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Scientific, Technical and Economic
Committee for Fisheries (STECF)

-

Evaluation of Joint
Recommendations on the landing
obligation and on Technical
Measures Regulation
(STECF-22-05)

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Abstract

Commission Decision of 25 February 2016 setting up a Scientific, Technical and Economic Committee for Fisheries, C(2016) 1084, OJ C 74, 26.2.2016, p. 4–10. The Commission may consult the group on any matter relating to marine and fisheries biology, fishing gear technology, fisheries economics, fisheries governance, ecosystem effects of fisheries, aquaculture or similar disciplines. This report contains a review of Joint Recommendations submitted by Member States Regional Groups for the implementation of the Landing Obligation in 2023 and beyond.

SCIENTIFIC, TECHNICAL AND ECONOMIC COMMITTEE FOR FISHERIES (STECF) - Evaluation of Joint Recommendations on the landing obligation and on Technical Measures Regulation (STECF-22-05)

Background provided by the Commission

Joint Recommendations on the Landing Obligation (exemptions)

After consulting the relevant Advisory Councils, Member States cooperating at sea -basin level may provide the Commission with joint recommendations requesting exemptions from the landing obligation. Where the STECF's advice is positive, the Commission adopts delegated acts implementing these joint recommendations into EU law, in accordance with Article 15(6) of the Common Fisheries Policy¹ (CFP). Where there is no multiannual plan for the fishery in question, article 15(6) of the CFP empowers the Commission to adopt delegated acts laying down on a temporary basis specific discard plans containing the exemptions. The six potential elements that can be contained in a discard plan are the following:

- Definitions of fisheries and species
- Provisions for survivability exemptions
- Provisions for de minimis exemptions
- The fixation of minimum conservation reference sizes
- Additional technical measures needed to implement the landing obligation; and
- The documentation of catches.

The temporary discard plans under Article 15(6) with a maximum of 6 years have expired in 2020 or will expire in 2021 and have been or should be replaced by provisions adopted under article 15(5) and specified in multiannual plans. Under the existing multiannual plans, provisions² specify that the Commission is empowered to adopt delegated acts following Article 18 of the CFP (Regionalisation procedure). Currently, most of the delegated regulations specifying the details of implementation of the landing obligation have been adopted by the Commission under the existing multiannual plans (Western Waters, the North Sea and Baltic).

In 2022, the discard plan for turbot fisheries in the Black Sea will expire as well as the Delegated Regulation regarding the derogation for the MCRS of Venus shells (*Venus spp.*) For this year and EWG, there are **nine** joint recommendations to be expected, see annex 1 for more detail but in summary:

- 1) Landing obligation - Joint recommendation Western Waters. Discard plan valid until 2023. One exemption requiring additional information, plus several extension requests for

¹ Regulation (EU) 1380/2013 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 11 December 2013 on the Common Fisheries Policy, amending Council Regulations (EC) No 1954/2003 and (EC) No 1224/2009 and repealing Council Regulations (EC) No 2371/2002 and (EC) No 639/2004 and Council Decision 2004/585/EC. OJ L 354, 28.12.2013, p. 22.

² Article 13, Regulation (EU) 2019/472 of the European Parliament and of the Council of 19 March 2019 establishing a multiannual plan for stocks fished in the Western Waters and adjacent waters, and for fisheries exploiting those stocks, amending Regulations (EU) 2016/1139 and (EU) 2018/973, and repealing Council Regulations (EC) No 811/2004, (EC) No 2166/2005, (EC) No 388/2006, (EC) No 509/2007 and (EC) No 1300/2008

² Article 11, Regulation (EU) 2018/973 of the European Parliament and of the Council of 4 July 2018 establishing a multiannual plan for demersal stocks in the North Sea and the fisheries exploiting those stocks, specifying details of the implementation of the landing obligation in the North Sea and repealing Council Regulations (EC) No 676/2007 and (EC) No 1342/2008

² Article 7, 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

² Article 14, Regulation (EU) 2019/1022 of the European Parliament and of the Council of 20 June 2019 establishing a multiannual plan for the fisheries exploiting demersal stocks in the western Mediterranean Sea and amending Regulation (EU) No 508/2014

exemptions granted until the 31st of December 2022, and (possibly) two new high survivability derogations

- 2) Landing obligation – joint recommendation North Sea. Valid until 2023 so only exemptions requiring additional information + one request for a new exemption
- 3) Landing obligation – joint recommendations Southwestern waters. Valid only 2023 exemptions requiring additional information.
- 4) Landing obligation – joint recommendation high survival exemption for plaice in the Baltic Sea. New exemption.
- 5) Landing obligation – joint recommendation turbot fisheries Black Sea. Valid until 2022.
- 6) Landing obligation – joint recommendation demersal fisheries Western Mediterranean Sea. Valid until 2024 so only exemptions requiring additional information; will include high survivability exemption request for Venus Shell
- 7) Landing obligation – joint recommendation demersal fisheries south-eastern Mediterranean. Valid until 2024 so only de minimis exemptions requiring additional information (small pelagics bycatch)
- 8) Landing obligation – joint recommendation demersal fisheries Adriatic Sea. Valid until 2024 so only de minimis exemptions requiring additional information (small pelagics bycatch)
- 9) Technical Measures – joint recommendation from NWW

The STECF has reviewed the joint recommendations prepared by the regional groups of Member States annually since 2014-2018 on fisheries subject to the landing obligation in the subsequent year. The implementation of the landing obligation has entered fully into force as of 1 January 2019. STECF is requested through this working group to review and evaluate the Member States' joint recommendations requesting either additional or continued (with additional scientific information as requested by STECF) exemptions for >2023.

Joint Recommendations on Technical Measures (Regulation)

All amendments, supplements, repeal or derogations from technical measures will be based upon Article 15 of the Technical Measures Regulation (Regulation (EU) 2019/1241). The entry into force of this Regulation resulted in the introduction of the process of regionalization in numerous fields as far as technical measures are concerned. In this process, the regional groups should develop joint recommendations that would need to go through the STECF in order to assess to what extent the recommendation proposed goes in line with achieving the objectives set out in the Regulation.

Main elements of the joint recommendations to be considered by STECF

Landing obligation - de Minimis and High Survivability

The main elements that STECF should continue to evaluate are the additional exemptions for **de minimis** or on the basis of **high survivability** for species subject to the landing obligation.

In addition to any new exemptions, STECF should also review additional information supplied to support several of the exemptions granted for 2022 but with the provision that the Member States concerned should submit further data to the Commission by 1 May 2022 to allow STECF to further assess these particular exemptions.

Technical measures

One joint recommendation from Italy regarding derogation of the MCRS of Venus shells (Venus spp.) has been already assessed in STECF PLEN 22-01. No joint recommendation on directed fishing is expected to be submitted. Any submitted joint recommendations on technical measures cover (one of) the following:

- Measures modifying the size and characteristics of fishing gear that MS may wish to implement in certain areas to increase selectivity and decrease the negative effects of the activity in the environment
- Minimum Conservation Reference Sizes for recreational fisheries
- Mitigation measures for bycatch of certain sensitive species, such as cetaceans or sea birds

- Definition of the directed fisheries for each species and sea basin, with a deadline of August 2020.

Terms of Reference for EWG-22-05

Based on the previous evaluations of the STECF, the Ad-hoc contract 19-01 on temporary *de minimis* exemptions, the joint recommendations that will be submitted by Member States regional groups (see annex), the following draft terms of reference are proposed:

STECF is requested to:

1. *Review the supporting documentation underpinning exemptions on the basis of **high survivability** in respect of:*

a. *Exemptions agreed for 2022 on the basis of high survivability where there was a requirement for further information to be supplied by 1 May 2022. In such cases, STECF should assess the quality of the information supplied and, where possible, provide a qualitative assessment of the ongoing efforts to address the needs for further information identified by STECF last year*

b. *New exemptions based on high survivability. In data poor situations, assess what further supporting information may be available and how this could be supplied in the future (e.g., survival studies, tagging experiments).*

2. *Review the supporting documentation (biological, technical and/or economic) for **de minimis** exemptions on the basis that either increasing selectivity is very difficult to achieve, or to avoid handling unwanted catches would create disproportionate cost in respect of:*

a. *The de minimis exemptions agreed for 2022 where there was a requirement for further information to be supplied by 1 May 2022. In such cases, STECF should assess the quality of the information supplied and, where possible, provide a qualitative assessment of the ongoing efforts to address the needs for further information identified by STECF last year*

b. *New de minimis exemptions. In data poor situations, assess what further supporting information may be available and how this could be supplied in the future (e.g. discard data collection, selectivity studies).*

As joint recommendations might be submitted on the basis of the Technical Measures Regulation (TMR) and they will be reviewed in this same EWG, STECF is also requested to:

On directed fishing definition, no joint recommendation is expected to be submitted for the NWW, the NS and SWW. Therefore, this evaluation is not included in this ToR.

3) For any joint recommendations submitted on the elements of the TMR, the STECF is requested to:

a. *Review whether there is sufficient information to support proposed minimum conservation reference size(s) that deviate from existing minimum landing sizes, and whether they are consistent with the objective of ensuring the protection of juveniles; as well taken into account Article 15(5) of the TMR stating mesh size specifications shall not lead to a deterioration of selectivity standards.*

b. *Review the supporting documentation provided for technical measures aimed at increasing gear selectivity for reducing or, as far as possible, eliminating unwanted catches including reducing fishing mortality on stocks in need of remedial measures for rebuilding biomass. This*

should include, if relevant, an indication of where further selectivity is currently difficult to achieve in a specific fishery, given the current state of technological developments.

4) Additionally, the STECF is requested to review the findings of the ad hoc contract linked to this EWG 'Summary of information on possible socio-economic impact of the implementation of the landing obligation', to be submitted by the selected expert by 11.05.2022

STECF noted (22-01) that they may be able to, for example, provide some updated literature review of reports and publications of the socioeconomic impacts of the landing obligation, as well as providing a comprehensive overview on model-based conclusions from different scenarios and fisheries of implementing the landing obligation. That review could be performed through an ad-hoc contract, and later summarised and included in the next EWG dealing with the landing obligation through a specific ToR for this group. This specific ad-hoc contract follows up to the above suggestion. As there is no or only very limited information on the socio-economic impacts, the STECF suggested to provide a summary of information from literature or research projects as background document to be included in the ToR of the upcoming STECF EWG 22-05. This ad hoc contract should provide the group with some background information on the available information on possible socio-economic impacts of the landing obligation, linked to the content of the joint recommendations evaluated -specifically the de minimis exemptions.

STECF response

Review of the EWG 22-05 report

General observations

The report of Expert Working Group 22-05 (STECF EWG 22-05) represents the findings of the meeting convened to review and to address the implications associated with the implementation of the Member States' joint recommendations requesting either additional or continued (with additional scientific information as requested by STECF) exemptions for 2023.

Joint recommendations for discard plans represent the agreement among Member States (MS) cooperating regionally on the elements for the preparation of Union law (Commission delegated act) in accordance with Article 15.6 of the Common Fisheries Policy. Where there is no multiannual plan for the fishery in question, article 15(6) of the CFP empowers the Commission to adopt delegated acts laying down on a temporary basis specific discard plans containing the exemptions. The potential elements that can be contained in a discard plan are: definitions of fisheries and species; de minimis and high survivability exemptions; setting of minimum conservation reference sizes (MCRS); additional technical measures needed to implement the landing obligation; and the documentation of catches.

EWG 22-05 reviewed the new or amended joint recommendations for the North Sea, North-Western waters (NWW), South-Western waters (SWW) and Baltic Sea. These pertained to de minimis and high survivability exemptions with separate JRs for technical measures. Additionally, in 2022, as the discard plan for certain demersal fisheries in the Mediterranean Sea expire, Member States submitted two joint recommendations to extend several de minimis exemptions for bycatch of pelagic species in demersal fisheries beyond 2023 in the Western Mediterranean, and the Adriatic Sea. Additionally, requests to extend high survivability exemptions for three species of bivalve molluscs were received for the South-eastern Mediterranean, along with a request for a high survivability exemption for the Black Sea.

As in 2021, STECF recognises that for 2022 the restrictions imposed due to the coronavirus pandemic created additional challenges to Regional Groups, the Commission and the STECF in the preparation of proposals and supporting information, collation and review of joint recommendations. STECF acknowledges this has severely limited the ability of the Member States to collect catch data as well as hindering research work to support exemptions and test gear modifications to improve selectivity.

Additionally, in 2021 and 2022, STECF recognises that the conditions of the Trade and Cooperation Agreement between the EU and UK has introduced new access arrangements to UK waters as well as different measures for operating in UK waters. These new measures and

arrangements have created further difficulties for Member States and the fishing industry in the implementation of the landing obligation.

Improvements in selectivity: STECF reiterates that the avoidance of unwanted catch through improved selectivity or other means should be the primary focus in implementing the landing obligation. As identified by EWG 22-05, STECF recognizes that modifying selectivity can result in some immediate reduction in revenue, but these should be viewed in the broader context of medium-term gains in stocks and the risk of choke events and the utilization of quota to land low value catches.

Quality of data: STECF recognises the progress made in supplying supporting information to justify exemptions and the volume of work that has been carried out to generate this information. However, for the 2022 JR's there are still many cases where the information and data supplied is not new information, with previous studies and information submitted to support exemptions. For some exemptions no supporting information has been provided at all. STECF observes this has restricted the ability of EWG 22-05 to carry out an evaluation of the exemptions over and above that carried out in previous EWGs.

Additionally, STECF notes that the catch information presented lacks consistency. In many cases it relates to different years, much wider areas than covered by the exemption or is not presented as absolute estimates but as percentages of overall catch information for the relevant fishery. Therefore, STECF reiterates the need to improve the quality and consistency of catch data provided to support exemptions. Such data is important to understand the relationship between the level of potential discards under the requested exemptions and the actual level of unwanted catches in the relevant fishery and for the relevant stocks. This will allow STECF to make an assessment as to the level of risk of discards allowed under exemption will potentially have on the stats of the stock or stocks involved.

Reporting of catch data: STECF notes that the weaknesses in the collection of catch documentation data consistently reported remain. If the data situation does not improve and the true quantities being caught as reported do not reflect the actual removals, it will likely have a significant impact on the quality of scientific advice and may compromise the achievement of the MSY objective. This potential for this discrepancy is higher for de minimis than high survival exemptions because the actual discard amount may be substantially higher than the permitted de minimis amount. For high survival exemptions, this risk has been mitigated to some extent by deducting the estimated dead discards associated with the exemptions from the total allowable quota prior to allocation. STECF acknowledges that the use of CCTV and Remote Electronic Monitoring (REM) has been given new impetus, particularly in the North Sea with pilot studies in several fisheries. STECF recognises this technology provides a more effective way to monitor the landing obligation to generate catch evidence for science and compliance.

Review of exemptions: STECF notes that many of the existing discard plans expire at the end of 2023, meaning these exemptions will no longer apply unless renewed. In this context, STECF welcomes the intention of DGMARE to carry out a full review of the exemptions that are in place. Such a review would help to determine whether they need to be amended or are still required given likely changes in catch patterns, gears used, vessels involved and uptake. In initiating such a review, however, STECF stresses it is vital that Member States and the Advisory Councils understand what information is needed to support this review and allow STECF carry out a meaningful evaluation.

Observations on the review process

EWG 22-05 met remotely from the 16-20 May 2022 to carry out the evaluation of the JRs submitted. Following the EWG meeting, DGMARE invited Member States to submit supplementary information on each exemption. Member States were given 5 days to provide this information. The supplementary information received by DGMARE from Member States was compiled and reviewed under an ad-hoc contract (STECF contract 2222) between 1 and 8 June 2022 and the reviewer's comments were incorporated into the regional sections contained in the EWG 22-05 report. The final revised report of the EWG was submitted to DGMARE on 10 June, and later replaced by a corrected version on 26 June 2022.

As in previous years, there was limited time for Regional Groups to respond to any serious gaps identified by the EWG. Additional information provided was primarily fishery information or provision of missing catch data as well as in some case clarifications on the basis and justification for specific exemptions. STECF urges Member States to provide such fishery information and catch data with their submissions, to avoid such gaps occurring.

Beyond those obvious gaps, and as in previous years, in many cases the missing information identified by EWG is more substantive information which can only be collected from scientific trials or through dedicated studies. Therefore, in these cases, the additional information supplied did not influence the conclusions made by the EWG. It is questionable whether the request for additional information beyond what can be easily obtained from standard data sources is actually useful, given it generally does not alter the STECF observations and conclusions.

Observations on de minimis exemptions

Recording of catches: STECF observes under Article 15 of the CFP Basic regulation Member States have a legal requirement to record all catches discarded under de minimis exemptions. However, STECF notes that in many cases this information is lacking from the supporting information provided by Member States. Other than the limited information contained in the FDI database, STECF has no clear understanding of the level of discarding under the various exemptions and the extent to which the fleet from Member States are utilising the exemptions.

Impact of de minimis exemptions: STECF notes in many exemptions the relationship between the de minimis volume requested and the level of unwanted catches is unclear from the information provided to support the exemption. In some cases, the de minimis volume covers 100% of the unwanted catches, usually in fisheries where the levels of unwanted catch are small. In other cases, the de minimis volume covers only a small part of the unwanted catches. STECF observes that the supporting information should contain indications on the measures to be taken to reduce these residual unwanted catches.

Disproportionate costs: STECF acknowledges the substantial effort made by the Member State Groups to provide information and analyses on disproportionate costs since the introduction of the landing obligation. However, as advised by STECF in 2021, given the difficulties in assessing what level of costs is disproportionate, it would be more informative for Member States to describe the relationship between the de minimis volume requested and the actual level of unwanted catches. This helps put the proposed exemption in the context of the fishery and the state of the stock(s) for which the exemption is covering. It provides a basis for STECF to assess the risk of the exemption on the relevant stocks covered by the exemption. To support this, STECF consider that information to define the fleets impacted along with a clear description of the problem is required. Referencing previous economic data demonstrating the level of increased costs because of having to handle and store unwanted catches on board is useful. STECF acknowledges the efforts made by several Member States groups to follow this approach, noting the limitations and inconsistencies in the catch information made available.

STECF further observes that EWG 21-05 requested more information on the methodology of the calculation of the economic impact assessment provided in 2020 and 2021 to support many of the de minimis exemptions in Southwestern waters. However, STECF notes no additional information on the methodology and data was provided to EWG 22-05 meaning the outcomes of this study cannot be fully assessed in the context of assessing the impacts of the landing obligation.

Calculation of de minimis: STECF notes that Member States have continued to use a variety of ways to calculate de minimis volumes. In most cases for single species de minimis exemptions, a percentage (e.g., 5% or 7%) has been applied to the catches of the relevant species in the relevant fishery. However, for several fisheries where the intention is to discard 100% of the catches (e.g., boarfish in the NWW and whiting bycatch in demersal beam trawl fisheries the North Sea), catches of the relevant stocks from all fisheries (e.g., for boarfish catches from all gears) or for different species (e.g., in the case of whiting, catches of sole and plaice are used) have been used as the basis for the calculation. EWG 22-05 has commented on this approach in the relevant exemption requests. However, the EWG cannot adjudicate whether this is a correct interpretation of Article 15(5c) of the CFP Basic Regulation.

Incentive to discard: STECF reiterates that de minimis exemptions can provide an incentive for vessel operators to continue discarding unwanted catches at sea and only retain unwanted catches on board if they are inspected on hauling, or to bring only permitted de minimis quantities ashore on landing.

De minimis exemptions in Mediterranean demersal fisheries: STECF observes as in previous years, the de minimis exemptions in the Mediterranean are based on generic justifications relating to improvements in selectivity being difficult to achieve and disproportionate costs. While there are indications that considerable selectivity work is ongoing, this has not translated into any concrete actions to date, other than actions undertaken put in place under other legislation (e.g., West Med Management Plan).

Observations on high survivability exemptions

Assessing high survivability: STECF notes that limited new survivability studies have been carried out in 2021/2022 presumably due to Covid-19. STECF reiterates that assessing what constitutes high survivability remains problematic, which is made more complex by the limited information available and the variability in the available survival estimates. This means that judging the representativeness of individual or limited studies as an indicator of discard survival across an entire fishery is difficult given the range of factors that can influence survival and how they may vary in time even within a fishery. Examples of this in the latest JRs include the exemptions for bivalve mollusc species in the Mediterranean and skates and rays in NWW, SWW and the North Sea.

Cuckoo Ray survivability: STECF notes the observations of EWG 22-05 that trends are emerging from the evidence provided to support survivability exemptions for skates and rays. In particular, STECF notes the evidence from experimentation carried out shows the survival of cuckoo rays is less than other ray species. This is in context of reported discard rates of between 27-39% in some fisheries. However, catch data only covers a limited number of fisheries and the true extent of unwanted catches of cuckoo rays is not clear and therefore the impact of the exemption in terms of dead discards is also unknown.

Plaice survivability: STECF observes that for beam trawl fisheries in the North Sea, NWW and for the trawl fishery in the Baltic, the main motivation is to mitigate against the economic costs of landing high volumes of unwanted plaice. In the case of these fisheries, it is noted that the justification for survivability exemption for plaice continues to be based on the potential for improving survival and selectivity. In this regard, STECF notes the extensive work that has been carried to date, but also that this work has shown that estimates of survival are still highly variable for plaice. STECF further notes that reported discards in certain fisheries remain high (e.g., in North Sea the discard rate reported by ICES is in excess of 70%).

Bivalve Mollusc survivability in the Mediterranean: STECF concurs with EWG 22-05 that the survivability exemptions for bivalve molluscs continue to be supported with only limited supporting information. Apart from *Venus* shells (*Venus* spp.), the exemptions assume that because the species must be landed alive on the market, that this equates to high survivability. STECF observes this does not necessarily follow and information on survival rates of these species is needed to support these requests, noting this information could be taken from previous studies in similar fisheries in other fisheries as observed by EWG 22-05.

Roadmaps: STECF notes that some clarity on the objectives for roadmaps developed for survivability of plaice and skates and rays has been provided, although timetables for the completion of the roadmap are still lacking.

Discard rate and discard mortality: STECF re-emphasises the need to consider survivability in the context of the discard rate for the fishery seeking an exemption (STECF 17-02), highlighting that medium survival rates in high discarding fisheries still lead to high discard mortality rates. STECF has also previously concluded (STECF 19-02) that unless surviving discards are accounted for in stock assessments when dead discards are accounted for in TAC setting, where survivability exemptions are in place, the actual fishing mortality will not match the agreed catch level. This is particularly the case for plaice.

Observations on technical measures

Uptake of selective gears: STECF notes that only one JR related to changes in technical measures has been submitted in 2022 and this JR concerned the extension of the use of existing gears covered under existing discard plans. STECF highlights that other than where selective gears have been made mandatory under legislation, there are still relatively few examples of uptake of selective gears, even in fisheries where unwanted catches remain high.

Coordination of selectivity studies: STECF reiterates that while extensive work has been carried out on selectivity, for some regions, this work remains uncoordinated and not necessarily targeted at the right fisheries. A review of the work completed to identify what works and what does not, along with detailing the gaps in knowledge would help to channel further experiments into the appropriate fisheries. STECF further notes that there are indications of various experiments with lights to reduce unwanted catches. Consolidating the findings into one review would be helpful to understand whether using lights has potential to reduce unwanted catches and for which species and in which fisheries.

Observations on the economic impacts of the landing obligation

STECF acknowledges the ad hoc contract provided to EWG 22-05 on the economic impacts of the landing obligation provides a comprehensive overview of existing scientific information.

STECF agrees with EWG 22-05 that an ex-post analysis of the economic implication of the landing obligation should be conducted, to explain the reasons for the impact (if so), but also contrasting the results with the ex-ante literature. This should also include possible ways to mitigate short-term losses without resorting to putting place multiple exemptions. The aim should be to allow the sector to be able to cope with the short-term losses to realise the mid- to long-term gains that studies have shown could accrue from better implementation of the landing obligation.

Observations on joint recommendations

Based on the terms of reference, EWG 22-05 considered multiple existing exemptions for *de minimis* and high survivability which were granted on a temporary basis for one year for which, the Commission requested additional information from Member States. A limited number of new requests for *de minimis* and high survivability exemptions were also received from the NWW group for a high survivability exemptions for sole below MCRS caught with bottom trawls in ICES division 7e; *de minimis* exemption for Northern prawn caught with demersal trawls in ICES division 3a and Subarea 4; high survivability exemption for plaice below MCRS caught with gillnets, trammel nets, Danish and Scottish seines and bottom trawls in ICES subdivisions 22 - 32 in the Baltic Sea.

For the Mediterranean, three Joint Recommendations were submitted by the different regional groups (SUDESTMED, PESCAMED and ADRIATICA); SUDESTMED and ADRIATIC submitted additional supporting information relating to *de minimis* exemptions for pelagic species caught as bycatch in demersal fisheries and PESCAMED for high survivability in dredge fisheries for scallops and clams. A request for a high survivability exemption for turbot in the Black Sea was also submitted by Romania and Bulgaria.

EWG 22-05 also considered a Joint Recommendations on regional technical measures received from the NWW. This was in the context of Regulation (EU) 2019/1241 which establishes a framework for technical measures for the conservation of fisheries resources and the protection of marine ecosystems. Article 15 of this Regulation and corresponding annexes put in place technical measures at regional level and include an empowerment for the Commission to adopt delegated acts to amend, supplement, repeal or derogate from those technical measures. These delegated acts are based on Joint Recommendations submitted by Member States concerned, in accordance with the regionalisation procedure described in Article 18 of the CFP.

The number of exemptions proposed in the JRs for evaluation by EWG 22-05 was comparable with the previous submissions in 2021 (EWG 21-05, STECF PLEN 21-02). The number of individual exemptions proposed for introduction or continuation in 2022 was 49 (3 new exemptions and 46 for renewal) compared with 58 for 2021.

Table 2.2.1 Number of recommendations by type and region evaluated by EWG 22-05

Region	De minimis exemptions	High Survivability exemptions	Technical Measures
NWW	10	4	1
North Sea	8	4	
SWW	13	2	
BALTIC		1	
PESCAMED		3	
SUDESTMED	1		
ADRIATIC	1		
BLACK SEA		1	
Total	33	15	1

Main findings

For each exemption by region the information set out in a-d is provided:

- the main findings of the EWG 22-05.
- a list of supplementary data and information provided by Member states in response to a request from DG MARE and based on the draft EWG findings.
- the reviewer's comments on the supplementary data and information provided by Member States.
- the comments arising from the STECF review of the EWG 22-05 report

Table 1a. Main findings of the STECF EWG 22-05, summary of additional information received relating to exemptions presented and Reviewer's Comments: **North Sea**.

<i>De minimis</i>	
Exemption	Whiting below MRCS caught in the mixed demersal fisheries by vessels using bottom trawls or seines in ICES divisions 4a and 4b
Main findings of EWG 22-05	<p>Limited new information has been provided other than partial information on catches and fleets. This information does not relate solely to the area covered by this exemption but a much wider area. The majority of the catches in the fisheries appears to be from ICES division 4c and 7d. In this regard, the impact of this exemption cannot be assessed, and the previous observations made by EWG 19-08 and 20-04 remain relevant.</p> <p>Additionally, estimates of discards reported in logbooks are provided. However, these estimates show very low catches and discards, when compared to the catch information provided for 2019 which shows high catches and discards of whiting. Therefore, it is not clear how reliable these estimates are of catches and discards, noting the issues with deploying on board observers due to Covid has limited data collection.</p> <p>Catch information suggests the discarding in these fisheries is high with nearly 4,000 tonnes of whiting discarded in 2019. Noting the data refers</p>

	<p>to a much wider area, nonetheless it would seem the de minimis catch requested covers only a part of the unwanted catches in the fisheries and improving selectivity in the fisheries should remain the priority.</p> <p>The information on fish behaviour to light opens new possibilities for selectivity trials and further work is encouraged.</p>												
<p>Supplementary information provided to the Commission post EWG 22-05</p>	<p>The following Supplementary information was provided:</p> <p><u>France</u></p> <p>France indicated that the results of the EODE and selectivity projects described under annex 6.5-6.6 are also applicable to the fishery covered by this exemption and have likely benefits for reducing catches of undersized whiting.</p> <p>Regarding LED-lights projects France indicates that while the results of the SELUX project are interesting for whiting, two out of the nine experiments completed show difficulties remains for both devices. The catch reductions observed were for whiting of all sizes, meaning there are economic losses associated with using these devices which makes they may not be options acceptable to fishers.</p> <p><u>Netherlands</u></p> <p>The Netherlands provided the following data is provided for the Dutch fleet:</p> <table border="1" data-bbox="395 958 1394 1189"> <thead> <tr> <th>MS</th> <th>Year</th> <th>No of Vessels</th> <th>Landings of whiting (tonnes)</th> <th>Estimated discards of whiting (tonnes)</th> <th>Estimated whiting catches (tonnes)</th> </tr> </thead> <tbody> <tr> <td>NL</td> <td>2021</td> <td>42</td> <td>67</td> <td>83</td> <td>150</td> </tr> </tbody> </table> <p><u>Belgium</u></p> <p>Belgium indicated that innovations are being developed for different fishing métiers practiced by Belgian fishermen (beam trawl, otter trawl, flyshoot and passive fishing) to reduce by-catches and/or optimize commercial catches. Based on brainstorm sessions that are organized throughout the project, commercially feasible network designs with the widest possible support within the sector are selected.</p> <p>The first trials undertaken are:</p> <ul style="list-style-type: none"> • LED on headrope of commercial flyshoot vessel (5 days); • Luminescent netting on board of passive fisheries vessel, pots targeting bown crab (6 days); • LED on board of passive fisheries vessel, pots targeting bown crab (6 days); • LED in Benthic Release panel on board of research vessel, RV Belgica, beam trawl targeting sole (10 days). <p>Several more sea trials will be planned for different innovations per métier to collect further data. Data collection will be based on a combination of self-sampling (by the crew) and through observer trips in which ILVO staff embark to perform extensive catch analysis. At least 5</p>	MS	Year	No of Vessels	Landings of whiting (tonnes)	Estimated discards of whiting (tonnes)	Estimated whiting catches (tonnes)	NL	2021	42	67	83	150
MS	Year	No of Vessels	Landings of whiting (tonnes)	Estimated discards of whiting (tonnes)	Estimated whiting catches (tonnes)								
NL	2021	42	67	83	150								

	<p>more innovations will be tested (for which at least 1 self-sampling and 1 observer trip will be performed per innovation). In addition, 6 more (5 day) campaigns on board the research vessel RV "Belgica" and 10 days on board of research vessel RV "Simon Stevin" are planned. The exact number of trials will depend on the selected innovations.</p> <p><i>Reviewer's comment: Reviewer acknowledges the most recent catch information provided by NL for 2021 and the overview of on-going Belgian project regarding LED-lights technology. The Belgian studies are interesting although several are not necessarily relevant to this exemption (crab pot work). The Reviewer agrees that the results of the French EODE project, described under annex 6.5-6.6, in general, are still applicable as background information to this exemption but nonetheless do not add any new or additional information to that previously provided to STECF. The additional information is useful but does not affect the main findings of EWG-22-05.</i></p>
<p>STECF Comments</p>	<p>STECF agrees with the observations of EWG 22-05 and notes the on-going work with lights to reduce unwanted catches. STECF notes such work is being carried out by a number of Member States in different fisheries and it would be useful to collate this work to allow taking stock of the results of the different trials and identify the fisheries where such technology could be best utilised.</p>
<p>Exemption</p>	<p>Mackerel, horse mackerel, herring and whiting in the pelagic fishery carried out by pelagic trawlers up to 25 meters in ICES divisions 4b and 4c south of 54 degrees north</p>
<p>Main findings of EWG 22-05</p>	<p>Limited new information has been provided other than partial information on catches and fleets. Therefore, an assessment of the impact of this exemption cannot be completed and the previous observations made by EWG 19-04 and 20-04 remain relevant.</p> <p>The new catch information provided in the JR indicates in 2019, the estimated discard rate for the OTM-PTM fishery was 5.8%, decreasing to 1.2% in 2020. It is not clear if this figure is based on total discards from the fishery or just the four species listed under the exemption.</p> <p>According to the observer data presented, horse mackerel and whiting are the main species discarding in 2019 and 2020 (horse mackerel made up 53% and 28% and whiting 13% and 71% respectively). Discards of herring and mackerel are reported to be minimal, and it is not clear why these species are included in the exemption, if the issue is principally to cover unwanted catches of whiting and horse mackerel.</p> <p>Vessels availing of the exemption use both pelagic and demersal trawls on the same fishing trips and sometimes on the same day. However, it is unclear how unwanted catches discarded under this exemption can be distinguished from unwanted catches caught with bottom trawls without specific control measures in place.</p> <p>With respect to difficulties in improving the gear selectivity in French artisanal small pelagic fisheries, the JR states that the low discard rates are due to their selective nature and the fact that fishermen already adopt voluntarily spatio-temporal measures to avoid unwanted catches. It is not clear what kind of spatio-temporal avoidance measures are meant here.</p> <p>The justification for the exemption assumes that the unwanted catches are insignificant in the pelagic fisheries and options to improve selectivity</p>

	<p>have been exhausted. Recognising that achieving additional selectivity improvements would be difficult in such fisheries and the costs for sorting would be high given the nature of the species and fisheries involved, this cannot be fully assessed from the information supplied.</p>
<p>Supplementary information provided to the Commission post EWG 22-05</p>	<p>Following Supplementary information was provided:</p> <p>France</p> <p>France indicates that the discard profile presented shows low discards of mackerel and herring for 2020 but report that there is variability of discards year-to-year. In this regard, the Obsmer report 2020 based on 2018 data showed that mackerel accounts for 9,2% of the total catch and 4,3% of the total discards, with 0,3% of the mackerel catches that are discarded. As a result, the scope of the exemption should remain unchanged, to cover potential needs to discard herring and mackerel as well, due to the variable catch composition.</p> <p>Additionally, the precautions underlined in the Obsmer report regarding the representativeness of the data for 2020 should be recalled, considering the disruption in the sampling program due to the Covid and post-Brexit crisis.</p> <p>Regarding moving-on measures, it relates to the geographical areas where fishing vessels operate. Indeed, vessels tend to choose their fishing location to avoid certain areas where important bycatches of these species were observed in the previous years, including coastal areas where catches tend to be more diversified in their composition.</p> <p><i>Reviewer's comment: Reviewer acknowledges the clarification provided by France. The comment regarding the variability of catch composition and hence levels of discards is duly noted. The comments on the spatio-temporal measures while clarifying these relate to moving-on measures, do not seem to go over and above normal operational decisions of where to fish by fishers. No information as to the extent to which they lead to avoidance of unwanted catches of the species covered by the exemption.</i></p>
<p>STECF Comments</p>	<p>STECF agrees with the observations of EWG 22-05 and highlights the difficulties in monitoring catches discarding under this exemption given the nature of the fishery and that vessels can use different gears during the same fishing trip.</p>
<p>Exemption</p>	<p>Sprat, sandeel, Norway pout and blue whiting caught in the demersal mixed fisheries with trawls and the fishery for Northern prawn in ICES division 3a and ICES subarea 4</p>
<p>Main findings of EWG 22-05</p>	<p>Additional documentation has been provided to support the continuation of this exemption in the form of updated catch and bycatch information, showing that bycatches of industrial species was very low – 0.1 % in the demersal human consumption fisheries.</p> <p>The JR has also provided an explanation of why improvements in selectivity in these fisheries would be difficult to achieve which seem reasonable.</p>
<p>Supplementary information provided to the Commission post</p>	<p><i>No Supplementary Information provided</i></p>

EWG 22-05	
STECF Comments	STECF agrees with the observations of EWG 22-05.
Exemption	Ling below MCRS caught with longlines in ICES subarea 4
Main findings of EWG 22-05	<p>Limited new information has been provided other than partial information on catches and fleets for 2020- 2021. The previous observations made by EWG 19-04 and 20-04 remain relevant.</p> <p>Based on the data presented discards of ling are low in the longline fishery and the observer data collected from 2019 reports discards of 26 tonnes. However, while this indicates little impact on the stock, without catch information, no assessment can be made.</p> <p>The observations of EWG 20-05 that the arguments regarding difficulties in improving selectivity are credible given the nature of the fisheries and discards covered by the exemption are quite low are still valid. However, the qualitative nature of the information presented means that the improvements of selectivity, for example through increases in hook size would have on the fishery have still not been provided.</p> <p>With respect to improving the selectivity, the JR provides three study programmes as examples of studies carried out to reduce unwanted by-catch of sensitive species by improving fishing techniques in longline fisheries. These studies while interesting are not relevant to this exemption.</p>
Supplementary information provided to the Commission post EWG 22-05	<p>The following Supplementary information was provided:</p> <p>France</p> <p>While the studies mentioned in the joint recommendation are focused on other sea basins and other species, the intention was to provide STECF with an overview of other works conducted on that specific gear. Regarding the specific fishery for ling with longlines, no dedicated studies are available. Considering the volumes involved and the selectivity of the fishery for these gears, the scientific and financial focus was rather channelled towards other exemptions.</p> <p><i>Reviewer's comments: Reviewer acknowledges the clarification provided. However, it does not alter the main findings of EWG-22-05.</i></p>
STECF Comments	STECF agrees with the observations of EWG 22-05 that the EWG 19-04 and 20-04 still remain relevant. Without catch information relating to the specific exemption, an assessment of the likely impact of this exemption cannot be made, noting that it appears discards of ling in the fishery are small (~27 tonnes)
Exemption	Horse mackerel in the demersal mixed fisheries with bottom trawls in ICES divisions 4b and 4c
Main findings of EWG 22-05	<p>Only limited new information has been provided other than partial information on catches and fleets. In this regard, a full assessment of the impact of this exemption is not possible and the previous observations made by EWG 19-08 and 20-04 remain relevant.</p> <p>Additionally, the estimates of discards reported from logbooks are very low catches and discards, when compared to the catch information</p>

	<p>provided for 2019 which showed high catches and discards of horse mackerel. Therefore, it is not clear how reliable these estimates are of catches and discards, noting the issues with deploying on board observers due to Covid during 2021.</p> <p>The exemption request is based on old studies of trawl selectivity, which date back to 2017 or earlier. No new selectivity investigations are reported or planned but it appears none of the gears tested are being used in the fisheries.</p> <p>The catch information presented suggests discarding in these fisheries is high with nearly 8,500 tonnes discarded in 2019. It would seem the de minimis catch requested covers only a part of the unwanted catches in the fisheries and therefore, improving selectivity in the fisheries should remain the priority.</p> <p>The estimates of the costs for landing unwanted horse mackerel are significant. However, they are based on average discards over the period 2013-2016, which may not be representative of the situation in the fisheries currently.</p>
Supplementary information provided to the Commission post EWG 22-05	<p>The following Supplementary information was presented:</p> <p>France</p> <p>France indicates that the results of the Obsmer sampling program were provided to allow for a more comprehensive analysis.</p> <p>Regarding the disproportionate costs, the elements provided under annex 6.5-6.6 present the main findings of the EODE and relevant selectivity studies. It aimed at analysing the costs generated by a full implementation of the landing obligation by the bottom trawlers fleet targeting multiple demersal species. As such, the study did indeed focus on a fishery likely to need and use the exemption.</p> <p><i>Reviewer's comments: Reviewer acknowledges the clarifications provided. The issues around data collection are noted. However, discard estimates based on logbook information should be treated with caution and not used as the basis for discard estimation.</i></p> <p><i>On the EODE and selectivity studies, the clarifications are noted. However, they are not new studies and do not add any additional information to allow STECF fully evaluate the impact of the exemption or led to improvements in selectivity in the relevant fisheries.</i></p> <p><i>The supplementary information however does not affect the main findings of EWG-22-05.</i></p>
STECF Comments	<p>STECF agrees with the comment of EWG 22-05 that the previous observations made by EWG 19-04 and 20-04 still remain relevant. Without catch information relating to the fishery, only a limited assessment can be made of the impacts of the exemption. The supporting information and justification remain generic and not specific to horse mackerel. STECF also notes that discarding in these fisheries are high.</p>
Exemption	Mackerel caught with bottom trawls in ICES divisions 4b and 4c
Main findings of EWG 22-05	<p>Only limited new information has been provided other than partial information on catches and fleets. In this regard, a full assessment of the impact of this exemption is not possible and the previous observations made by EWG 19-08 and 20-04 remain relevant.</p>

	<p>A substantial part of the landings is discarded in the fishery particularly by bottom trawlers below 18 m (71%) and above 18 m (30-51%). The proportion of discarded mackerel appears to be in the range of 0.2-3% of the total catch of mackerel but what this equates to in volume terms is unclear.</p> <p>The selectivity information from three French study projects gives a valuable insight to the research aimed to reduce unwanted by introducing various technical measures. However, they are not new, dating back to 2017 and earlier. It is unclear whether any of the selectivity improvements tested have been implemented in the fishery.</p> <p>It is accepted that it is difficult to improve selectivity without causing significant commercial losses for vessels fishing in such mixed fisheries. However, the data provided indicate that the levels of discarding in these fisheries is high and therefore, efforts to improve selectivity should continue.</p>
<p>Supplementary information provided to the Commission post EWG 22-05</p>	<p>The following Supplementary information was provided:</p> <p>France</p> <p>The French selectivity projects described under annex 6.5-6.6 focus on the fleets likely to avail of this exemption (i.e., the fleet of bottom trawlers operating between the south of the North Sea and the Channel). While the projects are not specifically dedicated to mackerel or horse mackerel, the devices were tested to lead to potential improvements of the fleet's selectivity. In that regard, the elements presented in the annex remains relevant for this exemption. The SELECFISH project in particular was aimed at testing devices that could lead to reducing discarded volumes of TAC species.</p> <p><i>Reviewer's comments: Reviewer acknowledges the clarifications provided. However, they do not alter the main findings of EWG 22-05.</i></p>
<p>STECF Comments</p>	<p>STECF agrees with the comment of EWG 22-05 that the previous observations made by EWG 19-04 and 20-04 still remain relevant. Without catch information relating to the fishery, only a limited assessment can be made of the impacts of the exemption. The supporting information and justification remain generic and not specific to mackerel. STECF also notes that discarding in these fisheries are high.</p>
<p>Exemption</p>	<p>Blue whiting caught in the industrial pelagic fishery by vessels targeting blue whiting in ICES subarea 4</p>
<p>Main findings of EWG 22-05</p>	<p>Limited new catch information specific to catches from ICES subarea 4 has been provided and therefore, full assessment of the impact of this exemption is not possible. However, it is noted that the volume of unwanted catch of blue whiting compared to the total catch for 2021 by the industrial vessel availing of this exemption is relatively small (63 tonnes or 2.4%) and would have not have any impact on the overall blue whiting stock.</p> <p>The description of the operation on board the vessel, as well as the qualitative information provided to support the assertion that the costs of handling unwanted catches on board are disproportionate, provide a reasonable justification for this exemption. However, no assessment as to whether the losses indicated are disproportionate or not is possible, having little information on total income or other indicators on the vessel economics.</p> <p>Regarding selectivity, the vessel is already fishing with a codend in</p>

	excess of the legal minimum mesh size. Improving selectivity further in the fishery may not be advantageous as it may lead to unaccounted mortality due to the likely low survival of escaping blue whiting as indicated in the JR.
Supplementary information provided to the Commission post EWG 22-05	<i>No Supplementary information has been provided.</i>
STECF Comments	STECF agrees with the observations of EWG 22-05. STECF cannot assess the impact of this exemption, noting that the volume of unwanted catch of blue whiting compared to the total catch for 2021 is relatively small and most likely will not have any impact on the overall blue whiting stock.
Exemption	Northern prawn – caught with demersal trawls and seines using mesh sizes above 70mm in ICES division 3a and subarea 4.
Main findings of EWG 22-05	<p>The background and the justification of this new exemption are similar to those presented by Scheveningen group for the combined de minimis exemption for industrial species. Therefore, the observations for that exemption are relevant.</p> <p>The current discard volumes reported for all of the fleets is less than 1 tonne annually with a discard rate of between 0.002 to 0.023%. In the overall context of the fishery, given the discard rates and volumes are low, the impact of the exemption is likely to be minimal.</p> <p>The justification that the catches are insignificant in the demersal fisheries and options to improve selectivity have been exhausted are not necessarily supported with quantitative evidence. However, based on the information supplied for this exemption and for the similar one for industrial species, it is reasonable to assume that improving selectivity further in the fishery to reduce such a small bycatch is difficult to achieve in practice.</p>
Supplementary information provided to the Commission post EWG 22-05	No supplementary information was provided
STECF Comments	STECF agrees with the observations of EWG 22-05.
High Survivability	
Exemption	Plaice below the minimum conservation reference size caught with 80-119 mm beam trawl gears (BT2) in ICES subarea 4
Main findings of EWG 22-05	Since 2019, progress has been made in increasing the knowledge of plaice survivability. Additionally, considerable work has begun on the estimation of catch volumes and composition, by development of systems and protocols for self-reporting and automated video analysis. Research on ways to improve selectivity is also ongoing. No concrete results have been presented to date, but the preliminary findings seem encouraging for some of the gear modifications tested.

	<p>For beam trawlers, the justification for survivability exemption for plaice continues to be based on the potential for improving survival and selectivity, but this is based on variable estimates of survival.</p> <p>The current survival estimates are still highly variable and only relevant for the larger beam trawl vessels. No new information has been provided for smaller vessels with less than 221KW engine power other than that contained in Uhlmann et al. (2016).</p> <p>There is also only limited and inconclusive information on the effectiveness of the Flip-up rope and the Benthic Release Panel to improve survivability. The use of these devices is specified in the Delegated Act as a condition of the exemption. If these devices are not effective in increasing survivability, then the value of making them a condition of the exemption is questionable even though they may have other benefits not related to survivability.</p> <p>The current survival estimates need to be considered in the context of the current discard rates reported, which are in excess of 70%. ICES advice shows the plaice stock in the North Sea is in good condition with fishing mortality below F_{msy}, F_{pa}, and F_{lim}, and spawning-stock size above $MSY_{Btrigger}$, B_{pa}, and B_{lim}. However, given the survival rates are in the range of 20-40% and the discard rates are high, considerable volumes of plaice discarded under this exemption are likely not to survive.</p> <p>Unless surviving discards are accounted for in stock assessments and dead discards are accounted for in TAC setting when survivability exemptions are in place, the actual fishing mortality will not match the agreed catch level.</p> <p>Introducing discard survival estimates should continue to be discussed by ICES for more stocks and especially plaice, given the proliferation of survival exemptions.</p> <p>The observations of EWG 21-05 that there is still a need for clarity on objectives and timelines in respect of the roadmap remains as there is still no timetable for the completion of the roadmap.</p>
<p>Supplementary information provided to the Commission post EWG 22-05</p>	<p>The following Supplementary information was provided:</p> <p><u>Netherlands</u></p> <p>The Netherlands has provided Additional information regarding timeline of on-going projects under the roadmap. The information in the Joint Recommendation indicates the timeline of the different projects. The Fully Documented Fisheries (FDF) project aims to automatically register all caught fish through recognition and identification of the volume and composition of catches and discards in demersal fisheries. This should contribute to improvements in the implementation of the landing obligation. The first pilot project had a phased implementation of three years, between 2019 and 2022. The Dutch authorities are currently extending this pilot project until 1 May 2023, in order for the current project to connect to the follow-up FDF project. There are still some elements that need further research, for example the automatic image recognition and the automatic and reliable data collection.</p> <p>The follow-up FDF project is investigating the effectiveness and verifiability of the algorithm at sea to gain insights on possible improvements. Furthermore, the project runs parallel to the new research project on the survivability of plaice and turbot in the beam trawl and Danish seine fisheries that are mentioned in the turbot exemption.</p>

	<p>The research project on the survivability of plaice and turbot will design, develop, and evaluate a system to automatically predict the survival probability of bycatch on-board of a fishing vessel. Additionally, the project will include tests of the Tiaki cod-end, which is a gear researched within the SELOV-project. The results of this research should provide insight into the effects on discards survival (qualitative, based on condition scoring).</p> <p>Belgium</p> <p>Belgium provided further clarifications on the table presented in the supporting annex. This indicated that the BE projects monitoring HS Plaice are finished. BE is exploring whether cooperation with NL is possible for the next discard plan (also for turbot). For now, there is no additional information available for BRP or flip up rope.</p> <p><i>Reviewer's comments: Reviewer acknowledges the additional information provided on the ongoing NL projects on implementation of FDF and on survivability of plaice and turbot. The project aims to develop and evaluate a system to automatically predict the survival probability of bycatch onboard of a fishing vessel. Additionally, the project will include tests of the Tiaki cod-end, which is a gear researched within the SELOV-project. The results of this research are expected to provide valuable insight into the effects on discards survival.</i></p> <p><i>The additional information clarifies some of the concerns of EWG 22-05 on elements of the roadmap. However, it does not materially alter the observations of EWG 22-05 that there are no clear timelines for completion of the roadmap.</i></p>
<p>STECF Comments</p>	<p>STECF acknowledges that progress has been made in increasing the knowledge of plaice survivability. Additionally, considerable work has begun on the estimation of catch volumes and composition as well as ways to improve survivability and selectivity in the relevant fisheries.</p> <p>The new estimates of survival provided as well as the update catch volumes and catch composition which improves the knowledge on plaice survivability in the beam trawl fishery and the impact of the exemption.</p> <p>STECF notes that given the survival rates are in the range of 20-40% and the discard rates are high, considerable volumes of plaice discarded under this exemption are likely not to survive.</p> <p>STECF agrees with EWG 22-05 that there is still a need for clarity on objectives and timelines in respect of the roadmap and notes there is still currently no timetable for the completion of the roadmap.</p>
<p>Exemption</p>	<p>Skates and rays caught by all fishing gears in the North Sea in ICES division 3a and ICES subarea 4</p>
<p>Main findings of EWG 22-05</p>	<p>Significant new information has been provided. This includes the requested summary table to provide a means to differentiate new from existing information. Update on the progress (projects mentioned above – ongoing) regarding the roadmap was also provided. However, catch data was limited to several species and specific gears. Significant gaps in knowledge on catches of some rays remain.</p> <p>Further survival work is planned for the coming year. This should provide better understanding of skates and ray survival in specific fisheries but also note that each species should be assessed. The RAYWATCH project will provide species useful vitality observations and biological data as</p>

	<p>preliminary results suggest. However, it should be noted that survival estimates from captive monitoring or tagging studies would provide important post-release survival data.</p> <p>As highlighted by STECF previously, Member States should be encouraged to use their joint scientific capacity to compile and analyse previous and new data in a more systematic way to assist future assessment of the exemptions covered under the roadmap.</p>
<p>Supplementary information provided to the Commission post EWG 22-05</p>	<p>The following Supplementary information was presented:</p> <p>The Scheveningen group underlines that many scientific projects (SUMARIS II, Innorays, Bridging Knowledge gaps, Raywatch...) are ongoing and that their outcomes is foreseen by the end of 2022. Many of these projects indeed include a captivity phase or a mark-recapture study. As such, the group hopes to provide new results in the next joint recommendation on landing obligation.</p> <p><i>Reviewer's comments: Reviewer acknowledges that the results of a number of ongoing projects including the captive monitoring or tagging-recapture studies to obtain post-release survivability estimations will be made available in the next JR on LO. While it does not materially alter the main findings of EWG 22-05, it is nonetheless positive that work is continuing given the wide scope of this exemption and many data gaps that exist.</i></p>
<p>STECF Comments</p>	<p>STECF agrees with the observations of EWG 22-05 and agrees that Member States should be encouraged to look at improving catch data for the different species as this data is lacking in many cases.</p> <p>STECF also encourages Member States use their joint scientific capacity to compile and analyse previous and new data in a more systematic way to assist future assessment of the exemptions covered under the roadmap.</p>
<p>Exemption</p>	<p>Mackerel and herring in the purse seine fisheries in ICES divisions 2a, 3a and subarea 4</p>
<p>Main findings of EWG 22-05</p>	<p>The conclusions of STECF PLEN 14-02 that, the survival estimates of 70% for mackerel and herring remain valid. This assumes the experiments undertaken on the crowding density effects and crowding duration on mackerel and herring mortality referred to in the original JR are representative of the conditions experienced under commercial purse seine fishing operations. It is also dependent on compliance with the rules set out in the Delegated Act regarding the point of retrieval after which fish cannot be released from the purse seine. There is no indication that either of these conditions have been met.</p> <p>The assertion by the Scheveningen group that the introduction of CCTV into pelagic fisheries will increase the use of purse seines and therefore the use of the exemption is unclear. There does not seem any obvious linkage between the two.</p> <p>Given no new supporting information has been provided and that this exemption has been in place since 2015, it should be subject to a further review as part of the wider review planned for next year. This should assess whether the survival estimates provide are still valid, the impact of the exemption on the stocks involved and also based on uptake, whether it is still required.</p>

Supplementary information provided to the Commission post EWG 22-05

The following Supplementary information was provided :

France

There are no French vessels likely to operate in this fishery with purse seines in the North Sea.

Sweden

There are no Swedish vessels targeting mackerel and herring using purse seines. Fifteen Swedish vessels targeted herring and mackerel during 2021 using trawls in the North Sea, Skagerrak and Kattegat.

Denmark

The Danish fleet has so far not used this exemption as described in the current exemption, which is only available for the purse seine fisheries. Thus, no discards have been registered in this fishery under the exemption. The Danish pelagic fleet have in recent years switched to pelagic trawls to target mackerel and herring. In 2019-2021 only one Danish vessel fished mackerel with purse seines with a bycatch of herring (less than 1%). All catches were landed.

Catch DK vessel	MACKEREL	Herring bycatch
2019	550.000 kg	
2020	800.000 kg	3.000 kg
2021	2.810.000 kg	22.000 kg

These bycatches are to be compared with the overall initial Danish quota of mackerel of 18 666 000 kg for 2021 and the total herring quota. The herring bycatch is a very small percentage of the total Danish herring quotas for 2021, which consists of 4 elements:

North Sea	50 661 000 kg
-bycatch	7 421 000 kg
Skagerrak/Kattegat	9 080 000 kg
-bycatch	5 692 000 kg

Regarding the context for this request: The Danish pelagic industry expects a few vessels to return to the purse seine fisheries for mackerel and herring when cameras are installed on their vessels given that these vessels would then be prepared to meet the condition of electronic monitoring which was a condition for using the exemption. It would be unfortunate timing if the exemption is not extended at the same time as vessels on their own initiative are being equipped to meet the conditions set. Further information on the use of the exemption in the future could be provided in due time. It should be noted as well that article 8 of (EU) delegated regulation 2020/2015 provides a similar exemption for the North Western Waters, while not coming to an end on the 31st of December 2022. Coherence between the two areas pleads for a prolongation of the exemption in force in the North Sea until the end of the current discard plan.

Reviewer's comments: The supplemented information provided has responded to some of the queries raised by EWG 22-05. It indicates that only DK would benefit from the exemptions since Danish pelagic industry expects a few vessels to return to the purse seine fisheries for mackerel and herring when CCTV cameras are installed onboard. No SWE nor FRA are planning the purse seine fishery in the area. The Reviewer agrees

	<i>that temporal coherence in prolongation of the similar exemption between the neighbouring North-Western Waters and North Sea would seem reasonable. However, the need to review this exemption as part of a wider review of all exemptions is still relevant, given the limited use of this exemption, both in North-Western waters and the North Sea.</i>
STECF Comments	STECF agrees with observations of EWG 22-05, and that this exemption should be subject to a further review to assess whether the survival estimates provided are still valid, the impact of the exemption on the stocks involved and also based on uptake whether it is still required.
Exemption	Turbot caught with beam trawls (TBB) with a cod-end equal to or larger than 80mm in ICES subarea 4
Main findings of EWG 22-05	<p>The Scheveningen Group has provided detailed catch and discard data as well as a description of the fisheries by Member State involved in the fishery. This shows discards of turbot in the fishery are low in terms of overall catches, noting that German and Belgian discard estimates are based on few observed trips in the beam trawl fishery which may bias discard estimates.</p> <p>Both catches and discards show a decreasing trend in recent years. The reason for the reduction in catch is unclear but may be related to the ban on the use of the pulse trawl.</p> <p>The current survival estimates need to be considered in the context of the current discard rates reported, which for all of the fleets is around 2%. ICES advice shows the turbot stock in the North Sea is in good condition with fishing mortality below F_{msy} and spawning-stock size is above $MSY_{Btrigger}$, B_{pa}, and B_{lim}. Assuming the survival rates are in the range of 38-75% and the discard rates and volumes are low, the impact of the exemption is likely to be low.</p> <p>The observation of EWG 21-05 that a synthesis of available survival estimates, and characteristics of all relevant fisheries is needed to assess the consequences of the exemption fully remains valid.</p>
Supplementary information provided to the Commission post EWG 22-05	<p>The following Supplementary Information was provided:</p> <p><u>Netherlands</u></p> <p>Information about intended research on this exemption was provided by the Netherlands. In previous years, two survival estimate studies were carried out. Firstly, discard survival probabilities were assessed for several species, including turbot and sole, caught by commercial pulse-trawlers. Based on nine sea trips, the estimated discard survival probabilities for turbot and sole were 30% and 19% respectively (Schram et al., 2018). Furthermore, the condition of turbot discards in tickler chain beam trawl fisheries were measured as a substitute for survival. This research concluded that the survivability of turbot in the tickler chain beam trawl fisheries is most likely lower than measured in pulse fisheries.</p> <p>To provide new survival estimates, the Dutch authorities intend to launch a new research project which focusses on the survivability of plaice and turbot in the beam trawl (TBB) and Scottish seine (SSC) fishery this year. The project consists of four separate work packages, including research on possibilities to increase discard survival. The aim is to present preliminary results of this research next year. The Dutch and Belgian authorities are currently discussing how to align their efforts in relation to this research.</p>

	<p>BE and NL will work together to see how their respective work can be aligned, to possibly advance in a coordinated manner.</p> <p><i>Reviewer's comments: Reviewer acknowledges that a new research project involving both NL and BE focusing on the survivability of plaice and turbot in the beam trawl (TBB) and Scottish seine (SSC) fishery will be launched this year with the aim to present preliminary results of this research next year. The potential results of this project are expected to be relevant to this exemption.</i></p>
STECF Comments	<p>STECF agrees with the observations of EWG 22-05 that the likely impact of this exemption is low given the low level of turbot discards. STECF further observes that NL and BE are about to launch a research project focusing on the survivability of plaice and turbot in the beam trawl (TBB) and Scottish seine (SSC) fishery. This project will be launched this year with the aim to present preliminary results in 2023. The potential results of this project are expected to be very relevant to this exemption.</p>

Table 1b. Main findings of the STECF EWG 21-05, summary of additional information received relating to exemptions presented and Reviewer's Comments: **NWW**.

<i>De minimis</i>	
Exemption	Whiting caught by vessels using bottom trawls and seines with a mesh size equal to or greater than 80 mm, pelagic trawls and beam trawls with a mesh size of 80 to 119 mm in ICES divisions 7b to 7k
Main findings of EWG 22-05	<p>New information has been provided by France and Ireland but only partial information on catches and fleets. France has only provided relative values for the level of unwanted catches. No data has been provided by other Member States operating in NWW. A full assessment of the impact of this exemption is not possible. The previous observations made by EWG 15-10, 17-08, 21-05 remain relevant.</p> <p>For some métiers (e.g., <i>Nephrops</i> fishery in the Celtic Sea and bottom trawls targeting crustaceans, mainly grey shrimp, in the Eastern Channel and the south of the North Sea), the whiting discard rate is likely to be above the 5% de minimis requested, although in some of the fisheries the volume in the overall context of the whiting stock is relatively low. For other métiers, the discard rates are relatively low.</p> <p>France and Ireland have continued to test a range of technical measures to reduce unwanted catches of whiting in particular métiers, such as in the <i>Nephrops</i> fishery. The results from some of these trials have led to the introduction of more selective gears into the Celtic Sea, while others have yielded positive indications in reducing unwanted catches of whiting but do not appear to be widely used as yet.</p> <p>The whiting (and cod stocks) in the Celtic Sea is currently in a poor state according to the latest ICES advice. Therefore, it is important that reducing unwanted catches should remain a priority in the fishery. It is also important that any whiting discarded under the exemption be fully monitored and recorded.</p>
Supplementary information provided to the Commission post EWG 22-	<p>The following Supplementary Information was provided:</p> <p>Belgium</p> <p>Belgium reports that no sampling data for whiting is available. The data collection in a Member State, here Belgium, is according to the DCF/EU MAP 2017/1004, the Commission Implementing Decision (EU) 2019/909 (for the</p>

05	<p>collection and management of data in the fisheries and aquaculture sectors) and the Commission Delegated Decision (EU) 2019/910 establishing the list of mandatory research surveys and thresholds.</p> <p>These regulations and decisions define how to establish the multiannual Union program for the collection and management of biological, environmental, technical and socioeconomic data in the fisheries and aquaculture sectors. Based on the guidance in these documents, it is for Belgium less relevant to collect data on flyshoot or trawl fisheries. Therefore, no information on whiting catches in 4c and 7d (see WP 2022-2027 - 2022-2027).</p> <p>France</p> <p>The French fleet covered by the exemption landed 4 350t of whiting in 2021. The total landings for this fleet accounted for 79 121t in 2021, all species included. Regarding area 7d in particular, landings of whiting accounts for 1 718t of the total landings of 24 651t. The impact of the exemption should therefore remain limited.</p> <p><i>Reviewer's comments: Belgium explains the reason for no catch information being available for whiting. France has provided updated landing data for 2021, However no information on discards. The new information does not alter the main observations of EWG 22-05.</i></p>
STECF Comments	<p>STECF agrees with the observations of EWG 22-05. STECF notes that in the absence of catch data for all Member States involved in the fleet, it is not possible to fully assess the impact of the exemption.</p> <p>STECF acknowledges the continued efforts by Member States in the NWW to improve selectivity in the relevant fisheries. STECF encourages Member States to continue with this work but also to collaborate to share information and results from the different initiatives taken.</p> <p>STECF reiterates its earlier (STEF 21-05) observation that besides whiting, also the cod stock remains heavily depleted in the Celtic Sea. Reducing fishing mortality on this stock should be a priority and therefore continuation of an exemption for a stock closely associated with cod if not strictly monitored, may lead to increased fishing mortality due to unreported discarding.</p>
Exemption	Haddock caught in the TR1 and TR2 trawl and seine fisheries in ICES divisions 7b, 7c and 7e to 7k
Main findings of EWG 22-05	<p>New information has been provided by France and Ireland but only partial information on catches and fleets. France has only provided relative values for the level of unwanted catches. No data has been provided by other Member States operating in NWW. Therefore, a full assessment of the impact of this exemption is not possible. The previous observations made by EWG 17-08, 20-04, 21-05 which remain relevant.</p> <p>For some métiers (e.g., <i>Nephrops</i> fishery in the Celtic Sea and beam trawl fishery), the haddock discard rate is likely to be well above the 5% de minimis requested, although in some of the fisheries the volume in the overall context of the haddock stock is relatively low. For other métiers, the discard rates are relatively low although in the mixed demersal fisheries the volumes of unwanted haddock catches are quite high relatively to the stock size.</p>

	<p>France and Ireland have continued to test and a range of technical measures to reduce unwanted catches of haddock in particular métiers, such as in the <i>Nephrops</i> fishery. The results from some of these trials have led to the introduction of more selective gears into the Celtic Sea.</p> <p>The haddock stock in the Celtic Sea is currently fished sustainably according to the latest ICES advice. However, given the high discard rates in some fisheries, it is important that reducing unwanted catches should remain a priority in these fisheries. It is also important that any haddock discarded under the exemption be fully monitored and recorded.</p>
Supplementary information provided to the Commission post EWG 22-05	<p>The following Supplementary Information was provided:</p> <p>France</p> <p>The French fleet covered by the exemption, landed 4 181t of haddock in 2021. The total landings for this fleet accounted for 44 955t in 2021, all species included.</p> <p><i>Reviewer's comments: France has provided updated landing data for 2021. However, no new information on discard volume has been provided. Therefore, the new information does not alter the main observations of EWG 22-05.</i></p>
STECF Comments	<p>STECF agrees with the observations of EWG 22-05. STECF notes that in the absence of catch data for all Member States involved in the fleet, it is not possible to assess fully the impact of the exemption.</p> <p>STECF acknowledges the continued efforts by Member States in the NWW to improve selectivity in the relevant fisheries. STECF encourages Member States to continue with this work but also to collaborate to share information and results from the different initiatives taken.</p> <p>STECF further acknowledges that the recent trials testing a range of technical measures to reduce unwanted catches of haddock in particular métiers, such as in the <i>Nephrops</i> fishery have led to the introduction of more selective gears into the Celtic Sea.</p> <p>STECF reiterates its earlier (STEF 21-05) observation that the cod stock remains heavily depleted in the Celtic Sea. Reducing fishing mortality on this stock should be a priority and therefore continuation of an exemption for a stock closely associated with cod if not strictly monitored, may lead to increased fishing mortality due to unreported discarding.</p>
Exemption	Boarfish caught by vessels using bottom trawls in ICES divisions 7b-c and 7f-k
Main findings of EWG 22-05	<p>Other than partial information on catches and fleets for 2019-2021, only limited new information has been provided. Therefore, a full assessment of the exemption is not possible. The previous observations made by EWG 19-04 and 20-04 remain relevant.</p> <p>Given the paucity of available catch information, monitoring the catches of boarfish in the relevant fleets covered by this exempted should be encouraged.</p> <p>The supporting information indicates that the current 0.5% de minimis based on bottom trawl catches would not be sufficient to account for the total unwanted catches of boarfish for the French fleet. France had to swap in up to 84 tonnes to cover boarfish unwanted catches in 2021.</p> <p>Based on the supporting information, bycatch of boarfish by Irish demersal</p>

vessels are very low when taken in the context of the Irish demersal fleet operating in the Celtic Sea. They represent less than 0.5% of the total Irish boarfish catches.

Catch data and a description of the fisheries of other Member States (Spain and Belgium) availing of this exemption would be helpful although would not materially change the observation that under both the current wording and the new wording, the exemption covers only a small portion of the total unwanted catches of boarfish.

The observations of EWG 20-04 and 21-05 that the information provided indicates that selective improvement by regulatory measures to avoid the catches of boarfish will be hard to achieve without severe economic impacts on the revenue of the boats concerned remain valid. However, the arguments presented in the supporting document are generic. The priority should be to improve selectivity to reduce the unwanted catches and therefore, the costs for handling such catches, accepting that this should be balanced against the costs of sorting small quantities of boarfish from the other marketable catch.

Supplementary information provided to the Commission post EWG 22-05

An additional document has been submitted by France to complement the annex previously submitted on boarfish. The new document provides additional relative information on proportion in the total catch, discard and discard in the total catch of boarfish in bottom trawl fishery (>18m), targeting anglerfish and various demersal species in 2018, while no data are available for 2019 and 2020 as during Obsmer campaigns 2019 and 2020, no boarfish discards were observed in large enough quantities to be included in the report. New information indicates that all boarfish was discarded, and the share of boarfish ranged from 3.8% to 8.9% in total discard amount (in catches of >18m vessels targeting various demersal species and targeting anglerfish, respectively).

Table 1 Summary table of proportion in the total catch, discard and discard in the total catch of boarfish in bottom trawl fishery (>18m), targeting anglerfish, in ICES zone 7b,c,e,f,g,h,j in 2018 (Gauduchon et al.2020)

	Proportion in the total catch	Proportion of discard in the total catch	Proportion in the total discard
2019	2,3	2,3	8,9

Table 2 Summary table of proportion in the total catch, discard and discard in the total catch of boarfish in bottom trawl fishery (>18m), targeting various demersal species, in ICES zone 7b, c,e,f,g,h,j in 2018 (Gauduchon et al.2020)

	Proportion in the total catch	Proportion of discard in the total catch	Proportion in the total discard
2019	1,1	1,1	3,8

Additionally, the document provides argumentation on working conditions onboard and the results of analysis of onboard work time of catch handling due to LO from EODE program (Balazuc et al. 2016). This information was already made available for EWG 22-05.

	<p><i>Reviewer's comments:</i></p> <p><i>The additional information is useful and provides further information on the extent of boarfish catches in France. However, the information dates back to 2019 and it is not clear how representative of the current level of catches in the relevant fleets.</i></p>
STECF Comments	<p>STECF agrees with the observations of EWG 22-05 that the impact of this exemption and the previous observations made by EWG 19-04 and 20-04 still remain relevant.</p> <p>STECF acknowledges testing gears to improve the selectivity only for boarfish is challenging. Prior to the landing obligation boarfish were always discarded due to their low market value. Diverting scarce research funds to specifically investigate boarfish selectivity is not really an option. Therefore, STECF observes improvements in selectivity for boarfish are only going to be delivered as a consequence of using selective gears designed to reduce unwanted catches of different target species. For instance, the use of square mesh panels in gadoid fisheries may lead to a reduction in boarfish catch.</p> <p>STECF acknowledges that for exemptions for data poor stocks such as boarfish, the quality of the catch data makes drawing any conclusions on the impacts of such exemptions difficult.</p>
Exemption	Megrim below MCRS caught using bottom trawls with a mesh size of 70-99mm and beam trawls with a mesh size of 80-119mm in ICES subarea 7
Main findings of EWG 22-05	<p>Only limited catch information has been provided by Ireland and it is unclear whether other Member States in NWW intend to use this exemption if extended.</p> <p>In the absence of any new information, no assessment of the impact of this exemption on the megrim stock can be made.</p> <p>The earlier assessments by STECF that evidence showing landing unwanted catches has an associated cost, is still not sufficient to demonstrate those costs are disproportionate.</p> <p>Improving selectivity in the relevant fisheries should be the priority as this will reduce the costs for handling unwanted catches. This is particularly relevant given the limited data provided shows the level of unwanted catches of megrim in Irish fisheries are significant.</p> <p>It is not clear why the exemption is proposed to cover the whole of ICES subarea 7 for beam trawls but is limited to only certain trawlers operating in a smaller area defined in the Fishing Opportunities Regulation for 2020 (Celtic Sea Protection Zone).</p>
Supplementary information provided to the Commission post EWG 22-05	<p>The supplementary information was provided by as follows:</p> <p>France</p> <p>Additional information extracted from the French sampling program are submitted as complementary information. The French fleet operating with the gears covered by the exemption in ICES subarea 7 landed 2073 t of megrim in 2021, on a total landing of 57 669t overall. The Obsmer data indicates that the share of megrim ranged from 4.7% to 0.6% in the total unwanted catches (in catches of >18m vessels targeting anglerfish and targeting various demersal, respectively). According to the observer data for 2019, 3% of the megrim that is discarded by French bottom trawlers</p>

	<p>>18m targeting anglerfish in the Celtic Sea, the Western Channel and the Irish sea is undersized. As the discard rate of undersized fishes is low, France concludes that this means this fishery is already selective for megrim.</p> <p>Spain</p> <p>Spain has provided discard data associated with this de minimis exception for megrim in ICES subarea 7 by Spanish bottom trawlers. During 2021, 18 bottom trawlers fished in subarea 7 in this ICES zone, and only 2 of them made use of de minimis exemption, accounting for a total of 3,311 kg of discards, equating to 1,70% of the total de minimis amount available for this species. Spain accounts for the low uptake of this exemption to be due to the conditions of the exemption which excluded some vessels. In this regard, Spain was informed recently by the Commission on a derogation for Spain to be able to use 80 mm codend mesh size outside of the Celtic Sea Protection Zone, which may vary the use of this exemption in the near future. Therefore, the maintenance of a certain percentage of de minimis exemption would continue to be necessary for the Spanish fleet.</p> <p><i>Reviewer's comments:</i></p> <p><i>The additional catch information provided by France and Spain is useful. However, it does not give a clear picture of the level of unwanted catches of megrim in the relevant fisheries. Other than the Irish information, there is no catch data for the relevant beam trawl fleets. The data provided by Spain for 2021 show that only 2 out of 18 vessels used this exemption, utilising 1.7% of the estimated de minimis volume. It is not clear how this estimate was generated, nor is it clear the potential level of catches that would be discarded if more vessels availed of the exemption. However, based on the uptake by only a small proportion of the vessels, assuming similar level of catches would suggest the volume would potentially be higher than the de minimis volume requested.</i></p> <p><i>The supplementary information indicates that the impact of this de minimis exemption has been limited and continuation of the exemption would be primarily helpful for the fishing industry by providing flexibility for the fleets. However, noting the relatively high discards reported by Ireland in similar fisheries to Spain and France, improvements in selectivity should remain the priority.</i></p>
<p>STECF Comments</p>	<p>STECF agrees with the observations of EWG 22-05.</p>
<p>Exemption</p>	<p>Common sole caught using beam trawls with mesh size of 80-119mm with a large mesh panel in ICES divisions 7a extended to include 7j,k</p>
<p>Main findings of EWG 22-05</p>	<p>The exemptions requested are both a temporal and geographical extension of existing exemptions. Partial catch and fleet information is provided by Belgium and Ireland.</p> <p>Measures to reduce the unwanted catch of sole have been put in place, notably through the implementation of the legal obligation to use "Flemish panels", as reported in previous STECF reports. This has resulted in the reduction of 40% of the undersized catches, to the extent that according to ICES they are now apparently mostly negligible (ICES, 2021 and 2021). The extent to which the Flemish panel has contributed to this is unclear.</p> <p>There are further plans in progress to improve the knowledge of the stock, through genetic analysis of fish and the validation of environmental DNA</p>

	<p>analyses, that may result in a better assessment of stock limits and stock size, potentially overcoming lack of observers for this fleet. The combined results of these new and ongoing projects are expected to improve knowledge on the stocks that will help to better define the impact of the fisheries and therefore focus the impact of management measures such as the requested exemptions on the landing obligation. Improved knowledge on the stocks involved is expected to allow better spatial planning and potentially further reduce unwanted catches.</p> <p>The request for a temporal extension of the derogation to area 7a and a spatial extension to area 7jk appears to be reasonable, based on the low level of catch and linkage to the use of the Flemish panel.</p> <p>It is unclear why the JR requests a 3% de minimis for 7jk, when apparently the reported catch rates are very low and discards negligible.</p> <p>ICES advice indicates a sudden increase in the discards in area 7a for the period 2018–2020. Understanding why this increase in discards has occurred would be helpful given the exemption is linked to the use of a selective gear and given previously ICES reported a decrease in discards of sole in this area.</p>
<p>Supplementary information provided to the Commission post EWG 22-05</p>	<p>The following supplementary information was received from NWW Group:</p> <p><u>Belgium</u></p> <p>Belgium contends that the 3% de minimis volume does not mean that this percentage has to be used completely. It is a buffer between the quota and the reality in the fishery. Belgium points out that as the Commission is aware there is always a lag of 2 years when using data to predict fishing opportunities and therefore this percentage provides flexibility if the fishing opportunities is not fully aligned with the reality at sea.</p> <p>In 2020 there was no UK-survey due to Covid. The UK-survey feeds into the estimation of juveniles in the stock. Therefore, an average of the previous years was taken instead. In 2021 there was a survey, indicating that there is an increase in juveniles. But it was decided not to adapt the mean of 2020. This means as a consequence that the estimation of juveniles is probably lower than in reality. This, in combination with the fact that new quota has a 2-year delay with real catches, has resulted in higher discards of 2–3-year-olds. Therefore the 3% is really needed to compensate this assessment. The same goes for the sole 7j,k.</p> <p><i>Reviewer’s comments: Reviewer agrees that utilisation of the 3% de minimis is not an obligation to discard that amount. It does provide a level of some flexibility for the fleets. An explanation of the higher discards has been provided by it is difficult to understand and does not necessarily explain this increase.</i></p> <p><i>Given no new information has been provided, the main findings of the EWG 22-05 remain.</i></p>
<p>STECF Comments</p>	<p>STECF agrees with the observations of EWG 22-05. STECF notes that measures taken to reduce the catch of the unwanted size classes through the implementation of the legal obligation to use “Flemish panels”, have resulted in the reduction of 40% of the undersized catches, to the extent that they are now apparently mostly negligible.</p> <p>STECF further notes that there are plans in progress to improve the knowledge of the stock through genetic studies that may result in a better understanding of stock limits and stock size. STECF considers this help to define the impact of the fisheries and therefore focus the impact of management measures such as the requested exemptions on the landing</p>

	obligation.
Exemption	Greater silver smelt caught using bottom trawls with a mesh size greater or equal to 100mm in ICES division 5b (EU waters) and subarea 6
Main findings of EWG 22-05	<p>Only limited new information has been provided and is restricted to partial information on catches and fleets for 2019-2021. Therefore, a full assessment of the exemption is not possible.</p> <p>It is apparent that the unwanted catch of greater silver smelt in the relevant mixed-species fisheries is small in volume, with nearly all of the catches discarded by the EU demersal fleet. Given the low volumes the impact of the stock of the exemption is likely to be low, particularly given recent ICES advice for greater silver smelt advising a large increase (213%) in the TAC for this species.</p> <p>No updated information has been provided of the uptake of the square mesh panel by Spanish vessels as reported in 2020 and it is not known whether the square mesh panel is being used by the Spanish fleet.</p> <p>Given the paucity of available catch information, monitoring the catches of greater silver smelt in the relevant fleets covered by this exempted should be encouraged.</p>
Supplementary information provided to the Commission post EWG 22-05	<i>No supplementary information provided</i>
STECF Comments	STECF agrees with the observations of EWG 22-05 and notes that the low level of discards reported indicate of the impact of this exemption is likely to be low.
Exemption	Horse mackerel caught using bottom trawls, seines and beam trawls in ICES subarea 6 and ICES divisions 7b-7k
Main findings of EWG 22-05	<p>Only limited new catch and fishery information has been provided by France and Ireland. Some of information dates back to the period 2013-2016 and may not be representative of the current situation in the relevant fisheries. Therefore, a full assessment of the impact of this exemption is not possible and the previous observations made by EWG 19-04 and 20-04 remain relevant.</p> <p>According to the French data, a substantial part of the landings is discarded in the fishery (40%) particularly by bottom trawlers below 18 m (71%). The proportion of discarded horse mackerel appears to be higher than for mackerel in the range of 0.2-6.7% of the total catch in the fishery (highest in the Danish seine fishery).</p> <p>Close to 100% of horse mackerel are discarded in the fishery. Therefore, it is unlikely that the current de minimis volume will cover all of these unwanted catches suggesting further improvements in the fishery to improve selectivity may be warranted.</p> <p>The selectivity information from three French selectivity projects gives a valuable insight to the research aimed to reduce unwanted by introducing various technical measures. However, they are not new, dating back to 2017 and earlier. It is unclear whether any of the selectivity improvements</p>

	<p>tested have been implemented in the fishery. The new research using lights is encouraging and should be continued.</p> <p>It is acknowledged that it is difficult to improve selectivity for horse mackerel without causing significant commercial losses for vessels fishing in such mixed fisheries. However, the data provided indicate that the levels of discarding in these fisheries is high and therefore, efforts to improve selectivity should continue.</p> <p>Continued efforts to improve the overall selectivity of the catches or considering ways to improve the commercial utilization of the unwanted >MCRS horse mackerel catches should be encouraged.</p>
Supplementary information provided to the Commission post EWG 22-05	<p>The following Supplementary information was provided by the NWW Group:</p> <p>The NWW Member States pointed out there was an error in the original EWG 22-05 observations communicated to the Member States Group in that the level of de minimis exemption in the Regulation is 3% and has not changed. This was confirmed by DGMARE.</p> <p>France</p> <p>For France, the fleet covered by the exemption (that is, operating in ICES divisions 7b to 7k with the gears listed under article 13.1.j) landed 313t of horse mackerel in 2021, on a total volume of landings of 68 218 tons (all species included). Horse mackerel therefore accounted for 0.45% of the total landings. France contends this should be taken into account, along with the difficulties to improve the selectivity, considering the regulation in force in the area and the costs associated with the devices tested in various projects when assessing the supporting information.</p> <p><i>Reviewer's comments:</i></p> <p><i>Reviewer agrees with NWW Group comment on 3% derogation. The additional information provided by France is useful and indicates that horse mackerel make up only a small proportion of the landings from the relevant fleets. However, no information is provided on the level of catches discarded under the exemption. Therefore, the main findings of the EWG 22-05 particularly regarding the need to improve selectivity in these fisheries remain valid.</i></p>
STECF Comments	<p>STECF agrees with the observations of EWG 22-05 that the previous observations made by EWG 19-04 and 20-04 still remain relevant. Without catch information relating to the fishery, only a limited assessment can be made of the impacts of the exemption. The supporting information and justification remain generic and not specific to horse mackerel. STECF also notes that discarding in these fisheries are high and efforts to improve selectivity should be encouraged.</p>
Exemption	<p>Mackerel caught using bottom trawls, seines and beam trawls in ICES subarea 6 and ICES divisions 7b-7k</p>
Main findings of EWG 22-05	<p>Only limited new catch and fishery information has been provided by France and Ireland. Some of the information dates back to the period 2013-2016 and may not be representative of the current situation in the relevant fisheries. Therefore, a full assessment of the impact of this exemption is not possible and the previous observations made by EWG 19-04 and 20-04 remain relevant</p> <p>According to the data submitted by France, a substantial part of the landings is discarded in the fishery (40%) particularly by bottom trawlers below 18 m (71%). However, the proportion of discarded mackerel appears</p>

	<p>to be quite low in the range of 0.0-0.4% of the total catch in the fishery (highest in the bottom trawl fishery in ICES divisions 6a and 6b).</p> <p>The selectivity information from three French study projects gives a valuable insight to the research aimed to reduce unwanted by introducing various technical measures. However, they are not new, dating back to 2017 and earlier. It is unclear whether any of the selectivity improvements tested have been implemented in the fishery.</p> <p>It is acknowledged that it is difficult to improve selectivity for mackerel without causing significant commercial losses for vessels fishing in such mixed fisheries. However, the data provided indicate that the levels of discarding in these fisheries is high and therefore, efforts to improve selectivity should continue.</p> <p>The Obsmer document provided is in French with only a short English summary.</p>
Supplementary information provided to the Commission post EWG 22-05	<p>The Supplementary information was provided as follows:</p> <p>France</p> <p>The French fleet covered by the exemption landed 3 519t of mackerel in 2021. The total landings for this fleet accounted for 68 218t in 2021, all species included.</p> <p>Regarding the economic loss, it was not possible to supplement the information already provided in the annex regarding the EODE project that details associated costs with landing obligation.</p> <p><i>Reviewer's comments: Reviewer acknowledges the additional explanation from France and the updated landing data for 2021. However, the data provides no further information on the level of mackerel discards in the relevant fisheries. The main findings of EWG 22-05 remain valid.</i></p>
STECF Comments	<p>STECF agrees with the comments of EWG 22-05. The arguments presented in the supporting document for JR are generic. Therefore, the supplementary information provided does not highlight the anticipated losses to the fleet in the case of the repeal of a de minimis exemption. The priority should be to improve selectivity to reduce the unwanted catches and therefore, the costs for handling such catches, accepting that this should be balanced against the costs of sorting quantities of horse mackerel from the other marketable catch.</p>
Exemption	<p>Haddock below MCRS caught with a mesh size up to 119mm in the West of Scotland <i>Nephrops</i> fishery in ICES division 6a</p>
Main findings of EWG 22-05	<p>It is apparent that this exemption is targeted at UK vessels operating in a fishery inside UK waters. No supporting information has been provided for its continuation. Therefore, as no Union vessels participate in the fishery it is unclear whether it is still required.</p>
Supplementary information provided to the Commission post EWG 22-05	<p><i>No Supplementary Information was provided</i></p>
STECF	<p>STECF agrees with the observations of EWG 22-05.</p>

Comments	
High Survivability	
Exemption	Skates and rays (Rajiformes) caught by any fishing gear in the North-Western Waters (ICES subareas 6 and 7)
Main findings of EWG 22-05	<p>The additional Irish study has provided further evidence that cuckoo rays have a lower survival rate compared to other ray species while reported, but incomplete discard rates are between 27 and 39%. The discard estimates only cover a limited number of fisheries and the true extent of unwanted catches of cuckoo rays is not clear.</p> <p>It is noted that survival experiments carried out have shown for cuckoo ray (as well other ray species), mortalities are protracted suggesting that keeping rays in captivity may risk underestimating survival in captive trials.</p> <p>As for cuckoo ray, the information provided in the past and additional catch data provided to support the JR show quite high discard rates for some ray species, which could equate to high levels of discard mortality associated with this exemption if the survival rates are low. However, the catch information provided is incomplete and filling the gaps in catch data for ray species should be prioritised to allow a full assessment of this exemption on the relevant species.</p>
Supplementary information provided to the Commission post EWG 22-05	<i>No Supplementary Information was provided</i>
STECF Comments	<p>STECF agrees with the observations of EWG 22-05 and agrees that Member States should be encouraged to look at improving catch data for the different species as this data is lacking in many cases.</p> <p>STECF also encourages Member States use their joint scientific capacity to compile and analyse previous and new data in a more systematic way to assist future assessment of the exemptions covered under the roadmap.</p> <p>STECF notes that the additional information provided to support the exemption request confirmed relatively low survival estimates for cuckoo rays. STECF further observes that the limited catch data provided indicate discard rates of 25- 35%. However, the catch information is incomplete and therefore the assessment of the impact of this exemption in terms of possible dead discards.</p> <p>STECF notes the observations that carrying out large-scale survival experiments for rays is challenging, given their morphology. This may lead to increases in experiment-induced mortality leading to underestimation of survival rates.</p>
Exemption	Plaice caught in ICES divisions 7a to 7g using beam trawls
Main findings of EWG 22-05	<p>Only supporting information has been provided by Belgium. Catch data and fishery information is missing for all Member States operating in the fisheries, making it difficult to assess the impact of this exemption on the different plaice stocks.</p> <p>Since 2019, progress has been made in increasing the knowledge of plaice</p>

	<p>survivability. Additionally, research on ways to improve selectivity is also ongoing. No concrete results have been presented to date, but the preliminary findings seem encouraging for some of the gear modifications tested.</p> <p>The selectivity projects planned by the Netherlands in the North Sea may also be relevant to the beam trawl fishery in the North-western waters given the similarities between fisheries.</p> <p>For beam trawlers, the justification for survivability exemption for plaice continues to be based on the potential for improving survival and selectivity, but this based on variable estimates of survival. No further trials to estimate survivability are currently planned in the fishery.</p> <p>The current survival estimates are still highly variable and only relevant for the larger beam trawl vessels. No information has been provided for smaller vessels with less than 221KW engine power other than that contained in Uhlmann et al. (2016).</p> <p>There is also only limited and inconclusive information on the effectiveness of the Flip-up rope and the Benthic Release Panel to improve survivability. The use of these devices is specified in the Delegated Act as a condition of the exemption. If these devices are not effective in increasing survivability, then the value of making them a condition of the exemption is questionable even though they may have other benefits not related to survivability.</p> <p>The current survival estimates need to be considered in the context of the current discard rates reported, in the various plaice stocks in NWW. Discard rates range from negligible in 7hjk to 62% in the Irish Sea.</p> <p>Unless surviving discards are accounted for in stock assessments and dead discards are accounted for in TAC setting when survivability exemptions are in place, the actual fishing mortality will not match the agreed catch level. Currently this is only considered for the Irish Sea stock.</p> <p>Introducing discard survival estimates should continue to be discussed by ICES for more stocks and especially plaice, given the proliferation of survival exemptions.</p>
<p>Supplementary information provided to the Commission post EWG 22-05</p>	<p><i>No Supplementary Information was provided</i></p>
<p>STECF Comments</p>	<p>STECF acknowledges that progress has been made in increasing the knowledge of plaice survivability. Additionally, considerable work has begun on the estimation of catch volumes and composition as well as ways to improve survivability and selectivity in the relevant fisheries.</p> <p>The new estimates of survival provided as well as the update catch volumes and catch composition which improves the knowledge on plaice survivability in the beam trawl fishery and the impact of the exemption.</p> <p>STECF notes that given the survival rates are in the range of 20-40% and the discard rates are high, considerable volumes of plaice discarded under this exemption are likely not to survive.</p> <p>STECF agrees with EWG 22-05 that there is still a need for clarity on objectives and timelines in respect of the roadmap and notes.</p> <p>STECF agrees with EG 22-05 that unless surviving discards are accounted</p>

	for in stock assessments and dead discards are accounted for in TAC setting when survivability exemptions are in place, the actual fishing mortality will not match the agreed catch level. Currently this is only considered for the Irish Sea stock.
Exemption	Common Sole below MCRS caught with bottom trawls by vessels less than 12m in ICES division 7e
Main findings of EWG 22-05	<p>PLEN 19-02 STECF observed that a key concern with a previous request for this exemption was the proportion of the catches made up of rays and spider crab compared to the time the survival estimates were generated. The presence of these species will negatively influence the survival of discarded fish given their spikey or rough morphology which can harm other fish. While overall immediate survival rates of undersized sole were very good (99.1%), 85% were caught in a single trip during spring. Catches of spider crab are greater in the summer and autumn and are likely to result in lower survival.</p> <p>A delayed survival rate was only presented for Category A sole, and no rates for overall or for the other vitality categories were presented. The delayed survival rate for Category A was estimated at 69.4%. Previous studies reported by Randall et al. (2017) and Ribeiro Santos et al. (2016) estimated sole survival from coastal trawlers at 88% for the Eastern Channel and 46% for the North Sea, respectively.</p> <p>While the request states that fishing will be undertaken outside of nursery areas there is no mention of where these areas are located. Additionally, as noted in PLEN 19-02, as a general rule, where exemptions have conditions attached there is no evidence of them being applied by Member States making controlling and enforcing such measures a challenge.</p> <p>In the supporting Annex, it is stated the proposed exemption would cover a fleet of about 90 French ≤ 12 m fishing vessels. However, there is no information on vessels from other nations fishing in this area. Additionally, there is no reference to the other areas of 7e where ≤ 12 m OTB vessels are likely to target sole. It is important to include data on any other vessel fishing in area 7e because they would/should also be covered by the exemption. It is not clear what is meant by the entire fleet in relation to the number of days at sea in 26E7 and 26E8—it needs to be made clear if it is just the French fleet and only OTB vessels under 12 m or is it all vessels.</p> <p>While the ICES Advice on fishing opportunities, catch, and effort for 7e states that $\sim 19\%$ of sole is captured in otter trawls there is no indication if other vessel segments catch sole in areas 26E7 and 26E8, and therefore the impact of a survival exemption on the overall stock is not possible.</p> <p>There is no information provided on catch rates or expected length frequencies of sole for areas 26E7 and 26E8 or the wider 7e area. Therefore, it is not clear to what extent is the impact of fishing on \leqMCRS sole. It is stated that there is a low catch rate of undersized sole but no indication of the amount or percentage.</p> <p>The supporting report is presented in English and French, however, the French report is over twice the number of pages of the English version. A full translation is welcomed because it allows a more comprehensive evaluation of the request and information provided.</p>
Supplementary information provided to the	Supplementary Information was provided by the NWW Group: France

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post EWG 22-
05

Catch composition

France indicates it is likely that the catch composition has an effect on the differed survival rate, but the SUMO report does evaluate this, as it focuses on vitality and not differences in survivability.

The SUMO report indicates a positive correlation between the catching of spider crabs and the vitality via the RAMP score: when spider crabs are numerous, less sole specimens tend to deliver strong reflex. However, it is not further explained, and a more comprehensive analysis would be necessary to elaborate further on this point (see the complementary document submitted for this exemption request).

Additionally, this correlation does not undermine the excellent results observed, as the catch composition is not the sole variable influencing the survival rate. Considering the multi-factor aspects affecting the vitality, it is not possible to conclude on this point.

Survival estimates

The SUMO report only presents results for vitality index or immediate survival rate, which is of 99,1% overall for all the soles, regardless of their vitality scores. No survival rates were presented, as it falls out of the scope of the vitality study.

Regarding longer-term survivability however, comparisons are drawn in the discussion with other studies that supported the exemptions requests in the Eastern Chanel and the North Sea (Randall et al. in 2017 and Ribeiro Santos et al. in 2016).

Nursery Areas

Regarding the conditions associated with the exemption, the group indeed noted the concerns raised previously by STECF. As a result, the JR suggests that the new exemption should be added as a new point under article 4 of the current delegated, and not by amending a separate sub-article to this exemption.

The intention was indeed to avoid duplicating the requirements attached to the current exemption in area 7d regarding the depth of the waters and the duration of the fishing operations. However, it seemed that the condition associated with nursery areas was necessary and driven by common sense for the state of the stock.

Information remains limited in area 7e regarding nursery areas. Studies have been conducted (CGFS Ifremer campaigns in 2016 and Nourmont campaign in 2017-19 for the Mont Saint-Michel Bay). While they did not define the perimeter of the nursery areas, the reports indicate important densities of small soles in the estuary and in the Western part of the Mont Saint-Michel Bay.

In practice, a simplification of the rules associated with the exemption will foster clarity and acceptability by the sector.

Information from other Member States

In practice, the exemption is very likely to be used by French vessels only as it will only apply to small vessels under 12m, operating very close to the shore.

In addition, the geographical scope remains limited, as it will cover area 7e only, where the basic regulation (EU) 1380/2013 does not provide for historical rights for fleets operating under other EU flags. The access from Jersey vessels should in addition be very limited.

Finally, it should be noted that the United Kingdom introduced a similar

exemption via the Sea Fisheries (Amendment etc.) (No.2) Regulations 2021.

Commission Delegated Regulation (EU) 2019/2239 specifying details of the landing obligation for certain demersal fisheries in North-Western waters for the period 2020-2021

9. (1) Commission Delegated Regulation (EU) 2019/2239 specifying details of the landing obligation for certain demersal fisheries in North-Western waters for the period 2020-2021(16) is amended as follows:

(2) In Article 1 (implementation of the landing obligation)—

- (a) the existing text becomes paragraph 1;
- (b) in that paragraph—
 - (i) omit "United Kingdom and International";
 - (ii) after "ICES Subareas 6 and 7" insert "that are not within Union waters";
 - (iii) omit "until the end of 2021";
- (c) after that paragraph insert—

"2. In this Regulation, "United Kingdom waters" and "Union waters" have the meanings given in Article 4 of Regulation (EU) No 1380/2013."

(3) In Article 2 (definitions)—

- (a) in paragraph 2(a), for "cod end" substitute "cod-end";
- (b) in paragraph 7, for "codend" substitute "cod-end";
- (c) at the end, insert—

"9. 'cod-end' means the rear-most part of the trawl, having either a cylindrical shape, with the same circumference throughout, or a tapering shape. It may be made up of one or more panels attached to one another along their sides and includes any lengthening piece which is made up of one or more panels located just in front of the cod-end."

(4) In Article 3 (survivability exemption for Norway lobster)—

- (a) omit points (b) and (c);
- (b) after the omitted point (c), insert—

"(ca) Norway lobster (*Nephrops norvegicus*) caught with otter trawls (OTT, OTB, TBS, TBN, TB, PTB) with a mesh size equal to or greater than 70 mm in ICES subarea 7;"

(5) In Article 4 (survivability exemption for common sole), in paragraph 1—

- (a) for "division 7d" substitute "divisions 7a, 7d, 7e, 7f and 7g";

The impact of other vessels fishing in the area

The SUMO report focuses on certain statistical rectangles, that are considered as representative of the fishery. Indeed, the fishing effort and the sole catches are in practice focused in the two rectangles 26E7 and 26E8, that concentrate the fishing effort for bottom trawlers under 18m targeting demersal species and cephalopods in Western Channel. Sole catches in the rest of area 7e are very limited. The complementary report further elaborates on this point.

Days at sea and fishing effort data

The number of days indicated in the annex cover the days at sea for French vessels <18m operating with OTB, OTT and PTB, knowing that OTT and OTB are marginal on the segment of vessels <12m in this area.

Catches of sole ≤MCRS sole.

The data analysis of sole catches in the fishery is still on-going and will be provided as soon as possible.

France also indicated that a fairly exhaustive translation of the report in English was provided. After cross-checking the two versions, it appears a few elements were missed out. A translation of these final precisions is added in annex to this document.

Reviewer's comments: Reviewer acknowledges NWW Group for the comprehensive clarification as a response to EWG 22-05 concerns and additional information, provided including complementary translations from the French Report of Obsmer Programme. This additional information has responded to many of the queries raised by EWG 22-05, particularly relating to the scope of the exemption. The exemption would appear to cover only relatively small catches of sole and therefore the overall impact on the sole stock in 7e is probably relatively low. The estimates from other studies are noted as is the inclusion of a similar exemption for UK vessels

	<i>in UK waters. However, the weaknesses in the survival estimates provided remain in that they are based on vitality observations rather than direct survival estimates and the issues around the catch composition.</i>
STECF Comments	STECF acknowledges the significant amount of information and clarifications received in relation to this exemption. STECF notes the weaknesses identified by EWG 22-05 in relation to the vitality data provided, while acknowledging that the level of discards in the relevant fishery is very low.
Technical Measures	
Exemption	Joint Recommendation to allow dual codend, an existing Technical Measure, to be used until end of December 2022
Main findings of EWG 22-05	<p>The findings of EWG 19-08 that the principle of the dual codend to vertically separate catch into two codends where differential selection can take place has the potential to reduce bycatch of unwanted species while maintaining catches of target species are still valid.</p> <p>Additional information has been provided in the JR relating to two new trials. The first trial was carried out on a simplified self-sampling basis due to Covid-19 restrictions. Results are confined to mean weights of total catches retained with each gear. The results indicate that compared with an 80 mm codend with 300 mm SMP the dual codend retains:</p> <ul style="list-style-type: none"> • More Nephrops and more wanted fish (> MCRS hake, monkfish, pollack, flatfish and other commercial species) • Less Nephrops, gurnard and lesser spotted dogfish • No difference in unwanted catches (< MCRS fish and non-commercial species combined) between the two gears <p>The simplified self-sampling protocol employed limits the inference that can be made but suggests that the dual codend and the 80 mm codend with 300 mm SMP are equally selective for unwanted catches. The 300 mm SMP tested during this trial is considerably larger than the 120 mm SMP specified in point 1.2 and likely to be more selective.</p> <p>The results of the second trial provide information on the relative selectivity of a T90 90 mm codend and an 80 mm codend fitted with a 120 mm SMP in a twin trawl fishery targeting fish. The results indicate that the 90 mm T90 mesh codend retained:</p> <ul style="list-style-type: none"> • Less whiting of all sizes, < MCRS haddock and < MCRS cod • More > MCRS hake, > MCRS megrim, monkfish, plaice of all sizes and lemon sole of all sizes <p>The inference that can be made from this trial is limited to fish species. The results suggest improved selectivity for undersized whiting, haddock and cod and reduced selectivity for undersize plaice and lemon sole.</p> <p>No supporting evidence is provided for the recommendation to increase the mesh size of the uppermost T90 codend from 90 mm to 100 mm. Evidence has been provided to EWG 19-08 and EWG 22-05 that the dual codend is very effective at sorting fish in to the uppermost codend. Implementing one of the gear options in point 13.1 in the uppermost codend of the dual codend would align with the technical measures for targeting fish in the area. It is noted that the NWW JR recommends that the mesh size of the</p>

	T90 codend should be increased 100 mm.
Supplementary information provided to the Commission post EWG 22-05	<i>No supplementary information provided</i>
STECF Comments	STECF acknowledges the progress with trials carried out to assess the effects of using the dual codend gear and agrees with the interpretation of the results provided by the EWG 22-05.
Exemption	Joint Recommendation to include T90 100 mm on the basis of equivalent selectivity with T0 120 mm
Main findings of EWG 22-05	<p>The observations by STECF PLEN 21-05 that the analysis carried out by Ireland shows that the abundance was highly variable between hauls remains valid in the new information provided with the JR. Low abundance was evident in numerous hauls for cod, haddock and whiting.</p> <p>The use of the catch comparison method in the Irish studies is a reasonable approach, given the objective of the trials was to assess the differences in catches between the alternative gear (T90 100 mm) and baseline gear (T0 120mm).</p> <p>The analysis provided indicates that the main benefit of the T90 100 mm in the Irish Sea whitefish fishery was a considerable reduction in <MCRS haddock.</p> <p>The T90 100 mm codend caught substantially more flatfish species compared with the T0 120 mm. There was minimal difference in catches between the two gears for whiting. The difference in cod catch was also negligible across all size classes, reflecting the stock state of cod in the Irish Sea where the experiments were carried out. No inference can be made for cod and whiting, but this does not mean that this gear is not selective, more that there were not enough of these encountered during the trials to allow for an analysis.</p> <p>Notwithstanding this, the data provided is still limited in terms of the number of hauls. More robust selectivity and/or catch comparison trials would be needed to fully conclude the outcomes of the supporting Irish studies and in particular for cod and whiting.</p>
Supplementary information provided to the Commission post EWG 22-05	<i>No Supplementary Information was provided</i>
STECF Comments	STECF agrees with the observations of EWG 22-05 and notes the limitations of the additional information provided that has not fully addressed the issues around equivalent selectivity for cod and whiting.

Table 1c. Main findings of the STECF EWG 22-05, summary of additional information received relating to exemptions presented and Reviewer's Comments: **SWW**.

<i>De minimis</i>	
Exemption	Horse mackerel caught by vessels using beamtrawls, bottom trawls and seines in ICES subareas 8 and 9
Main findings of EWG 22-05	<p>The supporting information on economic impacts was already provided in 2020. In 2021, EWG 21-05 re-examined the Spanish study and comments on the approach and methodology were provided. EWG 21-05 observed that the economic information provided on impacts of not granting the exemption indicates a comparatively high level of losses for the vessels involved in this fishery. However, EWG 21-05 requested more information on the methodology of the calculation and the data used as the opportunity costs cannot be put into context of the overall economic performance of the fleet segments. No additional information on the methodology and data was provided to EWG 22-05.</p> <p>Updated catch data has been provided by France for 2020, Spain and Belgium for 2021 but not by Portugal. The implications of granting the proposed exemption with regard to the fishery and species concerned cannot therefore be quantified due to a lack of catch data per gear, year and for all Member States. Nevertheless, the information provided by France and Spain shows relatively low rates of discards (i.e., OTB_MPD_>=55 metier targeting horse mackerel had a discard rate of 1% in 2021) for some fisheries but quite high discard rates in others (i.e., French demersal trawlers have a discard rate of 88% in 2020).</p> <p>EWG 21-05 highlighted that reducing the discard rates through improvements in selectivity is difficult in these fisheries given many are mixed fisheries and notes the results from the Spanish studies carried out in these fisheries which show quite high losses of commercial catch. Nonetheless, implementing the most promising of these gears may help to address the issue of reducing discard rates for horse mackerel in the longer term, particularly in those fisheries where discard rates are high. This observation remains relevant for this exemption.</p>
Supplementary information provided to the Commission post EWG 22-05	<i>No Supplementary information was provided</i>
STECF Comments	<p>STECF agrees with the observations of EWG 22-05 that the implications of granting the proposed exemption with regard to the fishery and species concerned cannot be fully quantified due to a lack of catch data per gear, year and for all Member States involved in fishery.</p> <p>STECF acknowledges that reducing the discard rates through improvements in selectivity is difficult in these fisheries given many are mixed fisheries and notes that the results from the Spanish studies carried out in these fisheries which show quite high losses of commercial catch when improving the gear selectivity.</p> <p>STECF reiterates the past conclusion of EWGs that efforts should be focused on reducing the level of unwanted catches of horse mackerel in the fisheries with the highest volumes of unwanted catches currently as identified by EWG 21-05.</p>
Exemption	Horse mackerel by vessels using gillnets in ICES subareas 8, 9 and 10 and CECAF zones 34.1.1, 34.1.2, 34.2.0

Main findings of EWG 22-05	<p>The supporting information on economic impacts was already provided in 2020. In 2021, EWG 21-05 re-examined the Spanish study and comments on the approach and methodology were provided. EWG 21-05 observed that the economic information provided on impacts of not granting the exemption indicates a comparatively high level of losses for the vessels involved in this fishery. However, EWG 21-05 requested more information on the methodology of the calculation and the data used as the opportunity costs cannot be put into context of the overall economic performance of the fleet segments. No additional information on the methodology and data was provided to EWG 22-05.</p> <p>Limited updated catch data has been provided by France for 2020, and no data from Spain or Portugal. France reports on a low horse mackerel discard rate for two out of six metiers but the rate is calculated in relation to total metier catches and not to horse mackerel catches, which if used may increase the discard rate significantly.</p> <p>Therefore, no assessment of the implications of granting the proposed exemption with regard to the fishery and species can be made due to the limited data provided by the Member States.</p>
Supplementary information provided to the Commission post EWG 22-05	<i>No Supplementary information was provided</i>
STECF Comments	STECF notes that only France has provided updated catch information to support the exemption and therefore, STECF cannot assess the implications of granting the proposed exemption with regard to the fishery and species.
Exemption	Mackerel caught by vessels using beam trawls, bottom trawls and seines) in ICES subareas 8 and 9
Main findings of EWG 22-05	<p>The supporting information on economic impacts was already provided in 2020. In 2021, EWG 21-05 has re-examined the Spanish study and comments on the approach and methodology were provided. EWG 21-05 observed that the economic information provided on impacts of not granting the exemption indicates a comparatively high level of losses for the vessels involved in this fishery. However, EWG 21-05 requested more information on the methodology of the calculation and the data used as the opportunity costs cannot be put into context of the overall economic performance of the fleet segments. No additional information on the methodology and data was provided to EWG 22-05.</p> <p>Updated catch data has only been provided by Spain and Belgium for 2021. Therefore, the implications of granting the proposed exemption with regard to the fishery and species concerned cannot be quantified due to a lack of catch data per gear, year and for all Member States.</p> <p>Nevertheless, the information provided by Spain shows relatively low rate of discards (i.e., OTB_MPD_>=55 metier targeting mackerel had a discard rate of 0.2% in 2021) for some fisheries but quite high discard rates in others (i.e., OTB_>70 metier has a mackerel discard rate of 82% in 2021).</p> <p>EWG 21-05 highlighted that reducing the discard rates through improvements in selectivity is difficult in these fisheries given many are mixed fisheries and notes the results from the French and Spanish</p>

	<p>studies carried out in these fisheries which show quite high losses of commercial catch. Nonetheless, implementing the most promising of these gears may help to address the issue of reducing discard rates for mackerel in the longer term. Focus should be on those fisheries with the highest volumes of mackerel discards. EWG 22-05 reiterates this observation which remains relevant for this exemption.</p>
Supplementary information provided to the Commission post EWG 22-05	<i>No Supplementary information was provided</i>
STECF Comments	<p>STECF agrees with the observations of EWG 22-05 that the implications of granting the proposed exemption with regard to the fishery and species concerned cannot be fully quantified due to a lack of catch data per gear, year and for all Member States involved in fishery.</p> <p>STECF acknowledges that reducing the discard rates through improvements in selectivity is difficult in these fisheries given many are mixed fisheries and notes that the results from the Spanish studies carried out in these fisheries which show quite high losses of commercial catch when improving the gear selectivity.</p> <p>STECF reiterates the past conclusion of EWGs that efforts should be focused on reducing the level of unwanted catches of mackerel in the fisheries with the highest volumes of unwanted catches currently as identified by EWG 21-05.</p>
Exemption	Mackerel by vessels using gillnets in ICES subareas 8 and 9 and and CECAF zones 34.1.1, 34.1.2, 34.2.0
Main findings of EWG 22-05	<p>The supporting information on economic impacts was already provided in 2020. In 2021, EWG 21-05 has re-examined the Spanish study and comments on the approach and methodology were provided. EWG 21-05 observed that the economic information provided on impacts of not granting the exemption indicates a comparatively high level of losses for the vessels involved in this fishery. However, EWG 21-05 requested more information on the methodology of the calculation and the data used as the opportunity costs cannot be put into context of the overall economic performance of the fleet segments. No additional information on the methodology and data was provided to EWG 22-05.</p> <p>Limited updated catch data has been provided by France for 2020, and no data from Spain or Portugal. France reports a low mackerel discard rate for three out of six metiers but the rate is calculated in relation to total metier catches and not to mackerel catches, which if used would increase the discard rate significantly. This is similar to last year and suggest discarding of mackerel is low in gillnet fisheries.</p> <p>No assessment of the implications of granting the proposed exemption with regard to the fishery and species can be made due to the limited data provided by the Member States. The observations of EWG 21-05 for this exemption remain relevant.</p>
Supplementary information provided to the Commission post EWG 22-05	<i>No Supplementary information was provided</i>

STECF Comments	STECF notes that only France provided updated catch information to support the exemption and therefore STECF cannot assess the implications of granting the proposed exemption with regard to the fishery and species. However, STECF does note the catch information indicates that discards of mackerel in these fisheries are low and therefore the impact of the exemption is likely to be low.
Exemption	Megrim caught with bottom trawls, seines & beam trawls in ICES areas 8 & 9
Main findings of EWG 22-05	<p>Updated catch data has been provided by France for 2020 and Spain and Belgium for 2021 but not for Portugal. The implications of granting the proposed exemption with regard to the fishery and species concerned cannot therefore be quantified due to a lack of catch data per gear, year and for all Member States. No additional information on the methodology and data was provided to EWG 22-05.</p> <p>The information provided by Spain shows discards rates of 18.9% in ICES subareas 8abd and 11.8% in ICES subareas 8c and 9a for megrim in 2021. The information provided by Belgium shows relatively low rate of discards for beam-trawls targeting megrim in subarea 8ab, estimating the discard rate of 2.14% (905 kg). The previous catch information provided for beam trawlers referred to total landings of 47 tonnes with an unwanted catch of 0.26 tonnes, but relative to subarea 8 (EWG 21-05, Annex 3). Generally, discard rates vary considerably between métiers.</p> <p>EWG 21-05 highlighted that reducing the discard rates through improvements in selectivity is difficult in these fisheries given many are mixed fisheries and notes the results from the Spanish studies carried out in these fisheries which show quite high losses of commercial catch. EWG 22-05 reiterates this observation which remains relevant for this exemption.</p>
Supplementary information provided to the Commission post EWG 22-05	<i>No Supplementary information was provided</i>
STECF Comments	STECF notes that the volume of discards reported for 2021 in some of the relevant fisheries are high and likely to exceed the level of de minimis volume granted. This suggests discarding over and above the de minimis exemption is likely to be occurring. Efforts should be focused on reducing the level of unwanted catches of megrim in those fisheries with the highest volumes of unwanted catches currently as identified by EWG 22-05.
Exemption	Megrim caught by vessels using gillnets in ICES subareas 8 and 9
Main findings of EWG 22-05	The supporting information on economic impacts was already provided in 2020. In 2021, EWG 21-05 has re-examined the Spanish study and comments on the approach and methodology were provided. EWG 21-05 observed that the economic information provided on impacts of not granting the exemption indicates a comparatively high level of losses for the vessels involved in this fishery. However, EWG 21-05 requested more information on the methodology of the calculation and the data used as the opportunity costs cannot be put into context of the overall economic performance of the fleet segments. No additional information

	<p>on the methodology and data was provided to EWG 22-05.</p> <p>Updated catch data has been provided by Spain for 2021 and limited data France for 2020. No data has been provided by Portugal. Belgium has no gillnet fisheries in subareas 8 and 9. The information provided by Spain and France shows that discard rates for megrim in gillnet fisheries are negligible.</p> <p>No new assessment of the implications of granting the proposed exemption with regard to the fishery and species can be made due to the limited data provided by the Member States, but as observed by EWG 21-05 the low level of megrim discards in gillnet fisheries indicates the impact of this exemption on the megrim stock is likely to be low. This observation still remains relevant.</p>
Supplementary information provided to the Commission post EWG 22-05	<i>No Supplementary information was provided</i>
STECF Comments	STECF notes that only France has provided updated catch information to support and therefore STECF cannot assess the implications of granting the proposed exemption with regard to the fishery and species. However, the information that has been provided suggest discards of megrim in the relevant fisheries are negligible and therefore the impact of exemption is likely to be low.
Exemption	Anglerfish caught with bottom trawls, seines & beam trawls in ICES areas 8 & 9
Main findings of EWG 22-05	<p>The supporting information on economic impacts was already provided in 2020. In 2021, EWG 21-05 has re-examined the Spanish study, and comments on the approach and methodology were provided. EWG 21-05 observed that the economic information provided on impacts of not granting the exemption indicates a comparatively high level of losses for the vessels involved in this fishery. However, EWG 21-05 requested more information on the methodology of the calculation and the data used as the opportunity costs cannot be put into context of the overall economic performance of the fleet segments. No additional information on the methodology and data was provided to EWG 22-05.</p> <p>Updated catch data has been provided by France for 2020 and by Spain and Belgium for 2021, but not for Portugal. However, the implications of granting the proposed exemption with regard to the fishery and species concerned cannot be quantified due to a lack of consistent catch data per gear, year and for all Member States.</p> <p>Nevertheless, EWG 22-05 notes that the information provided by France, Spain and Belgium shows relatively low rate of discards for most fisheries (i.e., OTB_DEF_≥55_0_0 (Spain) had a discard rate of 0.2% in 2021 and Belgium beam trawls (TBB) had a discard rate of 0.69%), with higher discard rates on others (i.e., French demersal trawls have a discard rate of 30% in 2020).</p> <p>EWG 21-05 highlighted that reducing the discard rates through improvements in selectivity is difficult in these fisheries given many are mixed fisheries and notes the results from the Spanish studies carried out in these fisheries which show quite high losses of commercial catch. This is particularly the case for anglerfish given its morphology which make improving selectivity specifically for anglerfish impractical. EWG</p>

	22-05 reiterates these observations which remain relevant for this exemption.
Supplementary information provided to the Commission post EWG 22-05	<i>No Supplementary information was provided</i>
STECF Comments	<p>STECF agrees with the observations of EWG 22-05. STECF notes that for many métiers, discarding of anglerfish seems low but there are several métiers (i.e., French demersal trawl fisheries) where the discards are much higher (~30%).</p> <p>STECF observes that as highlighted by EWG 22-05 that reducing the discard rates through improvements in selectivity is difficult in these fisheries given many are mixed fisheries. This is particularly the case for anglerfish given its morphology which make improving selectivity specifically for anglerfish impractical.</p>
Exemption	Anglerfish caught by vessels using gillnets in ICES subareas 8 and 9
Main findings of EWG 22-05	<p>The supporting information on economic impacts was already provided in 2020. In 2021, EWG 21-05 has re-examined the Spanish study, and comments on the approach and methodology were provided. EWG 21-05 observed that the economic information provided on impacts of not granting the exemption indicates a comparatively high level of losses for the vessels involved in this fishery. However, EWG 21-05 requested more information on the methodology of the calculation and the data used as the opportunity costs cannot be put into context of the overall economic performance of the fleet segments. No additional information on the methodology and data was provided to EWG 22-05.</p> <p>Limited updated catch data has been provided by France for 2020, and no data for Spain and Portugal. Belgium has no gillnet fisheries in subareas 8 and 9. The information provided by France shows that discard rates are ranging between 2- 11% for gillnets.</p> <p>No assessment of the implications of granting the proposed exemption with regard to the fishery and species can be made due to the limited data provided by the Member States. The observations of EWG 21-05 remain relevant for this exemption.</p>
Supplementary information provided to the Commission post EWG 22-05	<i>No Supplementary information was provided</i>
STECF Comments	STECF notes that only France provided updated catch information to support the exemption and therefore, cannot assess the implications of granting the proposed exemption with regard to the fishery and species. However, STECF notes the catch information provided indicates discarding of anglerfish is low in most gillnet fisheries.
Exemption	Whiting - by vessels using bottom trawls, seines & beam trawls in ICES subarea 8
Main findings of	The supporting information on economic impacts was already provided in 2020. In 2021, EWG 21-05 has re-examined the Spanish study and

EWG 22-05	<p>comments on the approach and methodology were provided. EWG 21-05 observed that the economic information provided on impacts of not granting the exemption indicates a comparatively high level of losses for the vessels involved in this fishery. However, EWG 21-05 requested more information on the methodology of the calculation and the data used as the opportunity costs cannot be put into context of the overall economic performance of the fleet segments. No additional information on the methodology and data was provided to EWG 22-05.</p> <p>Updated catch data was provided by Belgium for 2021 and by France for 2019 and 2020. Catch data on whiting was not provided by Spain and Portugal. Therefore, the implications of granting the proposed exemption with regard to the fishery and species concerned cannot be fully quantified due to a lack of catch data per gear, year and for all Member States.</p> <p>Nonetheless, the information provided by France shows relatively low rates of discards (i.e., 3.8% in 2019 for bottom trawls targeting demersal species and cephalopods), while Belgium reported zero discard rates on whiting.</p> <p>Given that improving the selectivity of whiting in towed gears has been shown to be technically possible through the use of square mesh panels or other selectivity devices, implementing effective gear modifications to reduce whiting discards is encouraged.</p>
Supplementary information provided to the Commission post EWG 22-05	<i>No Supplementary information was provided</i>
STECF Comments	<p>STECF notes that discarding of whiting seems relatively low in most fisheries. However, STECF agrees that reducing the discard rates in fisheries with highest discard rates should remain the priority. In this regard, STECF agrees with EWG 22-05 that improving the selectivity for whiting in trawl fisheries is technically feasible and effective gear modifications already exist that could be applied in the relevant fisheries.</p>
Exemption	Whiting caught by vessels using gillnets in ICES subarea 8
Main findings of EWG 22-05	<p>The supporting information on economic impacts was already provided in 2020. In 2021, EWG 21-05 has re-examined the Spanish study and comments on the approach and methodology were provided. EWG 21-05 observed that the economic information provided on impacts of not granting the exemption indicates a comparatively high level of losses for the vessels involved in this fishery. However, EWG 21-05 requested more information on the methodology of the calculation and the data used as the opportunity costs cannot be put into context of the overall economic performance of the fleet segments. No additional information on the methodology and data was provided to EWG 22-05.</p> <p>Limited updated catch data has been provided by France, based on data for the period 2013-2016. No data has been provided for Spain and Portugal. Belgium has no gillnet fisheries in ICES subarea 8. No assessment of the implications of granting the proposed exemption with regard to the fishery and species can be made due to the limited data provided by the Member States.</p> <p>However, based on the observations of EWG 21-05 it is likely that the discards of whiting from gillnet fisheries are very low and therefore, the</p>

	impact of the exemption on the whiting stock is likely to be negligible.
Supplementary information provided to the Commission post EWG 22-05	<i>No Supplementary information was provided</i>
STECF Comments	STECF agrees with the observations of EWG 22-05 and given the limited catch data and supporting information provided, no assessment of the impact of the exemption can be made. Indications from previous evaluations suggest catches and discards of whiting in gillnet fisheries are very low.
Exemption	Red Sea Bream caught by vessels using bottom trawls, seines & beam trawls in 9a
Main findings of EWG 22-05	No new information has been provided so no evaluation can be made and the conclusions of EWG 20-04 and EWG 21-05 remain relevant.
Supplementary information provided to the Commission post EWG 22-05	<i>No Supplementary information was provided</i>
STECF Comments	STECF agrees with the observations of EWG 22-05.
Exemption	Sole caught by vessels using bottom - trawls, seines and beam trawls in 9a
Main findings of EWG 22-05	Very limited new information has been provided so no evaluation can be made and the conclusions of EWG 20-04 and EWG 21-05 are still relevant.
Supplementary information provided to the Commission post EWG 22-05	<i>No Supplementary information was provided</i>
STECF Comments	STECF agrees with the observations of EWG 22-05.
Exemption	Anchovy caught by vessels using beam trawls, bottom trawls and seines in ICES subareas 8 and 9
Main findings of EWG 22-05	The supporting information on economic impacts was already provided in 2020. In 2021, EWG 21-05 has re-examined the Spanish study and comments on the approach and methodology were provided. EWG 21-05 observed that the economic information provided on impacts of not granting the exemption indicates a comparatively high level of losses for the vessels involved in this fishery. However, EWG 21-05 requested more information on the methodology of the calculation and the data used as the opportunity costs cannot be put into context of the overall economic performance of the fleet segments. No additional information on the methodology and data was provided to EWG 22-05.

	<p>Limited catch information has been supplied to support this exemption. Belgium reported no catch of anchovy for 2021, only frequency of species occurrence has been provided by France for 2020 and no data by Spain and Portugal.</p> <p>Therefore, the implications of granting the proposed exemption with regard to the fishery and species concerned cannot be quantified due to a lack of catch data per gear, year and for all Member States. The observations of EWG 21-05 remain relevant for this exemption that given the likely low level of catch, the impact of this exemption on the anchovy stock is likely to be low.</p>
Supplementary information provided to the Commission post EWG 22-05	<i>No Supplementary information was provided.</i>
STECF Comments	STECF agrees with the observations of EWG 22-05 and given the limited catch data and supporting information provided, no assessment of the impact of the exemption can be made. Indications from previous evaluations suggest catches and discards of anchovy in the relevant fisheries are very low.
High Survivability	
Exemption	Skates and rays (Rajiformes) caught with all gears in ICES subareas 8 and 9
Main findings of EWG 22-05	<p>No new survival data has been presented. Survival data provided from previous projects is valuable but commented on by EWG in previous years.</p> <p>The SUMARIS project provided survival estimates for blonde, thornback, undulate and spotted ray species. SWW Annex B noted that the conclusions of the SUMARIS report show good survivability for the species examined during the study.</p> <p>In conjunction with FROM Nord, a second phase of the project is planned for 2022/2023. This will entail a survivability study of thornback rays caught with Danish seines. It is a 9- month project carried out by the FROM Nord, a French Producer Organisations, as part of its 2022 production and marketing plan (PPC). In the context of supporting the exemption of skates and rays from the landing obligation, this study will also provide additional elements to the SUMARIS project, which did not examine the Danish seine.</p> <p>Two Portuguese projects were mentioned in Annex A, but the results from these projects were not conclusive and therefore there is nothing new to report. It is noted that the SURF project, which ended in 2020, and which focused on the survival of the Cuckoo ray, will be extended in 2022 (date will be communicated soon). This extension of the SURF project is intended to increase scientific knowledge about survival of cuckoo ray. It will take place at the junction between the Bay of Biscay and the Celtic Sea and will be led by IFREMER. The first results will be available in 2023.</p> <p>The Portuguese roadmap noted that in the near future, the plan for skates and ray survivability experiments needs to be revised and is dependent on availability of adequate facilities for these research</p>

	<p>experiments. Further work is required to increase knowledge of discard survival for skates and rays in each fishery at various times during the year.</p> <p>As for cuckoo ray, the information provided in the past and additional catch data provided to support the JR show quite high discard rates for some ray species, which could equate to high levels of discard mortality associated with this exemption if the survival rates are low. However, the catch information provided is incomplete and filling the gaps in catch data for ray species should be prioritised to allow a full assessment of this exemption on the relevant species.</p>
Supplementary information provided to the Commission post EWG 22-05	<i>No Supplementary information was provided</i>
STECF Comments	<p>STECF agrees with the observations of EWG 22-05 and agrees that Member States should be encouraged to look at improving catch data for the different species as this data is lacking in many cases.</p> <p>STECF also encourages Member States use their joint scientific capacity to compile and analyse previous and new data in a more systematic way to assist future assessment of the exemptions covered under the roadmap.</p>
Exemption	Red seabream caught by vessels using the artisanal gear <i>voracera</i> in ICES division 9a and with hooks and lines in ICES subareas 8 and 10 and ICES division 9a
Main findings of EWG 22-05	No new information has been provided but new studies are planned to address issues raised by STECF EWG 19-08. The new experiments aim to estimate the survival rates based on captive observations and during a longer observation period in line with recommendations from ICES WKMEDS.
Supplementary information provided to the Commission post EWG 22-05	<i>No Supplementary information was provided</i>
STECF Comments	STECF agrees with observations of EWG 22-05. The additional survivability experiments provided should help to provided robust survival estimates from the relevant fishery.

Table 1d. Main findings of the STECF EWG 22-05, summary of additional information received relating to exemptions presented and Reviewer's Comments: **Baltic Sea**

High Survivability	
Exemption	Plaice ≤MCRS caught in Gillnets, trammel nets, Danish and Scottish seines, and certain trawls from 1 st Nov to 30 th Apr in ICES subdivisions 22–32

<p>Main findings of EWG 22-05</p>	<p>As for the beam trawl fisheries in the North Sea and NWW, the main motivation for this exemption appears to be to mitigate against the economic costs of landing high volumes of unwanted plaice. The justification for this exemption is based on estimates for plaice survival, which are at least as reliable as those available for plaice in other fisheries. However, there are caveats relating to their robustness as detailed above that should be addressed.</p> <p>Responding to the STECF PLEN 19-03, the supporting information that fishing practices for gillnets and trammel nets are comparable but suggest that entanglement in gillnets may be different to trammels but do not explain how this might impact on survival. It is stated in the supporting document that in gillnet fisheries, the fish are retained by the gills or large parts of the body whereas in trammel nets the fish are entangled in a pocket of netting. Whether the difference in retention has an impact on survival should be explored further.</p> <p>For Annex 3 and 5, the mean size of plaice was 33 cm (range 22–40 cm) although the exemption request is for plaice \leqMCRS (25 cm). It appears that most of the fish caught in the trammel nets were above MCRS with plaice \leqMCRS caught in only 3 of the 13 fleets of nets from which survival estimates were derived. It is unsure what impact the catching process would have on smaller fish, but due to the way trammel nets catch, smaller fish are likely to be entangled more by the gills as they attempt to pass through the meshes.</p> <p>For the trawl and seine part of the exemption, there is a limited description of the codends used, for example, with no information on the mesh sizes used. Information on the mesh sizes would be useful considering there are different mesh size regulations in subdivisions 22 and 23 compared to the rest of the Baltic region. Baseline mesh sizes are at least 120 mm (for T90) and at least 105 mm fitted with a Bacoma exit window of 120mm, with a derogation in subdivisions 22 and 23 of at least 90 mm when directed fishing for flatfish (Regulation (EU) 2019/1241). Codend mesh size and construction is likely to have an impact on survival, particularly for small plaice.</p> <p>Additionally, there are some concerns over the justification to truncate the observation period to ten days (due to an extreme cold event) and whether this did bias the survival estimates. This is considered important given the survival estimates are higher than estimates from other trials. In the supporting document provided by LIFE, it is stated that the temperatures in 2021 were similar to annual temperatures experienced since 2010.</p> <p>No information on catch rates has been provided. The expected length frequencies are not discussed for any of the gears, and it is not clear to what extent the impact would be on \leqMCRS plaice catches for the different gears. The data presented is from very specific areas within the subdivisions and no information is presented on how these areas compare to the rest of the subdivisions, accepting that 70% of the plaice catches come from subdivisions 22- 23, where the trials were carried out.</p> <p>It is difficult to comment on how this exemption will impact on cod stocks. It is unlikely the exemption itself would have any impacts unless in granting it, this led to an increase in fishing effort for plaice and thereby potentially increasing cod catches in the fishery as a whole. Further information on the cod and plaice catches and discards (from all gears) would be required to make any assessment. The market situation for plaice would also be important as if targeted fisheries for plaice were seen as viable, then there would be an incentive to increase effort.</p>
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	<p>Additionally, for trawl fisheries, EWG 22-05 understands that specific legislated gears that reduce cod catches while allowing flatfish fisheries to continue are due to be introduced into legislation. However, no information on the likely uptake of these gears. The BALTFISH High Level Group request that details of cod catches and bycatches from these gears should be recorded separately from catches taken by other fishing gears. This would be especially important in relation to this proposed exemption as there are mesh size increases proposed (for trawls) and their impact on \leqMCRS fish needs to be evaluated further.</p> <p>Only data from the Danish fleet involved in the fisheries is provided with no information for other fleets that may avail of the exemption submitted with the request. It is understood Denmark has around 72% of the total TAC.</p> <p>EWG 22-05 notes that for Annex 6: The request is for subdivisions 22–25 but the overall request (from BALTFISH JR) is for subdivisions 22–32. Clarification is needed as to the area intended to be covered.</p>
Supplementary information provided to the Commission post EWG 22-05	<i>No Supplementary information was provided</i>
STECF Comments	<p>STECF acknowledges the significant amount of information and clarifications received in relation to this exemption. STECF notes the weaknesses identified by EWG 22-05 in relation to the survivability data provided and the limitations of the catch data. Such weaknesses exist for the high survivability exemptions for other plaice stocks in other regions.</p> <p>STECF observes the exemptions for the Baltic are very much similar to those for plaice in the North Sea and NWW in that they are based on variable survival rates with relatively high discard rates in specific fisheries. Accounting for dead discards in the stock assessments for plaice will be very important if this exemption were to be granted to ensure fishing mortality is accurately estimated.</p> <p>STECF agrees with EWG 22-05 that it is difficult to comment on how this exemption will impact on cod stocks. STECF acknowledges it is unlikely the exemption itself would have any impacts unless in granting it, this led to an increase in fishing effort for plaice and thereby potentially increasing cod catches in the fishery as a whole. Further information on the cod and plaice catches and discards (from all gears) would be required to make any assessment. The market situation for plaice would also be important as if targeted fisheries for plaice were seen as viable, then there would be an incentive to increase effort.</p>

Table 1e. Main findings of the STECF EWG 22-05, summary of additional information received relating to exemptions presented and Reviewer’s Comments: **South-eastern Mediterranean.**

<i>De minimis</i>	
Exemption	Anchovy, Sardine, Mackerel and Horse Mackerel , up to a maximum of 5% of the total annual catches by vessels using bottom trawls in the South- Eastern Mediterranean Sea
Main findings of EWG 22-05	Some additional information has been provided, relative to the previous EWG assessments of this exemption. However, the previous assessments

	<p>by EWG 19-08 and 21-05 remain relevant.</p> <p>The methodology for calculating the discard ratio differs among countries (i.e., for Cyprus and Malta it is the ratio between discards (<MCRS) and total catch, while for Greece and Italy it is the ratio between total discards (both <MCRS and >MCRS) and total catch).</p> <p>Additionally, there is a weakness in the combined de minimis approach. Accepting that the combined discards ratio for all species covered by the exemption is low for some species, the proportion of the catch that is discarded may be high.</p> <p>While estimates of the potential increase in costs of handling unwanted catches ashore are provided, there is no way to objectively judge whether such estimates amount to disproportionate costs. The arguments are generic and/or applied to an “average” vessel, and more detailed information is necessary. However, EWG 22-05 acknowledges that the recent great increase in fuel costs has worsened the overall situation.</p> <p>Updated catch data has been provided by the SUDESTMED group. However, the information is sporadic, for different years and not consistently presented. Therefore, the implications of granting the proposed exemption with regard to the fishery and species concerned cannot be quantified due to these data issues, noting that apart from Italy the reported discard rates are relatively low.</p> <p>EWG 22-05 notes that for the reduction of discards, SUDESTMED HLG considers a key factor the effects of management measures related to the introduction of the Recommendation GFCM/42/2018/5 on a multiannual management plan for bottom trawl fisheries exploiting demersal stocks in the Strait of Sicily (geographical subareas 12 to 16), establishing 3 FRAs as permanent closures for demersal fisheries. Additionally, since 2019 Italy has reduced the fishing effort of bottom trawlers in GSAs 16 and 19. EWG 22-05 considers that these measures are mostly aimed at protecting juveniles and/or spawners of demersal species. However, EWG 22-05 acknowledges that a general reduction of the fishing effort of bottom trawl would likely also decrease the amount of bycatch of small pelagics.</p>
<p>Supplementary information provided to the Commission post EWG 22-05</p>	<p>The following Supplementary information was provided by SUDESTMED Group (an updated Annex A):</p> <ol style="list-style-type: none"> 1. Description of fisheries for which de minimis exemptions are requested in SUDESTMED area (Cyprus, Greece, Malta, Italy). 2. Considerations about the scientific knowledge related to the application of the “landing obligation” and to the continuation of the de minimis exemption for small pelagic by catch of trawl fisheries in the Mediterranean – Italian case SUDESTMED area. <p>The SUDESTMED HLG highlighted that new data and information has been provided. In the supporting documents accompanying the SUDESTMED draft Joint Recommendation described measures already in place and some different aspects considered very relevant to mitigate the impact of OTB métier on the bycatch of small pelagic species under MCRS. These include:</p> <p>The overall reduction of fishing effort since 2019 - 14% in GSA 16 and 25% in GSA 19 – which the SUDESTMED group consider beneficial to reducing the by-catch of species including small pelagic species covered</p>

	<p>by this exemption.</p> <ol style="list-style-type: none"> 1. The temporary cessation of fishing activities, for at least 30 continuous days, during the late summer/autumn, which is expected to be beneficial in reducing bycatch of species including the small pelagics. Such consideration is supported by GAM modelling in MedBLand (GSA 19). The last quarter is significant in terms of increased discards for the species more subject to discarding, such as <i>Trachurus</i> spp. 2. The establishment of 3 FRAs in the Strait of Sicily (2 in GSA 16 and 1 in GSA 15) as permanent closure for demersal fisheries, including fully closed areas and buffer zones as well as MCRS measures are expected to produce positive effects for reducing discards of target demersal stocks and consequently of by-catch species, including small pelagics, at least for the fraction of the catch below the MCRS. 3. The evaluation of the impact of the derogation already granted on the discards such as <i>Trachurus</i> spp., was evaluated and a slight reduction was observed in GSA 19 with a stronger decline was reported in GSA 16. 4. It was considered that the impact of disproportionate costs, as evaluated in the previous year, has not significantly changed over time. However, it is now the case that the sharp increase of fuel costs will reduce incomes significantly and therefore deteriorating the profitability of the fleets further. <p><i>Reviewer's comment: Reviewer acknowledges the updated information provided by the SUDESTMED. However, the reviewer has the opinion that this does not materially affect the main findings of EWG 22-05.</i></p>
<p>STECF Comments</p>	<p>STECF agrees with the observations of EWG 22-05. STECF notes that there is no way to objectively judge whether potential increase in costs of handling unwanted catches ashore amount to disproportionate costs. The arguments are generic and/or applied to an "average" vessel, and more detailed information is necessary.</p> <p>STECF notes the difficulties associated with the rise in fuel prices that have impacted significantly on the profitability of the relevant fleets. Acknowledging these difficulties are real, STECF nonetheless observe they have only indirect links with the implementation of the landing obligation.</p>

Table 1f. Main findings of the STECF EWG 21-05, summary of additional information received relating to exemptions presented and Reviewer's Comments: **Western Mediterranean.**

High Survivability	
Exemption	Scallop (<i>Pecten jacobaeus</i>), Carpet clams (<i>Venerupis</i> spp.), and Venus shells (<i>Venus</i> spp.) below the minimum conservation reference size caught with mechanised dredges in the Western Mediterranean
Main findings of	The supporting information pertaining <i>Pecten jacobaeus</i> suggest further investigation on the survivability of this species caught with dredges in

EWG 22-05	<p>the Western Mediterranean Sea, also considering the potential effects of such gears in the swimming ability of this bivalve.</p> <p>No scientific evidence to support the request based on the high survivability of the carpet clams (<i>Venerupis</i> spp.) has been provided and thus no further evaluation of the proposed exemption is possible.</p> <p>The supporting information provided for Venus shells (<i>Venus spp</i>) does provide robust high survivability estimates for this species harvested by hydraulic dredges. Several caveats are noted, principally the estimates are from a different area (e.g., Adriatic Sea).</p>
Supplementary information provided to the Commission post EWG 22-05	<p>The following study was provided as supplementary information:</p> <p>Jenkins, S.R. And Brand, A.R. 2001. The effect of dredge capture on the escape response of the great scallop, <i>Pecten maximus</i> implications for the survival of undersized discards. <i>Journal of Experimental Marine Biology and Ecology</i> 266:33–50.</p> <p><i>Reviewer’s comments: The subject of the paper Jenkins and Brand (2001) is Pecten maximus (a cogenus of P. jacobaeus) caught with dredges in the Irish Sea. The study demonstrated a reduction in the swimming ability in captured undersized scallops. These data, together with numerous studies of predator aggregation to discarded material, indicated that there is a potential for high levels of mortality in undersized discards of P. maximus and in impacted but uncaptured individuals. Related to EWG 22-05, these results suggest the need to investigate the survivability of P. jacobaeus caught with dredges in the Western Mediterranean Sea, also considering the potential effects of such gears in the swimming ability of this bivalve.</i></p> <p><i>The additional information does not affect the main findings of EWG 22-05.</i></p>
STECF Comments	STECF agrees with the observations of EWG 22-05.

Table 1g. Main findings of the STECF EWG 22-05, summary of additional information received relating to exemptions presented and Reviewer’s Comments: **Adriatic**

<i>De minimis</i>	
Exemption	Anchovy, Sardine, Mackerel and Horse Mackerel , up to a maximum of 5% of the total annual catches by vessels using bottom trawls in the Adriatic Sea
Main findings of EWG 22-05	<p>The supporting information and the basis for the exemption provided by Croatia, Italy and Slovenia are not different from those presented previously to EWG 21-05. Therefore, the observations from EWG 21-05 remain relevant.</p> <p>Regarding, Italy the estimated combined discard rate (small pelagic species) corresponds to 53.1% in GSA17. Consequently, the de minimis volume is likely to cover only a proportion of the discards. Ways to deal with or reduce the residual unwanted catches have not been provided. For Croatia and Slovenia value of combined discards are much lower and typically less than 5%.</p> <p>As regards disproportionate costs, the supporting information is still based on documents provided in previous EWG and consequently EWG 22-05 can only reaffirm the same considerations. However, EWG 22-05</p>

	<p>acknowledges that the recent great increase in fuel costs has worsened the overall situation.</p> <p>The results coming from the IMPEMED project regarding the use of selectivity devices, such as grids and T90 panels, in bottom trawl nets while interesting are not necessarily relevant for this exemption. If on one hand there are improvements in the selectivity for some species, such as European hake, on the other hand, there are possible economic losses due to the reduction of catches of red mullet and deep-water rose shrimp of commercial size. Further investigation on these selectivity devices is needed to find a compromise between improving selectivity and minimising economic losses.</p> <p>EWG 22-05 notes that for the reduction of discards, ADRIATICA HLG considers a key factor the effects of management measures related to the introduction in the Adriatic Sea of the Recommendation GFCM/44/2021/1 that establishes a fishing effort regime for key demersal stocks in GSAs 17 and 18 and the closure of coastal strip (within 6 nautical miles) or alternatively 30 continuous days of fishing ban, in addition to existing FRAs and the establishment of new FRAs. EWG 22-05 considers that these measures are mostly aimed at protecting juveniles and/or spawners of demersal species. However, EWG 22-05 acknowledges that a general reduction of the fishing effort of bottom trawl would likely also decrease the amount of bycatch of small pelagics.</p> <p>EWG 22-05 notes that in Adriatica JR, page 6 the following sentence is reported: <i>Croatia, Italy and Slovenia recommend the continuation of the following exemption already granted in amended Commission delegated Regulation (EU) 2020/4 up to 0.5% of total annual catches of pelagic species (Anchovy, Sardine, Mackerel, Horse mackerel) under landing obligation according to Table.</i></p> <p>This sentence contains two aspect that should be clarify ; the first one regards the delegated Regulation (EU) 2020/4 that is no longer in force ; the second relates to the de minimis request of 0.5%, which it is assumed should be 5%.</p>
<p>Supplementary information provided to the Commission post EWG 22-05</p>	<p>The following Supplementary information was provided:</p> <p>Slovenia:</p> <p>In Slovenia, the disproportionate costs of handling discards remain high considering the continued low quantities of landings. In 2021, total landings in Slovenia decreased in comparison to the previous year, from 155 tonnes in 2020 to only about 106 tonnes in 2021 (i.e., a decrease in landings in comparison to 2020 of 31,6 %).</p> <p>Thus, the Slovenian fisheries sector continues to be very small. Considering the low quantities of landings in general, and the small size of fishing vessels (an overwhelming majority of Slovenian fishing vessels are below 15 m of length), requirements connected to the handling of discards on board and on land would demand additional resources. This would include additional space and equipment on board, additional crew, and appropriate facilities in ports to handle discards, as any discards need to be handled appropriately with regard to EU Directives in the field of hygiene. However, due to the small size of Slovenian fishing vessels, small daily, monthly, and annual catches and thus small profits, it is impossible to arrange for the necessary additional equipment, facilities and human resources needed for handling unwanted catches if the de minimis exemption was not in place.</p> <p>Thus, Slovenia would like to ask STECF to also consider the small size of</p>

fisheries sectors, fishing vessels, and small local fishing ports as well as socio-economic implications when considering the necessity of appropriate de minimis exemptions. In this light, it would be appropriate to consider the lowest threshold or quantity of landings, above which the landing obligation would apply. Those fisheries sectors or fisheries that are below such a minimum threshold should be exempted from the landing obligation.

Such provisions already exist in EU legislation. The DCF contains such threshold and Member States with landings below 200 tonnes are not obliged to collect biological data (Commission Implementing Decision (EU) 2021/1168 of 27 April 2021 establishing the list of mandatory research surveys at sea and thresholds as part of the multiannual Union programme for the collection and management of data in the fisheries and aquaculture sectors from 2022). It would be important if the STECF could consider such a threshold also in the case of the landing obligation.

Italy

Italy considers the overall reduction of fishing effort since 2019 - 24% in GSA 17 and 18 - is beneficial in reducing the by-catch of species, including small pelagics covered by this exemption. Italy also highlights those recent evaluations have shown a decreasing in discard ratio for *Trachurus* in GSA 18.

Other measures considered beneficial to reducing discards of bycatch species include:

- The temporary cessation of the fishing activities in the territorial waters (12 nautical miles) for at least 30 continuous days
- The consecutive further temporary cessation within 6 nautical miles during the late summer/autumn until December.
- The reduction of the working days during the week (supported by GAM modelling in MedBLand, as the last quarter is significant in terms of increased discards for the species more subject to discarding, as *Trachurus* spp).
- The establishment of the Jabuka/Pomo Pit FRA (which covers an area equivalent to 2-3% of the Adriatic Sea).
- The establishment of the no-take zone to protect juveniles in the Central Adriatic (equivalent to 1% of the area of the Adriatic Sea).

Italy considers that the impact of disproportionate costs, as evaluated in the previous year, has not significantly changed over time. However, it is now the case that the sharp increase of fuel costs will reduce incomes significantly and therefore deteriorating the profitability of the fleets further.

Finally, considering that the change of the mesh size towards a significant increase (e.g., 50 mm open square mesh) for certain fisheries or depth ranges may be economically unsustainable (STECF 21-13), further investigation of the selectivity devices, tested (e.g. IMPEMED), could be envisaged.

Croatia

Croatia highlights that after a period of stability of fuel, prices during the period 2019-2021 (0.68 EUR in 2019, 0.53 EUR in 2020 and 0.72 EUR in 2021), as in the rest of the Europe, the price of fuel increased by 100%

in 2022 and currently amounts to a record high 1.25 EUR per litre. This has significantly increased the overall operational costs, decreased the revenue and jeopardised the sustainability of the fishing fleet. Fuel accounts for 48% of the total operational costs of this fleet in the period before the fuel crisis, while in 2022, as per a preliminary analysis, fuel makes up 80-90% of the operational costs. Croatia stresses that the current situation cannot support any additional activity which does not bring any revenue or added value and only consumes time and decreases effectiveness of the crew.

Landing infrastructure has been one of the weakest elements in the overall fisheries sector in Croatia and more significant investments into this component began with the implementation of the EMFF. Significant amount of EMFF fund was directed to improving of the landing infrastructure, and particular attention was given also to equipping the landing places with the necessary storage facilities for full implementation of the landing obligation. Given the fact that these are very complex and lengthy projects, at the moment there are no preconditions for systematic implementation of the landing obligation along the Croatian coastline from infrastructural perspective. Thus far, only one project has been finalised (Split Dalmatia County – port of Brižine) – which is the key landing place for this part of the middle Dalmatia. It is equipped with storage facilities. Three more projects are close to finalisation (Zadar County – port of Gaženica and Lamjana (island of Ugljan) and in Primorje-Gorski Kotar County – Rab (island of Rab)) while the remaining 9 projects are in the pipeline. For comparison, in 2021, bottom trawls in Croatia landed their catches in 153 landing places. There is still no organised system in place for collecting the catches not intended for human consumption, nor is there a dedicated market (factory for fish meal production is planned during the current programming period 2021-2027).

In 2021, bottom trawls in Croatia landed their catch in 153 landing sites of which 30% are located on the islands where a 36% of the total catches from bottom trawls are landed. In average, there were 3.6 landings per week with the majority of landing places having less than 5 landings per week, and only 11 of them with more than 10 landings per week. In general, the 7 most frequent landing places cover 25% of all bottom trawl landings.

When observing the landed quantities per vessels and single landings, calculation was made to estimate the possible landed discard of small pelagics from the OTB fleet based on the average recorded discard rate of 3.75% (period 2018-20). On average, landed discard per landing place per one week, varied from 296kg to 0.2kg, with an average of 22kg. However, similarly as for the number of landings in the majority of landing places, the volume of landed discard per week would be less than 1% and 30 kg per week (123 of them), while 13 landing places would account for 50% of landed discards.

At the level of the single vessel, in one fishing trip, the estimated volume of landed discard would be 6.4 kg. It is clear that due to the high number of landing places along the coast and in the islands, as at the same time small volume of possible landed discard, it would be highly disproportional to have a scheme to collect, transport and destroy the landed discards.

Reviewer's comments:

Reviewer acknowledges the additional information to support the exemption provided by Slovenia, Italy and Croatia.

	<p>However, no information has been provided concerning the de minimis % requested (i.e., in Adriatica JR the request was: "Croatia, Italy and Slovenia recommend the continuation of the following exemption already granted in amended Commission delegated Regulation (EU) 2020/4 up to 0.5% of total annual catches of pelagic species (Anchovy, Sardine, Mackerel, Horse mackerel) under landing obligation according to Table 1". The doubt remains if this is really 0.5% or 5%.</p> <p>Comments to additional information provided by Slovenia, Italy and Croatia.</p> <p><u>Slovenia:</u> no additional documents have been provided. Information regarding a decreasing trend of discards from 2020 to 2021 (i.e., from 155 to 102 tons) has been provided. The request is still based on disproportionate costs. In addition, Slovenia asks STECF to consider the fact that, according to DCF, MS with landings below 200 tonnes are not obliged to collect biological data. On this view, EWG 22-05 is not sure this information could affect the exemption request for de minimis.</p> <p><u>Italy:</u> No additional documents have been provided by Italy. Basically, this additional information reflects in a more detailed way what already provided by ADRIATICA.</p> <p><u>Croatia:</u> Basically, the information provided by Croatia mostly reflects what has been already provided during the last two LO EWGs (21-05 and 22-05). This time, in addition, reference to an increase of the fuel prices has been made. The overall request continues to be mostly based on disproportionate costs.</p>
STECF Comments	<p>STECF agrees with the observations of EWG 22-05. STECF notes that there is no way to objectively judge whether potential increase in costs of handling unwanted catches ashore amount to disproportionate costs. The arguments are generic and/or applied to an "average" vessel, and more detailed information is necessary.</p> <p>STECF notes the difficulties associated with the rise in fuel prices that have impacted significantly on the profitability of the relevant fleets. Acknowledging these difficulties are real STECF nonetheless observe they have only indirect links with the implementation of the landing obligation.</p> <p>STECF observes that the request from Slovenia regarding the introduction of thresholds under which the landing obligation should not apply is a policy issue that should be addressed to DGMARE.</p>

Table 1g. Main findings of the STECF EWG 22-05, summary of additional information received relating to exemptions presented and Reviewer's Comments: **Black Sea**

<i>High Survivability</i>	
Exemption	Turbot (<i>Scophthalmus maximus</i>) caught with bottom-set gillnets (GNS) in the Black Sea (GSA29)
Main findings of EWG 22-05	Data provided by Bulgaria and Romania are valuable because they represent the first attempt of assessing survival of turbot caught with gillnets in the Black Sea, albeit based on vitality estimates. Vitality assessments do not, by themselves, generate an absolute survival estimate, but can quantify "at-vessel" or "immediate" mortality levels. When correlated with a likelihood of survival at vitality (derived from tagging or captive observation methods), a vitality index can be used as a proxy for survival. Moreover, following the ICES guidelines, vitality is typically quantified by measuring characteristics of individual animals

	<p>such as activity, responsiveness, reflex impairment, and injury. Therefore, in future studies it would be highly recommended to follow the methodologies described in the ICES guidelines.</p> <p>However, based on the supporting information presented, along with the fishery information provided last year to EWG 21-05, it seems that discarding of turbot is negligible/absent in this fishery. Therefore, while the exemption itself is likely to have low impact, it is not altogether clear why it is needed.</p>
Supplementary information provided to the Commission post EWG 22-05	<i>No Supplementary information was provided</i>
STECF Comments	<p>STECF agrees with the observations of the EWG 22-05. STECF acknowledges that the efforts made by Romania and Bulgaria to provide supporting information and catch data which is seen as a positive step.</p> <p>STECF notes the weaknesses identified by EWG 22-05 in relation to the vitality data provided, while acknowledging that the level of discards in the relevant fishery is very low.</p>

STECF conclusions

STECF endorses the observations and main findings of the EWG 22-05. Based on such findings STECF concludes that many of its previous conclusions remain valid and where appropriate are included in the conclusions below.

General conclusions

- The role of STECF EWGs set up to evaluate Joint Recommendations remains to evaluate the scientific rigor and robustness of the underpinning information supplied by Member States to support the main elements of Joint Recommendations. The EWG or STECF cannot adjudicate on whether exemptions should be accepted or not.
- The avoidance of unwanted catch through improved selectivity or other means should be the primary focus in implementing the landing obligation. While recognising that modifying selectivity can result in some reduction in revenue, such loss in revenue should be viewed in the broader context of medium-term gains in stocks from an increase in selectivity, the reduced risk of choke events and better utilization of quota to land a higher proportion of more valuable catch.
- The quality of submissions to support the exemptions has generally improved since the first JR's were submitted in 2014. However, there are cases in the 2022 JRs where the supporting information does not contain any new information. For some exemptions, no information has been provided at all. This has meant that for many exemptions, the EWG has not been able to carry out any meaningful evaluation and the previous observations from STECF remain valid.
- The quality and consistency of catch data provided to support exemptions in 2022 has been quite limited for many exemptions. Data has covered different years, for different or wider areas than covered by the exemption and in different formats. STECF acknowledges that Covid-19 has meant data collection has been challenging. However, having such data is important to understand the relationship between the de minimis volume requested, the actual level of unwanted catches to put the proposed exemption in the context of the fishery and also the state of the stock for which the exemption is covering. This allows an assessment as to whether risk of the exemption to the relevant stocks covered by the

exemption is minimal.

- Weaknesses remain in the collection of catch documentation data. If the data situation does not improve and the true quantities being caught as reported do not reflect the actual removals, it will likely have a significant impact on the quality of scientific advice and may compromise the achievement of the MSY objective. This potential for this discrepancy is higher for *de minimis* than high survival exemptions because the actual discard amount may be substantially higher than the permitted *de minimis* amount. For several high survival exemptions, this risk has been mitigated to some extent by deducting the estimated dead discards associated with the exemptions from the total allowable quota prior to allocation. However, this is not the case for all stocks currently covered by a high survivability exemption.
- The intention of DGMARE to carry out a full review of the exemptions that are in place is timely. Such a review would help to determine whether they need to be amended or are still required given likely changes in catch patterns, gears used, vessels involved and uptake. In initiating such a review, however, STECF stresses it is vital that Member States and the Advisory Councils understand what information is needed to support this review and allow STECF carry out a meaningful evaluation.
- The CFP review provides an opportunity to consider the landing obligation and ways to improve implementation. In this context, reviewing the process of evaluating exemptions would be helpful for STECF in addition to reviewing the exemptions themselves.

Conclusions on de minimis exemptions

- Under Article 15 of the CFP Basic regulation Member States have a legal requirement to record all catches discarded under *de minimis* exemptions. However, in many cases this information is still lacking from the supporting information provided by Member States as evidenced by the limitations of data contained in the FDI database.
- For many exemptions, the relationship between the *de minimis* volume requested and the level of unwanted catches is unclear from the information provided to support the exemption. In some cases, the *de minimis* volume covers 100% of the unwanted catches, usually in fisheries where the levels of unwanted catch are small. In other cases, the *de minimis* volume covers only a small part of the unwanted catches and the supporting information should contain indications on the measures to be taken to reduce these residual unwanted catches.
- The case for *de minimis* should not be improved by having high levels of unwanted catches, and therefore high handling costs, where the incentive to improve selectivity should be maintained. Improving selectivity or avoidance methods to reduce the catches of unwanted catches should be the priority.
- Judging at which level costs are disproportionate because there is no way of assessing objectively what level of costs constitutes disproportionate remains challenging. For this reason, in assessing *de minimis* exemptions, the relationship between the *de minimis* volume, the actual level of unwanted catches and the overall status of the stocks involved has been the focus of the assessments.
- Testing gears to improve the selectivity for low value stocks or in circumstances where the level of discards is very low is challenging. Prior to the landing obligation such catches were always discarded due to their low market value. Diverting scarce research funds to specifically investigate selectivity for such species is not really an option. Therefore, improving selectivity in such circumstances is only going to be delivered as a consequence of using selective gears designed to reduce unwanted catches of different target species. For instance, the use of square mesh panels in gadoid fisheries may lead to a reduction in boarfish or greater silver smelt catches.

Conclusions on high survivability exemptions

- Assessing what constitutes high survivability is still complicated by the limited evidence and the variability in the available estimates. Many factors can affect survival, but these are not well understood. This makes assessment of requests for survivability complex as many factors need to be considered.
- Survivability should be considered in the context of the discard rate for the fishery seeking an exemption. Medium survival rates in high discarding fisheries still lead to high discard mortality rates. STECF has previously concluded (STECF PLEN 19-02) that unless surviving discards are accounted for in stock assessments when dead discards are accounted for in TAC setting, where survivability exemptions are in place, the actual fishing mortality will not match the agreed catch level. This should continue to be discussed in the assessment forums for stocks with survival exemptions.
- Gaps in the evidence provided remain on conditions of the relevant fisheries (gear use, haul duration, seasonality, areas etc.) and catch data for all Member States to provide context for this exemption. Such information is crucial in order to assess the representativeness of the different reported survival rates and to be able to assess the effects of the exemption on the different stocks.

Conclusions on technical measures

- Despite many experiments to test selective gears, there are still relatively few examples of such gears being incorporated into the JRs submitted. Where there is no specific legislation making the use of selective gears mandatory, uptake of selective gears remains extremely low even in fisheries where unwanted catches remain high.
- Strengthening the linkage of exemptions to the use of selective gears as is the case for several exemptions (e.g., de minimis exemptions for whiting and haddock in the Celtic Sea; Common sole in the beam trawl fisheries in the North Sea and NWW; High survivability exemptions for *Nephrops* in North Sea and NWW) would provide greater confidence that the exemption is not just a means to maintain “business as usual” in the relevant fishery.
- There are indications of various experiments with lights to reduce unwanted catches. Consolidating the findings into one review would be helpful to understand whether using lights has potential to reduce unwanted catches and for which species and in which fisheries.

Conclusions on the impact of the landing obligation

- Conducting an ex-post analysis of the economic implication of the landing obligation would be timely. This should aim to explore and explain the reasons for the lack of real impacts and to contrast the results with the ex-ante literature showing impacts would be likely. This should also include possible ways to mitigate short-term losses without recourse to flexibility mechanisms or exemptions from the general rules. The aim should be to allow the sector to be able to cope with the short-term losses to realise the mid- to long-term gains that could be accrued.

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¹ - Information on STECF members' affiliations is displayed for information only. In any case, Members of the STECF shall act independently. In the context of the STECF work, the committee members do not represent the institutions/bodies they are affiliated to in their daily jobs. STECF members also declare at each meeting of the STECF and of its Expert Working Groups any specific interest which might be considered prejudicial to their independence in relation to specific items on the agenda. These declarations are displayed on the public meeting's website if experts explicitly authorized the JRC to do so in accordance with EU legislation on the protection of personnel data. For more information: <http://stecf.jrc.ec.europa.eu/adm-declarations>

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REPORT TO THE STECF

EXPERT WORKING GROUP ON Evaluation of Joint Recommendations on the landing obligation and on Technical Measures Regulation (EWG-22-05)

Virtual meeting, 16-20 May 2022

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

1 INTRODUCTION

Joint Recommendations on the landing obligation (exemptions)

After consulting the relevant Advisory Councils, Member States cooperating at sea-basin level may provide the Commission with joint recommendations requesting exemptions from the landing obligation. Where the STECF's advice is positive, the Commission adopts delegated acts implementing these joint recommendations into EU law, in accordance with Article 15(6) of the Common Fisheries Policy³ (CFP). Where there is no multiannual plan for the fishery in question, article 15(6) of the CFP empowers the Commission to adopt delegated acts laying down on a temporary basis specific discard plans containing the exemptions. The six potential elements that can be contained in a discard plan are the following:

- Definitions of fisheries and species
- Provisions for survivability exemptions
- Provisions for de minimis exemptions
- The fixation of minimum conservation reference sizes
- Additional technical measures needed to implement the landing obligation; and
- The documentation of catches.

The temporary discard plans under Article 15(6) with a maximum of 6 years have expired in 2020 or will expire in 2021 and have been or should be replaced by provisions adopted under article 15(5) and specified in multiannual plans. Under the existing multiannual plans, provisions⁴ specify that the Commission is empowered to adopt delegated acts following Article 18 of the CFP (Regionalisation procedure). Currently, most of the delegated regulations specifying the details of implementation of the landing obligation have been adopted by the Commission under the existing multiannual plans (Western Waters, the North Sea and Baltic).

In 2022, the discard plan for turbot fisheries in the Black Sea will expire as well as the Delegated Regulation regarding the derogation for the MCRS of Venus shells (*Venus spp.*) For this year and EWG, there are **nine** joint recommendations to be expected, see annex 1 for more detail but in summary:

- 10) Landing obligation - Joint recommendation Western Waters. Discard plan valid until 2023. One exemption requiring additional information, plus several extension requests for exemptions granted until the 31st of December 2022, and (possibly) two new high survivability derogations
- 11) Landing obligation – joint recommendation North Sea. Valid until 2023 so only exemptions requiring additional information + one request for a new exemption
- 12) Landing obligation – joint recommendations Southwestern waters. Valid only 2023 exemptions requiring additional information.

³ Regulation (EU) 1380/2013 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 11 December 2013 on the Common Fisheries Policy, amending Council Regulations (EC) No 1954/2003 and (EC) No 1224/2009 and repealing Council Regulations (EC) No 2371/2002 and (EC) No 639/2004 and Council Decision 2004/585/EC. OJ L 354, 28.12.2013, p. 22.

⁴ Article 13, Regulation (EU) 2019/472 of the European Parliament and of the Council of 19 March 2019 establishing a multiannual plan for stocks fished in the Western Waters and adjacent waters, and for fisheries exploiting those stocks, amending Regulations (EU) 2016/1139 and (EU) 2018/973, and repealing Council Regulations (EC) No 811/2004, (EC) No 2166/2005, (EC) No 388/2006, (EC) No 509/2007 and (EC) No 1300/2008

⁴ Article 11, Regulation (EU) 2018/973 of the European Parliament and of the Council of 4 July 2018 establishing a multiannual plan for demersal stocks in the North Sea and the fisheries exploiting those stocks, specifying details of the implementation of the landing obligation in the North Sea and repealing Council Regulations (EC) No 676/2007 and (EC) No 1342/2008

⁴ Article 7, 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

⁴ Article 14, Regulation (EU) 2019/1022 of the European Parliament and of the Council of 20 June 2019 establishing a multiannual plan for the fisheries exploiting demersal stocks in the western Mediterranean Sea and amending Regulation (EU) No 508/2014

- 13) Landing obligation – joint recommendation high survival exemption for plaice in the Baltic Sea. New exemption.
- 14) Landing obligation – joint recommendation turbot fisheries Black Sea. Valid until 2022.
- 15) Landing obligation – joint recommendation demersal fisheries Western Mediterranean Sea. Valid until 2024 so only exemptions requiring additional information; will include high survivability exemption request for Venus Shell
- 16) Landing obligation – joint recommendation demersal fisheries south-eastern Mediterranean. Valid until 2024 so only de minimis exemptions requiring additional information (bycatch of small pelagics in demersal trawl fisheries)
- 17) Landing obligation – joint recommendation demersal fisheries Adriatic Sea. Valid until 2024 so only de minimis exemptions requiring additional information (bycatch of small pelagics in demersal trawl fisheries)
- 18) Technical Measures – joint recommendation from NWW

The STECF has reviewed the joint recommendations prepared by the regional groups of MS annually since 2014-2018 on fisheries subject to the landing obligation in the subsequent year. The implementation of the landing obligation has entered fully into force as of 1 January 2019. STECF is requested through this working group to review and evaluate the Member States' joint recommendations requesting either additional or continued (with additional scientific information as requested by STECF) exemptions for >2023.

Joint Recommendations on Technical Measures (Regulation)

All amendments, supplements, repeal or derogations from technical measures will be based upon Article 15 of the Technical Measures Regulation (Regulation (EU) 2019/1241). The entry into force of this Regulation resulted in the introduction of the process of regionalization in numerous fields as far as technical measures are concerned. In this process, the regional groups should develop joint recommendations that would need to go through the STECF in order to assess to what extent the recommendation proposed goes in line with achieving the objectives set out in the Regulation.

Main elements of the joint recommendations to be considered by STECF

Landing obligation - de Minimis and High Survivability

The main elements that STECF should continue to evaluate are the additional exemptions for **de minimis** or on the basis of **high survivability** for species subject to the landing obligation.

In addition to any new exemptions, STECF should also review additional information supplied to support several of the exemptions granted for 2022 but with the provision that the Member States concerned should submit further data to the Commission by 1 May 2022 to allow STECF to further assess these particular exemptions.

Technical measures

One joint recommendation from Italy regarding derogation of the MCRS of Venus shells (Venus spp.) has been already assessed in STECF PLEN 22-01. No joint recommendation on directed fishing is expected to be submitted. Any submitted joint recommendations on technical measures cover (one of) the following:

- Measures modifying the size and characteristics of fishing gear that MS may wish to implement in certain areas to increase selectivity and decrease the negative effects of the activity in the environment
- Minimum Conservation References Sizes for recreational fisheries
- Mitigation measures for bycatch of certain sensitive species, such as cetaceans or sea birds
- Definition of the directed fisheries for each species and sea basin, with a deadline of August 2020.

1.1 Terms of Reference for EWG-22-05

Based on the previous evaluations of the STECF, the Ad-hoc contract 19-01 on temporary *de minimis* exemptions, the joint recommendations that will be submitted by Member States regional groups ([see annex](#)), the following draft terms of reference are proposed:

STECF is requested to:

1. Review the supporting documentation underpinning exemptions on the basis of **high survivability** in respect of:

a. Exemptions agreed for 2022 on the basis of high survivability where there was a requirement for further information to be supplied by 1 May 2022. In such cases, STECF should assess the quality of the information supplied and, where possible, provide a qualitative assessment of the ongoing efforts to address the needs for further information identified by STECF last year

b. New exemptions based on high survivability. In data poor situations, assess what further supporting information may be available and how this could be supplied in the future (e.g., survival studies, tagging experiments).

2. Review the supporting documentation (biological, technical and/or economic) for **de minimis** exemptions on the basis that either increasing selectivity is very difficult to achieve, or to avoid handling unwanted catches would create disproportionate cost in respect of:

a. The *de minimis* exemptions agreed for 2022 where there was a requirement for further information to be supplied by 1 May 2022. In such cases, STECF should assess the quality of the information supplied and, where possible, provide a qualitative assessment of the ongoing efforts to address the needs for further information identified by STECF last year

b. New *de minimis* exemptions. In data poor situations, assess what further supporting information may be available and how this could be supplied in the future (e.g. discard data collection, selectivity studies).

As joint recommendations might be submitted on the basis of the Technical Measures Regulation (TMR) and they will be reviewed in this same EWG, STECF is also requested to:

On directed fishing definition, no joint recommendation is expected to be submitted for the NWW, the NS and SWW. Therefore, this evaluation is not included in this ToR.

3) For any joint recommendations submitted on the elements of the TMR, the STECF is requested to:

a. Review whether there is sufficient information to support proposed minimum conservation reference size(s) that deviate from existing minimum landing sizes, and whether they are consistent with the objective of ensuring the protection of juveniles; as well taken into account Article 15(5) of the TMR stating mesh size specifications shall not lead to a deterioration of selectivity standards.

b. Review the supporting documentation provided for technical measures aimed at increasing gear selectivity for reducing or, as far as possible, eliminating unwanted catches including reducing fishing mortality on stocks in need of remedial measures for rebuilding biomass. This should include, if relevant, an indication of where further selectivity is currently difficult to achieve in a specific fishery, given the current state of technological developments.

4) Additionally, the STECF is requested to review the findings of the adhoc contract linked to this EWG 'Summary of information on possible socio-economic impact of the implementation of the landing obligation', to be submitted by the selected expert by 11.05.2022

STECF noted (22-01) that they may be able to, for example, provide some updated literature review of reports and publications of the socioeconomic impacts of the landing obligation, as well as providing a comprehensive overview on model-based conclusions from different scenarios and fisheries of implementing the landing obligation. That review could be performed through an ad-hoc contract, and later summarised and included in the next EWG dealing with the landing obligation through a specific ToR for this group. This specific ad-hoc contract follows up to the above suggestion. As there is no or only very limited information on the socio-economic impacts, the STECF suggested to provide a summary of information from literature or research projects as background document to be included in the ToR of the upcoming STECF EWG 22-05. This ad hoc contract should provide the group with some background information on the available information on possible socio-economic impacts of the landing obligation, linked to the content of the joint recommendations evaluated -specifically the de minimis exemptions.

2 MAINELEMENTS OF THE DISCARD PLANS

Based on the terms of reference, EWG 22-05 considered multiple existing exemptions for *de minimis* and high survivability which were granted on a temporary basis for one year for which, the Commission requested additional information from Member States. A limited number of new requests for *de minimis* and high survivability exemptions were also received.

For the Mediterranean, three Joint Recommendations were submitted by the different regional groups (SUDESTMED, PESCAMED and ADRIATICA); SUDESTMED and ADRIATIC submitted additional supporting information relating to *de minimis* exemptions for pelagic species caught as bycatch in demersal fisheries and PESCAMED for high survivability in dredge fisheries for scallops and clams. A request for a high survivability exemption for turbot in the Black Sea was also submitted by Romania and Bulgaria.

EWG 22-05 also considered a Joint Recommendations on regional technical measures received from the NWW. This was in the context of Regulation (EU) 2019/1241 which establishes a framework for technical measures for the conservation of fisheries resources and the protection of marine ecosystems. Article 15 of this Regulation and corresponding annexes put in place technical measures at regional level and include an empowerment for the Commission to adopt delegated acts to amend, supplement, repeal or derogate from those technical measures. These delegated acts are based on Joint Recommendations submitted by Member States concerned, in accordance with the regionalisation procedure described in Article 18 of the CFP.

The number of exemptions proposed in the JRs for evaluation by EWG 22-05 was comparable with the previous submissions in 2021 (EWG 21-05, STECF PLEN 21-02). The number of individual exemptions proposed for introduction or continuation in 2022 was 49 compared with 58 for 2021.

Table 2.2.1 Number of recommendations by type and region evaluated by EWG 22-05

Region	De minimis exemptions	High Survivability exemptions	Technical Measures
NWW	10	4	1
North Sea	8	4	
SWW	13	2	
BALTIC		1	
PESCAMED		3	
SUDESTMED	1		
ADRIATIC	1		
BLACK SEA		1	
Total	33	15	1

3 EWG 22-05 OBSERVATIONS

Following from previous EWGs (EWGs 15-10, 16-10, 17-08, 18-06, 19-08, 20-04 and 21-05 as well as STECF PLEN 14-02 and 19-02) set up to evaluate the Joint Recommendations, STECF has repeatedly made some general observations relating to the Joint Recommendations submitted by the Regional Groups of Member States. Many of these remain valid. EWG 22-05 has split these into general observations; observations relating to *de minimis* exemptions; observations relating to high survivability exemptions; and observations on technical measures.

3.1 General Observations

- As in 2021, EWG 22-05 recognises that for 2022 the restrictions imposed due to the coronavirus pandemic created additional challenges to Regional Groups, the Commission and the STECF in the preparation of proposals and supporting information, as well as in the collation and review of joint recommendations. EWG 22-05 acknowledges this has severely limited the ability of the Member States to collect catch data as well as hindering research work to support exemptions and the testing of gear modifications to improve selectivity.
- Additionally, in 2021 and 2022, EWG 22-05 recognises that the conditions of the Trade and Cooperation Agreement between the EU and UK has introduced new access arrangements to UK waters as well as different measures for Union vessels operating in UK waters. These new measures and arrangements have created further difficulties for Member States and the fishing industry in the implementation of the landing obligation.
- EWG 22-05 reiterates that the role of the EWG and any future STECF EWGs set up to evaluate joint recommendations, should continue to be the evaluation of the scientific rigour and robustness of the underpinning information supplied by Member States. The EWG does not adjudicate on whether exemptions should be accepted or not. This remains the remit of DG MARE.
- EWG 22-05 reiterates that the avoidance of unwanted catch through improved selectivity or other means should be the primary focus in implementing the landing obligation. EWG 22-05 recognizes that modifying selectivity can result in some reduction in revenue, but these should be viewed in the broader context of medium-term gains in stocks and the risk of choke events and the utilisation of quota to land low value catches.
- EWG 22-05 recognises the progress made in supplying supporting information to justify exemptions and the volume of work that has been carried out to generate this information. However, EWG 22-05 notes that for the 2022 JR's, there are many cases where the information and data supplied is generic with the justifications based on information previously submitted. For some exemptions no supporting information has been provided at all. This makes providing a meaningful evaluation of the exemptions challenging and, in such cases, the previous observations of STECF remain relevant.
- EWG 22-05 notes that the catch information presented to support many exemptions lacks consistency. In many cases it relates to different years, much wider areas than covered by the exemption or is not presented as absolute estimates but as percentages of overall catch information for the relevant fishery. Therefore, EWG 22-05 reiterates the need to improve the quality and consistency of catch data provided to support exemptions. Such data is important to understand the relationship between the level of potential discards under the requested exemptions and the actual level of unwanted catches in the relevant fishery and for the relevant stocks. This will allow STECF to make an assessment as to the level of risk of allowing discarding under exemptions will potentially have on the status of the stock or stocks involved.
- EWG 22-05 notes that the weaknesses in the collection of catch documentation data consistently reported remain. If the data situation does not improve and the true quantities being caught as reported do not reflect the actual removals, it will likely have a significant impact on the quality of scientific advice and may compromise the achievement of the MSY objective. The potential for this discrepancy is higher for *de minimis* than high survival exemptions because the actual discard amount may be substantially higher than

the permitted *de minimis* volume. For high survival exemptions, this risk has been mitigated to some extent by deducting the estimated dead discards associated with the exemptions from the total allowable quota prior to allocation.

- EWG 22-05 acknowledges that the use of CCTV and Remote Electronic Monitoring (REM) has been given new impetus, particularly in the North Sea with pilot studies in several fisheries. STECF recognises this technology provides a more effective way to monitor the landing obligation and to generate catch evidence for science and compliance.
- EWG 22-05 notes that many of the existing discard plans expire at the end of 2023, meaning these exemptions will no longer apply unless renewed. In this context, STECF welcomes the intention of DGMARE to carry out a full review of the exemptions that are in place. Such a review would help to determine whether the exemptions need to be amended or are still required given likely changes in catch patterns, gears used, vessels involved and uptake. However, in initiating such a review, EWG 22-05 stresses it is vital that Member States and the Advisory Councils understand what information is needed to support this review and allow EWG 22-05 carry out a meaningful evaluation.

3.2 Observations on *de minimis* exemptions

- EWG 22-05 observes under Article 15 of the CFP Basic Regulation, Member States have a legal requirement to record all catches discarded under *de minimis* exemptions. However, EWG 22-05 notes that in many cases this information is lacking from the supporting information provided by Member States as evidenced by the limitations of the discard data contained in the FDI database.
- EWG 22-05 notes for many exemptions the relationship between the *de minimis* volume requested and the level of unwanted catches is unclear from the information provided to support the exemption. In some cases, the *de minimis* volume covers 100% of the unwanted catches, usually in fisheries where the levels of unwanted catch are small. In other cases, the *de minimis* volume covers only a small part of the unwanted catches but the supporting information does not contain any indication of the measures to be taken to reduce these residual unwanted catches.
- EWG 22-05 acknowledges the substantial effort made by the Member State Groups to provide information and analyses on disproportionate costs since the introduction of the landing obligation. However, as advised by STECF in 2021, given the difficulties in assessing what level of costs is disproportionate, it would be more informative for Member States to describe the relationship between the *de minimis* volume requested and the actual level of unwanted catches. This helps put the proposed exemption in the context of the fishery and the state of the stock(s) for which the exemption is covering. It provides a basis for STECF to assess the risk of the exemption on the relevant stocks covered by the exemption. To support this, EWG 22-05 considers that information to define the fleets impacted along with a clear description of the problem is required. Referencing previous economic data demonstrating the level of increased costs because of having to handle and store unwanted catches on board is useful. EWG 22-05 acknowledges the efforts made by several Member States groups to follow this approach in 2022, noting the limitations and inconsistencies in the catch information made available in many cases.
- EWG 22-05 further observes that EWG 21-05 requested more information on the methodology of the calculation of the economic impact assessment provided in 2020 and 2021 to support many of the *de minimis* exemptions in Southwestern waters. However, no additional information on the methodology and data was provided to EWG 22-05 meaning the outcomes of this study cannot be fully assessed in the context of assessing the impacts of the landing obligation.
- EWG 22-05 notes that Member States have continued to use a variety of ways to calculate *de minimis* volumes. In most cases for single species *de minimis* exemptions, a percentage (e.g., 5% or 7%) has been applied to the catches of the relevant species. However, for several fisheries where the intention is to discard 100% of the catches (e.g., boarfish in the NWW and whiting bycatch in demersal beam trawl fisheries the North Sea), catches from the entire fishery or for different species have been used as the basis for the calculation. EWG 22-05 has commented on this approach in the relevant exemption

requests. However, the EWG cannot adjudicate whether this is a correct interpretation of Article 15 of the CFP Basic Regulation.

- EWG 22-05 reiterates that in some cases where the unwanted catch of species subject to the Landing Obligation are substantial, granting a *de minimis* of 5-7% of the catches of such species will have little, most likely an unmeasurable effect on their overall fishing mortality and only a marginal effect on the ability of the vessels concerned to continue fishing legally. It is likely that granting an exemption to discard 5%, will achieve little in terms of mitigating the costs of landing the other 95% of the unwanted catch.
- EWG 22-05 reiterates that *de minimis* exemptions can provide an incentive for vessel operators to continue discarding unwanted catches at sea and only retain unwanted catches on board if they are inspected on hauling, or to bring only permitted *de minimis* quantities ashore on landing.
- EWG 22-05 has identified areas where there are limitations in the information presented or the methodologies used and, in some cases, where there are inconsistencies. In these cases, further clarification may be required. Where evidence is presented and shows that for example increasing selectivity results in losses of marketable fish, then this is noted, but whether this constitutes a technical difficulty is not something that can be readily answered by the EWG. Inevitably, improvements in selectivity result in some degree of loss, and therefore some reduction in revenue. However, these should be viewed in the broader context of medium-term gains in stocks and in the absence of improvements in selectivity, would the fishery be worse off in comparison due to choke effects and utilisation of quota for fish that have little or no value.
- EWG 22-05 notes that for many *de minimis* exemptions, particularly in SWW and NWW, the number of vessels that potentially could avail of this exemption is large; the exemption covers fisheries where different gears are used during the same fishing trip; or the exemption covers a very wide area. This means that the monitoring of discards under the exemption is potentially challenging given that in these cases the volume of discards per vessels is likely to be very low.
- EWG 22-05 observes as in previous years, the *de minimis* exemptions in the Mediterranean are based on generic justifications relating to improvements in selectivity being difficult to achieve as well as disproportionate costs of handling such unwanted catches ashore. While there are indications that considerable selectivity work is ongoing, this has not translated into any concrete actions to date, other than actions undertaken put in place under other legislation (e.g., West Med Management Plan).

3.3 Observations on high survivability exemptions

- EWG 22-05 notes that limited new survivability studies have been carried out in 2021/2022 presumably due to Covid-19. EWG 22-05 reiterates that assessing what constitutes high survivability remains problematic, which is made more complex by the limited information available and the variability in the available survival estimates. This means that judging the representativeness of individual or limited studies as an indicator of discard survival across an entire fishery is difficult given the range of factors that can influence survival and how they may vary in time even within a fishery. Examples of this in the latest JRs include the exemptions for bivalve mollusc species in the Mediterranean and skates and rays in NWW, SWW and the North Sea.
- EWG 22-05 observes that vitality data in some cases is used to support high survival proposals. This is due to the relative ease and low cost of collecting this evidence compared with direct discard survival observations. Information on the health condition of fish at the point of release provides useful information on the survival potential of discards. However, the proportion of fish alive at the point of release does not constitute a valid survival estimate due to the mortalities that are known to occur post-release. The relationship between health condition and survival probability can be established by collecting survival estimates and vitality data in combination. Studies have demonstrated, within a fishery, fish assessed at different vitalities have significantly different survival probabilities, and therefore vitality from a wider sample can be used as a proxy for survival. However, the relationship between assessed vitality and survival probability

varies between fisheries and studies for the same species. There is still insufficient evidence to use vitality as a proxy for survival, outside of the fisheries from which these relationships have been generated, to provide discard survival estimates with meaningful levels of confidence.

- EWG 22-05 observes that to date, survival and discard evidence and fleet information is reported in a rather incoherent way that hindered assessment by the EWG. A case in point being skates and rays. Gaps remain in the evidence provided on conditions of the relevant fisheries (gear use, haul duration, seasonality, areas etc.) and catch data for all Member States to provide context for these exemptions. Such information is crucial in order to assess the representativeness of the different reported survival rates and to be able to assess the effects of the exemption on the different ray stocks.
- EWG 22-05 notes that several existing exemptions for plaice and sole continue to be linked to conditions such as restricting the exemption to fishing to certain depths, tow durations and to specific groups of vessels or specified selective gears. Such conditions have been included in a new exemption for sole in NWW. While these factors may influence survival, there is no evidence of these conditionalities being applied by Member States. In practice controlling and enforcing such measures to any degree will be challenging. A balance is needed between extrapolating the survival evidence from the conditions observed in the studies, and the practical considerations of enforcing and complying with the regulated measures.
- EWG 22-05 notes that several survivability exemptions – plaice and rays and skates – are linked to roadmaps setting out work planned to develop survival estimates and accompanying measures to increase survivability. There has been a positive response to the roadmaps and most of the new research provided is related to the roadmaps. However, EWG 22-05 reiterates that further clarity on the objectives for the roadmap is needed in order to facilitate an evaluation along with a timetable for the completion. EWG 22-05 would also encourage Member States to use their joint scientific capacity to compile and analyse previous and new data in a more systematic way to assist future EWGs assess the exemptions covered under the roadmap.
- EWG 22-05 reiterates the need to consider survivability in the context of the discard rate for the fishery seeking an exemption (STECF 17-02), highlighting that medium survival rates in high discarding fisheries still lead to high discard mortality rates. STECF has also previously concluded (STECF 19-02) that unless surviving and dead discards are accounted for in stock assessments are accounted for in TAC setting, where survivability exemptions are in place, the actual fishing mortality will not match the agreed catch level. EWG 22-05 reiterates the need for this to continue to be discussed in the assessment forums for stocks with survival exemptions.

3.4 Observations on technical measures

- EWG 22-05 notes despite many experiments to test selective gears, there are still relatively few examples of such gears being incorporated into the JRs submitted. Where there is no specific legislation making the use of selective gears mandatory, uptake of selective gears remains extremely low even in fisheries where unwanted catches remain high.
- EWG 22-05 reiterates that while extensive work has been carried out on selectivity, for some regions, this work has been uncoordinated and not necessarily targeted at the right fisheries. A review of the work completed to identify what works and what does not, along with detailing the gaps in knowledge would help to channel further experiments into the appropriate fisheries.
- EWG 22-05 notes that while in previous years some exemptions were predicated on the use of selective gears, no such exemptions where there was such a requirement included in the exemption have been proposed for 2020 or 2021.
- EWG 22-05 notes it is important to strengthen the linkage of exemptions to the use of selective gears as is the case for several existing exemptions. This would provide greater confidence that the exemption is not just a means to maintain “business as usual” in the

relevant fishery and that improvements in selectivity are being given serious consideration.

- EWG 22-05 acknowledges there are indications of various experiments with lights to reduce unwanted catches. Consolidating the findings of these experiments into one review would be helpful to understand whether using lights has potential to reduce unwanted catches, for which species and in which fisheries.

4 EVALUATION OF REGIONAL JOINT RECOMMENDATIONS

4.1 Structure of Advice – *de minimis* exemptions

In assessing each of the *de minimis* exemptions requested, EWG 22-05 has based their evaluation on the following three elements as described in STECF PLEN 20-04:

1. Information based on the STECF template that defines the fisheries involved. This should include the number of vessels; relevant catch data; indicative discard rates; and estimated volumes of *de minimis* requested.
2. Explanation why the *de minimis* exemption is needed, putting it in the context of the level of unwanted catches in the fishery. This demonstrates whether the exemption is required to cover residual unwanted catches following improvements in selectivity, as a “stop-gap” while further selectivity or avoidance measures are developed or to reduce disproportionate costs from handling and sorting unwanted catches on board.
3. The scientific evidence that underpins the exemption, including a summary of the relevant supporting studies and experiments in the JR as well as plans for future work.

EWG 16-06 provided a template for provision of information relating to the fisheries for *de minimis* exemptions and for survivability exemptions (See Annex I). Very few Member States have used these templates in their JRs in 2022. However, providing data in a harmonised way greatly helps the evaluation process.

Regarding the underpinning information for *de minimis* exemptions, EWG 22-05 has based their observations on the approaches of previous STECF evaluations of the JRs as well as the general principles described by STECF PLEN 19-01 on the development of criteria for reviewing *de minimis* requests. Additionally, in relation to disproportionate costs, EWG 22-05 has considered the observations and conclusions of STECF PLEN 21-01 that highlighted that regional groups should support requests for exemptions considering the following:

- Description of the problem – Why are the costs considered disproportionate.
- Why is selectivity hard to improve?
- The fleets and fishery involved – needs to include information for all Member States and include best available catch (landings plus discards) data
- Justification and supporting information – summary of relevant studies carried out
- Impact/risk of the exemption in the context of the fishery – showing the risk of granting the exemption in the overall context of the fishery regarding by catch species is low.

PLEN 21-01 also highlighted that a reasonable estimate where possible backed by available economic data would be beneficial. The types of data needed ideally would include:

- Characteristics of the vessels involved in the fishery,
- Estimates of working time per day for handling the bycatch or necessary storage capacity,
- Necessity for an extra person on board to handle the bycatch (may be not possible due to safety regulations),
- Information on cost structure and revenues (specified for the respective fisheries or specific information about seasonality of the activities of the fleet involved in case exemptions are requested for specific times of the year) of involved fleet segments (e.g., personal costs compared to revenue, etc.).

4.2 Structure of Advice – high survivability

In the case of high survivability exemptions, EWG 21-05 has provided advice based on the following elements (see also Annex I):

1. Exemption status
2. Survival evidence
3. Fishery context
4. Survival and fishery compatibility
5. Additional evidence and work planned

As there were few new survival studies, EWG 22-05 has not used the critical review framework developed by ICES Workshop on Methods for Estimating Discard Survival (WKMEDS) on how to conduct discard survival assessments to assess the survival data provided to support the exemptions. However, EWG 22-05 reiterates this is a useful framework that allows review of the reliability of survival estimates derived from survival experiments. The template used is shown in Annex II. There are more details on the critical review process available in the ICES WKMEDS meeting reports (ICES, 2016).

4.3 Survivability of skates and rays – General considerations

EWG 22-05 observes that the new information provided for 2021, in combination with the further studies planned will greatly increase the knowledge on the survival of skates and rays across species, gears and regions.

EWG 22-05 notes that there is further evidence that survival experiments carried out show that for several ray species (e.g., cuckoo ray), mortalities are protracted suggesting that keeping rays in captivity may risk underestimating survival in captive trials. This requires further investigation to confirm this is the case.

EWG 22-05 highlights that in the absence of complete fishery information on the catches and discards of the skate and ray species covered under this inclusive exemption, and the fishing conditions by all vessels to which these exemptions apply, the representativeness of survival evidence and the implications for these stocks cannot be fully assessed. EWG 22-05 observes that Member States should make efforts to improve catch data for skates and rays, not only in the context of the landing obligation but also for wider management.

EWG 22-05 noted that skate and ray survival rates can be highly variable between species and fisheries. EWG 22-05 notes that the new estimates provided from the NWW group are similar to previous estimates survival and is much lower (range between 14-23%) than other larger ray species. This is of particular concern, given that the limited discard data provided to EWG 22-05 suggests that discards are quite high (range between 27-39%).

EWG 22-05 reiterates that to enable more efficient evaluations and ensure that all new evidence is utilised fully, regional groups should report in the context of the agreed roadmap. This should detail progress against the three main tasks: i) quantifying catches and discards per species and métier; ii) generating new discard survival evidence; and iii) stakeholder led adoption of codes of best practice to maximize discard survival.

4.4 Survivability of plaice – General considerations

EWG 22-05 acknowledges that since 2019, progress has been made in increasing the knowledge of plaice survivability. Additionally, considerable work has begun in the North Sea and NWW on the estimation of catch volumes and composition, by development of systems and protocols for self-reporting and automated video analysis. Research on ways to improve selectivity is also ongoing. No concrete results have been presented to date, but the preliminary findings seem encouraging for some of the gear modifications tested.

EWG 22-05 reiterates the observations of EWG 18-06, 19-08, 20-04 and 21-05 that the evidence submitted to support survival exemptions for plaice highlights that survivability in most of the fisheries for which exemptions are in place is affected by many factors and is highly variable. STECF has previously noted that given the relatively high estimated discard rates and relatively low survival rates in some fisheries, it is likely that significant quantities of plaice discarded may not survive. This remains the case.

For the latest JRs assessed by EWG 22-05, Member States have proposed one new plaice exemption for the Baltic Sea. With these exemptions granted, it effectively means that almost all plaice catches in otter trawl, seine net and beam trawl fisheries in NWW, the North Sea and the Baltic are covered by a high survivability exemption. EWG 22-05 restates that the motivation for the proposed work is to mitigate against the economic costs of landing high volumes of unwanted plaice. It is further noted that for beam trawlers, the justification for survivability exemption for plaice continues to be based on the potential for improving survival and selectivity, but on variable estimates of survival.

For high survivability exemptions, STECF has previously emphasised the need to consider estimates of survivability in the context of the discard rate for the fishery seeking an exemption (STECF 17-02). It has been highlighted that medium survival rates in high discarding fisheries still lead to high discard mortality rates. STECF note that unless surviving discards are accounted for in stock assessments and dead discards are accounted for in TAC setting when survivability exemptions are in place, the actual fishing mortality will not match the agreed catch level. EWG 22-05 reiterates that introducing discard survival estimates is something which should continue to be discussed in the assessment forums for more stocks and especially plaice, given the proliferation of exemptions.

For the exemptions for beam trawls in the North Sea and NWW, EWG 22-05 observes that the current survival estimates are still highly variable and only relevant for the larger beam trawl vessels. No new information has been provided for smaller vessels with less than 221KW engine power since the exemptions were put in place. There is also only limited and inconclusive information on the effectiveness of the Flip-up rope and the Benthic Release Panel to improve survivability. The use of these devices is specified in the Delegated Act as a condition of the exemption. However, if these devices are not effective in increasing survivability, then the value of making them a condition of the exemption is questionable even though they may have other benefits not related to survivability.

5 NORTH SEA – OVERVIEW OF JOINT RECOMMENDATIONS

Commission Delegated Regulation (EU) 2015/2440 established a discard plan for certain demersal fisheries in the North Sea and in Union waters of ICES Division 2a. Based on new Joint Recommendations for the North Sea submitted by the regional group of Member States this plan has been updated several times, most recently by Commission Delegated Regulation (EU) 2020/2014 as amended by Commission Delegated Regulation (EU) 2021/2062.

Additionally, Commission Delegated Regulation (EU) No 1395/2014 established a discard plan for certain small pelagic fisheries and fisheries for industrial purposes in the North Sea. This was amended by Commission Delegated Regulation (EU) 2018/189, which extended the exemptions established under the original discard plan, while also adding some additional exemptions. These exemptions relating to pelagic fisheries were assessed by EWG 22-05.

In 2022, a Joint Recommendation has been submitted by the Member States. This consolidates the main elements of Regulation (EU) 2020/2014. It provides additional information on twelve of the existing exemptions, both de minimis and high survivability. One request for a new de minimis exemption is included.

It should be noted that the discard plan in its entirety expires at the end of 2023. Therefore, all of the exemptions, other than several exemptions with an expiry date at the end of 2022, will no longer apply after 2023 pending the submission of a new discard plan by the Scheveningen Group in 2023.

The main elements of these JR's and which of these have been assessed by EWG 22-05 are summarised in table 5.1.

Table 5.1 Main elements of the Joint Recommendations submitted for the North Sea

<i>Elements</i>	<i>Pelagic or Demersal discard plan</i>	<i>Status and relevant Article in current discard plan</i>	<i>Assessment by EWG 22-05 with relevant Annexes</i>
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			<i>in JR</i>
De minimis			
Common sole caught with gillnets and trammel nets in in Union waters of ICES divisions 2a and 3a, and ICES subarea 4	Demersal	Existing and unchanged Article 11(1)	Not assessed
Common sole caught by beam trawls with a mesh size of 80-119mm with increased mesh sizes in the extension of the beam trawl in ICES subarea 4	Demersal	Existing and unchanged Article 11(2)	Not assessed
Sole, cod, haddock, saithe, whiting and hake caught in the <i>Nephrops</i> fishery using bottom trawls with a mesh size equal to or larger than 70 mm equipped with a species-selective grid in Union waters of ICES division 3a	Demersal	Existing and unchanged Article 11(3)	Not assessed
Sole, haddock, whiting, cod, plaice, saithe, herring, Norway pout, greater silver smelt and blue whiting below MCRS caught in the <i>Pandalus</i> fishery using bottom trawls with a mesh size equal to or larger than 35 mm equipped with a species selective grid, and with unblocked fish outlet, in Union waters of ICES division 3a	Demersal	Existing and unchanged Article 11(4)	Not assessed
Whiting below MCRS caught in bottom trawls 90-119mm with SELTRA panels and bottomtrawls with a mesh size of 120mm and above in Union waters of ICES division in 3a	Demersal	Existing and unchanged Article 11(5)	Not assessed
Bycatch of plaice below MCRS in fisheries caught in the <i>Nephrops</i> trawl fishery with a mesh size \geq 80-99mm with a	Demersal	Existing and unchanged Article 11(6)	Not assessed

SEPNEP in ICES subarea 4			
All fish species caught in the Brown shrimp fishery using beam trawls in Union waters of ICES divisions 4b and 4c:	Demersal	Existing and unchanged Article 11(7)	Not assessed
Ling below MCRS caught using bottomtrawls with a mesh size equal to or greater than 120 mm in Union waters of ICES subarea 4	Demersal	Existing and unchanged Article 11(8)	Not assessed
Whiting below MCRS caught in mixed demersal fisheries by vessels using bottom trawls or seines with a mesh size of 70-99 mm in Union waters of ICES divisions 4a and 4b	Demersal	Existing and unchanged Article 11(10)	Re-assessed based on existing and new information
Bycatch of industrial species caught using bottomtrawls, seines and beam trawls in ICES subarea 4	Demersal	Existing and unchanged Article 11(13)	Re-assessed based on existing and new information
Ling below MCRS caught using longlines in ICES subarea 4	Demersal	Existing and unchanged Article 11(14)	Re-assessed based on existing and new information
Horse mackerel caught using bottom trawls, seines and beam trawls with a mesh size between 80 and 99 mm in ICES subarea 4	Demersal	Existing and unchanged Article 11(15)	Re-assessed based on existing and new information
Mackerel caught using bottomtrawls, seines and beam trawls with a mesh size between 80 and 99 mm in ICES subarea 4	Demersal	Existing and unchanged Article 11(16)	Re-assessed based on existing and new information
Mackerel, horse mackerel, herring and whiting in the pelagic fishery carried out by pelagic trawlers up to 25 meters in ICES area 4b and c south of 54 degrees north	Pelagic	Existing and unchanged Article 11(12)	Re-assessed based on existing and new information

Blue whiting caught by industrial pelagic trawlers in ICES subarea 4	Pelagic	Existing and unchanged Article 11(17)	Re-assessed based on existing and new information
Northern prawn caught with demersal trawls and seines using mesh sizes above 70mm in ICES division 3a and subarea 4	Demersal	New exemption	Assessed based on new information
Whiting below MCRS in demersal mixed fisheries using beam trawls with a mesh size of 80-119 mm in Union waters of ICES subarea 4	Demersal	Expiry date end of 2021 Article 11(9)	Not assessed
Cod and whiting below MCRS caught in the mixed demersal fishery using bottom trawls or seines of mesh size 70-99 mm in Union waters of ICES division 4c	Demersal	Expiry date end of 2021 Article 11(11)	Not assessed
High Survivability			
<i>Nephrops</i> caught with pots; bottom trawls with a cod-end larger than 80 mm or a cod-end with a mesh size of at least 70 mm equipped with a species selective grid; or a cod-end of at least 35 mm equipped with a species selective grid in Union waters of ICES divisions 2a, 3a and subarea 4	Demersal	Existing Article 3	Not assessed
Common sole below MCRS caught with bottom trawls with a cod end mesh size of 80-99 mm in ICES division 4c	Demersal	Existing Article 4	Not assessed
Fish bycatch in pots and fyke nets in Union waters of ICES division 3a and ICES subarea 4	Demersal	Existing Article 5	Not assessed
Plaice caught with nets; Danish seines; bottom trawls with a mesh size of at least 120 mm in winter months (from 1 November to 30 April) in	Demersal	Existing Article 6	Not assessed

Union waters of ICES division 3a and subarea 4			
Plaice below MCRS caught with beam trawls with a mesh of 80-119mm in Union waters of ICES division 2a and ICES subarea 4	Demersal	Annual based on information provided by 1 May every year Article 7	Re-assessed based on existing and new information
Turbot caught with trawls with a cod end larger than 80mm in ICES subarea 4	Demersal	Annual based on information provided by 1 May every year with expiry date at the end of 2022 Article 8	Re-assessed based on existing and new information
Skates and rays (<i>Rajiformes</i>) caught with all gears in Union waters of ICES divisions 2a, 3a and subarea 4)	Demersal	Annual based on information provided by 1 May every year Article 9	Re-assessed based on existing and new information
Mackerel and herring caught with purse seines under certain conditions in ICES division 3a and subarea 4	Pelagic	Existing Article 10	Re-assessed based on existing and new information

5.1 De minimis exemptions

A summary of the fishery information applicable to the proposed new or revised de minimis exemptions is provided in Table 6.1.1.

Table 6.1.1 Summary of de minimis exemptions submitted as part of the NWW Joint Recommendations (restricted to new or revised exemptions).

Exemption	Main Findings of EWG 22-05
<p>Whiting below MCRS caught in the mixed demersal fisheries by vessels using bottom trawls or seines in ICES divisions 4a and 4b which shall not exceed 4 % of the total annual catches of whiting – Article 11(10) of Regulation (EU) No 2020/2014.</p>	<p>1. Exemption status</p> <p>Existing temporary de minimis exemption applicable until 31 December 2022 (Article 11 (10) of Delegated Regulation (EU) No 2020/2014).</p> <p>Prior to 2021, the exemption was granted under article 10(f) of Regulation (EU) 2019/2238. This exemption was prolonged for the years 2021 and 2022 on the basis of Article 11(10) of Regulation (EU) No 2020/2014.</p> <p>The JR requests the continuation of this de minimis exemption for 2023.</p> <p>2. Fishery Context</p> <p>Updated catch data and fishery information has been provided by the Scheveningen Group for France and Germany. German landings in 2020 were 39.2 tonnes and 2.3 tonnes in 2021 based on logbook data. Germany did not conduct any on board observer trips in 2020 and 2021 due to Covid. Germany reports that it did not use the exemption in 2020 or 2021.</p>

France provided information for bottom trawlers and seiners operating in ICES divisions 4b, 4c and 7d, 7e and 7g. According to the JR, France had a total of 162 bottom trawlers (114 < 18m and 48 > 18m) operating in the Southern North Sea and Eastern Channel in 2019. The Danish seine fleet comprises 12 vessels. Both fleets target a mix of high value non-quota species (red mullet, cephalopods) and lower value whiting and rays. The catch data provided is limited due to Covid and Brexit. According to the data provided in the JR, in 2019 the two French fleets had total catches 24,277 tonnes with discards of 9393 tonnes. Whiting discards were 3,945 tonnes or 42% of discards. The data provided relates to ICES divisions 4b, 4c and 7d, 7e and 7g and therefore covers a wider area than the area defined in the exemption. Based on logbook data for 2021, the JR also reports that estimated total French whiting catches from 4a and 4b were 59.62 tonnes with discards of 0.3 tonnes or 0.6 %.

No information is provided for other Member States, but it is assumed they do not avail of this exemption.

3. Basis for the exemption

The justification is unclear in the JR, but EWG 22-05 assumes it is unchanged from 2019 and 2020 (as assessed by EWG 19-08 and EWG 20-04) on the grounds of disproportionate costs due to handling unwanted catches and on difficulties to achieve improvements in selectivity in these fisheries.

The JR notes that new technical measures were implemented due to Brexit. UK Legislation requires vessels fishing in British fishery limits of ICES IIa south of 64° north latitude and east of 4° west longitude (Norwegian Sea), of ICES VI (West of Scotland) or of ICES IV (North Sea), must use a square-mesh panel of not less than 90 mm when fishing with a mesh size in the range 70 to 119mm. The JR reports French vessels operating both in EU and UK waters, keep this selectivity device installed when fishing in EU waters. No information is available on the effectiveness of this gear modification in the relevant fisheries.

4. Additional evidence and work planned

The JR reports on a study carried out by France called SELUX. The project is focusing on artisanal trawlers operating in the South of the North Sea and in the English Channel and targeting demersal species. Two types of light devices were tested: the Brezglow and the PISCES, and each with different conditions (day/night, seasons, flashing or not). The behaviour of horse-mackerel, mackerel and whiting was observed, and the results showed that whiting and mackerel tend to behave in a light-averse manner. The JR indicates that other configurations of lights could be tested in the future, although no detail is provided.

5. EWG 22-05 Observations

Limited new information has been provided other than partial information on catches and fleets. This information does not relate solely to the area covered by this exemption but a much wider area. The majority of the catches in the fisheries appears to be from ICES division 4c and 7d. In this regard, the impact of this exemption cannot be assessed and the previous observations made by EWG 19-

	<p>08 and 20-04 remain relevant.</p> <p>Additionally, estimates of discards reported in logbooks are provided. However, these estimates show very low catches and discards, when compared to the catch information provided for 2019 which shows high catches and discards of whiting. Therefore, it is not clear how reliable these estimates are of catches and discards, noting the issues with deploying on board observers due to Covid has limited data collection.</p> <p>Catch information suggests the discarding in these fisheries is high with nearly 4,000 tonnes of whiting discarded in 2019. Noting the data refers to a much wider area, nonetheless it would seem the de minimis catch requested covers only a part of the unwanted catches in the fisheries and improving selectivity in the fisheries should remain the priority.</p> <p>The information on fish behaviour to light opens new possibilities for selectivity trials and further work is encouraged.</p>
Exemption	Main Findings of EWG 22-05
<p>Mackerel, horse mackerel, herring and whiting in the pelagic fishery carried out by pelagic trawlers up to 25 meters in ICES divisions 4b and 4c south of 54 degrees north which shall not exceed 1% of the total catches of these species in pelagic fisheries - Article 11.12 of Regulation (EU) No 2020/2014</p>	<p>1. Exemption status</p> <p>Existing temporary de minimis exemption applicable until 31 December 2022. (Article 11.12 of Regulation (EU) No 2020/2014. Prior to 2021, the exemption was already granted under article 3(a) of (EU) delegated regulation 1395/2014 for 2015 and 2016, and then extended for 2018-2020 under article 3a.</p> <p>It was re-assessed by STECF (report 20-04) on the basis of new information submitted and granted until the 31 December 2022. The JR seeks the continuation of this exemption for 2023.</p> <p>2. Fishery Context</p> <p>Updated catch data and fishery information has been provided by the Scheveningen Group covering the French fleet involved in the fishery. The data mainly relates to 2019, although some data is presented for 2020. Information has also been provided for Sweden. However, it is unclear whether they participated in the fishery covered by the exemption. Germany indicated it does not participate in this fishery.</p> <p>The exemption allows for the discarding of a combined quantity of mackerel, horse mackerel, herring and whiting, up to 1% of the total annual catches of those species in the pelagic fisheries of the French artisanal fleet. The French artisanal pelagic fishery comprises ten vessels of under-25m refrigerated vessels, targeting mackerel, herring and sardine. It is assumed horse mackerel and whiting are caught as bycatch in the fishery.</p> <p>The gears used are pelagic trawls (OTM and PTM). However, different gears (OTB) can also be used during a fishing trip. Those fishing trips are then considered as mixed trips. The exemption only covers unwanted catches from pelagic trawls. There is separate de minimis exemptions under the current Delegated Act for unwanted catches of mackerel and horse mackerel in demersal trawl fisheries in the same area, but it is not clear whether the same vessels avail of both exemptions.</p> <p>According to the catch data presented for herring, mackerel, horse mackerel and whiting, catches combined for the French artisanal pelagic trawlers in 2019 were 8,357 tonnes. Thus, in 2020 a de minimis of 1% would have allowed a maximum volume of discard by</p>

French vessels using OTM and PTM of 83.57 tonnes. As no distinction is made between pelagic and bottom trawls in the ObsMer 2020 data, it is likely this is an overestimate of the discards from the pelagic trawl fishery. The information indicates that the discard rate in the OTM-PTM fishery decreased from 2019 to 2020 from 5.8% of total catches in 2019 to 1.2% in 2020.

Horse mackerel and whiting would appear to make up most of the unwanted catches in the fishery (66% in 2019 and 99% in 2020). This is different to the data presented in 2020 to EWG 20-04 which showed whiting was the main species discarded by these vessels. Little or no unwanted catches of herring and mackerel are reported. They are two of the main target species in the fishery.

The JR states that a 1% de minimis would offer the flexibility needed by artisanal pelagic trawlers to face the variability of catch composition depending on fishing operation. However, without more recent catch data it is not possible for EWG 22-05 to assess the volume of the species combined to which this equates. No estimate of the uptake of the de minimis volume since its introduction in 2015 is provided.

3. Basis for the exemption

The justification is unchanged from 2020 (as assessed by EWG 20-04) on the grounds of disproportionate costs due to handling unwanted catches and on difficulties to achieve improvements in selectivity in these fisheries. The JR emphasizes that the economics of the landing obligation in the OTM artisanal fishery is difficult to approach because the fleet activity is generally mixed with demersal fishing operations during the same fishing trip. References to historic selectivity trials and the EODE project on disproportionate costs previously made available to EWG 19-04 and 20-04 are included as justification.

4. Additional evidence and work planned

No additional work is planned.

5. EWG 22-05 Observations

Limited new information has been provided other than partial information on catches and fleets. Therefore, an assessment of the impact of this exemption cannot be completed and the previous observations made by EWG 19-04 and 20-04 remain relevant.

The new catch information provided in the JR indicates in 2019, the estimated discard rate for the OTM-PTM fishery was 5.8%, decreasing to 1.2% in 2020. It is not clear if this figure is based on total discards from the fishery or just the four species listed under the exemption.

According to the observer data presented, horse mackerel and whiting are the main species discarding in 2019 and 2020 (horse mackerel made up 53% and 28% and whiting 13% and 71% respectively). Discards of herring and mackerel are reported to be minimal, and it is not clear why these species are included in the exemption, if the issue is principally to cover unwanted catches of whiting and horse mackerel.

Vessels availing of the exemption use both pelagic and demersal trawls on the same fishing trips and sometimes on the same day. However, it is unclear how unwanted catches discarded under this

	<p>exemption can be distinguished from unwanted catches caught with bottom trawls without specific control measures in place.</p> <p>With respect to difficulties in improving the gear selectivity in French artisanal small pelagic fisheries, the JR states that the low discard rates are due to their selective nature and the fact that fishermen already adopt voluntarily spatio-temporal measures to avoid unwanted catches. It is not clear what kind of spatio-temporal avoidance measures are meant here.</p> <p>The justification for the exemption assumes that the unwanted catches are insignificant in the pelagic fisheries and options to improve selectivity have been exhausted. Recognising that achieving additional selectivity improvements would be difficult in such fisheries and the costs for sorting would be high given the nature of the species and fisheries involved, this cannot be fully assessed from the information supplied.</p>
Exemption	Main Findings of EWG 22-05
<p>Sprat, sandeel, Norway pout and blue whiting caught in the demersal mixed fisheries with trawls and the fishery for Northern prawn in ICES division 3a and ICES subarea 4 which shall not exceed a combined quantity of 1% of sprat, sandeel, Norway pout and blue whiting, which shall not exceed 1 % of the total annual catches in the relevant fisheries - Article 11(13) of Regulation (EU) No 2020/2014</p>	<p>1. Exemption status</p> <p>Existing temporary de minimis exemption applicable until 31 December 2022 (Article 11 (13) of Delegated Regulation (EU) No 2020/2014).</p> <p>Prior to 2021, the exemption was granted under Article 10(m) of Regulation (EU) 2019/2238. This exemption was prolonged for the years 2021 and 2022 on the basis of Article 11(13) of Regulation (EU) No 2020/2014.</p> <p>The JR requests the continuation of this de minimis exemption for 2023.</p> <p>2. Fishery Context</p> <p>Detailed catch and fishery information has been provided by the Scheveningen Group covering Denmark and Sweden as the two Member States participating in the relevant mixed demersal and Northern prawn fisheries.</p> <p>The information provided by Denmark and Sweden show 234 Danish and 99 Swedish vessels operated in the fisheries in 2021. Based on the detailed catch data from the Danish observer sampling program the bycatch of the industrial species covered by the exemption was very low. The combined discards by Danish vessels in 2021 was estimated at 240 tonnes from total combined Danish landings for the four industrial species of 413,463 tonnes, representing a negligible discard rate of 0.05 %. The Swedish data shows total catches of 187 tonnes with the vast majority of these discarded. Overall, combining the catches from Denmark and Sweden shows total catches of 413,650 tonnes, with total discards of 428 tonnes equivalent to 0.1%.</p> <p>3. Basis for the exemption</p> <p>As in 2019 and 2020, the justification for this exemption assumes that handling of unwanted catches is regarded as uneconomically disproportionate given the difficulties in sorting these species from the target species.</p> <p>In response to the previous STECF advice, the JR states that despite the small size of the species covered by the exemption, some are retained, particularly when the volume of the targeted catch is large.</p>

	<p>Due to this, escapement is impeded, and a small number of fish can be 'trapped' in the codend – regardless of the mesh size. Consequently, an increase in mesh size in a fishery already using meshes that are more than twice those used in the targeted fishery for the industrial species will have no impact on the bycatch of these species but will have negative impact on catches of targeting species. The JR concludes that there are, at present, no scientifically documented methods to reduce bycatch of industrial species in these relevant fisheries.</p> <p>4. Additional evidence and work planned</p> <p>No additional work is planned.</p> <p>5. EWG 22-05 Observations</p> <p>Additional documentation has been provided to support the continuation of this exemption in the form of updated catch and bycatch information, showing that bycatches of industrial species was very low – 0.1 % in the demersal human consumption fisheries.</p> <p>The JR has also provided an explanation of why improvements in selectivity in these fisheries would be difficult to achieve which seem reasonable.</p>
Exemption	Main Findings of EWG 22-05
<p>Ling below MCRS caught with longlines in ICES subarea 4 which shall not exceed 3% of the total catches of that species - Article 11(14) of Regulation (EU) No 2020/2014)</p>	<p>1. Exemption status</p> <p>Existing temporary de minimis exemption applicable until 31 December 2022. Prior to 2021, the exemption was already granted under Article 10(n) of Regulation (EU) 2019/2238. This exemption was prolonged for the years 2021 and 2022 on basis of Article 11(14) of Regulation (EU) No 2020/2014.</p> <p>The JR requests the continuation of this de minimis exemption for 2023.</p> <p>2. Fishery Context</p> <p>Updated catch data and fishery information has been provided by the Scheveningen Group covering the French fleet which is the only fleet operating in this fishery. The French fleet benefiting from the exemption is composed of 15 French vessels that operate both in the North Sea and in the West of Scotland (ICES subarea 4a and 6a). This fleet targets demersal species, mainly hake and ling. The gears used are either set longlines or semi-floating longlines.</p> <p>The catch data provided relates to 2019 and is taken from the French observer programme (OBSMER 2021). The data relates to sampling from 2 vessels during 7 fishing trips. The JR indicates that a combination of factors including Covid-19, Brexit and procurement limited the observations in the fishery in 2020. While the data presented does not give definitive figures on the level of landings and discards in the fishery an estimation of 26 tonnes of ling discards in the fishery is provided.</p> <p>The Scheveningen Group recommends de minimis exemption for ling below MCRS caught by vessels using set longlines (LLS) in subarea 4, up to 3% of the total annual catches in 2023. However, without more recent catch data it is not possible to assess the volume of ling to which this equates.</p>

	<p>While not stated in the JR, it is assumed no other Member State participates in this fishery.</p> <p>3. Basis for the exemption</p> <p>The justification for the exemption is largely unchanged from 2019 and 2020. It is based on longlines being highly selective gears. The supporting information indicates that to increase selectivity further is not possible without incurring high economic costs. The exemption is to cover small residual unwanted catches.</p> <p>A short overview of 3 projects - PASAMER (2014/2016), SELPAL (2013/2018) and RESPAST (2014/2016) - on longline fisheries are provided. These studies do not focus on selectivity or ling but in reducing bycatch of sensitive species in the hake longline fishery.</p> <p>4. Additional evidence and work planned</p> <p>No additional work is planned in the short-term.</p> <p>5. EWG 22-05 Observations</p> <p>Limited new information has been provided other than partial information on catches and fleets for 2020-2021. The previous observations made by EWG 19-04 and 20-04 remain relevant.</p> <p>Based on the data presented discards of ling are low in the longline fishery and the observer data collected from 2019 reports discards of 26 tonnes. However, while this indicates little impact on the stock, without catch information, no assessment can be made.</p> <p>The observations of EWG 20-05 that the arguments regarding difficulties in improving selectivity are credible given the nature of the fisheries and discards covered by the exemption are quite low are still valid. However, the qualitative nature of the information presented means that the improvements of selectivity, for example through increases in hook size would have on the fishery have still not been provided.</p> <p>With respect to improving the selectivity, the JR provides three study programmes as examples of studies carried out to reduce unwanted by-catch of sensitive species by improving fishing techniques in longline fisheries. These studies while interesting are not relevant to this exemption.</p>
Exemption	Main Findings of EWG 22-05
<p>Horse mackerel in the demersal mixed fisheries with bottom trawls in ICES divisions 4b and 4c which shall not exceed 6% of the total catches – Article 11(15) of Regulation (EU) 2020/2014</p>	<p>1. Exemption status</p> <p>Existing temporary de minimis exemption applicable until 31 December 2022. Prior to 2021, the exemption was already granted under article 10(k) of Regulation (EU) 2019/2238. This exemption was prolonged for the years 2021 and 2022 on the basis of Article 11(15) of Regulation (EU) No 2020/2014.</p> <p>The JR requests the continuation of this de minimis exemption for 2023.</p> <p>2. Fishery Context</p> <p>Updated catch data and fishery information has been provided by the Scheveningen Group covering the French and German fleets. German</p>

landings of horse mackerel in 2020 and 2021 were less than 1 tonne and Germany reports that it did not use the exemption in either 2020 or 2021.

France provided information for bottom trawlers operating in ICES divisions 4b and 4c. These vessels also fish in 7d. According to the JR, France had a total of 159 bottom trawlers operating in the Southern North Sea and Eastern Channel in 2020. These vessels target a mix of high value non-quota species (red mullet, cephalopods) and lower value whiting and rays. They are assumed to be the same vessels that avail of the exemption for whiting as described above. The catch data provided is limited due to Covid and Brexit.

According to the data provided in the JR, in 2019 the two French fleets had total catches 20,773 tonnes with discards of 8475 tonnes. Horse mackerel discards made up around 9% of the total discards in the fishery. Based on logbook data for 2021, the JR also reports that estimated total French horse mackerel catches from 4b and 4c were 28.9 tonnes with discards of 1.4 tonnes or 3.6%.

3. Basis for the exemption

The justification is unchanged from 2020 (as assessed by EWG 20-04) on the grounds of disproportionate costs due to handling unwanted catches and on difficulties to achieve improvements in selectivity in these fisheries. The JR emphasizes that given the mixed nature of the fisheries and the associated multi-species catch composition, it is difficult to improve selectivity without experiencing significant losses of marketable catches. References to historic selectivity trials and the EODE project on disproportionate costs previously made available to EWG 19-04 and 20-04 are included as justification (Annex 6.5-6.6).

4. Additional evidence and work planned

The JR provides information indicating that horse-mackerel caught with such demersal gears are usually damaged, making the fish unsellable. As a small pelagic species, horse mackerel does not withstand long tow durations. In this regard, the results of a sanitary study conducted in France analysing the deterioration of mackerel and horse mackerel with tow duration was submitted in 2021 to STECF to substantiate a similar de minimis requests for the Southwestern Waters. The JR indicates this study is relevant for these fisheries in the North Sea and provide an estimate of the losses that would accrue to the relevant French fleets of €3,182,740 per year from having to land all catches of horse mackerel. The basis for this estimate is partially explained.

5. EWG 22-05 Observations

Only limited new information has been provided other than partial information on catches and fleets. In this regard, a full assessment of the impact of this exemption is not possible and the previous observations made by EWG 19-08 and 20-04 remain relevant.

Additionally, the estimates of discards reported from logbooks are very low catches and discards, when compared to the catch information provided for 2019 which showed high catches and discards of horse mackerel. Therefore, it is not clear how reliable these estimates are of catches and discards, noting the issues with

	<p>deploying on board observers due to Covid during 2021.</p> <p>The exemption request is based on old studies of trawl selectivity, which date back to 2017 or earlier. No new selectivity investigations are reported or planned but it appears none of the gears tested are being used in the fisheries.</p> <p>The catch information presented suggests discarding in these fisheries is high with nearly 8,500 tonnes discarded in 2019. It would seem the de minimis catch requested covers only a part of the unwanted catches in the fisheries and therefore, improving selectivity in the fisheries should remain the priority.</p> <p>The estimates of the costs for landing unwanted horse mackerel are significant. However, they are based on average discards over the period 2013- 2016, which may not be representative of the situation in the fisheries currently.</p>
Exemption	Main Findings of EWG 22-05
<p>Mackerel caught with bottom trawls in ICES divisions 4b and 4c which shall not exceed 6% of the total catches – Article 11(16) of Regulation (EU) 2020/2014</p>	<p>1. Exemption status</p> <p>Existing temporary de minimis exemption applicable until 31 December 2022. Prior to 2021, the exemption was granted under Article 10(l) of EU regulation 2019/2238. This exemption was prolonged for the years 2021 and 2022 on the basis of Article 11(16) of Regulation (EU) No 2020/2014.</p> <p>The JR requests the continuation of this de minimis exemption for 2023.</p> <p>2. Fishery context</p> <p>Updated catch data and fishery information has been provided by the Scheveningen Group covering principally French vessels. Some limited data is provided for Germany.</p> <p>France provided information for bottom trawlers operating in ICES divisions 4b and 4c. These vessels also fish in 7d. According to the JR, France had a total of 159 bottom trawlers) operating in the Southern North Sea and Eastern Channel in 2020. These vessels target a mix of high value non-quota species (red mullet, cephalopods) and lower value whiting and rays. They are assumed to be the same vessels that avail of the exemption for whiting and horse mackerel as described above.</p> <p>According to the data provided in the JR, in 2019 the two French fleets had total catches of 20773 tonnes with discards of 8475 tonnes. Mackerel discards made up around 1% of the total discards in the fishery. Based on logbook data for 2021, the JR also reports that estimated total French mackerel catches from 4b and 4c were 848.6 tonnes with discards of 3.3 tonnes or 0.4%. Historical data for 2013-2016 from the “FDI database” is also presented in the JR. This data indicates that mackerel represented on average approximately 0.8% of the total TAC species discarded during that period. The proportion of discarded mackerel was 2.7% of the total catch of mackerel.</p> <p>3. Basis for the exemption</p> <p>The justification is unchanged from 2020 (as assessed by EWG 20-04) on the grounds of disproportionate costs due to handling unwanted catches and on difficulties to achieve improvements in selectivity in these fisheries. The JR emphasizes that given the mixed nature of the</p>

	<p>fisheries and the associated multi-species catch composition, it is difficult to improve selectivity without experiencing significant losses of marketable catches. References to historic selectivity trials and the EODE project on disproportionate costs previously made available to EWG 19-04 and 20-04 are included as justification (Annex 6.5-6.6).</p> <p>4. Additional evidence and work planned</p> <p>No additional work is planned in the short term.</p> <p>5. EWG 22-05 Observations</p> <p>Only limited new information has been provided other than partial information on catches and fleets. In this regard, a full assessment of the impact of this exemption is not possible and the previous observations made by EWG 19-08 and 20-04 remain relevant.</p> <p>A substantial part of the landings is discarded in the fishery particularly by bottom trawlers below 18 m (71%) and above 18 m (30-51%). The proportion of discarded mackerel appears to be in the range of 0.2-3% of the total catch of mackerel but what this equates to in volume terms is unclear.</p> <p>The selectivity information from three French study projects gives a valuable insight to the research aimed to reduce unwanted by introducing various technical measures. However, they are not new, dating back to 2017 and earlier. It is unclear whether any of the selectivity improvements tested have been implemented in the fishery.</p> <p>It is accepted that it is difficult to improve selectivity without causing significant commercial losses for vessels fishing in such mixed fisheries. However, the data provided indicate that the levels of discarding in these fisheries is high and therefore, efforts to improve selectivity should continue.</p>
Exemption	Main Findings of EWG 22-05
<p>Blue whiting caught in the industrial pelagic fishery by vessels targeting blue whiting in ICES subarea 4 which shall not exceed 5% of the total annual catches of blue whiting – Article 11(17) of Regulation (EU) 2020/2014</p>	<p>1. Exemption status</p> <p>Existing temporary de minimis exemption applicable until 31 December 2022.</p> <p>The JR requests the continuation of this de minimis exemption for 2023.</p> <p>2. Fishery Context</p> <p>Updated catch data and fishery information has been provided by the Scheveningen Group covering principally one French industrial trawler targeting blue whiting and processing on board to obtain surimi. Some limited data is provided for German, although the JR states that German vessels did not use this exemption in 2020 or 2021.</p> <p>Based on logbook data, estimated French blue whiting catches in 2021 were 2,623.84 tonnes with discards of 63.65 tonnes or 2.4%. No other catch data is provided.</p> <p>3. Basis for the exemption</p> <p>The justification for this exemption is the same as assessed by STECF</p>

	<p>previously (EWG 18-06, 19-08, 20-04). It relates to food security issues from damaged or undersized blue whiting that cannot be processed on board and must be discarded. The cost of landing and handling damaged blue whiting is estimated to be uneconomically disproportionate.</p> <p>The JR provides a description of the process on board this vessel as requested by STECF (EWG 20-04). While the information presented is largely qualitative, it describes the problem in detail and provides a justification for the exemption from several perspectives relating to the disproportionate costs of handling damaged and undersized blue whiting on board. As the vessel does not usually return to port until fully loaded, retaining such catch on board would shorten the duration of each fishing trip by at least 15%. The vessel would have to make 5 fishing trips in a year instead of 4 to land the same total catch. The additional time at sea, estimated that 12 days of extra route would create an extra cost of roughly €180,000 with additional unspecified costs for handling such unwanted catches.</p> <p>The JR also states that there is no way to increase the selectivity of the fishery to avoid unwanted catches. The French vessel uses a 50 mm mesh in the codend, which is in excess of the legal minimum mesh size. Using a mesh size larger than 50 mm would result in significant losses of blue whiting, which are not likely to survive the escapement process.</p> <p>4. Additional evidence and work planned</p> <p>No additional work is planned in the short term, although ways to improve selectivity in the future are not ruled out.</p> <p>5. EWG 22-05 Observations</p> <p>Limited new catch information specific to catches from ICES subarea 4 has been provided and therefore, full assessment of the impact of this exemption is not possible. However, it is noted that the volume of unwanted catch of blue whiting compared to the total catch for 2021 by the industrial vessel availing of this exemption is relatively small (63 tonnes or 2.4%) and would have not have any impact on the overall blue whiting stock.</p> <p>The description of the operation on board the vessel, as well as the qualitative information provided to support the assertion that the costs of handling unwanted catches on board are disproportionate, provide a reasonable justification for this exemption. However, no assessment as to whether the losses indicated are disproportionate or not is possible, having little information on total income or other indicators on the vessel economics.</p> <p>Regarding selectivity, the vessel is already fishing with a codend in excess of the legal minimum mesh size. Improving selectivity further in the fishery may not be advantageous as it may lead to unaccounted mortality due to the likely low survival of escaping blue whiting as indicated in the JR.</p>
Exemption	Main Findings of EWG 22-05
Northern prawn – caught with demersal trawls and seines using mesh sizes	<p>1. Exemption status</p> <p>This is a new exemption, similar to the existing one for industrial species (sprat, sandeel, Norway pout and blue whiting) under Article 11(13) of Regulation (EU) No 2020/2014).</p>

<p>above 70mm in ICES division 3a and subarea 4. The request seeks a de minimis exemption for bycatch of Northern prawn up to a maximum of 0,01 % of total catches in this fishery.</p>	<p>Considering that the species covered by the exemption differ from the species covered under article 11(13), the Scheveningen group recommends that a separate exemption is included under a new Article 11(18).</p> <p>2. Fishery Context</p> <p>Detailed catch and fishery information has been provided by the Scheveningen Group covering Denmark and Sweden as the two Member States participating in the relevant fisheries. This exemption would affect the demersal fishery using gears (OTB, OTM, OTT, PTB, PTM, SDN, SPR, SSC, TB, TBN) with mesh sizes above 70mm in ICES subarea 3a fitted with a sorting grid with a maximum bar spacing of 35mm or equivalent selectivity device and above 80mm in ICES division 4.</p> <p>No detail is provided on the number of vessels involved but based on the exemption for industrial species bycatch in the same fisheries, a significant number of vessels (more than 300) are likely to benefit from this exemption.</p> <p>Catch data for the period 2019-2021 were provided. The total landings of Danish and Swedish vessels by vessels subject to the landing obligation in 2021 totalled 32,589 tonnes with the estimated discards of Northern prawn, less than 1 tonne. Over the period 2019-2021, discards totalled approximately 3.25 tonnes. The request seeks the de minimis exemption up to a maximum of 0.01 % of total catches in this fishery, which for 2021 would amount to 3.21 tonnes.</p> <p>3. Basis for the exemption</p> <p>This exemption is requested on the same basis as the current exemption already granted for bycatches of sprat, sandeel, Norway pout and blue whiting in demersal trawls >80 mm mesh and Pandalus trawls (>35 mm) with grid and fish retention tunnel in 3a and 4.</p> <p>The JR states that despite the small size of Northern prawn, some are retained, particularly when the volume of the targeted catch is large. Due to this, escapement is impeded, and a small number of prawns can be trapped' in the codend, regardless of the mesh size. Consequently, an increase in mesh size in a fishery already using meshes that are more than twice those used in the targeted fishery for Northern prawn will have no impact on the bycatch of these species but will have negative impact on catches of targeting species. The JR concludes that there are, at present, no scientifically documented methods to reduce bycatch of Northern prawn in these relevant fisheries.</p> <p>4. Additional evidence and work planned</p> <p>No additional work is planned.</p> <p>5. EWG 22-05 Observations</p> <p>The background and the justification of this new exemption are similar to those presented by Scheveningen group for the combined de minimis exemption for industrial species. Therefore, the observations for that exemption are relevant.</p> <p>The current discard volumes reported for all of the fleets is less than 1 tonne annually with a discard rate of between 0.002 to 0.023%. In</p>
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the overall context of the fishery, given the discard rates and volumes are low, the impact of the exemption is likely to be minimal.

The justification that the catches are insignificant in the demersal fisheries and options to improve selectivity have been exhausted are not necessarily supported with quantitative evidence. However, based on the information supplied for this exemption and for the similar one for industrial species, it is reasonable to assume that improving selectivity further in the fishery to reduce such a small bycatch is difficult to achieve in practice.

References

Balazuc A., Goffier E., Soulet E., Rochet M.J., Leleu K., 2016. EODE – Expérimentation de l’Obligation de DEbarquement à bord de chalutiers de fond artisans de Manche Est et mer du Nord, et essais de valorisation des captures non désirées sous quotas communautaires, 136 + 53 pp.

Cornou Anne Sophie, Scavinner Marion, Sagan Jonathan, Cloatre Thomas, Dubroca Laurent, Billet Norbert (2021). Captures et rejets des métiers de pêche français. Résultats des observations à bord des navires de pêche professionnelle en 2019. Obsmer. <https://doi.org/10.13155/79198>

Cloâtre Thomas, Quinio-Scavinner Marion, Sagan Jonathan, Dubroca Laurent, Biellet Norbert (2022). Captures et rejets des métiers de pêche français. Résultats des observations à bord des navires de pêche professionnelle en 2020. Obsmer

Gauduchon Thibault, Cornou Anne Sophie, Scavinner Marion, Goascoz Nicolas, Dubroca Laurent, Billet Norbert (2020). Captures et rejets des métiers de pêche français. Résultats des observations à bord des navires de pêche professionnelle en 2018. Obsmer. <https://doi.org/10.13155/73122>

Leonardi S., Rubin A., Meillat M., Coppin F., Delpech J-P., Morandeau F., Larnaud P., 2009. Selecmer – Amélioration de la sélectivité des chalutiers – Pêcheries multispécifiques Manche – Mer du Nord, 66 + 62 pp. Version septembre 2009

Scientific, Technical and Economic Committee for Fisheries (STECF) – Evaluation of the Landing Obligation Joint Recommendations (STECF-18-06) (2018). Publications Office of the European Union, Luxembourg, 2018, ISBN 978-92-79-79389-9, doi:10.2760/999971, JRC112740

Scientific, Technical and Economic Committee for Fisheries (STECF) – Evaluation of Landing Obligation Joint Recommendations (STECF-19-08). Publications Office of the European Union, Luxembourg, 2019, ISBN 978-92-76-09523-1, doi:10.2760/227428, JRC117511

Scientific, Technical and Economic Committee for Fisheries (STECF) Evaluation of Joint Recommendations on the Landing Obligation and on the Technical Measures Regulation (STECF-20-04). Publications Office of the European Union, Luxembourg, 2020, ISBN 978-92-76-20383-4, doi:10.2760/328463, JRC121260

Scientific, Technical and Economic Committee for Fisheries (STECF) - Evaluation of Joint Recommendations on the Landing Obligation and on the Technical Measures Regulation (STECF-21-05). EUR 28359 EN, Publications Office of the European Union, Luxembourg, 2021, ISBN 978-92-76-40593-1, doi:10.2760/83668, JRC126128.

Viera A., Meillat M., Coppin F., Delpech J-P., Morandeau F., Gamblin C., 2010. SELECCAB – Volet Artisans - Amélioration de la sélectivité des chalutiers artisanaux travaillant en Manche – Mer du Nord de façon à limiter les captures de cabillaud., 61 + 48pp. Version septembre 2010

Weiller Y., Reecht Y., Vermard Y., Coppin F., Delpech J-P., Morandeau F., 2014. SELECFISH – Amélioration de la sélectivité des chalutiers artisanaux travaillant en Manche Est - Mer du Nord afin de limiter leurs rejets, 82 + 55pp. Version avril 2014

5.2 High survivability exemptions

A summary of the proposed high survivability exemptions is given in Table 6.2.1. Table 6.2.1. Summary of high survivability submitted as part of the North Sea Joint Recommendations.

Exemption	Main Findings of EWG 22-05
<p>Plaice below MCRS caught with 80-119 mm beam trawl gears (BT2) in ICES subarea 4 (beam trawl – Article 7 of Regulation (EU) No 2020/2014)</p>	<p>1. Exemption status</p> <p>Existing temporary exemption with request for additional information. Member States having a direct management interest shall submit every year, as soon as possible and not later than by 1 May, additional scientific information supporting the exemption.</p> <p>The existing exemption applies to beam trawlers equipped with (7.1.a) the flip-up rope or benthos release panel (BRP) and with an engine power of more than 221 kW; or by vessels implementing the roadmap for Fully Documented Fisheries (FDF). (7.1.b) The exemption applies to vessels with an engine power of not more than 221 kw or less than 24 m in length overall, which are constructed to fish in the twelve-mile zone, if the average trawl duration is less than ninety minutes.</p> <p>2. Fishery context</p> <p>Updated information on the beam trawl (BT2) fleets and plaice catches in division 2a and subarea 4a for 2021 was provided by Belgium and the Netherlands. A total of 141 vessels participated in the fishery, with 101 of these Dutch vessels and the other 40 Belgian. The Netherlands accounts for almost 94% of reported total catches in the beam trawl fishery. Total discards of approximately 23,000 tonnes were reported from a total estimated catch of 30,491 tonnes. Reported discard rates were 74% and 76% for Belgium and the Netherlands, respectively. This is a slight increase in the discard rates observed in 2020. No information is provided on the volume of discards that are below the minimum conservation reference size and therefore covered by this exemption.</p> <p>3. Survival evidence</p> <p>No new survival evidence for plaice has been provided by the Scheveningen group. The previous estimates of plaice survival (vitality and captive studies) relevant for the exemption assessed by STECF (EWG 20-04, EWG 21-05 and references therein) remain the best available for the North Sea beam trawl fishery. These can be summarised as:</p> <ul style="list-style-type: none"> - Estimates of immediate survival of undersized plaice assessed just after being heaved on board, were found to vary between 60-90% (mean 75%, 66–83%, 95% CI). These estimates were based on 8 trips during 2019 and 2020 on Belgium beam trawlers. Important to note that these rates should not be confused with overall long-term discard survival. - Uhlmann et al. (2016 and 2021) reported that survival of plaice discarded from Belgian beam trawlers representing the three fleet segments was estimated to range between 41–58%, 11–28%, 2–4% (95 % confidence interval; Kaplan-Meier models) for trips of the coastal (≤ 221 kW), Eurocutter (≤ 221 kW) and >221 kW vessel, respectively. The mean discard survival rate across all sampled trips and vessel segments was 21% (EWG 20-04). For pulse trawlers, the discard survival estimates

previously assessed by STECF were 14% (95% CI 11-18%).

- Long-term survival (Kaplan-Meier asymptote) rates for discarded undersized plaice in the Celtic Sea and Eastern Channel were estimated at between 13% (9%-19%, 95% CI) from the summer trip (July 2020, Celtic Sea), with conventional trawl and 51% (41%-64%, 95% CI) from the winter trip (December 2020, Eastern Channel) with a flip-up trawl, and 44%, (35-56%, 95% CI) with a conventional trawl. No statistically significant difference in survival was found between conventional and flip-up rope trawls. The representativeness of these estimates for the North Sea is not clear but are in line with other observations.

The estimates provided show high variability between trips which is likely due to the differences in the environmental conditions (season, area) and fishing operations (catch size/composition, vessel size, gear characteristics). Additionally, most of the estimates are for vessels greater than 221 kw with little survival information for smaller vessels with lower engine power, except for those reported in Uhlmann et al. (2016). It is also noted that based on the Belgian survival research, the use of the flip-up rope as specified in the current Delegated Act is unlikely to significantly improve both on-board and post-release survival probability of discarded plaice, particularly on soft-sediment's fishing grounds. This is further discussed in Uhlmann et al. (2021). No information on the effectiveness of the Benthic Release Panel in improving survival has been reported so no assessment can be made whether this gear modification is beneficial or not.

4. Survival and fishery compatibility

No new survival estimates have been provided to EWG 22-05, so the previous estimates reported by EWG 21-05 and 20-04 remain the most up to date. There are both survival estimates derived from direct observation, and those based on a proxy, using relationships from other studies between health condition and survival probability. The latest estimates based on captive studies are considered robust, if highly variable. EWG 22-05 considers these are in line with the estimates generated by ICES WGMEDS for the North Sea plaice stock, whereby of the total catch from the stock, an estimated 23% (by weight) is made up of dead discards from the beam trawl fleet. This should be considered in the context of the discard rates in the fishery which are in excess of 70%.

5. Additional evidence and work planned

The Scheveningen group has provided updated information on ongoing research work in Belgium and Netherlands to support the exemption. The information provided is well-structured and follows the original roadmap developed by the Scheveningen group.

No further research focusing on the survival of plaice is planned and the focus in 2022 is on improving selectivity and increasing survivability as well as using REM systems to improve knowledge on fishing mortality in beam trawl fisheries.

The information provided by the Netherlands relates to 1) implementing a pilot Fully Documented Fisheries (FDF) project to improve the knowledge base on fishing mortality and catch reporting; and 2) selectivity trials to reduce fishing mortality of undersize plaice and increasing the chance of survival of discarded plaice.

As reported in 2020 and 2021 the Netherlands has committed to implementing an FDF pilot project with the aim of delivering accurate estimations of the complete catch. The latest report contains information for the work completed in the period Q2 2021 to Q1 2022. Nine vessels have been contracted to participate and REM systems have been installed on the vessels and information has been collected from 3063 hauls of which 2472 have provided good quality information. Due to Covid-19 no observer trials to validate the camera and self-sampling data have been possible but nonetheless automated analysis of the video material collected using a 3D camera has been carried out with good results. Work on this project will continue in 2022.

Similarly, the Belgian progress report describes work continuing to develop species identification software under laboratory conditions, to analyse video footage from EM systems. Species identification with an accuracy of 95% for plaice and sole to within 3mm in length has been achieved under laboratory conditions. Installation of the systems on board commercial vessels is ongoing, in combination with a self-sampling programme.

Selectivity work carried out by the Netherlands that commenced in 2019 is continuing in 2022. The focus of this work is to develop more selective beam trawl designs. According to the supporting report, of the six different gear innovations to improve selectivity under development, three have been discontinued - brush footrope, wing rakes and rotating brush. The three remaining (selection and escape panel - speed bump panel, the Tiaki codend and rubber strands with ball heads combination) have been further tested during 2021 and early 2022. The speed bump panel is more of a traditional adaptation to better separate plaice from sole. Similarly, the rubber strands with ball heads design is an alternative to traditional tickler chains used by the beam trawl fleet. The Tiaki codend work is different in that it focuses on the creation of a gentler catching process to increase the probability of discards surviving. These three remaining projects will run until Jan 2023. Testing seems to be at an early stage with only very preliminary results and observations presented.

Belgium also has reported on ongoing research into technical innovations to improve selectivity and survivability of discarded plaice under the "Combituig" Project. This work was carried out in 2021 and looked at the use of LED-lights in combination with Benthic Release Panels to reduce the catch of undersized plaice. Testing has been carried out on three research cruises to date and the results have been encouraged although no detail is provided. Further trips were scheduled in the second half of 2021, but no results are reported for these trials. The conclusion from these trials is that further research with alternative technologies such as LED-lights is warranted.

6. EWG 22-05 Observations

Since 2019, progress has been made in increasing the knowledge of plaice survivability. Additionally, considerable work has begun on the estimation of catch volumes and composition, by development of systems and protocols for self-reporting and automated video analysis. Research on ways to improve selectivity is also ongoing. No concrete results have been presented to date, but the preliminary findings seem encouraging for some of the gear modifications tested.

For beam trawlers, the justification for survivability exemption for

	<p>plaice continues to be based on the potential for improving survival and selectivity, but this is based on variable estimates of survival.</p> <p>The current survival estimates are still highly variable and only relevant for the larger beam trawl vessels. No new information has been provided for smaller vessels with less than 221KW engine power other than that contained in Uhlmann et al. (2016).</p> <p>There is also only limited and inconclusive information on the effectiveness of the Flip-up rope and the Benthic Release Panel to improve survivability. The use of these devices is specified in the Delegated Act as a condition of the exemption. If these devices are not effective in increasing survivability, then the value of making them a condition of the exemption is questionable even though they may have other benefits not related to survivability.</p> <p>The current survival estimates need to be considered in the context of the current discard rates reported, which are in excess of 70%. ICES advice shows the plaice stock in the North Sea is in good condition with fishing mortality below F_{msy}, F_{pa}, and F_{lim}, and spawning-stock size above $MSY_{Btrigger}$, B_{pa}, and B_{lim}. However, given the survival rates are in the range of 20-40% and the discard rates are high, considerable volumes of plaice discarded under this exemption are likely not to survive.</p> <p>Unless surviving discards are accounted for in stock assessments and dead discards are accounted for in TAC setting when survivability exemptions are in place, the actual fishing mortality will not match the agreed catch level.</p> <p>Introducing discard survival estimates should continue to be discussed by ICES for more stocks and especially plaice, given the proliferation of survival exemptions.</p> <p>The observations of EWG 21-05 that there is still a need for clarity on objectives and timelines in respect of the roadmap remains as there is still no timetable for the completion of the roadmap.</p>
Exemption	Main Findings of EWG 22-05
<p>Mackerel and herring in the purse seine fisheries in ICES divisions 2a, 3a and subarea 4 - Article 10 of Regulation (EU) No 2020/2014)</p>	<p>1. Exemption status</p> <p>Prior to 2021, this exemption was granted under Article 2 of Regulation (EU) 1395/2014. It was prolonged for the period 2021 and 2022 under Article 10 of Regulation (EU) 2020/2041. The Scheveningen Group has requested to extend this exemption beyond 2022.</p> <p>The existing exemption applies to mackerel and herring caught in purse seine fisheries in ICES divisions 2a, 3a and subarea 4. It is accompanied by requirements that:</p> <ol style="list-style-type: none"> a) the catch is released before a certain percentage of the purse seine is closed ('the point of retrieval'). b) the purse seine gear is fitted with a visible buoy clearly marking the limit for the point of retrieval. c) the vessel and the purse seine gear are equipped with an electronic recording and documenting system when, where and extent to which the purse seine has been hauled for all fishing operations. d) The point of retrieval shall be 80 % closure of the purse seine in fisheries for mackerel and it shall be 90 % closure of the

purse seine in fisheries for herring.

2. Fishery context

No information has been provided on the fishery in terms of number of vessels involved or on catch and extent of unwanted catches. Based on ICES advice approximately 20% of mackerel catches and 45% of herring catches come from purse seine fisheries. However, there is no information on the breakdown of such catches to Union vessels.

ICES reports that discarding of mackerel is known to take place (0.9% of the total catch in weight in 2020) but is only quantified for part of the fisheries and not by gear type; the proportion of the landings covered cannot be calculated. Partial discard estimates are included in the assessment and overall discarding in recent years is assumed negligible. ICES also reports that discarding of herring is negligible but slipping is known to occur in the purse seine and pelagic trawl fisheries.

3. Survival evidence

No new survival evidence and estimates have been provided by the Scheveningen Group and the request for extension of the exemption is based on the previous studies on "slipping" in purse seine fisheries submitted to STECF in 2014. These studies found that survival rates depend on the crowding time and the density of fish within the net, which are typically limited in these fisheries. STECF concluded at the time that, assuming the results of the survival studies are representative of survival rates under commercial fishing operations, the proportion of slipped mackerel surviving would likely be around 70 % and would result in much lower densities than the density where mortality of herring was observed to increase.

EWG 22-05 is aware of several papers by Anders et al. (2019, 2020 and 2021) and Marçalo et al. (2019) that are relevant to this exemption. These papers generally confirm the findings of the earlier studies referred to in supporting the original exemption. However, they also highlight that survival is not only related to the crowding density but also to the crowding duration, which in practice is difficult to control.

4. Survival and fishery compatibility

No new survival estimates have been provided and without any information on the fishery, EWG 22-05 cannot assess the likely impact of this exemption. Additionally, no information has been provided on the use of the exemption since its introduction in 2015 other than indications in the JR that it has not been used widely to date. The JR also states that it is expected that the introduction of CCTV on pelagic vessels in the near future will increase effort in the purse seine fisheries and therefore the use of the exemption. However, the basis for this statement is unclear.

5. Additional evidence and work planned

Other than indications that CCTV will be introduced on pelagic vessels in the near future, no other work relevant to this exemption is planned according to the JR.

	<p>6. EWG 22-05 Observations</p> <p>The conclusions of STECF PLEN 14-02 that, the survival estimates of 70% for mackerel and herring remain valid. This assumes the experiments undertaken on the crowding density effects and crowding duration on mackerel and herring mortality referred to in the original JR are representative of the conditions experienced under commercial purse seine fishing operations. It is also dependent on compliance with the rules set out in the Delegated Act regarding the point of retrieval after which fish cannot be released from the purse seine. There is no indication that either of these conditions have been met.</p> <p>The assertion by the Scheveningen group that the introduction of CCTV into pelagic fisheries will increase the use of purse seines and therefore the use of the exemption is unclear. There does not seem any obvious linkage between the two.</p> <p>Given no new supporting information has been provided and that this exemption has been in place since 2015, it should be subject to a further review as part of the wider review planned for next year. This should assess whether the survival estimates provide are still valid, the impact of the exemption on the stocks involved and also based on uptake, whether it is still required.</p>
Exemption	Main Findings of EWG 22-05
<p>Turbot caught with beam trawls (TBB) with a cod-end equal to or larger than 80mm in ICES subarea 4 - Article 8 of Regulation (EU) 2020/2014</p>	<p>1. Exemption status</p> <p>Existing survivability exemption granted in 2019 under Delegated Regulation EU 2019/2238 and extended until 31 December 2022 under Article 8 of Delegated Regulation (EU) 2020/2014.</p> <p>The 2022 JR requests the continuation of the survivability exemption for 2023.</p> <p>2. Fishery context</p> <p>Updated catch data and fishery information has been provided by the Netherlands, Belgium and Germany covering the period 2017-2021.</p> <p>The JR states that the exemption concerns:</p> <ul style="list-style-type: none"> • 102 Dutch vessels • 31 Belgian vessels • 13 German vessels <p>These vessels target plaice and sole with beam trawls mainly in ICES divisions 4b and 4c in the southern North Sea. Turbot is a relatively small but economically valuable bycatch in these fisheries.</p> <p>Based on 2021 catch data, the Netherlands accounts for almost 90% of reported total catches in the beam trawl fishery. Total discards of approximately 39 tonnes were reported from a total estimated catch of 1,643 tonnes. Reported discard rates were 2%, 3% and 5% for the Netherlands, Belgium and Germany, respectively. The German discard rate is based on self-sampling so is considered a preliminary figure.</p> <p>3. Survival evidence</p> <p>The initial 2019 exemption was based on an estimated 30% survival rate of turbot caught using pulse trawls. STECF EWGs 18-06 and 19-</p>

	<p>08 questioned whether survival estimates generated from pulse trawling are representative of the exempted beam trawl fishery. Therefore, the 2021 JR of the Scheveningen Group provided an estimated survival rate of between 38 and 75% based on a Belgian study using Beam Trawls in ICES subarea 4. Estimated long term survival was 75% (3 out of 4 individuals) from the first trip and 38% (5 out of 13) from the second trip. None of the 3 individuals caught with a trawl without a flip-up rope survived compared to 56% in the flip-up trawl. EWG 21-05 observed that the sample sizes were insufficient for further analyses into contributing factors. Previously submitted and reviewed documents based on pulse-trawls reported a survival rate of 20-43% (EWG 20-04). No other survival estimates are available.</p> <p>4. Survival and fishery compatibility</p> <p>No new survival estimates have been provided in the 2022 JR so the observations of EWG 21-05 regarding the number of observations are still relevant. The catch data suggests the quantity of turbot affected by this exemption is relatively low and applying the survival rates from the Belgian study, the estimated survival rate ranges from 14.8 tonnes (38 % survival) to 29.3 tonnes (75 % survival) from an estimated 39 tonnes of total discards. EWG 22-05 notes the caveats recorded by EWG 21-05 concerning the small number of observations on which the Belgian survival estimates were based.</p> <p>5. Additional evidence and work planned</p> <p>No new survival estimates have been provided and no further work is described in the JR.</p> <p>6. EWG 22-05 Observations</p> <p>The Scheveningen Group has provided detailed catch and discard data as well as a description of the fisheries by Member State involved in the fishery. This shows discards of turbot in the fishery are low in terms of overall catches, noting that German and Belgian discard estimates are based on few observed trips in the beam trawl fishery which may bias discard estimates.</p> <p>Both catches and discards show a decreasing trend in recent years. The reason for the reduction in catch is unclear but may be related to the ban on the use of the pulse trawl.</p> <p>The current survival estimates need to be considered in the context of the current discard rates reported, which for all of the fleets is around 2%. ICES advice shows the turbot stock in the North Sea is in good condition with fishing mortality below F_{msy} and spawning-stock size is above MSY B_{trigger}, B_{pa}, and B_{lim}. Assuming the survival rates are in the range of 38-75% and the discard rates and volumes are low, the impact of the exemption is likely to be low.</p> <p>The observation of EWG 21-05 that a synthesis of available survival estimates, and characteristics of all relevant fisheries is needed to assess the consequences of the exemption fully remains valid.</p>
Exemption	Main Findings of EWG 22-05
Skates and rays caught by all gears in ICES divisions 2a and	<p>1. Exemption status</p> <p>Existing temporary exemption with request for additional information. Member States having a direct management interest must submit</p>

3a and ICES subarea 4
- Article 9 of
Delegated Regulation
(EU) No 2020/2014.

additional scientific information supporting the exemption. By 1 May every year.

2. Fishery context

Limited catch data for cuckoo rays has been provided by the Scheveningen group for Denmark, Germany and Sweden for 2021. Denmark reports total catches of cuckoo ray of 24 tonnes with 9 tonnes discarded. German reports of 2.2 tonnes, all of which were discarded, while Sweden reports no catch.

France provided catch data from 2019 and 2020 for blonde rays, undulate rays, cuckoo rays, and thornback rays. The JR notes that precaution need to be taken with the data, as it is limited and inconsistent due to Covid and Brexit. In 2020, discard rates were highest for blonde ray (12%) in bottom trawls targeting demersal species and cephalopods in the east of the Eastern Channel and the South of the North Sea by vessels over 18m.

The JR notes that general data could not be provided as it has not been analysed yet and needs to be accredited by ICES WGEF which takes place between 14-23 June 2022. If necessary, the data can be transmitted at a later stage to STECF.

3. Previous survival evidence

No new survival estimates have been provided. Reference to existing estimates collected under SUMARIS project, Ensure project, SURF projects are provided as evidence of survivability.

4. Survival and fishery compatibility

No new survival estimates (however preliminary results available from RAYWATCH project, below) or substantial new information about fleets and fisheries for all affected Member States have been provided to EWG 22-05, so the previous estimates reported by EWG 21-05 and 20-04 remain the most up to date. Previous projects provided survival data from studies compatible with the specific fisheries. Studies were conducted using protocols developed by ICES WGMEDS and van Bogaert et al. 2020 - see EWG 20-04.

Preliminary results from the RAYWATCH project from several trips and hauls of the vitality of individuals has been assessed. The observers scored an individual along a four-point categorical scale (A = "excellent", B = "good", C = "poor", D = "dead") based on the number of injuries and the liveliness of the individual. A total of 40 hauls were sampled for vitality spread over 6 trips. 998 individuals were scored for vitality of which 518 spotted rays, 199 thornback rays, 99 small eyed ray, 97 cuckoo ray and 69 undulate rays. During the 40 hauls only 16 blonde rays were sampled for vitality. In the coming months more effort will be made to try and increase the number of sampled blonde rays if possible.

For all species combined, 37.9% of the sampled individuals were given vitality score A, 27.5% vitality score B and 21.9% vitality score C. The average at vessel mortality for all species combined is 12.7% (=vitality score D). The at vessel mortality is highest for thornback ray (27%), followed by spotted ray (12%), cuckoo ray (6%), small eyed ray (5%) and undulate ray (1%). No immediate mortalities were observed for blonde ray, but keep in mind the small sample size. In the coming months, factors affecting vitality and at vessel mortality will be analysed and a prediction of the long-term vitality will be made

using the output and data of the SUMARIS project. Note vitality assessments only, no survival estimates from captive monitoring or tagging studies are available.

RAYWATCH project also noted that from the preliminary data observed that the Minimum Landing Size (national measure) does not guarantee the reproduction of thornback ray and blonde ray, as an L50 of between 666 mm and 819 mm was observed. However, length frequency data presented in the RAYWATCH road map report (ANNEX I) shows that most individuals caught are below the L50. RAYWATCH suggested increasing the Minimum Landing Size would be beneficial. However, this could have a large effect on the fisheries, which is why for example a Maximum Landing Size might be a good measure. This means that animals above a certain size need to be discarded in order to make sure that the population can still reproduce. During the coming months RAYWATCH will investigate the possible management measures and seek feedback from stakeholders.

5. Additional evidence and work planned

The Scheveningen group has provided updated information on ongoing research work in Belgium and Netherlands to support the exemption. The information provided is well-structured and follows the original roadmap developed by the Scheveningen group. Member States are currently undertaking projects to add knowledge of skates and rays survival in various fisheries and also improve skates and rays population estimates. Among these is a planned report of survival estimates for thornback ray, spotted ray and blonde ray in area 4 and 7d in spring 2023 by the Netherlands.

The roadmap overview also reports on work about stock identity, other biological variables, and improved data collection with planned reports in 2022-2023. A coordinated effort to improve the knowledge base for the different species is a common theme among the roadmap partners. This effort focuses on species identification guidelines and improved resolution in the data collection for both science and industry (for example project Raywatch in Belgium).

- SUMARIS/ FROM NORD (7d) – survival of thornback ray in Danish seine
- Innorays (4b,4c) - Use of computer images to improve landing data; develop new innovative DNA-method for population estimates on thornback, spotted and blonde rays.
- Bridging the knowledge gaps for sharks and rays in the North Sea (4b,4c,7d)- thornback, spotted and blonde rays. This project will look to facilitate the dialogue between stakeholders in skate and ray fisheries, conservation, and research on the implementation of the roadmap as part of the High survivability exemption for skates and rays caught by all fishing gears. Per comms with dutch scientist the EWG 22-05 is aware that this project includes survival studies on skates and rays species but it is not clear in what fisheries and when results will become available.
- LIFE-IP (4b,4c) - Improve knowledge on temporal distribution of skates, rays and shark species and provide insight in kinship or subpopulations within these species.

	<ul style="list-style-type: none"> • Maturity and fecundity in data limited stocks (4b,4c) - Explore and evaluate innovative data collection methods to expand and consolidate the role of the fishing industry in data collection for stock assessments. • Raywatch (7a,d,e,f,g,h) - Collection of biological, catch and vitality data for seven ray species (thornback ray, blonde ray, spotted ray, undulate ray, small eyed ray, sandy ray and cuckoo ray) to improve the future NDGP data collection. Also plan to fill knowledge gaps to support the high survival exemption in the context of the roadmap for rays and skates. However, the EWG 22-05 note that all assessments to date have been vitality observations with no captive monitoring. <p>6. EWG 22-05 Observations</p> <p>Significant new information has been provided. This includes the requested summary table to provide a means to differentiate new from existing information. Update on the progress (projects mentioned above – ongoing) regarding the roadmap was also provided. However, catch data was limited to several species and specific gears. Significant gaps in knowledge on catches of some rays remain.</p> <p>Further survival work is planned for the coming year. This should provide better understanding of skates and ray survival in specific fisheries but also note that each species should be assessed. The RAYWATCH project will provide species useful vitality observations and biological data as preliminary results suggest. However, it should be noted that survival estimates from captive monitoring or tagging studies would provide important post-release survival data.</p> <p>As highlighted by STECF previously, Member States should be encouraged to use their joint scientific capacity to compile and analyse previous and new data in a more systematic way to assist future assessment of the exemptions covered under the roadmap.</p>
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References

- Anders N, Breen M, Saltskår J, Totland B, Øvredal JT, Vold A (2019) Behavioural and welfare implications of a new slipping methodology for purse seine fisheries in Norwegian waters. *PLoS One* 14: 1–24. e0213031.
- Anders N, Eide I, Lerfall J, Roth B, Breen M (2020) Physiological and flesh quality consequences of pre-mortem crowding stress in Atlantic mackerel (*Scomber scombrus*). *PLoS One* 15: 1–20. e0228454
- Anders N, Roth B, Breen M (2021) Physiological response and survival of Atlantic mackerel exposed to simulated purse seine crowding and release. *Conserv Physiol* 9(1): coab076; doi:10.1093/conphys/coab076.
- Marçalo A, Breen M, Tenningen M, Onandia I, Arregi L, Gonçalves JM (2019) Mitigating slipping-related mortality from purse seine fisheries for small pelagic fish: case studies from European Atlantic waters. In *The European Landing Obligation*. Springer, Cham, Switzerland, pp. 297–318.
- O'Neill, F.G.O., Feekings, J., Fryer, R.J., Fauconnet, L., Afonso, P. (2019). Discard avoidance by improving fishing gear selectivity: Helping the fishing industry help itself. In S.S. Uhlmann, C. Ulrich, S.J. Kennelly (Eds.), *The European Landing Obligation reducing discards in complex, multi-species and multi-jurisdictional fisheries* (pp. 283–297). Springer International Publishing AG, part of Springer Nature

Reid, D.G., Calderwood, J., Afonso, P., Fauconnet, L., Pawlowski, L., Plet-Hansen, K.S., et al. (2019). The best way to reduce discards is by not catching them! In S.S. Uhlmann, C. Ulrich, S.J Kennelly (Eds.), *The European Landing Obligation reducing discards in complex, multi- species and multi-jurisdictional fisheries* (pp. 261–282). Dordrecht: Springer International Publishing AG, part of Springer Nature

Uhlmann, S. S., Theunynck, R., Ampe, B., Verkempynck, R., Miller, D. C.M., van Marlen, B., van der Reijden, K. J. et al. 2016b. Overleving doorboomkor gevangen pladijs – Survival of beam-trawled European plaice (*Pleuronectes platessa*). ILVO Mededeling 210. Institute for Agricultural and Fisheries Research, Oostende, Belgium. 172 pp. (13) (PDF) *Survival of undersized plaice (Pleuronectes platessa), sole (Solea solea), and dab (Limanda limanda) in North Sea pulse-trawl fisheries*. Available from: https://www.researchgate.net/publication/313164959_Survival_of_undersized_plaice_Pleuronectes_platessa_sole_Solea_solea_and_dab_Limanda_limanda_in_North_Sea_pulse-trawl_fisheries [accessed May 18 2022].

Uhlmann, S.S., Theunynck, R., Ampe, B., Desender, M., Soetaert, M., Depestele, J., 2016a. Injury, reflex impairment, and survival of beam-trawled flatfish. ICES J. Mar. Sci. 73, 1244–1254. <https://doi.org/10.1093/icesjms/fsv252>

Uhlmann, S.S., Ampe, B., Van Bogaert, N., Vanden Berghe, C., Vanelslender, B., 2021. Flatfish survivors have tales to tell: Cold seawater and reduced deployment duration contribute to the survival of European plaice (*Pleuronectes platessa*) discarded by Belgian beam trawlers. Fish. Res. 240, 105966. <https://doi.org/10.1016/j.fishres.2021.105966>

Uhlmann et al., 2021. Effects of catch composition on the fate of European plaice (*Pleuronectes platessa*) discarded from Belgian beam trawlers. Under review with Fisheries Research.

Van Bogaert, N., Ampe, B., Uhlmann, S., and Torreele, E., 2020. Discard survival estimates of commercially caught skates of the North Sea and English Channel (Interreg programme No. Output O 5.1), Work Package 2.

6 NWW – OVERVIEW OF JOINT RECOMMENDATIONS

Commission Delegated Regulation (EU) 2015/2438 established a discard plan for certain demersal fisheries in North-Western Waters (i.e., in Union waters of ICES Areas 5b, 6 and 7). Based on new Joint Recommendations for the North-Western Waters submitted by the regional group of Member States, this plan has been updated several times, most recently by Commission Delegated Regulation (EU) 2020/2015 under the Western Waters Multiannual Plan (2019/472). In 2022, a further set of Joint Recommendations has been submitted by the Member States, updating and amending the discard plan.

It should be noted that the discard plan in its entirety expires at the end of 2023. Therefore, all of the exemptions, other than several exemptions with an expiry date at the end of 2022, will no longer apply after 2023 pending the submission of a new discard plan by the NWW Group in 2023.

The main elements of these JR's and those which have been assessed by EWG 22-05 are summarised in table 6.1.

Table 6.1 Main elements of the Joint Recommendations submitted for the NWW

Elements	Contained currently in pelagic or demersal discard plan	Status with relevant Article in current discard plan	Assessment by EWG 22-05 with relevant Annexes in JR
De minimis			
Common sole caught in gillnets and trammel nets in ICES divisions 7d, 7e,	Demersal	Existing Article 13(1b)	Not Assessed

7f and 7g			
Common sole caught with beam trawls with a mesh size of 80-119mm with increased mesh sizes in the extension of the beam trawl in ICES divisions 7d, 7e, 7f, 7g and 7h	Demersal	Existing Article 13(1c)	Not Assessed
Fish bycatch below MCRS in the Brown shrimp fishery caught using beam trawls of mesh size <31mm in ICES division 7a	Demersal	Existing Article 13(1e)	Not Assessed
Blue whiting caught in the industrial pelagic trawler fishery in ICES division 5b and subareas 6 and 7	Pelagic	Existing Article 13(1l)	Not Assessed
Albacore tuna caught using midwater pair trawls in ICES subarea 7	Pelagic	Existing Article 13(1m)	Not assessed
Mackerel, horse mackerel, herring and whiting caught by pelagic trawlers up to 25 metres in length overall, using mid-water trawls targeting mackerel, horse mackerel and herring in ICES division 7d	Pelagic	Existing Article 13(1n)	Not assessed
Whiting caught with bottom trawls and seines with a mesh size equal to or greater than 80 mm, pelagic trawls and beam trawls with a mesh size of 80-119 mm in ICES division 7b-c and 7e-k	Demersal	Temporary until end of 2021 Article 13(1a)	Re-assessed based on existing and new information
Haddock caught using bottom trawls, seines greater than 100m; with catches comprising not more than 30 % Norway lobster and excluding beam trawls; with mesh sizes greater than or equal to 80 mm in 7b, 7c and 7e to 7k with catches comprising more than 30	Demersal	Existing Article 13(1d)	Re-assessed based on existing and new information

% of Norway lobster; beam trawls using mesh sizes greater than or equal to 80 mm in 7b, 7c and 7e to 7k in conjunction with the use of a Flemish panel;			
Boarfish caught using bottom trawls in ICES divisions 7b-c & 7f-k	Demersal	Existing Article 13(1f)	Re-assessed based on existing and new information
Megrim below MCRS caught using bottom trawls with a mesh size of 70-99mm and beam trawls with a mesh size of 80-119mm in ICES subarea 7	Demersal	Existing Article 13(1g)	Re-assessed based on existing and new information
Common sole caught using beam trawls with mesh size of 80-119mm with a large mesh panel in ICES divisions 7a extended to include 7j,k	Demersal	Existing Article 13(1h)	Re-assessed based on existing and new information
Greater silver smelt caught using bottom trawls with a mesh size greater or equal to 100mm in ICES division 5b (EU waters) and subarea 6	Demersal	Existing Article 13(1i)	Re-assessed based on existing and new information
Horse mackerel caught using bottom trawls, seines and beam trawls in ICES subarea 6 and ICES divisions 7b-7k	Demersal	Existing Article 13(1j)	Re-assessed based on existing and new information
Mackerel caught using bottom trawls, seines and beam trawls in ICES subarea 6 and ICES divisions 7b-7k	Demersal	Existing Article 13(1k)	Re-assessed based on existing and new information
Haddock below MCRS caught with a mesh size up to 119mm in the West of Scotland <i>Nephrops</i> fishery in ICES division 6a	Demersal	Existing Article 13(1l)	Re-assessed based on existing and new information
High Survivability			
<i>Nephrops</i> caught using pots, traps or creels in	Demersal	Existing	Not assessed

ICES subareas 6 and 7;		Article 3(1a)	
<i>Nephrops</i> caught with bottom trawls with a mesh size equal to or larger than 100mm in ICES subarea 7	Demersal	Existing Article 3(1b)	Not assessed
<i>Nephrops</i> caught using bottom trawls with a mesh size of 70-99mm in combination with highly selective gears in ICES subarea 7	Demersal	Existing Article 3(1c)	Not assessed
<i>Nephrops</i> caught using bottom trawls with a mesh size of 80-119mm within 12 miles of coasts in ICES division 6a	Demersal	Existing Article 3(1d)	Not assessed
Common sole below MCRS caught using bottom trawls with cod end mesh size of 80-99 mm in ICES division VIIId	Demersal	Existing Article 4	Not assessed
Plaice caught with trammel nets in ICES divisions 7d, 7e, 7f, 7g	Demersal	Existing Article 6(1a)	Not assessed
Plaice caught using bottom trawls in ICES divisions 7d, 7e, 7f, 7g	Demersal	Existing Article 61(b)	Not assessed
Plaice caught using seines in ICES division VIIId	Demersal	Existing Article 6(1e)	Not assessed
Plaice caught using Scottish seines in ICES divisions 7b-k	Demersal	Existing Article 61(f)	Not assessed
Fish caught with pots, traps and creels in ICES subareas 6 and 7	Demersal	Existing Article 7	Not assessed
Mackerel and herring caught with purse seines under certain conditions in ICES subarea 6	Pelagic	Existing Article 8	Not assessed
Mackerel and herring caught using ring nets in the fishery targeting pelagic species not subject to quotas in ICES divisions 7e and 7f	Pelagic	Existing Article 8	Not assessed

Skates and ray species caught by any gear in ICES subareas VI and VII	Demersal	Information for cuckoo ray to be provided by 1 May every year Article 5	Re-assessed based on existing and new information
Plaice caught with beam trawls by vessels of the >221kW segment fleet which use the flip-up rope or benthic release panel; or vessels, with an engine power of not more than 221kW; or less than 24m in length overall in ICES subarea 7	Demersal	Temporary until end of 2021 Article 6(1d)	Re-assessed based on existing and new information
Common Sole below MCRS caught with bottom trawls by vessels less than 12m in ICES division 7e	Demersal	New	Assessed based on new information

6.1 De minimis exemption

A summary of the fishery information applicable to the proposed new or revised de minimis exemptions is provided in Table 6.1.1.

Table 6.1.1 Summary of de minimis exemptions submitted as part of the NWW Joint Recommendations (restricted to new or revised exemptions)

Exemption	Main Findings of EWG 22-05
<p>Whiting caught by vessels using bottom trawls, seines with a mesh size of equal or greater than 80mm and beam trawls with a mesh size of 80mm to 119mm in ICES divisions 7b- k up to a maximum of 5% of total catches - Article 13(1a) of Delegated Regulation (EU) No 2020/2015</p>	<p>1. Exemption status Existing temporary de minimis exemption applicable until December 2022. The JR requests the continuation of this de minimis exemption for 2023.</p> <p>2. Fishery Context Updated catch data and fishery information has been provided by the NWW Group for France and Ireland. However, no information has been provided from Belgium, Spain and the Netherlands. For France, catch data was provided for 2019 and 2020 through the Obsmer sampling programme. The supporting Annex provides detailed information on the number of fishing vessels by category/metier in 2019 concerned by the exemption totalling 474 vessels as follows: 34 vessels engaged in bottom trawling for crustaceans (shrimp) (OTB, OTT) in the Eastern Channel (7d) and the South of the North Sea (4c). 114 vessels <18m engaged in bottom trawling targeting demersal species and cephalopods in the Eastern Channel and the South of the North Sea 48 vessels >18m engaged in bottom trawling targeting demersal</p>

species and cephalopods in the Eastern Channel and the South of the North Sea

127 vessels > 18m engaged in bottom trawling targeting demersal species in the Celtic Sea, Western Channel and West of Ireland

12 vessels using seines in the Celtic Sea and the south of the North Sea and 122 vessels using pelagic trawls classified as "artisanal"

17 vessels using beam trawls (BT2).

The spatial distribution of the French fishing operations and the total fishing effort is also provided by métier. Whiting catches, landings and discards data is provided in relative values by métier, but not in absolute values. The proportion of discards for whiting compared to the total catches (in %) range from 1% to 12.5% depending on the year and métier. Although generally the results show a discard rate of whiting consistent with the 5% exemption, in some métiers and years the proportion of discards compared to the total catches is higher than the 5% limit (e.g., bottom trawls targeting crustaceans, mainly grey shrimp, in the Eastern Channel and the south of the North Sea in 2019).

Ireland provided detailed information about the number of vessels as well as catches and discards in the Celtic Sea, in 2018 and 2019, based on Irish sampling data. A total of 141 vessels are concerned:

76 vessels targeting *Nephrops* with OTB

30 vessels targeting whitefish with OTB>100mm

10 vessels targeting whitefish with OTB 70-99mm

11 vessels targeting whitefish with SSC

10 vessels using BT2

4 vessels using pelagic PTM.

For Ireland, the discard rate is also very variable depending on the year and particularly the métier. High values are observed for whiting caught as by catch with trawl targeting *Nephrops* (ca 80%) and whiting caught as bycatch with beam trawl (ca 50%).

The estimated volume of whiting discarded is only provided for Ireland: 122 tonnes in 2020 and 236 tonnes in 2021. The highest volume of whiting discards comes from OTB>100mm targeting whitefish and whiting (176 tonnes of estimated discards 2020+2021) and OTB targeting *Nephrops* (98 tonnes of estimated discards 2020 and 2021).

Since the exit of the United Kingdom from Europe, the fishing conditions in areas 7b to 7k are subject to certain UK legislation.

3. Basis for the exemption

The justification is largely unchanged from 2020 as previously assessed by STECF (EWG 15-10, 17-08, 21-05) on the grounds of difficulties to achieve further improvements in selectivity in these fisheries over and above technical measures already introduced into the fisheries.

Two French programmes related to selectivity (SELECMER and SELUX), have been conducted, aimed at finding selective devices (different square mesh panels and different species selective grids) and light devices, to reduce unwanted catches of whiting. However,

some of these experiments are preliminary and only show positive results for other species such as mackerel. Furthermore, the trials have shown these devices lead to losses of marketable catch.

Ireland has conducted several supporting selectivity trials comparing different mesh sizes in the codend, modification of the trawl design and the testing of different devices (e.g., lights, bycatch escape corridors, modified "box trawl"). These have mainly been in the *Nephrops* fishery. These trials have provided positive results and further work is planned. Furthermore, Irish scientists are developing a stock forecasting tool that integrate the length-based results of gear trials with existing age-based stock assessment models, which could be used by decision makers to achieve management targets in mixed fisheries.

The supporting information provided by France and Ireland concludes that there is scientific evidence indicating that further increases in selectivity currently are very difficult to achieve for whiting in the Celtic Sea, without significant losses of revenue. The scale of these losses has not been analysed fully.

4. Additional evidence and work planned

Ireland has indicated that further testing of selective gears is on-going. Trials are planned to continue testing selective gears in the *Nephrops* and whitefish trawl fisheries in the Celtic Sea in 2022 and 2023. Four different trials are planned testing artificial lights, using a raised fishing line trawl, a bycatch escape corridor, and a T90 codend with lastridge ropes.

5. EWG 22-05 Observations

New information has been provided by France and Ireland but only partial information on catches and fleets. France has only provided relative values for the level of unwanted catches. No data has been provided by other Member States operating in NWW. A full assessment of the impact of this exemption is not possible. The previous observations made by EWG 15-10, 17-08, 21-05 remain relevant.

For some métiers (e.g., *Nephrops* fishery in the Celtic Sea and bottom trawls targeting crustaceans, mainly grey shrimp, in the Eastern Channel and the south of the North Sea), the whiting discard rate is likely to be above the 5% de minimis requested, although in some of the fisheries the volume in the overall context of the whiting stock is relatively low. For other métiers, the discard rates are relatively low.

France and Ireland have continued to test a range of technical measures to reduce unwanted catches of whiting in particular métiers, such as in the *Nephrops* fishery. The results from some of these trials have led to the introduction of more selective gears into the Celtic Sea, while others have yielded positive indications in reducing unwanted catches of whiting but do not appear to be widely used as yet.

The whiting (and cod stocks) in the Celtic Sea is currently in a poor state according to the latest ICES advice. Therefore, it is important that reducing unwanted catches should remain a priority in the fishery. It is also important that any whiting discarded under the exemption be fully monitored and recorded.

Exemption	Main Findings of EWG 22-05
<p>Haddock caught with bottom trawls, seines with a mesh size of greater than 100m; with catches comprising not more than 30 % Norway lobster and beam trawls; with mesh sizes greater than or equal to 80 mm in ICES divisions 7b, 7c and 7e to 7k up to a maximum of 5% of total catches – Article 13(1d) of Regulation (EU) 2020/2015.</p>	<p>1. Exemption status</p> <p>Existing temporary de minimis exemption applicable until 31 December 2022.</p> <p>The JR requests the continuation of this de minimis exemption for 2023.</p> <p>2. Fishery Context</p> <p>Updated catch data and fishery information has been provided by the NWW Group for France and Ireland. However, no information has been provided from Belgium, Spain and the Netherlands.</p> <p>Detailed information on the French fishing fleet using bottom trawls, beam trawls and Danish Seines in this area is provided in the JR. Data is from 2019 and 2020 through the Obsmer observer programme (IFREMER). The supporting Annex provides detailed information on the number of fishing vessels by category/metier (trawl, seine, beam trawl) concerned by the exemption (2019, was approximately 140 vessels, of which the majority (127 vessels) use bottom trawls targeting demersal species in the Celtic Sea, the western Channel and the Irish Sea. The spatial distribution of the French fishing operations and the total fishing effort is provided by métier.</p> <p>According to the French data observer program (Obsmer), the proportion of haddock in the discards in the total catch of the fleet covered by the exemption (bottom trawlers > 18 m in the Celtic Sea, Western Channel and Irish Sea), ranges widely from year to year, from 0.9% (2019) to 4.9% (2020). Volumes of French haddock catches and discards are reported for one of the fisheries covered by the exemption in 2019-2020 (bottom trawlers >18m) in the Celtic Sea, Western Channel and Irish Sea, with total catch and discards amounting to 53000 and 16300 tonnes in 2019 respectively, and 12600 and 5700 tonnes in 2020 respectively.</p> <p>Ireland provided detailed information about the number of vessels as well as catches and discards in the Celtic Sea, in 2018 and 2019, based on Irish sampling data. A total of 137 vessels are concerned:</p> <ul style="list-style-type: none"> 76 vessels targeting <i>Nephrops</i> with OTB 30 vessels targeting whitefish with OTB>100mm 10 vessels targeting whitefish with OTB 70-99mm 11 vessels targeting whitefish with SSC 10 vessels using BT2 <p>The majority (more than 90%) of Irish haddock landings are from the Irish whitefish trawl and seine vessels > 100mm. The discard rate is very variable depending on the year and particularly the metier. All metiers show average (2020-2021) discard rates above the 5%, with a maximum of 81% in 2020 the case of <i>Nephrops</i> fishery albeit based on low volumes of unwanted catches. Levels of haddock discards in these fisheries remain quite high despite increases in selectivity in these fisheries. The absolute values of discards for certain metiers such as OTB>100mm targeting haddock and whitefish are also quite high (1130 tonnes for 2020 and 2021).</p>

3. Basis for the exemption

The justification is largely unchanged as previously assessed by STECF (EWG 17-08, 20-04, 21-05) on the grounds of difficulties to achieve further improvements in selectivity in these fisheries over and above technical measures already introduced into the fisheries.

The JR argues that since haddock and cod are high-risk choke species in the Celtic Sea, granting a de minimis exemption will provide a buffer against exceeding the haddock and cod TAC and hence reduce the risk of an early closures of fisheries.

French and Irish selectivity trials

Two French programmes related to selectivity (CELSELEC and SELUX), have been conducted. The use of the T90 meshing in the extension and codend yielded positive results regarding the reduction of unwanted haddock catches, without significant losses of marketable catches. However, results with a 100 mm square mesh cylinder were less convincing. In the SELUX project different light devices were tested yielded but positive results were only obtained for mackerel.

Ireland has also conducted several supporting selectivity trials to test ways to improve the selectivity in trawls and seines for haddock including artificial lights, bycatch escape corridors and T90 with lastridge ropes. This has built on earlier work carried out by Ireland looking a range of selectivity devices, some of which have been brought into technical measures legislation in the Celtic Sea.

The supporting information provided by France and Ireland concludes that there is scientific evidence indicating that further increases in selectivity currently are very difficult to achieve for haddock in the Celtic Sea, without significant losses of revenue. The scale of these losses has not been analysed fully.

4. Additional evidence and work planned

Ireland has indicated that further testing of selective gears is on-going. Trials are planned to continue testing selective gears in the *Nephrops* and whitefish trawl fisheries in the Celtic Sea in 2022 and 2023. Four different trials are planned testing artificial lights, using a raised fishing line trawl, a bycatch escape corridor, and a T90 codend with lastridge ropes.

5. EWG 22-05 Observations

New information has been provided by France and Ireland but only partial information on catches and fleets. France has only provided relative values for the level of unwanted catches. No data has been provided by other Member States operating in NWW. Therefore, a full assessment of the impact of this exemption is not possible. The previous observations made by EWG 17-08, 20-04, 21-05 which remain relevant.

For some métiers (e.g., *Nephrops* fishery in the Celtic Sea and beam trawl fishery), the haddock discard rate is likely to be well above the 5% de minimis requested, although in some of the fisheries the volume in the overall context of the haddock stock is

	<p>relatively low. For other métiers, the discard rates are relatively low although in the mixed demersal fisheries the volumes of unwanted haddock catches are quite high relatively to the stock size.</p> <p>France and Ireland have continued to test a range of technical measures to reduce unwanted catches of haddock in particular métiers, such as in the <i>Nephrops</i> fishery. The results from some of these trials have led to the introduction of more selective gears into the Celtic Sea.</p> <p>The haddock stock in the Celtic Sea is currently fished sustainably according to the latest ICES advice. However, given the high discard rates in some fisheries, it is important that reducing unwanted catches should remain a priority in these fisheries. It is also important that any haddock discarded under the exemption be fully monitored and recorded.</p>
Exemption	Main Findings of EWG 22-05
<p>Boarfish caught by vessels using bottom trawls in ICES divisions 7b-c and 7f-k up to a maximum of 0.5% of that species for all gears -Article 13(1) of Delegated Regulation (EU) No 2020/2015.</p>	<p>1. Exemption status</p> <p>Existing temporary de minimis exemption applicable until 31 December 2022 under Article 13(1), point (f) of Delegated Regulation (EU) No 2020/2015 with amendments in Article 1(4) of Delegated Regulation (EU) No 2021/2063.</p> <p>The JR requests the continuation of this de minimis exemption for 2023 and beyond.</p> <p>2. Fishery Context</p> <p>Updated catch and fishery information was provided by the NWW Member States Group. The information provided relates principally to France but catch information has been provided for relevant Irish fleets. Ireland reports it has not used this exemption to date. No information is provided by other Member States.</p> <p>According to the JR in the French TR2 fisheries (mesh size 80-99mm), 125 vessels participated in the fishery in 2020 and 127 vessels in 2019 with a length of over 18 m. Based on the supplementary information, which refers to the FDI database, the vessels operating in ICES 7 b,c,e-k caught 418 845 tonnes of TAC species (average 2013-2016) of which 33 586 tonnes were boarfish catches. Thus, a de minimis of 0,5% of the catches of boarfish would represent theoretically a maximum volume of discards of 168 tonnes. The average discard rate for the French bottom trawl fishery operating in 7b-c,e-k areas is 30.8% in 2019 and 45.3% in 2020. It is unclear whether this relates to boarfish or covers all species caught in the fishery.</p> <p>The supporting information indicates that the Irish demersal fleet OTB_>100 operating in the Celtic Sea is made up of around 120 vessels. Estimated discards of boarfish were 5.6 tonnes in 2020 and 64.1 tonnes in 2021 were reported, with all of this treated as unwanted catch.</p> <p>3. Basis for the exemption</p> <p>The justification for the exemption is the same as assessed by EWG 20-04 and 21-05. The JR states that improvements in selectivity, over and above the measures already to be introduced in the Celtic Sea Protection Zone, to avoid the catches of boarfish will be hard to achieve without severe economic impacts on the revenue of the</p>

	<p>boats concerned. A review of recent French selectivity experiments is provided, which describes trials carried out with several different selective gears as evidence. However, these are not new studies and do not specifically refer to boarfish.</p> <p>4. Additional evidence and work planned</p> <p>No additional work is planned in the short-term.</p> <p>5. EWG 22-05 Observations</p> <p>Other than partial information on catches and fleets for 2019-2021, only limited new information has been provided. Therefore, a full assessment of the exemption is not possible. The previous observations made by EWG 19-04 and 20-04 remain relevant.</p> <p>Given the paucity of available catch information, monitoring the catches of boarfish in the relevant fleets covered by this exempted should be encouraged.</p> <p>The supporting information indicates that the current 0.5% de minimis based on bottom trawl catches would not be sufficient to account for the total unwanted catches of boarfish for the French fleet. France had to swap in up to 84 tonnes to cover boarfish unwanted catches in 2021.</p> <p>Based on the supporting information, bycatch of boarfish by Irish demersal vessels are very low when taken in the context of the Irish demersal fleet operating in the Celtic Sea. They represent less than 0.5% of the total Irish boarfish catches.</p> <p>Catch data and a description of the fisheries of other Member States (Spain and Belgium) availing of this exemption would be helpful although would not materially change the observation that under both the current wording and the new wording, the exemption covers only a small portion of the total unwanted catches of boarfish.</p> <p>The observations of EWG 20-04 and 21-05 that the information provided indicates that selective improvement by regulatory measures to avoid the catches of boarfish will be hard to achieve without severe economic impacts on the revenue of the boats concerned remain valid. However, the arguments presented in the supporting document are generic. The priority should be to improve selectivity to reduce the unwanted catches and therefore, the costs for handling such catches, accepting that this should be balanced against the costs of sorting small quantities of boarfish from the other marketable catch.</p>
Exemption	Main Findings of EWG 22-05
<p>Greater silver smelt caught by vessels using bottom trawls with a mesh size of greater than equal to 100 mm (TR1) in ICES division 5b (EU waters) and subarea 6 up to a maximum of 0.6% of the total catch of that species with all gears – Article 13(1i) of</p>	<p>1. Exemption status</p> <p>Existing temporary de minimis exemption applicable until the 31st of December 2022.</p> <p>The JR requests the continuation of this de minimis exemption for 2023 and beyond.</p> <p>2. Fishery Context</p> <p>Updated catch and fishery information was provided by the NWW Member States Group. The information provided relates principally to France but catch information has been provided for relevant Irish</p>

<p>Regulation 2020/2015. (EU)</p>	<p>fleets. Ireland reports it has not used this exemption to date. No information is provided by other Member States.</p> <p>Based on the FDI data base, European vessels operating in ICES subarea 5b (EU-waters) and 6 in the period 2013-2016, caught 401,905 tonnes of TAC species of which 6,170 tonnes were greater silver smelt. Thus, a <i>de minimis</i> of 0.6% of the catches of great silver smelt would theoretically represent a maximum of about 37 tonnes discarded per year (for all European vessels using bottom trawl in ICES subarea 5 and 6), noting this is old data. More recently, (2018-2020) ICES (ICES, 2021) estimated values show that 14142 tonnes of greater silver smelt were landed and a further 397 tonnes or 2.7% discarded.</p> <p>French bottom trawlers mostly target deep-sea species in ICES area 5b, for which greater silver smelt are one of the by-catch species of this fishery. All catches are 100% discarded and France considers them a potential choke risk for targeted stocks as France has a small quota for greater silver smelt. Catches represent less than 0.1% of the total TAC species catches by all bottom trawls in this area, and the respective discards amount to 0.01% of the total TAC species discards (from statements provided in the supporting documentation). The discards of the TR1 fleet (a subset of the figures above) are smaller.</p> <p>Due to the small greater silver smelt TAC, France has had to secure swaps of up to 52 tonnes to cover its quota needs, stemming from the unwanted but so far <i>unavoidable</i> catch.</p> <p>3. Basis for the exemption</p> <p>The justification for the exemption is the same as assessed by EWG 20-04 and relates to improvements in selectivity being very difficult to achieve as well as the disproportionate costs for handling small amounts of greater silver smelt on board bottom trawlers.</p> <p>According to the JR, it is assumed the French fishery is very selective, with maximum discard rates of any individual species amounting to less than 2%. According to limited information provided in the JR, selectivity improvement by regulatory measures to avoid the catches of greater silver smelt would not be achieved without severe economic impacts on the revenue of the boats.</p> <p>4. Additional evidence and work planned</p> <p>No additional work is planned in the short-term.</p> <p>Additionally, no update is provided on the possible widespread use of the square mesh panels by Spanish trawlers, which were reported to EWG 20-04 to reduce unwanted catches of greater silver smelt, among other species.</p> <p>5. EWG 22-05 Observations</p> <p>Only limited new information has been provided and is restricted to partial information on catches and fleets for 2019-2021. Therefore, a full assessment of the exemption is not possible.</p> <p>It is apparent that the unwanted catch of greater silver smelt in the relevant mixed-species fisheries is small in volume, with nearly all of the catches discarded by the EU demersal fleet. Given the low volumes the impact of the stock of the exemption is likely to be</p>
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	<p>low, particularly given recent ICES advice for greater silver smelt advising a large increase (213%) in the TAC for this species.</p> <p>No updated information has been provided of the uptake of the square mesh panel by Spanish vessels as reported in 2020 and it is not known whether the square mesh panel is being used by the Spanish fleet.</p> <p>Given the paucity of available catch information, monitoring the catches of greater silver smelt in the relevant fleets covered by this exempted should be encouraged.</p>
Exemption	Main Findings of EWG 22-05
<p>Megrim below MCRS caught using bottom trawls with a mesh size of 70-99mm and beam trawls with a mesh size of 80-119mm in ICES subarea 7 up to a maximum of 4% of the total annual catches of that species – Article 13(g) of Regulation (EU) 2020/2015.</p>	<p>1. Exemption status</p> <p>Existing temporary de minimis exemption applicable until the 31st of December 2022.</p> <p>The JR requests the continuation of this de minimis exemption for 2023.</p> <p>2. Fishery Context</p> <p>Limited catch data was only supplied by Ireland. No data was provided by other Member States, and it is unclear how many vessels avail of this exemption.</p> <p>Ireland reported catch data for <i>Nephrops</i> trawl fleet, mixed demersal trawl fishery targeting mixed species and the Irish beam trawl fleet. According to the JR, the number of vessels involved in these fisheries was around 76, 10 and 10 respectively. The landings by the Irish fleet consisted of 760.1 tonnes and 859 tonnes in 2020 and 2021 respectively. While estimated unwanted catches were 154.5 tonnes with a discard rate of 32% in 2020 and 623.2 tonnes with an estimated discard rate of 31% in 2021.</p> <p>3. Basis for the exemption</p> <p>No new information has been provided so it is assumed the basis for the exemption is the assessed by STECF in 2019 and 2020 (EWG 19-08 and 20-05). This relates to the additional costs in crew time and an increase of space onboard for separate storage of unwanted catches of megrim below MCRS.</p> <p>4. Additional evidence and work planned</p> <p>No additional work is planned in the short-term.</p> <p>5. EWG 22-05 Observations</p> <p>Only limited catch information has been provided by Ireland and it is unclear whether other Member States in NWW intend to use this exemption if extended.</p> <p>In the absence of any new information, no assessment of the impact of this exemption on the megrim stock can be made.</p> <p>The earlier assessments by STECF that evidence showing landing unwanted catches has an associated cost, is still not sufficient to demonstrate those costs are disproportionate.</p> <p>Improving selectivity in the relevant fisheries should be the priority as this will reduce the costs for handling unwanted catches. This is particularly relevant given the limited data provided shows the level</p>

	<p>of unwanted catches of megrim in Irish fisheries are significant.</p> <p>It is not clear why the exemption is proposed to cover the whole of ICES subarea 7 for beam trawls but is limited to only certain trawlers operating in a smaller area defined in the Fishing Opportunities Regulation for 2020 (Celtic Sea Protection Zone).</p>
Exemption	Main Findings of EWG 22-05
<p>Mackerel caught by vessels using bottom trawls, beam trawls and seine in ICES divisions 6 and 7b-k up to a maximum of 3% of megrim catches by those fishing gears – Article 13(1g) of Regulation (EU) 2020/2015</p>	<p>1. Exemption status</p> <p>Existing temporary de minimis exemption applicable until the 31st of December 2022.</p> <p>The JR requests the continuation of this de minimis exemption for 2023.</p> <p>2. Fishery Context</p> <p>Updated catch and fishery information was provided by the NWW Member States Group. The information relates principally to France but catch information has been provided for relevant Irish fleets. Ireland reports it makes limited use of the exemption given the low level of catches (less than 1% of total catches). No information is provided by other Member States.</p> <p>The French bottom otter trawlers, operate over a wide area in ICES divisions 7b-e, 7g-j and 6a. French Danish seine and beam trawls, operate mainly in ICES divisions 7e and 7d. According to the JR, in total around 350 French vessels potentially could avail of this exemption. The métiers involved are largely the same as those described for the whiting, haddock, horse mackerel and boarfish exemptions as well as for exemptions in the North Sea for whiting and pelagic species.</p> <p>Partial catch data is provided from the French data observer programme (Obsmer). It shows the total catches for 2019 for the different métiers covered by the exemption were 104,065 tonnes with 41,794 tonnes of discards with a discard rate of 40%. Percentages by métier for the proportion of the total catch and discards that are made up of mackerel are provided which range between 0-35.8% (highest in the trawl fishery in ICES divisions 6a and 6b). It is unclear why there is such a wide range of rates between the different métiers. French fleet logbook data shows that for 2021, the discard rate under this exemption amounts to 5.1%.</p> <p>3. Basis for the exemption</p> <p>The justification for the exemption request by France is the same as provided previously assessed by STECF (EWG 18-06, 19-09, 20-04). This is based on selectivity improvements by regulatory measures to avoid the catches of mackerel being very difficult to achieve without severe economic impacts on the revenue of the boats concerned, and on the grounds of disproportionate costs due to handling unwanted catches. References to historic selectivity trials (CELESEC SELECCAB, SELECMER) and the EODE project on disproportionate costs previously made available to EWG 19-04 and 20-04 are included as justification.</p> <p>4. Additional evidence and work planned</p> <p>No additional work is planned in the short-term apart from the continuation of catch sampling.</p>

	<p>5. EWG 22-05 Observations</p> <p>Only limited new catch and fishery information has been provided by France and Ireland. Some of the information dates back to the period 2013-2016 and may not be representative of the current situation in the relevant fisheries. Therefore, a full assessment of the impact of this exemption is not possible and the previous observations made by EWG 19-04 and 20-04 remain relevant</p> <p>According to the data submitted by France, a substantial part of the landings is discarded in the fishery (40%) particularly by bottom trawlers below 18 m (71%). However, the proportion of discarded mackerel appears to be quite low in the range of 0.0-0.4% of the total catch in the fishery (highest in the bottom trawl fishery in ICES divisions 6a and 6b).</p> <p>The selectivity information from three French study projects gives a valuable insight to the research aimed to reduce unwanted by introducing various technical measures. However, they are not new, dating back to 2017 and earlier. It is unclear whether any of the selectivity improvements tested have been implemented in the fishery.</p> <p>It is acknowledged that it is difficult to improve selectivity for mackerel without causing significant commercial losses for vessels fishing in such mixed fisheries. However, the data provided indicate that the levels of discarding in these fisheries is high and therefore, efforts to improve selectivity should continue.</p> <p>The Obsmer document provided is in French with only a short English summary.</p>
Exemption	Main Findings of EWG 22-05
<p>Horse mackerel caught by vessels using bottom trawls and beam trawls and seines in ICES divisions 6 and 7b-k up to a maximum of 3% of megrim catches by those fishing gears – Article 13(1j) of Regulation (EU) 2020/2015</p>	<p>1. Exemption status</p> <p>Existing temporary de minimis exemption applicable until the 31st of December 2022.</p> <p>The JR requests the continuation of this de minimis exemption for 2023.</p> <p>2. Fishery Context</p> <p>Updated catch and fishery information was provided by the NWW Member States Group. The information relates principally to France but catch information has been provided for relevant Irish fleets, although Ireland reports it makes limited use of the exemption given the low level of catches (less than 1% of total catches). No information is provided by other Member States.</p> <p>The French bottom otter trawlers, operate over a wide area in ICES divisions 7b-e, 7g-j and 6a. French Danish seine and beam trawls, operate mainly in ICES divisions 7e and 7d. According to the JR, in total around 350 French vessels potentially could avail of this exemption. The métiers involved are largely the same as those described for the whiting, haddock, mackerel and boarfish exemptions as well as for exemptions in the North Sea for whiting and pelagic species.</p> <p>Partial catch data is provided from the French data observer programme (Obsmer). It shows the total catches for 2020 for the different métiers covered by the exemption were 38,973 tonnes with 17,998 tonnes of discards with a discard rate of 46%.</p>

Percentages by metier for the proportion of the total catch and discards that are made up of horse mackerel are provided which range between 0.2-6.7% (highest in Danish seine fishery). The data provided indicates that almost 100% of horse mackerel caught in the fishery are discarded. It is unclear why there is such a wide variation in discard rates between metiers.

3. Basis for the exemption

The justification for the exemption request by France is the same as provided previously assessed by STECF (EWG 18-06, 19-09, 20-04). This is based on selectivity improvements by regulatory measures to avoid the catches of mackerel being very difficult to achieve without severe economic impacts on the revenue of the boats concerned, and on the grounds of disproportionate costs due to handling unwanted catches. References to historic selectivity trials (CELESEC SELECCAB, SELECMER) and the EODE project on disproportionate costs previously made available to EWG 19-04 and 20-04 are included as justification.

4. Additional evidence and work planned

The JR reports on a study carried out by France called SELUX. The project is focusing on artisanal trawlers operating in the South of the North Sea and in the English Channel and targeting demersal species. Two types of light devices were tested: the Brez glow and the PISCES, and each with different conditions (day/night, seasons, flashing or not). The behaviour of horse-mackerel, mackerel and whiting was observed, and the results showed that whiting and mackerel tend to behave in a light-averse manner. The JR indicates that other configurations of lights could be tested in the future, although no detail is provided.

5. EWG 22-05 Observations

Only limited new catch and fishery information has been provided by France and Ireland. Some of information dates back to the period 2013-2016 and may not be representative of the current situation in the relevant fisheries. Therefore, a full assessment of the impact of this exemption is not possible and the previous observations made by EWG 19-04 and 20-04 remain relevant.

According to the French data, a substantial part of the landings is discarded in the fishery (40%) particularly by bottom trawlers below 18 m (71%). The proportion of discarded horse mackerel appears to be higher than for mackerel in the range of 0.2-6.7% of the total catch in the fishery (highest in the Danish seine fishery).

Close to 100% of horse mackerel are discarded in the fishery. Therefore, it is unlikely that the current de minimis volume will cover all of these unwanted catches suggesting further improvements in the fishery to improve selectivity may be warranted.

The selectivity information from three French selectivity projects gives a valuable insight to the research aimed to reduce unwanted by introducing various technical measures. However, they are not new, dating back to 2017 and earlier. It is unclear whether any of the selectivity improvements tested have been implemented in the fishery. The new research using lights is encouraging and should be

	<p>continued.</p> <p>It is acknowledged that it is difficult to improve selectivity for horse mackerel without causing significant commercial losses for vessels fishing in such mixed fisheries. However, the data provided indicate that the levels of discarding in these fisheries is high and therefore, efforts to improve selectivity should continue.</p> <p>Continued efforts to improve the overall selectivity of the catches or considering ways to improve the commercial utilization of the unwanted >MCRS horse mackerel catches should be encouraged.</p>
Exemption	Main Findings of EWG 22-05
<p>Haddock < MCRS with bottom trawls with mesh size up to 119mm in West of Scotland Norway lobster fishery ICES Division 6a of up to 3% of total catches of that species in the fishery - Article 13(1) of Regulation (EU) No 2020/2015).</p>	<p>1. Exemption status</p> <p>Existing temporary de minimis exemption applicable until December 2022</p> <p>2. Fishery Context</p> <p>No information is provided</p> <p>3. Basis for the exemption</p> <p>This exemption mainly concerns a fishery in UK waters and only involves UK vessels. No Union vessels participate in the fishery. No information has been provided.</p> <p>4. Additional evidence and work planned</p> <p>No additional work planned.</p> <p>5. EWG 22-05 Observations</p> <p>It is apparent that this exemption is targeted at UK vessels operating in a fishery inside UK waters. No supporting information has been provided for its continuation. Therefore, as no Union vessels participate in the fishery it is unclear whether it is still required.</p>
Exemption	Main Findings of EWG 22-05
<p>Common sole caught by vessels using beam trawls (BT2) 80-119mm with Flemish panel in ICES divisions 7a of up to 3% of total catches of that species in the fishery - Article 13(1h) of Regulation (EU) No 2020/2015)</p>	<p>1. Exemption status</p> <p>Existing temporary de minimis exemption applicable until the 31st of December 2022.</p> <p>The JR requests the continuation of this de minimis exemption for 2023.</p> <p>Additionally, the NWW Member States group has requested extending this exemption to ICES divisions 7j and 7k.</p> <p>2. Fishery Context</p> <p>Updated catch and fishery information has been provided by the NWW Member States group principally for Belgium with limited catch data provided by Ireland.</p> <p>Sole is caught, predominantly, in a mixed species (50+ species) demersal fishery. The Belgian fleet comprises 65 active (2019) and an additional 10 Irish beam trawl vessels which according to the supporting information do not avail of the exemption. Plaice constitutes a significant by-catch of the EU fleet. Sole catches from</p>

this fleet in area 7a amount to >13% of Belgian sole catches (targeted), whereas in areas 7j and k they correspond to <2% (caught as by-catch).

Estimated discards are generally quite low (none to negligible), except for a group of around 30 vessels operating in area 7a, for which the discard rate was ~10% in 2020 and 2021.

The gear is equipped with a Flemish panel, which is comprised of a panel of larger mesh netting, permitting the amount of sole caught below MCRS to be reduced by 40%. *"As such, together with the cod-end selectivity, the amount of small sole relative to the whole sole catch becomes rather low."* This has a concomitant reported impact of a 16% loss of marketable sole.

For area 7a, the ICES (2021a) assessment report states under *"Issues relevant for the advice"* that *"Discards have increased recently from 3,5% (average 2016–2018) to 10% (average 2018–2020) and are not currently included in the assessment."* This is not fleet-specific, but discards in the same report are attributed to beam trawlers (99%) and otter trawlers (1%), and does compare to the data provided to STECF with this JR. The stock is currently assessed to be fished sustainably.

As reported in the ICES assessment, for area 7h-k (and not 7j-k), the stock is assessed under category 5 (ICES 2021b), and it lately received a recommendation for a precautionary TAC reduction. Catches by the beam trawl fleet are likely to be under 1%. Discarding is considered negligible.

3. Basis for the exemption

As reported in the documentation provided, further increases in selectivity are very difficult to achieve and want to avoid additional disproportionate costs of handling unwanted catches (currently paying a 16% premium comprised of lost revenue from the improved selectivity).

This request for prolongation of the exemption for area 7a and a request for a new exemption for the area 7jk is in line with the existing exemption for sole in areas 7de and 7fgh for the BT2 gear. *"The NWW group notes that a level playing field should be ensured across sea basins, especially as those areas are adjacent and often frequented during the same fishing trip."* This is reported to consist of the same fishery in similar conditions (*cf.* ICES statement (2021b) about the lack of reliability on area reporting).

4. Additional evidence and work planned

Work is ongoing and new projects starting, with the aim of improving knowledge on the genetic composition of the targeted stock. Presently there are significant concerns with the choke potential of this stock, but the stock perception may potentially change, if the present borders are recognised to be different.

Further selectivity options are being studied at ILVO (Belgium) such as with the application of light. Options are also being considered to organise the spatial-temporal planning of the fishery based on presence or absence of certain species and population components, to further reduce the impact of unwanted catches.

5. EWG 22-05 Observations

The exemptions requested are both a temporal and geographical extension of existing exemptions. Partial catch and fleet information is provided by Belgium and Ireland.

Measures to reduce the unwanted catch of sole have been put in place, notably through the implementation of the legal obligation to use "Flemish panels", as reported in previous STECF reports. This has resulted in the reduction of 40% of the undersized catches, to the extent that according to ICES they are now apparently mostly negligible (ICES, 2021 and 2021). The extent to which the Flemish panel has contributed to this is unclear.

There are further plans in progress to improve the knowledge of the stock, through genetic analysis of fish and the validation of environmental DNA analyses, that may result in a better assessment of stock limits and stock size, potentially overcoming lack of observers for this fleet. The combined results of these new and ongoing projects are expected to improve knowledge on the stocks that will help to better define the impact of the fisheries and therefore focus the impact of management measures such as the requested exemptions on the landing obligation. Improved knowledge on the stocks involved is expected to allow better spatial planning and potentially further reduce unwanted catches.

The request for a temporal extension of the derogation to area 7a and a spatial extension to area 7jk appears to be reasonable, based on the low level of catch and linkage to the use of the Flemish panel.

It is unclear why the JR requests a 3% de minimis for 7jk, when apparently the reported catch rates are very low and discards negligible.

ICES advice indicates a sudden increase in the discards in area 7a for the period 2018–2020. Understanding why this increase in discards has occurred would be helpful given the exemption is linked to the use of a selective gear and given previously ICES reported a decrease in discards of sole in this area.

References

- Balazuc A., Goffier E., Soulet E., Rochet M.J., Leleu K., 2016. EODE – Expérimentation de l'Obligation de DEbarquement à bord de chalutiers de fond artisans de Manche Est et mer du Nord, et essais de valorisation des captures non désirées sous quotas communautaires, 136 + 53 pp.
- Cornou Anne Sophie, Scavinner Marion, Sagan Jonathan, Cloatre Thomas, Dubroca Laurent, Billet Norbert (2021). Captures et rejets des métiers de pêche français. Résultats des observations à bord des navires de pêche professionnelle en 2019. Obsmer. <https://doi.org/10.13155/79198>
- Cloâtre Thomas, Quinio-Scavinner Marion, Sagan Jonathan, Dubroca Laurent, Biellet Norbert (2022). Captures et rejets des métiers de pêche français. Résultats des observations à bord des navires de pêche professionnelle en 2020. Obsmer
- Gauduchon Thibault, Cornou Anne Sophie, Scavinner Marion, Goascoz Nicolas, Dubroca Laurent, Billet Norbert (2020). Captures et rejets des métiers de pêche français. Résultats des observations à bord des navires de pêche professionnelle en 2018. Obsmer. <https://doi.org/10.13155/73122>
- Leonardi S., Rubin A., Meillat M., Coppin F., Delpech J-P., Morandeau F., Larnaud P., 2009. Selecmer – Amélioration de la sélectivité des chalutiers – Pêcheries multispécifiques Manche – Mer du Nord, 66 + 62 pp. Version septembre 2009

Nielsen, E.E., et al., 2009. Population genomics of marine fishes: identifying adaptive variation in space and time. *Molecular Ecology*, 18, 3128-3150

Scientific, Technical and Economic Committee for Fisheries (STECF) – Evaluation of the Landing Obligation Joint Recommendations (STECF-18-06) (2018). Publications Office of the European Union, Luxembourg, 2018, ISBN 978-92-79-79389-9, doi:10.2760/999971, JRC112740

Scientific, Technical and Economic Committee for Fisheries (STECF) – Evaluation of Landing Obligation Joint Recommendations (STECF-19-08). Publications Office of the European Union, Luxembourg, 2019, ISBN 978-92-76-09523-1, doi:10.2760/227428, JRC117511

Scientific, Technical and Economic Committee for Fisheries (STECF) Evaluation of Joint Recommendations on the Landing Obligation and on the Technical Measures Regulation (STECF-20-04). Publications Office of the European Union, Luxembourg, 2020, ISBN 978-92-76-20383-4, doi:10.2760/328463, JRC121260

Scientific, Technical and Economic Committee for Fisheries (STECF) - Evaluation of Joint Recommendations on the Landing Obligation and on the Technical Measures Regulation (STECF-21-05). EUR 28359 EN, Publications Office of the European Union, Luxembourg, 2021, ISBN 978-92-76-40593-1, doi:10.2760/83668, JRC126128.

Viera A., Meillat M., Coppin F., Delpech J-P., Morandeau F., Gamblin C., 2010. SELECCAB – Volet Artisans - Amélioration de la sélectivité des chalutiers artisanaux travaillant en Manche – Mer du Nord de façon à limiter les captures de cabillaud., 61 + 48pp. Version septembre 2010

Weiller Y., Reecht Y., Vermard Y., Coppin F., Delpech J-P., Morandeau F., 2014. SELECFISH – Amélioration de la sélectivité des chalutiers artisanaux travaillant en Manche Est - Mer du Nord afin de limiter leurs rejets, 82 + 55pp. Version avril 2014

6.2 High Survivability exemptions

A summary of the proposed high survivability exemptions is given in Table 6.2.1.

Table 6.2.1. Summary of high survivability submitted as part of the NWW Joint Recommendations

Exemption	Main Findings of EWG 22-05
<p>Skates and rays (<i>Rajiformes</i>) caught by any fishing gear in the North-Western Waters (ICES subareas 6 and 7) – Article 10 of Regulation (EU) 2020/2015</p>	<p>1. Exemption status</p> <p>Existing temporary exemption with request for additional information. Member States having a direct management interest must submit additional scientific information supporting the exemption by 1 May every year.</p> <p>Article 10 contains a specific provision for cuckoo ray, whereby Member States must submit, every year as soon as possible and not later than by 1 May, additional scientific information on cuckoo ray catches, cuckoo ray discards and the progress of cuckoo ray vitality or survival research in relevant fisheries.</p> <p>2. Fishery context</p> <p>For all ray species that fall under this exemption, a comprehensive overview of landings and discard quantities of ray species, including cuckoo ray (that is of low economic value) is lacking per gear type, region, and member state (e.g., landings, discards, species composition, size/sex composition).</p> <p>Partial updated discard rates for various ray species were provided by France (see Annex B, SWW).</p> <p>There remains a gap in the knowledge base relating to the capture conditions of the relevant fisheries to link any vitality observations to influencing attributes (gear use, haul duration, seasonality/temperature, areas etc.). To comply with the objective of</p>

the roadmap and to systematically synthesize all relevant evidence in a useful way, regional groups are encouraged to focus on a comprehensive collective effort of all information in line with the observed knowledge gaps.

The Irish Sea is a hotspot, both for thornback ray catches and cuckoo ray bycatches. Detailed catch statistics and plotted CPUE catches from Belgium suggested that Cuckoo rays were caught-and-discarded year-round by Belgian trawlers, except for the third quarter where catches were less frequent.

In the Irish Sea, the maximum CPUE of 15.3 kg/h was registered and where discarding can occur of up to 11 kg/h (highest average CPUEs) in the central Irish Sea.

Discard data for cuckoo ray from France reported last year a discard rate of 27% is reported for the particular fishery, while 39% discards are reported for French bottom trawls in the Celtic Sea, western channel and west of Ireland as a whole. No further data is provided. In Irish trial catches of cuckoo ray were sporadic and comprised only 1% of total catch.

3. Basis for the exemption

One new study was identified assessing the survival of otter-trawled cuckoo ray from the Irish Sea as well as an update of the ongoing Raywatch project was provided by Belgium.

The various evidence from different regions corroborates earlier indications that cuckoo rays display lower survival than other, larger ray species and that there could be zero survival in some fisheries. At first inspection on-board after capture the majority of bottom-trawled cuckoo ray are in a relatively good condition showing body movements and no or only minor injuries. Nevertheless, the majority are suspected to die after discarding (or when being held in confinement). The new evidence provided by an Irish study demonstrate a lower survival probability of cuckoo ray compared to other ray species. It was estimated to range between 11 - 16% when rays were held in captivity for up to 25 days. These estimates are in line for other otter-trawl caught cuckoo ray (14%-23%, 95% CI; estimated from a French study that was provided last year). The ICES critical review was applied, and the estimates were considered robust. However, the study was limited in scope and restricted to one vessel and 39 individuals – operational conditions were representative of the fishery. The survival curves over time showed protracted mortality. Not being able to standardise air exposure on board and times being held in water-filled containers prior to being scored for vitality can potentially confound impairment scores. The effects of explanatory factors were explored, and capture depth seemed to contribute to poor vitality.

Apart from the Irish study, some preliminary data from the Belgian Raywatch project was submitted, which indicated that 97 cuckoo rays were scored for vitality and 6% were already dead when on deck (immediate, at-vessel mortality). More specifically, 48% of the cuckoo rays were given a vitality score A, 24% vitality score B and 22% vitality score C. How these vitality observations can be linked to survival observations without dedicated monitoring for delayed mortality of cuckoo rays and how the vitality observations can be brought in relation to operational and environmental variables remains unclear. There are also no evaluations provided on how to account for

	<p>vitality scoring bias amongst the different at-sea observers involved in data collection by for example regularly training them.</p> <p>4. Survival and fisheries compatability</p> <p>To be able to estimate the potential impact of the exemption on the ray stocks, fisheries landings and discard statistics are required together with available survival evidence per fishery, area and Member State.</p> <p>5. Additional evidence and work planned</p> <p>There is an ongoing study from Belgium (Raywatch) which is due to conclude in quarter 3 of 2022. The objectives of this project is to i) collect of biological, catch and vitality data for seven ray species (thornback ray, blonde ray, spotted ray, undulate ray, small eyed ray, sandy ray and cuckoo ray in the Western Waters (Ices-areas 7a,f,g,h) and English Channel (Ices-areas 7d,e) to improve the future NDGP data collection, and ii) to fill knowledge gaps to support the high survival exemption in the context of the Roadmap for rays and skates.</p> <p>Apart from these projects, FROM Nord in France will start a post-capture survival study for thornback ray for the Danish seine fisheries in 2022. ILVO (Belgium) will cooperate with FROM Nord on the processing and analysis of the data, and this project will continue to deliver insights in post-capture survivability of rays.</p> <p>6. EWG 22-05 Observations</p> <p>The additional Irish study has provided further evidence that cuckoo rays have a lower survival rate compared to other ray species while reported, but incomplete discard rates are between 27 and 39%. The discard estimates only cover a limited number of fisheries and the true extent of unwanted catches of cuckoo rays is not clear.</p> <p>It is noted that survival experiments carried out have shown for cuckoo ray (as well other ray species), mortalities are protracted suggesting that keeping rays in captivity may risk underestimating survival in captive trials.</p> <p>As for cuckoo ray, the information provided in the past and additional catch data provided to support the JR show quite high discard rates for some ray species, which could equate to high levels of discard mortality associated with this exemption if the survival rates are low. However, the catch information provided is incomplete and filling the gaps in catch data for ray species should be prioritised to allow a full assessment of this exemption on the relevant species.</p>
Exemption	Main Findings of EWG 22-05
<p>Plaice caught in ICES divisions 7a to 7g using beam trawls (TBB). (Article 6.1.c and 6.1.d of Regulation (EU) 2020/2015)</p>	<p>1. Exemption status</p> <p>Existing temporary exemption with request for additional information. Member States having a direct management interest shall submit every year, as soon as possible and not later than by 1 May, additional scientific information supporting the exemption.</p> <p>The existing exemption applies to beam trawlers equipped with a flip-up rope or benthos release panel (BRP) (6.1.c) and with an engine power of more than 221 kW and with an engine power of not more than 221 kw or less than 24 min length overall, which are constructed to fish in the twelve-mile zone, if the average trawl duration is less</p>

than ninety minutes (6.1.d).

2. Fishery context

No information has been provided on the fishery in terms of number of vessels involved or on catch and extent of unwanted catches. The supporting information provides a summary of the relevant ICES advice for the plaice stocks covered by this exemption.

3. Survival evidence

No new survival evidence for plaice has been provided by the NWW group. As for the North Sea, the previous estimates of plaice survival (vitality and captive studies) relevant for the exemption assessed by STECF (EWG 20-04, EWG 21-05 and references therein) remain the best available for the NWW beam trawl fishery. These can be summarised as:

- Estimates of immediate survival of undersized plaice assessed just after being heaved on board, were found to vary between 60-90% (mean 75%, 66–83%, 95% CI). These estimates were based on from 8 trips during 2019 and 2020 on Belgium beam trawlers. Important to note that these rates should not be confused with overall long-term discard survival.
- Uhlmann et al. (2016 and 2021) reported that survival of plaice discarded from Belgian beam trawlers representing the three fleet segments was estimated to range between 41–58%, 11–28%, 2–4% (95 % confidence interval; Kaplan-Meier models) for trips of the coastal (≤ 221 kW), Eurocutter (≤ 221 kW) and >221 kW vessel, respectively. The mean discard survival rate across all sampled trips and vessel segments was 21% (EWG 20-04). For pulse trawlers, the discard survival estimates previously assessed by STECF were 14% (95% CI 11-18%).
- Long-term survival (Kaplan-Meier asymptote) rates for discarded undersized plaice in the Celtic Sea and Eastern Channel were estimated at between 13% (9%- 19%, 95% CI) from the summer trip (July 2020, Celtic Sea), with conventional trawl and 51% (41%-64%, 95% CI) from the winter trip (December 2020, Eastern Channel) with a flip-up trawl, and 44%, (35- 56%, 95% CI) with a conventional trawl. No statistically significant difference in survival was found between conventional and flip-up rope trawls. The representativeness of these estimates for the North Sea is not clear but are in line with other observations.

The estimates provided show high variability between trips which is likely due to the differences in the environmental conditions (season, area) and fishing operations (catch size/composition, vessel size, gear characteristics). Additionally, most of the estimates are for vessels greater than 221 kw with little survival information for smaller vessels with lower engine power except for those reported in Uhlmann et al. (2016). It is also noted that based on the Belgian survival research, the use of the flip-up rope as specified in the current Delegated Act is unlikely to significantly improve both on-board and post-release survival probability of discarded plaice, particularly on soft-sediments fishing grounds. No information on the effectiveness of the Benthic Release Panel in improving survival has been reported so no assessment can be made whether this gear modification is beneficial or not.

4. Survival and fishery compatibility

No new survival estimates have been provided to EWG 22-05, so the previous estimates reported by EWG 21-05 and 20-04 remain the most up to date. There are both survival estimates derived from direct observation, and those based on a proxy, using relationships from other studies between health condition and survival probability. The latest estimates based on captive studies are considered robust, if highly variable. EWG 22-05 considers these are in line with the estimates generated by ICES WGMEDS for the plaice stocks in NWW, whereby the estimated dead discards as a % of the total catch from beam trawls per stock are as follows:

- Irish Sea (7a) 21-30%
- Western Channel (7e) 9-12%
- Bristol Channel (7f,g) 18-25%
- Celtic Sea south (7hjk) no estimate available

This should be considered in the context of the discard rates in the fishery which according to ICES estimates are 62% in the Irish Sea (Beam trawls make up 48% of the discards); 28% in 7e (Beam trawls make up 44% of discards); 52% in 7f,g (Beam trawls make up 10% of the discards). For the 7.h,j,k stock, ICES advises that discards in the beam trawl fishery are negligible. Catches in this area overall were only 75 tonnes in total with discards estimated at 36 tonnes.

5. Additional evidence and work planned

The NWW group has provided updated information on ongoing research work in Belgium to support the exemption. No further research focusing on the survival of plaice is planned and the focus in 2022 is on improving selectivity and increasing survivability as well as developing species identification, to analyse video footage from EM systems.

The Belgian report describes work continuing to develop species identification software under laboratory conditions, to analyse video footage from EM systems. Species identification with an accuracy of 95% for plaice and sole to within 3mm in length has been achieved under laboratory conditions. Installation of the systems on board commercial vessels is ongoing, in combination with a self-sampling programme.

Belgium also has reported on ongoing research into technical innovations to improve selectivity and survivability of discarded plaice under the "Combituig" Project. This work was carried out in 2021 and looked at the use of LED-lights in combination with Benthic Release Panels to reduce the catch of undersized plaice. Testing has been carried out on three research cruises to date and the results have been encouraged although no detail is provided. Further trips were scheduled in the second half of 2021, but no results are reported for these trials. The conclusion from these trials is that further research with alternative technologies such as LED-lights is warranted.

6. EWG 22-05 Observations

Only supporting information has been provided by Belgium. Catch data and fishery information is missing for all Member States operating in the fisheries, making it difficult to assess the impact of this exemption on the different plaice stocks.

	<p>Since 2019, progress has been made in increasing the knowledge of plaice survivability. Additionally, research on ways to improve selectivity is also ongoing. No concrete results have been presented to date, but the preliminary findings seem encouraging for some of the gear modifications tested.</p> <p>The selectivity projects planned by the Netherlands in the North Sea may also be relevant to the beamtrawl fishery in the Northwestern waters given the similarities between fisheries.</p> <p>For beam trawlers, the justification for survivability exemption for plaice continues to be based on the potential for improving survival and selectivity, but this based on variable estimates of survival. No further trials to estimate survivability are currently planned in the fishery.</p> <p>The current survival estimates are still highly variable and only relevant for the larger beam trawl vessels. No information has been provided for smaller vessels with less than 221KW engine power other than that contained in Uhlmann et al. (2016).</p> <p>There is also only limited and inconclusive information on the effectiveness of the Flip-up rope and the Benthic Release Panel to improve survivability. The use of these devices is specified in the Delegated Act as a condition of the exemption. If these devices are not effective in increasing survivability, then the value of making them a condition of the exemption is questionable even though they may have other benefits not related to survivability.</p> <p>The current survival estimates need to be considered in the context of the current discard rates reported, in the various plaice stocks in NWW. Discard rates range from negligible in 7hjk to 62% in the Irish Sea.</p> <p>Unless surviving discards are accounted for in stock assessments and dead discards are accounted for in TAC setting when survivability exemptions are in place, the actual fishing mortality will not match the agreed catch level. Currently this is only considered for the Irish Sea stock.</p> <p>Introducing discard survival estimates should continue to be discussed by ICES for more stocks and especially plaice, given the proliferation of survival exemptions.</p>
Exemption	Main Findings of EWG 22-05
<p>Sole below MCRS common sole caught by vessels under 12m using 80-99 mm otter trawl gears within 6 nautical miles of the French coast in ICES division 7e</p>	<p>1. Exemption status</p> <p>This is a new exemption that seeks to extend the scope of an existing exemption for sole in ICES division 7d. The existing exemption applies to sole (<i>Solea solea</i>) below MCRS caught in ICES division 7d by vessels under 12m long and using otter bottomtrawls (OTB), within six nautical miles of the coast but outside identified nursery areas, with a cod end mesh size larger than 80mm – Article 4 of Regulation (EU) 2020/2015.</p> <p>The request is an extension whereby the new exemption would cover catches of undersized sole, caught by vessels under 12m using 80-99 mm otter trawl gears within 6 nautical miles of the French coast in ICES division 7e.</p> <p>This exemption request is a follow-up to a previous request submitted in 2019 by the Northwestern Waters group, which was reviewed by</p>

PLEN 19-02.

2. Fishery context

No information was provided on the fishery in 7e. However, ICES advice for 7e is that sole landings are 1,219 t with ~19% from otter trawls and discards of <1 t with 60% attributed to otter trawls. The sole catch from other segments are: beam trawls 66%, gillnets ~11%, and other gears ~4%. Sole in ICES 7e is an ICES category 1 stock and can be considered to have a full analytical assessments and forecasts.

Overall, the relevant fleet is an inshore French fleet, comprising 132 French vessels under 18m fishing in the Western Channel and specifically in the Normando-Breton Bay and the Saint-Brieuc Bay. The fleet covered by the exemption would amount to ~90 French vessels under 12 m.

The vessels use an 80–99mm mesh trawl (headlines 12–20 m) with mostly rubber footropes but other options (e.g., bobbins) are also used depending on the sediment type.

No additional information was provided on the fishing fleet in the wider 7e area.

3. Survival evidence

Survival estimates for the sole are based on vitality assessments taken onboard three vessels during May to October. The survival potential was assessed with several vitality indexes (RAMP and Injury scores) and inferred from the immediate survival rate.

An immediate survival rate of 99.1% was observed for sole caught. All undersized sole tested presented Excellent (A) or Good (B) vitality scores, noting that 85% of the undersized sole were caught during a single fishing trip in the spring.

A semi-quantitative vitality index (QVI) presented the % of individuals in category A = excellent—47.9%, B= good—42.7%; C= poor—8.7%; and D= moribund—0.9%. The delayed survival rate for Category A was estimated at 69.4%, no delayed survival rate was given for the other categories.

Other studies Randall et al. (2017) and Ribeiro Santos et al. (2016) estimated sole survival from coastal trawlers at 88% for the Eastern Channel and 46% for the North Sea, respectively.

4. Survival and fishery compatibility

The trial was completed in in statistical rectangles 26E7 and 26E8 during May to October over 79 fishing trips undertaken by three vessels. Fishing took place in depths of 8–35 m with means of 23 m and 9.5 m for 26E7 and 26E8, respectively. Tow times were from 00:29–03:26 hrs (mean 01:47 hr) at mean towing speed of 2.6 kts (1.34 ms^{-1}).

In total 711 (562 in 26E7, and 149 in 26E8) sole were caught and assessed; overall 12% of the sole were below MCRS. Within the statistical rectangles 26E7 and 26E8 the percentage of sole catches below MCRS was 2 and 50%, respectively.

Sorting times during the trial were between 5 and 34 min (mean 12 min) while commercial fishing practices start the sorting after the net is redeployed (approximately after 15 min from when the catch is emptied from the codend).

Catch composition comprised mainly of spider crabs (59%), cuttlefish (*Sepia officianalis*) and squid (*Loligo vulgaris*) (10%), sole (1%), other fish and cephalopods (7%), and the remainder comprised of rocks and clam debris, seaweed, and non-commercial invertebrates.

Data presented on the fishing effort in 7e states that in 2019, the entire fleet completed 5895 days at sea in 26E7 and 1514 in 26E8, and sole were captured in all but 5 fishing trips.

The French observer program (Obsmer) data from 2019 showed that vessels <18 using bottom trawls to target cephalopods had 0.7% sole with 23.1% of these discarded (all undersize). When vessels targeted sole and cephalopods the sole represented 7.9% of the catch with 12.6% of these discarded (90% undersize)

5. Additional evidence and work planned

There is a clear outline of the proposed exemption 'This exemption shall apply in ICES division 7e, within six nautical miles of the coast but outside identified nursery areas, to catches of common sole (*Solea solea*) below the minimum conservation reference size made using OTB with a cod end mesh size larger than 80 mm. When discarding, common sole shall be released immediately'.

The common sole in area 7e is a shared stock with the UK and is generally in good shape with negligible discarding, although a 6% decrease to the TAC in 2022 was recommended due to a decrease in 2019 recruitment and biomass.

No further work was mentioned or planned.

6. EWG 22-05 Observations

PLEN 19-02 STECF observed that a key concern with a previous request for this exemption was the proportion of the catches made up of rays and spider crab compared to the time the survival estimates were generated. The presence of these species will negatively influence the survival of discarded fish given their spikey or rough morphology which can harm other fish. While overall immediate survival rates of undersized sole were very good (99.1%), 85% were caught in a single trip during spring. Catches of spider crab are greater in the summer and autumn and are likely to result in lower survival.

A delayed survival rate was only presented for Category A sole, and no rates for overall or for the other vitality categories were presented. The delayed survival rate for Category A was estimated at 69.4%. Previous studies reported by Randall et al. (2017) and Ribeiro Santos et al. (2016) estimated sole survival from coastal trawlers at 88% for the Eastern Channel and 46% for the North Sea, respectively.

While the request states that fishing will be undertaken outside of nursery areas there is no mention of where these areas are located. Additionally, as noted in PLEN 19-02, as a general rule, where exemptions have conditions attached there is no evidence of them being applied by Member States making controlling and enforcing such measures a challenge.

In the supporting Annex, it is stated the proposed exemption would cover a fleet of about 90 French ≤12 m fishing vessels. However, there is no information on vessels from other nations fishing in this area. Additionally, there is no reference to the other areas of 7e where ≤12 m OTB vessels are likely to target sole. It is important to include data on any other vessel fishing in area 7e because they would/should

	<p>also be covered by the exemption. It is not clear what is meant by the entire fleet in relation to the number of days at sea in 26E7 and 26E8—it needs to be made clear if it is just the French fleet and only OTB vessels under 12 m or is it all vessels.</p> <p>While the ICES Advice on fishing opportunities, catch, and effort for 7e states that ~19% of sole is captured in otter trawls there is no indication if other vessel segments catch sole in areas 26E7 and 26E8, and therefore the impact of a survival exemption on the overall stock is not possible.</p> <p>There is no information provided on catch rates or expected length frequencies of sole for areas 26E7 and 26E8 or the wider 7e area. Therefore, it is not clear to what extent is the impact of fishing on \leqMCRS sole. It is stated that there is a low catch rate of undersized sole but no indication of the amount or percentage.</p> <p>The supporting report is presented in English and French, however, the French report is over twice the number of pages of the English version. A full translation is welcomed because it allows a more comprehensive evaluation of the request and information provided.</p>
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References

- Bart Ampe, Noémi Van Bogaert, Els Torreele, Sebastian Uhlmann. 2020. Discard survival estimates of commercially caught skates of the North Sea and English Channel, Sumaris project (2020).
- Baulier Loïc, Morandea Fabien, Ramonet Morgane, Sourget Quiterie, Winkler Joachim. 2021. The SURF project: survivability of discarded cuckoo rays (*Leucoraja naevus*) in French bottom trawl fisheries. Project report.
- Laura Lemey, Klaas Sys, Esteban Torreblanca, Damian Villagra Villanueva, Tim Plevoets. 2021. Interim report II Raywatch: Towards a more extensive and efficient long-term data collection for skates in support of the "Roadmap for rays and skates". ILVO Report 36pp.
- Morfin Marie, Simon Julien, Morandea Fabien, Baulier Loïc, Méhault Sonia, Kopp Dorothée. 2019. Using acoustic telemetry to estimate post-release survival of undulate ray *Raja undulata* (Rajidae) in northeast Atlantic, Ocean and Coastal Management, 178(2019)
- Oliver, M., McHugh, M., Murphy, S., Browne, D., and Cosgrove, R. 2019. Post-capture condition of cuckoo ray in an Irish otter trawl fishery. BIM Fisheries Conservation Report, March 2019. 12 pp
- Oliver, M., McHugh, M., Murphy, S., Browne, D., and Cosgrove, R. 2021. An assessment of cuckoo ray (*Leucoraja naevus*) survivability in an Irish otter trawl fishery. BIM Fisheries Conservation report, November 2021.
- OP COBRENORD. (2022). Rapport d'étude du projet SUMO (SURvie de la sole en Manche-Ouest) 34 p.
- Randall, P., Ribeiro Santos, A., Firmin, C., O'Sullivan, H., White, E., Catchpole, T. (2017). Assessing the survival of discarded sole (*Solea solea*) in an English inshore trawl fishery, Part of the Cefas ASSIST Project, February 2017, Cefas report pp55
- Scientific, Technical and Economic Committee for Fisheries (STECF) – 61st Plenary Meeting Report (PLEN-19-02). Publications Office of the European Union, Luxembourg, 2019, ISBN 978-92-76-09515-6, doi:10.2760/31279, JRC117461
- Uhlmann, S. S., Theunynck, R., Ampe, B., Verkempynck, R., Miller, D. C.M., van Marlen, B., van der Reijden, K. J. et al. 2016b. Overleving doorboomkor gevangen pladijs – Survival of beam-trawled European plaice (*Pleuronectes platessa*). ILVO Mededeling 210. Institute for Agricultural and Fisheries Research, Oostende, Belgium. 172 pp.

(13) (PDF) *Survival of undersized plaice (Pleuronectes platessa), sole (Solea solea), and dab (Limanda limanda) in North Sea pulse-trawl fisheries.* Available from: https://www.researchgate.net/publication/313164959_Survival_of_undersized_plaice_Pleuronectes_platessa_sole_Solea_solea_and_dab_Limanda_limanda_in_North_Sea_pulse-trawl_fisheries [accessed May 18 2022].

Uhlmann, S.S., Theunynck, R., Ampe, B., Desender, M., Soetaert, M., Depestele, J., 2016a. Injury, reflex impairment, and survival of beam-trawled flatfish. ICES J. Mar. Sci. 73, 1244–1254. <https://doi.org/10.1093/icesjms/fsv252>

Uhlmann, S.S., Ampe, B., Van Bogaert, N., Vanden Berghe, C., Vanellander, B., 2021. Flatfish survivors have tales to tell: Cold seawater and reduced deployment duration contribute to the survival of European plaice (*Pleuronectes platessa*) discarded by Belgian beam trawlers. Fish. Res. 240, 105966. <https://doi.org/10.1016/j.fishres.2021.105966>

Uhlmann et al., 2021. Effects of catch composition on the fate of European plaice (*Pleuronectes platessa*) discarded from Belgian beam trawlers. Under review with Fisheries Research.

6.3 NWW – Technical measures in the Celtic Sea, Irish Sea and West of Scotland

The NWW Member States submitted a JR covering technical measures for the Celtic Sea, Irish Sea and West of Scotland, containing measures for commercial and recreational fisheries. This JR was largely the same as the JR submitted in 2020 and assessed by STECF PLEN 19-02.

One new request was made by the NWW Member States in respect of the NWW technical measures JR. This was for the re-instatement of the 100mm T90 gear option in the Irish Sea based on information submitted. This was evaluated by EWG 22-05 as follows:

Technical Measures	Main Findings of EWG 22-05
<p>Joint Recommendation to allow dual codend, an existing TM, to be used until end of December 2022 (Supporting Annex from Ireland)</p>	<p>1. Exemption status</p> <p>This technical measure was assessed by EWG 19-08, first implemented in 2020 (EU 2019/2239) and is in place until 31 July 2022 (EU 2019/1241 (consolidated)).</p> <p>The current regulation (EU) 2019/1241 (consolidated) includes the following condition:</p> <p style="padding-left: 40px;">Member States may allow the use of the dual cod-end until the end of December 2022, provided that the technical attributes of this device result in the same or higher selectivity as the other gears specified in points 1.2. and 1.3.1 of ANNEX VI, Part B.</p> <p>The 2022 NWW Joint Recommendation is to extend the use of the dual cod-end until the end of December 2022, which represents a 5-month extension.</p> <p>The joint recommendation includes the following new information to support the assertion that the dual codend has the same or higher selectivity as the gear in point 1.2 (80 mm mesh size with either 120 mm SMP or sorting grid with maximum 35 mm bar spacing):</p> <ol style="list-style-type: none"> (1) Results of an Irish Industry-led trial comparing catches with the dual codend against an 80 mm codend fitted with 300 mm Square Mesh Panel (SMP). (2) Results of an Irish trial comparing catches with a 90 mm T90 codend against an 80 mm codend with 120 mm square mesh panel (SMP). <p>The joint recommendation also includes the following Irish</p>

recommendation, based on consultation with the fishing industry, on achieving the same or higher selectivity as the gears in point 13.1:

- Increasing the mesh size in the in the upper codend of the dual codend to a minimum of 100 mm T90.

2. EWG 22-05 Observations

The findings of EWG 19-08 that the principle of the dual codend to vertically separate catch into two codends where differential selection can take place has the potential to reduce bycatch of unwanted species while maintaining catches of target species are still valid.

Additional information has been provided in the JR relating to two new trials. The first trial was carried out on a simplified self-sampling basis due to Covid-19 restrictions. Results are confined to mean weights of total catches retained with each gear. The results indicate that compared with an 80 mm codend with 300 mm SMP the dual codend retains:

- More Nephrops and more wanted fish (> MCRS hake, monkfish, pollack, flatfish and other commercial species)
- Less Nephrops, gurnard and lesser spotted dogfish
- No difference in unwanted catches (< MCRS fish and non-commercial species combined) between the two gears

The simplified self-sampling protocol employed limits the inference that can be made but suggests that the dual codend and the 80 mm codend with 300 mm SMP are equally selective for unwanted catches. The 300 mm SMP tested during this trial is considerably larger than the 120 mm SMP specified in point 1.2 and likely to be more selective.

The results of the second trial provide information on the relative selectivity of a T90 90 mm codend and an 80 mm codend fitted with a 120 mm SMP in a twin trawl fishery targeting fish. The results indicate that the 90 mm T90 mesh codend retained:

- Less whiting of all sizes, < MCRS haddock and < MCRS cod
- More > MCRS hake, > MCRS megrim, monkfish, plaice of all sizes and lemon sole of all sizes

The inference that can be made from this trial is limited to fish species. The results suggest improved selectivity for undersized whiting, haddock and cod and reduced selectivity for undersize plaice and lemon sole.

No supporting evidence is provided for the recommendation to increase the mesh size of the uppermost T90 codend from 90 mm to 100 mm. Evidence has been provided to EWG 19-08 and EWG 22-05 that the dual codend is very effective at sorting fish in to the uppermost codend. Implementing one of the gear options in point 13.1 in the uppermost codend of the dual codend would align with the technical measures for targeting fish in the area. It is noted that the NWW JR recommends that the mesh size of the T90 codend should be increased 100 mm.

Technical Measures	Main Findings of EWG 22-05
<p>Joint Recommendation to include T90 100 mm on the basis of equivalent selectivity with T0 120 mm (Supporting Annex from Ireland)</p>	<p>1. Exemption status</p> <p>EWG 22-05 reiterates the assessment by STECF PLEN 21-05 for the NWW technical measures JR in the use of a 100 mm T90 codend in ICES division 7a (Irish Sea). In 2021, it was acknowledged by STECF PLEN 21-05 that the T90 100 mm gear configuration offers a better selection for cod, whiting, and other small gadoids than the 100 mm T0 mesh. But it still remains (statistically) uncertain whether the T90 100 mm gear configuration has equivalent selectivity for cod and whiting compared to 120 mm codend mesh size which is the baseline gear prescribed in the TM regulations (EU Reg. 2021/2324 amending EU Reg. 2019/1241).</p> <p>2. EWG 22-05 observations</p> <p>The observations by STECF PLEN 21-05 that the analysis carried out by Ireland shows that the abundance was highly variable between hauls remains valid in the new information provided with the JR. Low abundance was evident in numerous hauls for cod, haddock and whiting.</p> <p>The use of the catch comparison method in the Irish studies is a reasonable approach, given the objective of the trials was to assess the differences in catches between the alternative gear (T90 100 mm) and baseline gear (T0 120mm).</p> <p>The analysis provided indicates that the main benefit of the T90 100 mm in the Irish Sea whitefish fishery was a considerable reduction in <MCRS haddock.</p> <p>The T90 100 mm codend caught substantially more flatfish species compared with the T0 120 mm. There was minimal difference in catches between the two gears for whiting. The difference in cod catch was also negligible across all size classes, reflecting the stock state of cod in the Irish Sea where the experiments were carried out. No inference can be made for cod and whiting but this does not mean that this gear is not selective, more that there were not enough of these encountered during the trials to allow for an analysis.</p> <p>Notwithstanding this, the data provided is still limited in terms of the number of hauls. More robust selectivity and/or catch comparison trials would be needed to fully conclude the outcomes of the supporting Irish studies and in particular for cod and whiting.</p>

References

- Browne, D., Cosgrove, R., and Tyndall, P. 2016. Assessment of T90 mesh in a fishery targeting whiting in the Celtic Sea, Irish Sea Fisheries Board (BIM), Fisheries Conservation Report, June 2016. 8 pp
- Browne et al. 2019. Assessment of a 90 mm T90 mesh codend, a new gear option for Celtic Sea whitefish vessels. Irish Sea Fisheries Board (BIM), Fisheries Conservation Report, July 2019. 8 pp. <https://bim.ie/wp-content/uploads/2021/02/BIM-Assessment-of-a-90-mm-T90-mesh-codend-report.pdf>
- Cosgrove, R., Browne, D., Minto, C., Tyndall, P., Oliver, M., Montgomerie, M., and McHugh, M. 2019. A game of two halves: Bycatch reduction in *Nephrops* mixed fisheries. Fisheries Research, 210: 31-40. <https://bim.ie/wp-content/uploads/2021/01/BIM-Game-of-two-halves-published.pdf>
- Cosgrove, R., Browne, D., Tyndall, P., McHugh, M., Oliver, M., Minto, C., Burke, B., et al. 2016. Assessment of a dual codend with net separator panel in an Irish *Nephrops* fishery. Irish

Sea Fisheries Board (BIM), Fisheries Conservation Report, December 2016. 12 pp. <https://bim.ie/wp-content/uploads/2021/02/5987-BIM-Stella-Nova-Trial-Brochure.pdf>

Matthew McHugh, Martin Oliver, Daragh Browne, C oil n Minto, Ron n Cosgrove. (2019) Benefits of 120 mm diamond and 100 mm T90 codends in the Celtic and Irish Seas. Irish Sea Fisheries Board (BIM), Fisheries Conservation Report, February 2019. 7 pp. <https://bim.ie/wp-content/uploads/2021/01/BIM-8306-Benefits-of-120-mm-diamond-and-100-mm-T90-codends-in-the-Celtic-and-Irish-Seas.pdf>

Oliver et al., 2021. Assessment of the Dual Codend on the Galway Aran Fishing Grounds. Irish Sea Fisheries Board (BIM), Fisheries Conservation Report, September 2021. 8 pp. <https://bim.ie/wp-content/uploads/2021/09/BIM-Fisheries-Report-Dual-Codend-GalwayAran-Fishinggrounds.pdf>

Scientific, Technical and Economic Committee for Fisheries (STECF) – 61st Plenary Meeting Report (PLEN-19-02). Publications Office of the European Union, Luxembourg, 2019, ISBN 978-92-76-09515-6, doi:10.2760/31279, JRC117461

Scientific, Technical and Economic Committee for Fisheries (STECF) – Evaluation of Landing Obligation Joint Recommendations (STECF-19-08). Publications Office of the European Union, Luxembourg, 2019, ISBN 978-92-76-09523-1, doi:10.2760/227428, JRC117511

Scientific, Technical and Economic Committee for Fisheries (STECF) - Evaluation of Joint Recommendations on the Landing Obligation and on the Technical Measures Regulation (STECF-21-05). EUR 28359 EN, Publications Office of the European Union, Luxembourg, 2021, ISBN 978-92-76-40593-1, doi:10.2760/83668, JRC126128.

7 SWW – OVERVIEW OF JOINT RECOMMENDATIONS

Commission Delegated Regulation (EU) 2015/2439 established a discard plan for certain demersal fisheries in South-Western waters (i.e., in Union waters of ICES divisions VIII, IX, X and CECAF areas 34.1.1, 34.1.2, 34.2.0). Based on Joint Recommendations for the South - Western waters submitted by the regional group of Member States this plan has been updated several times, most recently by Commission Delegated Regulation (EU) 2020/2015 under the Western Waters Multiannual Plan (2019/472). This included exemptions for pelagic fisheries following from Commission Delegated Regulation (EU) 1394/2014 that established a discard plan for certain pelagic fisheries in the SWW.

Some of the exemptions included in this Regulation EU) 2020/2015 were time limited, while others were granted based on additional information being submitted annually. For 2022, Member States have provided additional scientific information for the relevant exemptions which have been assessed by EWG 22-05.

The main elements of the new JR and which of these have been assessed by EWG 22-05 are summarised in table 7.1.

Table 7.1 Main elements of the Joint Recommendations submitted for the SWW

Elements	Contained currently in pelagic or demersal discard plan	Status with relevant Article in current discard plan	Assessment by EWG 20-04 with relevant Annexes in JR
De minimis			
Hake caught with trawls and seines in directed fisheries in ICES subareas 8 and 9	Demersal	Existing and unchanged Article 14(1a)	Not assessed
Common sole caught with beam trawls and bottom trawls in directed fishery in ICES	Demersal	Existing and unchanged Article 14(1b)	Not assessed

subareas 8 a,b			
Common sole caught in gillnets and trammel nets in ICES subareas 8 a,b	Demersal	Existing and unchanged Article 14(1c)	Not assessed
Alfonsinos caught by hooks and lines in division 10	Demersal	Existing and unchanged Article 14(1d)	Not assessed
Blue whiting caught in the industrial pelagic trawler fishery in ICES subarea 8	Pelagic	Existing and unchanged Article 14(1r)	Not assessed
Albacore tuna caught using midwater pair trawls in ICES subarea 7	Pelagic	Existing and unchanged Article 14(1s)	Not assessed
Anchovy, mackerel and horse mackerel caught using midwater trawls in the pelagic trawl fishery which targets anchovy, mackerel and horse mackerel in ICES division 8	Pelagic	Existing and unchanged Article 14(1t)	Not assessed
Horse mackerel, jack mackerel and mackerel caught using purse seines in the fishery which targets horse mackerel, jack mackerel, mackerel and anchovy in ICES subareas 8,9, 10 VIII, IX, X and CECAF divisions 34.1.1, 34.1.2, 34.2.0	Pelagic	Existing and unchanged Article 14(1u)	Not assessed
Horse mackerel caught with bottom trawls, seines and beam trawls in ICES subareas 8 and 9	Demersal	Annual information by 1 May Article 14(1e)	Re-assessed based on new information
Horse mackerel caught with gillnets in ICES subareas 8, 9 & 10 and CECAF 34.1.1, 34.1.2, 34.2.0	Demersal	Annual information by 1 May Article 14(1f)	Re-assessed based on new information
Mackerel caught with bottom trawls, seines and beam trawls in ICES subareas 8 and 9	Demersal	Annual information by 1 May Article 14(1g)	Re-assessed based on new information
Mackerel caught with gillnets in ICES subareas 8, 9 & 10 and CECAF 34.1.1, 34.1.2, 34.2.0	Demersal	Annual information by 1 May Article 14(1h)	Re-assessed based on new information

Megrim caught with bottom trawls, seines and beam trawls in ICES subareas 8 and 9	Demersal	Annual information by 1 May Article 14(1i)	Re-assessed based on new information
Megrim caught with gillnets in ICES subareas 8 and 9	Demersal	Annual information by 1 May Article 14(1j)	Re-assessed based on new information
Anglerfish caught with bottom trawls, seines and beam trawls in ICES subareas 8 and 9	Demersal	Annual information by 1 May Article 14(1k)	Re-assessed based on new information
Anglerfish caught with gillnets in ICES subareas 8 and 9	Demersal	Annual information by 1 May Article 14(1l)	Re-assessed based on new information
Whiting caught with bottom trawls, seines and beam trawls in ICES subarea 8	Demersal	Annual information by 1 May Article 14(1m)	Re-assessed based on new information
Whiting caught with gillnets in ICES subarea 8 and 9	Demersal	Annual information by 1 May Article 14(1n)	Re-assessed based on new information
Anchovy caught with bottom trawls, seines and beam trawls in ICES subareas 8 and 9	Demersal	Annual information by 1 May Article 14(1o)	Re-assessed based on new information
Red Sea Bream caught with bottom trawls, seines and beam trawls in ICES Division 9a	Demersal	Annual information by 1 May Article 14(1p)	Re-assessed based on new information
Sole caught with bottom trawls, seines and beam trawls in ICES Division 9a	Demersal	Annual information by 1 May Article 14(1q)	Re-assessed based on new information
High survivability			
<i>Nephrops</i> caught with trawls in ICES subareas 8 and 9	Demersal	Existing and unchanged Article 9	Not assessed
Anchovy, horse mackerel, jack mackerel and mackerel caught using purse seines in artisanal purse seine fisheries in ICES subareas 8 and 9	Pelagic	Existing and unchanged Article 12	Not assessed
Red seabream caught with "voracera" gear in	Demersal	Existing and unchanged	Not assessed

ICES division 9a		Article 11	
Red sea bream caught with hooks and lines in ICES subarea 10 as well as division 9a	Demersal	Information by 1 May 2022 Article 11	Re-assessed based on new information
Red seabream caught with hooks and lines in ICES subareas 8 and 9a	Demersal	Information by 1 May 2022 Article 11	Re-assessed based on new information
Skates and rays (<i>Rajiformes</i>) caught with all gears in ICES subareas 8 and 9	Demersal	Information by 1 May 2022 Article 10	Re-assessed based on new information
Cuckoo rays caught with trammel nets in ICES subareas 8 and 9	Demersal	Information by 1 May 2022 Article 10(4a)	Re-assessed based on new information
Cuckoo rays caught with bottom trawls in ICES subareas 8 and 9	Demersal	Information by 1 May 2022 Article 10(4b)	Re-assessed based on new information

7.1 De minimis exemptions

EWG 22-05 acknowledges that the collection of catch data by the SWW Member States group has been severely limited due to difficulties sampling at sea because of Covid-19. However, EWG 22-05 observes that the catch data that has been provided lacks consistency in the way it is presented. It covers different years (i.e., 2020 for France and 2021 for Spain and Belgium) with some presented as absolute estimates and other data presented as percentages of overall catch data for the relevant fisheries.

No catch information has been provided by Portugal, except for a summary regarding the collection of scientific information. It states that due to the COVID-19 pandemic in 2020 and 2021 no onboard sampling was performed and thus no data on catches from onboard sampling was collected, including discard data. It refers that a new modelling methodology was developed, and discard estimates were obtained for 2020 and 2021, but no data is provided. However, in EWG 21-05 it is stated that the supporting annex from Portugal reports that the frequency of occurrence of discards is too low (considered zero discards because such low frequency will result in highly biased estimates) or non-existent.

Additionally, EWG 21-05 requested more information on the methodology of the calculation of the economic impact assessment provided in 2020 and 2021 to support many of the de minimis exemptions. EWG 21-05 re-examined the Spanish study and highlighted that the data used as the opportunity costs could not be put into context of the overall economic performance of the fleet segments. However, no additional information on the methodology and data was provided. Further, EWG 21-05 observed that the economic information provided on impacts of not granting the exemption indicated a comparatively high level of losses for the vessels involved in this fishery but considered this was likely to be an overestimate given the way certain variable costs had been included in the analysis. EWG 21-05 requested more information on the methodology of the calculation and the data used as the opportunity costs cannot be put into context of the overall economic performance of the fleet segments. However, no additional information on the methodology and data was provided to EWG 22-05.

A combination of these factors has made it difficult for EWG 22-05 to carry out any meaningful evaluation of these exemptions. In most cases the findings from previous EWGs and in particular EWG 21-05 remain relevant.

A summary of the fishery information applicable to the proposed continuation of the de minimis exemptions (Article 14 points 1(e) to 1 (q)) is provided in Table 7.1.2.1.

Table 7.1.1 Summary of de minimis exemptions submitted as part of the SWW Joint Recommendations (restricted to new or revised exemptions).

Exemption	Main Findings of EWG 22-05
<p>Horse mackerel caught by vessels using beam trawls, bottom trawls and seines in ICES subareas 8 and 9 of up to a maximum of 5% of the total annual catches of horse mackerel in the specified fisheries – Article 14(1e) of Regulation (EU) No 2020/2015.</p>	<p>1. Exemption Status</p> <p>Existing temporary exemption granted until the end of 2023 but with a requirement for additional information to be provided by the 1st May every year.</p> <p>2. Fishery Context</p> <p>Information for 2020 was provided by France (Annex E) for catch and discard rates of horse mackerel in fisheries employing beam and bottom trawls in ICES subareas 8 and 9. This data was collected for 2020 under the Obsmer programme. The horse mackerel discard rate was high around 77% in 2020 and were somewhat similar between the gears reported (66% and 88% for <i>Nephrops</i> OTB and demersal trawls, respectively). <i>Nephrops</i> OTB landed 230 tonnes of horse mackerel and discarded 449 tonnes. Demersal trawls landed 125 tonnes and discarded 713 tonnes of horse mackerel. However, there is no data reported for seines as they were not sampled.</p> <p>Spain provided catch data by metier for 2021 which includes six metiers using bottom trawls with catches of horse mackerel – OTB_>70; OTB_DEF_>=55; OTB_MPD_>=55; OTB_MCD_>=55; PTB_DEF_>70; PTB_DEF_>55 (Annex D). There was a total of 7, 35, 33, 122 for otter trawl and 2 and 33 for pair trawl vessels involved in these metiers, respectively. In OTB_>70 landings of horse mackerel were 363 tonnes in 2021, while discarded catch was 450 tonnes (55%). In OTB_DEF_>=55, landings were 399 tonnes while discarded catches were 7 tonnes (2%). In the OTB_MPD_>=55 metier, landings of horse mackerel were 1,626 tonnes and discards were 18 tonnes (1%). This is a directed fishery for horse mackerel and mackerel. In the OTB_MCD_>=55 landings were 558 tonnes and discards were 254 tonnes (31%). In the PTB_DEF_>70 landings were 17 tonnes and discards 29 tonnes (63%). In the PTB_DEF_>55 landings of horse mackerel were 111 tonnes and discards were 67 tonnes (38%).</p> <p>In 2021, no catches of horse mackerel were reported by the six Belgian vessels active in these areas.</p> <p>There is no updated catch information from Portugal, except a summary regarding the collection of scientific information.</p> <p>3. Basis for the exemption</p> <p>The justification for the exemption is largely the same as assessed by STECF 20-04, namely from a detailed economic analysis of disproportionate costs resulting from the additional time required for handling and sorting unwanted catches on board vessels.</p> <p>Spain has provided a summary of all selectivity trials made by IEO that was already presented in 21-05, and a summary of two new selectivity experiments carried out by AZTI in 2021 as well as results from the SMARTFISH project.</p> <p>The studies explored the effect of shortening lastridge ropes on baka otter trawls in Div. 8abd (CASELEM project) and pair trawl operating in Div. 8c (MESEDE project). The CASELEM project showed that the</p>

codend selectivity of horse mackerel (increase L50 of 14.56 cm to 20.74 cm) and blue whiting was significantly improved when shortening lastride ropes, whereas the selectivity of hake, and megrim was not.

In addition, results from the European SMARTFISH project are also presented, focusing on using underwater lights on a grid located in the codend to modify fish behaviour as a first step to improve selectivity. However, the results showed that less than 25% of the individuals of all species analysed passed through the grid and were retained in the lower codend, as well as that no significant differences were found when the grid was illuminated. Finally, project SELECLUGO (for metier OTB_DEF_>=55) objective was to assess the selectivity of the regulatory trawl codends used by the commercial fleet in 2021 trials. The results indicate that increased selectivity in this metier is not easily achievable in the short term.

4. Additional evidence and work planned

Spain has further selectivity work planned, namely it will continue to carry out the CASELEM selectivity campaign aimed at improving the selectivity of multi-specific fisheries, continue with trials focused on trawling with doors and incorporate tests of fishing tactics to complement improvements in selectivity, start working on the new H2020 EveryFish project, continue with the DESCARSEL and SELECLUGO projects.

5. EWG 22-05 observations

The supporting information on economic impacts was already provided in 2020. In 2021, EWG 21-05 re-examined the Spanish study and comments on the approach and methodology were provided. EWG 21-05 observed that the economic information provided on impacts of not granting the exemption indicates a comparatively high level of losses for the vessels involved in this fishery. However, EWG 21-05 requested more information on the methodology of the calculation and the data used as the opportunity costs cannot be put into context of the overall economic performance of the fleet segments. No additional information on the methodology and data was provided to EWG 22-05.

Updated catch data has been provided by France for 2020, Spain and Belgium for 2021 but not by Portugal. The implications of granting the proposed exemption with regard to the fishery and species concerned cannot therefore be quantified due to a lack of catch data per gear, year and for all Member States. Nevertheless, the information provided by France and Spain shows relatively low rates of discards (i.e., OTB_MPD_>=55 metier targeting horse mackerel had a discard rate of 1% in 2021) for some fisheries but quite high discard rates in others (i.e., French demersal trawlers have a discard rate of 88% in 2020).

EWG 21-05 highlighted that reducing the discard rates through improvements in selectivity is difficult in these fisheries given many are mixed fisheries and notes the results from the Spanish studies carried out in these fisheries which show quite high losses of commercial catch. Nonetheless, implementing the most promising of these gears may help to address the issue of reducing discard rates for horse mackerel in the longer term, particularly in those fisheries where discard rates are high. This observation remains relevant for this exemption.

Exemption	Main Findings of EWG 22-05
<p>Horse mackerel caught by vessels using gillnets in ICES subareas 8 and 9 and CECAF zones 34.1.1 up to a maximum of 3% of the total annual catches of horse mackerel in the specified fisheries - Article 14 point 1(f) of Regulation (EU) No 2020/2015).</p>	<p>1. Exemption Status</p> <p>Existing temporary exemption granted until the end of 2023 but with a requirement for additional information to be provided by the 1st May every year.</p> <p>2. Fishery Context</p> <p>Information for 2020 is provided by France (Annex E) on catch and discard rates of horse mackerel in fisheries employing gillnets in ICES subareas 8 and 9. This was collected under the Obsmer programme for 2020. However, France lists six metiers deploying gillnets but reports total catch, landings and discards for two groups of combined metiers, while percentages of catch and discarded horse mackerel are only presented for two specific metiers, one for each group of combined metiers. Furthermore, percentages of horse mackerel discarded are given in relation of the metier total catch, while the de minimis percentage should be calculated in relation to total horse mackerel catch. Therefore, these data limitations preclude an analysis of the French data.</p> <p>There is no updated catch information from Spain for the metiers using gillnets and trammel nets - GNS_DEF_80-99; GNS_DEF_>=100 (Annex C). There was only a report of total number of vessels involved in these metiers, 40 and 28 respectively.</p> <p>Belgium has no gillnet fisheries in subareas 8 and 9.</p> <p>There is no updated catch information from Portugal, except a summary regarding the collection of scientific information.</p> <p>3. Basis for the exemption</p> <p>The justification for the exemption is largely the same as assessed by STECF 20-04, namely from a detailed economic analysis of disproportionate costs resulting from the additional time required for handling and sorting unwanted catches on board vessels.</p> <p>4. Additional evidence and work planned</p> <p>Spain has further selectivity work planned, namely, to start working on the new H2020 EveryFish project, although it is unclear if fixed gears are included.</p> <p>5. EWG 22-05 observations</p> <p>The supporting information on economic impacts was already provided in 2020. In 2021, EWG 21-05 re-examined the Spanish study and comments on the approach and methodology were provided. EWG 21-05 observed that the economic information provided on impacts of not granting the exemption indicates a comparatively high level of losses for the vessels involved in this fishery. However, EWG 21-05 requested more information on the methodology of the calculation and the data used as the opportunity costs cannot be put into context of the overall economic performance of the fleet segments. No additional information on the methodology and data was provided to EWG 22-05.</p> <p>Limited updated catch data has been provided by France for 2020, and no data from Spain or Portugal. France reports on a low horse mackerel discard rate for two out of six metiers but the rate is</p>

	<p>calculated in relation to total metier catches and not to horse mackerel catches, which if used may increase the discard rate significantly.</p> <p>Therefore, no assessment of the implications of granting the proposed exemption with regard to the fishery and species can be made due to the limited data provided by the Member States.</p>
Exemption	Main Findings of EWG 22-05
<p>Mackerel caught by vessels using beam trawls, bottom trawls and seines in ICES subareas 8 and 9 up to a maximum of 5% of the total annual catches of mackerel in the specified fisheries - Article 14 point 1(g) of Regulation (EU) No 2020/2015</p>	<p>1. Exemption Status</p> <p>Existing temporary exemption granted until the end of 2023 but with a requirement for additional information to be provided by the 1st May every year.</p> <p>2. Fishery Context</p> <p>Information for 2020 was provided by France (Annex F) on catches and total discard rates for all species in a range of fisheries employing beam and bottom trawls in ICES subareas 8 and 9. However, no data is provided on mackerel discards and catches, while there is no data reported for seines as they were not sampled.</p> <p>Spain provided catch data by metier for 2021 which includes seven metiers using bottom trawls with catches of mackerel – OTB_>70; OTB_DEF_>=55; OTB_MPD_>=55; OTB_MCD_>=55; PTB_DEF_>70; PTB_DEF_>55 (Annex D). There was a total of 7, 35, 33, 122 for otter trawl and 2 and 33 for pair trawl vessels involved in these metiers, respectively. In OTB_>70 landings of mackerel were 494 tonnes in 2021, while discarded catch was 2,279 tonnes (82%). In OTB_DEF_>=55, landings were 190 tonnes while discarded catches were 7 tonnes (3.5%). In the OTB_MPD_>=55 metier, landings of mackerel were 6,115 tonnes and discards were 11 tonnes (0.2%). This is a directed fishery for horse mackerel and mackerel. In the OTB_MCD_>=55 landings were 146 tonnes and discards were 41 tonnes (22%). In the PTB_DEF_>70 landings were 11 tonnes and discards 3 tonnes (21%). In the PTB_DEF_>55 landings of mackerel were 1,980+806 tonnes and there were 4 tonnes of discards (0.1%).</p> <p>In 2021, no catches of mackerel were reported by the six Belgian vessels active in these areas.</p> <p>There is no updated catch information from Portugal, except a summary regarding the collection of scientific information.</p> <p>3. Basis for the exemption</p> <p>The justification for the exemption is largely the same as assessed by STECF 20-04, namely from a detailed economic analysis of disproportionate costs resulting from the additional time required for handling and sorting unwanted catches on board vessels.</p> <p>Spain has provided a summary of all selectivity trials made by IEO that was already presented in 21-05, and a summary of two new selectivity experiments carried out by AZTI in 2021 and results from the SMARTFISH project. The studies explored preliminarily the effect of shortening lastridge ropes on baka otter trawls in Div. 8abd (CASELEM project) and pair trawl operating in Div. 8c (MESEDE project). The CASELEM project showed that the codend selectivity of horse mackerel and blue whiting was significantly improved when shortening lastridge ropes, whereas the selectivity of hake, and</p>

	<p>megrin was not.</p> <p>In addition, results from the European SMARTFISH project are also presented, focusing on using underwater lighting on a grid located in the codend to modify fish behaviour as a first step to improve selectivity. However, the results showed that less than 25% of the individuals of all species analysed passed through the grid and were retained in the lower codend, as well as that no significant differences were found when the grid was illuminated.</p> <p>Finally, project SELECLUGO (for metier OTB_DEF_>=55) objective was to assess the selectivity of the regulatory trawl codends used by the commercial fleet in 2021 trials. The results indicate that increased selectivity in this metier is not easily achievable in the short term.</p> <p>4. Additional evidence and work planned</p> <p>Spain has further selectivity work planned, namely it will continue to carry out the CASELEM selectivity campaign aimed at improving the selectivity of multi-specific fisheries; continue with trials focused on trawling with doors and incorporate tests of fishing tactics to complement improvements in selectivity; start working on the new H2020 EveryFish project; and continue with the DESCARSEL and SELECLUGO projects.</p> <p>5. EWG 22-05 observations</p> <p>The supporting information on economic impacts was already provided in 2020. In 2021, EWG 21-05 has re-examined the Spanish study and comments on the approach and methodology were provided. EWG 21-05 observed that the economic information provided on impacts of not granting the exemption indicates a comparatively high level of losses for the vessels involved in this fishery. However, EWG 21-05 requested more information on the methodology of the calculation and the data used as the opportunity costs cannot be put into context of the overall economic performance of the fleet segments. No additional information on the methodology and data was provided to EWG 22-05.</p> <p>Updated catch data has only been provided by Spain and Belgium for 2021. Therefore, the implications of granting the proposed exemption with regard to the fishery and species concerned cannot be quantified due to a lack of catch data per gear, year and for all Member States.</p> <p>Nevertheless, the information provided by Spain shows relatively low rate of discards (i.e., OTB_MPD_>=55 metier targeting mackerel had a discard rate of 0.2% in 2021) for some fisheries but quite high discard rates in others (i.e., OTB_>70 metier has a mackerel discard rate of 82% in 2021).</p> <p>EWG 21-05 highlighted that reducing the discard rates through improvements in selectivity is difficult in these fisheries given many are mixed fisheries and notes the results from the French and Spanish studies carried out in these fisheries which show quite high losses of commercial catch. Nonetheless, implementing the most promising of these gears may help to address the issue of reducing discard rates for mackerel in the longer term. Focus should be on those fisheries with the highest volumes of mackerel discards. EWG 22-05 reiterates this observation which remains relevant for this exemption.</p>
Exemption	Main Findings of EWG 22-05

Mackerel caught by vessels using gillnets in ICES subareas 8 and 9 up to a maximum of 3% of the total annual catches of mackerel in the specified fisheries - Article 14 point 1(h) of Regulation (EU) No 2020/2015.

1. Exemption Status

Existing temporary exemption granted until the end of 2023 but with a requirement for additional information to be provided by the 1st May every year.

2. Fishery Context

Information for 2020 is provided by France (Annex F) on catch and discard rates of mackerel in six metiers employing gillnets in ICES subareas 8 and 9. This data was collected under the Obsmer programme. However, France lists six metiers deploying gillnets but reports total catch, landings and discards for two groups of combined metiers, while percentages of catch and discarded mackerel are only presented for three specific metiers, divided between the group of combined metiers. Furthermore, percentages of mackerel discarded are given in relation of the metier total catch, while the de minimis percentage should be calculated in relation to total mackerel catch. Therefore, these data limitations preclude an analysis of the French data.

There is no updated catch information from Spain for the metiers using gillnets and trammel nets - GNS_DEF_80-99; GNS_DEF_>=100 (Annex C). There was only report of total number of vessels involved in these metiers, 40 and 28 respectively.

Belgium has no gillnet fisheries in subareas 8 and 9.

There is no updated catch information from Portugal, except a summary regarding the collection of scientific information.

3. Basis for the exemption

The justification for the exemption is largely the same as assessed by STECF 20-04, namely from a detailed economic analysis of disproportionate costs resulting from the additional time required for handling and sorting unwanted catches on board vessels.

4. Additional evidence and work planned

Spain has further selectivity work planned, namely, to start working on the new H2020 EveryFish project, although it is unclear if fixed gears are included.

5. EWG 22-05 observations

The supporting information on economic impacts was already provided in 2020. In 2021, EWG 21-05 has re-examined the Spanish study and comments on the approach and methodology were provided. EWG 21-05 observed that the economic information provided on impacts of not granting the exemption indicates a comparatively high level of losses for the vessels involved in this fishery. However, EWG 21-05 requested more information on the methodology of the calculation and the data used as the opportunity costs cannot be put into context of the overall economic performance of the fleet segments. No additional information on the methodology and data was provided to EWG 22-05.

Limited updated catch data has been provided by France for 2020, and no data from Spain or Portugal. France reports a low mackerel discard rate for three out of six metiers but the rate is calculated in relation to total metier catches and not to mackerel catches, which if used would increase the discard rate significantly. This is similar to

	<p>last year and suggest discarding of mackerel is low in gillnet fisheries.</p> <p>No assessment of the implications of granting the proposed exemption with regard to the fishery and species can be made due to the limited data provided by the Member States. The observations of EWG 21-05 for this exemption remain relevant.</p>
Exemption	Main Findings of EWG 22-05
<p>Anchovy caught by vessels using beam trawls, bottom trawls and seines in ICES subareas 8 and 9 up to a maximum of 5% of the total annual catches of anchovy in the specified fisheries - Article 14 point 1(o) of Regulation (EU) No 2020/2015.</p>	<p>1. Exemption Status</p> <p>Existing temporary exemption granted until the end of 2023 but with a requirement for additional information to be provided by the 1st May every year.</p> <p>2. Fishery Context</p> <p>Information for 2020 is provided by France (Annex K) on frequency of occurrence of anchovy in fisheries employing beam and bottom trawls in ICES subareas 8 and 9. This data was collected under the Obsmer programme for 2020. No catches of anchovy are reported in the Obsmer reports. There is also no data reported for seines as they were not sampled.</p> <p>Spain provided catch data by metier for 2021 for several trawl metiers but none are reported to catch anchovy.</p> <p>In 2021, no catches of anchovy were reported by the six Belgian vessels active in these areas.</p> <p>There is no updated catch information from Portugal, except a summary regarding the collection of scientific information.</p> <p>3. Basis for the exemption</p> <p>The justification for the exemption is largely the same as assessed by STECF 20-04, namely from a detailed economic analysis of disproportionate costs resulting from the additional time required for handling and sorting unwanted catches on board vessels.</p> <p>Spain has provided a summary of all selectivity trials made by IEO that was already presented in 21-05, and a summary of two new selectivity experiments carried out by AZTI in 2021 and results from the SMARTFISH project.</p> <p>The studies explored preliminarily the effect of shortening lastridge ropes on baka otter trawls in Div. 8abd (CASELEM project) and pair trawl operating in Div. 8c (MESEDE project). The CASELEM project showed that the codend selectivity of horse mackerel and blue whiting was significantly improved when shortening lastridge ropes, whereas the selectivity of hake, and megrim was not.</p> <p>In addition, results from the European SMARTFISH project are also presented, focusing on using underwater lighting on a grid located in the codend to modify fish behaviour as a first step to improve selectivity. However, the results showed that less than 25% of the individuals of all species analysed passed through the grid and were retained in the lower codend, as well as that no significant differences were found when the grid was illuminated.</p> <p>Finally, project SELECLUGO (for metier OTB_DEF_>=55) objective was to assess the selectivity of the regulatory trawl codends used by the commercial fleet in 2021 trials. The results indicate that increased</p>

	<p>selectivity in this metier is not easily achievable in the short term. None of this studies provided information specific to anchovy.</p> <p>4. Additional evidence and work planned</p> <p>Spain has further selectivity work planned, namely it will continue to carry out the CASELEM selectivity campaign aimed at improving the selectivity of multi-specific fisheries; continue with trials focused on trawling with doors and incorporate tests of fishing tactics to complement improvements in selectivity; start working on the new H2020 EveryFish project; and continue with the DESCARSEL and SELECLUGO projects.</p> <p>5. EWG 22-05 observations</p> <p>The supporting information on economic impacts was already provided in 2020. In 2021, EWG 21-05 has re-examined the Spanish study and comments on the approach and methodology were provided. EWG 21-05 observed that the economic information provided on impacts of not granting the exemption indicates a comparatively high level of losses for the vessels involved in this fishery. However, EWG 21-05 requested more information on the methodology of the calculation and the data used as the opportunity costs cannot be put into context of the overall economic performance of the fleet segments. No additional information on the methodology and data was provided to EWG 22-05.</p> <p>Limited catch information has been supplied to support this exemption. Belgium reported no catch of anchovy for 2021, only frequency of species occurrence has been provided by France for 2020 and no data by Spain and Portugal.</p> <p>Therefore, the implications of granting the proposed exemption with regard to the fishery and species concerned cannot be quantified due to a lack of catch data per gear, year and for all Member States. The observations of EWG 21-05 remain relevant for this exemption that given the likely low level of catch, the impact of this exemption on the anchovy stock is likely to be low.</p>
Exemption	Main Findings of EWG 22-05
<p>Anglerfish caught by vessels using pelagic trawls, beam trawls, bottom trawls and seines in ICES subareas 8 and 9 up a maximum of 5% of the total annual catches of anglerfish in the specified fisheries - Article 14 point 1(k) of Regulation (EU) No 2020/2015.</p>	<p>1. Exemption status</p> <p>Existing temporary exemption granted until the end of 2023 but with a requirement for additional information to be provided by the 1st of May every year.</p> <p>2. Fishery Context</p> <p>Updated information for 2020 was provided by France (Annex H[SWW]) on discard rates of anglerfish in a range of fisheries employing bottomtrawls in ICES subareas 8 and 9. The discard rates (calculated as discards of total anglerfish catch) of anglerfish was 30% for bottom trawls targeting crustaceans (OTB) and 6% for bottom trawls targeting demersal species and cephalopods (OTB, OTT, PTB) in 2020. Bottomtrawls targeting crustaceans (mainly <i>Nephrops</i>) had a total catch of 12435 tonnes with a total discard fraction of 53.8%. In 2020, 172 tonnes of anglerfish (3% of total landings) were landed, and 74 tonnes discarded. Bottomtrawls targeting demersal species and cephalopods landed 746 tonnes of anglerfish (6% of total landings) and discarded 6 tonnes.</p>

Spain provided catch data by metier for 2021 (Annex D[SWW]) which includes five metiers using bottom trawls with catches of angler fish: OTB_≥70_0_0; OTB_DEF_≥55_0_0; OTB_MPD_≥55_0_0; PTB_DEF_≥55_0_0; OTB_MCD_≥55_0_0. There was a total of 7, 35, 33, 29 and 122 vessels involved in these metiers, respectively. In OTB_≥70_0_0, 304 tonnes of anglerfish were landed and 29 tonnes discarded (8.7%). In OTB_DEF_≥55_0_0, 332 tonnes of anglerfish was landed with 2 tonnes discards (0.2%). OTB_MPD_≥55_0_0 landed 32 tonnes and discarded 0 tonnes of anglerfish. For both PTB_DEF_≥55_0_0 and OTB_MCD_≥55_0_0 landings were 122 tonnes with 21 tonnes discards (14.7%). However, the data from the latter two metiers should be taken with caution as EWG 22-05 observed that there might be an input error in the table for OTB_MCD_≥55_0_0.

Updated information for 2021 was provided by Belgium (Annex C) where six vessels fishing with beam trawls (TBB) with a mesh size of 70 mm were active in areas 8a and 8b. Total landings of anglerfish were 53 tonnes with 0.3 tonnes discards (0.69%).

There is no updated catch information from Portugal, except a summary (Annex A) regarding the collection of scientific information.

3. Basis for the exemption

The justification for the exemption is largely the same as assessed by STECF 20-04, namely from a detailed economic analysis of disproportionate costs resulting from the additional time required for handling and sorting unwanted catches on board vessels. No updated information has been provided to EWG 22-05 in respect of this study.

Spain has provided a summary of all selectivity trials made by IEO that was already presented in 21-05, and a summary of two new selectivity experiments carried out by AZTI in 2021 and results from the SMARTFISH project.

The studies explored preliminarily the effect of shortening lastridge ropes on baka otter trawls in Div. 8abd (CASELEM project) and pair trawl operating in Div. 8c (MESEDE project). The CASELEM project did not focus on anglerfish. The MESEDE project showed no significant difference in the catch of any species.

In addition, results from the European SMARTFISH project are also presented, focusing on using underwater lighting on a grid located in the codend to modify fish behaviour as a first step to improve selectivity. However, the results showed that less than 25% of the individuals of all species analysed passed through the grid and were retained in the lower codend, as well as that no significant differences were found when the grid was illuminated.

4. Additional evidence and work planned

Spain has further selectivity work planned, namely, it will continue to carry out the CASELEM selectivity campaign aimed at improving the selectivity of multi-specific fisheries; continue with trials focused on trawling with doors and incorporate tests of fishing tactics to complement improvements in selectivity; start working on the new H2020 EveryFish project; and continue with the DESCARSEL and SELECLUGO projects.

5. EWG 22-05 Observations

The supporting information on economic impacts was already provided

	<p>in 2020. In 2021, EWG 21-05 has re-examined the Spanish study, and comments on the approach and methodology were provided. EWG 21-05 observed that the economic information provided on impacts of not granting the exemption indicates a comparatively high level of losses for the vessels involved in this fishery. However, EWG 21-05 requested more information on the methodology of the calculation and the data used as the opportunity costs cannot be put into context of the overall economic performance of the fleet segments. No additional information on the methodology and data was provided to EWG 22-05.</p> <p>Updated catch data has been provided by France for 2020 and by Spain and Belgium for 2021, but not for Portugal. However, the implications of granting the proposed exemption with regard to the fishery and species concerned cannot be quantified due to a lack of consistent catch data per gear, year and for all Member States.</p> <p>Nevertheless, EWG 22-05 notes that the information provided by France, Spain and Belgium shows relatively low rate of discards for most fisheries (i.e., OTB_DEF_≥55_0_0 (Spain) had a discard rate of 0.2% in 2021 and Belgium beam trawls (TBB) had a discard rate of 0.69%), with higher discard rates on others (i.e., French demersal trawls have a discard rate of 30% in 2020).</p> <p>EWG 21-05 highlighted that reducing the discard rates through improvements in selectivity is difficult in these fisheries given many are mixed fisheries and notes the results from the Spanish studies carried out in these fisheries which show quite high losses of commercial catch. This is particularly the case for anglerfish given its morphology which make improving selectivity specifically for anglerfish impractical. EWG 22-05 reiterates these observations which remain relevant for this exemption.</p>
Exemption	Main Findings of EWG 22-05
<p>Anglerfish caught by vessels using gillnets in ICES subareas 8 and 9 up to a maximum of 4% of the total annual catches of anglerfish in the specified fisheries - Article 14 point 1(l) of Regulation (EU) No 2020/2015</p>	<p>1. Exemption status</p> <p>Existing temporary exemption granted until the end of 2023 but with a requirement for additional information to be provided by the 1st of May every year.</p> <p>2. Fishery Context</p> <p>Updated information for 2020 was provided by France (Annex H) on discard rates of anglerfish in fisheries employing gillnets in ICES subareas 8 and 9. The discard rates (calculated as discards to total anglerfish catch) of anglerfish was 11% for nets targeting demersal species, cephalopods and crustaceans (vessels under 15m, GTR in area 8a), and 8 and 3% for nets targeting demersal species and crustaceans with vessels above 15m (GNS,GTR) targeting sole and hake, respectively in 2020. GNS and GTR metiers with vessels under 15m had a total catch of 6712 tonnes with a total discard fraction of 19.3% for GTR metiers in area 8a. In 2020, 282 tonnes of anglerfish (5% of total landings) were landed, and 37 tonnes discarded. GNS and GTR metiers with vessels above 15m had a total catch of 11247 tonnes with total discard fractions of 39.9 and 8.6% for vessels targeting sole and hake, respectively. In 2020, 99 tonnes of anglerfish (1% of total landings) were landed, and 11 tonnes discarded.</p> <p>Spain provided information by metier for 2021 (Annex D). There are 40 vessels of 18m with a mesh size of 90 mm targeting demersal fish species, but mainly hake (GNS DEF 80-99), and 28 vessels of 18m</p>

	<p>with a mesh size larger than 100 targeting demersal fish species but mainly anglerfish (GNS_DEF_>=100). However, no updated catch data was provided for these metiers.</p> <p>Belgium has no gillnet fisheries in subareas 8 and 9.</p> <p>There is no updated catch information from Portugal, except a summary (Annex A) regarding the collection of scientific information.</p> <p>3. Basis for the exemption</p> <p>The justification for the exemption is largely the same as assessed by STECF 20-04, namely from a detailed economic analysis of disproportionate costs resulting from the additional time required for handling and sorting unwanted catches on board vessels.</p> <p>4. Additional evidence and work planned</p> <p>No future work is planned on gillnet fisheries.</p> <p>5. EWG 22-05 Observations</p> <p>The supporting information on economic impacts was already provided in 2020. In 2021, EWG 21-05 has re-examined the Spanish study, and comments on the approach and methodology were provided. EWG 21-05 observed that the economic information provided on impacts of not granting the exemption indicates a comparatively high level of losses for the vessels involved in this fishery. However, EWG 21-05 requested more information on the methodology of the calculation and the data used as the opportunity costs cannot be put into context of the overall economic performance of the fleet segments. No additional information on the methodology and data was provided to EWG 22-05.</p> <p>Limited updated catch data has been provided by France for 2020, and no data for Spain and Portugal. Belgium has no gillnet fisheries in subareas 8 and 9. The information provided by France shows that discard rates are ranging between 2-11% for gillnets.</p> <p>No assessment of the implications of granting the proposed exemption with regard to the fishery and species can be made due to the limited data provided by the Member States. The observations of EWG 21-05 remain relevant for this exemption.</p>
Exemption	Main Findings of EWG 22-05
<p>Megrim caught by vessels using beam trawls, bottom trawls and seines in ICES subareas 8 and 9 up to a maximum of 5% of the total annual catches of megrim in the specified fisheries - Article 14 point 1(i) of Regulation (EU) No 2020/2015.</p>	<p>1. Exemption status</p> <p>Existing temporary exemption granted until the end of 2023 but with a requirement for additional information to be provided by the 1st May every year.</p> <p>2. Fishery Context</p> <p>Updated information for 2020 is provided by France (Annex G) on discard rates of megrim in fisheries employing beam trawls and bottom trawls in ICES subareas 8 and 9. This was collected under the Obsmer programme for 2020. Furthermore, percentages of megrim discarded are given in relation of the metier total catch, while the de minimis percentage should be calculated in relation to total megrim catch. Therefore, these data limitations preclude an analysis of the French data.</p> <p>There is no updated catch information from Portugal, except a</p>

summary regarding the collection of scientific information. Previous information for Portugal (EWG 21-05, Annex 1) is provided for the period 2017-2019 which indicates that overall landings of megrim by Portuguese bottom trawlers averaged 117 tonnes. The supporting annex from Portugal reports that discards were negligible (1-1.3kg per trip sampled) when compared to annual landings volume. The two relevant metiers - OTB_DEF and OTB_CRU - involve 58 and 24 vessels, respectively. Most landings came from OTB_DEF.

Spain provided catch data by metier for 2021 (Annex D[SWW]) which includes five metiers using bottom trawls with catches of megrim: OTB_≥70_0_0; OTB_DEF_≥55_0_0; OTB_MPD_≥55_0_0; PTB_DEF_≥55_0_0; and OTB_MCD_≥55_0_0. There was a total of 7, 35, 33, 29 and 122 vessels involved in these metiers, respectively. In OTB_≥70_0_0, 293 tonnes of megrim were landed, and 19 tonnes discarded (6%). In OTB_DEF_≥55_0_0, 255 tonnes of *L. whiffiagonis* was landed with 32 tonnes discards (12.5%) and 624 tonnes landings of *L. boscii* with 108 tonnes discards (17.3%). OTB_MPD_≥55_0_0 had landings of 16 and 46 tonnes for *L. whiffiagonis* and *L. boscii*, respectively, with zero discards of both species. For PTB_DEF_≥55_0_0 reported landings and discards were zero. Megrim landings in OTB_MCD_≥55_0_0 were 4 tonnes in 2021 with zero discards. In ICES subareas 8abd, total landings of megrim for all trawl fisheries were 2302 tonnes with 435 tonnes discards (18.9%). In ICES subareas 8c and 9a, total landings of megrim for all trawl fisheries were 272 tonnes with 32.17 tonnes discards (11.8%).

In 2021 there were six Belgian vessels fishing with beam trawls (TBB) with a mesh-size of 70 mm in the Gulf of Biscay (ICES-area 8a and 8b). They mainly caught common sole, and have as by-catch anglerfish, megrim, and in smaller quantities pollack, hake, whiting, skates and rays and plaice. A summary of discard rates based on records in the electronic logbooks was provided. In 2021 the data about megrim (*Lepidorhombus spp.*) was estimated in 42,335 kg of landings, 905 kg of discards, for a discard rate of 2.14% (Annex D).

3. Basis for the exemption

The justification for the exemption is largely the same as assessed by STECF 20-04, namely from a detailed economic analysis of disproportionate costs resulting from the additional time required for handling and sorting unwanted catches on board vessels.

Spain has provided a summary of all selectivity trials made by IEO that was already presented in 21-05, and a summary of two new selectivity experiments carried out by AZTI in 2021 and results from the SMARTFISH project. The studies explored preliminarily the effect of shortening lastridge ropes on baka otter trawls in Div. 8abd (CASELEM project) and pair trawl operating in Div. 8c (MESEDE project). The CASELEM project showed that the codend selectivity could improve when shortening lastridge ropes for some species, but not for megrim.

In addition, results from the European SMARTFISH project are also presented, focusing on using underwater lighting on a grid located in the codend to modify fish behavior as a first step to improve selectivity. However, the results showed that less than 25% of the individuals of all species analysed passed through the grid and were retained in the lower codend, as well as that no significant differences were found when the grid was illuminated.

	<p>Finally, project SELECLUGO (for metier OTB_DEF_>=55) objective was to assess the selectivity of the regulatory trawl codends used by the commercial fleet in 2021 trials. The results indicate that increased selectivity in this metier is not easily achievable in the short term.</p> <p>4. Additional evidence and work planned</p> <p>Spain has further selectivity work planned, namely it will continue to carry out the CASELEM selectivity campaign aimed at improving the selectivity of multi-specific fisheries, continue with trials focused on trawling with doors and incorporate tests of fishing tactics to complement improvements in selectivity, start working on the new H2020 EveryFish project, continue with the DESCARSEL and SELECLUGO projects.</p> <p>5. EWG 22-05 Observations</p> <p>Updated catch data has been provided by France for 2020 and Spain and Belgium for 2021 but not for Portugal. The implications of granting the proposed exemption with regard to the fishery and species concerned cannot therefore be quantified due to a lack of catch data per gear, year and for all Member States. No additional information on the methodology and data was provided to EWG 22-05.</p> <p>The information provided by Spain shows discards rates of 18.9% in ICES subareas 8abd and 11.8% in ICES subareas 8c and 9a for megrim in 2021. The information provided by Belgium shows relatively low rate of discards for beam-trawls targeting megrim in subarea 8ab, estimating the discard rate of 2.14% (905 kg). The previous catch information provided for beam trawlers referred to total landings of 47 tonnes with an unwanted catch of 0.26 tonnes, but relative to subarea 8 (EWG 21-05, Annex 3). Generally, discard rates vary considerably between metier.</p> <p>EWG 21-05 highlighted that reducing the discard rates through improvements in selectivity is difficult in these fisheries given many are mixed fisheries and notes the results from the Spanish studies carried out in these fisheries which show quite high losses of commercial catch. EWG 22-05 reiterates this observation which remains relevant for this exemption.</p>
Exemption	Main Findings of EWG 22-05
<p>Megrim caught by vessels using gillnets in ICES subareas 8 and 9 up to a maximum of 4 % of the total annual catches of megrim in the specified fisheries - Article 14 point 1(i) of Regulation (EU) No 2020/2015.</p>	<p>1. Exemption status</p> <p>Existing temporary exemption granted until the end of 2023 but with a requirement for additional information to be provided by the 1st May every year.</p> <p>2. Fishery Context</p> <p>Updated information for 2019 and 2020 was provided by France (Annex H) on discard rates of megrim in fisheries employing gillnets in ICES subareas 8 and 9. France lists six metiers deploying gillnets but reports total catch, landings and discards for only one group of combined metiers. Furthermore, percentages of megrim discarded are given in relation of the metier total catch, while the de minimis percentage should be calculated in relation to total megrim catch. Therefore, these data limitations preclude an analysis of the French data.</p> <p>Spain provides catch data by metier for the period 2017- 2020 which</p>

	<p>includes two metiers using gillnets and trammel nets - GNS_DEF_80-99; GNS_DEF_>=100 (EWG 21-05, Annex 2). There was a total of 40 and 28 vessels involved in these metiers, respectively. In GNS_DEF_80-99, landings of megrim averaged 1.25 tonnes over the period 2017-2020 (range 0 - 2 tonnes) with no unwanted catches reported. In the GNS_EF_>=100 metier, there were no catches of megrim reported.</p> <p>Belgium has no gillnet fisheries in subareas 8 and 9.</p> <p>There is no updated catch information from Portugal, except a summary (Annex A) regarding the collection of scientific information.</p> <p>3. Basis for the exemption</p> <p>The justification for the exemption is largely the same as assessed by STECF 20-04, namely from a detailed economic analysis of disproportionate costs resulting from the additional time required for handling and sorting unwanted catches on board vessels.</p> <p>4. Additional evidence and work planned</p> <p>No additional information has been provided and no new work planned.</p> <p>5. EWG 22-05 Observations</p> <p>The supporting information on economic impacts was already provided in 2020. In 2021, EWG 21-05 has re-examined the Spanish study and comments on the approach and methodology were provided. EWG 21-05 observed that the economic information provided on impacts of not granting the exemption indicates a comparatively high level of losses for the vessels involved in this fishery. However, EWG 21-05 requested more information on the methodology of the calculation and the data used as the opportunity costs cannot be put into context of the overall economic performance of the fleet segments. No additional information on the methodology and data was provided to EWG 22-05.</p> <p>Updated catch data has been provided by Spain for 2021 and limited data France for 2020. No data has been provided by Portugal. Belgium has no gillnet fisheries in subareas 8 and 9. The information provided by Spain and France shows that discard rates for megrim in gillnet fisheries are negligible.</p> <p>No new assessment of the implications of granting the proposed exemption with regard to the fishery and species can be made due to the limited data provided by the Member States, but as observed by EWG 21-05 the low level of megrim discards in gillnet fisheries indicates the impact of this exemption on the megrim stock is likely to be low. This observation still remains relevant.</p>
Exemption	Main Findings of EWG 22-05
<p>Whiting caught by vessels using pelagic trawls, beam trawls and seines in ICES subarea 8 up to a maximum of 5% of the total annual catches of whiting in the specified fisheries</p>	<p>1. Exemption status</p> <p>Existing temporary de minimis exemption granted until the end of 2023 but with a requirement for additional information to be provided by the 1st of May every year.</p> <p>2. Fishery Context</p> <p>Updated information was provided by France (Annex I) on catch and discard rates of whiting in fisheries using bottom trawls, pelagic trawls and seines in ICES subareas 8 and 9. The discard rate (calculated as</p>

- Article 14 point 1 (m) of regulation (EU) No 2020/2015.

discards of total whiting catch) of whiting was 3.8% for bottom trawls targeting demersal species and cephalopods (OTB, OTT, PTB) in 2019. Danish seines discard rate in 2019 was 6.5% for vessels under 25m targeting demersal species and cephalopods and 10.3% for vessels targeting various fish species. Total landings (all gears combined) of whiting were 1956 tonnes in 2019 with a total discard fraction of 4.8%. In 2020, only discard information was available for whiting from pelagic trawls targeting demersal species (OTM, PTM) which accounts for 0.4% discard rate (of total whiting catch). Landings of whiting were only available from these métiers and were 14.9 tonnes.

Spain provided catch data by métier for 2021 (Annex D). However, there is no data available for whiting.

Updated information for 2021 was provided by Belgium (Annex C) where six vessels fishing with beam trawls (TBB) with a mesh size of 70 mm were active in areas 8a and 8b. Total landings of whiting was 0.2 tonnes with 0 tonnes discards (0%).

There is no updated catch information from Portugal, except a summary (Annex A) regarding the collection of scientific information.

3. Basis for the exemption

The justification for the exemption is largely the same as assessed by STECF 20-04, namely from a detailed economic analysis of disproportionate costs resulting from the additional time required for handling and sorting unwanted catches on board vessels. The study did not provide any specific information relating to whiting.

Spain has provided a summary of all selectivity trials made by IEO that was already presented in 21-05, and a summary of two new selectivity experiments carried out by AZTI in 2021 and results from the SMARTFISH project.

The studies explored preliminarily the effect of shortening lastridge ropes on baka otter trawls in Div. 8abd (CASELEM project) and pair trawl operating in Div. 8c (MESEDE project). The CASELEM project showed that the codend selectivity of horse mackerel and blue whiting was significantly improved when shortening lastridge ropes, whereas the selectivity of hake, and megrim was not.

In addition, results from the European SMARTFISH project are also presented, focusing on using underwater lighting on a grid located in the codend to modify fish behaviour as a first step to improve selectivity. However, the results showed that less than 25% of the individuals of all species analysed passed through the grid and were retained in the lower codend, as well as that no significant differences were found when the grid was illuminated.

Finally, project SELECLUGO (for métier OTB_DEF_>=55) objective was to assess the selectivity of the regulatory trawl codends used by the commercial fleet in 2021 trials. The results indicate that increased selectivity in this métier is not easily achievable in the short term.

France provided a summary of results from selectivity projects, namely the REDRESSE project and the OPTISEL project. The REDRESSE project (2014-2017) focused on trawl fleets targeting cephalopods, *Nephrops* and demersal fishes to test various selective configurations to reduce the discard levels within these fisheries. There were no significant results relating to whiting catches. The OPTISEL project started in 2019 and tested a selective grid that was used in the REDRESSE project. This selective grid seems to reduce the

	<p>catch of undersized <i>Nephrops</i>. However, no specific results can be found for whiting.</p> <p>4. Additional evidence and work planned</p> <p>Spain has further selectivity work planned, namely it will continue to carry out the CASELEM selectivity campaign aimed at improving the selectivity of multi-specific fisheries; continue with trials focused on trawling with doors and incorporate tests of fishing tactics to complement improvements in selectivity; start working on the new H2020 EveryFish project; and continue with the DESCARSEL and SELECLUGO projects.</p> <p>Furthermore, France has further selectivity work within the ACOST project, which started in 2021. The project aims to improve the biological, genetic and exploitation knowledge of 4 stocks in the Bay of Biscay classified as data limited stocks: pollack, meagre, red mullet, and whiting. Additionally, the CASEP project is a continuation of previous work on selectivity aiming to further develop this work.</p> <p>5. EWG 22-05 Observations</p> <p>The supporting information on economic impacts was already provided in 2020. In 2021, EWG 21-05 has re-examined the Spanish study and comments on the approach and methodology were provided. EWG 21-05 observed that the economic information provided on impacts of not granting the exemption indicates a comparatively high level of losses for the vessels involved in this fishery. However, EWG 21-05 requested more information on the methodology of the calculation and the data used as the opportunity costs cannot be put into context of the overall economic performance of the fleet segments. No additional information on the methodology and data was provided to EWG 22-05.</p> <p>Updated catch data was provided by Belgium for 2021 and by France for 2019 and 2020. Catch data on whiting was not provided by Spain and Portugal. Therefore, the implications of granting the proposed exemption with regard to the fishery and species concerned cannot be fully quantified due to a lack of catch data per gear, year and for all Member States.</p> <p>Nonetheless, the information provided by France shows relatively low rates of discards (i.e., 3.8% in 2019 for bottom trawls targeting demersal species and cephalopods), while Belgium reported zero discard rates on whiting.</p> <p>Given that improving the selectivity of whiting in towed gears has been shown to be technically possible through the use of square mesh panels or other selectivity devices, implementing effective gear modifications to reduce whiting discards is encouraged.</p>
Exemption	Main Findings of EWG 22-05
<p>Whiting caught by vessels gillnets in ICES subarea 8 up to a maximum of 4% of the total annual catches of whiting in the specified fisheries - Article 14 point 1(n) of regulation (EU) No</p>	<p>1. Exemption status</p> <p>Existing temporary de minimis exemption granted until the end of 2023 but with a requirement for additional information to be provided by the 1st of May every year.</p> <p>2. Fishery Context</p> <p>Updated information was provided by France (Annex J). Two French fisheries of gillnetters operate in ICES subarea 8. Gillnetters smaller than 15m using gillnets and trammel nets (GNS, GTR). In 2019 444</p>

2020/2015.

vessels were active and 502 vessels in 2020. Gillnetters larger than 15m using gillnets and trammel nets (GNS, GTR) operate in the Bay of Biscay (ICES area 8abcd). In 2019, 78 vessels were active and 77 vessels in 2021. The data was collected under the Obsmer programme. Percentages of whiting discards were presented from the STECF database for 2013-2016. However, these data were presented in relation to the total TAC species catches, while the de minimis percentage should be calculated in relation to total whiting catch. Therefore, these limitations preclude an analysis of the French data.

Spain provided information by metier for 2021 (Annex D[SWW]). There are 40 vessels of 18m with a mesh size of 90 mm targeting demersal fish species, but mainly hake (GNS_DEF_80-99), and 28 vessels of 18m with a mesh size larger than 100 targeting demersal fish species but mainly anglerfish (GNS_DEF_>=100). However, no updated catch data was provided for these metiers.

Belgium has no gillnet fisheries in subarea 8.

There is no updated catch information from Portugal, except a summary (Annex A) regarding the collection of scientific information.

3. Basis for the exemption

The justification for the exemption is largely the same as assessed by STECF 20-04, namely from a detailed economic analysis of disproportionate costs resulting from the additional time required for handling and sorting unwanted catches on board vessels. The study did not provide any specific information relating to whiting.

France provided a summary of recent work on selectivity measures. The REDRESSE project (2014-2017) conducted in the Bay of Biscay analysed options to work on the selectivity of French netters. However, no trials were carried out as it was not possible to find options to reduce the discards of whiting and mackerel.

4. Additional evidence and work planned

Spain has further selectivity work planned, namely, to start working on the new H2020 EveryFish project, although it is unclear if fixed gears are included.

Furthermore, France has started a project in 2021 (ACOST) to improve the biological, genetic and exploitation knowledge of 4 stocks in the Bay of Biscay classified as data limited stocks: pollack, meagre, red mullet and whiting.

5. EWG 22-05 Observations

The supporting information on economic impacts was already provided in 2020. In 2021, EWG 21-05 has re-examined the Spanish study and comments on the approach and methodology were provided. EWG 21-05 observed that the economic information provided on impacts of not granting the exemption indicates a comparatively high level of losses for the vessels involved in this fishery. However, EWG 21-05 requested more information on the methodology of the calculation and the data used as the opportunity costs cannot be put into context of the overall economic performance of the fleet segments. No additional information on the methodology and data was provided to EWG 22-05.

Limited updated catch data has been provided by France, based on data for the period 2013-2016. No data has been provided for Spain and Portugal. Belgium has no gillnet fisheries in ICES subarea 8. No assessment of the implications of granting the proposed exemption

	<p>with regard to the fishery and species can be made due to the limited data provided by the Member States.</p> <p>However, based on the observations of EWG 21-05 it is likely that the discards of whiting from gillnet fisheries are very low and therefore, the impact of the exemption on the whiting stock is likely to be negligible.</p>
Exemption	Main Findings of EWG 22-05
<p>Red Sea Bream</p> <p>caught by vessels using bottom trawls, seines & beam trawls in 9a up to a maximum of 5 % of the total annual catches of red sea bream in the specified fisheries - Article 14 point 1(p) of Regulation (EU) No 2020/2015.</p>	<p>1. Exemption status</p> <p>Existing temporary de minimis exemption applicable until the end of 2023 but with a requirement for additional information to be provided by the 1st May every year.</p> <p>2. Fishery Context</p> <p>No new information was provided.</p> <p>3. Basis for the exemption</p> <p>Even though not referred to in the SWW JR, EWG 22-05 assumes that the justification for the exemption is the same as assessed by STECF 21-05 and by STECF 20-04. This was based on the detailed economic analysis of disproportionate costs resulting from the additional time required for handling and sorting unwanted catches on board vessels. The study indicates that in terms of lost opportunity costs, Bottom trawlers in division 9a are estimated to experience losses amounting to of €20,400 for Spain €154,500 for Portugal if the requested de minimis exemption for red sea bream is not granted. This equates to 2.7% of the total losses estimated for the fleets subject to all the requested exemptions for all species in the JR, if all such exemptions are not granted.</p> <p>No other supporting information is provided.</p> <p>4. Additional evidence and work planned</p> <p>No additional evidence was provided.</p> <p>5. EWG 22-05 Observations</p> <p>No new information has been provided so no evaluation can be made and the conclusions of EWG 20-04 and EWG 21-05 remain relevant.</p>
Exemption	Main Findings of EWG 22-05
<p>Sole caught by vessels using bottom trawls, seines and beam trawls in 9a up to a maximum of 5 % of the total annual catches of sole in the specified fisheries - Article 14 point 1(q) of Regulation (EU) No 2020/2015</p>	<p>1. Exemption Status</p> <p>Existing temporary exemption granted until the end of 2023 but with a requirement for additional information to be provided by the 1st May every year.</p> <p>2. Definition of the fisheries</p> <p>Information was provided for Portugal (EWG 21-05 Annex 1) for the period 2017- 2019 which indicates that overall landings of sole by Portuguese vessels was 50 tonnes. The supporting annex from Portugal reports that no discards were reported. No information on the number of vessels involved is provided. The two relevant métiers -</p>

	<p>OTB_DEF and OTB_CRU - involve 58 and 24 vessels, respectively.</p> <p>Spain provided catch data by metier for the period 2017- 2020 which includes four metiers using bottomtrawls - OTB_DEF_>=55; OTB_MPD_>=55; PTB_MPD_>=55; OTB_MCD_>=55 (Annex 2). Only the OTB_MCD_>=55 metier reported landings of sole which averaged 6 tonnes (range from 1 -8 tonnes) with negligible unwanted catches.</p> <p>No catch data was reported for France.</p> <p>Belgian vessels do not fish in division 9a.</p> <p>3. Basis for (the maintenance of) the exemptions</p> <p>Even though, not referred to in the SWW JR, EWG 22-05 assumes that the justification for the exemption is the same as assessed by STECF 20-04 and STECF 21-05 and based on the detailed economic analysis of disproportionate costs resulting from the additional time required for handling and sorting unwanted catches on board vessels. The study indicates that in terms of lost opportunity costs, bottomtrawlers in division 9a are estimated to experience losses amounting to of €25,400 for Spain €55,300 for Portugal if the requested de minimis exemption for sole is not granted. This equates to 1% of the total losses estimated for all fleets subject to all the requested exemptions for all species in the JR, if all such exemptions are not granted.</p> <p>No other supporting information is provided.</p> <p>4. Additional evidence and work planned</p> <p>No additional evidence was provided, and no indication of future work planned.</p> <p>5. EWG 21-05 observations</p> <p>Very limited new information has been provided so no evaluation can be made and the conclusions of EWG 20-04 and EWG 21-05 are still relevant.</p>
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References

- Anon. 2022. De minimis exemption consolidation request of 5% for several species for 2023 onwards proposed from Spain for trawlers in the Bay of Biscay and Iberian waters (ICES 8abd and 8c9a). Report provided to EWG 22-05 by Spain. 38pp+Annexes.
- Cornou Anne Sophie, Scavinner Marion, Sagan Jonathan, Cloatre Thomas, Dubroca Laurent, Billet Norbert (2021). Captures et rejets des métiers de pêche français. Résultats des observations à bord des navires de pêche professionnelle en 2019. Obsmer. <https://doi.org/10.13155/79198>
- Cloâtre Thomas, Quinio-Scavinner Marion, Sagan Jonathan, Dubroca Laurent, Billet Norbert (2022). Captures et rejets des métiers de pêche français. Résultats des observations à bord des navires de pêche professionnelle en 2020. Obsmer
- Gauduchon Thibault, Cornou Anne Sophie, Scavinner Marion, Goascoz Nicolas, Dubroca Laurent, Billet Norbert (2020). Captures et rejets des métiers de pêche français. Résultats des observations à bord des navires de pêche professionnelle en 2018. Obsmer. <https://doi.org/10.13155/73122>
- General Secretariat for Fisheries, in cooperation with: Tragsatec, the University of Santiago de Compostela and AZTI Tecnalia, 2019. Analysis of the economic viability of unwanted catches that are subject to landing obligations in South-Western Waters. November 2019

Leonardi S., Rubin A., Meillat M., Coppin F., Delpech J-P., Morandeau F., Larnaud P., 2009. Selecmer – Amélioration de la sélectivité des chalutiers – Pêcheries multispécifiques Manche – Mer du Nord, 66 + 62 pp. Version septembre 2009

Scientific, Technical and Economic Committee for Fisheries (STECF) – 66th Plenary Report (PLEN-21-01). EUR 28359 EN, Publications Office of the European Union, Luxembourg, 2021, ISBN 978-92-76-36151-0 (online), doi:10.2760/437609 (online), JRC124902.

Scientific, Technical and Economic Committee for Fisheries (STECF) – Evaluation of the Landing Obligation Joint Recommendations (STECF-18-06) (2018). Publications Office of the European Union, Luxembourg, 2018, ISBN 978-92-79-79389-9, doi:10.2760/999971, JRC112740

Scientific, Technical and Economic Committee for Fisheries (STECF) – Evaluation of Landing Obligation Joint Recommendations (STECF-19-08). Publications Office of the European Union, Luxembourg, 2019, ISBN 978-92-76-09523-1, doi:10.2760/227428, JRC117511

Scientific, Technical and Economic Committee for Fisheries (STECF) Evaluation of Joint Recommendations on the Landing Obligation and on the Technical Measures Regulation (STECF-20-04). Publications Office of the European Union, Luxembourg, 2020, ISBN 978-92-76-20383-4, doi:10.2760/328463, JRC121260

Scientific, Technical and Economic Committee for Fisheries (STECF) - Evaluation of Joint Recommendations on the Landing Obligation and on the Technical Measures Regulation (STECF-21-05). EUR 28359 EN, Publications Office of the European Union, Luxembourg, 2021, ISBN 978-92-76-40593-1, doi:10.2760/83668, JRC126128.

7.2 High Survivability exemptions

A summary of the proposed high survivability exemptions is given in Table 7.2.1.

Table 7.2.1. Summary of high survivability submitted as part of the SWW Joint Recommendations

Exemption	Main Findings of EWG 22-05
<p>Skates and rays caught by all gears in ICES subareas 8 and 9 - Article 10.1 of Delegated Regulation (EU) No 2020/2015.</p>	<p>1. Exemption status</p> <p>Existing temporary exemption with request for additional information. Member States having a direct management interest shall submit every year, as soon as possible and not later than by 1 May, additional scientific information supporting the exemption.</p> <p>The existing temporary high survivability exemption applies to all gears and is applicable until 31st December 2022.</p> <p>SWW group requests the continuation of this exemption until 31 December 2023.</p> <p>2. Fishery context</p> <p>No updated information about fleet composition, landings, and discard statistics was provided except for French observer program data for cuckoo ray.</p> <p><u>Obsmer observer program (2019 and 2020) data for cuckoo ray catches:</u></p> <p>Data from bottom trawls targeting demersal species and cephalopods in the Bay of Biscay (OTB, OTT) estimated discards of 26.9% in 2019 and 49.5% in 2020 and in the Celtic Sea, Western Channel and West of Ireland above 18m (OTB, OTT, PTB) estimated discards of 39% in 2019 and 19.6% in 2020.</p> <p>Limited discard data was provided for other species, these include - Undulate ray which account for 2% of the discards for GNS in 8b and 8% of the discards GTR in 8a. Blonde ray account for 1.6% discards in for GTR in 8a.</p>

Morfin et al. (2019) provided a description of the French fleet. In the territorial waters of the division 8.a, undulate rays were mostly discarded by small (< 12 m) otter trawlers (29%), trammel netters (32%) and large set longliners (30%) in 2017 (source DPMA and Ifremer SIH). The French catches of all species were 515.7 t with 484 t discards in 2017.

There was no additional information regarding the Spanish fleet. Additional information was provided by the regional group to EWG 18-06 about number of Spanish vessels per gear type operating in ICES area 8, but only a combined discard rate was provided for all species and gears (29%).

Information was evaluated previously in EWG 19-08 for the Portuguese fleet including gear type, number of vessels and estimated landings and discards.

3. Previous survival evidence

No new survival evidence for skates and rays has been provided by the Southwestern Waters Member States Group. The previous estimates of skates and ray survival (Tagging, captive and vitality studies) as assessed by STECF (EWG 20-04, EWG 21-05 and references therein) remain the best available for the SWW set net and trawl fisheries. These can be summarised as:

- Previous evidence from Portugal in area 9 for thornback, spotted, blonde and undulate rays was evaluated in EWG 19-08, based on vitality data that do not constitute discard survival estimates but indicate survival potential, and tagged undulate rays caught by trammel nets with a return rate of 11%.
- Previous evidence was evaluated by EWG 18-06 for rays discarded from Spanish otter trawls and trammel nets in ICES areas 8c and 9a. Survival of thornback ray (after 1 month of captive observation) was estimated at 17% (10-27%, 95% CI) when discarded from otter trawls. The observations from trammel nets were not reported by species.
- Previous evidence was provided from Spain (EWG 20-04) provided for thornback ray in area 9a with bottom otter trawl. Estimated survival of thornback ray at medium term was 58% (47.7%-69.9%). The study did not use control individuals, and there was no observation to asymptote (up to 48h), therefore survival may have been overestimated. Also, there was no mention of the number of individuals assessed. The study did not find an effect of air exposure (30 and 60 min).
- Vitality evidence from two scientific trawls surveys was evaluated by EWG 19-08. Most of rays were found in Excellent or Good conditions (60-72%), however, these data are not representative of commercial fishing conditions due to the short tow duration of 30 mins.
- ENSURE project (ICES division 8a): undulate rays (144n) tagging study using acoustic tags and released from small single rig otter trawlers (under 12m). At least 49% of the rays survived the first 14 days after being released. Survival evidence was relevant for the French small otter trawl fishery, which contribute to 29% of the French discards in area 8a for undulate ray (of concern given high discard rate in coastal

fisheries for the areas of interest) (Morfin et al., 2019).

- SURF project (Cuckoo ray): The overall survival probability for cuckoo ray across seasons and vessels between 14-23% (95% CI). There was some indication of captivity related effects (20% of controls died in the summer, and up to 80% in the winter). The observations from winter were therefore not used for estimating the relationship between vitality index and long-term survival. A slightly lower survival rate was observed during winter but variability between vessels was larger than between seasons. The most important factor identified to affect survival rate was haul duration but also wave height, fishing depth, air temperature and duration of air exposure displayed significant effects. Discard data for cuckoo ray from France reports a discard rate of 27% is reported for the particular fishery, while 39% discards are reported for French bottom trawls in the Celtic Sea, western channel and west of Ireland as a whole. This is concern given the observed low survival estimates observed in the French trials.
- SUMARIS project also mentioned in JR however SUMARIS study was not conducted ICES areas 8 or 9: Blonde, thornback, undulate and spotted ray species caught using otter trawls, beam trawls and nets in the English Channel and NNW.

4. Survival and fishery compatibility

Survival estimates are available from the following projects:

ENSURE project: Conservative estimate of 49% survival after 14 days for undulate ray caught on small bottom trawlers (under 12m). Results compatible to small scale fisheries (vessels under 12m).

SURF project demonstrated 12 – 22% cuckoo ray survival caught using otter trawl. Estimated cuckoo ray discard survival from single rig otter trawler. Cuckoo rays were caught under commercial conditions and control ray were used to monitor holding facilities.

As evaluated by EWG 19-08, the vitality data appeared to adequately cover the fishing activity, characteristics and conditions of the Portuguese trammel net and trawl fisheries, but do not constitute survival evidence.

As requested by EWG 21-05, additional information on the Spanish fleet could help assess how representative the survival evidence is for the fishery, especially regarding seasons. Indeed, even though evidence was collected in the Mediterranean Sea with expected different environmental conditions than in area 9a, it was shown that survival of thornback ray is negatively affected by warmer waters. The trial in area 9a was conducted in March, which based on available information would suggest a lower chance for survival in the summer when water temperature is higher.

SUMARIS project: Overall ray survival varied between gears with lowest survival of 27% for spotted ray caught in beam trawl and up to 86% for blonde ray caught using otter trawl. Although SUMARIS project was conducted outside ICES subareas 8 and 9, the studies were completed using detailed protocol with control ray used to monitor holding facilities. Results compatible with commercial vessels operating in the North Sea and English Channel where studies were conducted.

5. Additional evidence and work planned

The SURF project will continue, and the project is intended to increase scientific knowledge about survival of cuckoo ray. It will take place at the junction between the Bay of Biscay and the Celtic Sea and will be led by IFREMER. The first results will be added to the exemption 2023.

In France, the Directorate for Sea Fisheries and aquaculture and the Museum National d'Histoire naturelle have concluded a convention in order to provide fishermen with some help identifying the various species of rays in the Atlantic. This aims at improving the completion of the logbooks and prevent mislabelling. However, this should be validated, perhaps by observer coverage.

Portuguese roadmap: Two further skates and ray projects, (project PPCENTRO and PhD thesis), were started but due to Covid-19 (PPCENTRO) and lack of data (PhD thesis) the projects did not provide conclusive data. Therefore, no new evidence has been presented.

A Spanish study (DESCARSEL) was mentioned in EWG 21-05 and due to continue once COVID restrictions allowed further on-board sampling, to estimate the survivability of skates and rays in Spanish bottom otter-trawls. However, no new evidence was presented and it is assumed this work did not proceed.

6. EWG 22-05 Observations

No new survival data has been presented. Survival data provided from previous projects is valuable but commented on by EWG in previous years.

The SUMARIS project provided survival estimates for blonde, thornback, undulate and spotted ray species. SWW Annex B noted that the conclusions of the SUMARIS report show good survivability for the species examined during the study.

In conjunction with FROM Nord, a second phase of the project is planned for 2022/2023. This will entail a survivability study of thornback rays caught with Danish seines. It is a 9-month project carried out by the FROM Nord, a French Producer Organisations, as part of its 2022 production and marketing plan (PPC). In the context of supporting the exemption of skates and rays from the landing obligation, this study will also provide additional elements to the SUMARIS project, which did not examine the Danish seine.

Two Portuguese projects were mentioned in Annex A, but the results from these projects were not conclusive and therefore there is nothing new to report. It is noted that the SURF project, which ended in 2020, and which focused on the survival of the Cuckoo ray, will be extended in 2022 (date will be communicated soon). This extension of the SURF project is intended to increase scientific knowledge about survival of cuckoo ray. It will take place at the junction between the Bay of Biscay and the Celtic Sea and will be led by IFREMER. The first results will be available in 2023.

The Portuguese roadmap noted that in the near future, the plan for skates and ray survivability experiments needs to be revised and is dependent on availability of adequate facilities for these research experiments. Further work is required to increase knowledge of discard survival for skates and rays in each fishery at various times during the year.

	<p>As for cuckoo ray, the information provided in the past and additional catch data provided to support the JR show quite high discard rates for some ray species, which could equate to high levels of discard mortality associated with this exemption if the survival rates are low. However, the catch information provided is incomplete and filling the gaps in catch data for ray species should be prioritised to allow a full assessment of this exemption on the relevant species.</p>
<p>Red seabream caught by vessels using the artisanal gear voracera in ICES division 9a and with hooks and lines in ICES subareas 8 and 10 and ICES division 9a - Article 11(1) of Regulation (EU) No 2020/2015</p>	<p>1. Exemption Status</p> <p>The existing high survivability exemption has been granted until 31 December 2022. Member States having a direct management interest should submit as soon as possible, but not later than by 1 May 2022 additional scientific information supporting the exemption.</p> <p>2. Definition of the fisheries</p> <p>A Roadmap of Portuguese survival studies to support this exemption was provided previously to STECF. This roadmap referred to the results from survival experiments detailed in a report dated May 2019 ("Blackspot seabream (<i>Pagellus bogaraveo</i>) in Portugal mainland (ICES Division 27.9.a): fisheries characterization and survivability experiments". Most of the specimens were found to be in Excellent (85- 89%) or Good (8-12%) conditions, and the at-vessel-mortality observed in the sampled trips was 0.6-2.6%. The observed survival rate in captive conditions after 36 hours was 86%. This study was reviewed by EWG 19-08 and limitations in the methodology, particularly in the short monitoring period were identified, which were considered likely to have overestimated survival. EWG 19-08 concluded that further studies are needed to generate robust survival estimates.</p> <p>3. Basis for (the maintenance of) the exemption</p> <p>No new information was supplied to EWG 22-05 for assessment as due to the COVID-19 pandemic, additional experiments planned to occur in 2021 were postponed to late 2023. Additional survivability experiments with red seabream caught by demersal longlines are planned to be conducted under the project PPCENTRO. Those experiments aim to estimate the survival rates based on captive observations and during a longer observation period as suggested by STECF 19-08. Captivity observations will be conducted for periods of three-weeks in IPMA's facilities in Peniche (located near the fishing harbour). Vitality, RAMP and lesions of the specimens and water quality parameters will be monitored daily. Additional vitality data after capture, RAMP and lesions will be recorded onboard for all the captured specimens</p> <p>4. EWG 22-05 observations</p> <p>No new information has been provided but new studies are planned to address issues raised by STECF EWG 19-08. The new experiments aim to estimate the survival rates based on captive observations and during a longer observation period in line with recommendations from ICES WKMEDS.</p>

References

Bart Ampe, Noémi Van Bogaert, Els Torreele, Sebastian Uhlmann. 2020. Discard survival estimates of commercially caught skates of the North Sea and English Channel, Sumaris project (2020).

Baulier Loïc, Morandeu Fabien, Ramonet Morgane, Sourget Quiterie, Winkler Joachim. 2021. The SURF project: survivability of discarded cuckoo rays (*Leucoraja naevus*) in French bottom trawl fisheries. Project report.

Cloâtre Thomas, Quinio-Scavinner Marion, Sagan Jonathan, Dubroca Laurent, Biellet Norbert (2022). Captures et rejets des métiers de pêche français. Résultats des observations à bord des navires de pêche professionnelle en 2020. Obsmer.

Cornou Anne Sophie, Scavinner Marion, Sagan Jonathan, Cloatre Thomas, Dubroca Laurent, Billet Norbert (2021). Captures et rejets des métiers de pêche français. Résultats des observations à bord des navires de pêche professionnelle en 2019. Obsmer.

Laura Lemey, Klaas Sys, Esteban Torreblanca, Damian Villagra Villanueva, Tim Plevvoets. 2021. Interim report II Raywatch: Towards a more extensive and efficient long-term data collection for skates in support of the "Roadmap for rays and skates". ILVO Report 36pp.

Morfin Marie, Simon Julien, Morandeu Fabien, Baulier Loïc, Méhault Sonia, Kopp Dorothee. 2019. Using acoustic telemetry to estimate post-release survival of undulate ray *Raja undulata* (Rajidae) in northeast Atlantic, Ocean and Coastal Management, 178(2019)

Oliver, M., McHugh, M., Murphy, S., Browne, D., and Cosgrove, R. 2019. Post-capture condition of cuckoo ray in an Irish otter trawl fishery. BIM Fisheries Conservation Report, March 2019. 12 pp

Oliver, M., McHugh, M., Murphy, S., Browne, D., and Cosgrove, R. 2021. An assessment of cuckoo ray (*Leucoraja naevus*) survivability in an Irish otter trawl fishery. BIM Fisheries Conservation report, November 2021.

Scientific, Technical and Economic Committee for Fisheries (STECF) – Evaluation of the Landing Obligation Joint Recommendations (STECF-18-06) (2018). Publications Office of the European Union, Luxembourg, 2018, ISBN 978-92-79-79389-9, doi:10.2760/999971, JRC112740

Scientific, Technical and Economic Committee for Fisheries (STECF) – Evaluation of Landing Obligation Joint Recommendations (STECF-19-08). Publications Office of the European Union, Luxembourg, 2019, ISBN 978-92-76-09523-1, doi:10.2760/227428, JRC117511

Scientific, Technical and Economic Committee for Fisheries (STECF) Evaluation of Joint Recommendations on the Landing Obligation and on the Technical Measures Regulation (STECF-20-04). Publications Office of the European Union, Luxembourg, 2020, ISBN 978-92-76-20383-4, doi:10.2760/328463, JRC121260

Scientific, Technical and Economic Committee for Fisheries (STECF) - Evaluation of Joint Recommendations on the Landing Obligation and on the Technical Measures Regulation (STECF-21-05). EUR 28359 EN, Publications Office of the European Union, Luxembourg, 2021, ISBN 978-92-76-40593-1, doi:10.2760/83668, JRC126128.

8 BALTIC SEA – OVERVIEW OF JOINT RECOMMENDATIONS

Commission Delegated Regulation (EU) 1396/2014 established a discard plan for fisheries in the Baltic Sea. This discard plan was valid until 31 December 2017 after which most of the elements of this discard plan were subsumed into the multiannual plan for the stocks of cod, herring and sprat in the Baltic Sea - Regulation (EU) 2016/1139. Article 7 of this Regulation contains these elements. In 2017 a new set of Joint Recommendations was submitted by the Member States in the Baltic and following assessment by STECF, a new delegated Act was put in place - Commission Delegated Regulation (EU) 2018/306. For 2022 a new Joint Recommendation has been submitted by the Baltfish Group of Member States. The main elements of the new JR and which of these have been assessed by EWG 22-05 are summarised in table 8.1.

Table 8.1 Main elements of the Joint Recommendations submitted for the Baltic Sea

Elements	Status with relevant Article in current discard plan	Assessment by EWG 20-04 with relevant Annexes in JR
De Minimis		
None	NA	
High Survivability		
Cod, plaice and salmon caught with trap-nets, creels/pots, fyke-nets and pound net	Existing but revised* (inclusion of plaice) Article	Not assessed
Salmon caught with trap-nets, creels/pots, fyke-nets and pound nets including Pontoon traps	Existing	Not assessed
Plaice ≤MCRS caught in Gillnets, trammel nets, Danish and Scottish seines, and certain trawls from 1 st Nov to 30 th Apr in ICES subdivisions 22–32	New	Assessed based on supporting information submitted
Minimum conservation reference size		
Baltic Cod	Existing and unchanged	Not assessed

8.1 High survivability exemptions

A summary of the proposed high survivability exemptions is given in Table 8.1.1.

Table 8.1.1. Summary of high survivability submitted as part of the Baltic Joint Recommendations

Exemption	Main Findings of EWG 22-05
<p>Plaice ≤MCRS caught in Gillnets, trammel nets, Danish and Scottish seines, and certain trawls from 1st Nov to 30th Apr in ICES subdivisions 22–32.</p>	<p>1. Exemption status</p> <p>This is partially an update of a previous request for an exemption which was reviewed by STECF PLEN 19-03.</p> <p>The trawl and seining elements are a new request for plaice (below the MCRS of 25 cm) in ICES subdivisions 22, 23, 24 and 25 as is the time limitation included.</p> <p>2. Fishery context</p> <p>According to ICES, in subdivisions 21–23 plaice landings are split 68% and 32% between active and passive gears, respectively. Approximately 31% (average 2018–2020) of plaice caught are discarded.</p> <p>ICES advice for subdivisions 24–32 show plaice landings are split 77% and 23% between active and passive gears, respectively. Approximately ~25% (average 2018–2020) of plaice caught are discarded, with an 84% and 12% split between active and passive gears, respectively. No information is provided on the volume below the minimum conservation reference size discarded as stipulated in this request for an exemption.</p> <p>ICES advises that the fishing pressure on the plaice stock in subdivisions 21-23 is below FMSY and spawning-stock size is above MSY Btrigger, Bpa, and Blim. The stock is fished sustainably according to ICES.</p> <p>According to the information provided, 33% of the Danish fleet are gillnetters but there is no information on percentage of these that use</p>

trammel nets or whether vessels use both gears.

In 2021 there were three Danish seine (SDN) and one Scottish seine (SSC) vessels in the Danish fleet operating in the Baltic Sea. The SDN vessels categories were 1 (12–15 m) and 2 (18–24 m); while the SSC vessel was in the 10–15 m category. Seiners make up around 1% of the fleet. No information on kW, gear configuration (seine rope lengths) or gear operation is provided.

In 2021, there were 61 trawlers in the Danish fleet operating in the Baltic Sea and all but two were less than 18 m. No information is available for the fleets from other Member States operating in subdivisions 22–32.

3. Survival evidence

The following survival evidence is provided:

Trammel nets (Annexes 3 and 5): 100% survival of plaice from trammel nets with soak times from 19–47 hrs over a 10-day period when stored in floating boxes was observed. This survival estimate is based on a shorter time-period than normal survival experiments. However, the asymptote (i.e., no mortalities over a 4–5-day period) was assumed sufficient with additional vitality estimates at the end of the observation period used to support this. The protocol employed here is based on ICES WKMEDS recommendations that “monitoring is continued until mortality approaches an asymptote”.

Trawling (Annex 6): Survival estimates of 87% were observed for trawl-caught plaice when held over 10 days in a recirculating aquaculture system. Vitality scores were also taken but not used to infer survival. Typically, survival estimates for fish are undertaken over at least two weeks. However, according to the supporting information, the truncated time-period in this experiment was due to a low temperature event that resulted in high mortalities after the event. No evidence was presented that a mortality asymptote was reached in the 10 days so the estimates should be treated with a degree of caution.

Seining: Two studies are provided as supporting evidence: one (Annex 6) indicated an 87% survival estimate for trawl-caught plaice; while the other, a Danish-seine study (Annex 3), indicated a similar 87% survival rate. This experiment was completed under the same conditions as the trammel caught plaice using floating boxes.

4. Survival and fishery compatibility

The trammel net trial was completed in ICES subdivisions 22 and 23 in depths of 7–18 m. Fishing is normally undertaken in depths of ~5–30 m so the trial is representative in terms of depth. The size ranges during the survival trial were 22–40 cm (mean 33.4 ±3.3 cm), no length frequency for the fishery for the plaice are provided.

For the trawled fisheries, the trials were completed in ICES subdivision 22 in depths of 16–19 m (Annex 3) and in ICES subdivision 24 in depths of 10–47 m (Annex 6). The plaice size ranges were 14–29 cm (Annex 3) and 17–27 cm (Annex 6). This indicates most of the fish observed during the experiments were below MCRS.

While discard data for passive and active gears is sparse in ICES subdivisions 21–23 there is evidence from ICES subdivisions 24–32 suggesting only 12% of plaice discards are caught by passive gears. Assuming similar discard rates for the whole region these low discard rates coupled with ‘high’ survival in static gears are somewhat in

contrast to the similar survival rates (87%) but much higher (84%) discard rates/volume in the trawl fisheries reported by ICES.

These contrasting discard rates need be considered with trawl fisheries in the region accounting for the bulk of the landings (68% in subdivisions 21–23; 77% in subdivisions 24–32). It should be noted that plaice in subdivisions 21– 23 are an ICES category 1 stock, while plaice in subdivisions 24– 32 are an ICES category 3 stock. While Category 1 stocks can be considered to have a full analytical assessments and forecasts; Category 3 stocks have reliable estimates with the advice based on an ICES precautionary approach.

5. Additional evidence and work planned

For the trammel net fishery, the information provided to STECF PLEN 19-03 has been updated. The new information has taken account of the concerns raised by PLEN 19-02. This includes concerns around how plaice are removed from trammel nets on board, soak times, comparisons with gillnets, monitoring periods, and the review process used in the original trials.

No new survival estimates have been supplied but the information provides argues that because sort times and air exposure are low there the is no reason (unless new scientific evidence emerges) to suggest survival in summer would be lower than observed in winter. In any case, the exemption is requested to be time limited during November to April.

EWG 22-05 notes the observations of The Low Impact Fishers of Europe (LIFE) who do not support the granting of this exemption. Their two main reasons are:

- 1 There is no impact study or quantifiable data submitted regarding the impact on the cod stocks from this derogation.
- 2 The research on plaice survivability is not of sufficiently high quality due to, for example, the small sample size used, limited geographical spread the research relates to, and questionable conclusions regarding survivability based on cold temperatures

They elaborate on these two points and suggest a revision of the Baltic Management plan (2016/1139) in particular with reference to cod stocks and their impact on the plaice TAC (considering that the cod quota is a bycatch quota). They also suggest “detailed and accurate documentation” regarding plaice and cod discards should be provided to the Advisory Council to support the exemption.

Further joint input was provided from the Coalition Clean Baltic and The Fisheries Secretariat. They raise concerns over the small sample size and claimed that the fishery is not representative of the entire Baltic. For the survival trials detailed in Annex 6, they also question the linkage of cold temperatures for a mass mortality event during their trial. They suggest that the trial should be redone as there is an obvious bias to the results, because the survival rates are only for the first 10 days of the trial and do not take account of the mass mortality event caused by the sudden dip in temperature. They also point to the differences between the results of (Schram & Molenaar, 2018) where a 14% survival was observed for undersized plaice and the results here (87% survival).

The Coalition Clean Baltic and The Fisheries Secretariat also highlight how the plaice stock in Subdivisions 24–32 area is assessed as a category 3 stock by ICES and the limited data is not sufficient to

support the exemption. There are also some concerns over the limited data from the Annex 6 study to cover the spring period of the proposed time period for the derogation. Additionally, they also question why the effects on cod were not included, for example a proposal to include gears that reduced undersized cod and plaice catches. There is also suggest the inclusion of REM as part of the derogation and wonder if the proposed exemption is in line with the CFP aims.

There is no indication of further work planned.

6. EWG 22-05 Observations

As for the beam trawl fisheries in the North Sea and NWW, the main motivation for this exemption appears to be to mitigate against the economic costs of landing high volumes of unwanted plaice. The justification for this exemption is based on estimates for plaice survival, which are at least as reliable as those available for plaice in other fisheries. However, there are caveats relating to their robustness as detailed above that should be addressed.

Responding to the STECF PLEN 19-03, the supporting information that fishing practices for gillnets and trammel nets are comparable but suggest that entanglement in gillnets may be different to trammels but do not explain how this might impact on survival. It is stated in the supporting document that in gillnet fisheries, the fish are retained by the gills or large parts of the body whereas in trammel nets the fish are entangled in a pocket of netting. Whether the difference in retention has an impact on survival should be explored further.

For Annex 3 and 5, the mean size of plaice was 33 cm (range 22–40 cm) although the exemption request is for plaice \leq MCRS (25 cm). It appears that most of the fish caught in the trammel nets were above MCRS with plaice \leq MCRS caught in only 3 of the 13 fleets of nets from which survival estimates were derived. It is unsure what impact the catching process would have on smaller fish, but due to the way trammel nets catch, smaller fish are likely to be entangled more by the gills as they attempt to pass through the meshes.

For the trawl and seine part of the exemption, there is a limited description of the codends used, for example, with no information on the mesh sizes used. Information on the mesh sizes would be useful considering there are different mesh size regulations in subdivisions 22 and 23 compared to the rest of the Baltic region. Baseline mesh sizes are at least 120 mm (for T90) and at least 105 mm fitted with a Bacoma exit window of 120mm, with a derogation in subdivisions 22 and 23 of at least 90 mm when directed fishing for flatfish (Regulation (EU) 2019/1241). Codend mesh size and construction is likely to have an impact on survival, particularly for small plaice.

Additionally, there are some concerns over the justification to truncate the observation period to ten days (due to an extreme cold event) and whether this did bias the survival estimates. This is considered important given the survival estimates are higher than estimates from other trials. In the supporting document provided by LIFE, it is stated that the temperatures in 2021 were similar to annual temperatures experienced since 2010.

No information on catch rates has been provided. The expected length frequencies are not discussed for any of the gears, and it is not clear to what extent the impact would be on \leq MCRS plaice catches for the different gears. The data presented is from very specific areas within

	<p>the subdivisions and no information is presented on how these areas compare to the rest of the subdivisions, accepting that 70% of the plaice catches come from subdivisions 22-23, where the trials were carried out.</p> <p>It is difficult to comment on how this exemption will impact on cod stocks. It is unlikely the exemption itself would have any impacts unless in granting it, this led to an increase in fishing effort for plaice and thereby potentially increasing cod catches in the fishery as a whole. Further information on the cod and plaice catches and discards (from all gears) would be required to make any assessment. The market situation for plaice would also be important as if targeted fisheries for plaice were seen as viable, then there would be an incentive to increase effort.</p> <p>Additionally, for trawl fisheries, EWG 22-05 understands that specific legislated gears that reduce cod catches while allowing flatfish fisheries to continue are due to be introduced into legislation. However, no information on the likely uptake of these gears. The BALTFISH High Level Group request that details of cod catches and bycatches from these gears should be recorded separately from catches taken by other fishing gears. This would be especially important in relation to this proposed exemption as there are mesh size increases proposed (for trawls) and their impact on \leqMCRS fish needs to be evaluated further.</p> <p>Only data from the Danish fleet involved in the fisheries is provided with no information for other fleets that may avail of the exemption submitted with the request. It is understood Denmark has around 72% of the total TAC.</p> <p>EWG 22-05 notes that for Annex 6: The request is for subdivisions 22–25 but the overall request (from BALTFISH JR) is for subdivisions 22–32. Clarification is needed as to the area intended to be covered.</p>
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References

- Aalborg University. (2019) Discard survival of plaice and cod from trammel net and Danish seine fisheries in the Baltic Sea, Aalborg University, 15 April 2019
- Aalborg University (2021). Updated note on short-term survival of discarded (*Pleuronectes platessa*) caught in trammel nets at winter season. Aalborg University, Denmark 28 June 2021
- Aalborg University (2021). Comments and updated information to STECF concerning requested information on plaice caught in Danish Trammel net fishery (62nd PLENARY MEETING REPORT, PLEN-19-03) Aalborg University, 28 June 2021 University of Aalborg, Appendix Danish Trammel Net studies, Aalborg Universitet, June.
- DTU Aqua. (2020) Request for documentation on plaice discard survival for demersal trawl (including seines) in the Western Baltic with specification of the fishing fleet using active gears, 1 April 2022 (updated version of previous version of 28 April 2021)
- ICES Advice on fishing opportunities, catch and effort, Baltic Sea and ecoregion, 28 May 2021, PLE 27.21-23 and PLE 27.24-32, 28 May 2021
- Jensen, Sergey V. Kucheryavskiy, Peter R. Møller, Niels Madsen. (2021). Initial experiments to assess short-term survival of discarded plaice (*Pleuronectes platessa*) caught in trammel nets during the winter season. Fisheries Research 251 (2022) 106308

9 MEDITERRANEAN – OVERVIEW OF JOINT RECOMMENDATIONS

Commission Delegated Regulation (EU) 2021/2064 established a discard plan for Mediterranean fisheries. It includes *de minimis* exemptions to the landing obligation for certain demersal

fisheries in the Adriatic and south-eastern Mediterranean Sea. One of these *de minimis* exemptions covering the bycatch of small pelagics (i.e., anchovy, sardine, mackerel and horse mackerel) caught with bottom trawls is included under this Regulation. It remains valid until 31 December 2022. Given their expiry date, the Member States Regional Groups (ADRIATICA and SUDESTMED) submitted additional information and updated data to support the continuation of these exemptions.

Commission Delegated Regulation (EU) 2021/2066 supplemented Regulation (EU) 2019/1022 regarded details of implementation of the landing obligation for certain demersal stocks in the western Mediterranean Sea for the period 2022- 2024. The exemption from the landing obligation for scallop, carpet clams and Venus shells caught with mechanised dredges, for which scientific evidence demonstrates high survival rates in the western Mediterranean Sea, is valid until 31 December 2022. Given these *high survivability* exemptions are due to expire, the Member States Regional Group PESCAMED submitted additional information and updated data to support the continuation of these exemptions.

The main elements of the existing discard plans which have been assessed by EWG 22 - 05 are summarised in table 9.1.

Table 9.1 Main elements of the Joint Recommendations submitted for the Mediterranean

Elements	Contained currently in pelagic or demersal discard plan	Status with relevant Article in current discard plan	Assessment by EWG 22-05 with relevant Annexes in JR
De minimis			
Bycatches of Anchovy, Sardine, Mackerel and Horse mackerel caught by bottom trawls, Adriatic Sea & South-Eastern Mediterranean	Demersal	Temporary until end of 2022 Article 3(1a(viii)) & 3(1b(vii))	Re-assessed based on supporting information supplied by ADRIATICA & SUDESTMED
High survivability			
Scallop, Carpet clams, and Venus shells caught with mechanised dredges, Western Mediterranean	Demersal	Temporary until end of 2022 Article 3(1a), 3(1b) & 3(1c)	Re-assessed based on supporting information supplied by PESCAMED

9.1 De minimis exemptions

9.1.1 South-Eastern Mediterranean Sea

General observations

The SUDESTMED HLG (including Cyprus, Greece, Italy and Malta) requests the prolongation of the *de minimis* exemption for anchovy, sardine, mackerel and horse mackerel caught by bottom trawls for 2023 onwards.

Data supporting the request includes:

- The description of the bottom trawl fisheries (Annex A) for which the *de minimis* exemption is requested in SUDESTMED area at national level by Cyprus, Greece, Italy and Malta.
- Supporting evidence (Annex B) on the request of *de minimis* exemptions under the disproportionate costs condition (only by Cyprus and Greece);

EWG 22-05 highlights that:

- Catch and economic data are not available for all countries (e.g., Malta provided only catch data)
- There is an inconsistency in the way discard rates are estimated among countries. More specifically, Malta and Cyprus estimated discard rates using discards below MCRS (Malta and Cyprus). On the other hand, Greece and Italy did not estimate discards below MCRS, and use total discards to estimate the discard ratio.

Table 9.1.1 Summary of *de minimis* exemptions submitted for the Southeastern Mediterranean Sea exemptions relating to small pelagic species caught by bottom trawls.

Exemption	Main Findings of EWG 22-05
<p>Anchovy, Sardine, Mackerel and Horse Mackerel, up to a maximum of 5% of the total annual catches by vessels using bottom trawls in the South-Eastern Mediterranean Sea - Article 3.1 point b(vii) of the Commission Delegated Regulation (EU) No 2021/2064</p>	<p>1. Exemption status</p> <p>Existing temporary exemption granted until the end of 2022. Specific request for additional information are reported in Article 3.2: <i>“By 1 May 2022, the Member States having a direct management interest in the fisheries in the Adriatic and south- eastern Mediterranean Sea shall submit to the Commission additional data based on the ongoing studies and an evaluation of the impact of the exemption and any other relevant scientific information supporting the exemption laid down in paragraph 1, points (a)(viii) and (b)(vii)”</i>.</p> <p>2. Fishery Context</p> <p>Biological and economic data have been submitted by Cyprus, Greece, Malta, and Italy. Quantified data on catches below MCRS is lacking for some of the Member States (Italy and Greece). Fleet descriptions are provided for all Member States as well as discard proportion estimates. However, it should be highlighted that the way the discard ratio is estimated differs among countries (i.e., for Cyprus and Malta it is the ratio between discards (<MCRS) and total catch, while for Greece and Italy it is the ratio between total discards (both <MCRS and >MCRS) and total catch).</p> <p>Cyprus reported catch data by GSA (GSA24 and GSA25). By aggregating the values (GSA24+GSA25). EWG 22-05 calculated a combined discard ratio of 3.9%, for the species covered by the exemption.</p> <p>Greece presented discard data per GSA for 2019 based on FDI 2020 data call and also based on Electronic Reporting System (ERS) data for the reference year of 2019. Based on the STECF data presented by Greece in the Annex A, EWG 22-05 calculated a combined discard ratio of 3.3% for the pelagic species under the landing obligation.</p> <p>Italy reported catch data by GSA. By aggregating the values, a combined discard ratio of 9.6% for pelagic species is calculated, which is mainly due to the high discard rates for horse mackerel.</p> <p>Malta presented pelagic species caught by bottom trawlers. Landings were obtained from logbooks and discard rates were calculated based on onboard observations, in line with DC-MAP. Discard rate is zero for most pelagic species, while the aggregate discard rate is 1.9%.</p> <p>3. Basis for the exemption</p> <p>According to the JR, the justification for an extension of the exemption is mainly based on “the disproportionate costs for hazards linked to the full load of holds of limited capacity, and in the absence of infrastructure to handle unwanted catches once landed”. Annex A and B provide supporting information on biological and economic impacts to justify the exemptions. This information has largely been presented</p>

previously as supporting information.

Cyprus - Cyprus provided information regarding technical solutions for increasing selectivity and for the existing fisheries restricted areas (also provided a map). Regarding selectivity, it is stated that: *"considering the multispecies character of the bottom trawl fishery, the very low presence of pelagic species in the catches and the fact that pelagic species (basically Trachurus spp) are discarded irrespectively of their size due to their low commercial value, it seems unlikely that measures focusing on reducing the bycatch of pelagic species could be taken, without jeopardizing the sustainability of the trawl fisheries targeting demersal species."*

Additionally, Cyprus provided a Multicriteria Table (Table 2) to justify disproportionality of costs. However, it should be mentioned that costs don't seem to significantly increase under the "do nothing scenario" mainly because of the very low level of discards.

Greece - Greece provided an exhaustive list (more than 100) of National Measures (adopted and/or planned to adopt) on spatio-temporal closures (see Table 5). Regarding selectivity, the Member State mentioned that all trawls have adopted the 40mm codend mesh size, which is already large enough to release small pelagic species, provided they have the opportunity to escape.

According to Annex A: *"Additional ways for improving the selectivity of the trawl, through changes in other parts of the trawl... may also be investigated the next years ... having in mind that in Greek trawl multi species fisheries, the improvement in selectivity affect in different ways to different species. A "positive" result of the selectivity for one species, usually means significant loss of commercial individuals for other important species"*.

In the case of Greece, the de minimis exemption is mainly based on disproportionate costs, which is described in Annex B. This indicated a significant profit loss under the "do nothing" scenario, where a de minimis exemption is not in place.

Annex B also mentions that there was no interest in Greece to invest in the collection and processing of unwanted catches by the private sector and the main obstacle for this unwillingness to invest, is the transport costs from landing sites to processing points, in combination with the small quantities of small pelagic species discarded by trawls. The low level of unwanted catch if landed would not support investment in facilities to handle such unwanted catches.

Malta - Malta only provided information on catch and discards level to justify de minimis exemption. No information regarding selectivity increases, or spatio-temporal closures were provided.

Italy - Italy provided some additional explanatory text to justify exemptions based on diminishing discards due to decreased fishing effort and existing spatial measures.

Regarding selectivity, the report mentioned that: *"despite some progress, bottom trawls still catch undersized specimens and unwanted catches in general. To simultaneously improve the size selectivity of different species or catch categories, more sophisticated alternative of selective devices, such as grids could be explored and implemented in some Mediterranean fisheries (e.g., Sala et al., 2015)."*

Moreover, justification for the exemption based on disproportionate costs on a similar basis as for other Member States along with

indications of research into improving gear selectivity are provided by Italy.

4. Additional evidence and work planned

Some additional information has been provided in the SUDESTMED JR, compared with the previous EWG. However, the justification around disproportionate costs is still not adequately supported, remaining generic. An interesting synthesis of measures is provided by the study of Spedicato et al. (2021) in the case of Italy. In addition, it is also worth mentioning that in some Member States there are on-going studies due to be finalized during 2023. No clear reference of further additional work planned by Member States is mentioned in the supporting documents.

5. EWG 22-05 Observations

Some additional information has been provided, relative to the previous EWG assessments of this exemption. However, the previous assessments by EWG 19-08 and 21-05 remain relevant.

The methodology for calculating the discard ratio differs among countries (i.e., for Cyprus and Malta it is the ratio between discards (<MCRS) and total catch, while for Greece and Italy it is the ratio between total discards (both <MCRS and >MCRS) and total catch).

Additionally, there is a weakness in the combined de minimis approach. Accepting that the combined discards ratio for all species covered by the exemption is low for some species, the proportion of the catch that is discarded may be high.

While estimates of the potential increase in costs of handling unwanted catches ashore are provided, there is no way to objectively judge whether such estimates amount to disproportionate costs. The arguments are generic and/or applied to an "average" vessel, and more detailed information is necessary. However, EWG 22-05 acknowledges that the recent great increase in fuel costs has worsened the overall situation.

Updated catch data has been provided by the SUDESTMED group. However, the information is sporadic, for different years and not consistently presented. Therefore, the implications of granting the proposed exemption with regard to the fishery and species concerned cannot be quantified due to these data issues, noting that apart from Italy the reported discard rates are relatively low.

EWG 22-05 notes that for the reduction of discards, SUDESTMED HLG considers a key factor the effects of management measures related to the introduction of the Recommendation GFCM/42/2018/5 on a multiannual management plan for bottom trawl fisheries exploiting demersal stocks in the Strait of Sicily (geographical subareas 12 to 16), establishing 3 FRAs as permanent closures for demersal fisheries. Additionally, since 2019 Italy has reduced the fishing effort of bottom trawlers in GSAs 16 and 19. EWG 22-05 considers that these measures are mostly aimed at protecting juveniles and/or spawners of demersal species. However, EWG 22-05 acknowledges that a general reduction of the fishing effort of bottom trawl would likely also decrease the amount of bycatch of small pelagics.

9.1.2 Adriatic Sea

General observations

The ADRIATICA HLG (including Croatia, Italy and Slovenia) requests the prolongation of the *de minimis* exemption for anchovy, sardine, mackerel and horse mackerel caught by bottom trawls for 2023-2024.

Data supporting the request includes:

- Annex A1 - Considerations about the scientific knowledge related to the application of the landing obligation and to the continuation of the *de minimis* exemption for small pelagic by catch of bottom trawl fisheries in Italy - ADRIATICA area (word document).
- Annex A2 – Discards and landings (average values 2019-2020) of the small pelagics subject of this request caught by bottom trawl in Italy (excel document)
- Annex B1 - Discards and landings (reference year 2021) of the small pelagics subject of this request caught by bottom trawl in Slovenia (excel document)
- Annex B2 - Additional information with regard to Slovenian fisheries regarding the necessity of *de minimis* exemptions in the Adriatic Sea in light of disproportionate costs (word document)
- Annex C1 - Discards and landings (reference years 2018-2020) of the small pelagics subject of this request caught by bottom trawl in Croatia (excel document)
- Annex C2 - Considerations regarding the landing obligation in the context of demersal fisheries in Croatia - analyses of costs for collection of unwanted catch upon landing.

EWG 22-05 highlights that:

- As regards disproportionate costs, EWG 22-05 notes that the supporting information are still based on documents provided to previous EWGs and consequently EWG 22-05 can only reaffirm the same observations.
- Concerning the possibilities to increase selectivity, EWG 22-05 notes that the results coming from the Implemented project regarding the use of selectivity devices, such as grids and T90 panels, in bottom trawl nets are not exhaustive. If on one hand there are improvements in the selectivity for some species, such as European hake, on the other hand, there are possible economic losses due to the reduction of catches of red mullet and deep-water rose shrimp of commercial size. Further investigation on these selectivity devices is needed to find an acceptable compromise between improving selectivity and minimising economic losses.
- EWG 22-05 notes that for the reduction of discards, ADRIATICA HLG considers a key factor the effects of management measures related to the introduction in the Adriatic Sea of the Recommendation GFCM/44/2021/1 that establishes a fishing effort regime for key demersal stocks in GSAs 17 and 18 and the closure of coastal strip (within 6 nautical miles) or alternatively 30 continuous days of fishing ban, in addition to existing FRAs and the establishment of new FRAs. EWG 22-05 considers that these measures are mostly aimed at protecting juveniles and/or spawners of demersal species. However, EWG 22-05 acknowledges that a general reduction of the fishing effort of bottom trawl would likely decrease also the amount of bycatch of small pelagics.

Table 9.2.1 Summary of *de minimis* exemptions submitted for the Adriatic Sea exemptions relating to small pelagic species caught by bottom trawls.

Exemption	Main Findings of EWG 22-05
Anchovy, Sardine, Mackerel and Horse Mackerel , up to a maximum of 5% of the total annual catches by vessels using bottom trawls in the Adriatic Sea -	<p>1. Exemption status</p> <p>Existing temporary exemption granted until the end of 2022. Specific request for additional information is reported in article 3.2: <i>By 1 May 2022, the Member States having a direct management interest in the fisheries in the Adriatic and south-eastern Mediterranean Sea shall submit to the Commission additional data based on the ongoing studies and an evaluation of the impact of the exemption and any other relevant scientific information supporting the exemption laid</i></p>

Article 3.1 point a(viii)
(Commission
Delegated Regulation
(EU) No 2021/2064

down in paragraph 1, points (a)(viii) and (b)(vii).

2. Fishery Context

Catch data and information on the number of vessels involved in the fisheries has been provided by Italy (2019-2020) data for bottom trawls in GSA 17, Croatia (2018-2019-2020) data for all gears including bottomtrawls and Slovenia (2021) data for bottomtrawls.

Croatia - Information on Estimated Discards, Estimated Catch, Discard Rate for all the fleet combined and for bottom trawls for the years 2018-2019-2019 reported in Annex_C1. Except for horse mackerel with a discard rate of up to 6%, for the other species discards rates are never more than 1%. Cumulative discards rates range from 2.8 to 4.1 %.

Italy - Information on number of vessels for by GSA and by gear presented in a single file together with Estimated Discards, Estimated Catch, Discard Rate (Annex_A2) and estimates *de minimis* volumes. No information provided for GSA 18.

Average values of landings and discards are provided for 2019- 2020. However, due to Covid 19, the 2020 Italian data on discards is derived from very few observations. It is important to highlight the fact that in some case the discards relate to a single species giving very high discard rates. This is the case for both species of horse mackerel (discard rate up to 73.9 %). The high discards rate for these species is due both to the presence of undersized specimens and the low economic value of adults. No unwanted catches of anchovy and sardine are reported. And for mackerel the discard rate is 1%. Cumulative discards rates correspond to 53.1% in GSA 17 due to the high discard rate for horse mackerel. According to the table reported in annex A1, the Italian Authorities highlight that the volume of catches of small pelagic in the demersal trawl fisheries (OTB gear level) is very small compared to the total volume of catches.

Slovenia - Information on number of vessels together with Estimated Discards, Estimated Catch, (Annex_B1). According to the table, total discards reported by the bottom trawl fleet was 173.1 kg corresponding to a cumulative discard ratio of 2.4%.

3. Basis for the exemption

The basis for justifying the exemption relates to disproportionate costs, in the absence of infrastructure to handle unwanted catches once landed as well as the difficulties to increase selectivity in mixed fisheries.

Croatia - As for the disproportionate cost and management measures, the same arguments used in the previous request (EWG 19- 08, 21- 05) for the trawl fleet are repeated. Croatia (see Annex C2) presents a table describing the factors for increased costs arising from unwanted catches. There is also an analysis of the potential revenues that unwanted landings may offer when the landing obligation is implemented. Even in a scenario where an optimistic price of 0.5 €/kg for the discards is adopted, the analysis indicates that the numerous landing places that are spread around the country (146 landing sites) result in very low volumes of discards per week that are not enough to create economic benefits. This is highlighted by the fact that the transportation costs outweigh the potential revenues from the exploitation of unwanted catches. Croatia has indicated that there is an on-going organised effort to rationalise the number of landing sites

by significantly eliminating some and modernising others. A total of 13 projects of improving the port/landing sites (investing into total of 12 ports/landing places) have been initialised during the period 2014-2020. Croatia argues on this basis that it should be possible to re-evaluate the disproportionate costs.

Croatia (Annex C2) also presented management measures of permanent and temporary spatio-temporal regimes as well as the establishment of FRA areas as measures to avoid unwanted catches of undersized fish. These are generic, rather than related specifically to bycatch of small pelagics.

Italy - As for the disproportionate costs, the same arguments used in the previous request (EWG 19-08, 21-05) for the trawl fleet are repeated (Annex A1). The justification is supported by an analysis of the continuation of the exemption, primarily due to disproportionate costs of handling unwanted catches. This is based on an analogy with the potential cost for an "average" trawl vessel (producing around 40 kg/day of discard of species in the Annex III of the EU Reg. 1967/2006 and working around 140 days/year) equating to around 3000 euro per year. This amount is about 7.5% of the gross profit of the "average" vessel (Sartor et al., 2016; Maynou et al., 2018 (Deliverable 2.19)).

Additionally, it is argued there are disproportionate costs in the absence of infrastructure to handle unwanted catches once landed (MedBLand project, Spedicato et al., 2021). The de minimis exemption is seen as a "stop-gap" that offsets some of the unwanted catches while research and testing of selective gears is carried out. This argument has been used consistently since the introduction of the landing obligation.

Management measures presented by Italy are related to the introduction in Adriatic Sea of Recommendation GFCM/44/2021/1. This established a fishing effort regime for key demersal stocks in the Adriatic Sea (geographical subareas 17 and 18) and the closure of coastal zone (within 6 nautical miles) or alternatively a 30-day prohibition of fishing. This was in addition to existing FRAs and the establishment of new FRAs. These measures are considered key to reducing discards. In the transitional period, Italy has reduced bottom trawl fishing effort by 16% overall (plus a further 8% reduction in 2019). The reduction of the fishing effort included the decrease of the number of fishing days during the autumn season, given the implementation of the fishing ban (at least 30 continuous days) and the reduction of working days (maximum 4 per week) just after the ban.

An analysis of the discard ratio for *Trachurus trachurus* showed a slight decrease in the period 2008-2020.

In addition, Italy also applies the closure of the coastal zone (six miles from the shore or 4 miles for those fishing vessels that cannot fish behind six miles from the shore) for 10 to 12 weeks after the temporary cessation. According to the JR, the Autumn fishing ban and limitation of fishing days after the ban are considered useful for avoiding the catch of young individuals for several species (MedBLand study, Spedicato et al., 2021).

Additionally, Italy states the mixed nature of the demersal trawl

fisheries poses problems when technical measures related to the codend mesh size opening are considered. Experiments in this direction were conducted in the IMPEMED project (Sbrana et al., 2022), though the target of this project were demersal species in the different GSAs, rather than small pelagics. The final report the project has been approved in 2022. Preliminary analysis for GSA 17 (Italian side), show the T90 configuration did not show substantial improvement in size selectivity of European hake. For red mullet, the T90 net proved to be the most size selective, but this was associated with a significant loss (-33% in biomass and -38% in number) of individuals above the MCRS of 11 cm TL, with significant economic losses. No reference to small pelagics is provided in this study

Slovenia - For Slovenia the request for the de minimis exemption is based on disproportionate handling costs with compared to the fact that the amount of discards is very low. There is no additional information provided.

4. Additional evidence and work planned

Most of the supporting information provided by ADRIATICA HLG were already presented in the previous EWGs (e.g., MINOUW and DISCARDLESS projects and Sartor et al. (2016)). Also, disproportionality of costs is not supported by any new documentation or information.

New results coming from the IMPEMED project regarding the use of selectivity devices, such as grids and T90 panels have been presented.

No additional planned work is mentioned.

5. EWG 22-05 Observations

The supporting information and the basis for the exemption provided by Croatia, Italy and Slovenia are not different from those presented previously to EWG 21-05. Therefore, the observations from EWG 21-05 remain relevant.

Regarding, Italy the estimated combined discard rate (small pelagic species) corresponds to 53.1% in GSA17. Consequently, the de minimis volume is likely to cover only a proportion of the discards. Ways to deal with or reduce the residual unwanted catches have not been provided. For Croatia and Slovenia value of combined discards are much lower and typically less than 5%.

As regards disproportionate costs, the supporting information is still based on documents provided in previous EWG and consequently EWG 22-05 can only reaffirm the same considerations. However, EWG 22-05 acknowledges that the recent great increase in fuel costs has worsened the overall situation.

The results coming from the IMPEMED project regarding the use of selectivity devices, such as grids and T90 panels, in bottom trawl nets while interesting are not necessarily relevant for this exemption. If on one hand there are improvements in the selectivity for some species, such as European hake, on the other hand, there are possible economic losses due to the reduction of catches of red mullet and deep-water rose shrimp of commercial size. Further investigation on these selectivity devices is needed to find a compromise between

	<p>improving selectivity and minimising economic losses.</p> <p>EWG 22-05 notes that for the reduction of discards, ADRIATICA HLG considers a key factor the effects of management measures related to the introduction in the Adriatic Sea of the Recommendation GFCM/44/2021/1 that establishes a fishing effort regime for key demersal stocks in GSAs 17 and 18 and the closure of coastal strip (within 6 nautical miles) or alternatively 30 continuous days of fishing ban, in addition to existing FRAs and the establishment of new FRAs. EWG 22-05 considers that these measures are mostly aimed at protecting juveniles and/or spawners of demersal species. However, EWG 22-05 acknowledges that a general reduction of the fishing effort of bottom trawl would likely also decrease the amount of bycatch of small pelagics.</p> <p>EWG 22-05 notes that in Adriatica JR, page 6 the following sentence is reported: <i>Croatia, Italy and Slovenia recommend the continuation of the following exemption already granted in amended Commission delegated Regulation (EU) 2020/4 up to 0.5% of total annual catches of pelagic species (Anchovy, Sardine, Mackerel, Horse mackerel) under landing obligation according to Table.</i></p> <p>This sentence contains two aspects that should be clarified; the first one regards the delegated Regulation (EU) 2020/4 that is no longer in force; the second relates to the de minimis request of 0.5%, which it is assumed should be 5%.</p>
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9.1.3 Western Mediterranean Sea

General observations

The PESCAMED HLG (including France, Italy and Spain) requests the prolongation of the high survivability exemption for scallop (*Pecten jacobaeus*), carpet clams (*Venerupis* spp.) and Venus shells (*Venus* spp.) caught with mechanised dredges until 31st December 2024.

Data supporting the request includes:

- Annex 1 – Information from Spain to support the requests for High Survivability exemptions regarding mollusc bivalves (striped venus clam *Chamelea gallina* and wedge clam *Donax trunculus*).
- Annex 1.1 – Scientific paper: Effects of mechanized dredging targeting *Chamelea gallina*, striped venus clams, on the associated discards in the northern Alboran Sea (Western Mediterranean Sea).
- Annex 1.2 – Scientific paper: Damage assessment and survival estimates in the wedge clam (*Donax trunculus*) caught by mechanical dredging in the northern Alboran Sea.
- Annex 2 – Total landings of scallop (*Pecten jacobaeus*), carpet clams (*Venerupis* spp.) and Venus shells (*Venus* spp.) and number of vessels belonging to the French dredge fleet targeting *Murex* in 2021.
- Annex 3 – Information from Italy to support the requests for high survivability exemptions regarding mollusc bivalves - Consideration on the survivability of the striped venus clam (*Chamelea gallina*).
- Annex 3.1 – Scientific paper: Reburial potential and survivability of the striped venus clam (*Chamelea gallina*) in hydraulic dredge fisheries.

EWG 22-05 highlights that:

- The limited supporting information pertaining to Scallop (*Pecten jacobaeus*) and Carpet clams (*Venerupis* spp.) species does not provide additional scientific evidence to support the request for a high survivability exemption.

- Concerning *Venus* shells (*Venus* spp.) caught with hydraulic dredges in the Western Mediterranean Sea, Italy supplied a report on survivability of striped Venus clam's (*C. gallina*) to support the request, which provides relevant information.

Table 9.1.3.1 Summary of high survivability exemption submitted for the Western Mediterranean Sea exemptions relating to three species of bivalves caught by mechanized dredges.

Exemption	Main Findings of EWG 22-05
<p>Scallop (<i>Pecten jacobaeus</i>), Carpet clams (<i>Venerupis</i> spp.), and Venus shells (<i>Venus</i> spp.) below the minimum conservation reference size caught with mechanised dredges (HMD) in the Western Mediterranean</p>	<p>1. Exemption status</p> <p>Pescamed HLG has submitted a joint recommendation to amend the present discard plan for demersal species in the western Mediterranean Sea (EU Regulation No 2021/2066) in order to extend three temporary exemptions that are set to expire on December 31, 2022. Separate annexes are supplied with additional scientific evidence required by the discard plan for exemptions. Exemptions are requested from January 1, 2023, to December 31, 2024.</p> <p>2. Survival evidence</p> <p>Besides the material provided in previous years, five scientific papers have been supplied by the Pescamed HLG to support the request:</p> <ul style="list-style-type: none"> - Annex 1.1: Effects of mechanized dredging targeting <i>Chamelea gallina</i>, striped venus clams, on the associated discards in the northern Alboran Sea (Western Mediterranean Sea) - Annex 1.2: Damage assessment and survival estimates in the wedge clam (<i>Donax trunculus</i>) caught by mechanical dredging in the northern Alboran Sea - Annex 3: Consideration on the survivability of the striped venus clam (<i>Chamelea gallina</i>) - Annex 3.1: Reburial potential and survivability of the striped venus clam (<i>Chamelea gallina</i>) in hydraulic dredge fisheries - The effect of dredge capture on the escape response of the great scallop, <i>Pecten maximus</i> L.: implications for the survival of undersized discards (Jenkins and Brand, 2001), <p>The first two studies (Annex 1.1 and 1.2) do not present scientific information that support the request based on the high survivability of the three bivalves subject to this exemption.</p> <p>Annex 1.1 (Urra et al., 2018) extrapolated high survivability for discarded undersized Venus shells based on low proportions of damaged individuals (4.9 percent), but the relationship between the damaged individuals and the actual level of survivability was not investigated.</p> <p>The high probability of survival for molluscs (>96%) indicated by Annex 1.2 (Urra et al., 2021) is solely determined from discards of the bivalve species <i>D. trunculus</i> caught by mechanised dredges, albeit this species is not covered by the landing obligation as no MCRS is defined for this species. EWG 22-05 reiterates the risks in extrapolating survival evidence between species.</p> <p>Annexes 3, supplied by Italy, provides information on survivability of the striped Venus clams (<i>C. gallina</i>) caught by hydraulic dredges, the results of which were published in Annex 3.1 (Bargione et al., 2021). Experiments in the lab and at sea, indicate survival rates of 94.8 percent and 96.2 percent, respectively, with no significant differences between the two trials or within size classes. These data conclusively demonstrate that <i>C. gallina</i> individuals returned to the sea have a high chance of survival. EWG 22-05 notes that a</p>

range of factors might impact survival and cautions against extrapolating survival evidence for the same species across fisheries (e.g., from hydraulic dredge to mechanised/towed dredges).

The subject of the paper Jenkins and Brand (2001) is *Pecten maximus* (a co-genus of *P. jacobaeus*) caught with dredges in the Irish Sea. The study demonstrated a reduction in the swimming ability in captured undersized scallops. These data, together with numerous studies of predator aggregation to discarded material, indicated that there is a potential for high levels of mortality in undersized discards of *P. maximus* and in impacted but uncaptured individuals.

3. Fishery context

Information from French vessels using dredges (HMD) have been provided, but the target species in this case is the gastropod *Murex*. It is unclear whether all of these vessels target the species covered by the exemption. Only overall landings (90 tonnes) have been provided, with no information on landings by species. Italy in the Tyrrhenian Sea confirmed around 38 hydraulic dredges harvesting bivalve molluscs, of which 20, 4 and 14 belong to the Roma, Gaeta and Napoli areas, respectively.

4. Survival and fishery compatibility

High survivability of Venus clams harvested in the Western Mediterranean can be inferred from studies performed in the Adriatic Sea considering fishing gear similarities (e.g., hydraulic dredge).

Concerning the other two species, scallop (*Pecten jacobaeus*) and carpet clams (*Venerupis* spp.), their survivability cannot be inferred from the supporting studies, which are focused on different species.

5. Additional evidence and work planned

The observations of EWG 17-03 and EWG 21-05 provided to the PESCAMED group remain relevant to this exemption. EWG 17-03 highlighted the following studies/publications as potential sources of further information: a) a study by Moschino et al. (2003) gives some information on the survivability of Venus clams; b) a review of discard survival rates done for the Commission in 2012 has some information on the survivability of Atlantic scallop (*Pecten maximus*), which is comparable to Mediterranean scallop. EWG 21-05 recommended that the PESCAMED group evaluate whether the survival data in these studies is indicative of the western Mediterranean fisheries.

6. EWG 22-05 observations

The supporting information pertaining *Pecten jacobaeus* suggest further investigation on the survivability of this species caught with dredges in the Western Mediterranean Sea, also considering the potential effects of such gears in the swimming ability of this bivalve.

No scientific evidence to support the request based on the high survivability of the carpet clams (*Venerupis* spp.) has been provided and thus no further evaluation of the proposed exemption is possible.

The supporting information provided for Venus shells (*Venus spp*) does provide robust high survivability estimates for this species harvested by hydraulic dredges. Several caveats are noted, principally the estimates are from a different area (e.g., Adriatic Sea).

10 BLACK SEA – OVERVIEW OF JOINT RECOMMENDATIONS

Commission Delegated Regulation (EU) 2021/2065 established a discard plan for turbot fisheries in the Black Sea. This discard plan is valid until 31 December 2022 and included a high survivability exemption for turbot caught in bottomset gillnets. By 1 May 2022, Member States having a direct management interest in the turbot fisheries in the Black Sea were asked to submit to the Commission additional data on survival estimates relating to the gillnet fishery for turbot and any other relevant scientific information supporting the exemption laid down in the Delegated Regulation.

The main elements of the JR assessed by EWG 21-05 are summarised in table 10.1.

Elements	Contained currently in pelagic or demersal discard plan	Status with relevant Article in current discard plan	Assessment by EWG 22-05 with relevant Annexes in JR
Turbot caught with gillnets	Demersal	Temporary until end of 2022 Article 3(1)	Assessed based on supporting information supplied by Bulgaria and Romania

10.1 High survivability exemptions

A summary of the information provided to support the high survivability exemptions for turbot in the Black Sea is provided in table 10.1.1.

Table 10.1.1 Summary of high survivability exemption submitted for the Black Sea exemption relating to turbot caught by bottom gillnets.

Exemption	Main Findings of EWG 22-05
<p>Turbot (<i>Scophthalmus maximus</i>) caught with bottom-set gillnets (GNS) in the Black Sea (GSA29) - Article 3 of Delegated Regulation (EU) No 2021/2065</p>	<p>1. Exemption status Existing temporary high survivability exemption applicable until 31st December 2022. The JR requests the continuation of this de minimis exemption for 2023.</p> <p>2. Survival evidence New evidence on the vitality of turbot caught with gillnets has been provided. Information comes from two pilot studies carried out in 2022 in Bulgaria (5 experimental fishing trials performed by IRF) and Romania (4 experimental fishing trials performed by NIMRD) following the same methodology. Survival evidence is not documented and the main findings of the pilot studies mainly refer to vitality rates of turbot in gillnet fisheries. In fact, fish were kept in tanks onboard for less than 1 hour, during which their condition was monitored (e.g., alive, dead, and potential injured). In Bulgaria, the results of the pilot study a high vitality rate of turbot caught in monofilament gillnets (85.71%). There were no undersized specimens caught during the surveys, as all seven specimens caught (6 alive and 1 dead) were larger than the MCRS of 45 cm TL (Reg. 2019/1241), indicating the gear used is selective (100% of fish larger than MCRS). The Romanian pilot study indicated a good vitality rate of turbot caught with monofilament gillnets of 81.67%. Similarly, no undersized specimens were caught during the surveys, with all of the 131 specimens of turbot (107 alive and 24 dead) larger than the MCRS 45 cm TL, equally showing the gear used by the Bulgarian fleet is selective (100% of fish larger than the MCRS).</p>

3. Fishery context

No additional information on the fisheries exploiting turbot in the Black Sea has been provided, in addition to what was already provided to EWG 21-05 as follows (Reference year 2020):

- i) for Romania, 59 vessels targeted turbot with gillnets in 2020 and landed about 70 tonnes of turbot, and catches were reported as 75 tonnes, with the estimated discard negligible;
- ii) ii) for Bulgaria, 124 vessels targeted turbot with gillnets in 2020 and landed about 62 tonnes of turbot, and catches were reported as 75 tonnes, with the estimated discard again reported as negligible.

4. Survival and fishery compatibility

Taking the vitality index as a proxy for the survival rate (according to "ICES Guidelines on methods for estimating discard survival", hereafter ICES guidelines), high rates of vitality were recorded during the 2 pilot surveys. In Romania, extremely long soak times (25-31 days) generated lower vitality rates (78%), when compared with shorter soak times (16/18 days with vitality rates of 86%). In Bulgaria, soak times ranged between 7 and 8 days and the overall vitality rate was 86%, confirming the results obtained in Romania.

The vitality rates were based on 9 experimental trials, which makes it difficult to draw any conclusions about both likely survival rates and the compatibility compared to current fishing practises as the conditions (e.g., seasonality) in the wider fishery was not considered in the experimental design. In addition, no detailed description of the commercial fishing practice has been provided (e.g., average soaking time, seasonality, etc.). Understanding, the soak times used in the fishery is considered particularly important.

5. Additional evidence and work planned

The supporting information provided is limited and mostly refers to vitality rate estimates. Therefore, additional experiments to obtain survival rates of turbot caught with gillnets would be required to provide better estimates of survival in the fishery. A full study following the ICES guidelines to directly observe discard survival would ideally be conducted in the gillnet fishery to provide robust survival estimates for turbot.

6. EWG 22-05 Observations

Data provided by Bulgaria and Romania are valuable because they represent the first attempt of assessing survival of turbot caught with gillnets in the Black Sea, albeit based on vitality estimates. Vitality assessments do not, by themselves, generate an absolute survival estimate, but can quantify "at-vessel" or "immediate" mortality levels. When correlated with a likelihood of survival at vitality (derived from tagging or captive observation methods), a vitality index can be used as a proxy for survival. Moreover, following the ICES guidelines, vitality is typically quantified by measuring characteristics of individual animals such as activity, responsiveness, reflex impairment, and injury. Therefore, in future studies it would be highly recommended to follow the methodologies described in the ICES guidelines.

However, based on the supporting information presented, along with the

fishery information provided last year to EWG 21-05, it seems that discarding of turbot is negligible/absent in this fishery. Therefore, while the exemption itself is likely to have low impact, it is not altogether clear why it is needed.
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References

Bargione G., Petetta A., Vasapollo C., Virgili M., Lucchetti A. 2021. Reburial potential and survivability of the striped venus clam (*Chamelea gallina*) in hydraulic dredge fisheries. Scientific Reports. 11:9109 DOI:10.1038/s41598-021-88542-8.

Jenkins S.R. and Brand A.R. 2001. The effect of dredge capture on the escape response of the great scallop, *Pecten maximus* (L.): implications for the survival of undersized discards. J. Exp. Mar. Biol. Ecol. (2001)

Maynou, G. Kraus (CSIC), D. Pinello, P. Accadia, E. Sabatella, M. Spinadin. 2018. MINOUW Project, Deliverable 2.19 Handling, storage, transport and utilization of unwanted catches. Available at: <http://minouw-project.eu>

Sala A., Lucchetti A., Perdichizzi A., Herrmann B., Rinelli P. 2015. Is square-mesh better selective than larger mesh? A perspective on the management for Mediterranean trawl fisheries. Fisheries Research 161:182–190.

Sartor P., Carbonara P., Lucchetti A., Sabatella R. 2016. Characterisation of the discards of the demersal fisheries of the Italian Seas; propaedeutic information for the implementation of the Landing Obligation provisions (EU Reg. 1380/2013, Art. 15). Italian Ministry for the Agricultural Food and Forestry Policies (MIPAAF) Coordinated Project. Final report, 268 pp + Annexes.

Sbrana M. et al. 2022. Improving the selectivity of trawl gears in the Mediterranean Sea to advance the sustainable exploitation pattern of trawl fisheries – IMPEMED. EASME/EMFF/2019/1.3.2.6/01/SI2.818717-SC04

Scientific, Technical and Economic Committee for Fisheries (STECF). 2021. Evaluation of the fishing effort regime in the Western Mediterranean – part VI (STECF-21-13). Publications Office of the European Union, Luxembourg.

Spedicato M.T., J. L. Sánchez-Lizaso, E. Sabatella, K. Tsagarakis, P. Sartor, G. Lembo. 2021. Synthesis of the Landing Obligation Measures and Discard Rates for the Mediterranean and the Black Sea. EASME/EMFF/2019/1.3.2.6/SI2.835464.

Urra J., Marina P., Garcia T, Baro J. 2021. Damage assessment and survival estimates in the wedge clam (*Donax trunculus*) caught by mechanical dredging in the northern Alboran Sea. Marine Biology Research. DOI: 10.1080/17451000.2021.1949618.

Urra J., Garcia T., Leon E., Gallardo-Roldan H., Lozano M., Rueda J.L., Baro J. 2018. Effects of mechanized dredging targeting *Chamelea gallina*, striped venus clams, on the associated discards in the northern Alboran Sea (Western Mediterranean Sea). Journal of the Marine Biological Association of the United Kingdom. doi:10.1017/S0025315418000462.

11 ECONOMIC IMPACTS OF THE LANDING OBLIGATION

11.1 Request from the Commission

EWG 22-05 was requested to review the findings of the ad hoc contract linked to this EWG 'Summary of information on possible socio-economic impact of the implementation of the landing obligation', which was submitted on the 11 May 2022.

11.2 Overview of Ad hoc contract

DG Mare issued an ad hoc contract to summarize the available scientific information on the socio-economic impacts of the landing obligation. The contractors provided two documents: an inventory excel-table with detailed information about the content of relevant scientific publications (e.g., peer-reviewed publications, books and technical reports) and scientific projects

as well as a report with the main findings and conclusions (see <https://stecf.jrc.ec.europa.eu/ewg/2205>).

The report is divided into two parts - ex ante and ex post assessment. The introductory part of the ex-ante assessment presents the possible impacts of the landing obligation and provides information about bioeconomic models which that have been used to analyse such impacts. All findings are summarized in the table found in that section. Further on, the ex-ante analysis provides information on exemptions (de minimis, high survival rate and damaged fish by predators), flexibilities (year transfer, inter species flexibility) mitigation measures (selectivity and tactical changes, quota top-up, quota transferability, and harvest control rules and reference points) as well as compliance. The ex-post assessment summarizes all available information in a short chapter, noting that a key problem in this type of analysis is the lack of relevant studies. In the last part of the report the authors then set out the findings of the review.

11.3 EWG 22-05 observations

EWG 22-05 observes that the ad hoc contractors have provided a very comprehensive overview of existing scientific information and assessments of the socio-economic impacts of the landing obligation. As the report is essentially a review of the existing literature, there is limited information on the causes that could affect the changed socio-economic situation due to the adoption of landing obligation. This is, however, an important point and requires further elaboration with the DGMARE, Member States and the Advisory Councils.

EWG 22-05 observes that there is still very little information available on the current socio-economic impacts of the landing obligation. The majority of the reviewed literature provides an ex-ante assessment of possible socio-economic impacts based on simulations using bioeconomic models, interviews, or conceptual literature. Therefore, their results and conclusions are heavily relied on the way they are constructed (e.g., the inclusion of socioeconomic drivers and incorporation of fisher's behaviour) and the assumptions they use to define the analyses.

EWG 22-05 notes that one of the main concerns of Member States and the fishing industry regarding the implementation of the landing obligation was and still is the choke species problem (see also EWG 13-23 (STECF 2013) or 14-19 (STECF 2014a)). Many of the exemptions from the landing obligation put in place and the flexibility instruments included in Article 15 aim to address the problem of avoiding choke species problems in mixed fisheries (e.g., inter-annual quota flexibility, inter species flexibility, de minimis, survivability, quota transferability). As most of the ex-ante modelling exercises to assess socio-economic impacts assume full implementation of the landing obligation, choke effects are shown to be the main problems of the landing obligation in these analyses and the accompanying literature. However, there is very little empirical evidence on choke effects in fisheries today. It seems that the desire to ensure "business as usual" as far as possible in Union fisheries has led to a lack of effective implementation. This in combination with a lack of monitoring and the introduction of all or some of the instruments (e.g., exemptions or mitigation measures) means anticipated choke species have not materialised. This means that there is often a significant mismatch between the model calculations of impacts (a full implementation of the landing obligation) and the actual situation in fisheries.

EWG 22-05 observes that STECF has been requested several times in the first years after the adoption of the current basic regulation to provide an ex-ante feedback on possible effects of the landing obligation. In the first EWG report on the landing obligation (STECF 13-20, p. 9) the EWG stated that difficulties to improve selectivity may have more to do with economic implications (short term losses) than technical issues. The ad-hoc report (especially table 1) supports this conclusion, as mitigation measures and exemptions have been subsequently introduced principally to reduce the short-term costs of the implementation of the landing obligation, rather than to solve problems in specific fisheries.

EWG 22-05 observes that there is limited literature on "disproportionate costs of handling unwanted catches". There are a few specific projects (e.g., MINOUW project and a study from the Netherlands (Oostenbrugge et al. 2021)) where researchers have attempted to calculate the actual costs of handling unwanted catches on board. However, STECF has stated several times that it remains a judgement call when costs can be defined as 'disproportionate' (see STECF 2013, p. 10, STECF 2014b (EWG 13-17), p. 10). Therefore, there is still no objective threshold for 'disproportionate costs.'

EWG 22-05 observers that the ad hoc report raises another important aspect of the implementation of the landing obligation - the quota uplifts (or top-ups). This is the case when fleets do not reduce discards but have benefitted from higher fishing possibilities through quota uplifts. There are no specific economic studies showing this effect, other than the recent analysis developed by Borges (2020)." (see Annex X page 12).

EWG 22-05 notes that with the quota uplift fishers receive a catch quota rather than a landings quota. Predicted bycatch (based on the number of discards in years prior to the implementation of the LO) were added to the quota. However, implementation of mitigation measures and exemptions in combination with a low level of enforcement could lead to higher overall catches than the catch quota. There is a lower availability of data on catches as discards are still allowed and it is nearly impossible to judge if discards fall under de-minimis exemptions or not. For some species an increase in removals is observed which increases the pressure on stocks and there is an increased risk of unsustainable exploitation of the stocks in the mid- to long-term.

EWG 22-05 observes that ad hoc report briefly discusses possible distributional effects of the mitigation measures and exemptions. The study concludes (see also EWG 22-05 conclusions) that fleets with low discard rates in the past could potentially benefit from the landing obligation in the form of higher quotas. However, there is a lack of firm evidence in the report to support this conclusion.

References

Borges, L., *The unintended impact of the European discard ban*. ICES Journal of Marine Science, 2020. 78(1): p. 134-141.

Oostenbrugge, H. v., Klok, A., Deetman, B., Bastleer, J. Bleeker, K. and A. M. Winter. *Undersized whiting in the BT 2 fishery*. Wageningen Economic Research, The Hague. ISBN 978-94-6395-804-2

Scientific, Technical and Economic Committee for Fisheries (STECF) 2013 – Landing obligation in EU fisheries (STECF-13-23). Publications Office of the European Union, Luxembourg.

Scientific, Technical and Economic Committee for Fisheries (STECF) 2014a – Landing Obligations in EU Fisheries - part 4 (STECF-14-19). Publications Office of the European Union, Luxembourg

Scientific, Technical and Economic Committee for Fisheries (STECF) 2014b – Landing Obligation in EU Fisheries - part II (STECF-14-01). Publications Office of the European Union, Luxembourg

12 CONCLUSIONS

The conclusions reported below are general observations on the quality and weaknesses identified with the exemptions submitted across all the regional groups. In this regard, EWG 22-05 concludes that:

General conclusions

- The role of STECF EWGs set up to evaluate Joint Recommendations remains to evaluate the scientific rigor and robustness of the underpinning information supplied by Member States to support the main elements of Joint Recommendations. The EWG or STECF cannot adjudicate on whether exemptions should be accepted or not.
- The avoidance of unwanted catch through improved selectivity or other means should be the primary focus in implementing the landing obligation. While recognising that modifying selectivity can result in some reduction in revenue, such loss in revenue should be viewed in the broader context of medium-term gains in stocks from an increase in selectivity, the reduced risk of choke events and better utilization of quota to land a higher proportion of more valuable catch.
- The quality of submissions to support the exemptions has generally improved since the first JR's were submitted in 2014. However, there are cases in the 2022 JRs where the supporting information does not contain any new information. For some exemptions, no information has been provided at all. This has meant that for many exemptions, the EWG has not been able to carry out any meaningful evaluation and the previous observations from STECF remain valid.

- The quality and consistency of catch data provided to support exemptions in 2022 has been quite limited for many exemptions. Data has covered different years, for different or wider areas than covered by the exemption and in different formats. STECF acknowledges that Covid-19 has meant data collection has been challenging. However, having such data is important to understand the relationship between the *de minimis* volume requested, the actual level of unwanted catches to put the proposed exemption in the context of the fishery and also the state of the stock for which the exemption is covering. This allows an assessment as to the level of risk of the exemption to the relevant stocks covered by the exemption.
- Weaknesses remain in the collection of catch documentation data. If the data situation does not improve and the true quantities being caught as reported do not reflect the actual removals, it will likely have a significant impact on the quality of scientific advice and may compromise the achievement of the MSY objective. This potential for this discrepancy is higher for *de minimis* than high survival exemptions because the actual discard amount may be substantially higher than the permitted *de minimis* amount. For high survival exemptions, this risk has been mitigated to some extent by deducting the estimated dead discards associated with the exemptions from the total allowable quota prior to allocation.
- The intention of DGMARE to carry out a full review of the exemptions that are in place is timely. Such a review would help to determine whether they need to be amended or are still required given likely changes in catch patterns, gears used, vessels involved and uptake. In initiating such a review, however, STECF stresses it is vital that Member States and the Advisory Councils understand what information is needed to support this review and allow STECF carry out a meaningful evaluation.
- The CFP review provides an opportunity to consider the landing obligation and ways to improve implementation. In this context, reviewing the process of evaluating exemptions would be helpful for STECF in addition to reviewing the exemptions themselves.

Conclusions on *de minimis* exemptions

- Under Article 15 of the CFP Basic Regulation Member States have a legal requirement to record all catches discarded under *de minimis* exemptions. However, in many cases this information is still lacking from the supporting information provided by Member States as evidenced by the limitations of data contained in the FDI database.
- For many exemptions, the relationship between the *de minimis* volume requested and the level of unwanted catches is unclear from the information provided to support the exemption. In some cases, the *de minimis* volume covers 100% of the unwanted catches, usually in fisheries where the levels of unwanted catch are small. In other cases, the *de minimis* volume covers only a small part of the unwanted catches and the supporting information should contain indications on the measures to be taken to reduce these residual unwanted catches.
- The case for *de minimis* should not be improved by having high levels of unwanted catches, and therefore high handling costs, where the incentive to improve selectivity should be maintained. Improving selectivity or avoidance methods to reduce the catches of unwanted catches should be the priority.
- Judging at which level costs are disproportionate because there is no way of assessing objectively what level of costs constitutes disproportionate remains challenging. For this reason, in assessing *de minimis* exemptions, the relationship between the *de minimis* volume, the actual level of unwanted catches and the overall status of the stocks involved has been the focus of the assessments.
- Testing gears to improve the selectivity for low value stocks or in circumstances where the level of discards is very low is challenging. Prior to the landing obligation such catches were always discarded due to their low market value. Diverting scarce research funds to specifically investigate selectivity for such species is not really an option. Therefore, improving selectivity in such circumstances is only going to be delivered as a

consequence of using selective gears designed to reduce unwanted catches of different target species. For instance, the use of square mesh panels in gadoid fisheries may lead to a reduction in boarfish or greater silver smelt catches.

Conclusions on high survivability exemptions

- Assessing what constitutes high survivability is still complicated by the limited evidence and the variability in the available estimates. Many factors can affect survival, but these are not well understood. This makes assessment of requests for survivability complex as many factors need to be considered.
- Survivability should be considered in the context of the discard rate for the fishery seeking an exemption. Medium survival rates in high discarding fisheries still lead to high discard mortality rates. STECF has previously concluded (STECF PLEN 19-02) that unless surviving discards are accounted for in stock assessments when dead discards are accounted for in TAC setting, where survivability exemptions are in place, the actual fishing mortality will not match the agreed catch level. This should continue to be discussed in the assessment forums for stocks with survival exemptions.
- To date, survival and discard evidence and fleet information is reported in rather incoherent way that hindered assessment by the EWG. Most information is Member State specific within regions and there are very limited transboundary linkages to neighbouring areas with shared stocks and fisheries.
- Gaps in the evidence provided remain on conditions of the relevant fisheries (gear use, haul duration, seasonality, areas etc.) and catch data for all Member States to provide context for this exemption. Such information is crucial in order to assess the representativeness of the different reported survival rates and to be able to assess the effects of the exemption on the different stocks.

Conclusions on technical measures

- Despite many experiments to test selective gears, there are still relatively few examples of such gears being incorporated into the JRs submitted. Where there is no specific legislation making the use of selective gears mandatory, uptake of selective gears remains extremely low even in fisheries where unwanted catches remain high.
- Strengthening the linkage of exemptions to the use of selective gears as is the case for several exemptions, would provide greater confidence that the exemption is not just a means to maintain "business as usual" in the relevant fishery.
- Extensive work has been carried out on selectivity, for some regions, but this work remains uncoordinated and not necessarily targeted at the right fisheries. A review of the work completed to identify what works and what does not, along with detailing the gaps in knowledge would help to channel further experiments into the appropriate fisheries.
- There are indications of various experiments with lights to reduce unwanted catches. Consolidating the findings into one review would be helpful to understand whether using lights has potential to reduce unwanted catches and for which species and in which fisheries.

Conclusions on the economic impacts of the landing obligation

- The introduction of exemptions or mitigation measures associated with a low level of control and monitoring has allowed the fishing sector to continue more or less to operate as 'business as usual'. Model calculations using full implementation of the landing obligation as a basis show high short-term losses but often associated long-term gains (see Table 1 in the ad hoc report).
- More effective implementation of the landing obligation would seem to depend on better mitigation of the short-term losses to allow fishers to change fishing patterns or to employ more selective fishing gear, resulting in higher long-term gains. However, currently it

seems there is bigger incentive for fishers to avoid short term losses due to implementation of the landing obligation through exemptions, as the perception from fishers tends to be they cannot comply with the landing obligation without the exemptions remaining in place. There is little consideration or expectation of the longer-term gains that may accrue and the main motivation is to maintain “business as usual” as much as possible.

- The combination of a lack of control, exemptions and quota uplifts, has meant there have not been any significant socio-economic impacts associated with the landing obligation to date. There is so far no empirical evidence from the studies conducted to suggest otherwise.
- The question of re-distributional effects of the landing obligation should be given more attention as it could make the implementation more difficult when fishers perceive that they lose while others win from the implementation of the landing obligation.
- An ex-post analysis of the economic implication of the landing obligation should be conducted. This should aim to explore and explain the reasons for the lack of real impacts and to contrast the results with the ex-ante literature showing impacts would be likely. This should also include possible ways to mitigate short-term losses without recourse to flexibility mechanisms or exemptions from the general rules. The aim should be to allow the sector to be able to cope with the short-term losses to realise the mid- to long-term gains that could be accrued.

13 REFERENCES

- Aalborg University (2021a). Comments and updated information to STECF concerning requested information on plaice caught in Danish Trammel net fishery (62nd PLENARY MEETING REPORT, PLEN-19-03) Aalborg University, 28 June 2021 University of Aalborg, Appendix Danish Trammel Net studies, Aalborg Universitet, June.
- Aalborg University (2021b). Updated note on short-term survival of discarded (*Pleuronectes platessa*) caught in trammel nets at winter season. Aalborg University, Denmark 28 June 2021
- Aalborg University. (2019) Discard survival of plaice and cod from trammel net and Danish seine fisheries in the Baltic Sea, Aalborg University, 15 April 2019
- Anders N, Breen M, Saltskår J, Totland B, Øvredal JT, Vold A (2019) Behavioural and welfare implications of a new slipping methodology for purse seine fisheries in Norwegian waters. *PLoS One* 14: 1–24. e0213031.
- Anders N, Eide I, Lerfall J, Roth B, Breen M (2020) Physiological and flesh quality consequences of pre-mortem crowding stress in Atlantic mackerel (*Scomber scombrus*). *PLoS One* 15: 1–20. e0228454
- Anders N, Roth B, Breen M (2021) Physiological response and survival of Atlantic mackerel exposed to simulated purse seine crowding and release. *Conserv Physiol* 9(1): coab076; doi:10.1093/conphys/coab076.
- Anon. (2022). De minimis exemption consolidation request of 5% for several species for 2023 onwards proposed from Spain for trawlers in the Bay of Biscay and Iberian waters (ICES 8abd and 8c9a). Report provided to EWG 22-05 by Spain. 38pp+Annexes.
- Balazuc A., Goffier E., Soulet E., Rochet M.J., Leleu K. (2016). EODE – Expérimentation de l’Obligation de DEbarquement à bord de chalutiers de fond artisans de Manche Est et mer du Nord, et essais de valorisation des captures non désirées sous quotas communautaires, 136 + 53 pp.
- Bargione G., Petetta A., Vasapollo C., Virgili M., Lucchetti A. (2021). Reburial potential and survivability of the striped venus clam (*Chamelea gallina*) in hydraulic dredge fisheries. *Scientific Reports*. 11:9109 DOI:10.1038/s41598-021-88542-8.

Bart Ampe, Noémi Van Bogaert, Els Torreele, Sebastian Uhlmann. (2020). Discard survival estimates of commercially caught skates of the North Sea and English Channel, Sumaris project (2020).

Baulier Loïc, Morandeau Fabien, Ramonet Morgane, Sourget Quiterie, Winkler Joachim. (2021). The SURF project: survivability of discarded cuckoo rays (*Leucoraja naevus*) in French bottom trawl fisheries. Project report.

Borges, L., *The unintended impact of the European discard ban*. ICES Journal of Marine Science, (2020). 78(1): p. 134- 141.

Browne et al. 2019. Assessment of a 90 mm T90 mesh codend, a new gear option for Celtic Sea whitefish vessels. Irish Sea Fisheries Board (BIM), Fisheries Conservation Report, July 2019. 8 pp. <https://bim.ie/wp-content/uploads/2021/02/BIM-Assessment-of-a-90-mm-T90-mesh-codend-report.pdf>

Browne, D., Cosgrove, R., and Tyndall, P. (2016). Assessment of T90 mesh in a fishery targeting whiting in the Celtic Sea, Irish Sea Fisheries Board (BIM), Fisheries Conservation Report, June 2016. 8 pp

Cloâtre Thomas, Quinio-Scavinner Marion, Sagan Jonathan, Dubroca Laurent, Billet Norbert (2022). Captures et rejets des métiers de pêche français. Résultats des observations à bord des navires de pêche professionnelle en 2020. Obsmer

Cornou Anne Sophie, Scavinner Marion, Sagan Jonathan, Cloatre Thomas, Dubroca Laurent, Billet Norbert (2021). Captures et rejets des métiers de pêche français. Résultats des observations à bord des navires de pêche professionnelle en 2019. Obsmer. <https://doi.org/10.13155/79198>

Cosgrove, R., Browne, D., Minto, C., Tyndall, P., Oliver, M., Montgomerie, M., and McHugh, M. (2019). A game of two halves: Bycatch reduction in *Nephrops* mixed fisheries. Fisheries Research, 210: 31-40. <https://bim.ie/wp-content/uploads/2021/01/BIM-Game-of-two-halves-published.pdf>

Cosgrove, R., Browne, D., Tyndall, P., McHugh, M., Oliver, M., Minto, C., Burke, B., (2016). Assessment of a dual codend with net separator panel in an Irish *Nephrops* fishery. Irish Sea Fisheries Board (BIM), Fisheries Conservation Report, December 2016. 12 pp. <https://bim.ie/wp-content/uploads/2021/02/5987-BIM-Stella-Nova-Trial-Brochure.pdf>

DTU Aqua. (2020) Request for documentation on plaice discard survival for demersal trawl (including seines) in the Western Baltic with specification of the fishing fleet using active gears, 1 April 2022 (updated version of previous version of 28 April 2021)

Gauduchon Thibault, Cornou Anne Sophie, Scavinner Marion, Goascoz Nicolas, Dubroca Laurent, Billet Norbert (2020). Captures et rejets des métiers de pêche français. Résultats des observations à bord des navires de pêche professionnelle en 2018. Obsmer. <https://doi.org/10.13155/73122>

General Secretariat for Fisheries, in cooperation with: Tragsatec, the University of Santiago de Compostela and AZTI Tecnalia, (2019). Analysis of the economic viability of unwanted catches that are subject to landing obligations in South-Western Waters. November 2019

ICES Advice on fishing opportunities, catch and effort, Baltic Sea and ecoregion, 28 May 2021, PLE 27.21-23 and PLE 27.24-32, 28 May 2021

Jenkins S.R. and Brand A.R. 2001. The effect of dredge capture on the escape response of the great scallop, *Pecten maximus* (L.): implications for the survival of undersized discards. J. Exp. Mar. Biol. Ecol. (2001)

Jensen, Sergey V. Kucheryavskiy, Peter R. Møller, Niels Madsen. (2021). Initial experiments to assess short-term survival of discarded plaice (*Pleuronectes platessa*) caught in trammel nets during the winter season. Fisheries Research 251 (2022) 106308

Laura Lemey, Klaas Sys, Esteban Torreblanca, Damian Villagra Villanueva, Tim Plevoets. (2021). Interim report II Raywatch: Towards a more extensive and efficient long-term data collection for skates in support of the "Roadmap for rays and skates". ILVO Report 36pp.

- Leonardi S., Rubin A., Meillat M., Coppin F., Delpech J-P., Morandeau F., Larnaud P. (2009). *Selecmer – Amélioration de la sélectivité des chalutiers – Pêcheries multispécifiques Manche – Mer du Nord*, 66 + 62 pp. Version septembre 2009
- Marçalo A, Breen M, Tenningen M, Onandia I, Arregi L, Gonçalves J.M. (2019) Mitigating slipping-related mortality from purse seine fisheries for small pelagic fish: case studies from European Atlantic waters. In *The European Landing Obligation*. Springer, Cham, Switzerland, pp. 297–318.
- Matthew McHugh, Martin Oliver, Daragh Browne, Cólín Minto, Ronán Cosgrove. (2019) Benefits of 120 mm diamond and 100 mm T90 codends in the Celtic and Irish Seas. Irish Sea Fisheries Board (BIM), Fisheries Conservation Report, February 2019. 7 pp. <https://bim.ie/wp-content/uploads/2021/01/BIM-8306-Benefits-of-120-mm-diamond-and-100-mm-T90-codends-in-the-Celtic-and-Irish-Seas.pdf>
- Maynou, G. Kraus (CSIC), D. Pinello, P. Accadia, E. Sabatella, M. Spinadin. (2018). MINOUW Project, Deliverable 2.19 Handling, storage, transport and utilization of unwanted catches. Available at: <http://minouw-project.eu>
- Morfin Marie, Simon Julien, Morandeau Fabien, Baulier Loïc, Méhault Sonia, Kopp Dorothée. (2019). Using acoustic telemetry to estimate post-release survival of undulate ray *Raja undulata* (Rajidae) in northeast Atlantic, *Ocean and Coastal Management*, 178(2019)
- Nielsen, E.E., et al., (2009). Population genomics of marine fishes: identifying adaptive variation in space and time. *Molecular Ecology*, 18, 3128–3150
- O'Neill, F.G.O., Feekings, J., Fryer, R.J., Fauconnet, L., Afonso, P. (2019). Discard avoidance by improving fishing gear selectivity: Helping the fishing industry help itself. In S.S. Uhlmann, C. Ulrich, S.J. Kennelly (Eds.), *The European Landing Obligation reducing discards in complex, multi-species and multi-jurisdictional fisheries* (pp. 283–297). Springer International Publishing AG, part of Springer Nature
- Oliver et al., 2021. Assessment of the Dual Codend on the Galway Aran Fishing Grounds. Irish Sea Fisheries Board (BIM), Fisheries Conservation Report, September 2021. 8 pp. <https://bim.ie/wp-content/uploads/2021/09/BIM-Fisheries-Report-Dual-Codend-GalwayAran-Fishinggrounds.pdf>
- Oliver, M., McHugh, M., Murphy, S., Browne, D., and Cosgrove, R. 2019. Post-capture condition of cuckoo ray in an Irish otter trawl fishery. BIM Fisheries Conservation Report, March 2019. 12 pp
- Oliver, M., McHugh, M., Murphy, S., Browne, D., and Cosgrove, R. 2021. An assessment of cuckoo ray (*Leucoraja naevus*) survivability in an Irish otter trawl fishery. BIM Fisheries Conservation report, November 2021.
- Oostenbrugge, H. v., Klok, A., Deetman, B., Bastleer, J. Bleeker, K. and A. M. Winter. Undersized whiting in the BT 2 fishery. Wageningen Economic Research, The Hague. ISBN 978-94-6395-804-2
- OP COBRENORD. (2022). Rapport d'étude du projet SUMO (SURvie de la sole en Manche-Ouest) 34 p.
- Randall, P., Ribeiro Santos, A., Firmin, C., O'Sullivan, H., White, E., Catchpole, T. (2017). Assessing the survival of discarded sole (*Solea solea*) in an English inshore trawl fishery, Part of the Cefas ASSIST Project, February 2017, Cefas report pp55
- Reid, D.G., Calderwood, J., Afonso, P., Fauconnet, L., Pawlowski, L., Plet-Hansen, K.S., et al. (2019). The best way to reduce discards is by not catching them! In S.S. Uhlmann, C. Ulrich, S.J Kennelly (Eds.), *The European Landing Obligation reducing discards in complex, multi-species and multi-jurisdictional fisheries* (pp. 261–282). Dordrecht: Springer International Publishing AG, part of Springer Nature
- Sala A., Lucchetti A., Perdichizzi A., Herrmann B., Rinelli P. 2015. Is square-mesh better selective than larger mesh? A perspective on the management for Mediterranean trawl fisheries. *Fisheries Research* 161:182–190.

Sartor P., Carbonara P., Lucchetti A., Sabatella R. 2016. Characterisation of the discards of the demersal fisheries of the Italian Seas; propaedeutic information for the implementation of the Landing Obligation provisions (EU Reg. 1380/2013, Art. 15). Italian Ministry for the Agricultural Food and Forestry Policies (MIPAAF) Coordinated Project. Final report, 268 pp + Annexes.

Sbrana M. et al. 2022. Improving the selectivity of trawl gears in the Mediterranean Sea to advance the sustainable exploitation pattern of trawl fisheries – IMPEMED. EASME/EMFF/2019/1.3.2.6/01/SI2.818717-SC04

Scientific, Technical and Economic Committee for Fisheries (STECF). 2021. Evaluation of the fishing effort regime in the Western Mediterranean – part VI (STECF-21-13). Publications Office of the European Union, Luxembourg.

Scientific, Technical and Economic Committee for Fisheries (STECF) - Evaluation of Joint Recommendations on the Landing Obligation and on the Technical Measures Regulation (STECF-21-05). EUR 28359 EN, Publications Office of the European Union, Luxembourg, 2021, ISBN 978-92-76-40593-1, doi:10.2760/83668, JRC126128.

Scientific, Technical and Economic Committee for Fisheries (STECF) – 66th Plenary Report (PLEN-21-01). EUR 28359 EN, Publications Office of the European Union, Luxembourg, 2021, ISBN 978-92-76-36151-0 (online), doi:10.2760/437609 (online), JRC124902.

Scientific, Technical and Economic Committee for Fisheries (STECF) Evaluation of Joint Recommendations on the Landing Obligation and on the Technical Measures Regulation (STECF-20-04). Publications Office of the European Union, Luxembourg, 2020, ISBN 978-92-76-20383-4, doi:10.2760/328463, JRC121260

Scientific, Technical and Economic Committee for Fisheries (STECF) – Evaluation of Landing Obligation Joint Recommendations (STECF-19-08). Publications Office of the European Union, Luxembourg, 2019, ISBN 978-92-76-09523-1, doi:10.2760/227428, JRC117511

Scientific, Technical and Economic Committee for Fisheries (STECF) – 61st Plenary Meeting Report (PLEN-19-02). Publications Office of the European Union, Luxembourg, 2019, ISBN 978-92-76-09515-6, doi:10.2760/31279, JRC117461

Scientific, Technical and Economic Committee for Fisheries (STECF) – Evaluation of the Landing Obligation Joint Recommendations (STECF-18-06) (2018). Publications Office of the European Union, Luxembourg, 2018, ISBN 978-92-79-79389-9, doi:10.2760/999971, JRC112740

Scientific, Technical and Economic Committee for Fisheries (STECF) – Evaluation of the Landing Obligation Joint Recommendations (STECF-17-08). (2017). Publications Office of the European Union, Luxembourg, 2017, ISBN 978-92-79-67480-8, doi:10.2760/149272, JRC107574.

Scientific, Technical and Economic Committee for Fisheries (STECF) – Evaluation of the Landing Obligation Joint Recommendations (STECF-16-10). (2016). Publications Office of the European Union, Luxembourg; EUR 27758 EN; doi:10.2788/59074

Scientific, Technical and Economic Committee for Fisheries (STECF) – Landing Obligation - Part 5 (demersal species for NWW, SWW and North Sea) (STECF-15-10). (2015). Publications Office of the European Union, Luxembourg, EUR 27407 EN, JRC 96949, 62 pp.

Scientific, Technical and Economic Committee for Fisheries (STECF) 2014a – Landing Obligations in EU Fisheries - part 4 (STECF-14-19). Publications Office of the European Union, Luxembourg

Scientific, Technical and Economic Committee for Fisheries (STECF) – 46th Plenary Meeting Report (PLEN-14-02). (2014). Publications Office of the European Union, Luxembourg, EUR 26810 EN, JRC 91540, 117 pp

Scientific, Technical and Economic Committee for Fisheries (STECF) 2014b – Landing Obligation in EU Fisheries - part II (STECF-14-01). Publications Office of the European Union, Luxembourg

Scientific, Technical and Economic Committee for Fisheries (STECF) 2013 – Landing obligation in EU fisheries (STECF-13-23). Publications Office of the European Union, Luxembourg.

Spedicato M.T., J. L. Sánchez-Lizaso, E. Sabatella, K. Tsagarakis, P. Sartor, G. Lembo. 2021. Synthesis of the Landing Obligation Measures and Discard Rates for the Mediterranean and the Black Sea. EASME/EMFF/2019/1.3.2.6/SI2.835464.

Uhlmann et al., 2021. Effects of catch composition on the fate of European plaice (*Pleuronectes platessa*) discarded from Belgian beam trawlers. Under review with Fisheries Research.

Uhlmann, S. S., Theunynck, R., Ampe, B., Verkempynck, R., Miller, D. C.M., van Marlen, B., van der Reijden, K. J. et al. 2016b. Overleving doorboomkor gevangen pladijs – Survival of beam-trawled European plaice (*Pleuronectes platessa*). ILVO Mededeling 210. Institute for Agricultural and Fisheries Research, Oostende, Belgium. 172 pp. (13) (PDF) *Survival of undersized plaice (Pleuronectes platessa), sole (Solea solea), and dab (Limanda limanda) in North Sea pulse-trawl fisheries.* Available from: https://www.researchgate.net/publication/313164959_Survival_of_undersized_plaice_Pleuronectes_platessa_sole_Solea_solea_and_dab_Limanda_limanda_in_North_Sea_pulse-trawl_fisheries [accessed May 18 2022].

Uhlmann, S.S., Theunynck, R., Ampe, B., Desender, M., Soetaert, M., Depestele, J., 2016a. Injury, reflex impairment, and survival of beam-trawled flatfish. ICES J. Mar. Sci. 73, 1244–1254. <https://doi.org/10.1093/icesjms/fsv252>

Uhlmann, S.S., Ampe, B., Van Bogaert, N., Vanden Berghe, C., Vanelslender, B., 2021. Flatfish survivors have tales to tell: Cold seawater and reduced deployment duration contribute to the survival of European plaice (*Pleuronectes platessa*) discarded by Belgian beam trawlers. Fish. Res. 240, 105966. <https://doi.org/10.1016/j.fishres.2021.105966>

Urta J., Garcia T., Leon E., Gallardo-Roldan H., Lozano M., Rueda J.L., Baro J. 2018. Effects of mechanized dredging targeting *Chamelea gallina*, striped venus clams, on the associated discards in the northern Alboran Sea (Western Mediterranean Sea). Journal of the Marine Biological Association of the United Kingdom. doi:10.1017/S0025315418000462.

Urta J., Marina P., Garcia T, Baro J. 2021. Damage assessment and survival estimates in the wedge clam (*Donax trunculus*) caught by mechanical dredging in the northern Alboran Sea. Marine Biology Research. DOI: 10.1080/17451000.2021.1949618.

Van Bogaert, N., Ampe, B., Uhlmann, S., and Torrele, E., 2020. Discard survival estimates of commercially caught skates of the North Sea and English Channel (Interreg programme No. Output O 5.1), Work Package 2.

Viera A., Meillat M., Coppin F., Delpech J-P., Morandea F., Gamblin C., 2010. SELECCAB – Volet Artisans - Amélioration de la sélectivité des chalutiers artisanaux travaillant en Manche – Mer du Nord de façon à limiter les captures de cabillaud., 61 + 48pp. Version septembre 2010

Weiller Y., Reecht Y., Vermard Y., Coppin F., Delpech J-P., Morandea F., 2014. SELECFISH – Amélioration de la sélectivité des chalutiers artisanaux travaillant en Manche Est - Mer du Nord afin de limiter leurs rejets, 82 + 55pp. Version avril 2014

14 LIST OF RELEVANT REGULATIONS

Commission Implementing Regulation (EU) No 404/2011 of 8 April 2011 laying down detailed rules for the implementation of Council Regulation (EC) No 1224/2009 establishing a Community control system for ensuring compliance with the rules of the Common Fisheries Policy

Regulation (EU) No 1380/2013 of the European Parliament and of the Council of 11 December 2013 on the Common Fisheries Policy, amending Council Regulations (EC) No 1954/2003 and (EC) No 1224/2009 and repealing Council Regulations (EC) No 2371/2002 and (EC) No 639/2004 and Council Decision 2004/585/EC

Commission Delegated Regulation (EU) No 1392/2014 of 20 October 2014 establishing a discard plan for certain small pelagic fisheries in the Mediterranean Sea

Commission Delegated Regulation (EU) No 1393/2014 of 20 October 2014 establishing a discard plan for certain pelagic fisheries in north-western waters

Commission Delegated Regulation (EU) No 1394/2014 of 20 October 2014 establishing a discard plan for certain pelagic fisheries in south-western waters

Commission Delegated Regulation (EU) No 1395/2014 of 20 October 2014 establishing a discard plan for certain small pelagic fisheries and fisheries for industrial purposes in the North Sea

Commission Delegated Regulation (EU) No 1396/2014 of 20 October 2014 establishing a discard plan in the Baltic Sea

Commission Delegated Regulation (EU) 2015/2438 of 12 October 2015 establishing a discard plan for certain demersal fisheries in north-western waters

Commission Delegated Regulation (EU) 2015/2439 of 12 October 2015 establishing a discard plan for certain demersal fisheries in south-western waters

Commission Delegated Regulation (EU) 2015/2440 of 22 October 2015 establishing a discard plan for certain demersal fisheries in the North Sea and in Union waters of ICES Division IIa

Commission Delegated Regulation (EU) 2016/2377 of 14 October 2016 amending Delegated Regulation (EU) No 1394/2014 establishing a discard plan for certain pelagic fisheries in South-Western waters

Commission Delegated Regulation (EU) 2017/86 of 20 October 2016 establishing a discard plan for certain demersal fisheries in the Mediterranean Sea

Commission Delegated Regulation (EU) 2017/87 of 20 October 2016 establishing a discard plan for turbot fisheries in the Black Sea

Commission Delegated Regulation (EU) 2018/153 of 23 October 2017 amending Delegated Regulation (EU) 2017/86 establishing a discard plan for certain demersal fisheries in the Mediterranean Sea

Commission Delegated Regulation (EU) 2018/211 of 21 November 2017 establishing a discard plan as regards salmon in the Baltic Sea

Commission Delegated Regulation (EU) 2018/45 of 20 October 2017 establishing a discard plan for certain demersal fisheries in the North Sea and in Union waters of ICES Division IIa for the year 2018

Commission Delegated Regulation (EU) 2018/46 of 20 October 2017 establishing a discard plan for certain demersal and deep sea fisheries in North-Western waters for the year 2018

Commission Delegated Regulation (EU) 2018/188 of 21 November 2017 amending Delegated Regulation (EU) No 1394/2014 establishing a discard plan for certain pelagic fisheries in South-Western waters

Commission Delegated Regulation (EU) 2018/189 of 23 November 2017 amending Delegated Regulation (EU) No 1395/2014 establishing a discard plan for certain small pelagic fisheries and fisheries for industrial purposes in the North Sea

Commission Delegated Regulation (EU) 2018/190 of 24 November 2017 amending Delegated Regulation (EU) No 1393/2014 establishing a discard plan for certain pelagic fisheries in North-Western waters

Regulation (EU) 2018/973 of the European Parliament and of the Council of 4 July 2018 establishing a multiannual plan for demersal stocks in the North Sea and the fisheries exploiting those stocks, specifying details of the implementation of the landing obligation in the North Sea and repealing Council Regulations (EC) No 676/2007 and (EC) No 1342/2008

Commission Delegated Regulation (EU) 2018/2033 of 18 October 2018 establishing a discard plan for certain demersal fisheries in South-Western waters for the period 2019-2021

Commission Delegated Regulation (EU) 2018/2034 of 18 October 2018 establishing a discard plan for certain demersal fisheries in North-Western waters for the period 2019-2021

Commission Delegated Regulation (EU) 2018/2035 of 18 October 2018 specifying details of implementation of the Landing Obligation for certain demersal fisheries in the North Sea for the period 2019-2021

Commission Delegated Regulation (EU) 2018/2036 of 18 October 2018 amending Delegated Regulation (EU) 2017/86 establishing a discard plan for certain demersal fisheries in the Mediterranean Sea

Commission Delegated Regulation (EU) 2018/306 of 18 December 2017 laying down specifications for the implementation of the landing obligation as regards cod and plaice in Baltic Sea fisheries

Commission Delegated Regulation (EU) 2019/905 of 13 March 2019 amending Delegated Regulation (EU) 2018/2034 establishing a discard plan for certain demersal fisheries in North-Western waters for the period 2019-2021

Commission Delegated Regulation (EU) 2019/906 of 13 March 2019 amending Delegated Regulation (EU) 2018/2035 specifying details of implementation of the Landing Obligation for certain demersal fisheries in the North Sea for the period 2019-2021

Regulation (EU) 2019/1241 of the European Parliament and of the Council of 20 June 2019 on the conservation of fisheries resources and the protection of marine ecosystems through technical measures, amending Council Regulations (EC) No 1967/2006, (EC) No 1224/2009 and Regulations (EU) No 1380/2013, (EU) 2016/1139, (EU) 2018/973, (EU) 2019/472 and (EU) 2019/1022 of the European Parliament and of the Council, and repealing Council Regulations (EC) No 894/97, (EC) No 850/98, (EC) No 2549/2000, (EC) No 254/2002, (EC) No 812/2004 and (EC) No 2187/2005.

Regulation (EU) 2019/472 of the European Parliament and of the Council of 19 March 2019 establishing a multiannual plan for stocks fished in the Western Waters and adjacent waters, and for fisheries exploiting those stocks, amending Regulations (EU) 2016/1139 and (EU) 2018/973, and repealing Council Regulations (EC) No 811/2004, (EC) No 2166/2005, (EC) No 388/2006, (EC) No 509/2007 and (EC) No 1300/2008

Commission Delegated Regulation (EU) 2019/2237 of 1 October 2019 specifying details of the landing obligation for certain demersal fisheries in South-Western waters for the period 2020-2021

Commission Delegated Regulation (EU) 2019/2238 of 1 October 2019 specifying details of implementation of the landing obligation for certain demersal fisheries in the North Sea for the period 2020-2021

Commission Delegated Regulation (EU) 2019/2239 of 1 October 2019 specifying details of the landing obligation for certain demersal fisheries in North-Western waters for the period 2020-2021

Commission Delegated Regulation (EU) 2020/4 of 29 August 2019 amending Delegated Regulation (EU) 2017/86 establishing a discard plan for certain demersal fisheries in the Mediterranean Sea

Council Regulation (EU) 2020/123 of 27 January 2020 fixing for 2020 the fishing opportunities for certain fish stocks and groups of fish stocks, applicable in Union waters and, for Union fishing vessels, in certain non-Union waters

Commission Delegated Regulation (EU) 2020/2015 of 21 August 2020 specifying details of the implementation of the landing obligation for certain fisheries in Western Waters for the period 2021-2023

Commission Delegated Regulation (EU) 2020/2013 of 21 August 2020 amending Regulation (EU) 2019/1241 of the European Parliament and of the Council as regards technical measures for certain demersal and pelagic fisheries in the North Sea and in the South-Western Waters

Commission Delegated Regulation (EU) 2020/2014 of 21 August 2020 specifying details of implementation of the landing obligation for certain fisheries in the North Sea for the period 2021-2023

Council Regulation (EU) 2021/92 of 28 January 2021 fixing for 2021 the fishing opportunities for certain fish stocks and groups of fish stocks, applicable in Union waters and, for Union fishing vessels, in certain non-Union waters

Commission Delegated Regulation (EU) 2021/2062 of 23 August 2021 amending Delegated Regulation (EU) 2020/2014 specifying details of implementation of the landing obligation for certain fisheries in the North Sea for the period 2021-2023

Commission Delegated Regulation (EU) 2021/2324 of 23 August 2021 amending Regulation (EU) 2019/1241 of the European Parliament and of the Council as regards technical measures for certain demersal and pelagic fisheries in the Celtic Sea, the Irish Sea and the West of Scotland

Commission Delegated Regulation (EU) 2021/2063 of 25 August 2021 amending and correcting Delegated Regulation (EU) 2020/2015 specifying details of the implementation of the landing obligation for certain fisheries in Western Waters for the period 2021-2023

Commission Delegated Regulation (EU) 2021/2064 of 25 August 2021 supplementing Regulation (EU) No 1380/2013 of the European Parliament and of the Council as regards the establishment of a *de minimis* exemption to the landing obligation for certain demersal fisheries in the Adriatic and south-eastern Mediterranean Sea

15 ANNEXES

Annex I - Templates for the provision of fisheries information to support *de minimis* and high survivability exemptions

Table 12.1a Template for the provision of information that defines the fisheries to which *de minimis* exemptions should apply

Country	Exemption applied for (species, area, gear type)*	Species as bycatch or target	Number of Vessels subject to LO	Landings (by subject Vessels)	Estimated Discards*	Estimated Catch	Discard Rate**	Estimated <i>de minimis</i> volumes**

Recommended steps to follow to support proposed high survival exemptions:

1. Define the selected species for which the exemption is being sought
2. Define the stock(s) of the selected species
3. Define the management unit (group of vessels)
4. Describe the catch and discard profile (discard rate, age composition, confidence and variability in the data)
5. Where relevant, describe any selective measures with potential to reduce unwanted catches and/or increase discard survival
6. Describe the scientific discard survival evidence to support the request for exemption, it is important to include the detailed scientific reports, so the quality of the estimates can be established
7. Describe any relevant current and future scientific discard survival studies
8. Describe any expected benefits or risks (economic, environmental) in the provision of an exemption for the selected species and management unit

Reporting against a Road Map (e.g. plaice, skates and rays)

Progress against the three main tasks of the road map should be detailed:

1. Quantifying catches and discards per species and metier
2. Generating discard survival evidence
3. Stakeholder led adoption of codes of best practice to maximize discard survival

Templates of summary tables for supporting high survival exemptions evidence

Table Annex 1.1. List all studies with survival evidence relevant to the exemption.

Country	Exemption applied for				Survival estimate					Evidence		
	Species	Area	Gear	Status	Type of study	Status	Experimental sample	Survival estimate in %	Factors that influence survival	Status of the evidence	Reference	Annex
XX	XX	XX	XX	Existing exemption/ response to request for additional	Captive / Vitality / Tagging	Completed/ Ongoing/ Delayed/ Upcoming	Species, area, gear	Survival estimate (95% confidence interval)	Describe observed effects of the operational (e.g., haul duration, catch weight,	New evidence / already submitted in YEAR	Reference of the report or published article	Annex number for the provided evidence

				evidence/ extension of existing exemption/ new exemption						catch composition, sorting time, air exposure), biological (e.g., fish size) and environmental (e.g., temperature , fishing depth) factors			
...

Table Annex 1.2. List all fisheries to which the exemption applies, with blanks if no further information available.

Country	Exemption applied for				Fishery					Landings and discards			Evidence		
	Species	Area	Gear	Status	Species as bycatch or target	Number of vessels	Season	Catch composition	Sorting time	Landings in weight	Discards in weight	Discard rate in %	Status of the evidence	Reference	Annex
XX	XX	XX	XX	Existing exemption/ response to request for additional evidence/ extension of existing exemption/ new exemption			Describe when the fishery is taking place	Describe the catch composition (e.g., presence of stones or sand, mix of fish and crustaceans)	Average (min-max)		Average (min-max) over the years if relevant	Average (min-max) over the years if relevant	New evidence/ already submitted in YEAR	Reference of the report or published article	Annex number for the provided evidence
...

Approach applied for high survival evidence evaluation

1. Exemption status

Existing exemption/response to request for additional evidence/extension of existing exemption/new exemption

2. Survival evidence

New discard survival evidence provided? ICES critical review applied (see Annex II)?

Robustness of the survival estimate? Study limitations e.g. representativeness within study, monitoring duration? *Give % survival.*

3. Fishery context

Is it clear to which fisheries the exemption applies? Fishery description (vessels, discards) information provided? *Give % discard rate.*

4. Survival and fishery compatibility

Is survival evidence relevant to the fishery? What assumptions are being made on factors that influence survival?

5. Additional evidence

What additional evidence would improve confidence in awarding an exemption? How does this link to the roadmap (skates and rays, NS TBB PLE only)?

Submit full discard survival study reports or papers

Any new evidence for discard survival should be supported by documentation (e.g. scientific or technical report, submitted or published paper) appended as annex. Documentation should be informative enough so that the ICES critical review can be applied such as described in:

ICES. 2015. Report of the Workshop on Methods for Estimating Discard Survival 3 (WKMEDS 3), 20-24 April 2015, London, UK. ICES CM 2015\ACOM:39. 47 pp.

Annex II – ICES template for critical review of survival experiments

The framework of the critical review used to evaluate literature on discard survival estimates based on ICES WKMEDS guidelines; Catchpole et al., unpubl. data. 'Y' = yes, 'N' = no, 'P' = partial; whereby more positive responses demonstrate more robust studies.

	Critical review questions
Key guidance questions	Are criteria given to define when death occurred?
	Was a control used that informed on experimental induced mortality?
	Was all discard induced mortality observed/modelled (during monitoring period or time at liberty)?
	Did the sample represent the part of the catch being studied?
	Did the sample represent the relevant population in the wider fishery?
Vitality assessments	Is the method of selection for assessed fish described?
	Is there a description for each health state category?
	Were reflexes developed using 'unstressed' fish (not exposed to capture treatment) and consistently observed?
	Were there time limits for responses/reflexes? e.g. operculum movement within 5 secs.
	Was assessment container appropriate for the species, adequate to observe responses?
	Is the potential for observer bias discussed?
	Are the protocols effective in assessing health/injury?
	Are assessments consistent across all parts of the study?
Captive Observation	Are the holding/transfer facilities described?
	Are holding/transfer facilities considered sympathetic to the biological/behavioural needs of the subjects?
	Are the holding/transfer conditions the same across treatments/replicates?
	Was there potential for additional stress/injury/mortality with captive fish unlikely?
	Are the holding/transfer conditions representative of "ambient" (discarded to) conditions?
	Are there appropriate protocols for handling/removal of dead specimens? (e.g. dead removed regularly)
	Are there appropriate protocols for monitoring live specimens?
	Is there sufficient frequency in observations during the monitoring period?
	Was there potential for stress/injury in subjects during observation unlikely?
	Was mortality observed to (or very near to) asymptote?
Tagging	Has the potential for tagging induced mortality been considered?

	Are fish released in the same area as they were caught?
	Are tag losses accounted for?
	Can discard-related mortality be distinguished from natural mortality, fishing mortality and emigration?
	Is the duration of the at-liberty tagged period sufficiently long to estimate discard survival?
	<i>Traditional tags</i> - Are catches in the fishery sufficiently large to provide the required tag return rate to estimate discard survival?
	<i>Acoustic, DST tags</i> - Can the death of an individual be accurately determined from the data?
	<i>Acoustic tags</i> - Does the acoustic receiver array provide full coverage of the area?
	<i>Pop-off DST-tags</i> - Is there a similar likelihood of tag recovery for both survivors and non-survivors?
Controls	Were controls representative of the treatment groups? i.e. biologically (length, sex, condition), number, spatial & temporal origin
	Did control subjects experience same experimental conditions?
	Were treatment and controls randomly selected to account for bias?
	Were "blind controls" used to account for performance/measurement bias?
	Is potential for effects when combining stressors from acquisition methods discussed?
Analysis	Is the analysis that derived the survival estimates described?
	Are the conclusions based on data summary or statistical inference?
	Are the conclusions supported by the data / analysis?

16 CONTACT DETAILS OF EWG-22-05 PARTICIPANTS

¹ - Information on EWG participant's affiliations is displayed for information only. In any case, Members of the STECF, invited experts, and JRC experts shall act independently. In the context of the STECF work, the committee members and other experts do not represent the institutions/bodies they are affiliated to in their daily jobs. STECF members and experts also declare at each meeting of the STECF and of its Expert Working Groups any specific interest which might be considered prejudicial to their independence in relation to specific items on the agenda. These declarations are displayed on the public meeting's website if experts explicitly authorized the JRC to do so in accordance with EU legislation on the protection of personnel data. For more information: <http://stecf.jrc.ec.europa.eu/adm-declarations>

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18 LIST OF BACKGROUND DOCUMENTS

Background documents are published on the meeting's web site on:

<http://stecf.jrc.ec.europa.eu/web/stecf/ewg22-05>

List of background documents:

EWG-22-05 – Doc 1 - Declarations of invited and JRC experts (see also section 16 of this report – List of participants)

Ad hoc contract – Doc 2 - Summary of information on possible socio-economic impact of the implementation of the landing obligation'. Part of STECF EWG 22-05 Evaluating the joint recommendations on the landing obligation and technical measures

Ad hoc contract – Doc 3 - Summary of information on possible socio-economic impact of the implementation of the landing obligation'. Matrix table. Part of STECF EWG 22-05 Evaluating the joint recommendations on the landing obligation and technical measures

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