Iberian waters)	NA	Division 9.a (Atlantic Iberian waters)		
Malta, Portugal	<i>Epinephelus</i> spp. ( <i>Epinephelus caninus</i> , <i>Epinephelus aeneus</i> , <i>Epinephelus marginatus</i> )	126068	NA	NA		MWE, MIC, MAL, MAD, AMA	PT, MT
Germany	<i>Esox lucius</i> **	154210	NA	NA		BAL	DE
Portugal	<i>Euthynnus alleteratus</i> **	403171	NA	NA		ABI	PT
Germany, France	<i>Eutrigla gurnardus</i>	150637	gug.27.3a47d Grey gurnard ( <i>Eutrigla gurnardus</i> ) in Subarea 4 and divisions 7.d and 3.a (North Sea, eastern English Channel, Skagerrak and Kattegat)	NA	Subarea 4 and divisions 7.d and 3.a (North Sea, eastern English Channel, Skagerrak and Kattegat)	ANS	

Reported by Member State (2018) *	Species (extra lines of same species used to account for multiple stocks in column C and management plans per stock in column D)	WoRMS	ICES Stock name	Management plans ***	Fishing area ICES	Corresponding MSFD regions (regions newly reported by Member States in 2018 marked in red)	Member State that reported new MSFD region in 2018
Belgium, Denmark, Finland, France, Germany, Latvia, Lithuania, Netherlands, Poland, Sweden	<i>Gadus morhua</i>	126436				BAL, ACS, ANS	
	<i>Gadus morhua</i>		cod.21.1 Cod (Gadus morhua) in NAFO Subarea 1, inshore (West Greenland cod)	NA		NAFO Subarea 1, inshore (West Greenland cod)	
	<i>Gadus morhua</i>		cod.21.1a-e Cod (Gadus morhua) in NAFO divisions 1.A-E, offshore (West Greenland)	NA		NAFO divisions 1.A-E, offshore (West Greenland)	
	<i>Gadus morhua</i>		cod.2127.1f14 Cod (Gadus morhua) in ICES Subarea 14 and NAFO Division 1.F (East Greenland, South Greenland)	NA		CES Subarea 14 and NAFO Division 1.F (East Greenland, South Greenland)	
	<i>Gadus morhua</i>		cod.27.1-2 Cod (Gadus morhua) in subareas 1 and 2 (Northeast Arctic)	NA		subareas 1 and 2 (Northeast Arctic)	
	<i>Gadus morhua</i>		cod.27.1-2coast Cod (Gadus morhua) in subareas 1 and 2 (Norwegian coastal waters cod)	NA		subareas 1 and 2 (Norwegian coastal waters cod)	
	<i>Gadus morhua</i>		cod.27.21 Cod (Gadus morhua) in Subdivision 21 (Kattegat)	NA		Subdivision 21 (Kattegat)	

Reported by Member State (2018) *	Species (extra lines of same species used to account for multiple stocks in column C and management plans per stock in column D)	WoRMS	ICES Stock name	Management plans ***	Fishing area ICES	Corresponding MSFD regions (regions newly reported by Member States in 2018 marked in red)	Member State that reported new MSFD region in 2018
	<i>Gadus morhua</i>		cod.27.22-24 Cod ( <i>Gadus morhua</i> ) in subdivisions 22-24, western Baltic stock (western Baltic Sea)	Baltic Multiannual Plan, (EU) 2016/1139 <a href="http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32016R1139&amp;from=EN">http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32016R1139&amp;from=EN</a>	subdivisions 22-24, western Baltic stock (western Baltic Sea)		
	<i>Gadus morhua</i>		cod.27.24-32 Cod ( <i>Gadus morhua</i> ) in subdivisions 24-32, eastern Baltic stock (eastern Baltic Sea)	Baltic Multiannual Plan, (EU) 2016/1139 <a href="http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32016R1139&amp;from=EN">http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32016R1139&amp;from=EN</a>	subdivisions 24-32, eastern Baltic stock (eastern Baltic Sea)		
	<i>Gadus morhua</i>		cod.27.47d20 Cod ( <i>Gadus morhua</i> ) in Subarea 4, Division 7.d, and Subdivision 20 (North Sea, eastern English Channel, Skagerrak)	NA	Subarea 4, Division 7.d, and Subdivision 20 (North Sea, eastern English Channel, Skagerrak)		
	<i>Gadus morhua</i>		cod.27.5a Cod ( <i>Gadus morhua</i> ) in Division 5.a (Iceland grounds)	NA	Division 5.a (Iceland grounds)		
	<i>Gadus morhua</i>		cod.27.5b1 Cod ( <i>Gadus morhua</i> ) in Subdivision 5.b.1 (Faroe Plateau)	NA	Subdivision 5.b.1 (Faroe Plateau)		
	<i>Gadus morhua</i>		cod.27.5b2 Cod ( <i>Gadus morhua</i> ) in Subdivision 5.b.2 (Faroe Bank)	NA	Subdivision 5.b.2 (Faroe Bank)		
	<i>Gadus morhua</i>		cod.27.6a Cod ( <i>Gadus morhua</i> ) in Division 6.a (West of Scotland)	NA	Division 6.a (West of Scotland)		

Reported by Member State (2018) *	Species (extra lines of same species used to account for multiple stocks in column C and management plans per stock in column D)	WoRMS	ICES Stock name	Management plans ***	Fishing area ICES	Corresponding MSFD regions (regions newly reported by Member States in 2018 marked in red)	Member State that reported new MSFD region in 2018
	<i>Gadus morhua</i>		cod.27.6b Cod ( <i>Gadus morhua</i> ) in Division 6.b (Rockall)	NA	Division 6.b (Rockall)		
	<i>Gadus morhua</i>		cod.27.7a Cod ( <i>Gadus morhua</i> ) in Division 7.a (Irish Sea)	NA	Division 7.a (Irish Sea)		
	<i>Gadus morhua</i>		cod.27.7e-k Cod ( <i>Gadus morhua</i> ) in divisions 7.e-k (eastern English Channel and southern Celtic Seas)	NA	divisions 7.e-k (eastern English Channel and southern Celtic Seas)		
France, Portugal	<i>Galeorhinus galeus</i>	105820	gag.27.nea Tope ( <i>Galeorhinus galeus</i> ) in subareas 1-10, 12 and 14 (the Northeast Atlantic and adjacent waters)	NA	subareas 1-10, 12 and 14 (the Northeast Atlantic and adjacent waters)	ABI, ACS, ANS, <b>AMA</b>	PT
France, Sweden, Portugal	<i>Galeus melastomus</i>	105812		NA		ABI, ACS, ANS	
	<i>Galeus melastomus</i>		sho.27.89a Black-mouth dogfish ( <i>Galeus melastomus</i> ) in Subarea 8 and Division 9.a (Bay of Biscay and Atlantic Iberian waters)	NA	Subarea 8 and Division 9.a (Bay of Biscay and Atlantic Iberian waters)		

Reported by Member State (2018) *	Species (extra lines of same species used to account for multiple stocks in column C and management plans per stock in column D)	WoRMS	ICES Stock name	Management plans ***	Fishing area ICES	Corresponding MSFD regions (regions newly reported by Member States in 2018 marked in red)	Member State that reported new MSFD region in 2018
	<i>Galeus melastomus</i>		sho.27.67 Black-mouth dogfish ( <i>Galeus melastomus</i> ) in subareas 6 and 7 (West of Scotland, southern Celtic Seas, and English Channel)	NA	subareas 6 and 7 (West of Scotland, southern Celtic Seas, and English Channel)		
Sweden	<i>Glyptocephalus cynoglossus</i>	127136	wit.27.3a47d Witch ( <i>Glyptocephalus cynoglossus</i> ) in Subarea 4 and divisions 3.a and 7.d (North Sea, Skagerrak and Kattegat, eastern English Channel)	The EU multiannual plan (MAP) for stocks in the North Sea (EU, 2018) and adjacent waters applies to bycatches of this stock. <a href="http://data.europa.eu/eli/reg/2018/973/oj">http://data.europa.eu/eli/reg/2018/973/oj</a> .	Subarea 4 and divisions 3.a and 7.d (North Sea, Skagerrak and Kattegat, eastern English Channel)	ANS	
not reported	<i>Gymnammodytes cicereus</i>	126753	NA	NA	subareas 1-10, 12 and 14 (the Northeast Atlantic and adjacent waters)	MWE	
not reported	<i>Gymnammodytes semisquamatus</i>	126754	NA	NA		MWE	
Portugal	<i>Helicolenus dactylopterus**</i>	127251	NA			ABI, AMA	PT
Malta	<i>Hexanchus griseus**</i>	105833	NA	NA		MIC	MT
not reported	<i>Hippoglossoides platessoides</i>	127137	NA	NA		ANS	
not reported	<i>Homarus gammarus</i>	107253	NA	NA		MWE, MIC, MAL, MAD	

Reported by Member State (2018) *	Species (extra lines of same species used to account for multiple stocks in column C and management plans per stock in column D)	WoRMS	ICES Stock name	Management plans ***	Fishing area ICES	Corresponding MSFD regions (regions newly reported by Member States in 2018 marked in red)	Member State that reported new MSFD region in 2018
France	<i>Hoplostethus atlanticus</i>	126402	ory.27.nea Orange roughy ( <i>Hoplostethus atlanticus</i> ) in subareas 1-10, 12 and 14 (the Northeast Atlantic and adjacent waters)	NA	subareas 1-10, 12 and 14 (the Northeast Atlantic and adjacent waters)	ABI, ACS, ANS, AMA	
Italy, Malta	<i>Illex coindetii</i>	140621	NA	NA		MWE, MIC	MT
Portugal	<i>Istiophorus albicans**</i>	126949	ICCAT stock			ABI, AMA	PT
France, Portugal	<i>Isurus oxyrinchus</i>	105839	ICCAT stock	NA		ABI, ACS, ANS, AMA	PT
Portugal	<i>Kajikia albida**</i>	712906	ICCAT stock			ABI, AMA	PT
Portugal, Spain	<i>Katsuwonus pelamis **</i>	127018	ICCAT stock	NA		AMA	ES, PT
Portugal	<i>Labrus bergylta</i>	126965	NA	NA		AMA	PT
France, Portugal	<i>Lamna nasus</i>	105841	por.27.nea Porbeagle ( <i>Lamna nasus</i> ) in subareas 1-10, 12 and 14 (the Northeast Atlantic and adjacent waters)	NA	subareas 1-10, 12 and 14 (the Northeast Atlantic and adjacent waters)	ABI, ACS, ANS, AMA	PT
Malta, Portugal	<i>Lepidopus caudatus</i>	127088				MWE, MIC, AMA	PT
	<i>Lepidopus caudatus</i>		lez.27.4a6a Megrim ( <i>Lepidorhombus</i> spp.) in divisions 4.a and 6.a (northern North Sea, West of Scotland)	NA	divisions 4.a and 6.a (northern North Sea, West of Scotland)		

Reported by Member State (2018) *	Species (extra lines of same species used to account for multiple stocks in column C and management plans per stock in column D)	WoRMS	ICES Stock name	Management plans ***	Fishing area ICES	Corresponding MSFD regions (regions newly reported by Member States in 2018 marked in red)	Member State that reported new MSFD region in 2018
	<i>Lepidopus caudatus</i>		lez.27.6b Megrim (Lepidorhombus spp.) in Division 6.b (Rockall)	NA	Division 6.b (Rockall)		
Portugal, Spain	<i>Lepidorhombus boscii</i>	127145		The EU multiannual plan (MAP; EU, 2019) for stocks in the Western Waters and adjacent waters applies to this stock. <a href="https://eur-lex.europa.eu/eli/reg/2019/472/oj">https://eur-lex.europa.eu/eli/reg/2019/472/oj</a>		ABI, ACS, ANS, AMA	
	<i>Lepidorhombus boscii</i>		ldb.27.7b-k8abd Four-spot megrim (Lepidorhombus boscii) in divisions 7.b-k, 8.a-b, and 8.d (west and southwest of Ireland, Bay of Biscay)	The EU multiannual plan (MAP; EU, 2019) for stocks in the Western Waters and adjacent waters applies to this stock. <a href="https://eur-lex.europa.eu/eli/reg/2019/472/oj">https://eur-lex.europa.eu/eli/reg/2019/472/oj</a>	divisions 7.b-k, 8.a-b, and 8.d (west and southwest of Ireland, Bay of Biscay)		
	<i>Lepidorhombus boscii</i>		ldb.27.8c9a Four-spot megrim (Lepidorhombus boscii) in divisions 8.c and 9.a (southern Bay of Biscay and Atlantic Iberian waters East)	The EU multiannual plan (MAP; EU, 2019) for stocks in the Western Waters and adjacent waters applies to this stock. <a href="https://eur-lex.europa.eu/eli/reg/2019/472/oj">https://eur-lex.europa.eu/eli/reg/2019/472/oj</a>	divisions 8.c and 9.a (southern Bay of Biscay and Atlantic Iberian waters East)		

Reported by Member State (2018) *	Species (extra lines of same species used to account for multiple stocks in column C and management plans per stock in column D)	WoRMS	ICES Stock name	Management plans ***	Fishing area ICES	Corresponding MSFD regions (regions newly reported by Member States in 2018 marked in red)	Member State that reported new MSFD region in 2018
France, Portugal, Spain	<i>Lepidorhombus whiffiagonis</i>	127146	meg.27.7b-k8abd, meg.27.8c9a Megrim (Lepidorhombus whiffiagonis) in divisions 8.c and 9.a (Cantabrian Sea and Atlantic Iberian waters)	The EU multiannual plan (MAP; EU, 2019) for stocks in the Western Waters and adjacent waters applies to this stock. <a href="https://eur-lex.europa.eu/eli/reg/2019/472/oj">https://eur-lex.europa.eu/eli/reg/2019/472/oj</a>	divisions 8.c and 9.a (Cantabrian Sea and Atlantic Iberian waters)	ABI, ACS, ANS, AMA	
<i>not reported</i>	<i>Leucoraja circularis</i>	105873	rji.27.67 Sandy ray (Leucoraja circularis) in subareas 6-7 (West of Scotland, southern Celtic Seas, English Channel)	NA	subareas 6-7 (West of Scotland, southern Celtic Seas, English Channel)	ACS, ANS	
<i>not reported</i>	<i>Leucoraja fullonica</i>	105874	rjf.27.67 Shagreen ray (Leucoraja fullonica) in subareas 6-7 (West of Scotland, southern Celtic Seas, English Channel)	NA	subareas 6-7 (West of Scotland, southern Celtic Seas, English Channel)	ACS, ANS	
France, Portugal	<i>Leucoraja naevus</i>	105876				ABI, ACS, ANS	
	<i>Leucoraja naevus</i>		rjn.27.3a4 Cuckoo ray (Leucoraja naevus) in Subarea 4 and Division 3.a (North Sea, Skagerrak and Kattegat)	NA	Subarea 4 and Division 3.a (North Sea, Skagerrak and Kattegat)		

Reported by Member State (2018) *	Species (extra lines of same species used to account for multiple stocks in column C and management plans per stock in column D)	WoRMS	ICES Stock name	Management plans ***	Fishing area ICES	Corresponding MSFD regions (regions newly reported by Member States in 2018 marked in red)	Member State that reported new MSFD region in 2018
	<i>Leucoraja naevus</i>		rjn.27.678abd Cuckoo ray ( <i>Leucoraja naevus</i> ) in subareas 6-7 and divisions 8.a-b and 8.d (West of Scotland, southern Celtic Seas, and western English Channel, Bay of Biscay)	NA	subareas 6-7 and divisions 8.a-b and 8.d (West of Scotland, southern Celtic Seas, and western English Channel, Bay of Biscay)		
	<i>Leucoraja naevus</i>		rjn.27.8c Cuckoo ray ( <i>Leucoraja naevus</i> ) in Division 8.c (Cantabrian Sea)	NA	Division 8.c (Cantabrian Sea)		
	<i>Leucoraja naevus</i>		rjn.27.9a Cuckoo ray ( <i>Leucoraja naevus</i> ) in Division 9.a (Atlantic Iberian waters)	NA	Division 9.a (Atlantic Iberian waters)		
Belgium, Germany, France, Sweden	<i>Limanda limanda</i>	127139				BAL, ANS	
	<i>Limanda limanda</i>		dab.27.22-32 Dab ( <i>Limanda limanda</i> ) in subdivisions 22-32 (Baltic Sea)	NA	subdivisions 22-32 (Baltic Sea)		
	<i>Limanda limanda</i>		dab.27.3a4 Dab ( <i>Limanda limanda</i> ) in Subarea 4 and Division 3.a (North Sea, Skagerrak and Kattegat)	The EU multiannual plan (MAP) for stocks in the North Sea catches of this stock." <a href="http://data.europa.eu/eli/reg/2018/973/oj">http://data.europa.eu/eli/reg/2018/973/oj</a> .	Subarea 4 and Division 3.a (North Sea, Skagerrak and Kattegat)		
Malta	<i>Lithognathus mormyrus</i>	127055	NA	NA		MWE, MIC, MAL, MAD	
France, Portugal	<i>Loligo forbesii</i>	140270	NA	NA		ABI, ACS, ANS, <b>AMA</b>	PT

Reported by Member State (2018) *	Species (extra lines of same species used to account for multiple stocks in column C and management plans per stock in column D)	WoRMS	ICES Stock name	Management plans ***	Fishing area ICES	Corresponding MSFD regions (regions newly reported by Member States in 2018 marked in red)	Member State that reported new MSFD region in 2018
France, Italy, Malta, Portugal	<i>Loligo vulgaris</i>	140271	NA	NA		MWE, ABI, ACS, ANS, <b>MIC</b>	MT
France, Portugal, Italy, Spain	<i>Lophius budegassa</i>	126554				MWE, ABI, ACS, ANS, AMA, <b>MAD</b>	IT
	<i>Lophius budegassa</i>		anf.27.1-2 Anglerfish ( <i>Lophius budegassa</i> , <i>Lophius piscatorius</i> ) in subareas 1 and 2 (Northeast Arctic)	NA	subareas 1 and 2 (Northeast Arctic)		
	<i>Lophius budegassa</i>		anf.27.3a46 Anglerfish ( <i>Lophius budegassa</i> , <i>Lophius piscatorius</i> ) in Subareas 4 and 6, and Division 3.a (North Sea, Rockall and West of Scotland, Skagerrak and Kattegat)	NA	Subareas 4 and 6, and Division 3.a (North Sea, Rockall and West of Scotland, Skagerrak and Kattegat)		
	<i>Lophius budegassa</i>		ank.27.78abd Black-bellied anglerfish ( <i>Lophius budegassa</i> ) in Subarea 7 and divisions 8.a-b and 8.d (Celtic Seas, Bay of Biscay)	NA	Subarea 7 and divisions 8.a-b and 8.d (Celtic Seas, Bay of Biscay)		
	<i>Lophius budegassa</i>		ank.27.8c9a Black-bellied anglerfish ( <i>Lophius budegassa</i> ) in divisions 8.c and 9.a (Cantabrian Sea, Atlantic Iberian waters)	NA	divisions 8.c and 9.a (Cantabrian Sea, Atlantic Iberian waters)		

Reported by Member State (2018) *	Species (extra lines of same species used to account for multiple stocks in column C and management plans per stock in column D)	WoRMS	ICES Stock name	Management plans ***	Fishing area ICES	Corresponding MSFD regions (regions newly reported by Member States in 2018 marked in red)	Member State that reported new MSFD region in 2018
France, Malta, Portugal, Spain, Italy	<i>Lophius piscatorius</i>	126555				MWE, MAD, ABI, ACS, ANS, AMA, <b>MIC</b>	MT
	<i>Lophius piscatorius</i>		anf.27.1-2 Anglerfish (Lophius budegassa, Lophius piscatorius) in subareas 1 and 2 (Northeast Arctic)	NA	subareas 1 and 2 (Northeast Arctic)		
	<i>Lophius piscatorius</i>		anf.27.3a46 Anglerfish (Lophius budegassa, Lophius piscatorius) in Subareas 4 and 6, and Division 3.a (North Sea, Rockall and West of Scotland, Skagerrak and Kattegat)	NA	Subareas 4 and 6, and Division 3.a (North Sea, Rockall and West of Scotland, Skagerrak and Kattegat)		
	<i>Lophius piscatorius</i>		mon.27.78abd White anglerfish (Lophius piscatorius) in Subarea 7 and divisions 8.a-b and 8.d (Celtic Seas, Bay of Biscay)	The EU multiannual plan (MAP; EU, 2019) for stocks in the Western Waters and adjacent waters applies to this stock. <a href="https://eur-lex.europa.eu/eli/reg/2019/472/oj">https://eur-lex.europa.eu/eli/reg/2019/472/oj</a>	Subarea 7 and divisions 8.a-b and 8.d (Celtic Seas, Bay of Biscay)		
	<i>Lophius piscatorius</i>		mon.27.8c9a White anglerfish (Lophius piscatorius) in divisions 8.c and 9.a (Cantabrian Sea and Atlantic Iberian waters)	The EU multiannual plan (MAP; EU, 2019) for stocks in the Western Waters and adjacent waters applies to this stock. <a href="https://eur-lex.europa.eu/eli/reg/2019/472/oj">https://eur-lex.europa.eu/eli/reg/2019/472/oj</a>	divisions 8.c and 9.a (Cantabrian Sea and Atlantic Iberian waters)		

Reported by Member State (2018) *	Species (extra lines of same species used to account for multiple stocks in column C and management plans per stock in column D)	WoRMS	ICES Stock name	Management plans ***	Fishing area ICES	Corresponding MSFD regions (regions newly reported by Member States in 2018 marked in red)	Member State that reported new MSFD region in 2018
France	<i>Macrourus berglax</i>	126472	rhg.27.nea Roughhead grenadier ( <i>Macrourus berglax</i> ) in subareas 5-8, 10, 12 and 14 (Northeast Atlantic and Arctic Ocean)	NA	subareas 5-8, 10, 12 and 14 (Northeast Atlantic and Arctic Ocean)	ACS, ANS, <b>ABI</b>	FR
not reported	<i>Maja squinado</i>	107350	NA	NA		MWE	
Portugal	<i>Makaira nigrican</i> **	126950	ICCAT stock			<b>ABI, AMA</b>	PT
Denmark, France, Netherlands, Sweden	<i>Melanogrammus aeglefinus</i>	126437				BAL, ACS, ANS	
	<i>Melanogrammus aeglefinus</i>		had.27.1-2 Haddock ( <i>Melanogrammus aeglefinus</i> ) in subareas 1 and 2 (Northeast Arctic)	NA	subareas 1 and 2 (Northeast Arctic)		
	<i>Melanogrammus aeglefinus</i>		had.27.46a20 Haddock ( <i>Melanogrammus aeglefinus</i> ) in Subarea 4, Division 6.a, and Subdivision 20 (North Sea, West of Scotland, Skagerrak)	NA	Subarea 4, Division 6.a, and Subdivision 20 (North Sea, West of Scotland, Skagerrak)		
	<i>Melanogrammus aeglefinus</i>		had.27.5a Haddock ( <i>Melanogrammus aeglefinus</i> ) in Division 5.a (Iceland grounds)	NA	Division 5.a (Iceland grounds)		

Reported by Member State (2018) *	Species (extra lines of same species used to account for multiple stocks in column C and management plans per stock in column D)	WoRMS	ICES Stock name	Management plans ***	Fishing area ICES	Corresponding MSFD regions (regions newly reported by Member States in 2018 marked in red)	Member State that reported new MSFD region in 2018
	<i>Melanogrammus aeglefinus</i>		had.27.5b Haddock (Melanogrammus aeglefinus) in Division 5.b (Faroes grounds), had.27.6b Haddock (Melanogrammus aeglefinus) in Division 6.b (Rockall)	NA	Division 5.b (Faroes grounds), had.27.6b Haddock (Melanogrammus aeglefinus) in Division 6.b (Rockall)		
	<i>Melanogrammus aeglefinus</i>		had.27.7a Haddock (Melanogrammus aeglefinus) in Division 7.a (Irish Sea)	NA	Division 7.a (Irish Sea)		
	<i>Melanogrammus aeglefinus</i>		had.27.7b-k Haddock (Melanogrammus aeglefinus) in Divisions 7.b-k (southern Celtic Seas and English Channel)	NA	Divisions 7.b-k (southern Celtic Seas and English Channel)		
Belgium, France, Germany, Netherlands, Portugal, Sweden	<i>Merlangius merlangus</i>	126438		NA		ABI, ACS, ANS, AMA	
	<i>Merlangius merlangus</i>		whg.27.3a Whiting (Merlangius merlangus) in Division 3.a (Skagerrak and Kattegat)	NA	Division 3.a (Skagerrak and Kattegat)		
	<i>Merlangius merlangus</i>		whg.27.47d Whiting (Merlangius merlangus) in Subarea 4 and Division 7.d (North Sea and eastern English Channel)	NA	Subarea 4 and Division 7.d (North Sea and eastern English Channel)		

Reported by Member State (2018) *	Species (extra lines of same species used to account for multiple stocks in column C and management plans per stock in column D)	WoRMS	ICES Stock name	Management plans ***	Fishing area ICES	Corresponding MSFD regions (regions newly reported by Member States in 2018 marked in red)	Member State that reported new MSFD region in 2018
	<i>Merlangius merlangus</i>		whg.27.6a Whiting (Merlangius merlangus) in Division 6.a (West of Scotland)	NA	Division 6.a (West of Scotland)		
	<i>Merlangius merlangus</i>		whg.27.6b Whiting (Merlangius merlangus) in Division 6.b (Rockall)	NA	Division 6.b (Rockall)		
	<i>Merlangius merlangus</i>		whg.27.7a Whiting (Merlangius merlangus) in Division 7.a (Irish Sea)	NA	Division 7.a (Irish Sea)		
	<i>Merlangius merlangus</i>		whg.27.7b-ce-k Whiting (Merlangius merlangus) in divisions 7.b-c and 7.e-k (southern Celtic Seas and eastern English Channel)	NA	divisions 7.b-c and 7.e-k (southern Celtic Seas and eastern English Channel)		
	<i>Merlangius merlangus</i>		whg.27.89a Whiting (Merlangius merlangus) in Subarea 8 and Division 9.a (Bay of Biscay and Atlantic Iberian waters)	The EU multiannual plan (MAP; EU, 2019) for stocks in the Western Waters and adjacent waters applies to this stock. <a href="https://eur-lex.europa.eu/eli/reg/2019/472/oj">https://eur-lex.europa.eu/eli/reg/2019/472/oj</a>	Subarea 8 and Division 9.a (Bay of Biscay and Atlantic Iberian waters)		

Reported by Member State (2018) *	Species (extra lines of same species used to account for multiple stocks in column C and management plans per stock in column D)	WoRMS	ICES Stock name	Management plans ***	Fishing area ICES	Corresponding MSFD regions (regions newly reported by Member States in 2018 marked in red)	Member State that reported new MSFD region in 2018
Croatia, Cyprus, Denmark, France, Hungary, Italy, Malta, Netherlands, Portugal, Spain, Sweden	<i>Merluccius merluccius</i>	126484		Croatian management plan (CMP) for bottom trawlers		MWE, MIC, MAL, MAD, BAL, ABI, ACS, ANS, AMA	
	<i>Merluccius merluccius</i>		hke.27.3a46-8abd Hake ( <i>Merluccius merluccius</i> ) in subareas 4, 6, and 7, and divisions 3.a, 8.a-b, and 8.d, Northern stock (Greater North Sea, Celtic Seas, and the northern Bay of Biscay)	NA	subareas 4, 6, and 7, and divisions 3.a, 8.a-b, and 8.d, Northern stock (Greater North Sea, Celtic Seas, and the northern Bay of Biscay)		
	<i>Merluccius merluccius</i>		hke.27.8c9a Hake ( <i>Merluccius merluccius</i> ) in divisions 8.c and 9.a, Southern stock (Cantabrian Sea and Atlantic Iberian waters)	The EU multiannual plan (MAP; EU, 2019) for stocks in the Western Waters and adjacent waters applies to this stock, <a href="https://eur-lex.europa.eu/eli/reg/2019/472/oj">https://eur-lex.europa.eu/eli/reg/2019/472/oj</a> . Croatian management plan (CMP) for bottom trawlers	divisions 8.c and 9.a, Southern stock (Cantabrian Sea and Atlantic Iberian waters)		
Portugal	<i>Microchirus spp**</i>	126274	NA	NA		ABI	PT
France, Portugal, Spain, Sweden	<i>Micromesistius poutassou</i>	126439	whb.27.1-91214 Blue whiting ( <i>Micromesistius poutassou</i> ) in subareas 1-9, 12, and 14 (Northeast Atlantic and adjacent waters)	NA	subareas 1-9, 12, and 14 (Northeast Atlantic and adjacent waters)	MWE, ABI, ACS, ANS, AMA	

Reported by Member State (2018) *	Species (extra lines of same species used to account for multiple stocks in column C and management plans per stock in column D)	WoRMS	ICES Stock name	Management plans ***	Fishing area ICES	Corresponding MSFD regions (regions newly reported by Member States in 2018 marked in red)	Member State that reported new MSFD region in 2018
Belgium, Germany, Sweden	<i>Microstomus kitt</i>	127140	NA	NA		ANS	
France	<i>Molva dypterygia</i>	126459		NA		ACS, ANS	
	<i>Molva dypterygia</i>		bli.27.5a14 Blue ling ( <i>Molva dypterygia</i> ) in Subarea 14 and Division 5.a (East Greenland and Iceland grounds)	NA	Subarea 14 and Division 5.a (East Greenland and Iceland grounds)		
	<i>Molva dypterygia</i>		bli.27.5b67 Blue ling ( <i>Molva dypterygia</i> ) in subareas 6-7 and Division 5.b (Celtic Seas and Faroes grounds)	NA	subareas 6-7 and Division 5.b (Celtic Seas and Faroes grounds)		
	<i>Molva dypterygia</i>		bli.27.nea Blue ling ( <i>Molva dypterygia</i> ) in Subareas 1, 2, 8, 9, and 12, and Divisions 3.a and 4.a (other areas)	NA	Subareas 1, 2, 8, 9, and 12, and Divisions 3.a and 4.a (other areas)		
Portugal	<i>Molva macrophthalma</i> **	126460		NA		AMA	PT
France	<i>Molva molva</i>	126461		NA		ABI, ACS, ANS, AMA	FR
	<i>Molva molva</i>		lin.27.1-2 Ling ( <i>Molva molva</i> ) in subareas 1 and 2 (Northeast Arctic)	NA	subareas 1 and 2 (Northeast Arctic)		

Reported by Member State (2018) *	Species (extra lines of same species used to account for multiple stocks in column C and management plans per stock in column D)	WoRMS	ICES Stock name	Management plans ***	Fishing area ICES	Corresponding MSFD regions (regions newly reported by Member States in 2018 marked in red)	Member State that reported new MSFD region in 2018
	<i>Molva molva</i>		lin.27.3a4a6-91214 Ling (Molva molva) in Subareas 6-9, 12, and 14, and Divisions 3.a and 4.a (Northeast Atlantic and Arctic Ocean)	NA	Subareas 6-9, 12, and 14, and Divisions 3.a and 4.a (Northeast Atlantic and Arctic Ocean)		
	<i>Molva molva</i>		lin.27.5a Ling (Molva molva) in Division 5.a (Iceland grounds)	NA	Division 5.a (Iceland grounds)		
	<i>Molva molva</i>		lin.27.5b Ling (Molva molva) in Division 5.b (Faroes grounds)	NA	Division 5.b (Faroes grounds)		
Portugal	<i>Mora moro</i> **	126497				AMA	PT
not reported	<i>Mugil cephalus</i>	126983	NA	NA		MIC, MAD	
Croatia, Cyprus, France, Malta, Romania, Spain, Hungary, Italy	<i>Mullus barbatus</i>	126985	NA	Croatian management plan (CMP) for bottom trawlers		MWE, MIC, MAL, MAD, BLK,	
Croatia, Cyprus, France, Malta, Portugal, Spain, Hungary, Italy	<i>Mullus surmuletus</i>	126986		Croatian management plan (CMP) for bottom trawlers		MWE, MIC, MAL, MAD, ABI, ACS, ANS, AMA	PT

Reported by Member State (2018) *	Species (extra lines of same species used to account for multiple stocks in column C and management plans per stock in column D)	WoRMS	ICES Stock name	Management plans ***	Fishing area ICES	Corresponding MSFD regions (regions newly reported by Member States in 2018 marked in red)	Member State that reported new MSFD region in 2018
	<i>Mullus surmuletus</i>		mur.27.3a47d Striped red mullet ( <i>Mullus surmuletus</i> ) in Subarea 4 and divisions 7.d and 3.a (North Sea, eastern English Channel, Skagerrak and Kattegat)	The EU multiannual plan (MAP) for stocks in the North Sea (EU, 2018) and adjacent waters applies to bycatches of this stock. The MAP stipulates that when the FMSY ranges are not available, fishing opportunities should be based on the best available scientific advice. <a href="https://eur-lex.europa.eu/eli/reg/2018/973/oj">https://eur-lex.europa.eu/eli/reg/2018/973/oj</a>	Subarea 4 and divisions 7.d and 3.a (North Sea, eastern English Channel, Skagerrak and Kattegat)		
	<i>Mullus surmuletus</i>		mur.27.67a-ce-k89a Striped red mullet ( <i>Mullus surmuletus</i> ) in subareas 6 and 8, and divisions 7.a-c, 7.e-k, and 9.a (North Sea, Bay of Biscay, southern Celtic Seas, and Atlantic Iberian waters)		subareas 6 and 8, and divisions 7.a-c, 7.e-k, and 9.a (North Sea, Bay of Biscay, southern Celtic Seas, and Atlantic Iberian waters)		
Portugal	<i>Muraena helena</i> **	126303				AMA	PT
not reported	<i>Murex spp</i>	138196	NA	NA		MWE	
France, Portugal	<i>Mustelus spp</i>	105732	sdv.27.nea Smooth-hound ( <i>Mustelus spp.</i> ) in subareas 1-10, 12 and 14 (the Northeast Atlantic and adjacent waters)	NA	subareas 1-10, 12 and 14 (the Northeast Atlantic and adjacent waters)	ABI, ACS, ANS, MIC, AMA	PT
Malta	<i>Mustelus mustelus</i>	105822				MIC	MT

Reported by Member State (2018) *	Species (extra lines of same species used to account for multiple stocks in column C and management plans per stock in column D)	WoRMS	ICES Stock name	Management plans ***	Fishing area ICES	Corresponding MSFD regions (regions newly reported by Member States in 2018 marked in red)	Member State that reported new MSFD region in 2018
Portugal	<i>Myxeroperca fusca</i> **	127038				AMA	PT
Denmark, Germany	<i>Mytilus edulis</i>	140480	NA	NA		BAL, ANS	DK
not reported	<i>Mytilus galloprovincialis</i>	140481	NA	NA		MWE, MAD	
Croatia, Denmark, France, Germany, Malta, Netherlands, Spain, Sweden, Hungary, Italy, Portugal	<i>Nephrops norvegicus</i>	107254		Croatian management plan (CMP) for bottom trawlers		ABI, ACS, ANS, AMA, MIC, MAD, MWE	MT, HR
	<i>Nephrops norvegicus</i>		nep.27.4outFU Norway lobster ( <i>Nephrops norvegicus</i> ) in Subarea 4, outside the functional units (North Sea)	NA			Subarea 4, outside the functional units (North Sea)
	<i>Nephrops norvegicus</i>		nep.27.6aoutFU Norway lobster ( <i>Nephrops norvegicus</i> ) in Division 6.a, outside the functional units (West of Scotland)	NA			Division 6.a, outside the functional units (West of Scotland)
	<i>Nephrops norvegicus</i>		nep.27.7outFU Norway lobster ( <i>Nephrops norvegicus</i> ) in Subarea 7, outside the functional units (southern Celtic Seas, southwest of Ireland)	NA			Subarea 7, outside the functional units (southern Celtic Seas, southwest of Ireland)

Reported by Member State (2018) *	Species (extra lines of same species used to account for multiple stocks in column C and management plans per stock in column D)	WoRMS	ICES Stock name	Management plans ***	Fishing area ICES	Corresponding MSFD regions (regions newly reported by Member States in 2018 marked in red)	Member State that reported new MSFD region in 2018
	<i>Nephrops norvegicus</i>		nep.fu.10 Norway lobster ( <i>Nephrops norvegicus</i> ) in Division 4.a, Functional Unit 10 (northern North Sea, Noup)	The EU multiannual plan (MAP) for stocks in the North Sea (EU, 2018) applies to this stock. This plan is not adopted by Norway, thus, not used as the basis of the advice for this shared stock.	Division 4.a, Functional Unit 10 (northern North Sea, Noup)		
	<i>Nephrops norvegicus</i>		nep.fu.11 Norway lobster ( <i>Nephrops norvegicus</i> ) in Division 6.a, Functional Unit 11 (West of Scotland, North Minch)	NA	Division 6.a, Functional Unit 11 (West of Scotland, North Minch)		
	<i>Nephrops norvegicus</i>		nep.fu.12 Norway lobster ( <i>Nephrops norvegicus</i> ) in Division 6.a, Functional Unit 12 (West of Scotland, South Minch)	NA	Division 6.a, Functional Unit 12 (West of Scotland, South Minch)		
	<i>Nephrops norvegicus</i>		nep.fu.13 Norway lobster ( <i>Nephrops norvegicus</i> ) in Division 6.a, Functional Unit 13 (West of Scotland, the Firth of Clyde and Sound of Jura)	NA	Division 6.a, Functional Unit 13 (West of Scotland, the Firth of Clyde and Sound of Jura)		
	<i>Nephrops norvegicus</i>		nep.fu.14 Norway lobster ( <i>Nephrops norvegicus</i> ) in Division 7.a, Functional Unit 14 (Irish Sea, East)	NA	Division 7.a, Functional Unit 14 (Irish Sea, East)		

Reported by Member State (2018) *	Species (extra lines of same species used to account for multiple stocks in column C and management plans per stock in column D)	WoRMS	ICES Stock name	Management plans ***	Fishing area ICES	Corresponding MSFD regions (regions newly reported by Member States in 2018 marked in red)	Member State that reported new MSFD region in 2018
	<i>Nephrops norvegicus</i>		nep.fu.15 Norway lobster ( <i>Nephrops norvegicus</i> ) in Division 7.a, Functional Unit 15 (Irish Sea, West)	NA	Division 7.a, Functional Unit 15 (Irish Sea, West)		
	<i>Nephrops norvegicus</i>		nep.fu.16 Norway lobster ( <i>Nephrops norvegicus</i> ) in divisions 7.b-c and 7.j-k, Functional Unit 16 (west and southwest of Ireland, Porcupine Bank)	NA	divisions 7.b-c and 7.j-k, Functional Unit 16 (west and southwest of Ireland, Porcupine Bank)		
	<i>Nephrops norvegicus</i>		nep.fu.17 Norway lobster ( <i>Nephrops norvegicus</i> ) in Division 7.b, Functional Unit 17 (west of Ireland, Aran grounds)	NA	Division 7.b, Functional Unit 17 (west of Ireland, Aran grounds)		
	<i>Nephrops norvegicus</i>		nep.fu.19 Norway lobster ( <i>Nephrops norvegicus</i> ) in divisions 7.a, 7.g, and 7.j, Functional Unit 19 (Irish Sea, Celtic Sea, eastern part of southwest of Ireland)	NA	divisions 7.a, 7.g, and 7.j, Functional Unit 19 (Irish Sea, Celtic Sea, eastern part of southwest of Ireland)		
	<i>Nephrops norvegicus</i>		nep.fu.2021 Norway lobster ( <i>Nephrops norvegicus</i> ) in divisions 7.g and 7.h, functional units 20 and 21 (Celtic Sea)	NA	divisions 7.g and 7.h, functional units 20 and 21 (Celtic Sea)		

Reported by Member State (2018) *	Species (extra lines of same species used to account for multiple stocks in column C and management plans per stock in column D)	WoRMS	ICES Stock name	Management plans ***	Fishing area ICES	Corresponding MSFD regions (regions newly reported by Member States in 2018 marked in red)	Member State that reported new MSFD region in 2018
	<i>Nephrops norvegicus</i>		nep.fu.22 Norway lobster ( <i>Nephrops norvegicus</i> ) in divisions 7.f and 7.g, Functional Unit 22 (Celtic Sea, Bristol Channel)	NA	divisions 7.f and 7.g, Functional Unit 22 (Celtic Sea, Bristol Channel)		
	<i>Nephrops norvegicus</i>		nep.fu.2324 Norway lobster ( <i>Nephrops norvegicus</i> ) in divisions 8.a and 8.b, Functional Units 23-24 (northern and central Bay of Biscay)	NA	divisions 8.a and 8.b, Functional Units 23-24 (northern and central Bay of Biscay)		
	<i>Nephrops norvegicus</i>		nep.fu.25 Norway lobster ( <i>Nephrops norvegicus</i> ) in Division 8.c, Functional Unit 25 (southern Bay of Biscay and northern Galicia)	NA	Division 8.c, Functional Unit 25 (southern Bay of Biscay and northern Galicia)		
	<i>Nephrops norvegicus</i>		nep.fu.2627 Norway lobster ( <i>Nephrops norvegicus</i> ) in Division 9.a, Functional Units 26-27 (Atlantic Iberian waters East, western Galicia, and northern Portugal)	NA	Division 9.a, Functional Units 26-27 (Atlantic Iberian waters East, western Galicia, and northern Portugal)		
	<i>Nephrops norvegicus</i>		nep.fu.2829 Norway lobster ( <i>Nephrops norvegicus</i> ) in Division 9.a, Functional Units 28-29 (Atlantic Iberian waters East and southwestern and southern Portugal)	NA	Division 9.a, Functional Units 28-29 (Atlantic Iberian waters East and southwestern and southern Portugal)		

Reported by Member State (2018) *	Species (extra lines of same species used to account for multiple stocks in column C and management plans per stock in column D)	WoRMS	ICES Stock name	Management plans ***	Fishing area ICES	Corresponding MSFD regions (regions newly reported by Member States in 2018 marked in red)	Member State that reported new MSFD region in 2018
	<i>Nephrops norvegicus</i>		nep.fu.3-4 Norway lobster ( <i>Nephrops norvegicus</i> ) in Division 3.a, Functional units 3 and 4 (Skagerrak and Kattegat)	NA	Division 3.a, Functional units 3 and 4 (Skagerrak and Kattegat)		
	<i>Nephrops norvegicus</i>		nep.fu.30 Norway lobster ( <i>Nephrops norvegicus</i> ) in Division 9.a, Functional Unit 30 (Atlantic Iberian waters East and Gulf of Cadiz)	NA	Division 9.a, Functional Unit 30 (Atlantic Iberian waters East and Gulf of Cadiz)		
	<i>Nephrops norvegicus</i>		nep.fu.31 Norway lobster ( <i>Nephrops norvegicus</i> ) in Division 8.c, Functional Unit 31 (southern Bay of Biscay and Cantabrian Sea)	NA	Division 8.c, Functional Unit 31 (southern Bay of Biscay and Cantabrian Sea)		
	<i>Nephrops norvegicus</i>		nep.fu.32 Norway lobster ( <i>Nephrops norvegicus</i> ) in Division 4.a, Functional Unit 32 (northern North Sea, Norway Deep)	NA	Division 4.a, Functional Unit 32 (northern North Sea, Norway Deep)		
	<i>Nephrops norvegicus</i>		nep.fu.33 Norway lobster ( <i>Nephrops norvegicus</i> ) in Division 4.b, Functional Unit 33 (central North Sea, Horn's Reef)	The EU MAP for the North Sea (EU,2018) applies to this stock.	Division 4.b, Functional Unit 33 (central North Sea, Horn's Reef)		

Reported by Member State (2018) *	Species (extra lines of same species used to account for multiple stocks in column C and management plans per stock in column D)	WoRMS	ICES Stock name	Management plans ***	Fishing area ICES	Corresponding MSFD regions (regions newly reported by Member States in 2018 marked in red)	Member State that reported new MSFD region in 2018
	<i>Nephrops norvegicus</i>		nep.fu.34 Norway lobster ( <i>Nephrops norvegicus</i> ) in Division 4.b, Functional Unit 34 (central North Sea, Devil's Hole)	The EU MAP for the North Sea is currently being finalized and is not yet adopted.	Division 4.b, Functional Unit 34 (central North Sea, Devil's Hole)		
	<i>Nephrops norvegicus</i>		nep.fu.5 Norway lobster ( <i>Nephrops norvegicus</i> ) in divisions 4.b and 4.c, Functional Unit 5 (central and southern North Sea, Botney Cut-Silver Pit)	The EU MAP for the North Sea is currently being finalized and is not yet adopted.	divisions 4.b and 4.c, Functional Unit 5 (central and southern North Sea, Botney Cut-Silver Pit)		
	<i>Nephrops norvegicus</i>		nep.fu.6 Norway lobster ( <i>Nephrops norvegicus</i> ) in Division 4.b, Functional Unit 6 (central North Sea, Farn Deeps)	The EU MAP for the North Sea is currently being finalized and is not yet adopted.	Division 4.b, Functional Unit 6 (central North Sea, Farn Deeps)		
	<i>Nephrops norvegicus</i>		nep.fu.7 Norway lobster ( <i>Nephrops norvegicus</i> ) in Division 4.a, Functional Unit 7 (northern North Sea, Fladen Ground)	NA	Division 4.a, Functional Unit 7 (northern North Sea, Fladen Ground)		
	<i>Nephrops norvegicus</i>		nep.fu.8 Norway lobster ( <i>Nephrops norvegicus</i> ) in Division 4.b, Functional Unit 8 (central North Sea, Firth of Forth)	The EU MAP for the North Sea is currently being finalized and is not yet adopted. Croatian management plan (CMP) for bottom trawlers	Division 4.b, Functional Unit 8 (central North Sea, Firth of Forth)		

Reported by Member State (2018) *	Species (extra lines of same species used to account for multiple stocks in column C and management plans per stock in column D)	WoRMS	ICES Stock name	Management plans ***	Fishing area ICES	Corresponding MSFD regions (regions newly reported by Member States in 2018 marked in red)	Member State that reported new MSFD region in 2018
	<i>Nephrops norvegicus</i>		nep.fu.9 Norway lobster ( <i>Nephrops norvegicus</i> ) in Division 4.a, Functional Unit 9 (central North Sea, Moray Firth)	The EU MAP for the North Sea is currently being finalized and is not yet adopted.	Division 4.a, Functional Unit 9 (central North Sea, Moray Firth)		
France	<i>Octopodidae</i>	11782	NA	NA		ABI, ACS, ANS	
Cyprus, Malta, Italy, Spain, Portugal	<i>Octopus vulgaris</i>	140605	NA	NA		MWE, MAL, MAD, <b>MIC</b> , <b>ABI</b>	MT, PT
France	<i>Ommastrephidae</i>	11760	NA	NA		ABI, ACS, ANS	
<i>not reported</i>	<i>Orcynopsis unicolor</i>	127019	NA	NA		MAD	
Cyprus, Malta, Portugal	<i>Pagellus acarne</i>	127057	NA	NA		MWE, MIC, MAL, MAD, <b>AMA</b> , <b>ABI</b>	PT
France, Malta, Portugal	<i>Pagellus bogaraveo</i>	127059				ABI, ACS, ANS, <b>AMA</b> , MAD, MAL, MIC, MWE	
	<i>Pagellus bogaraveo</i>		sbr.27.10 Blackspot seabream ( <i>Pagellus bogaraveo</i> ) in Subarea 10 (Azores grounds)	NA			Subarea 10 (Azores grounds)
	<i>Pagellus bogaraveo</i>		sbr.27.6-8 Blackspot seabream ( <i>Pagellus bogaraveo</i> ) in subareas 6-8 (Celtic Seas, the English Channel, and Bay of Biscay)	NA			subareas 6-8 (Celtic Seas, the English Channel, and Bay of Biscay)

Reported by Member State (2018) *	Species (extra lines of same species used to account for multiple stocks in column C and management plans per stock in column D)	WoRMS	ICES Stock name	Management plans ***	Fishing area ICES	Corresponding MSFD regions (regions newly reported by Member States in 2018 marked in red)	Member State that reported new MSFD region in 2018
	<i>Pagellus bogaraveo</i>		sbr.27.9 Blackspot seabream ( <i>Pagellus bogaraveo</i> ) in Subarea 9 (Atlantic Iberian waters)	NA	Subarea 9 (Atlantic Iberian waters)		
Cyprus, Malta, Italy	<i>Pagellus erythrinus</i>	127060	NA	NA		MWE, MIC, MAL, MAD	
Cyprus, Malta, Portugal	<i>Pagrus pagrus</i>	127063	NA	NA		MWE, MIC, MAL, MAD, <b>AMA</b>	PT
Malta, Portugal	<i>Palinurus elephas</i>	107703	NA	NA		MWE, MIC, MAL, MAD, <b>AMA</b>	PT
Denmark, Netherlands, Sweden	<i>Pandalus borealis</i>	107649				ANS	
	<i>Pandalus borealis</i>		pra.27.1-2 Northern shrimp ( <i>Pandalus borealis</i> ) in subareas 1 and 2 (Northeast Arctic)	NA	subareas 1 and 2 (Northeast Arctic)		
	<i>Pandalus borealis</i>		pra.27.3a4a Northern shrimp ( <i>Pandalus borealis</i> ) in divisions 3.a and 4.a East (Skagerrak and Kattegat and northern North Sea in the Norwegian Deep)	NA	divisions 3.a and 4.a East (Skagerrak and Kattegat and northern North Sea in the Norwegian Deep)		

Reported by Member State (2018) *	Species (extra lines of same species used to account for multiple stocks in column C and management plans per stock in column D)	WoRMS	ICES Stock name	Management plans ***	Fishing area ICES	Corresponding MSFD regions (regions newly reported by Member States in 2018 marked in red)	Member State that reported new MSFD region in 2018
	<i>Pandalus borealis</i>		pra.27.4a Northern shrimp ( <i>Pandalus borealis</i> ) in Division 4.a West (northern North Sea, Fladen Ground)	NA	Division 4.a West (northern North Sea, Fladen Ground)		
Malta, Spain, Italy, Portugal	<i>Parapenaeus longirostris</i>	107109	NA	NA		MWE, MIC, MAL, MAD, <b>ABI</b>	PT
Portugal	<i>Patella candei**</i>	140678	NA	NA		<b>AMA</b>	PT
Portugal	<i>Patella ulyssiponensis**</i>	140684	NA	NA		<b>AMA</b>	PT
Croatia, Hungary	<i>Pecten jacobeus</i>	140711	NA	NA		MWE, MIC, MAL, MAD	
France	<i>Pecten maximus</i>	140712	NA	NA		ABI, ACS, ANS	
Italy	<i>Penaeus kerathurus</i>	246388	NA	NA		MIC, <b>MWE</b>	IT
Estonia, Finland, Germany	<i>Perca fluviatilis</i>	151353	NA	NA		<b>BAL</b>	DE, EE, FI
Portugal	<i>Phorcus sauciatus**</i>	689178	NA	NA		<b>AMA</b>	PT
France, Portugal	<i>Phycis blennoides</i>	126501	gfb.27.nea Greater forkbeard ( <i>Phycis blennoides</i> ) in subareas 1-10, 12 and 14 (the Northeast Atlantic and adjacent waters)	NA	subareas 1-10, 12 and 14 (the Northeast Atlantic and adjacent waters)	ABI, ACS, ANS, AMA	
Portugal	<i>Phycis phycis**</i>	126502	NA			<b>ABI, AMA</b>	PT

Reported by Member State (2018) *	Species (extra lines of same species used to account for multiple stocks in column C and management plans per stock in column D)	WoRMS	ICES Stock name	Management plans ***	Fishing area ICES	Corresponding MSFD regions (regions newly reported by Member States in 2018 marked in red)	Member State that reported new MSFD region in 2018
Belgium, Estonia, Germany, France, Lithuania, Poland, Sweden	<i>Platichthys flesus</i>	127141				BAL, ANS	
	<i>Platichthys flesus</i>		bwq.27.2425 (changed in 2020 from fle.27.2425) Flounder ( <i>Platichthys flesus</i> ) in subdivisions 24 and 25 (west of Bornholm and southwestern central Baltic)	Bycatch of this species is taken into account in the EU Multiannual Plan for the Baltic Sea (EU, 2016). <a href="http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32016R1139&amp;rid=1">http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32016R1139&amp;rid=1</a>	subdivisions 24 and 25 (west of Bornholm and southwestern central Baltic)		
	<i>Platichthys flesus</i>		bwq.27.2628 (changed in 2020 from fle.27.2628) Flounder ( <i>Platichthys flesus</i> ) in subdivisions 26 and 28 (east of Gotland and Gulf of Gdansk)	Bycatch of this species is taken into account in the EU Multiannual Plan for the Baltic Sea (EU, 2016). <a href="http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32016R1139&amp;rid=1">http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32016R1139&amp;rid=1</a>	subdivisions 26 and 28 (east of Gotland and Gulf of Gdansk)		
	<i>Platichthys flesus</i>		fle.27.2223 Flounder ( <i>Platichthys flesus</i> ) in subdivisions 22 and 23 (Belt Seas and the Sound)	Bycatch of this species is taken into account in the EU Multiannual Plan for the Baltic Sea (EU, 2016). <a href="http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32016R1139&amp;rid=2">http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32016R1139&amp;rid=2</a>	subdivisions 22 and 23 (Belt Seas and the Sound)		
	<i>Platichthys flesus</i>		fle.27.3a4 Flounder ( <i>Platichthys flesus</i> ) in Subarea 4 and Division 3.a (North Sea, Skagerrak and Kattegat)	NA	Subarea 4 and Division 3.a (North Sea, Skagerrak and Kattegat)		

Reported by Member State (2018) *	Species (extra lines of same species used to account for multiple stocks in column C and management plans per stock in column D)	WoRMS	ICES Stock name	Management plans ***	Fishing area ICES	Corresponding MSFD regions (regions newly reported by Member States in 2018 marked in red)	Member State that reported new MSFD region in 2018
	<i>Platichthys flesus</i>		bwp.27.2729-32 Flounder ( <i>Platichthys flesus</i> ) in subdivisions 27 and 29-32 (northern central and northern Baltic Sea)	Bycatch of this species is taken into account in the EU Multiannual Plan for the Baltic Sea (EU, 2016). <a href="http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32016R1139&amp;rid=4">http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32016R1139&amp;rid=4</a>	subdivisions 27 and 29-32 (northern central and northern Baltic Sea)		
Belgium, Denmark, France, Germany, Netherlands, Sweden	<i>Pleuronectes platessa</i>	127143	NA			BAL, ABI, ACS, ANS, AMA	
	<i>Pleuronectes platessa</i>		ple.27.21-23 Plaice ( <i>Pleuronectes platessa</i> ) in subdivisions 21-23 (Kattegat, Belt Seas, and the Sound)	The EU Multiannual Plan for the Baltic Sea (EU, 2016) takes bycatch of this species into account. <a href="http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32016R1139&amp;rid=1">http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32016R1139&amp;rid=1</a>	subdivisions 21-23 (Kattegat, Belt Seas, and the Sound)		
	<i>Pleuronectes platessa</i>		ple.27.24-32 Plaice ( <i>Pleuronectes platessa</i> ) in subdivisions 24-32 (Baltic Sea, excluding the Sound and Belt Seas)	The EU Multiannual Plan for the Baltic Sea (EU, 2016) takes bycatch of this species into account. <a href="http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32016R1139&amp;rid=2">http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32016R1139&amp;rid=2</a>	subdivisions 24-32 (Baltic Sea, excluding the Sound and Belt Seas)		
	<i>Pleuronectes platessa</i>		ple.27.420 Plaice ( <i>Pleuronectes platessa</i> ) in Subarea 4 (North Sea) and Subdivision 20 (Skagerrak)	NA	Subarea 4 (North Sea) and Subdivision 20 (Skagerrak)		

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	<i>Pleuronectes platessa</i>		ple.27.7a Plaice (Pleuronectes platessa) in Division 7.a (Irish Sea)	NA	Division 7.a (Irish Sea)		
	<i>Pleuronectes platessa</i>		ple.27.7bc Plaice (Pleuronectes platessa) in divisions 7.b-c (West of Ireland)	NA	divisions 7.b-c (West of Ireland)		
	<i>Pleuronectes platessa</i>		ple.27.7d Plaice (Pleuronectes platessa) in Division 7.d (eastern English Channel)	The EU multiannual plan (MAP) for stocks in North Sea applies to this stock. The plan specifies conditions for setting fishing opportunities depending on stock status and making use of the FMSY range for the stock. <a href="https://eur-lex.europa.eu/eli/reg/2019/472/oj">https://eur-lex.europa.eu/eli/reg/2019/472/oj</a>	Division 7.d (eastern English Channel)		
	<i>Pleuronectes platessa</i>		ple.27.7e Plaice (Pleuronectes platessa) in Division 7.e (western English Channel)	NA	Division 7.e (western English Channel)		
	<i>Pleuronectes platessa</i>		ple.27.7fg Plaice (Pleuronectes platessa) in divisions 7.f and 7.g (Bristol Channel, Celtic Sea)	NA	divisions 7.f and 7.g (Bristol Channel, Celtic Sea)		

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	<i>Pleuronectes platessa</i>		ple.27.7h-k Plaice ( <i>Pleuronectes platessa</i> ) in divisions 7.h-k (Celtic Sea South, southwest of Ireland)	NA	divisions 7.h-k (Celtic Sea South, southwest of Ireland)		
	<i>Pleuronectes platessa</i>		ple.27.89a Plaice ( <i>Pleuronectes platessa</i> ) in Subarea 8 and Division 9.a (Bay of Biscay and Atlantic Iberian waters)	NA	Subarea 8 and Division 9.a (Bay of Biscay and Atlantic Iberian waters)		
France	<i>Pollachius pollachius</i>	126440	NA			ABI, ACS, ANS, AMA	
	<i>Pollachius pollachius</i>		pol.27.3a4 Pollack ( <i>Pollachius pollachius</i> ) in Subarea 4 and Division 3.a (North Sea, Skagerrak and Kattegat)	NA	Subarea 4 and Division 3.a (North Sea, Skagerrak and Kattegat)		
	<i>Pollachius pollachius</i>		pol.27.67 Pollack ( <i>Pollachius pollachius</i> ) in subareas 6-7 (Celtic Seas and the English Channel)	NA	subareas 6-7 (Celtic Seas and the English Channel)		
	<i>Pollachius pollachius</i>		pol.27.89a Pollack ( <i>Pollachius pollachius</i> ) in Subarea 8 and Division 9.a (Bay of Biscay and Atlantic Iberian waters)	NA	Subarea 8 and Division 9.a (Bay of Biscay and Atlantic Iberian waters)		
Denmark, France, Netherlands, Sweden	<i>Pollachius virens</i>	126441	NA			ACS, ANS	

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	<i>Pollachius virens</i>		pok.27.1-2 Saithe ( <i>Pollachius virens</i> ) in subareas 1 and 2 (Northeast Arctic)	NA	subareas 1 and 2 (Northeast Arctic)		
	<i>Pollachius virens</i>		pok.27.3a46 Saithe ( <i>Pollachius virens</i> ) in Subareas 4, 6 and Division 3.a (North Sea, Rockall and West of Scotland, Skagerrak and Kattegat)	NA	Subareas 4, 6 and Division 3.a (North Sea, Rockall and West of Scotland, Skagerrak and Kattegat)		
	<i>Pollachius virens</i>		pok.27.5a Saithe ( <i>Pollachius virens</i> ) in Division 5.a (Iceland grounds)	NA	Division 5.a (Iceland grounds)		
	<i>Pollachius virens</i>		pok.27.5b Saithe ( <i>Pollachius virens</i> ) in Division 5.b (Faroes grounds)	NA	Division 5.b (Faroes grounds)		
	<i>Pollachius virens</i>		pok.27.7-10 Saithe ( <i>Pollachius virens</i> ) in subareas 7-10 (Southern Celtic Sea and the English Channel, Bay of Biscay, Atlantic Iberian waters and the Azores grounds)	NA	subareas 7-10 (Southern Celtic Sea and the English Channel, Bay of Biscay, Atlantic Iberian waters and the Azores grounds)		
Malta, Portugal	<i>Polyprion americanus</i>	126998	NA	NA		MWE, MIC, MAL, MAD, <b>AMA</b>	PT
Portugal	<i>Pomatomus saltatrix</i>	151482	NA	NA		BLK, <b>AMA</b>	PT

Reported by Member State (2018) *	Species (extra lines of same species used to account for multiple stocks in column C and management plans per stock in column D)	WoRMS	ICES Stock name	Management plans ***	Fishing area ICES	Corresponding MSFD regions (regions newly reported by Member States in 2018 marked in red)	Member State that reported new MSFD region in 2018
Portugal	<i>Pontinus kuhlii</i> **	127240	NA	NA		AMA	PT
France, Malta, Portugal, Spain	<i>Prionace glauca</i>	105801	ICCAT stock	NA		ABI, ACS, ANS, AMA, MIC	ES, PT, MT
not reported	<i>Pseudaphya ferreri</i>	126934	NA	NA		MWE	
Portugal	<i>Pseudocaranx dentex</i> **	126812	NA			AMA	PT
not reported	<i>Raja asterias</i>	105881	NA	NA		MWE	
Portugal, France	<i>Raja brachyura</i>	367297				ACS, ANS, ABI	PT
	<i>Raja brachyura</i>		rjh.27.4a6 Blonde ray ( <i>Raja brachyura</i> ) in Subarea 6 and Division 4.a (North Sea and West of Scotland)	NA	Subarea 6 and Division 4.a (North Sea and West of Scotland)		
	<i>Raja brachyura</i>		rjh.27.4c7d Blonde ray ( <i>Raja brachyura</i> ) in divisions 4.c and 7.d (southern North Sea and eastern English Channel)	NA	divisions 4.c and 7.d (southern North Sea and eastern English Channel)		
	<i>Raja brachyura</i>		rjh.27.7afg Blonde ray ( <i>Raja brachyura</i> ) in divisions 7.a and 7.f-g (Irish Sea, Bristol Channel, Celtic Sea North)	NA	divisions 7.a and 7.f-g (Irish Sea, Bristol Channel, Celtic Sea North)		
	<i>Raja brachyura</i>		rjh.27.7e Blonde ray ( <i>Raja brachyura</i> ) in Division 7.e (western English Channel)	NA	Division 7.e (western English Channel)		

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	<i>Raja brachyura</i>		rjh.27.9a Blonde ray ( <i>Raja brachyura</i> ) in Division 9.a (Atlantic Iberian waters)	NA	Division 9.a (Atlantic Iberian waters)		
France	<i>Raja circularis</i> **	105873	rji.27.67, Sandy ray ( <i>Leucoraja circularis</i> ) in subareas 6–7 (West of Scotland southern Celtic Seas English Channel)	NA	subareas 6–7 (West of Scotland southern Celtic Seas English Channel)	ACS, ANS	FR
France, Malta, Portugal	<i>Raja clavata</i>	105883	NA			ABI, ACS, ANS, MWE, MIC, AMA	MT, PT
	<i>Raja clavata</i>		rjc.27.3a47d Thornback ray ( <i>Raja clavata</i> ) in Subarea 4 a	NA	Subarea 4 a		
	<i>Raja clavata</i>		rjc.27.6 Thornback ray ( <i>Raja clavata</i> ) in Subarea 6 (West of Scotland)	NA	Subarea 6 (West of Scotland)		
	<i>Raja clavata</i>		rjc.27.7afg Thornback ray ( <i>Raja clavata</i> ) in divisions 7.a and 7.f-g (Irish Sea, Bristol Channel, Celtic Sea North)	NA	divisions 7.a and 7.f-g (Irish Sea, Bristol Channel, Celtic Sea North)		
	<i>Raja clavata</i>		rjc.27.7e Thornback ray ( <i>Raja clavata</i> ) in Division 7.e (western English Channel)	NA	Division 7.e (western English Channel)		
	<i>Raja clavata</i>		rjc.27.8 Thornback ray ( <i>Raja clavata</i> ) in Subarea 8 (Bay of Biscay)	NA	Subarea 8 (Bay of Biscay)		

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	<i>Raja clavata</i>		rjc.27.9a Thornback ray ( <i>Raja clavata</i> ) in Division 9.a (Atlantic Iberian waters)	NA	Division 9.a (Atlantic Iberian waters)		
France	<i>Raja microocellata</i>	105885	NA			ACS, ANS	
	<i>Raja microocellata</i>		rje.27.7de Small-eyed ray ( <i>Raja microocellata</i> ) in divisions 7.d and 7.e (English Channel)	NA	divisions 7.d and 7.e (English Channel)		
	<i>Raja microocellata</i>		rje.27.7fg Small-eyed ray ( <i>Raja microocellata</i> ) in divisions 7.f and 7.g (Bristol Channel, Celtic Sea North)	NA	divisions 7.f and 7.g (Bristol Channel, Celtic Sea North)		
France, Portugal, Malta	<i>Raja montagui</i>	105887	NA			ABI, ACS, ANS, <b>MIC</b>	MT
	<i>Raja montagui</i>		rjm.27.3a47d Spotted ray ( <i>Raja montagui</i> ) in Subarea 4 and Divisions 3.a and 7.d (North Sea, Skagerrak, Kattegat, and eastern English Channel)	NA	Subarea 4 and Divisions 3.a and 7.d (North Sea, Skagerrak, Kattegat, and eastern English Channel)		
	<i>Raja montagui</i>		rjm.27.67bj Spotted ray ( <i>Raja montagui</i> ) in Subarea 6 and divisions 7.b and 7.j (West of Scotland, west and southwest of Ireland)	NA	Subarea 6 and divisions 7.b and 7.j (West of Scotland, west and southwest of Ireland)		

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	<i>Raja montagui</i>		rjm.27.7ae-h Spotted ray ( <i>Raja montagui</i> ) in divisions 7.a and 7.e-h (southern Celtic Seas and western English Channel)	NA	divisions 7.a and 7.e-h (southern Celtic Seas and western English Channel)		
	<i>Raja montagui</i>		rjm.27.8 Spotted ray ( <i>Raja montagui</i> ) in Subarea 8 (Bay of Biscay)	NA	Subarea 8 (Bay of Biscay)		
	<i>Raja montagui</i>		rjm.27.9a Spotted ray ( <i>Raja montagui</i> ) in Division 9.a (Atlantic Iberian waters)	NA	Division 9.a (Atlantic Iberian waters)		
France, Portugal	<i>Raja undulata</i>	105891	NA			ABI, ACS, ANS	
	<i>Raja undulata</i>		rju.27.7bj Undulate ray ( <i>Raja undulata</i> ) in divisions 7.b and 7.j (west and southwest of Ireland)	NA	divisions 7.b and 7.j (west and southwest of Ireland)		
	<i>Raja undulata</i>		rju.27.7de Undulate ray ( <i>Raja undulata</i> ) in divisions 7.d and 7.e (English Channel)	NA	divisions 7.d and 7.e (English Channel)		
	<i>Raja undulata</i>		rju.27.8ab Undulate ray ( <i>Raja undulata</i> ) in divisions 8.a-b (northern and central Bay of Biscay)	NA	divisions 8.a-b (northern and central Bay of Biscay)		
	<i>Raja undulata</i>		rju.27.8c Undulate ray ( <i>Raja undulata</i> ) in Division 8.c (Cantabrian Sea)	NA	Division 8.c (Cantabrian Sea)		

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	<i>Raja undulata</i>		rju.27.9a Undulate ray ( <i>Raja undulata</i> ) in Division 9.a (Atlantic Iberian waters)	NA	Division 9.a (Atlantic Iberian waters)		
<i>not reported</i>	<i>Rajidae</i>	105711				ANS	
	<i>Rajidae</i>		raj.27.1012 Rays and skates ( <i>Rajidae</i> ) (mainly thornback ray ( <i>Raja clavata</i> )) in subareas 10 and 12 (Azores grounds and north of Azores)	NA	subareas 10 and 12 (Azores grounds and north of Azores)		
	<i>Rajidae</i>		raj.27.3a47d Rays and skates ( <i>Rajidae</i> ) in Subarea 4 and in divisions 3.a and 7.d (North Sea, Skagerrak, Kattegat, and eastern English Channel)	NA	Subarea 4 and in divisions 3.a and 7.d (North Sea, Skagerrak, Kattegat, and eastern English Channel)		
	<i>Rajidae</i>		raj.27.67a-ce-h Rays and skates ( <i>Rajidae</i> ) in Subarea 6 and divisions 7.a-c and 7.e-h (Rockall and West of Scotland, southern Celtic Seas, western English Channel)	NA	Subarea 6 and divisions 7.a-c and 7.e-h (Rockall and West of Scotland, southern Celtic Seas, western English Channel)		
	<i>Rajidae</i>		raj.27.89a Rays and skates ( <i>Rajidae</i> ) in Subarea 8 and Division 9.a (Bay of Biscay and Atlantic Iberian waters)	NA	Subarea 8 and Division 9.a (Bay of Biscay and Atlantic Iberian waters)		
<i>not reported</i>	<i>Rapana venosa</i>	140416	NA	NA		BLK	

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<i>not reported</i>	<i>Reinhardtius hippoglossoides</i>	127144				ANS	
	<i>Reinhardtius hippoglossoides</i>		ghl.27.1-2 Greenland halibut (Reinhardtius hippoglossoides) in subareas 1 and 2 (Northeast Arctic)	NA	subareas 1 and 2 (Northeast Arctic)		
	<i>Reinhardtius hippoglossoides</i>		ghl.27.561214 Greenland halibut (Reinhardtius hippoglossoides) in subareas 5, 6, 12, and 14 (Iceland and Faroes grounds, West of Scotland, North of Azores, East of Greenland)	NA	subareas 5, 6, 12, and 14 (Iceland and Faroes grounds, West of Scotland, North of Azores, East of Greenland)		
France	<i>Rostroraja alba</i>	105896	rja.27.nea White skate (Rostroraja alba) in subareas 1-10, 12 and 14 (the Northeast Atlantic and adjacent waters)	NA	subareas 1-10, 12 and 14 (the Northeast Atlantic and adjacent waters)	ABI, ACS, ANS	
France	<i>Ruditapes philippinarum</i>	231750	NA	NA		ABI	
Germany	<i>Rutilus rutilus</i> **	154333	NA	NA		BAL	DE
Estonia, Finland	<i>Salmo salar</i>	127186				BAL	
	<i>Salmo salar</i>		sal.27.22-31 Salmon (Salmo salar) in subdivisions 22-31 (Baltic Sea, excluding the Gulf of Finland)	NA	subdivisions 22-31 (Baltic Sea, excluding the Gulf of Finland)		

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	<i>Salmo salar</i>		sal.27.32 Salmon ( <i>Salmo salar</i> ) in Subdivision 32 (Gulf of Finland)	NA	Subdivision 32 (Gulf of Finland)		
	<i>Salmo salar</i>		sal.nac.all Salmon ( <i>Salmo salar</i> ) from North America	NA	North America		
	<i>Salmo salar</i>		sal.neac.all Salmon ( <i>Salmo salar</i> ) in Northeast Atlantic and Arctic Ocean	NA	Northeast Atlantic and Arctic Ocean		
	<i>Salmo salar</i>		sal.wgc.all Salmon ( <i>Salmo salar</i> ) in Subarea 14 and NAFO division 1 (east and west of Greenland)	NA	Subarea 14 and NAFO division 1 (east and west of Greenland)		
Estonia, Finland, Germany	<i>Sander lucioperca</i>	151308	NA	NA		BAL	DE, EE FI
Portugal, Spain	<i>Sarda sarda</i>	127021	ICCAT stock	NA		MIC, MAD, BLK, BAL, ANS, AMA, ABI	PT
Croatia, France, Malta, Portugal, Spain, Slovenia, Hungary, Italy	<i>Sardina pilchardus</i>	126421		Croatian management plan for purse seiners includes sardine		ABI, ACS, ANS, MAD, MAL, MIC, MWE, AMA	ES
	<i>Sardina pilchardus</i>		pil.27.7 Sardine ( <i>Sardina pilchardus</i> ) in Subarea 7 (Southern Celtic Seas, English Channel)		Subarea 7 (Southern Celtic Seas, English Channel)		

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	<i>Sardina pilchardus</i>		pil.27.8abd Sardine ( <i>Sardina pilchardus</i> ) in divisions 8.a-b and 8.d (Bay of Biscay)		divisions 8.a-b and 8.d (Bay of Biscay)		
	<i>Sardina pilchardus</i>		pil.27.8c9a Sardine ( <i>Sardina pilchardus</i> ) in divisions 8.c and 9.a (Cantabrian Sea and Atlantic Iberian waters)		divisions 8.c and 9.a (Cantabrian Sea and Atlantic Iberian waters)		
Malta, Spain	<i>Sardinella aurita</i>	126422	NA	NA		MWE, MIC; MAL, <b>AMA</b>	ES
Portugal	<i>Schedophilus ovalis</i> **	126834	NA	NA		<b>AMA</b>	PT
Portugal	<i>Scomber colias</i> **	151174	NA	NA		<b>AMA, ABI, MWE</b>	PT
Malta	<i>Scomber japonicus</i>	127022	NA	NA		MWE, MIC, MAL, MAD	
Denmark, France, Germany, Netherlands, Portugal, Spain, Sweden, Malta	<i>Scomber scombrus</i>	127023	mac.27.nea Mackerel ( <i>Scomber scombrus</i> ) in subareas 1-8 and 14 and division 9.a (the Northeast Atlantic and adjacent waters)	Norway-EU-Faroes Long Term Management Strategy	subareas 1-8 and 14 and division 9.a (the Northeast Atlantic and adjacent waters)	MWE, MIC, MAL, MAD, ABI, ACS, ANS, <b>AMA</b>	
Belgium, Denmark, Germany, Romania, Sweden	<i>Scophthalmus maximus</i> [ <i>Psetta maxima</i> ]	127149				BLK, BAL, ANS	

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	<i>Scophthalmus maximus</i> [ <i>Psetta maxima</i> ]		tur.27.22-32 Turbot ( <i>Scophthalmus maximus</i> ) in Subdivisions 22-32 (Baltic Sea)	The EU multiannual plan for the Baltic Sea (MAP; EU, 2016) takes bycatch of this species into account. <a href="http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32016R1139&amp;rid=1">http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32016R1139&amp;rid=1</a>	Subdivisions 22-32 (Baltic Sea)		
	<i>Scophthalmus maximus</i> [ <i>Psetta maxima</i> ]		tur.27.3a Turbot ( <i>Scophthalmus maximus</i> ) in Division 3.a (Skagerrak and Kattegat)	The EU multiannual plan (MAP) for stocks in the North Sea applies to bycatches of this stock. <a href="http://data.europa.eu/eli/reg/2018/973/oj">http://data.europa.eu/eli/reg/2018/973/oj</a> . The MAP stipulates that when the FMSY ranges are not available, fishing opportunities should be based on the best available scientific advice.	Division 3.a (Skagerrak and Kattegat)		
	<i>Scophthalmus maximus</i> [ <i>Psetta maxima</i> ]		tur.27.4 Turbot ( <i>Scophthalmus maximus</i> ) in Subarea 4 (North Sea)	NA	Subarea 4 (North Sea)		
Belgium, Sweden, France	<i>Scophthalmus rhombus</i>	127150				BAL, ACS, ANS	
	<i>Scophthalmus rhombus</i>		bll.27.22-32 Brill ( <i>Scophthalmus rhombus</i> ) in subdivisions 22-32 (Baltic Sea)	NA	subdivisions 22-32 (Baltic Sea)		

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	<i>Scophthalmus rhombus</i>		bll.27.3a47de Brill (Scophthalmus rhombus) in Subarea 4 and divisions 3.a and 7.d-e (North Sea, Skagerrak and Kattegat, English Channel)	NA	Subarea 4 and divisions 3.a and 7.d-e (North Sea, Skagerrak and Kattegat, English Channel)		
not reported	<i>Scorpaena porcus</i>	127247	NA	NA		MAL	
Portugal, Malta	<i>Scorpaena scrofa</i>	127248	NA	NA		MWE, MIC, MAL, <b>AMA</b>	PT
France, Malta, Portugal	<i>Scyliorhinus canicula</i>	105814				ABI, ACS, ANS, <b>MIC</b>	MT, PT
	<i>Scyliorhinus canicula</i>		syc.27.3a47d Lesser spotted dogfish (Scyliorhinus canicula) in Subarea 4 and divisions 3.a and 7.d (North Sea, Skagerrak and Kattegat, eastern English Channel)	NA	Subarea 4 and divisions 3.a and 7.d (North Sea, Skagerrak and Kattegat, eastern English Channel)		
	<i>Scyliorhinus canicula</i>		syc.27.67a-ce-j Lesser spotted dogfish (Scyliorhinus canicula) in Subarea 6 and divisions 7.a-c and 7.e-j (West of Scotland, Irish Sea, southern Celtic Seas)	NA	Subarea 6 and divisions 7.a-c and 7.e-j (West of Scotland, Irish Sea, southern Celtic Seas)		
	<i>Scyliorhinus canicula</i>		syc.27.8abd Lesser spotted dogfish (Scyliorhinus canicula) in divisions 8.a-b and 8.d (Bay of Biscay)	NA	divisions 8.a-b and 8.d (Bay of Biscay)		

Reported by Member State (2018) *	Species (extra lines of same species used to account for multiple stocks in column C and management plans per stock in column D)	WoRMS	ICES Stock name	Management plans ***	Fishing area ICES	Corresponding MSFD regions (regions newly reported by Member States in 2018 marked in red)	Member State that reported new MSFD region in 2018
	<i>Scyliorhinus canicula</i>		syc.27.8c9a Lesser spotted dogfish ( <i>Scyliorhinus canicula</i> ) in divisions 8.c and 9.a (Cantabrian Sea and Atlantic Iberian waters)	NA	divisions 8.c and 9.a (Cantabrian Sea and Atlantic Iberian waters)		
France	<i>Scyliorhinus stellaris</i>	105815	syt.27.67 Greater-spotted dogfish ( <i>Scyliorhinus stellaris</i> ) in subareas 6 and 7 (West of Scotland, southern Celtic Sea, and the English Channel)	NA	subareas 6 and 7 (West of Scotland, southern Celtic Sea, and the English Channel)	ACS, ANS	
Portugal	<i>Scyllarides latus</i> **	107708	NA			AMA	PT
France, Malta, Italy, Spain, Portugal	<i>Sepia offi-cinalis</i>	138477	NA	NA		MWE, MIC, MAL, MAD, ABI, ANS	
Cyprus, Portugal	<i>Seriola dumerili</i>	126816	NA	NA		MAD, MAL, AMA	CY, PT
Cyprus	<i>Serranus cabrilla</i>	127041	NA	NA		MAL	
Portugal	<i>Solea senegalensis</i> **	127159	NA	NA		ABI	PT
Belgium, Denmark, France, Germany, Italy, Netherlands, Portugal, Slovenia,, Sweden	<i>Solea solea (sin. vulgaris)</i>	127160				MWE, MIC, MAL, MAD, BAL, ABI, ANS, AMA, ACS	FR

Reported by Member State (2018) *	Species (extra lines of same species used to account for multiple stocks in column C and management plans per stock in column D)	WoRMS	ICES Stock name	Management plans ***	Fishing area ICES	Corresponding MSFD regions (regions newly reported by Member States in 2018 marked in red)	Member State that reported new MSFD region in 2018
	<i>Solea solea (sin. vulgaris)</i>		sol.27.20-24 Sole ( <i>Solea solea</i> ) in subdivisions 20-24 (Skagerrak and Kattegat, western Baltic Sea)	NA	subdivisions 20-24 (Skagerrak and Kattegat, western Baltic Sea)		
	<i>Solea solea (sin. vulgaris)</i>		sol.27.4 Sole ( <i>Solea solea</i> ) in Subarea 4 (North Sea)	NA	Subarea 4 (North Sea)		
	<i>Solea solea (sin. vulgaris)</i>		sol.27.7a Sole ( <i>Solea solea</i> ) in Division 7.a (Irish Sea)	NA	Division 7.a (Irish Sea)		
	<i>Solea solea (sin. vulgaris)</i>		sol.27.7bc Sole ( <i>Solea solea</i> ) in divisions 7.b and 7.c (West of Ireland)	NA	divisions 7.b and 7.c (West of Ireland)		
	<i>Solea solea (sin. vulgaris)</i>		sol.27.7d Sole ( <i>Solea solea</i> ) in Division 7.d (eastern English Channel)	The European Parliament and the Council have published a multiannual management plan (MAP) for the Western Waters. This plan applies to demersal stocks, including sole in ICES Division 7.d. <a href="http://data.europa.eu/eli/reg/2019/472/oj">http://data.europa.eu/eli/reg/2019/472/oj</a> . The MAP stipulates that when the FMSY ranges are not available the precautionary approach should be applied.	Division 7.d (eastern English Channel)		

Reported by Member State (2018) *	Species (extra lines of same species used to account for multiple stocks in column C and management plans per stock in column D)	WoRMS	ICES Stock name	Management plans ***	Fishing area ICES	Corresponding MSFD regions (regions newly reported by Member States in 2018 marked in red)	Member State that reported new MSFD region in 2018
	<i>Solea solea (sin. vulgaris)</i>		sol.27.7e Sole ( <i>Solea solea</i> ) in Division 7.e (western English Channel)	NA	Division 7.e (western English Channel)		
	<i>Solea solea (sin. vulgaris)</i>		sol.27.7fg Sole ( <i>Solea solea</i> ) in divisions 7.f and 7.g (Bristol Channel, Celtic Sea)	NA	divisions 7.f and 7.g (Bristol Channel, Celtic Sea)		
	<i>Solea solea (sin. vulgaris)</i>		sol.27.7h-k Sole ( <i>Solea solea</i> ) in Divisions 7.h-k (Celtic Sea South, southwest of Ireland)	NA	Divisions 7.h-k (Celtic Sea South, southwest of Ireland)		
	<i>Solea solea (sin. vulgaris)</i>		sol.27.8ab Sole ( <i>Solea solea</i> ) in divisions 8.a-b (northern and central Bay of Biscay)	NA	divisions 8.a-b (northern and central Bay of Biscay)		
	<i>Solea solea (sin. vulgaris)</i>		sol.27.8c9a Sole ( <i>Solea solea</i> ) in divisions 8.c and 9.a (Cantabrian Sea and Atlantic Iberian waters)	NA	divisions 8.c and 9.a (Cantabrian Sea and Atlantic Iberian waters)		
Cyprus, Spain, Portugal	<i>Sparisoma cretense</i>	231441	NA	NA		MAL, <b>AMA</b>	PT
Malta	<i>Sparus aurata</i>	151523	NA	NA		MWE, MIC, MAL, MAD	
Portugal	<i>Sphyræna viridensis**</i>	127069	NA	NA		<b>AMA</b>	PT
Cyprus	<i>Spicara maena</i>	126828	NA	NA		MWE, MIC, MAL	
Croatia, Cyprus, Hungary	<i>Spicara smaris</i>	126830	NA	NA		MWE, MIC, MAL, <b>MAD</b>	HR

Reported by Member State (2018) *	Species (extra lines of same species used to account for multiple stocks in column C and management plans per stock in column D)	WoRMS	ICES Stock name	Management plans ***	Fishing area ICES	Corresponding MSFD regions (regions newly reported by Member States in 2018 marked in red)	Member State that reported new MSFD region in 2018
Portugal	<i>Spisula solida</i> **	140301	NA	NA		ABI	PT
Denmark, Estonia, Finland, Germany, Latvia, Lithuania, Poland, Romania, Sweden	<i>Sprattus sprattus</i>	126425				MIC, MAD, BLK, BAL, ANS	
	<i>Sprattus sprattus</i>		spr.27.22-32 Sprat ( <i>Sprattus sprattus</i> ) in Subdivisions 22-32 (Baltic Sea)	Baltic Multiannual Plan, (EU) 2016/1139. <a href="http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32016R1139&amp;from=EN">http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32016R1139&amp;from=EN</a>	Subdivisions 22-32 (Baltic Sea)		
	<i>Sprattus sprattus</i>		spr.27.3a4 Sprat ( <i>Sprattus sprattus</i> ) in Division 3.a and Subarea 4 (Skagerrak, Kattegat and North Sea)	NA	Division 3.a and Subarea 4 (Skagerrak, Kattegat and North Sea)		
	<i>Sprattus sprattus</i>		spr.27.67a-cf-k Sprat ( <i>Sprattus sprattus</i> ) in Subarea 6 and Divisions 7.a-c and 7.f-k (West of Scotland, southern Celtic Seas)	NA	Subarea 6 and Divisions 7.a-c and 7.f-k (West of Scotland, southern Celtic Seas)		
	<i>Sprattus sprattus</i>		spr.27.7de Sprat ( <i>Sprattus sprattus</i> ) in divisions 7.d and 7.e (English Channel)	NA	divisions 7.d and 7.e (English Channel)		
France, Malta, Netherlands, Sweden	<i>Squalus acanthias</i>	105923	dgs.27.nea Spurdog ( <i>Squalus acanthias</i> ) in Subareas 1-10, 12 and 14 (the Northeast Atlantic and adjacent waters)	NA	Subareas 1-10, 12 and 14 (the Northeast Atlantic and adjacent waters)	BLK, ABI, ACS, ANS, MIC	MT

Reported by Member State (2018) *	Species (extra lines of same species used to account for multiple stocks in column C and management plans per stock in column D)	WoRMS	ICES Stock name	Management plans ***	Fishing area ICES	Corresponding MSFD regions (regions newly reported by Member States in 2018 marked in red)	Member State that reported new MSFD region in 2018
Malta	<i>Squalus blainville</i> **	105924	NA	NA		MIC	MT
France	<i>Squatina squatina</i>	105928	agn.27.nea Angel shark ( <i>Squatina squatina</i> ) in subareas 1-10, 12 and 14 (the Northeast Atlantic and adjacent waters)	NA	subareas 1-10, 12 and 14 (the Northeast Atlantic and adjacent waters)	ANS, ABI, ACS	FR
Italy	<i>Squilla mantis</i>	136137	NA	NA		MWE, MAD	IT
Cyprus, France, Portugal, Spain	<i>Thunnus alalunga</i>	127026	ICCAT stock	NA		MWE, MIC, MAL, ABI, ACS, ANS, AMA	ES, PT
Portugal	<i>Thunnus albacares</i> **	127027	ICCAT stock	NA		ABI, AMA	PT
Portugal, Spain	<i>Thunnus obesus</i> **	127028	ICCAT stock	NA		ABI, AMA	ES, PT
Cyprus, France, Malta, Portugal, Spain	<i>Thunnus thynnus</i>	127029	ICCAT stock	NA		MWE, MIC, MAL, MAD, ABI, ACS, ANS, AMA	ES, PT
Malta, Romania, Spain	<i>Trachurus mediterraneus</i>	126820	NA	NA		MWE, MIC, MAL, MAD, BLK, ABI, ACS, ANS, AMA	
Portugal, Spain	<i>Trachurus picturatus</i> **	126821				ABI, AMA	PT
France, Malta, Portugal, Spain, Sweden, Italy	<i>Trachurus trachurus</i>	126822	NA	NA		MWE, MIC, MAL, MAD, ABI, ACS, ANS, AMA	

Reported by Member State (2018) *	Species (extra lines of same species used to account for multiple stocks in column C and management plans per stock in column D)	WoRMS	ICES Stock name	Management plans ***	Fishing area ICES	Corresponding MSFD regions (regions newly reported by Member States in 2018 marked in red)	Member State that reported new MSFD region in 2018
<i>not reported</i>	<i>Trachyrincus scabrus</i>	126482	tsu.27.nea Roughsnout grenadier ( <i>Trachyrincus scabrus</i> ) in subareas 1-2, 4-8, 10, 12, 14 and Division 3a (Northeast Atlantic and Arctic Ocean)	NA	subareas 1-2, 4-8, 10, 12, 14 and Division 3a (Northeast Atlantic and Arctic Ocean)	ANS	
Denmark	<i>Trisopterus esmarkii</i>	126444				BAL, ACS, ANS	
	<i>Trisopterus esmarkii</i>		nop.27.3a4 Norway pout ( <i>Trisopterus esmarkii</i> ) in Subarea 4 and Division 3.a (North Sea, Skagerrak and Kattegat) nop.27.6a Norway pout ( <i>Trisopterus esmarkii</i> ) in Division 6.a	ICES is not aware of any agreed precautionary management plan for Norway pout in this area. Norway and EU have requested ICES to evaluate different options for a proposed management plan.	Subarea 4 and Division 3.a (North Sea, Skagerrak and Kattegat) <i>Trisopterus esmarkii</i> Greater North Sea Ecoregion 2020 WGNSSK		
	<i>Trisopterus esmarkii</i>		nop.27.6a Norway pout ( <i>Trisopterus esmarkii</i> ) in Division 6.a	NA	Division 6.a		
Portugal	<i>Trisopterus luscus</i> **	126445	NA	NA		ABI	PT
<i>not reported</i>	<i>Trisopterus minutus</i>	126446	NA	NA		MWE, MIC, MAL, MAD,	
<i>not reported</i>	<i>Venerupis spp.</i>	138647	NA	NA		MWE, MIC, MAL, MAD,	
<i>not reported</i>	<i>Venus verrucosa</i>	141936	NA	NA		MWE, MIC, MAL, MAD,	

Reported by Member State (2018) *	Species (extra lines of same species used to account for multiple stocks in column C and management plans per stock in column D)	WoRMS	ICES Stock name	Management plans ***	Fishing area ICES	Corresponding MSFD regions (regions newly reported by Member States in 2018 marked in red)	Member State that reported new MSFD region in 2018
Cyprus, France, Portugal, Spain, Malta	<i>Xiphias gladius</i>	127094	ICCAT stock	NA		MWE, MIC, MAL, ABI, ACS, ANS, <b>AMA</b>	ES, PT
Portugal	<i>Zeus faber</i>	127427	NA	NA		<b>ABI, AMA</b>	PT

\* This list includes information from the Member States that submitted D3 reports in 2018 – Belgium, Bulgaria, Croatia, Cyprus, Denmark, Estonia, Finland, France, Germany, Italy, Latvia, Lithuania, Malta, Netherlands, Poland, Portugal, Romania, Slovenia, Spain, Sweden

\*\* reported in 2018 by Member States but not included in the D3 EC reference list

\*\*\* for information on National Management Plans see table in Annex 4, for information on EU Multiannual Management Plans see table in Annex 5

## Annex 2: Comparison of different threshold levels by weight

This Annex provides a practical exploration of the implication of applying different threshold levels to both weight and value for a variety of member states from the Atlantic, Baltic and Mediterranean regions. First, a comparison of threshold levels by weight is presented, followed by a comparison of weight and value thresholds. Separately, a case study on the implications of different threshold levels and types is presented for France, including each of its four subregions.

### Comparison of different threshold levels by weight

The TOR raise the question of whether information on the contribution of populations (stocks) to landings should be used to further refine the regional and subregional agreed lists of D3 to be reported by Member States to fully meet the requirements of the GES Decision to report on all commercially-exploited fish and shellfish in the next (2024) updates under Article 17.

The reference lists of species/stocks has been developed as a technical tool to assist Member States in reporting, so that relevant species/stocks can be selected from a drop-down list. The reference list therefore needs to be comprehensive for each marine (sub)region, but not all stocks will be relevant for all Member States. In order for Member States to determine the stocks that are relevant for them to report, and to identify local stocks of importance, further guidance on factors to take into consideration would be helpful for Member States.

Previous ICES advice has suggested the use of thresholds to ensure that the stocks reported represent 'a very high proportion of the landings (e.g. >90%) in weight by that EU Member State' (ICES 2016b) Earlier advice recognised the validity of considering value as an alternative to retain small stocks which are subject to intense targeting because of high resale value (ICES 2014a).

Here we provide an exploratory analysis of the use of different threshold levels, and the implications for the number of stocks/species that would be included in the reporting. The thresholds explored are:

- 90% of total landings by weight;
- 95% of total landings by weight;
- 99% of total landings by weight;
- 100.0% (to 1 d.p.) of total landings by weight;
- Species contributing >0.1% of landings by weight.

These thresholds are explored for five Member States as examples. A summary of the number of species included at each threshold level is provided in Table 1. It should be noted that the data sources are not consistent between Member States, and that this is an exploratory analysis to consider the implications of different threshold levels.

It should be noted that some 'species/stocks' are included in the data at Genus level, or more generic (e.g. Mugilidae, *Mulletts nei*). These have not been removed. The occurrence of such generic groups in the landings data tends to increase at progressively higher thresholds.

**Table 1** Number of species included at different threshold levels, by landings weight

Member State	Number of species included at each level					Total number of species in landings	Comments
	90%	95%	99%	100.0%	>0.1% (species)		
North Sea member state	13	19	33	66	44	163	Based on landings from all MS, from the member state's waters, 2012-2016
Germany (North Sea)	4	7	14	33	18	119	Based on landings from all MS, from Germany's NS waters, 2010-2015
Baltic member state	4	6	10	23	15	51	Based on landings from all MS from the member state's waters, 2012-2016
Mediterranean member state	28	45	79	133	80	185	Based on landings from GSA15, 2012-2016
Mediterranean member state	49	83	189	555	114	2,178	Based on landings from GSA1, GSA5, GSA6, 2012-2016

This analysis indicates that a threshold of 90% of landings weight, or even 95% of landings weight, does not sufficiently capture all commercially-exploited species for the North Sea and Baltic Sea. A more ambitious threshold, such as 99% of landings weight, or all species that contribute at least 0.1% of landings weight, is more appropriate. In the Mediterranean, a threshold of 90% captures a number of species comparable to the 99% threshold in the North Sea. 95% or 99% thresholds, are progressively more comprehensive (as is a 0.1% species threshold), but the 99% threshold in particular may be challenging to report on such a large number of species.

## Comparison of weight and value thresholds

A comparison was carried out of the species/stocks included when thresholds are applied to the value of landings rather than weight of landings.

The data used were from the Joint Research Centre's Fisheries Dependent Information 2017 (covering the period 2012-2016). This provided the weight of landings by species from ICES rectangles overlapping a Member State's waters (these should not be compared with national statistics that represent landings from a Member State's fishing fleet). An average price per species from Eurostat data was applied to the landings weights to derive value per species.

Examples for a Baltic and a North Sea member state are shown in Table 2 and Table 3.

In general, applying thresholds by weight identifies more species than when thresholds are applied to value. However, there is some difference in the species between the lists; applying thresholds by value can identify additional species of importance that are not picked up when applying thresholds by weight only. There are also exceptions – data for one Atlantic member state identified 13 species when applying a 95% threshold by volume, and 28 species when applying a 95% threshold by value.

**Table 2** Comparison of species included at 90%, 95% and 99% thresholds for weight and value, for landings from a Baltic Sea member state's waters 2012-2016

Species	90% threshold		95% threshold		99% threshold	
	Weight	Value	Weight	Value	Weight	Value
<i>Sprattus sprattus</i> , European sprat	y	y	y	y	y	y
<i>Clupea harengus</i> , Atlantic herring	y	y	y	y	y	y
<i>Gadus morhua</i> , Atlantic cod	y	y	y	y	y	y
<i>Platichthys flesus</i> , European flounder	y		y	y	y	y
<i>Pleuronectiformes</i> , Flatfishes nei			y		y	
<i>Ammodytes spp</i> , Sandeels(=Sandlances) nei			y		y	y
<i>Perca fluviatilis</i> , European perch					y	y
<i>Rutilus rutilus</i> , Roach					y	
<i>Osteichthyes</i> , Pelagic fishes nei					y	y
<i>Abramis brama</i> , Freshwater bream					y	
<i>Sander lucioperca</i> , Pike-perch				y		y
<i>Salmo trutta</i> , Sea trout						y
<i>Psetta maxima</i> , Turbot						y
Number of species	4	3	6	5	10	10

**Table 3** Comparison of species included at 90%, 95% and 99% thresholds for weight and value, for landings from a North Sea member state's waters 2012-2016

Species	90% threshold		95% threshold		99% threshold	
	Weight	Value	Weight	Value	Weight	Value
<i>Pleuronectes platessa</i> , European plaice	y	y	y	y	y	y
<i>Solea solea</i> , Common sole	y	y	y	y	y	y
<i>Crangon crangon</i> , Common shrimp	y	y	y	y	y	y
<i>Limanda limanda</i> , Common dab	y		y	y	y	y
<i>Gadus morhua</i> , Atlantic cod	y	y	y	y	y	y
<i>Merlangius merlangus</i> , Whiting	y		y		y	y
<i>Platichthys flesus</i> , European flounder	y		y		y	y
<i>Chelidonichthys lucerna</i> , Tub gurnard	y		y	y	y	y
<i>Psetta maxima</i> , Turbot	y	y	y	y	y	y

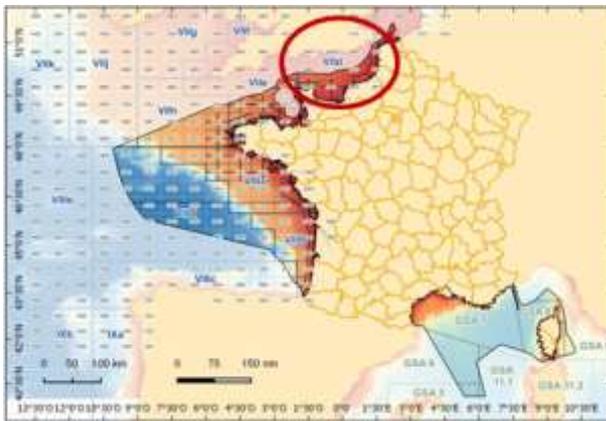
Species	90% threshold		95% threshold		99% threshold	
	Weight	Value	Weight	Value	Weight	Value
<i>Buccinum undatum</i> , Whelk	y		y		y	y
<i>Trachurus spp</i> , Jack and horse mackerels nei	y		y		y	y
<i>Microstomus kitt</i> , Lemon sole	y		y	y	y	y
<i>Scophthalmus rhombus</i> , Brill	y	y	y	y	y	y
<i>Scomber scombrus</i> , Atlantic mackerel			y		y	y
<i>Pleuronectiformes</i> , Flatfishes nei			y	y	y	y
<i>Mullus surmuletus</i> , Surmullet		y	y	y	y	y
<i>Dicentrarchus labrax</i> , European seabass		y	y	y	y	y
<i>Trisopterus luscus</i> , Pouting(=Bib)			y		y	y
<i>Sepia officinalis</i> , Common cuttlefish			y		y	y
<i>Scyliorhinus canicula</i> , Small-spotted catshark					y	
<i>Trachurus trachurus</i> , Atlantic horse mackerel					y	
<i>Clupea harengus</i> , Atlantic herring					y	
<i>Sardina pilchardus</i> , European pilchard(=Sardine)					y	
<i>Scyliorhinus spp</i> , "Catsharks",' nursehounds nei"					y	
Other nei					y	
<i>Aspitrigla cuculus</i> , Red gurnard					y	
<i>Loligo vulgaris</i> , European squid					y	
<i>Raja clavata</i> , Thornback ray					y	y
<i>Raja montagui</i> , Spotted ray					y	y
<i>Martialia hyadesi</i> , Sevenstar flying squid					y	
" <i>Sepiidae</i> , <i>Sepiolidae</i> ", "Cuttlefish",' bobtail squids nei"					y	y
<i>Raja brachyura</i> , Blonde ray					y	
<i>Eutrigla gurnardus</i> , Grey gurnard					y	
<i>Martialia hyadesi</i> , Sevenstar flying squid						y
<i>Mullus spp</i> , Surmullets(=Red mullets) nei						y
<i>Loliginidae</i> , Inshore squids nei						y
Number of species	13	8	19	12	33	25

## The case of France

The French waters are divided in four marine subregions: Eastern Channel and South of North Sea, Celtic Sea, Gulf of Biscay and Mediterranean Sea. France has reported all MSFD GES assessments, for all descriptors including Descriptor 3, for these four subregions. For the last MSFD cycle (2012-2018), France did not report D3 assessment on the base of percentage thresholds of landings (by weight or value), but on the base of knowledge on the stocks having MSY reference points.

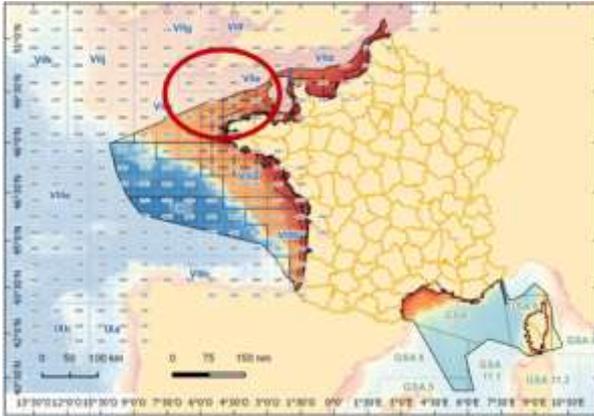
If percentage threshold levels are advised, consequences of the number of stocks to be reported are not negligible. Examples below using 2019 official data:

### North Sea and Eastern Channel (4c and 7d)



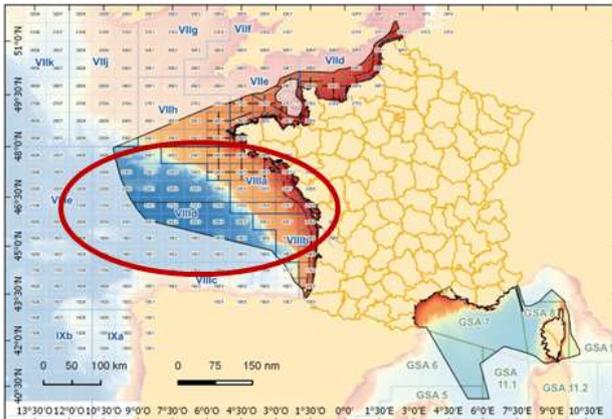
	By weight	By value
Number of species	163	163
Total landings	66 190 tons	161 640 K€
90% threshold	16 species	16 species
95% threshold	23 species	24 species
99% threshold	44 species	42 species

### Celtic Sea (7eh)



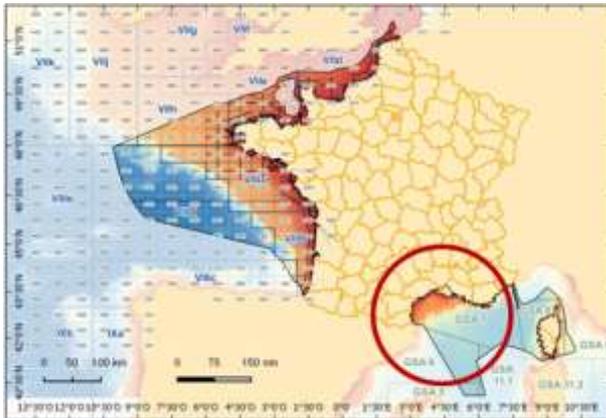
	By weight	By value
Number of species	195	195
Total landings	106 390 tons	195 788K€
90% threshold	23 species	35 species
95% threshold	32 species	44 species
99% threshold	54 species	76 species

### Bay of Biscay (8abd)



	By weight	By value
Number of species	260	260
Total landings	82 893 tons	315 903K€
90% threshold	31 species	28 species
95% threshold	47 species	42 species
99% threshold	87 species	83 species

**Mediterranean Sea (GSA07 Gulf of Lion)**



	By weight	By value
Number of species	269	269
Total landings	15 252 tons	76 960 K€
90% threshold	41 species	35 species
95% threshold	60 species	52 species
99% threshold	109 species	95 species

## Annex 3: List of ICES stocks for which D3C1 and D3C2 compatible advice will be available in the future

List of ICES category 3 and category 4 stocks in 2019. The stocks with available fishing and biomass reference points (MSYproxyF and MSYproxyB columns) have the potential to be used for MSFD D3 assessment in next cycle of reporting

Stock Key Label	Stock Data-base ID	Active Year	Stock Key Description	Ices Data Category	Year Of Last Assessment	Year Of Next Assessment	Assessment Frequency	MSYproxyF	MSYproxyB
ane.27.9a	2377	2019	Anchovy ( <i>Engraulis encrasicolus</i> ) in Division 9.a (Atlantic Iberian waters)	3	2019	2020	1	-	lim,pa
anf.27.3a46	2373	2019	Anglerfish ( <i>Lophius budegassa</i> , <i>Lophius piscatorius</i> ) in Subareas 4 and 6, and Division 3.a (North Sea, Rockall and West of Scotland, Skagerrak and Kattegat)	3.2	2019	2020	1	-	-
ank.27.78abd	2368	2019	Black-bellied anglerfish ( <i>Lophius budegassa</i> ) in Subarea 7 and divisions 8.a-b and 8.d (Celtic Seas, Bay of Biscay)	3.2	2019	2020	1	msy	-
ank.27.8c9a	2369	2019	Black-bellied anglerfish ( <i>Lophius budegassa</i> ) in divisions 8.c and 9.a (Cantabrian Sea, Atlantic Iberian waters)	3.2	2019	2020	1	msy,lim	msy,lim
aru.27.123a4	2289	2019	Greater silver smelt ( <i>Argentina silus</i> ) in subareas 1, 2, and 4, and in Division 3.a (Northeast Arctic, North Sea, Skagerrak and Kattegat)	3.2	2019	2021	2	-	-
aru.27.5a14	2298	2019	Greater silver smelt ( <i>Argentina silus</i> ) in Subarea 14 and Division 5.a (East Greenland and Iceland grounds)	3.3	2019	2020	1	msy	lim,pa
aru.27.5b6a	2290	2019	Greater silver smelt ( <i>Argentina silus</i> ) in divisions 5.b and 6.a (Faroes grounds and west of Scotland)	3.2	2019	2021	2	-	-

Stock Key Label	Stock Data-base ID	Active Year	Stock Key Description	Ices Data Category	Year Of Last Assessment	Year Of Next Assessment	Assessment Frequency	MSYproxyF	MSYproxyB
aru.27.6b7-1012	2291	2019	Greater silver smelt ( <i>Argentina silus</i> ) in subareas 7-10 and 12, and Division 6.b (other areas)	3.2	2019	2021	2	-	-
bli.27.5a14	2299	2019	Blue ling ( <i>Molva dypterygia</i> ) in Subarea 14 and Division 5.a (East Greenland and Iceland grounds)	3.3	2019	2020	1	proxy method 3.3	-
bl.27.22-32	2302	2019	Brill ( <i>Scophthalmus rhombus</i> ) in subdivisions 22-32 (Baltic Sea)	3.2	2017	2020	3	-	-
bl.27.3a47de	2303	2019	Brill ( <i>Scophthalmus rhombus</i> ) in Subarea 4 and divisions 3.a and 7.d-e (North Sea, Skagerrak and Kattegat, English Channel)	3.2	2019	2021	2	-	-
boc.27.6-8	2304	2019	Boarfish ( <i>Capros aper</i> ) in subareas 6-8 (Celtic Seas, English Channel, and Bay of Biscay)	3.2	2019	2021	2	-	-
bsf.27.nea	2275	2019	Black scabbardfish ( <i>Aphanopus carbo</i> ) in subareas 1, 2, 4-8, 10, and 14, and divisions 3.a, 9.a, and 12.b (Northeast Atlantic and Arctic Ocean)	3.2	2018	2020	2	-	-
cod.21.1a-e	2338	2019	Cod ( <i>Gadus morhua</i> ) in NAFO divisions 1.A-E, offshore (West Greenland)	3	2019	2021	2	msy	msy,lim,pa
cod.27.1-2coast	2312	2019	Cod ( <i>Gadus morhua</i> ) in subareas 1 and 2 (Norwegian coastal waters cod)	3	2019	2020	1	-	mgt
cod.27.21	2344	2019	Cod ( <i>Gadus morhua</i> ) in Subdivision 21 (Kattegat)	3.2	2019	2020	1	-	-
cod.27.5b2	2313	2019	Cod ( <i>Gadus morhua</i> ) in Subdivision 5.b.2 (Faroe Bank)	3.8	2019	2022	3	-	-
cod.27.7a	2365	2019	Cod ( <i>Gadus morhua</i> ) in Division 7.a (Irish Sea)	3	2019	2020	1	-	-
dab.27.22-32	2318	2019	Dab ( <i>Limanda limanda</i> ) in subdivisions 22-32 (Baltic Sea)	3.2	2017	2020	3	-	-
dab.27.3a4	2319	2019	Dab ( <i>Limanda limanda</i> ) in Subarea 4 and Division 3.a (North Sea, Skagerrak and Kattegat)	3.2	2019	2022	3	-	-

Stock Key Label	Stock Data-base ID	Active Year	Stock Key Description	Ices Data Category	Year Of Last Assessment	Year Of Next Assessment	Assessment Frequency	MSYproxyF	MSYproxyB
ele.2737.nea	2329	2019	European eel ( <i>Anguilla anguilla</i> ) throughout its natural range	3.14	2019	2020	1	-	-
fle.27.2223	2253	2019	Flounder ( <i>Platichthys flesus</i> ) in subdivisions 22 and 23 (Belt Seas and the Sound)	3.2	2019	2022	3	-	-
fle.27.2425	2286	2019	Flounder ( <i>Platichthys flesus</i> ) in subdivisions 24 and 25 (west of Bornholm and southwestern central Baltic)	3.2	2019	2022	3	-	-
fle.27.2628	2254	2019	Flounder ( <i>Platichthys flesus</i> ) in subdivisions 26 and 28 (east of Gotland and Gulf of Gdansk)	3.2	2017	2020	3	-	-
fle.27.2729-32	2255	2019	Flounder ( <i>Platichthys flesus</i> ) in subdivisions 27 and 29-32 (northern central and northern Baltic Sea)	3.2	2017	2020	3	-	-
fle.27.3a4	2386	2019	Flounder ( <i>Platichthys flesus</i> ) in Subarea 4 and Division 3.a (North Sea, Skagerrak and Kattegat)	3.2	2019	2021	2	-	-
gfb.27.nea	2322	2019	Greater forkbeard ( <i>Phycis blennoides</i> ) in subareas 1-10, 12 and 14 (the Northeast Atlantic and adjacent waters)	3.2	2018	2020	2	-	-
gug.27.3a47d	2325	2019	Grey gurnard ( <i>Eutrigla gurnardus</i> ) in Subarea 4 and divisions 7.d and 3.a (North Sea, eastern English Channel, Skagerrak and Kattegat)	3.2	2018	2020	2	-	-
her.27.6a7bc	2295	2019	Herring ( <i>Clupea harengus</i> ) in divisions 6.a and 7.b-c (West of Scotland, West of Ireland)	3	2019	2020	1	-	-
hom.27.3a4bc7d	2351	2019	Horse mackerel ( <i>Trachurus trachurus</i> ) in divisions 3.a, 4.b-c, and 7.d (Skagerrak and Kattegat, southern and central North Sea, eastern English Channel)	3.2	2019	2021	2	-	-
lem.27.3a47d	2387	2019	Lemon sole ( <i>Microstomus kitt</i> ) in Subarea 4 and divisions 3.a and 7.d (North Sea, Skagerrak and Kattegat, eastern English Channel)	3.2	2019	2021	2	-	-

Stock Key Label	Stock Data-base ID	Active Year	Stock Key Description	Ices Data Category	Year Of Last Assessment	Year Of Next Assessment	Assessment Frequency	MSYproxyF	MSYproxyB
lez.27.6b	2130	2019	Megrim ( <i>Lepidorhombus</i> spp.) in Division 6.b (Rockall)	3.2	2019	2020	1	msy	msy
lin.27.1-2	2125	2019	Ling ( <i>Molva molva</i> ) in subareas 1 and 2 (Northeast Arctic)	3.2	2019	2021	2	-	-
lin.27.3a4a6-91214	2128	2019	Ling ( <i>Molva molva</i> ) in Subareas 6-9, 12, and 14, and Divisions 3.a and 4.a (Northeast Atlantic and Arctic Ocean)	3.2	2019	2021	2	-	-
lin.27.5b	2126	2019	Ling ( <i>Molva molva</i> ) in Division 5.b (Faroes grounds)	3.2	2019	2021	2	-	-
mur.27.3a47d	2283	2019	Striped red mullet ( <i>Mullus surmuletus</i> ) in Subarea 4 and divisions 7.d and 3.a (North Sea, eastern English Channel, Skagerrak and Kattegat)	3.2	2019	2021	2	-	-
nep.fu.10	2134	2019	Norway lobster ( <i>Nephrops norvegicus</i> ) in Division 4.a, Functional Unit 10 (northern North Sea, Noup)	4.14	2018	2020	2	-	-
nep.fu.25	2201	2019	Norway lobster ( <i>Nephrops norvegicus</i> ) in Division 8.c, Functional Unit 25 (southern Bay of Biscay and northern Galicia)	3.14	2019	2022	3	-	-
nep.fu.2627	2202	2019	Norway lobster ( <i>Nephrops norvegicus</i> ) in Division 9.a, Functional Units 26-27 (Atlantic Iberian waters East, western Galicia, and northern Portugal)	3.14	2019	2022	3	msy	-
nep.fu.2829	2203	2019	Norway lobster ( <i>Nephrops norvegicus</i> ) in Division 9.a, Functional Units 28-29 (Atlantic Iberian waters East and southwestern and southern Portugal)	3.2	2019	2021	2	msy	-
nep.fu.30	2204	2019	Norway lobster ( <i>Nephrops norvegicus</i> ) in Division 9.a, Functional Unit 30 (Atlantic Iberian waters East and Gulf of Cadiz)	3.2	2019	2020	1	-	-
nep.fu.31	2205	2019	Norway lobster ( <i>Nephrops norvegicus</i> ) in Division 8.c, Functional Unit 31 (southern Bay of Biscay and Cantabrian Sea)	3.14	2019	2022	3	-	-

Stock Key Label	Stock Data-base ID	Active Year	Stock Key Description	Ices Data Category	Year Of Last Assessment	Year Of Next Assessment	Assessment Frequency	MSYproxyF	MSYproxyB
nep.fu.32	2206	2019	Norway lobster ( <i>Nephrops norvegicus</i> ) in Division 4.a, Functional Unit 32 (northern North Sea, Norway Deep)	4.14	2018	2020	2	-	-
nep.fu.33	2207	2019	Norway lobster ( <i>Nephrops norvegicus</i> ) in Division 4.b, Functional Unit 33 (central North Sea, Horn's Reef)	4.14	2018	2020	2	-	-
nep.fu.34	2281	2019	Norway lobster ( <i>Nephrops norvegicus</i> ) in Division 4.b, Functional Unit 34 (central North Sea, Devil's Hole)	4.14	2018	2020	2	-	-
nep.fu.5	2209	2019	Norway lobster ( <i>Nephrops norvegicus</i> ) in divisions 4.b and 4.c, Functional Unit 5 (central and southern North Sea, Botney Cut-Silver Pit)	4.14	2018	2020	2	-	-
ple.27.24-32	2144	2019	Plaice ( <i>Pleuronectes platessa</i> ) in subdivisions 24-32 (Baltic Sea, excluding the Sound and Belt Seas)	3	2019	2020	1	-	-
ple.27.7e	2150	2019	Plaice ( <i>Pleuronectes platessa</i> ) in Division 7.e (western English Channel)	3.2	2019	2020	1	msy,lim,pa	msy,lim,pa
ple.27.7fg	2148	2019	Plaice ( <i>Pleuronectes platessa</i> ) in divisions 7.f and 7.g (Bristol Channel, Celtic Sea)	3.2	2019	2020	1	msy	msy
ple.27.7h-k	2146	2019	Plaice ( <i>Pleuronectes platessa</i> ) in divisions 7.h-k (Celtic Sea South, southwest of Ireland)	3.2	2019	2021	2	msy,lim,pa	msy,lim,pa
pol.27.67	2159	2019	Pollack ( <i>Pollachius pollachius</i> ) in subareas 6-7 (Celtic Seas and the English Channel)	4.12	2019	2020	1	-	-
raj.27.1012	2165	2019	Rays and skates ( <i>Rajidae</i> ) (mainly thornback ray ( <i>Raja clavata</i> )) in subareas 10 and 12 (Azores grounds and north of Azores)	3.2	2019	2021	2	-	-
reb.2127.sp	2225	2019	Beaked redfish ( <i>Sebastes mentella</i> ) in ICES subareas 5, 12, and 14 (Iceland and Faroe grounds, North of Azores, East of Greenland) and NAFO subareas 1 and 2 (shallow pelagic stock < 500 m)	3	2019	2022	3	-	-

Stock Key Label	Stock Data-base ID	Active Year	Stock Key Description	Ices Data Category	Year Of Last Assessment	Year Of Next Assessment	Assessment Frequency	MSYproxyF	MSYproxyB
reb.27.14b	2224	2019	Beaked redfish ( <i>Sebastes mentella</i> ) in Division 14.b, demersal (Southeast Greenland)	3.2	2019	2020	1	-	-
reb.27.5a14	2222	2019	Beaked redfish ( <i>Sebastes mentella</i> ) in Subarea 14 and Division 5.a, Icelandic slope stock (East of Greenland, Iceland grounds)	3.2	2019	2020	1	-	-
rjc.27.3a47d	2268	2019	Thornback ray ( <i>Raja clavata</i> ) in Subarea 4 and in divisions 3.a and 7.d (North Sea, Skagerrak, Kattegat, and eastern English Channel)	3.2	2019	2021	2	-	-
rjc.27.6	2172	2019	Thornback ray ( <i>Raja clavata</i> ) in Subarea 6 (West of Scotland)	3.2	2018	2020	2	-	-
rjc.27.7afg	2168	2019	Thornback ray ( <i>Raja clavata</i> ) in divisions 7.a and 7.f-g (Irish Sea, Bristol Channel, Celtic Sea North)	3.2	2018	2020	2	-	-
rjc.27.8	2169	2019	Thornback ray ( <i>Raja clavata</i> ) in Subarea 8 (Bay of Biscay)	3.2	2018	2020	2	-	-
rjc.27.9a	2171	2019	Thornback ray ( <i>Raja clavata</i> ) in Division 9.a (Atlantic Iberian waters)	3.2	2018	2020	2	-	-
rje.27.7fg	2173	2019	Small-eyed ray ( <i>Raja microocellata</i> ) in divisions 7.f and 7.g (Bristol Channel, Celtic Sea North)	3.2	2018	2020	2	-	-
rjh.27.4c7d	2269	2019	Blonde ray ( <i>Raja brachyura</i> ) in divisions 4.c and 7.d (southern North Sea and eastern English Channel)	3.2	2019	2021	2	-	-
rjh.27.9a	2177	2019	Blonde ray ( <i>Raja brachyura</i> ) in Division 9.a (Atlantic Iberian waters)	3.2	2018	2020	2	-	-
rjm.27.3a47d	2179	2019	Spotted ray ( <i>Raja montagui</i> ) in Subarea 4 and Divisions 3.a and 7.d (North Sea, Skagerrak, Kattegat, and eastern English Channel)	3.2	2019	2021	2	-	-
rjm.27.67bj	2261	2019	Spotted ray ( <i>Raja montagui</i> ) in Subarea 6 and divisions 7.b and 7.j (West of Scotland, west and southwest of Ireland)	3.2	2018	2020	2	-	-

Stock Key Label	Stock Data-base ID	Active Year	Stock Key Description	Ices Data Category	Year Of Last Assessment	Year Of Next Assessment	Assessment Frequency	MSYproxyF	MSYproxyB
rjm.27.7ae-h	2262	2019	Spotted ray ( <i>Raja montagui</i> ) in divisions 7.a and 7.e-h (southern Celtic Seas and western English Channel)	3.2	2018	2020	2	-	-
rjm.27.8	2180	2019	Spotted ray ( <i>Raja montagui</i> ) in Subarea 8 (Bay of Biscay)	3.2	2018	2020	2	-	-
rjm.27.9a	2181	2019	Spotted ray ( <i>Raja montagui</i> ) in Division 9.a (Atlantic Iberian waters)	3.2	2018	2020	2	-	-
rjn.27.3a4	2271	2019	Cuckoo ray ( <i>Leucoraja naevus</i> ) in Subarea 4 and Division 3.a (North Sea, Skagerrak and Kattegat)	3.2	2019	2021	2	-	-
rjn.27.678abd	2276	2019	Cuckoo ray ( <i>Leucoraja naevus</i> ) in subareas 6-7 and divisions 8.a-b and 8.d (West of Scotland, southern Celtic Seas, and western English Channel, Bay of Biscay)	3.2	2018	2020	2	-	-
rjn.27.8c	2277	2019	Cuckoo ray ( <i>Leucoraja naevus</i> ) in Division 8.c (Cantabrian Sea)	3.2	2018	2020	2	-	-
rjn.27.9a	2182	2019	Cuckoo ray ( <i>Leucoraja naevus</i> ) in Division 9.a (Atlantic Iberian waters)	3.2	2018	2020	2	-	-
rjr.27.23a4	2272	2019	Starry ray ( <i>Amblyraja radiata</i> ) in Subareas 2 and 4, and Division 3.a (Norwegian Sea, North Sea, Skagerrak and Kattegat)	3.14	2019	2023	4	-	-
rju.27.7de	2183	2019	Undulate ray ( <i>Raja undulata</i> ) in divisions 7.d and 7.e (English Channel)	3.2	2018	2020	2	-	-
rng.27.3a	2186	2019	Roundnose grenadier ( <i>Coryphaenoides rupestris</i> ) in Division 3.a (Skagerrak and Kattegat)	3.2	2018	2020	2	-	-
sal.27.32	2340	2019	Salmon ( <i>Salmo salar</i> ) in Subdivision 32 (Gulf of Finland)	3	2019	2020	1	-	-
sbr.27.10	2220	2019	Blackspot seabream ( <i>Pagellus bogaraveo</i> ) in Subarea 10 (Azores grounds)	3.2	2019	2020	1	-	-

Stock Key Label	Stock Data-base ID	Active Year	Stock Key Description	Ices Data Category	Year Of Last Assessment	Year Of Next Assessment	Assessment Frequency	MSYproxyF	MSYproxyB
sbr.27.9	2219	2019	Blackspot seabream ( <i>Pagellus bogaraveo</i> ) in Subarea 9 (Atlantic Iberian waters)	3.2	2018	2020	2	-	-
sdv.27.nea	2241	2019	Smooth-hound ( <i>Mustelus</i> spp.) in subareas 1-10, 12 and 14 (the Northeast Atlantic and adjacent waters)	3.2	2019	2021	2	-	-
sho.27.67	2264	2019	Black-mouth dogfish ( <i>Galeus melastomus</i> ) in subareas 6 and 7 (West of Scotland, southern Celtic Seas, and English Channel)	3.9	2019	2021	2	-	-
sho.27.89a	2259	2019	Black-mouth dogfish ( <i>Galeus melastomus</i> ) in Subarea 8 and Division 9.a (Bay of Biscay and Atlantic Iberian waters)	3.9	2019	2021	2	-	-
sol.27.7d	2354	2019	Sole ( <i>Solea solea</i> ) in Division 7.d (eastern English Channel)	3	2019	2020	1	msy,lim,pa	msy,lim,pa
sol.27.7h-k	2228	2019	Sole ( <i>Solea solea</i> ) in Divisions 7.h-k (Celtic Sea South, southwest of Ireland)	3.2	2019	2020	1	msy,lim,pa	msy,lim,pa
spr.27.7de	2390	2019	Sprat ( <i>Sprattus sprattus</i> ) in divisions 7.d and 7.e (English Channel)	3.2	2019	2020	1	-	-
syc.27.3a47d	2237	2019	Lesser spotted dogfish ( <i>Scyliorhinus canicula</i> ) in Subarea 4 and divisions 3.a and 7.d (North Sea, Skagerrak and Kattegat, eastern English Channel)	3.9	2019	2021	2	-	-
syc.27.67a-ce-j	2240	2019	Lesser spotted dogfish ( <i>Scyliorhinus canicula</i> ) in Subarea 6 and divisions 7.a-c and 7.e-j (West of Scotland, Irish Sea, southern Celtic Seas)	3.9	2019	2021	2	-	-
syc.27.8abd	2239	2019	Lesser spotted dogfish ( <i>Scyliorhinus canicula</i> ) in divisions 8.a-b and 8.d (Bay of Biscay)	3.9	2019	2021	2	-	-
syc.27.8c9a	2238	2019	Lesser spotted dogfish ( <i>Scyliorhinus canicula</i> ) in divisions 8.c and 9.a (Cantabrian Sea and Atlantic Iberian waters)	3.9	2019	2021	2	-	-

Stock Key Label	Stock Data-base ID	Active Year	Stock Key Description	Ices Data Category	Year Of Last Assessment	Year Of Next Assessment	Assessment Frequency	MSYproxyF	MSYproxyB
syt.27.67	2265	2019	Greater-spotted dogfish ( <i>Scyliorhinus stellaris</i> ) in subareas 6 and 7 (West of Scotland, southern Celtic Sea, and the English Channel)	3.9	2019	2021	2	-	-
trs.27.22-32	2242	2019	Sea trout ( <i>Salmo trutta</i> ) in subdivisions 22-32 (Baltic Sea)	4	2019	2021	2	-	-
tur.27.22-32	2243	2019	Turbot ( <i>Scophthalmus maximus</i> ) in Subdivisions 22-32 (Baltic Sea)	3.2	2018	2021	3	-	-
tur.27.3a	2282	2019	Turbot ( <i>Scophthalmus maximus</i> ) in Division 3.a (Skagerrak and Kattegat)	3.2	2019	2021	2	-	-
usk.27.1-2	2244	2019	Tusk ( <i>Brosme brosme</i> ) in subareas 1 and 2 (Northeast Arctic)	3.2	2019	2021	2	-	-
usk.27.3a45b6a7-912b	2247	2019	Tusk ( <i>Brosme brosme</i> ) in subareas 4 and 7-9 and divisions 3.a, 5.b, 6.a, and 12.b (Northeast Atlantic)	3.2	2019	2021	2	-	-

## Annex 4: List of National Management Plans

**Note:** This list contains national management plans known to the European Commission plus management plans added by WKD3Lists participants for southern Member States. The list may not be exhaustive.

N	Country	Fishing gear	Region	Year of adoption	Species (allocated by DGENV)
1	Croatia	Trawler	Territorial waters	2014	Bottom trawl gear is widely employed in order to catch demersal species such as red mullet ( <i>Mullus barbatus</i> / <i>Mullus surmuletus</i> ), cuttlefish ( <i>Sepia officinalis</i> ) and octopus ( <i>Octopus</i> spp.).
2	Croatia	Purse seiner	Territorial waters	2014	
3	Cyprus	Trawler	Territorial waters	2012	Pickerels, red mullet, stripped mullets bogues and common pandora
4	Greece	Trawler	Territorial waters	2014	Trawling is a typical multispecies fishery and the landings include around 70 species. But 40% of total landings composed of hake, red mullet, shrimps, horse mackerel and pickerels
5	Greece	Purse seiner	Territorial waters	2013	Sardine and anchovy
6	France	Trawler	Territorial waters	2013	Hake and small pelagics (anchovy and sardine)
7	France	Mechanised dredges	Territorial waters	2014	Dredge: Murex and mussel
8	France	Gangui	Territorial waters	2014	Gangui and shore seine: various coastal species
9	France	Shore seines	Territorial waters	2014	Gangui and shore seine: various coastal species
10	France	Purse seiner	Territorial waters	2014	Purse seine: sardine, anchovy, striped and gilthead sea breams

N	Country	Fishing gear	Region	Year of adoption	Species (allocated by DGENV)
11	Italy	Trawler	GSA9	2011	Hake, red mullet and deep water rose shrimp
12	Italy	Trawler	GSA10	2011	Hake, red mullet and deep water rose shrimp
13	Italy	Trawler	GSA11	2011	Hake, red mullet and deep water rose shrimp
14	Italy	Trawler	GSA16 LOA<18	2011	Hake, red mullet and deep water rose shrimp
15	Italy	Trawler	GSA16 LOA>18	2011	Hake, red mullet and deep water rose shrimp
16	Italy	Trawler	GSA17	2011	Hake, red mullet and deep water rose shrimp. Bottom dredges are employed by Italy in order to catch shellfish e.g. razor clams and mussels.
17	Italy	Trawler	GSA18	2011	Hake, red mullet and deep water rose shrimp
18	Italy	Trawler	GSA19	2011	Hake, red mullet and deep water rose shrimp
19	Italy	Boat seine	Liguria-Tuscany GSA9	2011	
20	Italy	Surrounding nets	GSA17-GSA18	2011	Anchovy and sardines. Purse seine gear is also employed in the area to target northern Bluefin tuna ( <i>Thunnus thynnus</i> ), with live catch regularly used to stock coastal tuna farms in the Northern Adriatic.
21	Italy	Surrounding nets	GSA16	2011	Anchovy and sardines
22	Italy	Surrounding nets	GSA9	2011	Anchovy and sardines
23	Italy	Surrounding nets	GSA10	2011	Anchovy and sardines
24	Italy	Dredges	Adriatic coast	2015	
25	Malta	Otter bottom Trawler	Territorial waters	2013	Red Shrimps, Red Mullet ( <i>Mullus</i> spp.) and Pink Shrimp

N	Country	Fishing gear	Region	Year of adoption	Species (allocated by DGENV)
26	Malta	Lampara Fishery	Territorial waters	2013	Chub Mackerel and Round Sardinella)
27	Slovenia	Trawler	Territorial waters	2013	Bottom trawl gear is widely employed in order to catch demersal species such as red mullet ( <i>Mullus barbatus</i> / <i>Mullus surmuletus</i> ), cuttlefish ( <i>Sepia officinalis</i> ) and octopus ( <i>Octopus</i> spp.). Purse seine gear is also employed in the area to target northern Bluefin tuna ( <i>Thunnus thynnus</i> ), with live catch regularly used to stock coastal tuna farms in the Northern Adriatic.
28	Slovenia	Purse seiner	Territorial waters	2013	Small pelagic species such as anchovy ( <i>Engraulis encrasicolus</i> ), sardine ( <i>Sardina pilchardus</i> ) horse mackerel ( <i>Trachurus</i> spp.), mackerel ( <i>Scomber</i> spp.) and sprat ( <i>Sprattus sprattus</i> ) are key commercial species in the Adriatic Sea, targeted primarily with purse seine and mid water pair trawl gears.
29	Spain	Trawler	Territorial waters	2013	Hake, red mullets, red shrimp, deep-water rose shrimp
30	Spain	Boat seine	Murcia	2013	
31	Spain	Boat seine	Baleares	2013	
32	Spain	Boat seine	Catalonia	2014	Sandeel and small gobies
33	Spain	Purse seiner	Territorial waters	2013	Small pelagics (anchovy and sardine)
34	Spain	Mechanised dredges	Andalusia	2014	
35	Spain	Mechanised dredges	Catalonia	2015	Donax (bean clams), smooth clams, striped venus
36	Spain/Portugal	Purse seine	Northern shelf (8c9aN)	2018	Sardine ( <i>Sardina pilchardus</i> )

## Annex 5: List of Multi-Annual Management Plans within the EU

**Note:** This list contains plans known to ICES. However some of these plans might no longer be in use, have been repealed or have been superseded by the new EU Regional Multi-Annual Plans. Also, there are additional plans that are in use some of which may not have been enshrined in EU law. Finally, this list does not include multi-annual plans which are agreed between the EU and other Coastal States.

### 1. Recovery plan for cod: North Sea, Kattegat, Skagerrak, the eastern Channel, Irish Sea and West of Scotland

Areas covered: ICES 3, 4, 6.a, 7.a and 7.d.

Council Regulation (EC) No 423/2004 of 26 February 2004

Council Regulation (EC) No 1342/2008 of 18 December 2008

Council Regulation (EU) No 1243/2012 of 19 December 2012 amending Regulation (EC) No 1342/2008 establishing a long-term plan for cod stocks and the fisheries exploiting those stocks

Regulation (EU) 2016/2094 of the European Parliament and of the Council of 23 November 2016 amending Council Regulation (EC) No 1342/2008 establishing a long-term plan for cod stocks and the fisheries exploiting those stocks

### 2. Recovery plan for Northern hake

Areas covered: Kattegat, Skagerrak, North Sea, the Channel, West of Scotland, all around Ireland and Bay of Biscay.

Council Regulation (EC) No 811/2004 of 21 April 2004

### 3. Recovery plan for Southern hake and Norway lobster

Areas covered: Cantabrian Sea and Western Iberian Peninsula.

Council Regulation (EC) No 2166/2005 of 20 December 2005

### 4. Multi-annual plan for sole, Bay of Biscay

Areas covered: Bay of Biscay (ICES V8.a and 8.b).

Council Regulation (EC) No 388/2006 of 23 February 2006

### 5. Multi-annual plan for sole, Western Channel

Areas covered: Western Channel (ICES 7.e).

Council Regulation (EC) No 509/2007 of 7 May 2007

### 6. Multi-annual plan for sole and plaice, North Sea

Area covered: North Sea.

Council Regulation (EC) No 676/2007 of 11 June 2007

### 7. Measures for the recovery of eel

Area covered: EU estuaries and rivers that flow into seas in ICES areas 3, 4, 6, 7, 8, 9 and the Mediterranean.

Council Regulation (EC) No 1100/2007 of 18 September 2007

List of national eel management plans

**8. Multi-annual plan for cod, Baltic**

Area covered: ICES SD 22-32.

Council Regulation (EC) No 1098/2007 of 18 September 2007

**9. Long-term plan for West of Scotland herring**

Area covered: international and EU waters in ICES zones Vb and VIb, and the northern part of ICES zone VIa excluding the Clyde.

Council Regulation (EC) No 1300/2008 of 18 December 2008

**10. Recovery plan for Greenland halibut**

Council Regulation (EC) No 2115/2005 of 20 December 2005 establishing a recovery plan for Greenland halibut in the framework of the Northwest Atlantic Fisheries Organisation

**11. Recovery plan for Bluefin tuna**

Regulation (EU) No 2016/1627 of the European Parliament and of the Council of 14 September 2016 on a multiannual recovery plan for bluefin tuna in the eastern Atlantic and the Mediterranean, and repealing Council Regulation (EC) No 302/2009

Regulation (EU) No 500/2012 of 13 June 2012 amending Council Regulation (EC) No 302/2009 concerning a multiannual recovery plan for bluefin tuna in the eastern Atlantic and Mediterranean

Council Regulation (EC) No 302/2009 of 6 April 2009 concerning a multiannual recovery plan for bluefin tuna in the eastern Atlantic and Mediterranean, amending Regulation (EC) No 43/2009 and repealing Regulation (EC) No 1559/2007

Council Regulation (EC) No 1559/2007 of 17 December 2007 establishing a multi-annual recovery plan for bluefin tuna in the Eastern Atlantic and Mediterranean and amending Regulation (EC) No 520/2007

**12. Multiannual plan for the stocks of cod, herring and sprat in the Baltic Sea**

Regulation (EU) 2016/1139 of the European Parliament and of the Council of 6 July 2016 establishing a multiannual plan for the stocks of cod, herring and sprat in the Baltic Sea and the fisheries exploiting those stocks, amending Council Regulation (EC) No 2187/2005 and repealing Council Regulation (EC) No 1098/2007

## Annex 6: List of MSFD Regions

Id	Label	Status	Status Modified	Notation
ABI	Bay of Biscay and Iberian Coast	Valid	24.01.2014	ABI
ACS	Celtic Seas	Valid	24.01.2014	ACS
AMA	Macaronesia	Valid	24.01.2014	AMA
ANS	Greater North Sea	Valid	24.01.2014	ANS
ATL	North East Atlantic Ocean	Valid	09.10.2015	ATL
BAL	Baltic Sea	Valid	24.01.2014	BAL
BAR	Barents Sea	Valid	09.10.2015	BAR
BLA	Black Sea - sea of Azov	Valid	27.10.2017	BLA
BLK	Black Sea	Valid	24.01.2014	BLK
BLM	Black Sea - sea of Marmara	Valid	27.10.2017	BLM
ICE	Iceland Sea	Valid	09.10.2015	ICE
MAD	Adriatic Sea	Valid	24.01.2014	MAD
MAL	Aegean-Levantine Sea	Valid	24.01.2014	MAL
MED	Mediterranean Sea	Valid	09.10.2015	MED
MIC	Ionian Sea and Central Mediterranean Sea	Valid	24.01.2014	MIC
MWE	Western Mediterranean Sea	Valid	24.01.2014	MWE
NOR	Norwegian Sea	Valid	09.10.2015	NOR
WHI	White Sea	Valid	09.10.2015	WHI

## Annex 7: European Environment Agency list of D3 species

Species name	Aphia code
<i>Alopias spp</i>	105740
<i>Amblyraja radiata</i>	105865
<i>Ammodytes spp</i>	125909
<i>Anguilla anguilla</i>	126281
<i>Aphanopus carbo</i>	127085
<i>Aphia minuta</i>	126868
<i>Argentina silus</i>	126715
<i>Aristaeomorpha foliacea</i>	158326
<i>Aristeus antennatus</i>	107083
<i>Atherina boyeri</i>	272027
<i>Auxis rochei rochei</i>	236487
<i>Belone belone</i>	126375
<i>Beryx spp.</i>	125700
<i>Boops boops</i>	127047
<i>Brosme brosme</i>	126447
<i>Buccinum undatum</i>	138878
<i>Callista chione</i>	141906
<i>Cancer pagurus</i>	107276
<i>Capros aper</i>	127419
<i>Centrophorus squamosus</i>	105901
<i>Centroscymnus coelolepis</i>	105907
<i>Cetorhinus maximus</i>	105837
<i>Chamelea gallina</i>	141907
<i>Chelidonichthys cuculus</i>	127259
<i>Chelidonichthys lucerna</i>	127262
<i>Clupea harengus</i>	126417

Species name	Aphia code
<i>Clupea harengus</i>	126417
<i>Coregonus lavaretus</i>	127180
<i>Coryphaena hippurus</i>	126846
<i>Coryphaenoides rupestris</i>	158960
<i>Crangon crangon</i>	107552
<i>Crystalllogobius linearis</i>	126878
<i>Dalatias licha</i>	105910
<i>Dentex dentex</i>	273962
<i>Dicentrarchus labrax</i>	126975
<i>Diplodus annularis</i>	127049
<i>Diplodus puntazzo</i>	127052
<i>Diplodus sargus</i>	127053
<i>Diplodus vulgaris</i>	127054
<i>Dipturus batis</i>	105869
<i>Dipturus spp</i>	105762
<i>Donax</i>	137906
<i>Eledone cirrhosa</i>	140600
<i>Eledone moschata</i>	140601
<i>Engraulis encrasicolus</i>	126426
<i>Epinephelus spp.</i>	126068
<i>Eutrigla gurnardus</i>	150637
<i>Gadus morhua</i>	126436
<i>Galeorhinus galeus</i>	105820
<i>Galeus melastomus</i>	105812
<i>Glyptocephalus cynoglossus</i>	127136
<i>Gymnamodytes cicerelus</i>	126753
<i>Gymnamodytes semisquamatus</i>	126754
<i>Hippoglossoides platessoides</i>	127137
<i>Homarus gammarus</i>	107253

Species name	Aphia code
<i>Hoplostethus atlanticus</i>	126402
<i>Illex coindetii</i>	140621
<i>Isurus oxyrinchus</i>	105839
<i>Katsuwonus pelamis</i>	127018
<i>Lamna nasus</i>	105841
<i>Lepidopus caudatus</i>	127088
<i>Lepidorhombus boscii</i>	127145
<i>Lepidorhombus whiffiagonis</i>	127146
<i>Leucoraja circularis</i>	105873
<i>Leucoraja fullonica</i>	105874
<i>Leucoraja naevus</i>	105876
<i>Limanda limanda</i>	127139
<i>Lithognathus mormyrus</i>	127055
<i>Loligo forbesii</i>	140270
<i>Loligo vulgaris</i>	140271
<i>Lophius budegassa</i>	126554
<i>Lophius piscatorius</i>	126555
<i>Macrourus berglax</i>	126472
<i>Maja squinado</i>	107350
<i>Melanogrammus aeglefinus</i>	126437
<i>Merlangius merlangus</i>	126438
<i>Merluccius merluccius</i>	126484
<i>Micromesistius poutassou</i>	126439
<i>Microstomus kitt</i>	127140
<i>Molva dypterygia</i>	126459
<i>Molva molva</i>	126461
<i>Mugil cephalus</i>	126983
<i>Mullus barbatus</i>	126985
<i>Mullus surmuletus</i>	126986

Species name	Aphia code
<i>Murex spp</i>	138196
<i>Mustelus spp</i>	105732
<i>Mytilus edulis</i>	140480
<i>Mytilus galloprovincialis</i>	140481
<i>Nephrops norvegicus</i>	107254
<i>Octopodidae</i>	11782
<i>Octopus vulgaris</i>	140605
<i>Ommastrephidae</i>	11760
<i>Orcynopsis unicolor</i>	127019
<i>Pagellus acarne</i>	127057
<i>Pagellus bogaraveo</i>	127059
<i>Pagellus erythrinus</i>	127060
<i>Pagrus pagrus</i>	127063
<i>Palinurus elephas</i>	107703
<i>Pandalus borealis</i>	107649
<i>Parapenaeus longirostris</i>	107109
<i>Pecten jacobaeus</i>	140711
<i>Pecten maximus</i>	140712
<i>Penaeus kerathurus</i>	246388
<i>Perca fluviatilis</i>	151353
<i>Phycis blennoides</i>	126501
<i>Platichthys flesus</i>	127141
<i>Pleuronectes platessa</i>	127143
<i>Pollachius pollachius</i>	126440
<i>Pollachius virens</i>	126441
<i>Polyprion americanus</i>	126998
<i>Pomatomus saltatrix</i>	151482
<i>Prionace glauca</i>	105801
<i>Pseudaphya ferreri</i>	126934

Species name	Aphia code
<i>Raja asterias</i>	105881
<i>Raja brachyura</i>	367297
<i>Raja clavata</i>	105883
<i>Raja microocellata</i>	105885
<i>Raja montagui</i>	105887
<i>Raja undulata</i>	105891
Rajidae	105711
<i>Rapana venosa</i>	140416
<i>Reinhardtius hippoglossoides</i>	127144
<i>Rostroraja alba</i>	105896
<i>Ruditapes philippinarum</i>	231750
<i>Salmo salar</i>	127186
<i>Sander lucioperca</i>	151308
<i>Sarda sarda</i>	127021
<i>Sardina pilchardus</i>	126421
<i>Sardinella aurita</i>	126422
<i>Scomber japonicus</i>	127022
<i>Scomber scombrus</i>	127023
<i>Scophthalmus maximus [Psetta maxima]</i>	127149
<i>Scophthalmus rhombus</i>	127150
<i>Scorpaena porcus</i>	127247
<i>Scorpaena scrofa</i>	127248
<i>Scyliorhinus canicula</i>	105814
<i>Scyliorhinus stellaris</i>	105815
<i>Sepia offi-cinalis</i>	138477
<i>Seriola dumerili</i>	126816
<i>Serranus cabrilla</i>	127041
<i>Solea solea (sin. vulgaris)</i>	127160
<i>Sparisoma cretense</i>	231441

Species name	Aphia code
<i>Sparus aurata</i>	151523
<i>Spicara maena</i>	126828
<i>Spicara smaris</i>	126830
<i>Sprattus sprattus</i>	126425
<i>Squalus acanthias</i>	105923
<i>Squatina squatina</i>	105928
<i>Squilla mantis</i>	136137
<i>Thunnus alalunga</i>	127026
<i>Thunnus obesus</i>	127028
<i>Thunnus thynnus</i>	127029
<i>Trachurus mediterraneus</i>	126820
<i>Trachurus trachurus</i>	126822
<i>Trachyrincus scabrus</i>	126482
<i>Trisopterus esmarkii</i>	126444
<i>Trisopterus minutus</i>	126446
<i>Venerupis spp.</i>	138647
<i>Venus verrucosa</i>	141936
<i>Xiphias gladius</i>	127094
<i>Zeus faber</i>	127427

## Annex 8: List of participants

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## Annex 9: Technical minutes from the D3 lists Review Group

- RGD3lists
- By correspondence August 2020
- Participants: Anna Rindorf (Chair) Lena Bergstrom, and Sasa Raicevich
- Working group: WKD3lists

### Aim

In relation to request ENV: MSFD 3-17 commercially-exploited fish & shellfish stocks: *“Review the lists of commercially-exploited fish and shellfish populations (stocks) for each marine regions and corresponding subregions reported under MSFD Descriptor 3 by Member States in their 2018 reports under MSFD Article 17, based on the regional/subregional lists compiled using the criteria under ‘specifications’ in the GES Decision. Advise on how the lists of species to be reported could be improved to fully meet the requirements of the GES Decision in the 2024 updates of Article 17 reporting.*

### RGD3lists Review Report

**Anna Rindorf**

#### General comment

The report details substantial work on listing species and discussing guidelines for which species to include. It does not relate clearly to the terms of reference in the text and seems to apply a rather loose definition of ‘review’. Generally, ‘reviews’ include some kind of evaluation of the items reviewed, whereas ‘lists’ refer to the listing of values from different sources. The report seems to have confused the two somewhat. While the guidelines are clear, they are not actually applied to any of the national lists and hence the degree to which the Member State lists adhere to the guidance and the reply to tor d remains unclear.

#### **Update the operational (reference) list compiled by the European Commission: new species, list of stocks under national management plans, MSFD region-subregion**

Table 2: the areas in the columns should be described in full rather than only in annexes. The recommendation by the 2014 WK to not include aggregations such as Rajidae should be repeated here.

#### **Review the Member States lists against the reference list: proposal for regional/subregional list, criteria for stocks selection (national and regional/subregional level), list of important species at small scale-coastal level.**

Table 4: It seems odd that the process to review is conducted in the title of the table and recommends to simply do as the Member States have done without commenting on whether this follows the guidelines specified later in the document anywhere. Some of these species are not important commercial species (at least one is under prohibition) but important sensitive species and are more appropriate under D1 (e.g. *Squatina squatina*). Further, a selection of the species are brackish water species, and these seem inconsistently included across regions. These issues would seem to be part of an actual review, so perhaps these sections were more correctly referred to as listing rather than reviewing. Footnote on aquaculture recruit fishery: Capture seems an inappropriate word for *Mytilus* as these can also be captured by providing e.g. straps to settle on

### **Evaluate and if required propose revisions of the criteria used to define species: Updated definition of commercially-exploited species (D3)**

‘Therefore, it should be noted that the considerations below in some instances do not agree with the latest GES Decision. ‘ This seems to indicate that the either the suggested guidelines are in conflict with the latest GES Decision or the species appointed by the Member States are. Pointing out the latter seems to be exactly the purpose of the report, and so the sentence seems odd.

‘recorded in national lists under the EU Data Collection Framework’. Since the 2016 list is no longer in fore, the DCF monitoring guidance is to identify all species, hence it is unclear what this reference adds.

#### **Recommendations**

1-3: These seem sensible and well founded

4: This seems a bit out of place – why would these data be preferable to other or national sources? Would it not be more appropriate to refer to that best available information should be used?

It should be clearly stated in these recommendations that sensitive species are expected to be included under D1. Hence, species not included in the list due to low contributions to landings should be listed under D1.

5: needed? This species would not make the ‘contribution by weight and value criteria’.

8: One of the major issues here must be whether meaningful data exists on the two indicators. While it is clear from the guidance that lack of data should not be an excuse for not listing species, any combined indicators for D3 will be highly dependent on less well known species. Another major concern is that species previously fished but know under landing ban will leave the list, leading to an overly positive evaluation across stocks. Hence, it should probably be stated which time period should be used to evaluate catches (e.g. full 6 year cycle or two 6 year cycles). Finally, widespread species may not reach the limit in areas of specific Member States but would reach it at EU level. Are these species then not included?

*‘It should be noted that the some of the commercial fish and shellfish species reported by MS are listed as protected species in IUCN, OSPAR and redlist and enumerate the species and refer to the list in the annex’*  
I do not understand this sentence?

\*WKD3lists discussed the issue of D3 stocks belonging to more than one MSFD region or subregion. For the Fisheries and Ecosystem Overviews, ICES assigns stocks to one or more ecoregion, which closely align with MSFD ecoregions, though are not identical (Figure 1, upper). Of the 246 stocks considered so far for these overviews, 165 (67%) are found entirely within a single ecoregion (Figure 1, lower). (ICES 2020) It is unclear what the recommendation is? Further, the sentence would probably flow better if moved below the next section.

### **Propose changes to the reference D3 lists to fully meet the requirements of the GES Decision: Proposals informed in the work above**

‘It is proposed to change/update the operational list with the findings of Table 3 above.’ Table 3 is about assigning species reported to genus to species? If you are thinking about tables 2 and 4 here, what is the point of making guidelines but then suggesting they are not used to evaluate the species in the table?

On fishing young individuals for aquaculture, I would read the decision as any commercial fishing mortality, regardless of the use of the fish caught. I do not see that the use of the fish will change this unless the point is that this is unregulated and unmonitored fishing?

#### **RGD3lists Review Report**

## Lena Bergstrom

### General comment

The report is informative and well presented in the sense that it is easy to follow as a separate product. However, the fact that the structure of the report is not fully aligned with the Request nor the ToRs, makes evaluation of the results in relation to these more challenging than would have been needed. It is not possible to easily discern what parts of the text represent background studies, results and what parts are conclusions from the workshop that should be forwarded as advice. Revising some of the subheadings may be helpful to improve this, e.g. in section 5.

### Executive summary

A section presenting the main results of the workshop is missing, but would be useful to guide the reader especially in terms of how the report should be considered in relation to the request, and the main conclusions/achievements of the WK.

### In relation to the tasks that were carried through

#### **Update the operational (reference) list compiled by the European Commission: new species, list of stocks under national management plans, MSFD region-subregion**

Gap analyses well prepared and conducted. It is unfortunate that a complete material from all countries was not available for the workshop, as this makes (for example) the stated conclusions about mismatches in relation to the reference list inconclusive. However, caveats are clearly stated.

It appears that there will be a need to revisit the list soon again, and make sure to include all relevant information.

Table 3 gives potential scenarios in making the D3RL consistent with member state reporting. This is a useful table, but it would benefit from being complemented with an initial evaluation of pros and cons for each potential solution, to guide decision on how to follow each of these potential solutions (it may be understandable that time constraints could be restricting this, though).

#### **Review the Member States lists against the reference list: proposal for regional/subregional list, criteria for stocks selection (national and regional/subregional level), list of important species at small scale-coastal level.**

**Table 4 heading.** Given the stated remaining uncertainties and potential implication of these on the state of recommendations, the heading of table 4 should be reconsidered, especially concerning the passage “list of species which should”. The heading should preferably present the content of the table in a more neutral way.

#### **Evaluate and if required propose revisions of the criteria used to define species: Updated definition of commercially-exploited species (D3)**

It is unfortunate that the considerations presented in some instances are not aligned with the content of the latest GES Decision (This is due to circumstances beyond the workshop). As far as possible, the text should reflect what is currently valid and in a transparent way show places where this is not the case.

Page 20, point 4. Did the workshop discuss if this list should be set for a reference period, after which no species can any more removed but only added, or in any other way discuss how to deal with the potential situation that a stock is depleted over time and may risk being “fished

out of the assessment" ? This potential issue is touched upon in the second bullet point in the list at page 24 but it would be beneficial to highlight also from the perspective of what is stated on page 20.

Page 24. Bullet point list: It should be clarified if the list gives situations that could potentially happen/have happened, or situations that would be appropriate solutions in the view of WKD3lists

Second bullet point: It should be better clarified if this is the view of the WK or a WK-interpretation of the Decision. Also, did the workshop discuss for how long time the stock should still be reported? It appears that there is limited case for removing a species/stock from the list if it is in fact established that the stock is low as a result of fishing

Fourth point. I might be missing some information here, but it appears questionable that a species is regularly caught but not reported. Perhaps some rephrasing is needed to clarify. The question also arises how it would be assessed and reported under any descriptor if it is not included in data collection. It would be good to verify the last sentence to check if the recommendation is actually D1, as based on the existing explanations D3 seems more motivated (unless the species identity calls for reporting under D1 for some other reason).

Fifth point. Is this point actually needed? If the basal recommendation is that member states should select stocks to include based on the weight (or value) of catches or landings within their national waters (page 20, point 1), this would solve if cod is to be included in D3 or not in the example

Page 26, "While for stocks spread across two ecoregions it may be reasonable to use the overall stock criteria to judge GES, for certain stocks the impact of catches in a particular member state's waters may have little to no impact on the GES of the stock". This reasoning could be questioned in relation to the overall aims of the D3 assessment concerning internationally managed fish stocks, and in relation to for example what is stated on page 27 ("Thus, a national D3 assessment can be seen as an evaluation of the status of fish stocks that occur in the member states waters, rather than an evaluation of the MS' performance as a fishing nation"). Some stronger motivation could be added. However, it is not clear from the content if this is to be understood as a recommendation or as a side comment.

**Propose changes to the reference D3 lists to fully meet the requirements of the GES Decision: Proposals informed in the work above**

No comments

**Fact checks and minor comments:**

**Page 24,** "... WKD3Lists concluded that the Commission Decision 2017/848/EU explicitly implies the potential for reporting commercially exploited stocks under D1 as well as under D3. The group noted that there are unresolved issues relating to the stock vs species assessments under D3 and D1 respectively". The wording "Explicitly implies" is curious. It would be helpful to more clearly refer to this place in the Decision, for transparency

**Page 24.** The bullet point list introduction "WKD3Lists identified four possible situations" should read "WKD3Lists identified five possible situations:" (given that the present number of bullet points are kept)

**Page 24:** The first point. "Commercially exploited species that are representative of the D1 species groups can be reported under both descriptors e.g. cod, commercially exploited but also representative of commercial fish in D1." Last part of the sentence needs to be checked as "commercial fish" is not a Species group to be reported within D1.

**Page 26.** Figure 1 Title of second graph “number of ecoregions per stock” should be changed to “Number of stocks spanning over ecoregions”, or similar to reflect what is on the y-axis

**Page 121.** Point 8 should be removed or a note added that it is currently replaced by point 12

## Revision of the report WKD3lists – S. Raicevich

### Foreword

ICES was tasked by the Commission to:

-Review the lists of commercially-exploited fish and shellfish populations (stocks) for each marine regions and corresponding subregions reported under MSFD Descriptor 3 by Member States in their 2018 reports under MSFD Article 17, based on the regional/subregional lists compiled using the criteria under 'specifications' in the GES Decision.

-Advice on how the lists of species to be reported could be improved to fully meet the requirements of the GES Decision in the 2024 updates of Article 17 reporting.

This revision addressed the contents of the report according to ICES request. Some suggestions and comments are also included in the word document report as track change to facilitate addressing the different comments.

### General comment to the report

The report presents the outcome of WKD3List that engaged 44 experts from 17 countries. It provides the update of the D3 reference list, mainly extending the list to new species/stocks included in the 2018 MSFD, the stocks object of national and/or multiannual plans, stocks of “local” value. The work also includes reflections on the definition of commercially exploited species, the possible setting of thresholds for inclusion in the reporting, along with other considerations such as the difficulties in operationalize thresholds in areas with high species’ diversity (i.e. the Mediterranean Sea).

A lot of work has been done by WKD3List participants in updating the species’ list and summarizing the association of stocks to subregions, MS, etc., and I believe this work is very valuable.

However, the report is not fully convincing, possibly because of three parallel aspects:

- The lack of a thorough description of methods, lists, and outcomes of the update in the lists, that result in partially questionable interpretations;
- The not comprehensive approach (e.g. no/little inclusion of references to RSC and RFMO approaches);
- The impression that no substantial steps forward have been achieved (apart from the updated list) in terms of advice on how to progress towards a more coherent selection of stocks and reporting.

I believe that most of these shortcomings could be solved with the revision of the text, and the exploration of some sources not considered (e.g. RFMO stock lists, see below for suggestions for the Mediterranean). Other implementations (e.g. the analysis of number of stocks at subregional/regional level according to landings data) would need more “hands on work” with data with adequate spatial and taxonomic resolution, which most likely are not available.

Suggestions/specific comments are given in the main text (as comments) and in the notes reported below.

### Comments on the work performed by WKD3lists:

*o REFERENCE TO “the review of the lists of commercially-exploited fish and shellfish populations (stocks) for each marine regions and corresponding subregions by the Member States in their 2018 report to MSFD obligation”*

Chp3 provides information on the general workflow. I find the description a bit confusing, because of the presence of many species lists; the writing could be simplified by using acronyms for all the lists (e.g. EC operational list, ICES, and EEA list). More prominently, I felt that the description of all the list considered was lacking, and in particular what was lacking is the rationale that was behind their establishment, e.g.:

-EC operational list: does this include all the species/stocks of the first MSFD reporting (2012)?

-ICES and EEA list: what was the rationale for stock inclusion?

Providing this information to the reader could be useful to better tackle the reasons behind the gaps identified between the lists.

The approach adopted was to use EC reference lists and integrate it with those included in the MS reports in 2018, the ICES-EEA list, + those included in management plans. Also, WKD3RL participants were asked to edit and complement the list based on their expertise at the national/regional level to include stocks/species of “local” relevance.

Regarding the latter, the report is not clear in defining the meaning of “local” relevance (for the MS? in a specific area? Because there is a fishery targeting the stock?). This information would be needed for a thorough understanding of the proposal of integration of the list.

Since this is expert-based information (and the overall report is based on experts contribution), the report should better acknowledge if RSC and RFMO experts also participated in the meeting (this is unclear from the list of attendees): this is relevant to understand if all kind of expertise contributed to the lists, but also because it was a request from the Commission to ICES.

The discussion on the differences observed between the reference list and the MS 2018 reports is not convincing: “According to Table 2 there seem to be gaps in the reporting on stocks of relevant commercial species, especially in the Mediterranean sub-regions. This finding is probably due to two reasons: 1) the taxonomic diversity is higher in the Mediterranean than in other marine regions, 2) several member states have not yet submitted their national reports hence these gaps might be filled once these reports become available.” (pag. 10)

In particular:

There is a need to clarify the landings values associated with Table 2, since these values generally show that most stocks included are to be associate with low landings, although some others are associate with high landings (eg. *Chamelea gallina* in the Adriatic Sea). Possibly these values are those that were reported in the first assessment by MS in 2012?

Regarding point 1) I believe that the main differences between the lists (species in table 2) are due to changes in the reporting from MS in 2012 to 2018; possibly they reduced the number of stocks addressed in the 2018 reporting (Italy did it for sure). This reduction could be justified by the different approach towards the definition of the term “all commercial species” (also the new Decision arrived between 2012 and 2018 reporting. Regarding point 2) only 1 MS per Region has not submitted yet their national reports and, for instance, I do not expect Greece to include most of the Med species quoted in Table 2.

A comparison between the number of species reported in the first and second cycles (e.g. comparing Raicevich et al. 2017 - <https://www.frontiersin.org/articles/10.3389/fmars.2017.00316/full> – referred to 2012 assessment - to the Med species reported in 2018) could shed light regarding differences in number of stocks reported.

Regarding the issue of reporting at the genus level, I suggest remarking that the assessment of status at the genus level could be complex (models are set at species level...).

*Further suggestions for the Chpt 3:*

Adding a figure to show the workflow would enhance clarity. At the same time, any number summarising the outcomes of the exercise is missing (e.g. how many stocks/species were present in the EC operational list, how many in the final D3RL? etc.). Adding this information is needed in my opinion and would enhance report quality/clarity.

The title is a bit misleading since some items are not addressed (list of species in the management plans): I suggest to revise the title or to add this content in the main text.

*o REFERENCE TO the update of the operational (reference) list of commercially-exploited species (fish and shellfish) for each marine region and subregion compiled by the European Commission to assist the report by Member States*

Chapter 4 provides the list of species that should be added to the D3 Reference list because i) they were added in an MS report or ii) they were identified as relevant from an expert.

The same line of reasoning applies here in this chapter. Some methodological information is lacking and in particular how stocks were defined locally relevant. The terminology (what to add to what) is not clear; my understanding is that the D3RL was already including the new stocks considered in 2018 (the green cells in the table), that represent an addition to the EC ref list. Is it correct? Regarding the discussion of the stocks to add, I suggest to add the number of stocks but also to check the line of reasoning. The 2018 reports from MS were missing from a small number of countries per region (maybe only in the BS if one country is missing has a real relevance, but only there) so that I would soften the statement of incompleteness in the list due to lack of MS reporting.

The reference to RSC/RFMO practices or stock lists are not included, while they should be considered in my opinion. This because the stock list should be defined under regional and subregional cooperation and the Commission Decision clearly states that RSC or relevant international agreement should be used. For instance, in the Mediterranean, the GFCM established two lists of relevant commercial stocks by subregion under the Data Collection Reference Framework; see for instance: A.1 - Group 1 species. Species that drive the fishery and for which assessment is regularly carried out and A.2 - Group 2 species. Species which are important in terms of landing and/or economic values at the regional and subregional level, and for which assessment is not regularly carried out. See the report at the link below:

<https://gfcmlib.sharepoint.com/sites/DCRF/SiteAssets/Manual/GFCM-DCRF-manual-2018-v.20.1.pdf?originalPath=aHR0cHM6Ly9nZmNtLnNoYXJlcG9pbmQuY29tLzpiOi9zL0RDUkYvRVk3ZFRRVnhLVGRLaTdWMTcxbDhPeU1CNVhqd2kza0QxQ2ExMktCYmVrSDhLUT9ydGltZT12LXg2Zkp4dTJFZW>

I suggest consider adding these stocks to the overall list, or in any case present this list. Are there similar lists in other RSC/RFMO?

Other minor issues: the title of the chapter is misleading since much information is not given in the text (criteria for stocks selection (national and regional/subregional level), list of important species at small scale-coastal level.

#### *o the evaluation and proposed revisions of the criteria used to define D3*

Chapter 5 deals with the revision of the D3 stock definition, starting from the latest definition in the new GES Decision and then considering the different advice proposed by ICES. Overall the discussion seems to add new elements, but it does not provide a final advice.

In particular, I was puzzled by a small paragraph under “considerations on WKDE3Lists”: “WKD3Lists considered the criteria for inclusion in the D3 lists, and whether revisions were required. The following section summarises these discussions. Much of preparation for the reporting under the current round of the MSFD, along with previous ICES advice predates the current Commission Decision of GES (848/2017). Therefore, it should be noted that the considerations below in some instances do not agree with the latest GES Decision“. Given the request from the Commission, I was expecting the report to update previous advice and fully address the latest Decision.

#### *Par: What constitutes a commercial stock?*

As mentioned above, giving reference to the approach adopted by RFMO could be also relevant here. As far as I know, in the process of prioritizing stocks for fishing monitoring in the Med, both landings and value are considered. Including information on the approach they used could be useful.

I fully agree with the need of being pragmatic and the comparison among n. of stocks per MS/subregion is convincing, e.g. for the different French areas (also in the annex, with details). Possibly applying similar approached at broader scales and comparing the different regions would have been useful.

*Par: Thresholds in terms of weight and value of catches/landings*

In general, the considerations listed in this paragraph are reasonable. I see little/no ref to the regional/subregional cooperation process, nor suggestions on how to proceed in this regard. However, a proposal for a final “solution” to set thresholds is lacking.

Some more hints:

At point 6: “Landings from GSA1, GSA5, and GSA6 (roughly equating to Spain’s waters) comprise 2,178 species or species groups over the period 2012-2016. 2,064 of these make less than 0.0% (to 1d.p.) of total landings in weight. Hence, there may be a case for pragmatism.

Please check these numbers. Likely, you are not representing species (in the Med there are about 600 fish species...) but rather stocks (one per GSA). Still, 700 stocks per GSA is not convincing! Maybe imported species/byproduct- are included?

The improvement in landings coverage using different reference lists in the Med (based on the 2012 reporting as a starting point) was analysed in Raicevich et al. (2017). You may consider to refer also to this paper to remark some common point/differences.

At point 8: the need for collaboration among MS across subregions and regions is remarked to define a common list of thresholded species is mentioned. I see this as a paradox since the first thing to remark would be the need to establish subregional/regional lists of selected stocks (and this is missing).

One key point that seems to be not considered here, is that in the absence of any clarification about what should be compulsory for the MSFD reporting: the Commission Decision states that a list of all commercially exploited species shall be established by MS through regional/subregional collaboration “taking into account” Council Regulation 1380/2013 and a set of criteria... , it is unlikely that any common approach will be applied by MS without clarifying also the meaning of “taking into account”.

*Par: National management plans (Mediterranean only)*

The list in the annex is not updated, since at least for Italy some management plans are missing. I am updating the file with those MP I am aware of. Please note the although MP addresses fisheries, they have targets for primary stocks that could be thus identified/crosse checked with the D3RL list. Please also note that at least one Multiannual Management Plan is missing (also working to add it to the list) – it refers to Western Mediterranean Sea.

*Par: Stocks without advice in relation to MSY reference points*

I agree on the possibility/need to assess data-limited stocks. Regarding the method to be applied my understanding is that (when being in the category 3 or 4 contexts) the most suitable method depend mainly on the quality/quantity of data. I believe in the Med methods should be agreed by MS under regional/subregional cooperation engaging with the RFMO and RSC. In any case, methods to address uncertainty and to integrate assessments with different degrees of quality of data should be developed, and this need should be acknowledged.

*Par: Interaction between D3 and D1 for commercially exploited stocks*

According to the Decision, the D3 species shall be reported also in D1, using the outcomes of D3 assessment. One issue not mentioned here is the comparability of metrics/indicators, as well as how to integrate the outcomes of assessments potentially carried out with different indicators.

From the analysis I made on the D1 and D3 reports (unpublished data, in the context of MEDREGION project) in the Med, it appears that the selection of species across the two Descriptors was not consistent in the region,

showing that to address properly both the Descriptors a clarification of the approach to select species in D1 concerning D3 (and vice versa) would be needed.

*o proposal of changes to the development of the D3 lists to fully meet the requirements of the GES Decision in the next updates under Article 17 (2024)*

Chapter 6 seems to be too synthetic and it does not provide a final outline from which a clear position is provided. The caveats of the analysis should be better represented (e.g. lack of references to RSC/RFMO work, need to update management plans and related stocks, etc.). For the statement “The species in Table 2 also merit further consideration in relation to whether they indicate gaps in the member states’ reporting within the relevant marine regions/sub-regions (recognising that not all member states have reported yet), or whether they are not commercially exploited in the (sub)region and should be removed from the list.” See my previous comments.

- **Whether the work from WKD3lists can be used for ICES advice.**

*The work carried out is for sure helpful and could be used to provide advice and update the species’ list, but I strongly suggest revising the report and some interpretations taking into account the suggestions above.*

*The species’ list is for sure improvement and update as compared to the previous list. However, I believe no real exploration beyond merging lists already established and adding some stocks from expert-based knowledge was carried out (apart from a few, rather interesting, case studies). Some other parts for the advice would need further elaboration/refinement (see comments above).*

*It appears that further cross-check of some information at the national level on management plans in particular for the Med and the Black Sea would be needed.*

*As already stated, the examples in annex II are relevant and interesting, but they are not suitable to take detailed conclusions apart from remarking the high diversity of catches in the Med, or the effects of selecting stocks by their relative contribution to landings or value.*

*In conclusion, taking into account the request of advice from the Commission, I do not have the feeling that all the items in the request were fully addressed at the ICES standards (that I value very much).*

Mira, 13/10/2020

Dr. Saša Raičević

