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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)

Edited by Dominic Rihan, Thomas Catchpole & Hendrik Doerner

Joint Research Centre

EUR 28359 EN

Contact information

Name: STECF secretariat

Address: Unit D.02 Water and Marine Resources, Via Enrico Fermi 2749, 21027 Ispra VA, Italy

E-mail: jrc-stecf-secretariat@ec.europa.eu

Tel.: +39 0332 789343

EU Science Hub

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Authors:

STECF advice:

Abella, J. Alvaro; Bastardie, Francois; Borges, Lisa; Casey, John; Catchpole, Thomas; Damalas, Dimitrios; Daskalov, Georgi; Döring, Ralf; Gascuel, Didier; Grati, Fabio; Ibaibarriaga, Leire; Jung, Armelle; Knittweis, Leyla; Kraak, Sarah; Ligas, Alessandro; Martin, Paloma; Motova, Arina; Moutopoulos, Dimitrios; Nord, Jenny; Prellezo, Raúl; O'Neill, Barry; Raid, Tiit; Rihan, Dominic; Sampedro, Paz; Somarakis, Stylianos; Stransky, Christoph; Ulrich, Clara; Uriarte, Andres; Valentinsson, Daniel; van Hoof, Luc; Vanhee, Willy; Villasante, Sebastian; Vrgoc, Nedo

EWG-20-04 report:

RIHAN Dominic, CATCHPOLE Tom, CASEY John, GRATI Fabio, JUNG Armelle, LLORET Josep, PEREIRA Joao, SAVINA Esther, UHLMANN Sven Sebastian, VALENTINSSON Daniel, VANHEE Willy, VIVA Claudio

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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 2021 and beyond. The report of the Expert Working Groups was reviewed by written procedure by the STECF in June 2020.

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)

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 Policy[1] (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 on *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 current discard plans will expire either by 2020 or 2021 and should be replaced by provisions adopted under article 15(5) and specified in multiannual plans. Under the existing multiannual plans, provisions[2] specify that the Commission is empowered to adopt delegated acts following Article 18 of the CFP (Regionalisation procedure). For the discard plans expiring by 2020, the Joint Recommendations submitted by the Member States in 2020 will be in accordance with the relevant multiannual plan in place. In the Mediterranean, Regulation (EU) 2018/153 laying down *de minimis* exemptions (only) for certain fisheries targeting small pelagics will also expire at the end of 2020. While the legal basis is different[3], the scientific assessment process is identical to the cases listed above.

Article 15(5) does not stipulate a specific period of validity as was the case with Article 15(6).

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[1] Regulation (EU) 1380/2013

[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

[3] Under Article 15(7) CFP, the Commission may adopt delegated act laying down *de minimis* exemptions only. While no joint recommendation is formally required, the MS should however provide the scientific evidence justifying the exemptions.

The STECF has reviewed the Joint Recommendations prepared by the regional groups of MS annually since 2014-2018 on fisheries subject to the LO in the subsequent year. The implementation of the LO has entered fully into force as of 1 January 2019. STECF is requested through this working group to review and evaluate the MS Joint Recommendations requesting either additional or continued (where the delegated acts expire in the end of 2020) exemptions for 2021.

Joint Recommendations on Technical Measures (Regulation)

All amendments, supplements, repeal or derogations from technical measures will be based upon the Technical Measures Regulation (Regulation (EU) 2019/1241) adopted in August 2019, Article 15. 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.

It was scheduled for 2020 to have specific dedicated working groups for these tasks; however, the current situation regarding COVID-19 impeded the organisation of these working groups. In order to have the necessary continuity, it is requested now to STECF to assess the Joint Recommendations that may be submitted.

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 elements, STECF should also review additional information supplied to support several of the exemptions granted for 2020 but with the provision that the Member States concerned should submit further data to the Commission to allow STECF to further assess these particular exemptions.

Technical measures

The expected Joint Recommendations will cover 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.

Terms of Reference

Based on the previous evaluations of the STECF, suggested structure of the next STECF evaluation, STECF PLEN 19-01 on temporary *de minimis* exemptions, the Joint Recommendations that will be submitted by Member States regional groups, the following draft terms of reference are proposed:

Request to the STECF

STECF is requested to:

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

a) *Exemptions agreed for 2020 on the basis of high survivability where there was a requirement for further information to be supplied. 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 2020 where there was a requirement for further information to be supplied. 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 the Joint Recommendations submitted on the basis of the Technical Measures Regulation will be reviewed in this same EWG, STECF is also requested to:

3. 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.

4. 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.

STECF Response

General observations

The report of the Expert Working Group 20-04 represents the findings of the meeting convened to review the joint recommendations (JR) from Member States regional groups for the implementation of the landing obligation (LO) in 2021 and in some cases beyond 2021. 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 (DA)) in accordance with Article 15.6 of the Common Fisheries Policy[4]. These elements are: definitions of fisheries and species; de minimis and high survivability exemptions; setting of minimum conservation reference sizes (MCRS); additional technical measures to implement the landing obligation; and the documentation of catches. EWG 20-04 reviewed the new or amended joint recommendations from the North Sea, North Western waters (NWW), South Western waters (SWW), Baltic Sea. For the Mediterranean, the different regional groups (SUDESTMED, PESCAMED and ADRIATICA) did not send Joint Recommendations formally speaking (because the legal basis is different for the de minimis exemptions) but submitted additional supporting information relating to existing de minimis exemptions for small pelagic species (i.e. anchovy, sardine, mackerel and horse mackerel). No joint recommendations were received for the Black Sea.

Improvements in selectivity

STECF notes that while the avoidance of unwanted catch through improved selectivity or other means should be the primary focus in implementing the LO, relatively few measures aimed to increase selectivity were contained in the joint recommendations. While recognising that modifying selectivity can result in some reductions in revenue, especially in the short term, such reductions should be viewed in the broader context of stock recovery in the medium-term, with expected associated gains in stocks and catches, and reduced risk of choke events.

Reporting of catch data

There is a need to maintain and improve the collection and reporting of catch (landings, unwanted catch and discards) data. If the data reported do not reflect the actual removals, this will have a significant impact on the quality of scientific advice and may compromise the achievement of the MSY objective. This potential for poor quality catch data is particularly true for species and fisheries where a de minimis exemption is granted as there is a risk that the volume of unwanted catch discarded may be substantially higher than that permitted. For high survival exemptions, this risk is mitigated to some extent by deducting the estimated dead discards associated with the exemptions from the advised catch prior to agreeing on a TAC. As STECF has pointed out previously, monitoring all catches using onboard measures such as Remote Electronic Monitoring (REM or EM) have been applied in several fisheries around the world and have shown to be an effective way to monitor the LO to generate catch evidence for science and compliance.

Review of existing exemptions

EWG 20-04 noted that many exemptions were put in place under discard plans agreed from 2015-2018. STECF notes that it would be appropriate and timely for regional groups and the

[4] 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 (OJ L 354, 28.12.2013, p. 22)

Commission to review such exemptions and determine whether they have been effectively enforced and effective, whether the original STECF observations remain valid or whether the exemptions require amendment or are still required, given likely changes in catch patterns, gears used, vessels involved and uptake. This is particularly the case for exemptions included under the pelagic discards plans for the NWW, SWW and North Sea, which came into force in 2015 and were renewed in 2018 until the end of 2020. The exemptions included under these plans have not been subject to any further assessment by STECF since the originally assessment reported in STECF PLEN 14-02.

Data and information in support of discard plans

EWG 20-04 recognises that providing data and information in support of some of the exemptions can be challenging due to the nature of the data required. Regarding the 2020 joint recommendations, however, there are many cases where the information and data supplied is not species and/or fishery specific, and the same studies and assumptions are used to support multiple exemptions. In some cases, no supporting information was provided in support of proposed exemptions. Without species- and fishery-specific data and information, there is no means to evaluate the likely impact of proposed exemption or even whether the exemption meets the conditions for de minimis or high survival.

Representative data

In many cases the supporting information for the 2020 joint recommendations are based on DCF data submitted by Member States for the period 2014-2016, which are held in the publicly-available STECF FDI database. Such data may not be representative of the most recent catches in the fisheries concerned and consequently estimates of the potential impact of proposed exemption may be erroneous. However, more recent catch data should be available from DCF sampling carried out by the national research institutes in Member States and its use would permit a more meaningful assessment of potential impacts.

Observations on the review process

STECF recognises that this year 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 for discard plans. Notwithstanding that such challenges have largely been successful addressed, in recent years the process from assessment of the joint recommendations by the EWG to provision of the final advice by STECF has become constricted into a very short period.

In 2020, EWG 20-04 met from the 18-22 May. Following the EWG meeting, DGMARE invited Member States to submit supplementary information on each exemption evaluated by the EWG. Member States were given 5 days to provide this information. The supplementary information received by DG MARE from Member States was compiled and reviewed under contract (STECF contract 2056) between 8 and 12 June and the reviewer's comments were incorporated into Table 1.2 of the EWG 20-04. The final report of the EWG was submitted to DG MARE on 12 June.

As in previous years, there was limited time for Regional Groups to respond to any serious gaps identified by the EWG. Any additional information provided was primarily fishery information or provision of missing catch data. However, as in previous years, in many cases what the EWG identified as missing from the supporting evidence is more substantive information which can only be collected from scientific trials or through dedicated studies. Therefore, in most cases, the additional information supplied did not influence the conclusions made by STECF.

STECF acknowledges the steps that DGMARE needs to complete to convert the joint recommendations into discard plans and the time pressure to ensure the process is completed by the end of the year. Nonetheless, STECF suggests a review of the whole process would be useful to identify where improvements could be made.

Observations on de minimis exemptions

Disproportionate costs

STECF notes presenting appropriate information to support *de minimis* exemption based on disproportionate costs is challenging, although necessary to allow for an evaluation to be carried out. The purpose of economic analyses to support a *de minimis* exemption is to understand the scale, or proportionality, of the challenges in terms of lost revenue faced by the group of vessels in complying with the obligation to land all catches of those species subject to the LO.

A range of economic analyses to estimate the costs that would be incurred if the requested *de minimis* exemptions are not granted have been provided together with the 2020 joint recommendations. In fact, most (> 90%) of the proposed *de minimis* exemptions are based on such analyses and the NWW, SWW and North Sea have taken on board the suggestions made by STECF in 2019 on formulating such requests (STECF PLEN 19-01). They demonstrate that the potential increase in workload in terms of time and operational costs and that due to storage limitations vessels may be forced to cut short fishing trips causing loss of income. However, STECF stresses that there is no way to objectively judge whether such costs are disproportionate. Simply stating that handling, storing and landing unwanted catches has an associated cost, is not sufficient to demonstrate that such costs are disproportionate. Logically, in line with the objectives of the landing obligation, priority should be given to improving selectivity and the introduction of avoidance measures to reduce the levels of unwanted catches and thus, reduce the costs for handling such catches.

EWG 20-04 acknowledges the detailed economic analysis provided by the SWW Member States Group on the economic viability of unwanted catches that are subject to landing obligation in SWW. This employs a different methodology than previous studies to measure disproportionate costs of handling unwanted catches based on the loss of opportunity costs arising from the removal of *de minimis* exemptions. EWG 20-04 did not have the relevant economic expertise to thoroughly review the approach taken and suggests a more detailed review be carried out to validate the methodology, input assumptions and results. STECF agrees that this point is comprehensive and is reconsidered specifically before the next EWG.

Estimating de minimis discard volumes:

Regional groups have used a variety of ways to estimate potential *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 unwanted catches (e.g. Greater silver smelt and boarfish in the NWW and industrial species bycatch in demersal fisheries the North Sea), catches of all species from the entire fishery or fisheries have been used as the basis for estimating the *de minimis* volume. In such cases, the permitted *de minimis* volume of the species under the exemption is much higher than would have been the case if just the catches for that species in that fishery were used, thus making the exemption largely unconstrained with no incentive to reduce unwanted catches.

Relationship between the estimated volume of unwanted catch and the estimated de minimis discard volume

For many proposed exemptions, the relationship between the *de minimis* volume requested and the actual level of unwanted catches is unclear from the information provided to support the exemption. In some cases, the estimated *de minimis* volume is expected to permit all unwanted catches of a species to be discarded which is counter to the rationale for the landing obligation. Such cases tend to be for fisheries for which the volume of unwanted catch of the species in question are small. In other cases, the estimated *de minimis* volume accounts for only a small part (typically about 5%) of the unwanted catches and the supporting information does not

indicate the measures, if any are to be taken to reduce the remaining (typically 95%) unwanted catches.

In cases where the unwanted catch of species subject to the LO 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 of such species 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.

Existing de minimis exemptions for depleted stocks

There are several existing exemptions that are not time limited but apply to stocks that are in a depleted state. These are whiting in the Celtic Sea (Article 8(1a) of the NWW discard plan) and cod in the North Sea (Article 10(e) of the North Sea discard plan). STECF was not requested to assess assessment of these exemptions and no new information was provided by the relevant Regional Groups. it is imperative that measures be taken to reduce the level of unwanted cod catches in the fisheries concerned by these exemption and rigorous monitoring of whiting and cod catches discarded under the exemptions ensured.

Control issues

There is a risk 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. The implications of such practices are that data quality will deteriorate and scientific advice for fisheries management will be less reliable, because the unmonitored part of the fishing mortality cannot be accurately estimated.

Observations on high survivability exemptions

Assessing high survivability

Assessing what constitutes high survivability is problematic, which is made more complex by the limited information available and the variability in the available survival estimates. What is clear, is that there are a wide range of factors that can affect survival, and these are likely to be the primary cause of the high variability observed across the studies. However, identifying and quantifying such factors is problematic due to the relatively limited species-specific information and differences between experiments including timing, season, environmental conditions, gear handling and catch processing. This means that passing judgment on the representativeness of individual or limited range of studies as an indicator of discard survival across an entire fishery is difficult given the variety of factors that can influence survival and how such factors may vary in time even within a fishery.

Evidence from survival studies

Some trends are emerging from the survival evidence provided to support exemptions based on survivability. Most proposals for exemptions in demersal fisheries have continued to focus on a few species, such as Norway lobster, plaice, sole and skates and rays. Studies on these species are indicating that there can be substantial differences in overall discard survival between gear types, whereby otter trawl fisheries generally have higher survival levels compared with beam (including pulse) trawl fisheries. The species most studied to date is plaice. Several studies on plaice have shown that discard survival was lower when more Norway lobster were caught simultaneously with plaice. Also, season has been identified as an influencing factor in several studies, with higher plaice survival observed in winter months when seawater and air temperatures were lower. Further information on factors shown to influence discard survival has

been collated by the ICES Working Group on Methods to Estimate Discard Survival (ICES, 2020). A meta-analysis of the relative importance of the factors that influence discard is likely to prove informative in assessing future proposals for exemptions to discard based on high survival.

Vitality data

Vitality data are increasingly being used in support of high survival proposals. This is due to the relative ease and low cost of collecting such data, compared with direct discard survival observations. Information on the 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 condition and survival probability can be established by collecting survival estimates and vitality data in combination. Some studies have demonstrated, within a fishery, that fish assessed at different vitalities have significantly different survival probabilities. This suggests that there could be a potential for using vitality as a proxy for survival. However, the relationship between assessed vitality and survival probability of each species studied varies between fisheries and studies. STECF concludes that at this time, there is still insufficient evidence to confidently use vitality as a proxy for discard survival for fisheries other than those from which the relationships between vitality and survival were derived.

Extrapolating survival estimates between fisheries and sea basins

There are numerous exemption requests where the supporting evidence is derived from the same scientific study. There are examples for which a single study initially produces a robust estimate of discard survival in a localised fishery. This is then applied to the whole region; and once established, the exemption is extended to other regions, based on technical similarities between fisheries. The result of this incremental stretching of the evidence is that the fate of a few hundred fish in a local fishery can provide the basis for exemptions for many fisheries across different regions and this is not defensible scientifically. Knowledge of the factors influencing discard survival needs to increase and improve before we can be confident in extrapolating discard survival evidence much beyond the conditions under which it was collected. With a better understanding of the influence of these factors, only then data on the technical, biological and environmental conditions associated with relevant fisheries could be provided by Member States (some of these data may be available through observer programmes), to demonstrate the comparability between the fisheries requesting the exemption and the fisheries from which discard survival estimates have been generated. This knowledge, alongside further studies to directly observe discard survival, would help assess the soundness of extrapolating survival rates between fisheries.

Additional conditions for high survival exemptions

Several high survival exemptions for plaice and sole are linked to conditions such as restricting the exemption to fishing at certain depths, tow durations and to specific groups of vessels, or the use of modified fishing gears. While such factors may influence discard survival, there is no evidence that these conditionalities are being applied in practice or enforced by Member States. There is thus a need to define a proper balance between identifying handling factors that can increase survival and considering whether their implementation can effectively be regulated and controlled. The granting of the exemption should be conditioned on such enforcement measures.

Exemptions linked to roadmaps

Several survivability exemptions – plaice and rays and skates – are linked to a roadmap setting out work planned to develop survival estimates and accompanying measures to increase survivability. While the response to roadmaps has been positive and most of the new research provided relates to such roadmaps, there is no explicit reporting against the various steps of the

roadmaps, which makes it difficult to assess progress. Structured reporting of the different tasks and their objectives as set out in the roadmaps would enable a more efficient and robust evaluation process. Moreover, it is noted that the timelines and specific objectives for the roadmaps are sometimes unclear and these need to be set out in definitive versions of the roadmap documents. This will assist member states in understanding the commitments made and will enable robust evaluations of the outputs.

Discard rate and discard mortality

It is vitally important to re-emphasise the need to consider survivability in the context of the discard rate for the fishery seeking an exemption (STECF 17-02). In particular, medium discard survival rates in high discarding fisheries still lead to high mortality of discards (high rates of dead discards). STECF has also previously concluded (STECF 19-02) that where exemptions to discard are in place, unless surviving discards are accounted for in stock assessments when dead discards are discounted for in TAC setting, the actual fishing mortality will not match the agreed catch level. STECF re-iterates and stresses the need for this to be discussed in the assessment forums for stocks with survival exemptions.

Provision of supporting information: STECF has previously published a template for the provision of supporting evidence to assist the regional groups (STECF EWG 13-23 and EWG 16-10). These have been further refined and expanded herein Annex I of the EWG 20-04 report, together with a description of the critical review process that is applied to assess the quality of the discard survival estimates based on the ICES best practices guidance (Annex II).

Observations on technical measures

While in previous years, some proposals for exemptions were predicated on the use of selective gears, no such exemptions were proposed in the 2020 JRs, other than existing exemptions which already were linked to the use of a specific selective gear. Uptake of selective gears in most regions remains extremely low even in fisheries where unwanted catches remain high. Other than in the North Sea, which largely moved existing measures into a new JR for technical measures, virtually no new measures have been proposed for 2020.

Even more, STECF notes that there seems to be a notable drop-off in research and testing of selective gears in most regions now, even though the levels of unwanted catches continue to be high in some fisheries. This decline in selectivity research is concerning.

STECF acknowledges that while extensive work has previously been carried out on selectivity, for some regions, this work has been largely uncoordinated and not necessarily targeted at the right fisheries. Building on work carried out in the H2020 Discardless project and previous analysis by STECF (STECF 18-02), a review of the work completed to identify what works and what does not, along with detailing the gaps in knowledge would help channel further experiments into the appropriate fisheries. This review should focus on fisheries for which *de minimis* or survivability exemptions are already in place and where improving selectivity may reduce the need for such exemptions.

Observations on joint recommendations

In accordance with the Terms of reference, the EWG 20-04 reviewed a combination of existing exemptions for *de minimis* and high survivability which were granted on a temporary basis for one year until the end of 2020 for which, the Commission requested additional information from Member States, together with new exemption requests on grounds of *de minimis* and high survivability conditionalities.

The number of exemptions proposed in the JRs for evaluation by EWG 20-04 was comparable with the previous submissions in 2019 (EWG 18-06, STECF 18-02). The number of individual exemptions proposed for introduction or continuation in 2021 was 55 compared with 67 for 2019 (STECF 19-08). The number of recommendations for exemptions by type and region are summarised in Table 1.1.

Table 1.1 Number of recommendations by type and region evaluated by EWG 20-04

Region	High Survivability	*De minimis*
North Sea	7	9
NWW	4	9
SWW	3	19
Baltic	1	-
PESCAMED	-	1
for SUDESTMED	-	1
ADRIATICA	-	1
Total	**15**	**40**

Main findings

The main findings in relation to each proposed exemption by region are given in Table 1.2 a-d.

Tables 1.2.a-e contain the following:

a. the main findings of the EWG 20-04;
b. 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;
c. the reviewer's comments on the supplementary data and information provided by Member States;
d. the comments arising from the STECF review of the EWG 20-04 report

Table 1.2a. Main findings of the STECF EWG 20-04, summary of additional information received relating to exemptions presented and STECF Conclusions: **North Sea**.

De minimis	
Exemption	Whiting and cod below the minimum conservation reference size by vessels using bottom trawls or seines with mesh size 70-99 mm in ICES divisions 4a and 4b.
Main findings of EWG 20-04	Limited new information is provided. The arguments presented regarding disproportionate costs for handling unwanted catches are based on previously submitted information. They are generic and not specific to the relevant fisheries, accepting that there are indications that the impacts are quite significant in terms of disproportionate costs. The selectivity information provided has also previously be used to support this, and other exemptions. Many of the studies date back to 2014 and earlier, noting one new study is ongoing. The de minimis volume requested covers only a part of the unwanted catches in the fisheries and improving selectivity in the fisheries should remain the priority. Only partial information on catches and fleets are provided. The supporting information supplied refers mainly to area 4c and 7d and for the French fleet. It is not clear how representative this information is to areas 4a and 4b, or the Dutch and German fleets availing of this exemption. The actual amount of de minimis being requested should be clarified.
Supplementary information provided to the Commission post EWG 20-04	The following supplementary information was received from Member States: DE – Germany provided additional information in May 2019 regarding this exemption. Germany has provided up to date landings and discard data for whiting and cod in this fishery in the current JR. Germany sees the information provided by France as sufficiently representative for the German fleet. In recent years, the German TR2 mixed demersal fishery operates exclusively in divisions 4b and 4c with similar trip lengths (average 5.5 days) and the vessels catch a similar species assemblage. In regulation 2019/2238 the amount of de-minimis allowed is only specified for 2020 (6%). The JR and delegated act (DA) keeps the 6% also for 2021-2023 while in the annex from France the amount is reduced to 5% from 2021 onwards. Also, for cod a reduction from 2% to 1% de-minimis is proposed. Germany will not insist on a certain percentage if the percentage is in line with article 15 (5c) of regulation (EU) No 2013/1380. DK - Not relevant for DK fisheries FR - Indeed, it's written in the DA that the de minimis is 6 % of the total annual catches of whiting and cod; the maximum amount of cod that may be discarded shall be limited to 2 %. In the annex France had asked for a de minimis of 5% with the maximum amount of cod that may be discarded limited to 1%. =>Given the current state of the cod stock, France considered it relevant to ask for a 5% de minimis with a limitation of 1% of cod (for both exemptions for whiting and cod) NL - NL has provided data in 2019 and also in the JR for 2020. In the annexed document the data is provided once again. This for the entire area 4. SE – Not relevant for SE fisheries

	Reviewer's Comments *The supplementary information provided is largely qualitative and/or for clarification and does not affect the main findings of the EWG given above.*
STECF Comments	There is evidence of increased costs associated with handling and storing unwanted catches in the relevant fisheries, but this is not specific to cod and whiting and is based on previously-submitted information. Evidence that landing unwanted catches has an associated cost, is not sufficient to demonstrate those costs are disproportionate. Improving selectivity in the relevant fisheries should be the priority as this will reduce the costs for handling unwanted catches. It should also be noted that according to ICES, fishing pressure on the North Sea cod stock is above FMSY, Fpa and Flim; spawning stock size is below MSY Btrigger, Bpa, and Blim. Therefore, it is imperative that measures be taken to reduce the level of unwanted cod catches in the fisheries concerned by this exemption and that if the exemption is granted rigorous monitoring of cod catches discarded under the exemption is carried out.
Exemption	Whiting below the minimum conservation reference size by vessels using beam trawls with mesh size 80-119mm in ICES subarea 4.
Main findings of EWG 20-04	The information provided indicates that the costs of landing unwanted catches of whiting are significant and would require additional labour on board. However, given the de minimis volume would cover only a small part of the overall unwanted catches, the costs for handling the residual unwanted catches not discarded under the exemption would remain regardless of whether the exception is in place or not. The studies only cover the Dutch fleet and it is not clear whether it is representative of other fleets availing of this exemption. Calculating the de minimis based on catches of sole and plaice, means 100% of unwanted catches below mcrs can be potentially discarded. The actual amount of de minimis volume should be clarified as there are different percentages specified in the delegated act (2%) compared to the JR (3%).
Supplementary information provided to the Commission post EWG 20-04	The following supplementary information was received from Member States: BE - In Belgium 41 vessels were active in 2019 in ICES division 4b and 4c (TBB_DEF_70-99). The percentage of the de minimis in the JR prevails in this request, this is 3%. DE - The following number of German vessels used beam trawls with mesh size 80-119mm for at least one trip in a given year (also provided in Annex_DEU_additional_information.docx): 2017: 17 2018: 15 2019: 43 Regarding the amount of de-minimis allowed, 2% are mentioned in regulation 2019/2238. Germany will not insist on a certain percentage. DK - Not relevant for DK fisheries FR - Not relevant for FR fisheries

	NL - "With regards to possibilities for improvement of selectivity, the research that has been done in fisheries with beam trawls has been extensively reported in the exemption request and annex for the exemption for plaice in beam trawl fisheries. In particular, research that was done by increasing mesh size from 80mm to 90mm showed clearly, that this led to a larger loss of marketable sole than a reduction of discards. Improving selectivity for whiting in fisheries with BT2 is therefore very difficult. (Reference: Thomas Brunel, Ruben Verkempynck, Chun Chen and Jurgen Batsleer, Effect on future development of sole and plaice of changing mesh size from 80mm to 90mm in the beam trawl fishery, Wageningen Marine Research report C016/19) The de minimis amount requested is 3%. The delegated act must be adapted accordingly. Number of NL vessels: 2017: 42 2018: 41 2019: 43 SE – Not relevant for SE fisheries *Reviewer's comments* *The supplementary information provided by the Netherlands clarifies the requested de minimis percentage for whiting as 3% of the total combined catches of plaice and sole in fisheries with beam trawls 80-119mm.* *Other supplementary information provided does not affect the findings of the EWG 20-04 given above.*
STECF comments	There is evidence of increased costs associated with handling and storing unwanted catches in the relevant fisheries, but this is quantified at the fleet level and not specific to whiting. Evidence that landing unwanted catches has an associated cost, is not sufficient to demonstrate those costs are disproportionate. Improving selectivity in the relevant fisheries should be the priority as this will reduce the costs for handling unwanted catches.
Exemption	Horse mackerel in the demersal mixed fisheries with bottom trawls with a mesh size between 80-99mm (TR2, BT2) in ICES subarea 4
Main findings of EWG 20-04	Limited new information is provided. The arguments presented regarding disproportionate costs for handling unwanted catches are based on previously submitted information. They are generic and not specific to the relevant fisheries, accepting that there are indications that the impacts are quite significant in terms of disproportionate costs. The selectivity information provided has also previously be used to support this, and other exemptions. Many of the studies date back to 2014 and earlier. The supporting Annex indicates unwanted catches of horse-mackerel are low (< 3%) and highlights that selectivity for horse mackerel is already high. The evidence provided only partially supports this contention. Only partial information on catches and fleets are provided and in the case of the supporting annex, the data presented dates to 2016 or early. The supporting information supplied refers mainly to area 4c and 7d and for the French fleet. It is not clear how representative this information is for other

	fleets availing of this exemption.
Supplementary information provided to the Commission post EWG 20-04	The following supplementary information was received from Member States: DE - The selectivity for horse mackerel is already high in demersal fisheries with>= 80mm mesh size. A further increase of mesh size would lead to loss of catches from important target species (i.e. sole) in 4c and 4b where the German TR2 and BT2 fleets operate (similar to the French fleets). DK - Not relevant for DK fisheries FR - Given the data provided, France suggests asking for a de minimis for TR2 only and for the area 4b and c as there is no data provided for BT2 and for area 4a. SE – Not relevant for SE fisheries *Reviewer's comments* *The supplementary information on selectivity for horse mackerel from DE, merely re-asserts that unwanted catches of horse-mackerel are low (< 3%) and that selectivity for horse mackerel is already high. Hence the findings of the EWG 20-04 given above are unaffected.* *The Commission may wish to note the suggestion from France and discuss with the relevant regional group.*
STECF comments	There is evidence of increased costs associated with handling and storing unwanted catches in the relevant fisheries due to an estimated increase in sorting time of unwanted catches on board of 30-60% depending on vessel size. This is not specific to mackerel and horse mackerel. Evidence that landing unwanted catches has an associated cost, is not sufficient to demonstrate those costs are disproportionate. Improving selectivity in the relevant fisheries should be the priority as this will reduce the costs for handling unwanted catches.
Exemption	Mackerel in the demersal mixed fisheries with bottom trawls with a mesh size between 80-99mm (TR2, BT2) in ICES subarea 4
Main findings of EWG 20-04	The EWG observations are the same as those for horse mackerel.
Supplementary information provided to the Commission post EWG 20-04	The following supplementary information was received from Member States: DE - The selectivity for mackerel is already high in demersal fisheries with>= 80mm mesh size. A further increase of mesh size would lead to loss of catches from important target species (i.e. sole) in 4c and 4b where the German TR2 and BT2 fleets operate (similar to the French fleets). DK - Not relevant for DK fisheries FR - Given the data provided, France suggests asking for a de minimis for TR2 only and for the area 4b and c as there is no date provided for BT2 and for area 4a. SE – Not relevant for SE fisheries *Reviewer's comments* *The supplementary information on selectivity for mackerel from DE, merely re-asserts that unwanted catches of horse-mackerel are low that selectivity for horse mackerel is already high in demersal fisheries with >=80mm mesh size. Hence the findings of the EWG 20-04 given above are unaffected.*

	The Commission may wish to note the suggestion from France and discuss with the relevant regional group.
STECF comments	There is evidence of increased costs associated with handling and storing unwanted catches in the relevant fisheries due to an estimated increase in sorting time of unwanted catches on board of 30-60% depending on vessel size. This is not specific to mackerel and horse mackerel. Evidence that landing unwanted catches has an associated cost, is not sufficient to demonstrate those costs are disproportionate. Improving selectivity in the relevant fisheries should be the priority as this will reduce the costs for handling unwanted catches.
Exemption	Sprat, sandeel, Norway pout and blue whiting of all species under the landing obligation caught in the demersal mixed fisheries with trawls in ICES division 3a and ICES subarea 4
Main findings of EWG 20-04	No additional documentation has been provided to support the continuation of this exemption, other than updated catch information. The justification that the catches are insignificant in the demersal fisheries and options to improve selectivity have been exhausted are not supported with quantitative evidence. Intuitively, achieving additional selectivity improvements would be difficult to achieve in such fisheries and the costs for sorting would be high given the nature of the species involved.
Supplementary information provided to the Commission post EWG 20-04	The following supplementary information was received from Member States: DK - As already mentioned in the JR it is evident that mesh sizes of 120mm will be selective in order to avoid fish normally caught with 35 og 70mm. Neither we nor our scientific institute can see the reasoning behind expensive studies to demonstrate this self-evident fact. The insignificance of catches observed in the fisheries data provided – also in comparison to the individual stocks of industrial species. FR - Not relevant for FR fisheries *Reviewer's comments* *The assertion from DK relating to mesh sizes greater than 120 mm is not in line with the request in the JR which relates to the demersal fishery using gears with mesh sizes above 80 mm and fishery for Northern Prawn using gears with mesh sizes above 35 mm in ICES division 3a and 32 mm in ICES subarea 4 and a fish retention device fitted with a sorting grid with a maximum bar spacing of 19mm or equivalent selectivity device (OTB, OTM, OTT, PTB, PTM, SDN, SPR, SSC, TB, TBN).* *The supplementary information provided does not affect the findings of the EWG 20-04 given above.*
STECF comments	STECF agrees with the main findings of the EWG 20-04.
Exemption	Ling in the demersal fishery for hake with longlines in ICES subarea 4
Main findings of EWG 20-04	No additional documentation has been provided to support the continuation of this exemption, other than updated information on the number of vessels involved in the fishery. The arguments regarding difficulties in improving selectivity are credible given the nature of the fisheries and the de minimis volume is estimated as small compared to overall ling catches. 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 not been provided. No attempt has been made to quantify the potential scale of losses that would be incurred if the de minimis exemption was not granted.
Supplementary information provided to the Commission post EWG 20-04	The following supplementary information was received from Member States: DE - Germany has currently no longline fisheries for hake. DK - Not relevant for DK fisheries FR - As already mentioned in the annex, it is known that longlines is already a very selective gear. Therefore, France cannot see the reasoning behind expensive studies to demonstrate this fact. Moreover, STECF database indicates that, the discard ratio of TAC species between 2013 and 2016 is around 0.3%, meaning that the longlines fisheries are highly selective. According to the French observer program, there is no discard of hake by French longliners (targeting hake) meaning that this fishery is highly selective. Still, because the minimum size of the hake is 27 cm and the minimum size of the ling is 63cm and despite this level of selectivity, it is possible for longliners to catch some lings below MCRS. There is no quantification of the potential scale of losses as the argument put forward is that it's really to improve the selectivity when there is no discard for the target species. SE – Not relevant for SE fisheries *Reviewer's comments* *The comments from France regarding the selectivity of longlines are intuitive and simply re-assert the statements in the supporting documentation included within the JR.* *The supplementary information provided is largely qualitative and does not affect the findings of the EWG 20-04 given above.*
STECF comments	STECF agrees with the main findings of the EWG 20-04
Exemption	Mackerel, horse mackerel, herring and whiting in the pelagic fishery carried out by pelagic trawlers up to 25 meters
Main findings of EWG 20-04	No additional documentation has been provided to support the continuation of this exemption since the last evaluation of the pelagic discard plan JR's for the North Sea carried out by STECF in 2014. Updated information on the number of vessels involved in the fishery and catch data from French observed data collected under the OBSMER programme has been provided. The information provided indicates that the de minimis is primarily covering unwanted catches of whiting in the fishery. The unwanted catches of herring, mackerel and horse mackerel are reported to be minimal and it is not clear why these species are included in the exemption, if the issue is around unwanted catches of whiting. It is not possible to precisely identify which vessels or trips would be subject to a de minimis exemption from the information given in the JR or whether it is intended that the exemption would apply to specific fishing operations within a given fishing trip. The justification assumes that the unwanted catches are insignificant in the pelagic fisheries and options to improve selectivity have been exhausted.

	There is no quantitative evidence to support these assertions although several French selectivity projects are referenced, which contain limited information on the specific species covered by the exemption. Intuitively, 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 but this cannot be fully assessed from the information supplied. The relatively high number of vessels compared to the low volume of de minimis brings into question of monitoring the exemption.
Supplementary information provided to the Commission post EWG 20-04	The following supplementary information was received from Member States: DE - Germany has currently no vessel below 25m targeting small pelagic fish. DK - Not relevant for DK fisheries NL - No additional information. NL does not have small pelagic vessels. SE – Not relevant for SE fisheries *Reviewer's comments* *The supplementary information provided is largely uninformative and does not affect the findings of the EWG 20-04 given above.*
STECF comments	STECF agrees with the main findings of the EWG 20-04.
Exemption	Blue-whiting for industrial vessels using pelagic trawls in ICES subarea 4
Main findings of EWG 20-04	Discrepancies between the figures in the discard table (from 0,06% in 2013 to 2% in 2016) and the exemption request (5 and 6 %) make it difficult to evaluate the request. There does not appear to be any relationship between the level of de minimis requested and the levels of unwanted catch (reported to be 0.1% in the table referred to above). The actual levels of resulting de minimis is many times greater than the reported level of unwanted catch. No documentation is provided to support the assertion that selectivity is difficult to achieve on board the factory vessel covered by the requested exemption. Similarly, there is limited information to demonstrate that the costs of handling unwanted catches are disproportionate. There is no quantitative evidence to support the assertion that options to improve selectivity have been exhausted even though, intuitively, achieving additional selectivity improvements would be difficult given the technical and sanitary specificities of the factory trawler involved.
Supplementary information provided to the Commission post EWG 20-04	The following supplementary information was received from Member States: DK - Not relevant for DK fisheries FR - France would like to stress out that STECF data (from 2013 to 2016) are not quite relevant as they take into account all European pelagic trawler and this exemption will only concern one industrial French pelagic trawler targeting blue-whiting. The main objective of this exemption is to have a level playing field between sea-basins (NWW and the North Sea). The exemption was already granted in the NWW (5% corresponding to the discard level) and it is why the same exemption is requested in the North Sea. France does not understand this second comment as the addition information sent for the below 25 m fleet concerned the above-mentioned

	exemption and not this one. Therefore, we totally agree that these elements are not relevant with this request. SE – Not relevant for SE fisheries *Reviewer's comments* *Paragraph 2 of the supplementary information provided by France above, relating to additional information for the under 25m fleet is unclear. While it is clear that the statement that the exemption is being requested to provide a level playing field between sea basins, the remaining supplementary information provided does not affect the findings of the EWG 20-04 given above.*
STECF comments	STECF agrees with the main findings of the EWG 20-04.
Exemption	Herring for vessels using bottom trawl and seine (OTB, OTT, PTB, TBB, SSC, SPR, SDN, SX, SV) with mesh size of 80-99mm to catch herring in ICES subarea 4
Main findings of EWG 20-04	The information provided indicates that the costs of landing unwanted catches of herring are significant and would require additional labour on board. However, given the de minimis volume would cover only a small part of the overall unwanted catches, the costs for handling the residual unwanted catches not discarded under the exemption would remain regardless of whether the exception is in place or not. There is no indication of any measures to be taken to reduce these residual unwanted catches. The supporting information also provides a review of selectivity trial projects carried out since 2008. The results presented while designed for various species show reductions of unwanted catches including herring (up to 39%) but also corresponding losses of marketable catch associated with most of the gear modifications tested. Because of these losses, there seems a marked reluctance to use any of the gear options tested.
Supplementary information provided to the Commission post EWG 20-04	No supplementary information was provided.
STECF comments	STECF agrees with the main findings of the EWG 20-04.
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 20-04	The estimated discard survival estimates described here are variable between trips. The trips varied in time and area, and therefore in environmental conditions, by vessel, gear characteristics and catch composition. It is considered the data should be sampled from a range of vessels that is representative of the relevant fleet. To evaluate the outputs from the roadmap, future submissions should include scientific evidence of the changes in discard survival that have been achieved in a clearer manner. Delegated Regulation 2019/2238 also refers to a roadmap for the Fully Documented Fisheries. Further clarity on the objectives for this are needed before an evaluation can be provided.

	There is currently no timetable for the completion of the roadmap.
Supplementary information provided to the Commission post EWG 20-04	The following supplementary information was received from Member States: DK - Not relevant for DK fisheries FR - Not relevant for FR fisheries NL - See 'FDF Roadmap' document in Annex. This has been supplemented based on the request. (Annex_Additional Information FDF Roadmap 2020_NL.docx) SE – Not relevant for SE fisheries *Reviewer's comments* *While the Annex from the Netherlands relating to the FDF roadmap is informative, it in no way helps with the assessment of survivability of discards.*
STECF comments	The discard survival estimates used in support of the exemption were derived from experiments undertaken in varying conditions and the estimates may not be representative of the fleet to which the exemption is to apply. STECF agrees with the EWG-20-04 assessment and observes that the submission of future evidence to support this proposal should be presented in line with the relevant timelines in the roadmap which sets out the work that is planned to enhance evidence on discard survival.
Exemption	Skates and rays caught by all fishing gears in the North Sea in ICES division 3a and ICES subarea 4 (except cuckoo ray)
Main findings of EWG 20-04	Regarding starry ray in the Dutch otter trawl and flyshoot fishery, even though the proposed rates were adjusted for the commercial conditions of the fisheries of interest, the survival evidence cannot be considered a representative estimate. There is little evidence documenting in which respects pulse trawling could be compared to otter trawling with respect to mode of capture and therefore potential effects on discard survival. Fish caught by Scottish or Danish seining may show similar and relatively high survival, but comparison across families, i.e., flatfish and rays, is difficult to support. For thornback ray, blonde ray, spotted ray and undulate ray, survival evidence is deemed relevant for the pulse, beam and otter trawls (80mm) and trammel nets (90mm) in 4c. It is difficult to assess applicability to the other gears/mesh sizes and areas without additional information on the fisheries. The ongoing projects demonstrate the significant effort in addressing data gaps to meet the objectives of the roadmap. A summary table with all studies and fisheries would be helpful for further reports. Reporting against the agreed roadmap should be provided detailing progress against the three main tasks: i) quantifying catches and discards per species and métier; ii) generating discard survival evidence; and iii) stakeholder led adoption of codes of best practice to maximize discard survival.
Supplementary information provided to the Commission post	The following supplementary information was received from Member States: BE - A summary table with an overview of the studies high survivability exemption for skates and rays caught by all fishing gears in the North Sea

EWG 20-04	is annexed (ref Annex S&R overview). Besides, Belgium believes that the document 'Gap analysis' initially added as annex 6.2.2a, gives an overview of which kind of research is conducted on the different species S&R, the area and fishery. The BE research institute also introduced recently a proposal for project Raywatch (short summary in annex). The main objective of this project is to fill a number of important knowledge gaps. The focus is on collecting discard figures and biological parameters (such as height, age, maturity, etc.) of rays through catch monitoring on board commercial vessels. NL - See attached research document that was referenced. (Annex project Raywatch.docx and Annex S&R_overview.docx) *Reviewer's comments* *While the documents referred to by BE and NL are informative they do not provide information that affects the findings of the EWG 20-04.*
STECF comments	STECF agrees with the EWG 20-04 assessment and notes that this wide-ranging exemption still has many evidence gaps. Continued work following the roadmap will potentially address these gaps in the coming years. The latest evidence indicates survival varies across species and fisheries, and larger individuals and species caught by inshore and static gears have the highest rates of survival. STECF notes that the outputs of the ICES Workshop on incorporating discards into the assessments and advice of elasmobranch stocks (WKSHARK5) will provide useful context for this exemption. STECF also agrees with EWG-20-04 that the submission of future evidence to support this exemption should be presented in line with the timelines in the roadmap which sets out the work that is planned to enhance evidence on discard survival.
Exemption	Cuckoo Ray caught by all fishing gears in the North Sea in ICES division 3a and ICES subarea 4
Main findings of EWG 20-04	Cuckoo ray is rarely caught in the North Sea in the Belgian and Swedish fisheries. No additional information was provided for the other fleets to evaluate the extent of the exemption. There is currently one published study in area 7e (Catchpole et al., 2017), but it is difficult to assess applicability to the other area/gear combinations without additional information on the fisheries.
Supplementary information provided to the Commission post EWG 20-04	No supplementary information was provided.
STECF comments	STECF agrees with the EWG 20-04 assessment and observe that evidence from all regions indicates that cuckoo rays display lower survival than larger ray species and there could be zero survival in some fisheries. Further observations from survival experiments are needed to provide reliable estimates of survival rates for cuckoo ray before any definitive judgment can be made. New and ongoing studies (e.g. SUMARIS project), completed in the next 1-2 years across relevant fisheries, and following the ICES guidance, will generate necessary evidence on discard survival levels.

Exemption	Plaice when targeting flatfish or round fish (Bottom trawls with a mesh size of at least 120mm) in ICES division 3a and ICES subarea 4
Main findings of EWG 20-04	The two supporting studies with survival estimates were based on fish caught using a 90mm cod end mesh, compared to the requested exemption that applies to ≥ 120 mm trawls. It is unlikely the survival rate when using a larger codend mesh is lower than the reported rates of 44-75%. Apart from season, two other important factors influencing plaice survival, according to the underlying studies, was air exposure time and whether fish or *Nephrops* was targeted. Air exposure influenced a reported drop in survival to 8% after 60 min air exposure in the summer experiments. 60 minutes was in the 2019 JR also reported to be the average sorting time in the fishery when plaice is targeted. Therefore the 44% summer survival rate in the JR request may not represent the survival rate in the fishery during summer as fleet sorting times can be longer than those observed in the survival study. As this request relates to the >120 mm fleet the effect of *Nephrops* in the catches is a minor issue as these fleets target fish and not *Nephrops*. Information about seasonal fishing patterns and sorting times for the fleet would be beneficial for a better assessment of this request.
Supplementary information provided to the Commission post EWG 20-04	The following supplementary information was received from Member States: DE - Percentage per quarter of German total landings with bottom trawls and mesh size >=120mm in 2019 (area 4 and 3a): Quarter 1: 23% Quarter 2: 32% Quarter 3: 29% Quarter 4: 16% However, given that evidence has been provided for the winter and summer fishery, Germany does not see the real need for further seasonal division. DK – The scientific data already provided shows a high survivability rate and provides evidence on the impact of air exposure. As the data is provided for both the summer fishery and winter fishery, we do not see the need for further seasonal division. Fisheries data has been updated. SE - Quarterly data for 2017 – 2019 attached (Annex Sweden Data.docx). Have no additional information on sorting time available. *Reviewer's comments* *The supplementary information provided does not alter the main findings of the EWG 20-04.*
STECF comments	STECF agrees with the findings of the EWG 20-04 noting in particular that based on current evidence, the survival estimate in summer (44% survival of discards) may be an overestimate.
Exemption	Plaice caught with trawls with a mesh size of at least 90-99 mm equipped with Seltra panel targeting flatfish or roundfish in ICES division 3a, — plaice caught with trawls with a mesh size of at least 80-99 mm targeting flatfish or roundfish in ICES subarea 4

Main findings of EWG 20-04	The two supporting studies with survival estimates are based on fish caught using a 90mm codend mesh. According to the underlying studies, apart from season, two other factors that were shown to influence plaice survival was air exposure time and whether fish or *Nephrops* was targeted. Air exposure influenced a reported drop in survival to 8% after 60 min air exposure in the summer experiments. A large difference in the average sorting time depending on whether plaice of *Nephrops* is targeted was reported. A major target species for the 80-99 mm fleet in the northern North Sea and 3a is *Nephrops*. As this request relates to the part of the fleet that targets fish a definition of vessels targeting flatfish and roundfish would be needed to manage the implementation of this exemption. The request would benefit from a definition of how a directed fishery for flatfish and roundfish can be separated from directed fisheries for other important species in trawls using this mesh size range (e.g. *Nephrops*). This should consider the evidence indicating that more *Nephrops* in the catch reduces the survival of discarded plaice. Such a definition would facilitate the assessment of the likely effects of this exemption on the plaice stock
Supplementary information provided to the Commission post EWG 20-04	The following supplementary information was received from Member States: DE - This relates to the definition of targeted fisheries covered by the next delegated act. Because discussions are ongoing, a definition of directed fishery for flatfish and roundfish is difficult to provide in this short time frame. DK - The Scheveningen group is currently working on definitions for directed fishery. In the meantime a definition could be changed to "white fish, excluding crustaceans (i.e. Lobster and Northern prawn)" FR - France agrees with the DK comments and the suggested definition of fisheries targeting flatfish and roundfish. NL - NL recognizes the difficulty in differentiating between the targeted fisheries. This discussion is taking place at the moment in light of the TM regulation. SE - Catches of *Nephrops* decreases survival of plaice. A formulation which makes it clear from the start of the fishing trip (for fishermen and control authorities) whether the exemption applies or not should be proposed. Difficult to come up with a proposal though. (Sweden mentions to have indicated to swedish fishermen that most of them on most trips to a certain extent target *Nephrops* which means that in most cases the exemption would not apply.) *Reviewer's comments* *The supplementary information provided relates to the definition of fisheries for the purposes of prescribing the exemption in a delegated act. Given that such definitions are on-going, the supplementary information does not alter the main findings of the EWG 20-04.*
STECF comments	STECF agrees with the main findings of the EWG 20-04, noting in particular that because discard survival rates are fishery-specific, a precise definition of the fishery to which the exemption would apply is required.
Exemption	Plaice caught with mesh size 100-119 mm in ICES division 3a and ICES subarea 4

Main findings of EWG 20-04	The two supporting studies with survival estimates were based on fish caught using a 90mm cod end mesh, compared to the requested exemption that applies to 100-119 mm trawls. It is unlikely the survival rate when using a larger codend mesh is lower than the reported rates of 44-75%. Apart from season, two other important factors influencing plaice survival, according to the underlying studies, was air exposure time and whether fish or *Nephrops* was targeted. Air exposure influenced a reported drop in survival to 8% after 60 min air exposure in the summer experiments. 60 minutes was in the 2019 JR also reported to be the average sorting time in the Danish fishery when plaice is targeted. Therefore the 44% summer survival rate in the JR request may not represent the survival rate in the fishery during summer as fleet sorting times can be longer than those observed in the survival study. As this request relates to the 100-119 mm fleet, the effect of *Nephrops* in the catches is probably a minor issue as these fleets primarily target fish and not *Nephrops.* However, the lack of any fishery information hampers the ability to assess survival and fishery compatibility fully. Information about fleets and catches, including discards, for the fleets in all Member States is missing
Supplementary information provided to the Commission post EWG 20-04	The following supplementary information was received from Member States: BE - In Belgium there is no discard information available for OTB vessels in this area –conform DCF. In 2019 there was landed (from ICES division 4b and 4c) 944.459t plaice by 7 vessels OTB_DEF_100-119. DE - Germany provides relevant information in Annex_DE_additional_information.docx DK - DK provided this information. Denmark underlines that keeping the gap could prevent fishermen from moving up from mesh sizes below 100mm. FR - Not relevant for FR fisheries NL - NL has provided additional information on the fishery and catches in attached document. (Annex_Additional information by NL on STECF.docx) SE - Sweden has no vessels and no landings during the period from 2017 to 2019. SE doesn't have separate discard estimates for this mesh size range. *Reviewer's comments* *The supplementary information provided largely relates to fleet catches and does not alter the main findings of the EWG 20-04.*
STECF comments	STECF agrees with the findings of the EWG 20-04 noting in particular that based on current evidence, the survival estimate in summer (44% survival of discards) may be an overestimate.
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 20-04	It remains unclear whether the survival estimates provided from pulse trawling are relevant to this request, given that numbers of pulse trawlers are set to reduce, and likely to be replaced by beam trawlers. The supporting information mentions that research is committed by BE to estimate the survival of discarded turbot caught by beam trawlers in the North Sea in a project ('Survival Monitoring - Overleving Monitoren') that

	aims to improve survival estimates for both plaice and turbot in the beam trawl fishery during 2019-2021. Outputs from this work will enable a more robust evaluation of this proposed exemption.
Supplementary information provided to the Commission post EWG 20-04	The following supplementary information was received from Member States: BE - The Scheveningen Group refers to the annex submitted 4 May with the JR. In this annex Belgium is referring to a project plan. With the ongoing project 'Survival Monitoring - Overleving Monitoren' discard survival estimates of turbot will be generated from samples taken during normal commercial fishing activity. The JR for 2021 does not refer to pulse trawling. DK - Not relevant for DK fisheries FR - Not relevant for FR fisheries NL - The submission in 2019 has indicated a range in survivability of turbot from several different studies including traditional beam trawls (non-pulse). The data from pulse-fisheries are not relevant for the beam trawl fleet in its entirety. BE has indicated its intention to continue survivability work. Turbot is also one of the species that is studied in the context of the pilot project Fully Documented Fisheries implemented by NL. SE – Not relevant for SE fisheries *Reviewer's comments* *The supplementary information provided by Member States does not alter the main findings of the EWG 20-04.*
STECF comments	STECF agrees with the EWG 20-04 that estimated survival rates for discarded turbot are uncertain. Whether estimated rates from one fishery are representative of other fisheries also remains in doubt. The results of the Belgian 'Survival monitoring' project will hopefully provide more robust survival estimates for beam trawl caught turbot.
Exemption	Plaice caught with mesh size 100-119 mm in ICES division 3a and ICES subarea 4
Main findings of EWG 20-04	This is a new request but given its link with other plaice exemptions the same comments as for the other plaice exemptions apply. No additional information is provided.
Supplementary information provided to the Commission post EWG 20-04	No supplementary information was provided.
STECF comments	STECF agrees with the main findings of the EWG 20-04
Exemption	Norway lobster caught with bottom trawls with a cod- end larger than 80mm or with a cod-end of at least 35 mm + species selective grid with bar spacing of maximum 19 mm in ICES divisions 2a, 3a and ICES subarea 4
Main findings of EWG 20-04	It is not clear which fisheries this exemption would apply. Additional information is provided for the Scottish East coast otter-trawl fishery for *Nephrops*. Based on this work, different fishing practices within this fleet contribute to different injury rates which indicate potential for different

	survival rates. Information on the fishery detailing fishing effort, landings, discards and operational characteristics with respect to the fisheries that were studied to quantify discard survival is required. The assumptions made on the survival estimates observed in the east coast fisheries may not be representative for the whole area, no additional evidence has been provided to address this. The request to extend the exemption to the fishery for Northern prawn is not supported without any information on the operational and environmental characteristics of the Northern prawn fishery or discard survival data.
Supplementary information provided to the Commission post EWG 20-04	The following supplementary information was received from Member States: DE - Germany has no fishery for northern prawn. It needs to be specified by STECF which operational characteristics are most relevant to the survival rates. Given that survivability can be influenced by many factors, it is otherwise difficult for MS to ensure that all necessary information is provided. Germany provides relevant information on the fishery and catches in Annex_DE_additional_information.docx. DK - Member States should provide their fishery information. Please find enclosed the Danish data for landings and discard. (Annex_DK_Norway lobster fisheries data DENMARK.docx). Information on number of vessels will follow. As indicated earlier in the group, we have no need to keep the shrimp fishery in the exemption and have no scientific data except for the fishery information provided in the attached doc. FR - Not relevant for FR fisheries NL - NL provides relevant information on the fishery and catches in attached document. (Annex - Additional information by NL on STECF.docx) As stated in the JR, previous evaluations in recent years have indicated that the provided evidence as was robust. SE - The additional information that COM/STECF has requested concerns some areas in 4 and not 3a. That should be pointed out in the reply to COM, in that way it would be easier to focus the evaluation. STECF and COM has previously considered the information for area 3a robust and sufficient. On that basis *Nephrops* survival exemptions for 3a were included in the DA for 2017 (2016/2250 art 4.1.b) without requirements for updates or additional info. *Reviewer's comments* *The supplementary information provided does not include additional relevant information on the survival of discarded Nephrops from the fisheries concerned and does not affect the main findings of the EWG 20-04.*
STECF comments	STECF agrees with the main findings of the EWG 20-04.
Technical Measures	
Exemption	Specific technical measures in the Skagerrak
Main findings of	The specific technical measures in the Skagerrak have been agreed

EWG 20-04	between the EU and Norway and are already included in Annex V, to Regulation (EU) No 2019/1241 (technical measures framework). The main elements have been previously assessed at different occasions by STECF (STECF 15-10 and PLEN 15-02) and their use is linked to existing de minimis and high survivability exemptions in the Skagerrak. Other elements are included in the current discard plan. No new assessment has been carried out as no new information or changes to these measures are included under the joint recommendation. The question relating to which Regulation the detail and definitions should be contained is a matter for the Commission to agree with the Scheveningen Group.
Supplementary information provided to the Commission post EWG 20-04	No supplementary information was provided.
STECF comments	STECF agrees with the main findings of the EWG 20-04
Exemption	The use of the Sep Nep
Main findings of EWG 20-04	STECF has previously concluded that detailed information was provided to support the use of the SEPNEP gear to reduce plaice discards in *Nephrops* fisheries. The case was well presented, and the information provided credible arguments for the use of the gear. It showed plaice discards can be reduced by up to 80% and reduced non-marketable *Nephrops* catches by 53-56%. These conclusions remain valid and in fact further supporting evidence of the effectiveness's of the SEPNEP has been provided with the JR. Based on the information provided the SepNep selectivity device complies with the provisions of Regulation 2019/1241 as an equivalent selectivity device in the context of the technical provisions set out for *Nephrops* directed fisheries (120mm codend or sorting grid with a maximum bar spacing of 35mm) in part B of annex V of Regulation (EC) 2019/1241. This is on the provision that the SEPNEP is used according to the specifications detailed in the supporting documentation. The detailed description of the SEPNEP gear provided would be useful to include as an Annex to the delegated act.
Supplementary information provided to the Commission post EWG 20-04	No supplementary information was provided.
STECF comments	STECF agrees with the main findings of the EWG 20-04
Exemption	Protection of berried European lobster in ICES divisions 3a, 4a and 4b
Main findings of EWG 20-04	A large amount of information has been provided to support the introduction of a prohibition of landing berried lobster. There is compelling evidence in the information supplied to support the introduction of this measure. In other countries, the ban on landing berried lobster is supported with v-notching of berried lobsters prior to returning to the sea.

Supplementary information provided to the Commission post EWG 20-04	No supplementary information was provided.
STECF comments	STECF agrees with the main findings of the EWG 20-04 and supports v-notching of berried females as a conservation tool.
Exemption	Amending the MCRS for European lobster in the Swedish exclusive economic zone in ICES division 3a.
Main findings of EWG 20-04	Limited information is provided to support this request. Given this represents an increase in mcrs it has obvious benefits to stock conservation in combination with the other measures proposed, albeit to a relatively small area. Studies have shown that increasing the mcrs will mean the stock is exploited at a lower intensity, rebuilding is expected over time provided total fishing effort does not increase during the same period. Extending the mcrs to a wider area would increase the benefit to lobster stocks over the wider North Sea and Skagerrak area. It would also avoid having different mcrs applying in different adjacent management areas and create a level playing field for competing fishermen that sell into the same market under different rules.
Supplementary information provided to the Commission post EWG 20-04	No supplementary information was provided.
STECF comments	STECF agrees with the main findings of the EWG 20-04.
Exemption	Seasonal closure for commercial and recreational fishery on European lobster In the Swedish exclusive economic zone in ICES division 3a.
Main findings of EWG 20-04	Limited supporting information is provided to support this request. Given it represents a reduction in fishing mortality albeit to a relatively small area, it is likely to have positive benefits to lobster stocks in combination with the other measures proposed. It is known that density of lobster increases rapidly following bans on fishing in no-take zones (Bergström et al. 2016). However, in the absence of any supporting documentation it is not possible to quantify the potential benefit of the proposed seasonal closure.
Supplementary information provided to the Commission post EWG 20-04	No supplementary information was provided.
STECF comments	STECF agrees with the main findings of the EWG 20-04
Exemption	Prohibition to fish lobster with gears other than lobster pots in the Swedish exclusive economic zone in ICES division 3a
Main findings of EWG 20-04	Limited information is provided to support this request although given it represents a reduction in fishing mortality albeit to a relatively small area, it is likely to have positive benefits to lobster stocks in combination with the

	other measures proposed. It is evident from other countries (e.g. Ireland and Australia) that banning the use of gillnets for targeting crustacean (lobster and crawfish) has had positive impacts on stocks. However, in the absence of any supporting documentation it is not possible to quantify potential benefits of the proposed measures.
Supplementary information provided to the Commission post EWG 20-04	No supplementary information was provided.
STECF comments	STECF agrees with the main findings of the EWG 20-04
Exemption	Derogation to allow fishing in an area closed to fishing with certain gears along the Danish North Sea coast.
Main findings of EWG 20-04	This request represents the continuation of a derogation to the technical measures for sprat fisheries in an area along the Danish North Sea coast "the sprat box". No additional supporting evidence has been provided for this request and it is based principally on the 2017 ICES advice which took from the results from an experimental fishery in 2014 and 2015. The data from this experimental fishery showed that the number of herring per kg of sprat did not differ significantly between samples taken inside and outside the sprat box, but the weight of herring per kg sprat did differ significantly, with a higher percentage of herring by weight taken outside the box. This is confirmed in the ICES advice. The ICES advice concludes that if the TAC is set in accordance with scientific advice, is fully enforced and is complied with, then this measure is sufficient to control the bycatch of herring in the sprat fishery. On this basis, if the derogation is extended, it would be advisable to monitor activity within the sprat box to confirm levels of mixing of sprat and herring remain at the levels referred to in the ICES with the relaxing of the sprat box. Additionally, Member States should ensure compliance with the TAC as highlighted by ICES and that fishing effort, based on current effort levels in the fishery, do not increase significantly when the area is open to fishing.
Supplementary information provided to the Commission post EWG 20-04	No supplementary information was provided.
STECF comments	STECF agrees with the main findings of the EWG 20-04
Exemption	Minimum conservation reference size for seabass caught in recreational fisheries in the ICES division 3a and ICES subarea 4
Main findings of EWG 20-04	Given recreational fisheries contribute to the overall fishing mortality on the sea bass stock in the North Sea, applying the mcrs of 42cm for commercial fisheries to recreational fisheries is a positive management measure. This will cement this measure in legislation for both commercial and recreational fisheries and avoid having to renew it annually in the TAC and quota Regulation for 2020.
Supplementary	No supplementary information was provided.

information provided to the Commission post EWG 20-04	
STECF comments	STECF agrees with the main findings of the EWG 20-04

Table 1.2b. Main findings of the STECF EWG 20-04, summary of additional information received relating to exemptions presented and STECF Conclusions: **NWW**

De minimis	
Exemption	Haddock caught with bottom trawls, seines and beam trawls with a mesh size equal to or greater than 80 mm in ICES divisions 7b-7c and 7e-7k
Main findings of EWG 20-04	The supported information provided in 2019 on catches and discards has been updated. Additional results from selectivity trials from Ireland and France have been provided as well as an update of the economic analysis for Irish vessels. All the additional information provided this year is in line with the supporting information accompanying the 2019 JR. The information provided indicates that for all gear configurations, the CR/BER for the current (baseline) shows in the short-term that the operational costs would be greater than the estimated revenue (i.e. in the short-term, the fishery would be operating at a loss). While the CR/BER estimates are likely to be rather imprecise, it seems reasonable to assume that the magnitude of change in CR/BER indicates that improvements in selectivity by adopting any of the gear configurations tested would result in significant losses in revenue in the short-term. Even if improvements in selectivity are achieved by adopting the gear configurations tested, it is highly likely that unwanted catches of haddock (and other species including cod and whiting) will continue. Since haddock and cod are high-risk choke species in these areas, granting a de minimis exemption will provide a buffer against exceeding the haddock and cod TAC and hence slightly reduce the risk of an early fishery closure. It may also provide an incentive to attempt to develop additional alternative means to improve selectivity and reduce unwanted catches. In addition, specific technical measures operating with bottom trawls or seins in the Celtic Sea protection zone are to become mandatory from 1 June 2020. The selectivity information provided indicates that introduction of such gears is expected to reduce unwanted catches of haddock, but it is too early to evaluate whether that will be achieved.
Supplementary information provided to the Commission post EWG 20-04	No supplementary information was provided.
STECF comments	STECF agrees with the main findings of EWG 20-04. STECF also notes that the cod and whiting stocks in the Celtic Sea are heavily depleted and remedial technical measures to reduce bycatch of these stocks were introduced for 2020 through Article 13 of the Fishing Opportunities Regulation. As indicated by STECF PLEN 20-01 these measures should help reduce fishing mortality on cod and whiting stocks as well as improve selectivity for haddock. STECF notes implementing these measures should remain the priority.
Exemption	Horse mackerel caught in demersal mixed fisheries, by vessels using bottom trawls, seines and beam trawls in ICES subarea 6 and ICES divisions 7b to 7k
Main findings of	Inconsistencies between the text of the JR and the supporting Annex need

EWG 20-04	to be resolved. The justification for the exemption request is that selectivity improvements by regulatory measures to avoid the catches of horse mackerel will be hard to achieve without severe economic impacts on the revenue of the boats concerned. However, while such a conclusion is intuitive, it is not supported by quantitative information. The introduction of the specific technical measures for vessels operating with bottom trawls or seines in the Celtic Sea in 2020 under Article 13 of the TAC and quota regulation may reduce the unwanted catch of horse mackerel. If that is the case the catch corresponding to a 6% de minimis exemption would also be reduced accordingly. An analysis of costs generated due to hold overloading and an increase of the sorting time by the crew was provided. This is based on a French study. While estimates of the potential increase in workload are provided in terms of time (increase of 30-40%), accepting the analysis is generic. It is not possible to establish how representative the analysis is for the fisheries covered by the exemption. Information is only provided for the French fleet. Catch data and a description of the fisheries of other Member States availing of this exemption are needed.
Supplementary information provided to the Commission post EWG 20-04	The following supplementary information was received from Member States: FR - The information from France consists of an amendment to the original supporting information (annex 4), incorporating 2 additional gear codes. ES - The information from Spain related to catch data for 2 vessels that would be subject to the exemption. *Reviewer's comments* *The amendments proposed by France were the insertion of 2 additional gear codes* (SPR and SV)*.* *The information from Spain provided catch data over a 6-7 months period for 2 vessels that would be subject to the exemption and indicated that discards of mackerel in 2016, 2017 and 2018 were zero.* *The supplementary information provided by FR and ES does not affect the main findings of the EWG 20-04.*
STECF comments	There is evidence of increased costs associated with handling and storing unwanted catches in the relevant fisheries. These costs result from an increase in handling and sorting times on board at 30-60% depending on vessel size. Such increased costs are not specific to horse mackerel. Evidence that landing unwanted catches has an associated cost, is not sufficient to demonstrate those costs are disproportionate. Improving selectivity in the relevant fisheries should be the priority as this will reduce the costs for handling unwanted catches.
Exemption	Mackerel caught by vessels using bottom trawls, seines and beam trawls in ICES subarea 6 and ICES divisions 7b to 7k
Main findings of EWG 20-04	Inconsistencies between the text of the JR and the supporting Annex need to be resolved. The justification for the exemption request is that selectivity improvements by regulatory measures to avoid the catches of mackerel will be hard to achieve without severe economic impacts on the revenue of the boats

	concerned. However, while such a conclusion is intuitive, it is not supported by quantitative information. The introduction of the specific technical measures for vessels operating with bottom trawls or seines in the Celtic Sea in 2020 under Article 13 of the TAC and quota regulation may reduce the unwanted catch of mackerel. If that is the case the catch corresponding to a 6% de minimis exemption would also be reduced accordingly. An analysis of costs generated due to hold overloading and an increase of the sorting time by the crew was provided. This is based on a French study. While estimates of the potential increase in workload are provided (increase of 30-40%), the analysis is generic. It is not possible to establish how representative the analysis is for other fisheries covered by the exemption. Information is only provided for the French fleet. Catch data and a description of the fisheries of other Member States availing of this exemption are needed.
Supplementary information provided to the Commission post EWG 20-04	The following supplementary information was received from Member States: FR - The information from France consists of an amendment to the original supporting information (annex 4), incorporating 2 additional gear codes. ES - The information from Spain related to catch data for 2 vessels that would be subject to the exemption. *Reviewer's comments* *The amendments proposed by France were the insertion of 2 additional gear codes* (SPR and SV)*.* *The information from Spain provided catch data over a 6-7-month period for 2 vessels that would be subject to the exemption and indicated that discards of mackerel in 2016, 2017 and 2018 were zero.* *The supplementary information provided by FR and ES does not affect the main findings of the EWG 20-04.*
STECF comments	There is evidence of increased costs associated with handling and storing unwanted catches in the relevant fisheries. These costs result from an increase in handling and sorting times on board at 30-60% depending on vessel size. Such increased costs are not specific to mackerel. Evidence that landing unwanted catches has an associated cost, is not sufficient to demonstrate those costs are disproportionate. Improving selectivity in the relevant fisheries should be the priority as this will reduce the costs for handling unwanted catches.
Exemption	Boarfish caught by vessels using bottom trawls in ICES divisions 7b-c and 7f-k
Main findings of EWG 20-04	The supporting information concludes that selectivity 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. However, while such a conclusion is intuitive, it is not supported by quantitative information. The information presented is generic and does not relate to the unwanted catches of boarfish. The priority should be to improve selectivity to reduce the unwanted catches and therefore, the costs for handling such catches. Discrepancies exist between the wording in the delegated act (2239/2019) concerning the de minimis exemption for boarfish in 2020 and the proposal

	for a continuation of the exemption in the 2020 JR. There are differences in terms of permitted potential de minimis discard volume. The implied discard volume for a 0.5% de minimis is small in each case (21 tonnes based on catches by all gears and < 1 t based on catches by bottom trawls. Almost all reported discards for 2018 (187 tonnes) were attributed to bottom trawls (178 t). Therefore a 0.5% de minimis would not have been sufficient to account for the discards of boarfish in bottom trawl fisheries reported for 2018. Information is only provided for the French fleet. Catch data and a description of the fisheries of other Member States availing of this exemption are needed.
Supplementary information provided to the Commission post EWG 20-04	The following supplementary information was received from Member States: FR - The information from France suggests amendments to the wording of the exemption and to complete the list of gear codes. ES – Spain provided information on estimated catches of unwanted total discards and unwanted Boarfish for otter bottom trawls in 6a, 7b, 7c, 7g, 7h, 7j and 7k. *Reviewer's comments* *The supplementary information provided by FR and ES does not affect the main findings of the EWG 20-04.*
STECF comments	There is evidence of increased costs associated with handling and storing unwanted catches in the relevant fisheries. These costs result from an increase in handling and sorting times on board at 30-60% depending on vessel size. These are not specific to boarfish. Evidence that landing unwanted catches has an associated cost, is not sufficient to demonstrate those costs are disproportionate. Improving selectivity in the relevant fisheries should be the priority as this will reduce the costs for handling unwanted catches.
Exemption	Greater silver smelt - bottom trawls with a mesh size greater or equal to 100mm in 5b (EU waters) and VI
Main findings of EWG 20-04	The discrepancy between the gears specified in the JR and the supporting information needs to be resolved. The landings of France and Spain in 2018 only amount to 8 tonnes, representing only 0.3% of the EU landings. The de minimis volume proposed would cover 100% of the unwanted catches. The supporting information of the Spanish selectivity trials show that catches of greater silver smelt can be reduced by up to 38% by using a square mesh panel. The use of such a panel is mandatory for the Spanish fleet from 1 July 2020. It would seem logical that this measure or selectivity devices giving equivalent reductions be extended to include other vessels operating in the same fisheries. This would potentially reduce the level of unwanted catches of silver smelt and reduce the need for the exemption. As with the boarfish exemption, discrepancies exist between the wording in the delegated act (2239/2019) in 2020 and the proposal for a continuation of the exemption in the 2020 JR. There are significant differences in terms of the potential de minimis discard volume. In each case, the implied discard volume for a 0.6% de minimis is small (approximately 6 t based on catches by all gears and < 1 t bases on catches by bottom trawls). Information is only provided for the French fleet. Catch data and a

	description of the fisheries of other Member States availing of this exemption are needed.
Supplementary information provided to the Commission post EWG 20-04	The following supplementary information was received from Member States: FR - The French submission was a modified version of the original supporting information (Annex 7) to clarify discrepancies in gears covered by the exemption. ES - Spain provided estimated catches of unwanted total discards and unwanted Greater Silver Smelt for otter bottom trawls in 6a, 7b, 7c, 7g, 7h, 7j and 7k. Spanish bottom otter trawlers operating in the above areas discard 100% of their catches of Greater silver smelt. *Reviewer's comments* *Regarding the supplementary information from France, several discrepancies remain regarding the precise gears to be covered.* *The data provided by Spain indicate that Spanish bottom otter trawlers operating in in 6a, 7b, 7c, 7g, 7h, 7j and 7k discard 100% of their catches of Greater silver smelt.* *The supplementary information provided by FR and ES does not affect the main findings of the EWG 20-04.*
STECF comments	STECF agrees with the main findings of the EWG 20-04. There is evidence of increased costs associated with handling and storing unwanted catches in the relevant fisheries. These costs result from an increase in handling and sorting times on board at 30-60% depending on vessel size. These are not specific to Greater silver smelt. Evidence that landing unwanted catches has an associated cost, is not sufficient to demonstrate those costs are disproportionate. Improving selectivity in the relevant fisheries should be the priority as this will reduce the costs for handling unwanted catches.
Exemption	Common sole -beam trawls with a mesh size of 80-119 mm with increased selectivity (Flemish panel) in 7a, 7j and 7k
Main findings of EWG 20-04	The mesh size of the so-called Flemish panel specified in the Delegated Act was 120mm compared to what was originally tested, i.e. a 150mm panel. As pointed out previously, this may reduce the effectiveness of the panel and not give the reductions in unwanted catches observed in the trials. Information to demonstrate whether the 120 mm panel is equally as selective as the 150 mm panel is still lacking. Such information would explain the reasoning behind only requiring the panel to be constructed in 120mm rather than 150mm. It is not clear if the Flemish Panel will be used by the Irish fleet, which is responsible for around 8% of the catches in 7a in 2019. In this regard, the NWW Member States should consider including the Flemish Panel in a future technical measures JR, thereby making it mandatory for all beam trawl vessels in area 7.
Supplementary information provided to the Commission post EWG 20-04	The following supplementary information was received from Member States: IE – Ireland provided limited information on sole catches in 7a and 7h,j,k. by beam trawls. They concluded that in 7a the estimated de minimis is 1 tonne (3% of total sole catches) and negligible in 7h,j,k. FR – France provided the FDI info on landings and discards of sole for otter

	trawls in 2013-2016. Reviewer's comments *The supplementary information provided by Ireland and France does not affect the main findings of the EWG 20-04.*
STECF comments	STECF agrees with the main findings of the EWG 20-04.
Exemption	Megrim - beam trawls with a mesh size of 80-119 mm in 7; and bottom trawls in 7f, 7g, the part of 7h North of latitude 49° 30' North and the part of 7j North of latitude 49° 30' North and East of longitude 11° West, for catches comprising more than 55 % of whiting or 55 % of anglerfish, hake or megrim combined and in 7, outside the abovementioned area;
Main findings of EWG 20-04	It is not clear whether the intention is for the exemption to apply to fleets from Member States other than France and Spain, but it is anticipated that Irish trawlers and Belgium beam trawls would also participate in the fisheries covered by the exemption. The supporting information from Spain concludes that an increase in selectivity is hard to achieve without loss of a part of the catch that is of marketable size. While such a conclusion is intuitive, it is not supported by quantitative information that can be verified and checked. It is concluded that the obligatory landing of all unwanted megrim below legal size implies an additional cost in crew time and an increase of space onboard both which are a problem from the logistic and economic point of view. There is no information presented to support such a conclusion although an economic analysis previously provided in support of the 2019 JR (STECF 19-08) indicated that the additional time on board to handle unwanted catches of megrim is estimated to increase crew costs by approximately 40%.
Supplementary information provided to the Commission post EWG 20-04	The following supplementary information was received from Member States: BE – Belgium provided limited information on megrim landings. Belgium informed that discard information is only available for whole stock (7b-k,8abd) IE – Ireland provide limited data on landings and discards for bottom and beam trawls. They estimated a de minimis of 117 tonnes (4% of total megrim catches in 2019) for bottom trawls and beam trawls. ES – Spain provided an extended Spanish study from 2017 by Prellezo, Raúl, Iriondo, Ane and Santurtún, Marina (original Spanish + English version) on Landing obligation's impact analysis of the megrim fisheries discards. *Reviewer's comments* *The supplementary information provided by Spain is extensive and thorough while the data from Ireland and France adds only limited value to that provided with the JR.* *The supplementary information provided by all three Member States does not alter the main findings of the EWG 20-04.*
STECF comments	The analysis provided is specific to unwanted catches of megrim and shows additional costs for handling unwanted catches of megrim. It also shows the additional time on board to handle unwanted catches of megrim is estimated to increase crew costs by approximately 40%. Evidence that landing unwanted catches has an associated cost, is not

	sufficient to demonstrate those costs are disproportionate. Improving selectivity in the relevant fisheries should be the priority as this will reduce the costs for handling unwanted catches. STECF also notes 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).
Exemption	Haddock below minimum conservation reference size, by vessels using bottom trawls with a mesh size up to 119 mm in the West of Scotland Norway lobster fishery in ICES division 6a
Main findings of EWG 20-04	No information in support of the exemption was provided.
Supplementary information provided to the Commission post EWG 20-04	No supplementary information was provided.
STECF comments	No comments.
Exemption	Ling below minimum conservation reference size MCRS caught by vessels using set longlines in ICES division 6a.
Main findings of EWG 20-04	Arguments regarding difficulties in improving selectivity are credible given the nature of the fisheries and the de minimis volume is estimated as small compared to overall ling catches. 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 not been provided. Additional information on hook selectivity in similar longline fisheries would be helpful if such studies exist. Discrepancy between the exemption request and wording in the supporting information needs to be resolved. It is unclear whether the estimates for catches and discards presented in the supporting information are specifically related to the fishery concerned. Based on data from 2013-2016, it is reported that a de minimis volume of 3% would represent a maximum amount of allowed discard for ling of 63 tonnes, which represents double the reported value in the supporting information. Information is only provided for the French fleet. Catch data and a description of the fisheries of other Member States availing of this exemption are needed.
Supplementary information provided to the Commission post EWG 20-04	The following supplementary information was received from Member States: FR - In the attached document, France suggests some wording modifications to get rid of the discrepancy between the JR and the annex. As already mentioned in the annex, it is known that longlines is already a very selective gear. Therefore, neither France nor our scientific institute can see the reasoning behind expensive studies to demonstrate this fact. According to the French observer program, there is no discard of hake by French longliners (targeting hake in area 4 and 6a) meaning that this fishery is highly selective. Still, because the minimum size of the hake is 27

	cm and the minimum size of the ling is 63cm and despite this level of selectivity, it is possible for longliners to catch some lings below MCRS.µ *Reviewer's comments* *The rewording provided by France appears to have resolved the discrepancy between the JR and the supporting annex.* *The comments from France regarding the selectivity of longlines are intuitive and simply re-assert the statements in the supporting documentation included within the JR.* *The supplementary information provided is largely qualitative and does not affect the findings of the EWG 20-04 given above.*
STECF comments	STECF agrees with the main findings of the EWG 20-04
High Survivability	
Exemption	Skates and rays (Rajiformes) caught by any fishing gear in the North Western Waters (ICES subareas 6 and 7) (Excluding Cuckoo Ray)
Main findings of EWG 20-04	For thornback ray, blonde ray, spotted ray and undulate ray, survival evidence is deemed relevant for the pulse, beam and otter trawls (80mm) and trammel nets (90mm) in 7e. It is difficult to assess applicability to the other gears/mesh sizes and areas without additional information on the fisheries with respect to their relevant operational and environmental characteristics. There was no explicit reporting against the road map. Future submissions should report against the three main tasks in the road map; i) quantifying catches and discards per species and métier; ii) generated discard survival evidence; and iii) stakeholder led adoption of codes of best practice to maximize discard survival. A summary table with all studies and fisheries would be helpful for further reporting. When published, the outputs of the ICES Workshop on incorporating discards into the assessments and advice of elasmobranch stocks (WKSHARK5) will provide useful context for this exemption
Supplementary information provided to the Commission post EWG 20-04	The following supplementary information was received from Member States: BE – Belgium provided a summary of project 'Raywatch' (North Sea, the English Channel, the western waters -Celtic Sea, Bristol Channel, Irish Sea - and the Bay of Biscay). The focus is on collecting discard figures and biological parameters of skates and rays and fill in knowledge gaps. BE – DEU – NL – Provided an overview for the survival studies in the North Sea, NWW and the Bay of Biscay. FR - France agrees with the addition of the following sentence: "When discarding skates and rays caught in cases referred to in paragraph 1, the skates and rays shall be released immediately." *Reviewer's Comments* *The brief summary of the project 'Raywatch' simply outlined the objectives and timeline of the project and no data or results were included.* *While the supplementary information provided by all three Member States is in itself, useful information, it does not alter the main findings of the EWG 20-04.*

Comments of STECF PLEN 20-02	STECF agrees with the main findings of EWG 20-04 and notes that survival varies across species and fisheries. The results of the ICES Workshop on incorporating discards into the assessments and advice of elasmobranch stocks (WKSHARK5) hopefully will provide useful data and information in relation to this exemption request. STECF also agrees with EWG-20-04 that the submission of future evidence to support this exemption, should be presented in line with the timelines in the roadmap which sets out the work that is planned to enhance evidence on discard survival.
Exemption	Cuckoo Ray caught by any fishing gear in the North Western Waters (ICES subareas 6 and 7)
Main findings of EWG 20-04	No additional information was provided for the French, Irish, Dutch fleets. There is currently one published study in area 7e, but it is difficult to assess applicability to the other area/gear combinations without additional information on the fisheries. The latest discard plan 2019/2239 does not include a specific request for survival evidence for cuckoo ray. See the evaluation on the generic skates and ray exemption for additional evidence.
Supplementary information provided to the Commission post EWG 20-04	No supplementary information specific to cuckoo ray was provided.
STECF comments	STECF agrees with the main findings of the EWG 20-04 and notes that evidence from all regions indicates that cuckoo rays display lower survival than larger ray species and there could be zero survival in some fisheries. Further observations from survival experiments are needed to provide reliable estimates of survival rates for cuckoo ray before any definitive judgment can be made. New and ongoing studies (e.g. SUMARIS project), completed in the next 1-2 years across relevant fisheries, and following the ICES guidance, will generate necessary evidence on discard survival levels.
Exemption	Plaice (Pleuronectes platessa) caught in ICES divisions 7a to 7k by vessels having a maximum engine greater than 221 kW, and using beam trawls (TBB) fitted with a flip-up rope or benthic release panel; OR Plaice (Pleuronectes platessa) caught in ICES divisions 7a to 7k by vessels using beam trawls (TBB), having a maximum engine power of 221 kW or a maximum length of 24 meters, which are constructed to fish within 12 nautical miles of the coast and with average tow durations of no more than 1:30 hours
Main findings of EWG 20-04	The estimated discard survival estimates described here are variable between trips. The trips varied in time and area, and therefore in environmental conditions, by vessel, gear characteristics and catch composition. Estimates for the most recent trips are inferred and based on vitality, so these may have been influenced by any inconsistencies in performing vitality assessments. It is considered the data were sampled from a range of vessels that is representative of the relevant fleet. The specific requirement of the existing exemption was for additional survival evidence for plaice stock in ICES

	divisions 7h-k. No new data were provided from these areas. Studies previously assessed by STECF indicate that survival is higher in the coastal fishing grounds, and when seawater temperature is lowest. It is considered that, when fishing away from the coast, the environmental and technical attributes of fishing operations in 7h-k are consistent with the other areas covered by this exemption, therefore the survival of plaice discarded by beam trawlers in 7h is likely to be comparable with other areas in the Celtic Sea. Flanders Research for Agriculture, Fisheries and Food (ILVO) has developed a three-year (2019-2021) project ('Survival Monitoring - Overleving Monitoren') to gather additional survival data and further analyze existing and new data, for plaice in the North Sea 4a & 7d and 7fg (not for 7hjk). This project aims to produce new discard survival estimates for plaice in the Celtic Sea and North Sea beam trawl fisheries. Fishery information should be provided by relevant countries other than Belgium. The annual progress reports could be improved, specifically in detailing the scientific evidence on discard survival, and identifying new information from previously submitted evidence. A clearer highlighting of new science is encouraged in future reports.
Supplementary information provided to the Commission post EWG 20-04	The following supplementary information was received from Member States: BE – Belgium provided landings and discard information for beam trawl vessels with max engine power greater than 221 kW with flip-up rope and benthic release panel, as well as vessels with a max engine power of 221 kW, max length of 24 m with average tow duration of 1:30 hours. The information was given for 7a, 7d, 7e, 7f, 7g, 7h and 7j. FR - France agrees with the addition of the following sentence: "When discarding plaice caught in cases referred to in paragraph 1, the plaice shall be released immediately." *Reviewer's Comments* *The supplementary information provided by Belgium and France does not alter the main findings of the EWG 20-04.*
STECF comments	STECF agrees with the main findings of EWG 20-04 and note that the regional group. STECF also notes that according to ICES fishing pressure on the plaice stock in 7h,j,k is above FMSY proxy, Fpa, and Flim, and the spawning–stock size is below MSY Btrigger proxy, Bpa, and Blim. Therefore, increases in fishing mortality on this stock should be avoided and any plaice discarded under the exemption should be accurately recorded.
Exemption	Common sole (Solea solea) in ICES division 7a, 7e, 7f and 7g caught with otter trawl gears
Main findings of EWG 20-04	More information on the fleets availing of the exemption is needed, broken down by Member States. Without an understanding of the contributing factors associated with survival, and a corresponding inventory of otter-trawl fishing activity with respect to prevailing key conditions, it is not possible to evaluate whether the 50% survival estimate is valid for other otter trawl gears and fishing operations. It is considered that evidence generated from a single study in an inshore

	fishery in 7b may not represent the sole discard survival from all otter trawl fisheries in 7a, e, f and g. Equivalent evidence for other studies has supported exemptions that are limited to the fishing conditions under which the evidence was generated. The proposal extrapolates robust results from a single localized fishery to cover a large geographical area with insufficient information that the evidence is representative of the wider area. Understanding the catches of discards of sole generated by the proposed fleets is needed, along with the operational and technical methods of fishing. This will enable an assessment of the representativeness of the existing evidence for all potentially effected fleets. Also, analyses to understand factors influencing sole discard survival from existing studies would inform on the implications of extrapolating the current evidence. For fisheries where sole is caught and discarded under different conditions to that of the studied fisheries, new directly observed discard survival evidence would provide the best means of a robust assessment.
Supplementary information provided to the Commission post EWG 20-04	The following supplementary information was received from Member States: BE – Belgium provided limited information on sole catches in 7a, 7d, 7e, 7f, 7g, 7h, 7j for otter trawls. FR - France provides in an attached file, French catch and discard data for French otter trawlers operating in ICES area 7b,c e-k (STECF data base). *Reviewer's Comments* *The supplementary information provided by Belgium and France does not alter the main findings of the EWG 20-04.*
STECF comments	STECF agrees with the findings of the EWG 20-04 noting in particular that in the supporting information, the results from a single localized fishery are extrapolated to a large geographical area without sufficient evidence that such results are representative of the fishery over the wider area.

Table 1.2c. Main findings of the STECF EWG 20-04, summary of additional information received relating to exemptions presented and STECF Conclusions: **SWW**

De minimis	
Exemption	Horse mackerel caught by vessels using beam trawls, bottom trawls and seines in ICES subareas 8 and 9
Main findings of EWG 20-04	Detailed data by fleet have been provided for the period 2015-2017. Catch data for 2018 and 2019 would have been useful to gain insight as to whether the situation in the fisheries has changed since 2017. No data were provided for Belgium. Costs of landing unwanted catches if the exemption is not granted have also been presented. The results of the analysis indicate the loss of earnings associated with the removal of the exemption. The analysis provided of the level of disproportionate costs incurred due to increased sorting and handling time provides a detailed, if rather generic, breakdown of these costs across a range of vessels and fisheries. It is not possible to establish whether the study provided in support the exemption is entirely representative of all the fisheries covered by the exemption, which are numerous and diverse. The study relates primarily to Spanish vessels and while data and information for the French and Portuguese fleets operating in subareas 8 and 9 are included, it is not clear how such data and information have been used in the estimates. There is only limited information to explain the level of de minimis required. There does not appear to be any relationship between the de minimis requested and the levels of unwanted catch. There is no indication of steps to be taken to reduce the residual unwanted catches
Supplementary information provided to the Commission post EWG 20-04	The following supplementary information was received from Member States: FR - For France, the Spanish study took into account the specificity of the French fleet. In the Annex 15 (previously send and again attached) parts 2.4.1.3 and 2.6.3 summed up the French metier operating in the Bay of Biscay and their catch composition. Then, part 3.2.1.3. summed up the location of French fishing ports and fishmeal companies in France. The fourth part of the report (estimation and analysis of the socio-economic impact of the application of the LO) also took into account French figures. Therefore, it seems to us that this study is representative for the French fleets operating in the Bay of Biscay. PT - The Spanish study (annex 15, PT pg. 16, 24, 40, 67 e 70)) concludes that for PT the economic impact for the trawling fleet of the absence of de minimis would be around € 2.5 million in total, corresponding to a decrease in profits of around 5%, without taking into account the additional costs with personnel. In the case of Horse mackerel the total amount is € 1.5 million. The Portuguese and Spanish fishing fleets are very similar. There are several reasons to justify this similarity. First of all, it is necessary to highlight the almost identical geographical areas of operation between the Portuguese and the Spanish coast that makes the fishing patterns very similar too. Also the artisanal fleet in both countries are equal and therefore equally

	important for our coasts in terms of socioeconomic importance. *Reviewer's Comments* *The supplementary information provided points to information originally provided together with the SWW JR (Annex 15, Spanish study on costs of handling unwanted catches) which relates to the representativeness of the results to the French and Portuguese fleets.* *The EWG 20-04 main findings point out that while the Spanish study relates primarily to Spanish vessels and while data and information for the French and Portuguese fleets operating in subareas 8 and 9 are included, it is not clear how such data and information have been used in the estimates.* *While the supplementary information provided by France and Portugal assert that the results in Annex 15 can be considered representative of their national fleets, the main findings of the EWG 20-04 remain valid.*
STECF Comments	STECF agrees with the main findings of the EWG 20-04. The supporting information (Annex 15, Spanish study) together with the supplementary information provides estimates of the costs of handing unwanted catches expressed as lost opportunity costs assuming no de minimis exemptions are granted. Such estimates are given separately by Member State and exemption. While the study is detailed and extensive, STECF could not fully evaluate this new methodology during its written procedure and could not conclude whether the estimated lost opportunity costs can be considered disproportionate in the context of a single exemption. Further work would be needed to evaluate this approach in more details.
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 20-04	Detailed data by fleet have been provided for the period 2015-2017. Catch data for 2018 and 2019 would have been useful to gain insight as to whether the situation in the fisheries has changed since 2017. Costs of landing unwanted catches if the exemption is not granted have also been presented. The results of the analysis presented indicate the loss of earnings associated with the removal of the exemption. The analysis provided on the level of disproportionate costs incurred due to increased sorting and handling time provides a detailed, if rather generic, breakdown of these costs across a range of vessels and fisheries. It is not possible to establish whether the study provided in support the exemption is entirely representative of all the fisheries covered by the exemption, which are numerous and diverse. The study relates primarily to Spanish vessels and while data and information for the French and Portuguese fleets operating in subareas 8 and 9 are included, it is not clear how such data and information have been used in the estimates. The French analysis of costs is generic and while it indicates there are additional costs associated with handling and storing unwanted catches, these are not quantified. The assertion that improvements in selectivity for horse mackerel in these fisheries are difficult achieve, intuitively, would appear reasonable.

	However, it is supported only with details from a review of selectivity studies that are not specific to horse mackerel. There is only limited information to explain the level of de minimis required. There does not appear to be any relationship between the de minimis requested and the levels of unwanted catch. There is no indication of steps to be taken to reduce the residual unwanted catches.
Supplementary information provided to the Commission post EWG 20-04	The following supplementary information was received from Member States: FR – For France, the Spanish study took into account the specificity of the French fleet. In the Annex 11 (previously send and again attached) parts 2.4.1.4 and 2.5.2 summed up the French metier operating in the Bay of Biscay and their catch composition. Then, part 3.2.1.2. summed up the location of French fishing ports and fishmeal companies in France. The fourth part of the report (estimation and analysis of the socio-economic impact of the application of the LO) also took into account French figures. Therefore, it seems to us that this study is representative for the French fleets operating in the Bay of Biscay. PT - The Portuguese and Spanish fleet fishing are very similar. Data on PT is covered in annex 6 pg 12 and 56 (OTB). There are several reasons to justify this similarity. First of all, it is necessary to highlight the almost identical geographical characteristics between the Portuguese and the Spanish coast that makes the fishing patterns very similar too. Also the artisanal fleet in both countries are equal and therefore equally important for our coasts in terms of socioeconomic importance. *Reviewer's Comments* *The supplementary information provided points to information originally provided together with the SWW JR (Annex 15, Spanish study on costs of handling unwanted catches) which relates to the representativeness of the results to the French and Portuguese fleets.* *The EWG 20-04 main findings point out that while the Spanish study relates primarily to Spanish vessels and while data and information for the French and Portuguese fleets operating in subareas 8 and 9 are included, it is not clear how such data and information have been used in the estimates.* *While the supplementary information provided by France and Portugal assert that the results in Annex 15 can be considered representative of their national fleets, the main findings of the EWG 20-04 remain valid.*
STECF Comments	STECF agrees with the main findings of the EWG 20-04.
Exemption	Mackerel caught by vessels using beam trawls, bottom trawls and seines) in ICES subareas 8 and 9
Main findings of EWG 20-04	Detailed data by fleet have been provided for the period 2015-2017. Catch data for 2018 and 2019 would be useful as it is not clear whether the situation in the fisheries has changed since 2017.No data are provided for Portugal. Costs of landing unwanted catches if the exemption is not granted have also been presented. The results of the analysis indicate the loss of earnings associated with the removal of the exemption. The analysis provided of the

	level of disproportionate costs incurred due to increased sorting and handling time provides a detailed, if rather generic, breakdown of these costs across a range of vessels and fisheries. It is not possible to establish whether the study provided in support the exemption is entirely representative of all the fisheries covered by the exemption, which are numerous and diverse. The study relates primarily to Spanish vessels and while data and information for the French and Portuguese fleets operating in subareas 8 and 9 are included, it is not clear how such data and information have been used in the estimates. There is only limited information to explain the level of de minimis required. There does not appear to be any relationship between the de minimis requested and the levels of unwanted catch. There is no indication of steps to be taken to reduce the residual unwanted catches.
Supplementary information provided to the Commission post EWG 20-04	The following supplementary information was received from Member States: FR - For France, the Spanish study took into account the specificity of the French fleet. In the Annex 13 (previously sent and again attached), parts 2.4.1.3 and 2.6.3 summed up the French metier operating in the Bay of Biscay and their catch composition. Then, part 2.7.3. maps the French vessels catches. The fourth part of the report (estimation and analysis of the socio-economic impact of the application of the LO) also took into account French figures. Therefore, it seems to us that this study is representative for the French fleets operating in the Bay of Biscay. PT - The Spanish study (annex 13, pg 8, 17, 23, 26, 30, 58, 72 e 73) concludes that for PT the economic impact for the trawling fleet of the absence of de minimis would be around € 2.5 million in total, corresponding to a decrease in profits of around 5%, without taking into account the additional costs with personnel. In the case of f mackerel the total amount is € 397 000. Data for mackerel discards 4,5 t (data 2017) which correspond to 0,1% discard rate. The Portuguese and Spanish fishing fleets are very similar. There are several reasons to justify this similarity. First of all, it is necessary to highlight the almost identical geographical characteristics between the Portuguese and the Spanish coast that makes the fishing patterns very similar too. In addition, the artisanal fleet in both countries are equal and therefore equally important for our coasts in terms of socioeconomic importance. *Reviewer's Comments* *The supplementary information provided points to information originally provided together with the SWW JR (Annex 15, Spanish study on costs of handling unwanted catches) which relates to the representativeness of the results to the French and Portuguese fleets.* *The EWG 20-04 main findings point out that while the Spanish study relates primarily to Spanish vessels and while data and information for the French and Portuguese fleets operating in subareas 8 and 9 are included, it is not clear how such data and information have been used in the estimates.* *While the supplementary information provided by France and Portugal assert that the results in Annex 15 can be considered representative of their national fleets, the main findings of the EWG 20-04 remain valid.*

STECF Comments	STECF agrees with the main findings of the EWG 20-04.
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 20-04	Detailed data by fleet have been provided for the period 2015-2017. Catch data for 2018 and 2019 would have been useful to gain insight as to whether the situation in the fisheries has changed since 2017. No data were provided for Belgium. The analysis provided of disproportionate costs shows that there will be an increase in handling and sorting time on board depending on vessels size. However, this is based on sorting catches of all species on board and not specific to mackerel. It is not possible to establish whether the study provided in support the exemption is entirely representative of all the fisheries covered by the exemption, which are numerous and diverse. The study relates primarily to Spanish vessels and while data and information for the French and Portuguese fleets operating in subareas 8 and 9 are included, it is not clear how such data and information have been used in the estimates. The justification for the exemption request based on selectivity improvements by regulatory measures to avoid the catches of mackerel will be hard to achieve without severe economic impacts on the revenue of the boats concerned is based on French selectivity trials, which do not relate specifically to mackerel. The conclusion that improving selectivity further is difficult, is intuitive, but it is not supported by quantitative information. There is only limited information to explain the level of de minimis required. There does not appear to be any relationship between the de minimis requested and the levels of unwanted catch. There is no indication of steps to be taken to reduce the residual unwanted catches.
Supplementary information provided to the Commission post EWG 20-04	The following supplementary information was received from Member States: FR - For France, the Spanish study took into account the specificity of the French fleet. In the Annex 9 (previously sent and again attached), parts 2.4.1.2 and 2.5.2 summed up the French metier operating in the Bay of Biscay and their catch composition. Then, part 3.2.1.2. summed up the location of French fishing ports and fishmeal companies in France. The fourth part of the report (estimation and analysis of the socio-economic impact of the application of the LO) also took into account French figures. Therefore, it seems to us that this study is representative for the French fleets operating in the Bay of Biscay. PT - The Spanish study (annex 13) concludes that for PT the economic impact for the trawling fleet of the absence of de minimis would be around € 2.5 million in total, corresponding to a decrease in profits of around 5%, without taking into account the additional costs with personnel. In the case of f mackerel the total amount is € 397 000. The Portuguese and Spanish fleet fishing are very similar. There are several reasons to justify this similarity. First of all, it is necessary to highlight the almost identical geographical characteristics between the Portuguese and the Spanish coast that makes the fishing patterns very similar too. In addition, the artisanal fleet in both countries are equal and therefore

	equally important for our coasts in terms of socioeconomic importance. *Reviewer's Comments* *The supplementary information provided points to information originally provided together with the SWW JR (Annex 15, Spanish study on costs of handling unwanted catches) which relates to the representativeness of the results to the French and Portuguese fleets.* *The EWG 20-04 main findings point out that while the Spanish study relates primarily to Spanish vessels and while data and information for the French and Portuguese fleets operating in subareas 8 and 9 are included, it is not clear how such data and information have been used in the estimates.* *While the supplementary information provided by France and Portugal assert that the results in Annex 15 can be considered representative of their national fleets, the main findings of the EWG 20-04 remain valid.*
STECF Comments	STECF agrees with the main findings of the EWG 20-04.
Exemption	Megrim caught with bottom trawls, seines & beam trawls in ICES areas 8 & 9.
Main findings of EWG 20-04	Detailed data by fleet have been provided for the period 2015-2017. Catch data for 2018 and 2019 would have been useful to gain insight as to whether the situation in the fisheries has changed since 2017. No data are provided for Belgium. Similarly, the analysis provided of disproportionate costs shows that there will be an increase in handling and sorting time on board depending on vessels size. However, this is based on sorting catches of all species on board and not specific to megrim. It is not possible to establish whether the study provided in support the exemption is entirely representative of all the fisheries covered by the exemption, which are numerous and diverse. The study relates primarily to Spanish vessels and while data and information for the French and Portuguese fleets operating in subareas 8 and 9 are included, it is not clear how such data and information have been used in the estimates. There is only limited information to explain the level of de minimis required. There does not appear to be any relationship between the de minimis requested and the levels of unwanted catch. There is no indication of steps to be taken to reduce these residual unwanted catches.
Supplementary information provided to the Commission post EWG 20-04	The following supplementary information was received from Member States: FR - Last year France provided the result of the REDRESSE project conducted in the Bay of Biscay. There is also another ongoing project led by the French industry and the French program Aglia, OPTISEL. Indeed, an anglerfish grid (1040mm x 1075mm) was tested during some fishing trips in autumn 2018 by two French otter twin trawlers targeting anglerfish in the Bay of Biscay. It was put up in the right part of the trawl. Preliminary results show that this grid could have a good impact on the selectivity of megrim by reducing the catch of undersized fish. This device has to be tested during other fishing trips in order to be able to conclude something on the impact on the catch of the target species (anglerfish) but it still an interesting result and it shows that the fishing industry continue to set up selectivity projects in the

	Bay of Biscay even if an exemption is granted. For France, the Spanish study took into account the specificity of the French fleet. In the Annex 15, parts 2.4.1.3 and 2.6.3 summed up the French metier operating in the Bay of Biscay and their catch composition. Then, part 3.2.1.3. summed up the location of French fishing ports and fishmeal companies in France. The fourth part of the report (estimation and analysis of the socio-economic impact of the application of the LO) also took into account French figures. Therefore, it seems to us that this study is representative for the French fleets operating in the Bay of Biscay. PT - The Portuguese and Spanish fleet fishing are very similar. There are several reasons to justify this similarity. First of all, it is necessary to highlight the almost identical geographical characteristics between the Portuguese and the Spanish coast that makes the fishing patterns very similar too. In addition, the artisanal fleet in both countries are equal and therefore equally important for our coasts in terms of socioeconomic importance. *Reviewer's Comments* *The supplementary information provided points to information originally provided together with the SWW JR (Annex 15, Spanish study on costs of handling unwanted catches) which relates to the representativeness of the results to the French and Portuguese fleets.* *The EWG 20-04 main findings point out that while the Spanish study relates primarily to Spanish vessels and while data and information for the French and Portuguese fleets operating in subareas 8 and 9 are included, it is not clear how such data and information have been used in the estimates.* *While the supplementary information provided by France and Portugal assert that the results in Annex 15 can be considered representative of their national fleets, and the preliminary results for the French project* Aglia, OPTISEL *look promising, the main findings of the EWG 20-04 are unaffected and remain valid.*
STECF Comments	STECF agrees with the main findings of the EWG 20-04.
Exemption	Megrim caught by vessels using gillnets in ICES subareas 8 and 9
Main findings of EWG 20-04	Detailed data by fleet have been provided for the period 2015-2017. Catch data for 2018 and 2019 would have been useful to gain insight as to whether the situation in the fisheries has changed since 2017. No discard data were provided for France, which has the highest reported landings. The analysis provided of disproportionate costs shows that there will be an increase in handling and sorting time on board depending on vessels size. However, this is based on sorting catches of all species on board and not specific to megrim. It is not possible to establish whether the study provided in support the exemption is entirely representative of all the fisheries covered by the exemption, which are numerous and diverse. The study relates primarily to Spanish vessels and while data and information for the French and Portuguese fleets operating in subareas 8 and 9 are included, it is not clear how such data and information have been used in the estimates. At the estimated level of de minimis volume requested and the reported level of unwanted catches means 100% of unwanted catches of megrim could potentially be discarded. The de minimis volume is estimated to be

	around 4 tonnes.
Supplementary information provided to the Commission post EWG 20-04	The following supplementary information was received from Member States: FR – France provided some data on Megrim catches (STECF data 2013-2016) by gillnets. *Reviewer's Comments* *The supplementary information provided does not affect the main findings of the EWG 20-04.*
STECF Comments	STECF agrees with the main findings of the EWG 20-04.
Exemption	Plaice caught with bottom trawls, seines & beam trawls in ICES areas 8 & 9
Main findings of EWG 20-04	The exemption is only supported with qualitative arguments on selectivity, which do not differentiate between species and fisheries or relate to plaice. Intuitively, given the low level of unwanted catches of plaice and their morphology which makes improving selectivity difficult, it is reasonable to assume improving selectivity further would be difficult, but no attempt has been made to support this assumption. There is only limited information to explain the level of de minimis required. There does not appear to be any relationship between the de minimis requested and the levels of unwanted catch. The actual levels of unwanted catches are virtually zero and the estimated level of resulting de minimis would cover 100% of the unwanted catches, assuming such catches would remain very low. Only partial catch data have been presented for the French fleet. No information is provided for other fleets operating in the same fisheries.
Supplementary information provided to the Commission post EWG 20-04	The following supplementary information was received from Member States: FR – France provides some data for its bottom trawls fisheries operating in the Bay of Biscay (STECF data 2013-2016). According to STECF (average 2013-2016), 4% of the catches of plaice is discarded in French bottom trawls fisheries. There is no data in the Obsmer report as the catch of plaice represents less than 1% of the total catch for French bottom trawls and seines fisheries. Therefore, we cannot say that the STECF data changed from 2016 to 2018 and we have to take into account these figures. *Reviewer's Comments* *The supplementary information provided does not affect the main findings of the EWG 20-04.*
STECF Comments	STECF agrees with the main findings of the EWG 20-04.
Exemption	Plaice caught by vessels using gillnets in ICES subareas 8 and 9
Main findings of EWG 20-04	In the absence of any substantive information to support this exemption, no evaluation can be made. The level of unwanted catches is so low that a de minimis exemption to discard plaice in the fisheries concerned is likely

	permit 100% of unwanted catches of plaice can be discarded.
Supplementary information provided to the Commission post EWG 20-04	The following supplementary information was received from Member States: ES – Spain has no data available of plaice caught in ICES subareas 8 and 9. *Reviewer's Comments* *The supplementary information provided does not affect the main findings of the EWG 20-04.*
STECF Comments	STECF agrees with the main findings of the EWG 20-04.
Exemption	Anglerfish caught with bottom trawls, seines & beam trawls in ICES areas 8 & 9
Main findings of EWG 20-04	Detailed data have been provided for the French and Spanish fleets. Only partial catch data are presented with only discard data provided for Spain. No information on the level of unwanted catches for France is given, even though France accounts for 70% of the total landings of anglerfish in ICES subareas 8 and 9. Only limited catch and fleet information is presented for Portugal and no information is supplied for Belgium. Costs of landing unwanted catches if the exemption is not granted have been presented. The analysis also provided of disproportionate costs shows that there will be an increase in handling and sorting time on board depending on vessels size. However, this is based on sorting catches of all species on board and not specific to anglerfish. It is not possible to establish whether the study provided in support the exemption is entirely representative of all the fisheries covered by the exemption, which are numerous and diverse. The study relates primarily to Spanish vessels and while data and information for the French and Portuguese fleets operating in subareas 8 and 9 are included, it is not clear how such data and information have been used in the estimates.There is only limited information to explain the level of de minimis required. There does not appear to be any relationship between the de minimis requested and the levels of unwanted catch. There is no indication of steps to be taken to reduce the residual unwanted catches.
Supplementary information provided to the Commission post EWG 20-04	The following supplementary information was received from Member States: BE – Belgium provided the minimal landings for their fleet. FR – France provided some data for its bottom trawl fisheries operating in the Bay of Biscay (STECF data 2013-2016). According to STECF (average 2013 – 2016), 14% of the catches of anglerfish is discarded in French bottom trawl fisheries. According to the French observer program, in 2018, around 5% of the catch of anglerfish is discarded by French bottom trawl in the Bay of Biscay. Almost 100% of the anglerfish that is discarded is undersized. For France, the Spanish study took into account the specificity of the French fleet. In the Annex 18, parts 2.4.1.4 and 2.6.3 summed up the French metier operating in the Bay of Biscay and their catch composition. Then, part 3.2.1.3. summed up the location of French fishing ports and fishmeal companies in France. The fourth part of the report (estimation and analysis of the socio-economic impact of the application of the LO) also took into

	account French figures. Therefore, it seems to us that this study is representative for the French fleets operating in the Bay of Biscay. PT - The Portuguese and Spanish fishing fleet are very similar. There are several reasons to justify this similarity. First of all, it is necessary to highlight the almost identical geographical characteristics between the Portuguese and the Spanish coast that makes the fishing patterns very similar too. In addition, the artisanal fleet in both countries are equal and therefore equally important for our coasts in terms of socioeconomic importance. *Reviewer's Comments* *Supplementary information provided by France which concerns data submitted by France under the FDI data call, indicates that 14% of anglerfish catches are discarded in French bottom trawl fisheries in the Bay of Biscay. This compares to an equivalent estimate of 5% from the French OBSMER programme, almost all which are under-size.* *The supplementary information provided points to information originally provided together with the SWW JR (Annex 18, Spanish study on costs of handling unwanted catches) which relates to the representativeness of the results to the French and Portuguese fleets.* *The EWG 20-04 main findings point out that while the Spanish study relates primarily to Spanish vessels and while data and information for the French and Portuguese fleets operating in subareas 8 and 9 are included, it is not clear how such data and information have been used in the estimates.* *While the supplementary information provided by France and Portugal assert that the results in Annex 15 can be considered representative of their national fleets, and the preliminary results for the French project* Aglia, OPTISEL *look promising, the main findings of the EWG 20-04 are unaffected and remain valid.*
STECF Comments	STECF agrees with the main findings of the EWG 20-04.
Exemption	Anglerfish caught by vessels using gillnets in ICES subareas 8 and 9
Main findings of EWG 20-04	Detailed data have been provided on the structure of the French and Spanish fleets. Only partial catch data are presented with only discard data provided for Spain. No information on the level of unwanted catches for France is given, even though France has 70% of the total landings of anglerfish from ICES subareas 8 and 9. Only limited qualitative catch information is presented for Portugal. Costs of landing unwanted catches if the exemption is not granted have been presented. The analysis also provides an indication of the disproportionate costs and shows that there will be an increase in handling and sorting time on board depending on vessels size. However, this is based on sorting catches of all species on board and not specific to anglerfish. It is not possible to establish whether the study provided in support the exemption is entirely representative of all the fisheries covered by the exemption, which are numerous and diverse. The study relates primarily to Spanish vessels and while data and information for the French and Portuguese fleets operating in subareas 8 and 9 are included, it is not clear how such data and information have been used in the estimates. There is only limited information to explain the level of de minimis required. There does not appear to be any relationship between the de minimis

	requested and the levels of unwanted catch. Th estimated de minimis volume is small and spread across a wide area and nearly 1000 vessels. Control and motoring of uptake of anglerfish discarded under the de minimis exemption would therefore be challenging
Supplementary information provided to the Commission post EWG 20-04	The following supplementary information was received from Member States: BE – Belgium provided the minimal landings for their fleet. FR – France provided some data for it's gillnets fisheries operating in the Bay of Biscay (STECF data 2013-2016). According to STECF (average 2013 – 2016), 9% of the catches of anglerfish is discarded in French netters. According to the French observer program, in 2018, less than 1% of the catch of anglerfish is discarded by French netters in the Bay of Biscay. PT - The Portuguese and Spanish fleet fishing are very similar. There are several reasons to justify this similarity. First of all, it is necessary to highlight the almost identical geographical characteristics between the Portuguese and the Spanish coast that makes the fishing patterns very similar too. In addition, the artisanal fleet in both countries are equal and therefore equally important for our coasts in terms of socioeconomic importance. Portugal also provided gillnet information in subarea 8 and 9 (number of vessels and catches). *Reviewer's Comments* *Supplementary information provided by France which concerns data submitted by France under the FDI data call, indicates that 9% of anglerfish catches are discarded in French netters in the Bay of Biscay. This compares to an equivalent estimate of 1% from the French OBSMER programme, almost all which are under-size.* *The supplementary information provided points to information originally provided together with the SWW JR (Annex 18, Spanish study on costs of handling unwanted catches) which relates to the representativeness of the results to the French and Portuguese fleets.* *The EWG 20-04 main findings point out that while the Spanish study relates primarily to Spanish vessels and while data and information for the French and Portuguese fleets operating in subareas 8 and 9 are included, it is not clear how such data and information have been used in the estimates.* *While the supplementary information provided by France and Portugal assert that the results in Annex 15 can be considered representative of their national fleets, and the preliminary results for the French project* Aglia, OPTISEL *look promising, the main findings of the EWG 20-04 are unaffected and remain valid.*
STECF Comments	STECF agrees with the main findings of the EWG 20-04.
Exemption	Whiting -by vessels using bottom trawls, seines & beam trawls in ICES subarea 8
Main findings of EWG 20-04	The arguments presented are generic and not specific to the relevant fisheries, accepting that there are indications that improving selectivity is difficult in mixed demersal fisheries in which whiting are caught without

	significant losses of other marketable catch. Many of the studies used to support the exemption date back to 2014 and earlier, noting new studies are ongoing. There does not appear to be any relationship between the de minimis requested and the levels of unwanted catch. The actual levels of unwanted catches are much greater than the estimated de minimis volume and will only cover a fraction of the unwanted catches. However, further selectivity work is planned to try to reduce these residual unwanted catches. No information is presented for Belgium although it is likely the Belgium beam trawl fleet would have some level of whiting catches.
Supplementary information provided to the Commission post EWG 20-04	The following supplementary information was received from Member States: FR - France already provided updated data in a dedicated annex (see Annex 4 previously send and again attached). In the attached DOC 2 (gillnets), France provides some data for its fisheries. According to STECF (average 2013 – 2016), 53% of the catches of whiting is discarded in French netters. According to the French observer program, in 2018, around 20% of the catch of whiting is discarded by French netters in the Bay of Biscay but there is very little catches of whiting in such fisheries (less than 5% of the total catch). Whiting caught with such gears is usually damaged, making the fish unsellable as it can drown itself. *Reviewer's Comments* *The supplementary information provided does not alter the main findings of the EWG 20-04.*
STECF Comments	STECF agrees with the main findings of the EWG 20-04.
Exemption	Whiting caught by vessels using gillnets in ICES subarea 8
Main findings of EWG 20-04	Only partial catch data is presented and the information on levels of unwanted catch is incomplete. The arguments presented regarding difficulties in improving selectivity are credible, the qualitative nature of the information presented make it difficult to quantify the potential scale of losses of marketable catch. It is also not clear how expected losses would vary across the different gillnet fisheries involved. The arguments on disproportionate costs are generic and do not contain any specific information related to whiting. There does not appear to be any relationship between the de minimis requested and the large variation in reported levels of unwanted catch. The actual levels of unwanted catches are much greater than the estimated de minimis volume in some fisheries but is zero in others.
Supplementary information provided to the Commission post EWG 20-04	No supplementary information was provided.
STECF	STECF agrees with the main findings of the EWG 20-04 and notes that the

Comments	arguments in support of the de minimis exemption are not well founded, while accepting that improvements in selectivity are difficult to achieve in gillnet fisheries.
Exemption	Pollack caught vessels using bottom trawls, seines & beam trawls in 8 and 9
Main findings of EWG 20-04	In the absence of any substantive information to support this exemption, no evaluation can be made. The level of unwanted catches is so low that a de minimis exemption to discard pollack in the fisheries concerned is likely to permit 100% of unwanted catches of pollack to be discarded.
Supplementary information provided to the Commission post EWG 20-04	The following supplementary information was received from Member States: BE – Belgium provided the minimal landings for their fleet. FR – France provided some data for its bottom trawl fisheries operating in the Bay of Biscay (STECF data 2013-2016). ES – Spain provided otter bottom trawl sampled information in subareas 8c 9a by IEO (number of vessels, trips, landings, discards, sampling coverage). *Reviewer's comments* *The supplementary information provided does not alter the main findings of the EWG 20-04.*
STECF Comments	STECF agrees with the main findings of the EWG 20-04.
Exemption	Pollack caught by vessels using gillnets in ICES subareas 8 and 9
Main findings of EWG 20-04	In the absence of any substantive information to support this exemption, no evaluation can be made. The level of unwanted catches is so low that a de minimis exemption to discard pollack in the fisheries concerned is likely permit all unwanted catches of pollack to be discarded.
Supplementary information provided to the Commission post EWG 20-04	The following supplementary information was received from Member States: ES – Spain provided gillnets sampled information in subareas 8c 9a by IEO (number of vessels, trips, landings, discards, sampling coverage). *Reviewer's comments* *The supplementary information provided does not alter the main findings of the EWG 20-04.*
STECF Comments	STECF agrees with the main findings of the EWG 20-04 and notes that the arguments in support of the de minimis exemption are not well founded, while accepting that improvements in selectivity are difficult to achieve in gillnet fisheries.
Exemption	Red Sea Bream caught by vessels using bottom trawls, seines & beam trawls in 9a
Main findings of EWG 20-04	Detailed catch data by fleet have been provided and a detailed analysis of the costs of landing de minimis volumes unwanted catches if the exemption is not granted has also been presented. This has been tailored to the fleets with a bycatch of red sea bream. The analysis provided of disproportionate costs shows that there will be an increase in handling and sorting time on board depending on vessels size. However, this is based on sorting catches of all species on board and not

	specific to red sea bream. The de minimis proportion requested (5%) is higher than the reported discard proportion, which is below 1% for the relevant fisheries combined. Hence, if granted, the exemption is likely to permit 100% of unwanted catches of red sea bream to be discarded."
Supplementary information provided to the Commission post EWG 20-04	The following supplementary information was received from Member States: ES – Spain provided otter bottom trawls sampled information in subarea 9a by IEO (number of vessels, trips, landings, discards, sampling coverage). PT – Portugal provided bottom trawl information in subarea 9a (number of vessels, and catches). *Reviewer's comments* *The supplementary information provided does not alter the main findings of the EWG 20-04.*
STECF Comments	STECF agrees with the main findings of the EWG 20-04.
Exemption	Hake caught by vessels using trawls and seines in ICES subareas 8 and 9
Main findings of EWG 20-04	Detailed analyses of catch and landing distribution by fleet and for the species under examination, for both Spain and Portugal, as well as costs of landing de minimis volumes if the exemption was not granted are presented. Such analyses have been tailored to the fleets targeting hake and to those fleets with hake as a bycatch. The results indicate that there will be an increase in handling and sorting time on board depending on vessels size. The results are based on sorting catches of all species on board and not specific to hake, although given hake forms a high proportion of the catches in many metiers in SWW, the additional sorting and handling of unwanted catches would form a significant proportion of these costs. There is only limited information to explain the level of de minimis required. There does not appear to be any relationship between the de minimis requested and the levels of unwanted catch. However, further selectivity work is planned to try to find solutions to reduce these residual unwanted catches
Supplementary information provided to the Commission post EWG 20-04	The following supplementary information was received from Member States: ES – Spain provided otter bottom trawls sampled information in subarea 8c and 9a by IEO (number of vessels, trips, landings, discards, sampling coverage). PT - The Spanish study (annex 21) concludes that for PT the economic impact for the trawling fleet of the absence of de minimis would be around € 2.5 million in total, corresponding to a decrease in profits of around 5%, without taking into account the additional costs with personnel. In the case of f Hake the total amount is € 174 000. Portugal provided bottom trawl information in subarea 8 and 9 (number of vessels, and catches). *Reviewer's Comments* *The supplementary information provided does not alter the main findings of the EWG 20-04 although the information from* Portugal highlights the anticipated losses to the fleet if a de minimis exemption to discard hake is not granted are €174 000.

STECF Comments	STECF agrees with the main findings of EWG 20-04.
Exemption	Sole caught by vessels using bottom -trawls, seines and beam trawls in 9a
Main findings of EWG 20-04	Detailed catch data by fleet have been provided and a detailed analysis of the costs of landing de minimis volumes unwanted catches if the exemption is not granted has also been presented. The analysis provided of disproportionate costs shows that there will be an increase in handling and sorting time on board depending on vessels size. However, this is based on sorting catches of all species on board and not specific to sole. The de minimis proportion requested is higher, then the reported discard proportion, which is below 1% for the relevant fisheries combined. Hence, if granted, the exemption is likely to permit 100% of unwanted catches of sole to be discarded."
Supplementary information provided to the Commission post EWG 20-04	The following supplementary information was received from Member States: ES – Spain provided otter bottom trawls sampled information in subarea 8c and 9a by IEO (number of vessels, trips, landings, discards, and sampling coverage). PT - The Spanish study (annex 25) concludes that for PT the economic impact for the trawling fleet of the absence of de minimis would be around € 2.5 million in total, corresponding to a decrease in profits of around 5%, without taking into account the additional costs with personnel. In the case of Sole the total amount is € 55 000. Portugal provided bottom trawl information in subarea 9a (number of vessels, and catches). *Reviewer's Comments* *The supplementary information provided does not alter the main findings of the EWG 20-04 although the information from* Portugal highlights the anticipated losses to the fleet if a de minimis exemption to discard sole in IXa is not granted are €55 000.
STECF Comments	STECF agrees with the main findings of EWG 20-04.
Exemption	Anchovy caught by vessels using beam trawls, bottom trawls and seines in ICES subareas 8 and 9
Main findings of EWG 20-04	Detailed data by fleet have been provided for the period 2015-2017. Catch data for 2018 and 2019 would have been useful to gain insight as to whether the situation in the fisheries has changed since 2017. No data are provided for Belgium. Costs of landing unwanted catches if the exemption is not granted have also been presented, although the costs presented apply to a range of species caught in the fisheries. There is only limited information to explain the level of de minimis required. There does not appear to be any relationship between the de minimis requested and the levels of unwanted catch. There is no indication of steps to be taken to reduce these residual unwanted catches.
Supplementary	The following supplementary information was received from Member States:

information provided to the Commission post EWG 20-04	ES – Spain provided otter bottom trawls sampled information in subarea 9a by IEO (number of vessels, trips, landings, discards and sampling coverage) and purse seine in subareas 8abd. Spain also provided a summary of a paper in preparation: Metier definition of the Spanish purse seine fishery targeting small pelagic species in the Bay of Biscay: Landings, discards and interactions with protected species. PT - Portugal provided bottom trawl information in subarea 8 and 9 (number of vessels, and catches). *Reviewer's comments* *The supplementary information provided does not alter the main findings of the EWG 20-04*
STECF Comments	STECF agrees with the main findings of the EWG 20-04.
High Survivability	
Exemption	Skates and rays (Rajiformes) caught with all gears in ICES subareas 8 and 9 (Excluding Cuckoo Ray)
Main findings of EWG 20-04	The vitality data appears to adequately cover the fishing activity, characteristics and conditions of the Portuguese trammel net and trawl fisheries. Survival evidence was relevant for the French small otter trawl fishery, which contribute to 29% of the French discards in area 8a for the undulate ray (of concern given high discard rate in coastal fisheries for the areas of interest) (Morfin et al., 2019). Additional information on the Spanish fleet could help assess how representative the survival evidence is for the fishery, especially regarding seasons. The evidence collected in the Mediterranean Sea with expected different environmental conditions than in area 9a, shows that survival of thornback ray is negatively affected by warmer waters. Because the trial in area 9a was conducted in March. It is expected there would be a lower chance for survival in the summer if water temperature is higher. There was significant effort in addressing data gaps as the significant number of ongoing projects can show, and in reporting against the roadmap. An upcoming Portuguese study (delayed) will estimate the survival rates for the most important species based on captive observations (higher priority given to thornback ray caught in the net fisheries). An upcoming Spanish study (project application as annex) will estimate the survivability of skates and rays in the artisanal Galician fleet discards using acoustic telemetry in the environment of a marine protected area, identify technical improvements to reduce the impact of discarding. There was no explicit reporting against the road map. Future submissions should report against the three main tasks in the road map; i) quantifying catches and discards per species and métier; ii) generated discard survival evidence; and iii) stakeholder led adoption of codes of best practice to maximize discard survival. When published, the outputs of the ICES Workshop on incorporating discards into the assessments and advice of elasmobranch stocks (WKSHARK5) will provide useful context for this exemption.

Supplementary information provided to the Commission post EWG 20-04	No supplementary information was provided.
STECF Comments	STECF agree with the main findings of the EWG 20-04.
Exemption	Cuckoo Ray caught with all gears in ICES subareas 8 and 9
Main findings of EWG 20-04	Additional information on the Spanish fleet could help assess how representative the survival evidence is for the fishery, especially regarding seasons as above. There was significant effort in addressing data gaps as the significant number of ongoing projects can show, and in reporting against the roadmap. A new study is planned to obtain scientific evidences of the survivability of cuckoo ray in the Portuguese otter-trawl fisheries. An ongoing French study on survival of cuckoo ray in area 8 could not be reported due to the Covid crisis, but additional results are expected. There was no explicit reporting against the road map, which is recommended in the future. Future submissions should report against the three main tasks in the road map.
Supplementary information provided to the Commission post EWG 20-04	No supplementary information was provided.
STECF Comments	STECF agree with the main findings of the EWG 20-04 and observe that evidence from all regions indicates that cuckoo rays display lower survival than larger ray species and there could be zero survival in some fisheries. Further observations from survival experiments are needed to provide reliable estimates of survival rates for cuckoo ray before any definitive judgment can be made. New and ongoing studies (e.g. SUMARIS project), completed in the next 1-2 years across relevant fisheries, and following the ICES guidance, will generate necessary evidence on discard survival levels.
Exemption	Red seabream caught with the artisanal gear voracera in ICES division 9a and with hooks and lines (gear codes: LHP, LHM, LLS, LLD) in ICES subareas 8 and 10 and in ICES division 9a.
Main findings of EWG 20-04	No additional information on survival and fishery compatibility has been provided. However, it is stated that discards for this species are negligible, being mostly related to fish below the minimum landing size. Additional experiments to obtain survival rates over a longer period under captive conditions are required. New experiments were planned to be conducted in late 2019/early 2020, to obtain survival rates for a longer period of time under captive conditions, but the trials have been postponed due to constraints acquiring material for the experiments.
Supplementary information provided to the	The following supplementary information was received from Member States: PT - Azores (area 10) had already justified in 2018 this exemption, based

Commission post EWG 20-04	on experimental work, and it was accepted by STECF. PT had already justified this exemption in 2019. A report was produced and sent to STECF in May 2019 ("Blackspot seabream (Pagellus bogaraveo) in Portugal mainland (ICES Division 27.9.a): fisheries characterization and survivability experiments") It was not possible to do any of additional studies this year. *Reviewer's Comments* *The comments from Portugal is noted and needs to be taken into account by the STECF in finalising its review and opinion on the work of the EWG 20-04.*
STECF Comments	STECF agrees with the main findings of the EWG 20-04.
Exemption	Anchovy, horse mackerel and mackerel in purse seine fisheries (PS) in South Western Waters, provided that the net is not fully taken on board.
Main findings of EWG 20-04	Crowding time and density of fish within the net bunt are the most determinant factors for survival. The provided document shows that survival rates for all three species strongly decreased after a crowding time >20 min. However, under real fishing condition the crowding time related to slipping procedure was estimated to be less than 5 min. Under these conditions, the survival rates observed further increased to >91% for anchovy, >94% for horse mackerel, and >91% for mackerel. A complete report on a robust scientific discard survival study including detailed methodology of survival experiments would enable a robust assessment of this proposal.
Supplementary information provided to the Commission post EWG 20-04	The following supplementary information was received from Member States: PT – The Spanish study (annex 19) can be applied to Portugal, our fleets are very similar in terms of vessels species caught and gears. *Reviewer's Comments* *The supplementary information provided does not alter the man findings of the EWG 20-04.*
STECF Comments	STECF agrees with the main findings of the EWG 20-04 noting that while reported survival rates associated with crowding time were greater than 90% for all species, a robust scientific study is needed to verify such estimates.
Technical Measures	
Exemption	Minimum conservation reference size for cod, red sea bream and sea bass caught in recreational fisheries in ICES subareas 8 and 9
Main findings of EWG 20-04	Given recreational fisheries contribute to the overall fishing mortality of stocks in SWW, applying the mcrs for commercial fisheries to recreational fisheries is a positive management measure. This will cement these in legislation and in the case of sea bass will avoid having to renew the mcrs annually in the TAC and quota Regulation for 2020. In subarea 8 the mcrs for cod, sea bass and red sea bream, the mcrs

	proposed for recreational fisheries is greater than the current mcrs for commercial fisheries. However, for the rest of the SWW, the mcrs is harmonised with the current regulations contained in Annex VII of Regulation (EU) 1241/2019. There is no reason given for the difference in mcrs between the two areas. Extending the increased mcrs to the whole area would increase the benefit of the measure and avoid having different mcrs applying in different adjacent management areas.
Supplementary information provided to the Commission post EWG 20-04	No supplementary information was provided.
STECF Comments	STECF agrees with the main findings of the EWG 20-04.

Table 1.2d. Main findings of the STECF EWG 20-04, summary of additional information received relating to exemptions presented and STECF Conclusions: **Baltic Sea**

High Survivability	
Exemption	Salmon in the Baltic Sea caught with trap-nets, creels/pots, fyke-nets and pound nets including Pontoon traps as long as Pontoon traps are equipped with an attached knot-less bag and as long as the total amounts of released salmon is kept at a low level.
Main findings of EWG 20-04	The evidence suggests that Pontoon trap equipped with an attached knot-less bag has potential to be gentler with salmon released after handling, mainly because the catch is never lifted above the water surface or dumped directly in the boat. In the case of traditional trap-net fisheries, it is possible to gently remove salmon from the gears "fish bag" one by one (by hand) and release them. The study assessing the survivability of salmon from trap-net fishery followed the normal commercial procedure and fish were carefully one-by-one lifted from the back of the trap-net to the boat where tagging was done. Since 2014 several studies focusing on post-release mortality of salmon captured in Pontoon traps have been initiated in Sweden. Results from these studies have only been published as short reports or memorandums, or in manuscripts under preparation inaccessible for evaluation. Detailed scientific reports of such studies would improve the assessment of the preliminary results obtained for Pontoon trap fisheries in the Baltic.
Supplementary information provided to the Commission post EWG 20-04	No additional information provided
STECF Comments	The information provided in support of the JR relates primarily to Pontoon traps with an attached knotless bag. There is insufficient information to determine post-release survival rate of salmon from all of the gears specified in the proposed exemption.

Table 1.2e. Main findings of the STECF EWG 20-04, summary of additional information received relating to exemptions presented and STECF Conclusions: **Mediterranean**

De Minimis	
Exemption	Anchovy, sardine, mackerel and horse mackerel below mcrs by vessels using midwater trawls and purse seines in GSA 1, 2, 5, 6, 7,8, 9, 10, 11.1, 11.2 and 12 (Western Mediterranean)
Main findings of EWG 20-04	The justification is based on qualitative and limited quantitative economic data information and catch information gathered from the "LANDMED" project. On this basis, the proposal is to rollover the existing exemption which is due to expire at the end of this year for a further three years. Given no new information has been provided no new evaluation can be made. There is no quantitative evidence to support these assertions. Intuitively, achieving additional selectivity improvements would be difficult to achieve in such fisheries and the costs for sorting would be high given the nature of the species involved but there is still limited quantitative evidence to support these assertions. No discard data is provided for Spain and France. Therefore, it is not possible to compare the de minimis volume requested against the actual levels of unwanted catches. For Italy, there does not appear to be any relationship between the de minimis requested and the levels of unwanted catch, which Italy reports as zero for all small pelagic species. Without catch data for all fleets and for all management areas, there is no way of fully assessing whether the de minimis exemption is required at the percentage included in the current discard plan.
Supplementary information provided to the Commission post EWG 20-04	The following supplementary information was received from Member States: IT – Provided results of studies by Sartor et al. (2016) and Maynou et al. (2018) that the costs for disposal of catches as a waste were expected to range from 0.45 €/kg up to 0.65 €/kg, resulting in a potential yearly cost for "average" trawl vessel of 3000 euro. This amount is about 7.5% of the gross profit of the "average" vessel. Italy assumed that although these studies was targeted on trawl fisheries, many results can be extended also to small pelagic fisheries. Italy also provided information for midwater trawls and purse seines in GSA 9 and 11 (number of vessels and landings of anchovy, sardine, mackerel and horse mackerel). There are hardly any reported discard values for the concerned fisheries in PESCAMED area. *Reviewer's Comments* *The supplementary information provided does not alter the main findings of the EWG 20-04.*
STECF comments	STECF agrees with the observations of EWG 20-04 noting that the supplementary information on the fisheries covered by this exemption provided by Italy does not alter the main findings of EWG 20-04. In the absence of relevant data of catches and discards, the relevance of the requested exemption in terms of unwanted catch and de minimis

	volume cannot be assessed.
Exemption	Anchovy, sardine, mackerel and horse mackerel below mcrs by vessels using midwater trawls and purse seines in GSA 15, 16, 19, 20, 22 23 and 25 (South-eastern Mediterranean)
Main findings of EWG 20-04	The justification is based on qualitative and quantitative data provided by Greece. On this basis, the proposal from the SUDESTMED group is to rollover the existing exemption which is due to expire at the end of this year for a further three years. New information provided by Greece strengthens the justification for the exemption, if though it is not clear how representative it is for other the fleets of other Member States operating in the south-eastern Mediterranean. The level of de minimis requested, would cover 100% of the observed unwanted catches of small pelagic species in the south eastern Mediterranean. There is no information to explain why the levels of de minimis requested is required and in fact for three of the four Member States no unwanted catches are reported at all. There is no apparent relationship between the de minimis requested and the levels of unwanted catches reported.
Supplementary information provided to the Commission post EWG 20-04	The following supplementary information was received from Member States: IT – Provided results of studies by Sartor et al. (2016) and Maynou et al. (2018) that the costs for disposal of catches as a waste were expected to range from 0.45 €/kg up to 0.65 €/kg, resulting in a potential yearly cost for "average" trawl vessel of 3000 euro. This amount is about 7.5% of the gross profit of the "average" vessel. Italy assumed that although these studies was targeted on trawl fisheries, many results can be extended also to small pelagic fisheries. Italy also provided information for midwater trawls and purse seines in GSA 16 and 19 (number of vessels and landings of anchovy, sardine, mackerel and horse mackerel). There is no reported discard value for the concerned fisheries in SUDESTMED area. *Reviewer's Comments* *The supplementary information provided does not alter the main findings of the EWG 20-04.*
STECF comments	STECF agrees with the observations of EWG 20-04 noting that the supplementary information on the fisheries covered by this exemption was provided by Italy does not alter the main findings of EWG 20-04. In the absence of relevant data of catches and discards, the relevance of the requested exemption in terms of unwanted catch and de minimis volume cannot be assessed.
Exemption	Anchovy, sardine, mackerel and horse mackerel below mcrs by vessels using midwater trawls and purse seines in GSA 17 and 18 (Adriatic).
Main findings of EWG 20-04	The justification is based on qualitative and limited quantitative economic data information and catch information gathered mainly from the "LANDMED" project. On this basis, the proposal from the ADRIATIC group is to rollover the existing exemption which is due to expire at the end of this year for a further three years. Given no new information has been provided no new evaluation can be made. Intuitively, achieving additional selectivity

	improvements would be difficult to achieve in such fisheries and the costs for sorting would be high given the nature of the species involved but there is still limited quantitative evidence to support these assertions. Based on the catch data submitted, the level of de minimis requested would cover 100% of the observed unwanted catches of small pelagic species. There is no information to explain why such levels of de minimis is required. There does not appear to be any relationship between the de minimis requested and the levels of unwanted catch. The actual levels of unwanted catches seem minimal for most of these species and the actual level of resulting de minimis will cover more than twice the level of unwanted catches reported.
Supplementary information provided to the Commission post EWG 20-04	The following supplementary information was received from Member States: IT – Provided results of studies by Sartor et al. (2016) and Maynou et al. (2018) that the costs for disposal of catches as a waste were expected to range from 0.45 €/kg up to 0.65 €/kg, resulting in a potential yearly cost for "average" trawl vessel of 3000 euro. This amount is about 7.5% of the gross profit of the "average" vessel. Italy assumed that although these studies was targeted on trawl fisheries, many results can be extended also to small pelagic fisheries. Italy also provided information for midwater trawls and purse seines in GSA 17 and 18 (Adriatic) (number of vessels and catches of anchovy, sardine, mackerel and horse mackerel). *Reviewer's Comments* *The supplementary information provided does not alter the main findings of the EWG 20-04.*
STECF comments	STECF agrees with the observations of EWG 20-04 noting that the supplementary information on the fisheries covered by this exemption provided by Italy does not alter the main findings of EWG 20-04. In the absence of relevant data of catches and discards, the relevance of the requested exemption in terms of unwanted catch and de minimis volume cannot be assessed.

STECF conclusions

STECF endorses the observations and main findings of the EWG 20-04. Based on such findings STECF concludes that many of its previous conclusions remain valid and where appropriate are included in the conclusions below.

General

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, STECF concludes that:

- 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 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 STECF recognizes 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.
- STECF notes that there has been a significant increase in the number and scope of Joint Recommendations for exemptions to the extent that exemptions are currently being sought or have been granted for the majority of species and fisheries. This continued increase raises some concern, as this legitimizes the continued discarding of species subject to the LO with no incentive to improve selectivity and avoid unwanted catches, instead of progressing towards the CFP's objective of gradually eliminating discards. Furthermore, the absence of effective control, enforcement, monitoring and reporting, also provides an opportunity to continue discarding over and above permitted (de minimis) or anticipated (high survival) volumes, both of which are taken into account in setting TACs. Consequently, in such circumstances, the extent to which TACs will be exceeded will be unknown. In addition, without effective monitoring and reporting of all catches, whether landed or discarded, scientific advice for fisheries management and the ability to monitor the performance of the CFP will also be compromised.
- It is difficult to provide conclusive advice on whether the information presented is sufficient to accept or reject any individual application based on the exemption provisions. The subjective nature of the conditionalities – "high survival", "very difficult to achieve" or "disproportionate costs" –means that the final decision on whether to permit or reject a proposal should not be based solely on the scientific opinion of the EWG on the evidence presented.
- 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 2020 JRs where the quality of submission is poor or absent, making it difficult to conduct an analysis. STECF urges Members States' Regional Groups to use the templates developed by STECF to supply fisheries and fleet descriptors; in the case of *de minimis* exemptions provide economic data to support such proposals; and for high survival exemptions provide all relevant survival information (details provided in Annex I).
- The increase of the number of exemptions requested has not been accompanied by a similar increase in the availability of supporting data and information. Hence data and results obtained from those studies that have been carried out are being put forward in support of exemption requests for species/fishery combination for which no pertinent information is currently available. Extrapolating by analogy in this way is not scientifically justifiable and in order to give an informed opinion on whether from a scientific perspective, requests for exemptions are adequately supported, such requests

need to be accompanied by data and information that relate specifically to the species/fishery combinations for which the exemptions are being sought.

- The supporting information for some exemptions relating to the fleets and fisheries involved are based on data from the period 2014-2016, stored in the publicly available STECF FDI database. More recent catch data should be provided, for example from DCF sampling carried out by the national research institutes in Member States.

High survivability

- Assessing what constitutes high survivability is 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 (STECF PLEN 17-02), highlighting that 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 discounted for in TAC setting, where survivability exemptions are in place, the actual fishing mortality will not match the agreed catch level. This should be discussed in the assessment forums for stocks with survival exemptions.
- As in 2019, the same scientific studies are being provided to support different discard survival exemptions. In some cases, this evidence is being extended to other fisheries and sea basins beyond the point where it is scientifically defensible. There are examples for which a single study produces a robust estimate of discard survival in a localised fishery. This is then applied to the whole region; and once established, the exemption is extended to other regions, based on technical similarities between fisheries. The result of this incremental stretching of the evidence is that the fate of a few hundred fish in a local fishery can provide the basis for exemptions for many fisheries across different regions.
- Where survivability exemptions are linked to a roadmap setting out work planned to develop survival estimates and accompanying measures to increase survivability, the JRs should report against the different tasks set out in the roadmap to facilitate future evaluations.

De minimis

- There is a need to improve 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. As STECF has pointed out previously, monitoring all catches using onboard measures such as Remote Electronic Monitoring (REM or EM) have been applied in several fisheries worldwide and have shown to be an effective way to monitor the LO to generate catch evidence for science and compliance.
- 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. Further STECF stresses that improving selectivity or avoidance methods to reduce the catches of unwanted catches should be the priority.
- Many of the existing exemptions were included under the discard plans for 2015-2017. STECF observes that there has been little attempt to review these exemptions as to whether the fisheries have changed in terms of catch patterns, gears used, vessels involved and in the case of *de minimis* the uptake of the volume of catch allowed to be discarded. As concluded by STECF PLEN 19-02 it would be appropriate for the Member States Groups and the Commission to review these exemptions and determine whether they need to be amended or are still required.
- The number of *de minimis* exemptions based on disproportionate costs continues to increase. More than 90% of the proposed *de minimis* exemptions in the JRs are based on disproportionate costs. As in 2019, the same generic information on the costs of handling unwanted catches is used to support multiple exemptions making it difficult to make an evaluation of individual exemptions as there is lack of specific information at a fishery level.
- Member States have used 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. brown shrimp in the NWW and North Sea and industrial species bycatch in demersal fisheries the North Sea), catches from the entire fishery or fisheries have been used as the basis for the calculation. A small percentage has been applied to these total catches to give a higher *de minimis* volume than would have been the case if just the catches for that species in that fishery were used.
- 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.
- *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.

Technical measures

- *Information to support proposed minimum conservation reference size(s).* No relevant information in support of minimum conservation reference sizes was provided together with the joint recommendations.
- *Increasing gear selectivity for reducing or eliminating unwanted catches:* There has been a notable drop-off in research and testing of selective gears in most regions, even in fisheries where the levels of unwanted catches continue to be high. The decline in selectivity work is concerning given one of the main objectives of the landing obligation is to improve selectivity.

Contact details of STECF members

[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

Name	**Affiliation[1]**	**Email**
Abella, J. Alvaro	Independent consultant	aabellafisheries@gmail.com
Bastardie, Francois	Technical University of Denmark, National Institute of Aquatic Resources (DTU-AQUA), Kemitorvet, 2800 Kgs. Lyngby, Denmark	fba@aqua.dtu.dk
Borges, Lisa	FishFix, Lisbon, Portugal	info@fishfix.eu
Casey, John	Independent consultant	blindlemoncasey@gmail.com
Catchpole, Thomas	CEFAS Lowestoft Laboratory, Pakefield Road, Lowestoft, Suffolk, UK, NR33 0HT	thomas.catchpole@cefas.co.uk
Damalas, Dimitrios	Hellenic Centre for Marine Research, Institute of Marine Biological Resources & Inland Waters, 576 Vouliagmenis Avenue, Argyroupolis, 16452, Athens, Greece	shark@hcmr.gr
Daskalov, Georgi	Laboratory of Marine Ecology, Institute of Biodiversity and Ecosystem Research, Bulgarian Academy of Sciences	Georgi.m.daskalov@gmail.com
Döring, Ralf (vice-chair)	Thünen Institute [TI-SF] Federal Research Institute for Rural Areas, Forestry and Fisheries, Institute of Sea Fisheries, Economic analyses Herwigstrasse 31, D-27572 Bremerhaven, Germany	ralf.doering@thuenen.de
Gascuel, Didier	AGROCAMPUS OUEST, 65 Route de Saint Brieuc, CS 84215, F-35042 RENNES Cedex, France	Didier.Gascuel@agrocampus-ouest.fr

Name	**Affiliation[1]**	**Email**
Grati, Fabio	National Research Council (CNR) – Institute for Biological Resources and Marine Biotechnologies (IRBIM), L.go Fiera della Pesca, 2, 60125, Ancona, Italy	fabio.grati@cnr.it
Ibaibarriaga, Leire	AZTI. Marine Research Unit. Txatxarramendi Ugartea z/g. E-48395 Sukarrieta, Bizkaia. Spain.	libaibarriaga@azti.es
Jung, Armelle	DRDH, Techopôle Brest-Iroise, BLP 15 rue Dumont d'Urville, Plouzane, France	armelle.jung@desrequinsetdeshommes.org
Knittweis, Leyla	Department of Biology, University of Malta, Msida, MSD 2080, Malta	Leyla.knittweis@um.edu.mt
Kraak, Sarah	Thünen Institute of Baltic Sea Fsheries, Alter Hafen Süd 2, 18069 Rostock, Germany.	sarah.kraak@thuenen.de
Ligas, Alessandro	CIBM Consorzio per il Centro Interuniversitario di Biologia Marina ed Ecologia Applicata "G. Bacci", Viale N. Sauro 4, 57128 Livorno, Italy	ligas@cibm.it; ale.ligas76@gmail.com
Martin, Paloma	CSIC Instituto de Ciencias del Mar Passeig Marítim, 37-49, 08003 Barcelona, Spain	paloma@icm.csic.es
Motova, Arina	Sea Fish Industry Authority, 18 Logie Mill, Logie Green Road, Edinburgh EH7 4HS, U.K	arina.motova@seafish.co.uk
Moutopoulos, Dimitrios	Department of Animal Production, Fisheries & Aquaculture, University of Patras, Rio-Patras, 26400, Greece	dmoutopo@teimes.gr
Nord, Jenny	The Swedish Agency for Marine and Water Management (SwAM)	Jenny.nord@havochvatten.se
Prellezo, Raúl	AZTI -Unidad de Investigación Marina, Txatxarramendi Ugartea z/g 48395 Sukarrieta (Bizkaia), Spain	rprellezo@azti.es
O'Neill, Barry	DTU Aqua, Willemoesvej 2, 9850 Hirtshals, Denmark	barone@aqua.dtu.dk

Name	**Affiliation[1]**	**Email**
Raid, Tiit	Estonian Marine Institute, University of Tartu, Mäealuse 14, Tallin, EE-126, Estonia	Tiit.raid@gmail.com
Rihan, Dominic (vice-chair)	BIM, Ireland	rihan@bim.ie
Sampedro, Paz	Spanish Institute of Oceanography, Center of A Coruña, Paseo Alcalde Francisco Vázquez, 10, 15001 A Coruña, Spain	paz.sampedro@ieo.es
Somarakis, Stylianos	Institute of Marine Biological Resources and Inland Waters (IMBRIW), Hellenic Centre of Marine Research (HCMR), Thalassocosmos Gournes, P.O. Box 2214, Heraklion 71003, Crete, Greece	somarak@hcmr. gr
Stransky, Christoph	Thünen Institute [TI-SF] Federal Research Institute for Rural Areas, Forestry and Fisheries, Institute of Sea Fisheries, Herwigstrasse 31, D-27572 Bremerhaven, Germany	christoph.stransky@thuenen.de
Ulrich, Clara (chair)	IFREMER, France	Clara.Ulrich@ifremer.fr
Uriarte, Andres	AZTI. Gestión pesquera sostenible. Sustainable fisheries management. Arrantza kudeaketa jasangarria, Herrera Kaia - Portualdea z/g. E-20110 Pasaia – GIPUZKOA (Spain)	auriarte@azti.es
Valentinsson, Daniel	Swedish University of Agricultural Sciences (SLU), Department of Aquatic Resources, Turistgatan 5, SE-45330, Lysekil, Sweden	daniel.valentinsson@slu.se
van Hoof, Luc	Wageningen Marine Research Haringkade 1, Ijmuiden, The Netherlands	Luc.vanhoof@wur.nl
Vanhee, Willy	Independent consultant	wvanhee@telenet.be
Villasante, Sebastian	University of Santiago de Compostela, Santiago de Compostela, A Coruña, Spain, Department of Applied Economics	sebastian.villasante@usc.es

Name	**Affiliation[1]**	**Email**
Vrgoc, Nedo	Institute of Oceanography and Fisheries, Split, Setaliste Ivana Mestrovica 63, 21000 Split, Croatia	vrgoc@izor.hr

REPORT TO THE STECF

EXPERT WORKING GROUP ON Evaluation of Joint Recommendations on the Landing Obligation and on the Technical Measures Regulation (EWG-20-04)

Virtual meeting, 18-22 May 2020

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. EXECUTIVE SUMMARY

Following from previous EWGs (EWGs 15-10, 16-10, 17-08, 18-06 and 19-08 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 20-04 has split these into general observations; observations relating to *de minimis* exemptions; observations relating to high survivability exemptions; and observations on technical measures.

General Observations

- EWG 20-04 acknowledges the difficulties experienced by the Member States' Groups due to the Covid-19 pandemic in providing comprehensive Joint Recommendations.
- EWG 20-04 reiterates that the avoidance of unwanted catch through improved selectivity or other means should be the primary focus in implementing the Landing Obligation. STECF notes that the JRs received contained few measures to increase selectivity. EWG 20-04 recognizes that modifying selectivity can result in some reductions in revenue, but these should be viewed in the broader context of medium-term gains in stocks and catches, and reduced risk of choke events.
- EWG 20-04 re-iterates the need to improve the collection and reporting of catch (landings, unwanted catch and discards) 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. As STECF has pointed out previously, innovative monitoring measures such as CCTV and Remote Electronic Monitoring (REM) have been applied in pilot studies and could be a more effective way to monitor the Landing Obligation to generate catch evidence for science and compliance.
- EWG 20-04 notes that many of the existing exemptions included under the discard plans were put in place under earlier discard plans from the period 2015-2018. EWG 20-04 re-iterates it would be timely for the Member States Groups and the Commission to review these exemptions and determine whether they need to be amended or are still required given likely changes in catch patterns, gears used, vessels involved and uptake.
- EWG 20-04 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 20-04 notes that for the 2020 JR's there are many cases where the information and data supplied is nonspecific with the same studies and assumptions used to support multiple exemptions. For some exemptions no supporting information has been provided at all. EWG 20-04 acknowledges that the same exemption can impact several fisheries, but without any specific linkage to the stocks and fisheries involved, it is extremely difficult to make any evaluation as to whether the exemption makes sense or not.
- EWG 20-04 notes that in many cases the supporting information for exemptions relating to the fleets and fisheries involved are based on data from the period 2014-2016, stored in the publicly available STECF FDI database. More recent catch data should be available from DCF sampling carried out by the national research institutes in Member States and should be provided. In cases where the exemption, where historical catch data are used to illustrate the potential impact of an exemption, it is difficult to evaluate the impact of the exemption compared to the current level of unwanted catches as such data may not be representative of the current catches in the relevant fisheries.

Observations on *de minimis* exemptions

- EWG 20-04 recognises there are many challenges for Member States in presenting appropriate information to support *de minimis* exemption based on disproportionate costs. STECF has proposed different analytical framework that can assist in the submission of economic cases for *de minimis* (STECF EWG 13-23 and EWG 16-10). The purpose of the economic analysis to support a *de minimis* exemption is to understand the scale, or proportionality, of the challenges faced by the group of vessels in complying with the obligation to land all catches of species subject to the Landing Obligation.
- EWG 20-04 notes that for many cases Member States have provided a range of economic analyses to estimate the costs that would be incurred if the requested *de minimis* exemptions are not granted. More than 90% of the proposed *de minimis* exemptions are based on such analyses. They demonstrate that the potential increase in workload in terms of time and operational costs and that due to storage limitations vessels may be forced to cut short fishing trips causing loss of income. However, EWG 20-04 highlights that there is no way to objectively judge whether such estimates amount to disproportionate costs. EWG 20-04 consider that simply stating that handling, storing and landing unwanted catches has an associated cost, is not sufficient to demonstrate that those costs are disproportionate. The priority should be improving selectivity and the introduction of avoidance measures to reduce the levels of unwanted catches and thus, reduce the costs for handling these unwanted catches.
- EWG 20-04 acknowledges the detailed economic analysis provided by the SWW Member States Group on the economic viability of unwanted catches that are subject to Landing Obligation in SWW. This employs a different methodology than previous studies to measure disproportionate costs of handling unwanted catches based on the loss of opportunity costs arising from the removal of *de minimis* exemptions. EWG 20-04 did not have the relevant economic expertise to thoroughly review the approach taken and suggests more a detailed review be carried out to validate the methodology, input assumptions and results.
- EWG 20-04 notes that regional groups have used a variety of ways to estimate potential *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 unwanted catches (e.g. Greater silver smelt and boarfish in the NWW and industrial species bycatch in demersal fisheries the North Sea), catches of all species from the entire fishery or fisheries have been used as the basis for estimating the *de minimis* volume. In such cases, the *de minimis* volume of the species under the exemption is much higher than would have been the case if just the catches for that species in that fishery were used.
- EWG 20-04 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 and the supporting information should contain indications on the measures to be taken to reduce these residual unwanted catches.
- EWG 20-04 notes 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 of such species 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 20-04 re-iterates 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.
- EWG 20-04 has identified areas where there are limitations in the information presented or the methodologies used and, in some cases, where there are inconsistences. 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 short term 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 of in comparison due to choke effects and utilization of quota for fish that have little or no value. There may also be market advantages in introducing more selective measures.

Observations on high survivability exemptions

- EWG 20-04 re-iterates that assessing what constitutes high survivability is problematic, which is made more complex by the limited information available and the variability in the available survival estimates. What is clear is that there are a wide range of factors that can affect survival, and these are likely to be the primary cause of the high variability observed across the studies. However, identifying and quantifying these is difficult due to the relatively limited species-specific information and differences between experiments including timing, season, environmental conditions, gear handling and catch processing. This means that passing judgment on 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.
- EWG 20-04 observes that some trends are emerging from the survival evidence provided to support survivability exemptions. Most of the exemptions in the demersal fisheries have continued to focus on a few species, Norway lobster, plaice, sole and skates and rays. Studies on these species are indicating general differences in overall discard survival between gear types, whereby otter trawl fisheries have higher survival levels compared with beam (including pulse) trawl fisheries. The species most studied to date is plaice. Several studies on plaice have shown that discard survival is lower when more Norway lobster were caught simultaneously with plaice. Also, season has been identified as an influencing factor in several studies, with higher plaice survival observed in winter months when seawater temperatures were lower. EWG 20-04 note that further information on factors shown to influence discard survival has been collated by the ICES Working Group on Methods to Estimate Discard Survival (ICES, 2020) and a meta-analysis of the relative importance of these factors would be useful.
- EWG 20-04 observes that vitality data is increasingly being used to support high survival proposals because of calls for additional supporting information. This is due to the relative ease and low cost of collecting this evidence compared with direct discard survival observations. Information on the 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 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. At this time, there is 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 20-04 observes that the same scientific studies are being provided to support different discard survival exemptions. EWG 20-04 consider that in some cases, this evidence is being extended to other sea basins and other fisheries beyond the point where it is scientifically defensible. There are examples for which a single study produces a robust estimate of discard survival in a localised fishery. This is then applied to the whole region; and once established, the exemption is extended to other regions, based on technical similarities between fisheries. The result of this incremental stretching of the

evidence is that the fate of a few hundred fish in a local fishery can provide the basis for exemptions for many fisheries across different regions. Our current knowledge of the factors influencing discard survival needs to improve before we can be confident in extrapolating discard survival evidence much beyond the conditions under which it was collected. Alongside this, data on the technical, biological and environmental conditions associated with relevant fisheries should be collected and compiled (some of which may be available through observer programmes), to provide context to extrapolating survival rates between fisheries.

- EWG 20-04 notes that several existing exemptions for plaice and sole are linked to conditions such as restricting the exemption to fishing at certain depths, tow durations and to specific groups of vessels, or the use of modified fishing gears. While these factors may influence survival, there is no evidence of these conditionalities are 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 20-04 notes that several survivability exemptions – plaice and rays and skates – are linked to a roadmap 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 relates to the roadmaps. However, EWG 20-04 points out that there is no explicit reporting against the roadmap, which it makes it hard to assess progress. Structured reporting of the different tasks and their objectives as set out in the roadmaps would enable a more efficient and robust evaluation process. Moreover, it is noted that the timelines and specific objectives for the roadmaps are sometimes unclear and these need to be set out in definitive versions of the roadmap documents. This will assist member states in understanding the commitments made and will enable robust evaluations of the outputs.
- EWG 20-04 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. EWG 20-04 re-iterates the need for this to be discussed in the assessment forums for stocks with survival exemptions.
- EWG 20-04 recognises the challenges for Member States in presenting appropriate information to support survival exemptions. STECF has previously published a template for the provision of supporting evidence to assist the regional groups (STECF EWG 13-23 and EWG 16-10). These have been further refined and expanded here (Annex I), alongside a description of the critical review process that is applied to assess the quality of the discard survival estimates based on the ICES best practices guidance (Annex II).

Observations on technical measures

- EWG 20-04 notes that despite many experiments to test selective gears, both before and after the Landing Obligation was introduced, there are few examples of such gears being incorporated into the JRs submitted. Uptake of selective gears in most regions remains extremely low even in fisheries where unwanted catches remain high. Other than in the North Sea, which largely moved existing measures into a new JR for technical measures, virtually no new measures have been proposed for 2020.
- EWG 20-04 re-iterates 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. This review should focus on fisheries with *de minimis* or survivability exemptions are already in place but improving selectivity may reduce the need for such exemptions to remain in place.

- EWG 20-04 notes, that while in previous years some exemptions were predicated on the use of selective gears, no such exemptions were proposed for 2020, other than existing exemptions which already were linked to the use of a specific selective gear.
- EWG 20-04 notes that there has been a notable drop-off in research and testing of selective gears in most regions, even though the levels of unwanted catches continue to be high in some fisheries. While there is no doubt that the Covid-19 pandemic may have impacted on some of these studies, the decline in selectivity work is nonetheless concerning.

Evaluation of regional Joint Recommendations

Based on the terms of reference, EWG 20-04 considered a combination of 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, as well as new exemption requests for *de minimis* and high survivability.

Additionally, EWG 20-04 has considered Joint Recommendations on regional technical measures. Such Joint Recommendations were received from the North Sea and SWW regional groups. They contained specific proposals on closed areas and selective gears as well as proposals in relation to MCRS for specific species caught in recreational fisheries.

The number of exemptions proposed in the JRs for evaluation by EWG 20-04 was comparable with the previous submissions in 2019 (EWG 18-06, STECF 18-02). The number of individual exemptions proposed for introduction or continuation in 2021 was 55 compared with 67 for 2019. This was made up of a limited number of new exemptions and multiple exemptions that were granted for one year, until the end of 2020.

For the Mediterranean, the different regional groups (SUDESTMED, PESCAMED and ADRIATICA) did not send Joint Recommendations formally speaking (because the legal basis is different for the de minimis exemptions) but submitted additional supporting information relating to de minimis exemptions for small pelagic species (i.e. anchovy, sardine, mackerel and horse mackerel). Excluding the Mediterranean, the total number of individual proposed and assessed exemptions across all regions (NS, NWW, SWW, Baltic) was 52 (Table 1.1). The number of proposed exemptions in the previous year was 67 (STECF 19-08).

Table 1.1 Number of recommendations by type and region evaluated by EWG 20-04 (To be updated)

Region	High Survivability	*De minimis*
North Sea	7	9
NWW	4	9
SWW	3	19
Baltic	1	-
PESCAMED	-	1
SUDESTMED	-	1
ADRIATICA	-	1
Total	**15**	**40**

Main findings

The main findings of the EWG 20-04 are given in Table 1.2 below.

At the end of the EWG 20-04 meeting (29 May 2020), an incomplete draft of the EWG report was provided to the Commission (DG MARE). The Commission then invited Member States to provide feedback/supplementary information based on the contents of the draft EWG report by 5 June. The responses from the Member States were compiled and reviewed under contract. The compiled responses and comments from the reviewer are also incorporated Table 1.2.

The responses from Member States and the comments from the reviewer are intended to add value so that in its review of the EWG 20-04 report, the STECF can take account of the findings of the EWG, feedback/supplementary information from Member States provided in response to the draft EWG report and any comments made by the reviewer.

Table 1a. Main findings of the STECF EWG 20-04, summary of additional information received relating to exemptions presented and Reviewer's Comments:

North Sea

De minimis	
Exemption	Whiting and cod below the minimum conservation reference size by vessels using bottom trawls or seines with mesh size 70-99 mm in ICES divisions 4a and 4b.
Main findings of EWG 20-04	Limited new information is provided. The arguments presented regarding disproportionate costs for handling unwanted catches are based on previously submitted information. They are generic and not specific to the relevant fisheries, accepting that there are indications that the impacts are quite significant in terms of disproportionate costs. The selectivity information provided has also previously be used to support this, and other exemptions. Many of the studies date back to 2014 and earlier, noting one new study is ongoing. The *de minimis* volume requested covers only a part of the unwanted catches in the fisheries and improving selectivity in the fisheries should remain the priority. Only partial information on catches and fleets are provided. The supporting information supplied refers mainly to area 4c and 7d and for the French fleet. It is not clear how representative this information is to areas 4a and 4b, or the Dutch and German fleets availing of this exemption. The actual amount of *de minimis* being requested should be clarified.
Supplementary information provided to the Commission post EWG 20-04	The following supplementary information was received from Member States: DE – Germany provided additional information in Mai 2019 regarding this exemption. Germany has provided up to date landings and discard data for whiting and cod in this fishery in the current JR. Germany sees the information provided by France as sufficiently representative for the German fleet. In recent years, the German TR2 mixed demersal fishery operates exclusively in divisions 4b and 4c with similar trip lengths (average 5.5 days) and the vessels catch a similar species assemblage. In regulation 2019/2238 the amount of de-minimis allowed is only specified for 2020 (6%). The JR and DA keeps the 6% also for 2021-2023 while in the annex from France the amount is reduced to 5% from 2021 onwards. Also for cod a reduction from 2% to 1% de-minimis is proposed. Germany will not insist on a certain percentage as long as the percentage is in line with article 15 (5c) of regulation (EU) No 2013/1380. DK - Not relevant for DK fisheries FR - Indeed, it's written in the DA that the DM is 6 % of the total annual catches of whiting and cod; the maximum amount of cod that may be discarded shall be limited to 2 %. In the annex we had ask for a *de minimis* of 5% with the maximum amount of cod that may be discarded limited to 1%. =>Given the current state of the cod stock, we think that it would be relevant to ask for a 5% *de minimis* with a limitation of 1% of cod (for both exemptions for whiting and cod) NL - NL has provided data in 2019 and in the JR for 2020. In the annexed document the data is provided once again. This for the entire area 4. SE – Not relevant for SE fisheries *Reviewer's Comments*

	The supplementary information provided is largely qualitative and/or for clarification and does not affect the main findings of the EWG given above.
Exemption	Whiting below the minimum conservation reference size by vessels using beam trawls with mesh size 80-119mm in ICES subarea 4.
Main findings of EWG 20-04	The information provided indicates that the costs of landing unwanted catches of whiting are significant and would require additional labour on board. However, given the *de minimis* volume would cover only a small part of the overall unwanted catches, the costs for handling the residual unwanted catches not discarded under the exemption would remain regardless of whether the exception is in place or not. The studies only cover the Dutch fleet and it is not clear whether it is representative of other fleets availing of this exemption. Calculating the *de minimis* based on catches of sole and plaice, means 100% of unwanted catches below mcrs can be potentially discarded. The actual amount of *de minimis* volume should be clarified as there are different percentages specified in the delegated act (2%) compared to the JR (3%).
Supplementary information provided to the Commission post EWG 20-04	The following supplementary information was received from Member States: BE - In Belgium 41 vessels were active in 2019 in ICES division 4b and 4c (TBB_DEF_70-99). The percentage of the *de minimis* in the JR prevails in this request, this is 3%. DE - The following number of German vessels used beam trawls with mesh size 80-119mm for at least one trip in a given year (also provided in Annex_DEU_additional_information.docx): DEU 2017: 17 DEU 2018: 15 DEU 2019: 43 Regarding the amount of de-minimis allowed, 2% are mentioned in regulation 2019/2238. Germany will not insist on a certain percentage. DK - Not relevant for DK fisheries FR - Not relevant for FR fisheries NL - "With regards to possibilities for improvement of selectivity, the research that has been done in fisheries with beam trawls has been extensively reported in the exemption request and annex for the exemption for plaice in beam trawl fisheries. In particular, research that was done by increasing mesh size from 80mm to 90mm showed clearly, that this led to a larger loss of marketable sole than a reduction of discards. Improving selectivity for whiting in fisheries with BT2 is therefore very difficult. (Reference: Thomas Brunel, Ruben Verkempynck, Chun Chen and Jurgen Batsleer, Effect on future development of sole and plaice of changing mesh size from 80mm to 90mm in the beam trawl fishery, Wageningen Marine Research report C016/19) The *de minimis* amount requested is 3%. The delegated act must be adapted accordingly. Number of NL vessels: 2017: 42

	2018: 41 2019: 43 SE – Not relevant for SE fisheries *Reviewer's comments* *The supplementary information provided by the Netherlands clarifies the requested de minimis percentage for whiting as 3% of the total combined catches of plaice and sole in fisheries with beam trawls 80-119mm.* *Other supplementary information provided does not affect the findings of the EWG 20-04 given above.*
Exemption	Horse mackerel in the demersal mixed fisheries with bottom trawls with a mesh size between 80-99mm (TR2, BT2) in ICES subarea 4
Main findings of EWG 20-04	Limited new information is provided. The arguments presented regarding disproportionate costs for handling unwanted catches are based on previously submitted information. They are generic and not specific to the relevant fisheries, accepting that there are indications that the impacts are quite significant in terms of disproportionate costs. The selectivity information provided has also previously be used to support this, and other exemptions. Many of the studies date back to 2014 and earlier. The supporting Annex indicates unwanted catches of horse-mackerel are low (< 3%) and highlights that selectivity for horse mackerel is already high. The evidence provided only partially supports this contention. Only partial information on catches and fleets are provided and in the case of the supporting annex, the data presented dates to 2016 or early. The supporting information supplied refers mainly to area 4c and 7d and for the French fleet. It is not clear how representative this information is for other fleets availing of this exemption.
Supplementary information provided to the Commission post EWG 20-04	The following supplementary information was received from Member States: DE - The selectivity for horse mackerel is already high in demersal fisheries with>= 80mm mesh size. A further increase of mesh size would lead to loss of catches from important target species (i.e. sole) in 4c and 4b where the German TR2 and BT2 fleets operate (similar to the French fleets). DK - Not relevant for DK fisheries FR - Given the data provided, France suggests to ask for a *de minimis* for TR2 only and for the area 4b and c as there is no data provided for BT2 and for area 4a. SE – Not relevant for SE fisheries *Reviewer's comments* *The supplementary information on selectivity for horse mackerel from DE, merely re-asserts that unwanted catches of horse-mackerel are low (< 3%) and that selectivity for horse mackerel is already high. Hence the findings of the EWG 20-04 given above are unaffected.* *The Commission may wish to note the suggestion from France and discuss with the relevant regional group.*
Exemption	Mackerel in the demersal mixed fisheries with bottom trawls with a mesh size between 80-99mm (TR2, BT2) in ICES subarea 4

Main findings of EWG 20-04	The EWG observations are the same as those for horse mackerel.
Supplementary information provided to the Commission post EWG 20-04	The following supplementary information was received from Member States: DE - The selectivity for mackerel is already high in demersal fisheries with>= 80mm mesh size. A further increase of mesh size would lead to loss of catches from important target species (i.e. sole) in 4c and 4b where the German TR2 and BT2 fleets operate (similar to the French fleets). DK - Not relevant for DK fisheries FR - Given the data provided, France suggests to ask for a *de minimis* for TR2 only and for the area 4b and c as there is no date provided for BT2 and for area 4a. SE – Not relevant for SE fisheries *Reviewer's comments* *The supplementary information on selectivity for mackerel from DE, merely re-asserts that unwanted catches of horse-mackerel are low that selectivity for horse mackerel is already high in demersal fisheries with >=80mm mesh size. Hence the findings of the EWG 20-04 given above are unaffected.* *The Commission may wish to note the suggestion from France and discuss with the relevant regional group.*
Exemption	Sprat, sandeel, Norway pout and blue whiting of all species under the Landing Obligation caught in the demersal mixed fisheries with trawls in ICES division 3a and ICES subarea 4
Main findings of EWG 20-04	No additional documentation has been provided to support the continuation of this exemption, other than updated catch information. The justification that the catches are insignificant in the demersal fisheries and options to improve selectivity have been exhausted are not supported with quantitative evidence. Intuitively, achieving additional selectivity improvements would be difficult to achieve in such fisheries and the costs for sorting would be high given the nature of the species involved.
Supplementary information provided to the Commission post EWG 20-04	The following supplementary information was received from Member States: DK - As already mentioned in the JR it is evident that mesh sizes of 120mm will be selective in order to avoid fish normally caught with 35 og 70mm. Neither we nor our scientific institute can see the reasoning behind expensive studies to demonstrate this self-evident fact. The insignificance of catches are demonstrated in the fisheries data provided – also in comparison to the individual stocks of industrial species. FR - Not relevant for FR fisheries *Reviewer's comments* *The assertion from DK relating to mesh sizes greater than 120 mm is not in line with the request in the JR which relates to the demersal fishery using gears with mesh sizes above 80 mm and fishery for Northern Prawn using gears with mesh sizes above 35 mm in ICES division 3a and 32 mm in ICES subarea 4 and a fish retention device fitted with a sorting grid with a maximum bar spacing of 19mm or equivalent selectivity device (OTB, OTM, OTT, PTB, PTM, SDN, SPR, SSC, TB, TBN).* *The supplementary information provided does not affect the findings of the*

	EWG 20-04 given above.
Exemption	Ling in the demersal fishery for hake with longlines in ICES subarea 4
Main findings of EWG 20-04	No additional documentation has been provided to support the continuation of this exemption, other than updated information on the number of vessels involved in the fishery. The arguments regarding difficulties in improving selectivity are credible given the nature of the fisheries and the *de minimis* volume is estimated as small compared to overall ling catches. 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 not been provided. No attempt has been made to quantify the potential scale of losses that would be incurred if the *de minimis* exemption was not granted.
Supplementary information provided to the Commission post EWG 20-04	The following supplementary information was received from Member States: DE - Germany has currently no longline fisheries for hake. DK - Not relevant for DK fisheries FR - As already mentioned in the annex, it is known that longlines is already a very selective gear. Therefore, neither France nor our scientific institute can see the reasoning behind expensive studies to demonstrate this fact. Moreover, STECF database indicates that, the discard ratio of TAC species between 2013 and 2016 is around 0.3%, meaning that the longlines fisheries are highly selective. According to the French observer program, there is no discard of hake by French longliners (targeting hake) meaning that this fishery is highly selective. Still, because the minimum size of the hake is 27 cm and the minimum size of the ling is 63cm and despite this level of selectivity, it is possible for longliners to catch some lings below MCRS. There is no quantification of the potential scale of losses as the argument put forward is that it's really to improve the selectivity when there is no discard for the target species. SE – Not relevant for SE fisheries *Reviewer's comments* *The comments from France regarding the selectivity of longlines are intuitive and simply re-assert the statements in the supporting documentation included within the JR.* *The supplementary information provided is largely qualitative and does not affect the findings of the EWG 20-04 given above.*
Exemption	Mackerel, horse mackerel, herring and whiting in the pelagic fishery carried out by pelagic trawlers up to 25 meters
Main findings of EWG 20-04	No additional documentation has been provided to support the continuation of this exemption since the last evaluation of the pelagic discard plan JR's for the North Sea carried out by STECF in 2014. Updated information on the number of vessels involved in the fishery and catch data from French observed data collected under the OBSMER programme has been provided. The information provided indicates that the *de minimis* is primarily covering unwanted catches of whiting in the fishery. The unwanted catches of herring, mackerel and horse mackerel are

	reported to be minimal and it is not clear why these species are included in the exemption, if the issue is around unwanted catches of whiting. It is not possible to precisely identify which vessels or trips would be subject to a *de minimis* exemption from the information given in the JR or whether it is intended that the exemption would apply to specific fishing operations within a given fishing trip. The justification assumes that the unwanted catches are insignificant in the pelagic fisheries and options to improve selectivity have been exhausted. There is no quantitative evidence to support these assertions although several French selectivity projects are referenced, which contain limited information on the specific species covered by the exemption. Intuitively, 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 but this cannot be fully assessed from the information supplied. The relatively high number of vessels compared to the low volume of *de minimis* brings into question of monitoring the exemption.
Supplementary information provided to the Commission post EWG 20-04	The following supplementary information was received from Member States: DE - Germany has currently no vessel below 25m targeting small pelagic fish. DK - Not relevant for DK fisheries NL - No additional information. NL does not have small pelagic vessels. SE – Not relevant for SE fisheries *Reviewer's comments* *The supplementary information provided is largely uninformative and does not affect the findings of the EWG 20-04 given above.*
Exemption	Blue-whiting for industrial vessels using pelagic trawls in ICES subarea 4
Main findings of EWG 20-04	Discrepancies between the figures in the discard table (from 0,06% in 2013 to 2% in 2016) and the exemption request (5 and 6 %) make it difficult to evaluate the request. There does not appear to be any relationship between the level of *de minimis* requested and the levels of unwanted catch (reported to be 0.1% in the table referred to above). The actual levels of resulting *de minimis* is many times greater than the reported level of unwanted catch. No documentation is provided to support the assertion that selectivity is difficult to achieve on board the factory vessel covered by the requested exemption. Similarly, there is limited information to demonstrate that the costs of handling unwanted catches are disproportionate. There is no quantitative evidence to support the assertion that options to improve selectivity have been exhausted even though, intuitively, achieving additional selectivity improvements would be difficult given the technical and sanitary specificities of the factory trawler involved.
Supplementary information provided to the Commission post EWG 20-04	The following supplementary information was received from Member States: DK - Not relevant for DK fisheries FR - France would like to stress out that STECF data (from 2013 to 2016) are not quite relevant as they take into account all European pelagic trawler and this exemption will only concern one industrial French pelagic trawler

	targeting blue-whiting. The main objective of this exemption is to have a level playing field between sea-bassins (NWW and the North Sea). The exemption was already granted in the NWW (5% corresponding to the discard level) and it is why the same exemption is requested in the North Sea. France does not understand this second comment as the addition information sent for the below 25 m fleet concerned the above-mentioned exemption and not this one. Therefore, we totally agree that these elements are not relevant with this request. SE – Not relevant for SE fisheries *Reviewer's comments* *Paragraph 2 of the supplementary information provided by France above, relating to additional information for the under 25m fleet is unclear. While it is clear that the statement that the exemption is being requested to provide a level playing field between sea basins, the remaining supplementary information provided does not affect the findings of the EWG 20-04 given above.*
Exemption	Herring for vessels using bottom trawl and seine (OTB, OTT, PTB, TBB, SSC, SPR, SDN, SX, SV) with mesh size of 80-99mm to catch herring in ICES subarea 4
Main findings of EWG 20-04	The information provided indicates that the costs of landing unwanted catches of herring are significant and would require additional labour on board. However, given the *de minimis* volume would cover only a small part of the overall unwanted catches, the costs for handling the residual unwanted catches not discarded under the exemption would remain regardless of whether the exception is in place or not. There is no indication of any measures to be taken to reduce these residual unwanted catches. The supporting information also provides a review of selectivity trial projects carried out since 2008. The results presented while designed for various species show reductions of unwanted catches including herring (up to 39%) but also corresponding losses of marketable catch associated with most of the gear modifications tested. Because of these losses, there seems a marked reluctance to use any of the gear options tested.
Supplementary information provided to the Commission post EWG 20-04	No supplementary information was provided.
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 20-04	The estimated discard survival estimates described here are variable between trips. The trips varied in time and area, and therefore in environmental conditions, by vessel, gear characteristics and catch composition. It is considered the data should be sampled from a range of vessels that is representative of the relevant fleet. To evaluate the outputs from the roadmap, future submissions should include scientific evidence of the changes in discard survival that have been

	achieved in a clearer manner. Delegated Regulation 2019/2238 also refers to a roadmap for the Fully Documented Fisheries. Further clarity on the objectives for this are needed before an evaluation can be provided. There is currently no timetable for the completion of the roadmap.
Supplementary information provided to the Commission post EWG 20-04	The following supplementary information was received from Member States: DK - Not relevant for DK fisheries FR - Not relevant for FR fisheries NL - See 'FDF Roadmap' document in Annex. This has been supplemented based on the request. (Annex_Additional Information FDF Roadmap 2020_NL.docx) SE – Not relevant for SE fisheries *Reviewer's comments* *While the Annex from the Netherlands relating to the FDF roadmap is informative, it in no way helps with the assessment of survivability of discards.*
Exemption	Skates and rays caught by all fishing gears in the North Sea in ICES division 3a and ICES subarea 4 (except cuckoo ray)
Main findings of EWG 20-04	Regarding starry ray in the Dutch otter trawl and flyshoot fishery, even though the proposed rates were adjusted for the commercial conditions of the fisheries of interest, the survival evidence cannot be considered a representative estimate. There is little evidence documenting in which respects pulse trawling could be compared to otter trawling with respect to mode of capture and therefore potential effects on discard survival. Fish caught by Scottish or Danish seining may show similar and relatively high survival, but comparison across families, i.e., flatfish and rays, is difficult to support. For thornback ray, blonde ray, spotted ray and undulate ray, survival evidence is deemed relevant for the pulse, beam and otter trawls (80mm) and trammel nets (90mm) in 4c. It is difficult to assess applicability to the other gears/mesh sizes and areas without additional information on the fisheries. The ongoing projects demonstrate the significant effort in addressing data gaps to meet the objectives of the roadmap. A summary table with all studies and fisheries would be helpful for further reports. Reporting against the agreed roadmap should be provided detailing progress against the three main tasks: i) quantifying catches and discards per species and métier; ii) generating discard survival evidence; and iii) stakeholder led adoption of codes of best practice to maximize discard survival..
Supplementary information provided to the Commission post EWG 20-04	The following supplementary information was received from Member States: BE - A summary table with an overview of the studies high survivability exemption for skates and rays caught by all fishing gears in the North Sea is annexed (ref Annex S&R overview). Besides, Belgium believes that the document 'Gap analysis' initially added as annex 6.2.2a, gives an overview of which kind of research is conducted on the different species S&R, the area and fishery. The BE research institute also introduced recently a proposal for project

	Raywatch (short summary in annex). The main objective of this project is to fill a number of important knowledge gaps. The focus is on collecting discard figures and biological parameters (such as height, age, maturity, etc.) of rays through catch monitoring on board commercial vessels. NL - See attached research document that was referenced. (Annex project Raywatch.docx and Annex S&R_overview.docx) *Reviewer's comments* *While the documents referred to by BE and NL are informative they do not provide information that affects the findings of the EWG 20-04.*
Exemption	Cuckoo Ray caught by all fishing gears in the North Sea in ICES division 3a and ICES subarea 4
Main findings of EWG 20-04	Cuckoo ray is rarely caught in the North Sea in the Belgian and Swedish fisheries. No additional information was provided for the other fleets to evaluate the extent of the exemption. There is currently one published study in area 7e (Catchpole et al., 2017), but it is difficult to assess applicability to the other area/gear combinations without additional information on the fisheries.
Supplementary information provided to the Commission post EWG 20-04	No supplementary information was provided.
Exemption	Plaice when targeting flatfish or round fish (Bottom trawls with a mesh size of at least 120mm) in ICES division 3a and ICES subarea 4
Main findings of EWG 20-04	The two supporting studies with survival estimates were based on fish caught using a 90mm cod end mesh, compared to the requested exemption that applies to ≥ 120 mm trawls. It is unlikely the survival rate when using a larger cod end mesh is lower than the reported rates of 44-75%. Apart from season, two other important factors influencing plaice survival, according to the underlying studies, was air exposure time and whether fish or *Nephrops* was targeted. Air exposure influenced a reported drop in survival to 8% after 60 min air exposure in the summer experiments. 60 minutes was in the 2019 JR also reported to be the average sorting time in the fishery when plaice is targeted. Therefore the 44% summer survival rate in the JR request may not represent the survival rate in the fishery during summer as fleet sorting times can be longer than those observed in the survival study. As this request relates to the >120 mm fleet the effect of *Nephrops* in the catches is a minor issue as these fleets target fish and not *Nephrops*. Information about seasonal fishing patterns and sorting times for the fleet would be beneficial for a better assessment of this request.
Supplementary information provided to the Commission post EWG 20-04	The following supplementary information was received from Member States: DE - Percentage per quarter of German total landings with bottom trawls and mesh size >=120mm in 2019 (area 4 and 3a): Quarter 1: 23% Quarter 2: 32%

	Quarter 3: 29% Quarter 4: 16% However, given that evidence has been provided for the winter and summer fishery, Germany does not see the real need for further seasonal division. DK – The scientific data already provided shows a high survivability rate and provides evidence on the impact of air exposure. As the data is provided for both the summer fishery and winter fishery, we do not see the need for further seasonal division. Fisheries data has been updated. SE - Quarterly data for 2017 – 2019 attached (Annex Sweden Data.docx). Have no additional information on sorting time available. *Reviewer's comments* *The supplementary information provided does not alter the main findings of the EWG 20-04.*
Exemption	Plaice caught with trawls with a mesh size of at least 90-99 mm equipped with Seltra panel targeting flatfish or roundfish in ICES division 3a, — plaice caught with trawls with a mesh size of at least 80-99 mm targeting flatfish or roundfish in ICES subarea 4
Main findings of EWG 20-04	The two supporting studies with survival estimates are based on fish caught using a 90mm cod end mesh. According to the underlying studies, apart from season, two other factors that were shown to influence plaice survival was air exposure time and whether fish or *Nephrops* was targeted. Air exposure influenced a reported drop in survival to 8% after 60 min air exposure in the summer experiments. A large difference in the average sorting time depending on whether plaice of *Nephrops* is targeted was reported. A major target species for the 80-99 mm fleet in the northern North Sea and 3a is *Nephrops*. As this request relates to the part of the fleet that targets fish a definition of vessels targeting flatfish and roundfish would be needed to manage the implementation of this exemption. The request would benefit from a definition of how a directed fishery for flatfish and roundfish can be separated from directed fisheries for other important species in trawls using this mesh size range (e.g. *Nephrops*). This should consider the evidence indicating that more *Nephrops* in the catch reduces the survival of discarded plaice. Such a definition would facilitate the assessment of the likely effects of this exemption on the plaice stock
Supplementary information provided to the Commission post EWG 20-04	The following supplementary information was received from Member States: DE - This relates to the definition of targeted fisheries covered by the next delegated act. Because discussions are ongoing, a definition of directed fishery for flatfish and roundfish is difficult to provide in this short time frame. DK - The Scheveningen group is currently working on definitions for directed fishery. In the meantime a definition could be changed to "white fish, excluding crustaceans (i.e. Lobster and Northern prawn)" FR - France agrees with the DK comments and the suggested definition of fisheries targeting flatfish and roundfish. NL - NL recognizes the difficulty in differentiating between the targeted fisheries.

	This discussion is taking place at the moment in light of the TM regulation. SE - Catches of *Nephrops* decreases survival of plaice. A formulation which makes it clear from the start of the fishing trip (for fishermen and control authorities) whether the exemption applies or not should be proposed. Difficult to come up with a proposal though. (We have indicated to our fishermen that most of them on most trips to a certain extent target *Nephrops* which means that in most cases the exemption would not apply.) *Reviewer's comments* *The supplementary information provided relates to the definition of fisheries for the purposes of prescribing the exemption in a delegated act. Given that such definitions are on-going, the supplementary information does not alter the main findings of the EWG 20-04.*
Exemption	Plaice caught with mesh size 100-119 mm in ICES division 3a and ICES subarea 4
Main findings of EWG 20-04	The two supporting studies with survival estimates were based on fish caught using a 90mm cod end mesh, compared to the requested exemption that applies to 100-119 mm trawls. It is unlikely the survival rate when using a larger cod end mesh is lower than the reported rates of 44-75%. Apart from season, two other important factors influencing plaice survival, according to the underlying studies, was air exposure time and whether fish or *Nephrops* was targeted. Air exposure influenced a reported drop in survival to 8% after 60 min air exposure in the summer experiments. 60 minutes was in the 2019 JR also reported to be the average sorting time in the Danish fishery when plaice is targeted. Therefore the 44% summer survival rate in the JR request may not represent the survival rate in the fishery during summer as fleet sorting times can be longer than those observed in the survival study. As this request relates to the 100-119 mm fleet, the effect of *Nephrops* in the catches is probably a minor issue as these fleets primarily target fish and not *Nephrops.* However, the lack of any fishery information hampers the ability to assess survival and fishery compatibility fully. Information about fleets and catches, including discards, for the fleets in all Member States is missing
Supplementary information provided to the Commission post EWG 20-04	The following supplementary information was received from Member States: BE - In Belgium there is no discard information available for OTB vessels in this area –conform DCF. In 2019 there was landed (from ICES division 4b and 4c) 944.459t plaice by 7 vessels OTB_DEF_100-119. DE - Germany provides relevant information in Annex_DE_additional_information.docx DK - DK provided this information. Maybe we should underline, that keeping the gap could prevent fishermen from moving up from mesh sizes below 100mm. FR - Not relevant for FR fisheries NL - NL has provided additional information on the fishery and catches in attached document. (Annex_Additional information by NL on STECF.docx) SE - Sweden has no vessels and no landings during the period from 2017 to

	2019. SE doesn't have separate discard estimates for this mesh size range. *Reviewer's comments* *The supplementary information provided largely relates to fleet catches and does not alter the main findings of the EWG 20-04.*
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 20-04	It remains unclear whether the survival estimates provided from pulse trawling are relevant to this request, given that numbers of pulse trawlers are set to reduce, and likely to be replaced by beam trawlers. The supporting information mentions that research is committed by BE to estimate the survival of discarded turbot caught by beam trawlers in the North Sea in a project ('Survival Monitoring - Overleving Monitoren') that aims to improve survival estimates for both plaice and turbot in the beam trawl fishery during 2019-2021. Outputs from this work will enable a more robust evaluation of this proposed exemption.
Supplementary information provided to the Commission post EWG 20-04	The following supplementary information was received from Member States: BE - The Scheveningen Group refers to the annex submitted 4 May with the JR. In this annex Belgium is referring to a project plan. With the ongoing project 'Survival Monitoring - Overleving Monitoren' discard survival estimates of turbot will be generated from samples taken during normal commercial fishing activity. The JR for 2021 does not refer to pulse trawling. DK - Not relevant for DK fisheries FR - Not relevant for FR fisheries NL - The submission in 2019 has indicated a range in survivability of turbot from several different studies including traditional beam trawls (non pulse). The data from pulse-fisheries are not relevant for the beam trawl fleet in its entirety. BE has indicated its intention to continue survivability work. Turbot is also one of the species that is studied in the context of the pilot project Fully Documented Fisheries implemented by NL. SE – Not relevant for SE fisheries *Reviewer's comments* *The supplementary information provided by Member States does not alter the main findings of the EWG 20-04.*
Exemption	Plaice caught with mesh size 100-119 mm in ICES division 3a and ICES subarea 4
Main findings of EWG 20-04	This is a new request but given its link with other plaice exemptions the same comments as for the other plaice exemptions apply. No additional information is provided.
Supplementary information provided to the Commission post EWG 20-04	No supplementary information was provided.

Exemption	Norway lobster caught with bottom trawls with a cod- end larger than 80mm or with a cod-end of at least 35 mm + species selective grid with bar spacing of maximum 19 mm in ICES divisions 2a, 3a and ICES subarea 4
Main findings of EWG 20-04	It is not clear which fisheries this exemption would apply. Additional information is provided for the Scottish East coast otter-trawl fishery for *Nephrops*. Based on this work, different fishing practices within this fleet contribute to different injury rates which indicate potential for different survival rates. Information on the fishery detailing fishing effort, landings, discards and operational characteristics with respect to the fisheries that were studied to quantify discard survival is required. The assumptions made on the survival estimates observed in the east coast fisheries may not be representative for the whole area, no additional evidence has been provided to address this. The request to extend the exemption to the fishery for Northern prawn is not supported without any information on the operational and environmental characteristics of the Northern prawn fishery or discard survival data.
Supplementary information provided to the Commission post EWG 20-04	The following supplementary information was received from Member States: DE - Germany has no fishery for northern prawn. It needs to be specified by STECF which operational characteristics are most relevant to the survival rates. Given that survivability can be influenced by many factors, it is otherwise difficult for MS to ensure that all necessary information is provided. Germany provides relevant information on the fishery and catches in Annex_DE_additional_information.docx. DK - Member States should provide their fishery information. Please find enclosed the Danish data for landings and discard. (Annex_DK_Norway lobster fisheries data DENMARK.docx). Information on number of vessels will follow. As indicated earlier in the group, we have no particular need to keep the shrimp fishery in the exemption and have no scientific data except for the fishery information provided in the attached doc. FR - Not relevant for FR fisheries NL - NL provides relevant information on the fishery and catches in attached document. (Annex_Additional information by NL on STECF.docx) As stated in the JR, previous evaluations in recent years have indicated that the provided evidence was robust. SE - The additional information that COM/STECF has requested concerns some areas in 4 and not 3a. That should be pointed out in the reply to COM, in that way it would be easier to focus the evaluation. STECF and COM has previously considered the information for area 3a robust and sufficient. On that basis *Nephrops* survival exemptions for 3a were included in the DA for 2017 (2016/2250 art. 4.1.b) without requirements for updates or additional info. *Reviewer's comments* *The supplementary information provided does not include additional relevant information on the survival of discarded Nephrops from the*

	fisheries concerned and does not affect the main findings of the EWG 20-04.
Technical Measures	
Exemption	Specific technical measures in the Skagerrak
Main findings of EWG 20-04	The specific technical measures in the Skagerrak have been agreed between the EU and Norway and are already included in Annex V, to Regulation (EU) No 2019/1241 (technical measures framework). The main elements have been previously assessed at different occasions by STECF (STECF 15-10 and PLEN 15-02) and their use is linked to existing de minimis and high survivability exemptions in the Skagerrak. Other elements are included in the current discard plan. No new assessment has been carried out as no new information or changes to these measures are included under the joint recommendation. The question relating to which Regulation the detail and definitions should be contained is a matter for the Commission to agree with the Scheveningen Group.
Supplementary information provided to the Commission post EWG 20-04	No supplementary information was provided.
Exemption	The use of the Sep Nep
Main findings of EWG 20-04	STECF has previously concluded that detailed information was provided to support the use of the SEPNEP gear to reduce plaice discards in *Nephrops* fisheries. The case was well presented, and the information provided credible arguments for the use of the gear. It showed plaice discards can be reduced by up to 80% and reduced non-marketable *Nephrops* catches by 53-56%. These conclusions remain valid and in fact further supporting evidence of the effectiveness's of the SEPNEP has been provided with the JR. Based on the information provided the SepNep selectivity device complies with the provisions of Regulation 2019/1241 as an equivalent selectivity device in the context of the technical provisions set out for *Nephrops* directed fisheries (120mm cod end or sorting grid with a maximum bar spacing of 35mm) in part B of annex V of Regulation (EC) 2019/1241. This is on the provision that the SEPNEP is used according to the specifications detailed in the supporting documentation. The detailed description of the SEPNEP gear provided would be useful to include as an Annex to the delegated act.
Supplementary information provided to the Commission post EWG 20-04	No supplementary information was provided.
Exemption	Protection of berried European lobster in ICES divisions 3a, 4a and 4b
Main findings of EWG 20-04	A large amount of information has been provided to support the introduction of a prohibition of landing berried lobster. There is compelling evidence in the information supplied to support the introduction of this measure. In other countries, the ban on landing berried lobster is supported with v-

	notching of berried lobsters prior to returning to the sea.
Supplementary information provided to the Commission post EWG 20-04	No supplementary information was provided.
Exemption	Amending the MCRS for European lobster in the Swedish exclusive economic zone in ICES division 3a.
Main findings of EWG 20-04	Limited information is provided to support this request. Given this represents an increase in mcrs it has obvious benefits to stock conservation in combination with the other measures proposed, albeit to a relatively small area. Studies have shown that increasing the mcrs will mean the stock is exploited at a lower intensity, rebuilding is expected over time provided total fishing effort does not increase during the same period. Extending the mcrs to a wider area would increase the benefit to lobster stocks over the wider North Sea and Skagerrak area. It would also avoid having different mcrs applying in different adjacent management areas and create a level playing field for competing fishermen that sell into the same market under different rules.
Supplementary information provided to the Commission post EWG 20-04	No supplementary information was provided.
Exemption	Seasonal closure for commercial and recreational fishery on European lobster In the Swedish exclusive economic zone in ICES division 3a.
Main findings of EWG 20-04	Limited supporting information is provided to support this request. Given it represents a reduction in fishing mortality albeit to a relatively small area, it is likely to have positive benefits to lobster stocks in combination with the other measures proposed. It is known that density of lobster increases rapidly following bans on fishing in no-take zones (Bergström et al. 2016). However, in the absence of any supporting documentation it is not possible to quantify the potential benefit of the proposed seasonal closure.
Supplementary information provided to the Commission post EWG 20-04	No supplementary information was provided.
Exemption	Prohibition to fish lobster with gears other than lobster pots in the Swedish exclusive economic zone in ICES division 3a
Main findings of EWG 20-04	Limited information is provided to support this request although given it represents a reduction in fishing mortality albeit to a relatively small area, it is likely to have positive benefits to lobster stocks in combination with the other measures proposed. It is evident from other countries (e.g. Ireland and Australia) that banning the use of gillnets for targeting crustacean (lobster and crawfish) has had positive impacts on stocks. However, in the absence of any supporting documentation it is not possible to quantify potential benefits of the proposed measures.

Supplementary information provided to the Commission post EWG 20-04	No supplementary information was provided.
Exemption	Derogation to allow fishing in an area closed to fishing with certain gears along the Danish North Sea coast.
Main findings of EWG 20-04	This request represents the continuation of a derogation to the technical measures for sprat fisheries in an area along the Danish North Sea coast "the sprat box". No additional supporting evidence has been provided for this request and it is based principally on the 2017 ICES advice which took from the results from an experimental fishery in 2014 and 2015. The data from this experimental fishery showed that the number of herring per kg of sprat did not differ significantly between samples taken inside and outside the sprat box, but the weight of herring per kg sprat did differ significantly, with a higher percentage of herring by weight taken outside the box. This is confirmed in the ICES advice. The ICES advice concludes that if the TAC is set in accordance with scientific advice, is fully enforced and is complied with, then this measure is sufficient to control the bycatch of herring in the sprat fishery. On this basis, if the derogation is extended, it would be advisable to monitor activity within the sprat box to confirm levels of mixing of sprat and herring remain at the levels referred to in the ICES advice with the relaxing of the sprat box. Additionally, Member States should ensure compliance with the TAC as highlighted by ICES and that fishing effort, based on current effort levels in the fishery, do not increase significantly when the area is open to fishing.
Supplementary information provided to the Commission post EWG 20-04	No supplementary information was provided.
Exemption	Minimum conservation reference size for seabass caught in recreational fisheries in the ICES division 3a and ICES subarea 4
Main findings of EWG 20-04	Given recreational fisheries contribute to the overall fishing mortality on the sea bass stock in the North Sea, applying the mcrs for commercial fisheries to recreational fisheries is a positive management measure. This will cement this measure in legislation and avoid having to renew it annually in the TAC and quota Regulation for 2020.
Supplementary information provided to the Commission post EWG 20-04	No supplementary information was provided.

Table 1b. Main findings of the STECF EWG 20-04, summary of additional information received relating to exemptions presented and Reviewer's Comments: **NWW**

De minimis	
Exemption	Haddock caught with bottom trawls, seines and beam trawls with a mesh size equal to or greater than 80 mm in ICES divisions 7b-7c and 7e-7k
Main findings of EWG 20-04	The supported information provided in 2019 on catches and discards has been updated. Additional results from selectivity trials from Ireland and France have been provided as well as an update of the economic analysis for Irish vessels. All the additional information provided this year is in line with the supporting information accompanying the 2019 JR. The information provided indicates that for all gear configurations, the CR/BER for the current (baseline) shows in the short-term that the operational costs would be greater than the estimated revenue (i.e. in the short-term, the fishery would be operating at a loss). While the CR/BER estimates are likely to be rather imprecise, it seems reasonable to assume that the magnitude of change in CR/BER indicates that improvements in selectivity by adopting any of the gear configurations tested would result in significant losses in revenue in the short-term. Even if improvements in selectivity are achieved by adopting the gear configurations tested, it is highly likely that unwanted catches of haddock (and other species including cod and whiting) will continue. Since haddock and cod are high-risk choke species in these areas, granting a *de minimis* exemption will provide a buffer against exceeding the haddock and cod TAC and hence slightly reduce the risk of an early fishery closure. It may also provide an incentive to attempt to develop additional alternative means to improve selectivity and reduce unwanted catches. In addition, specific technical measures operating with bottom trawls or seins in the Celtic Sea protection zone are to become mandatory from 1 June 2020. The selectivity information provided indicates that introduction of such gears is expected to reduce unwanted catches of haddock, but it is too early to evaluate whether that will be achieved.
Supplementary information provided to the Commission post EWG 20-04	No supplementary information was provided.
Exemption	Horse mackerel caught in demersal mixed fisheries, by vessels using bottom trawls, seines and beam trawls in ICES subarea 6 and ICES divisions 7b to 7k
Main findings of EWG 20-04	Inconsistencies between the text of the JR and the supporting Annex need to be resolved. The justification for the exemption request is that selectivity improvements by regulatory measures to avoid the catches of horse mackerel will be hard to achieve without severe economic impacts on the revenue of the boats concerned. However, while such a conclusion is intuitive, it is not supported by quantitative information. The introduction of the specific technical measures for vessels operating with bottom trawls or seines in the Celtic Sea in 2020 under Article 13 of

	the TAC and quota regulation may reduce the unwanted catch of horse mackerel. If that is the case the catch corresponding to a 6% *de minimis* exemption would also be reduced accordingly. An analysis of costs generated due to hold overloading and an increase of the sorting time by the crew was provided. This is based on a French study. While estimates of the potential increase in workload are provided in terms of time (increase of 30-40%), accepting the analysis is generic. It is not possible to establish how representative the analysis is for the fisheries covered by the exemption. Information is only provided for the French fleet. Catch data and a description of the fisheries of other Member States availing of this exemption are needed.
Supplementary information provided to the Commission post EWG 20-04	The following supplementary information was received from Member States: FR - The information from France consists of an amendment to the original supporting information (annex 4), incorporating 2 additional gear codes. ES - The information from Spain related to catch data for 2 vessels that would be subject to the exemption. *Reviewer's comments* *The amendments proposed by France were the insertion of 2 additional gear codes* (SPR and SV)*.* *The information from Spain provided catch data over a 6-7 month period for 2 vessels that would be subject to the exemption and indicated that discards of mackerel in 2016, 2017 and 2018 were zero.* *The supplementary information provided by FR and ES does not affect the main findings of the EWG 20-04.*
Exemption	Mackerel caught by vessels using bottom trawls, seines and beam trawls in ICES subarea 6 and ICES divisions 7b to 7k
Main findings of EWG 20-04	Inconsistencies between the text of the JR and the supporting Annex need to be resolved. The justification for the exemption request is that selectivity improvements by regulatory measures to avoid the catches of mackerel will be hard to achieve without severe economic impacts on the revenue of the boats concerned. However, while such a conclusion is intuitive, it is not supported by quantitative information. The introduction of the specific technical measures for vessels operating with bottom trawls or seines in the Celtic Sea in 2020 under Article 13 of the TAC and quota regulation may reduce the unwanted catch of mackerel. If that is the case the catch corresponding to a 6% *de minimis* exemption would also be reduced accordingly. An analysis of costs generated due to hold overloading and an increase of the sorting time by the crew was provided. This is based on a French study. While estimates of the potential increase in workload are provided (increase of 30-40%), the analysis is generic. It is not possible to establish how representative the analysis is for other fisheries covered by the exemption. Information is only provided for the French fleet. Catch data and a description of the fisheries of other Member States availing of this exemption are needed.
Supplementary	The following supplementary information was received from Member States:

information provided to the Commission post EWG 20-04	FR - The information from France consists of an amendment to the original supporting information (annex 4), incorporating 2 additional gear codes. ES - The information from Spain related to catch data for 2 vessels that would be subject to the exemption. *Reviewer's comments* *The amendments proposed by France were the insertion of 2 additional gear codes* (SPR and SV). *The information from Spain provided catch data over a 6-7 month period for 2 vessels that would be subject to the exemption and indicated that discards of mackerel in 2016, 2017 and 2018 were zero.* *The supplementary information provided by FR and ES does not affect the main findings of the EWG 20-04.*
Exemption	Boarfish caught by vessels using bottom trawls in ICES divisions 7b-c and 7f-k
Main findings of EWG 20-04	The supporting information concludes that selectivity 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. However, while such a conclusion is intuitive, it is not supported by quantitative information. The information presented is generic and does not relate to the unwanted catches of boarfish. The priority should be to improve selectivity to reduce the unwanted catches and therefore, the costs for handling such catches. Discrepancies exist between the wording in the delegated act (2239/2019) concerning the *de minimis* exemption for boarfish in 2020 and the proposal for a continuation of the exemption in the 2020 JR. There are differences in terms of permitted potential *de minimis* discard volume. The implied discard volume for a 0.5% *de minimis* is small in each case (21 tonnes based on catches by all gears and < 1 t based on catches by bottom trawls. Almost all reported discards for 2018 (187 tonnes) were attributed to bottom trawls (178 t). Therefore a 0.5% *de minimis* would not have been sufficient to account for the discards of boarfish in bottom trawl fisheries reported for 2018. Information is only provided for the French fleet. Catch data and a description of the fisheries of other Member States availing of this exemption are needed.
Supplementary information provided to the Commission post EWG 20-04	The following supplementary information was received from Member States: FR - The information from France suggests amendments to the wording of the exemption and to complete the list of gear codes. ES – Spain provided information on estimated catches of unwanted total discards and unwanted Boarfish for otter bottom trawls in 6a, 7b, 7c, 7g, 7h, 7j and 7k. *Reviewer's comments* *The supplementary information provided by FR and ES does not affect the main findings of the EWG 20-04.*
Exemption	Greater silver smelt - bottom trawls with a mesh size greater or equal to 100mm in 5b (EU waters) and VI
Main findings of	The discrepancy between the gears specified in the JR and the supporting

EWG 20-04	information needs to be resolved. The landings of France and Spain in 2018 only amount to 8 tonnes, representing only 0.3% of the EU landings. The *de minimis* volume proposed would cover 100% of the unwanted catches. The supporting information of the Spanish selectivity trials show that catches of greater silver smelt can be reduced by up to 38% by using a square mesh panel. The use of such a panel is mandatory for the Spanish fleet from 1 July 2020. It would seem logical that this measure or selectivity devices giving equivalent reductions be extended to include other vessels operating in the same fisheries. This would potentially reduce the level of unwanted catches of silver smelt and reduce the need for the exemption. As with the boarfish exemption, discrepancies exist between the wording in the delegated act (2239/2019) in 2020 and the proposal for a continuation of the exemption in the 2020 JR. There are significant differences in terms of the potential *de minimis* discard volume. In each case, the implied discard volume for a 0.6% *de minimis* is small (approximately 6 t based on catches by all gears and < 1 t bases on catches by bottom trawls). Information is only provided for the French fleet. Catch data and a description of the fisheries of other Member States availing of this exemption are needed.
Supplementary information provided to the Commission post EWG 20-04	The following supplementary information was received from Member States: FR - The French submission was a modified version of the original supporting information (Annex 7) to clarify discrepancies in gears covered by the exemption. ES - Spain provided estimated catches of unwanted total discards and unwanted Greater Silver Smelt for otter bottom trawls in 6a, 7b, 7c, 7g, 7h, 7j and 7k. Spanish bottom otter trawlers operating in the above areas discard 100% of their catches of Greater silver smelt. *Reviewer's comments* *Regarding the supplementary information from France, a number of discrepancies remain regarding the precise gears to be covered.* *The data provided by Spain indicate that Spanish bottom otter trawlers operating in in 6a, 7b, 7c, 7g, 7h, 7j and 7k discard 100% of their catches of Greater silver smelt.* *The supplementary information provided by FR and ES does not affect the main findings of the EWG 20-04.*
Exemption	Common sole -beam trawls with a mesh size of 80-119 mm with increased selectivity (Flemish panel) in 7a, 7j and 7k
Main findings of EWG 20-04	The mesh size of the so-called Flemish panel specified in the Delegated Act was 120mm compared to what was originally tested, i.e. a 150mm panel. As pointed out previously, this may reduce the effectiveness of the panel and not give the reductions in unwanted catches observed in the trials. Information to demonstrate whether the 120 mm panel is equally as selective as the 150 mm panel is still lacking. Such information would explain the reasoning behind only requiring the panel to be constructed in 120mm rather than 150mm. It is not clear if the Flemish Panel will be used by the Irish fleet, which is responsible for around 8% of the catches in 7a in 2019. In this regard, the NWW Member States should consider including the Flemish Panel in a future technical measures JR, thereby making it mandatory for all beam trawl

	vessels in area 7.
Supplementary information provided to the Commission post EWG 20-04	The following supplementary information was received from Member States: IE – Ireland provided limited information on sole catches in 7a and 7h,j,k. by beam trawls. They concluded that in 7a the estimated *de minimis* is 1 ton (3% of total sole catches) and negligible in 7h,j,k. FR – France provided the FDI info on landings and discards of sole for otter trawls in 2013-2016. Reviewer's comments *The supplementary information provided by Ireland and France does not affect the main findings of the EWG 20-04.*
Exemption	Megrim - beam trawls with a mesh size of 80-119 mm in 7; and bottom trawls in 7f, 7g, the part of 7h North of latitude 49° 30' North and the part of 7j North of latitude 49° 30' North and East of longitude 11° West, for catches comprising more than 55 % of whiting or 55 % of anglerfish, hake or megrim combined and in 7, outside the abovementioned area;
Main findings of EWG 20-04	It is not clear whether the intention is for the exemption to apply to fleets from Member States other than France and Spain, but it is anticipated that Irish trawlers and Belgium beam trawls would also participate in the fisheries covered by the exemption. The supporting information from Spain concludes that an increase in selectivity is hard to achieve without loss of a part of the catch that is of marketable size. While such a conclusion is intuitive, it is not supported by quantitative information that can be verified and checked. It is concluded that the obligatory landing of all unwanted megrim below legal size implies an additional cost in crew time and an increase of space onboard both which are a problem from the logistic and economic point of view. There is no information presented to support such a conclusion although an economic analysis previously provided in support of the 2019 JR (STECF 19-08) indicated that the additional time on board to handle unwanted catches of megrim is estimated to increase crew costs by approximately 40%.
Supplementary information provided to the Commission post EWG 20-04	The following supplementary information was received from Member States: BE – Belgium provided limited information on megrim landings. Belgium informed that discard information is only available for whole stock (7b-k,8abd) IE – Ireland provide limited data on landings and discards for bottom and beam trawls. They estimated a *de minimis* of 117 tonnes (4% of total megrim catches in 2019) for bottom trawls and beam trawls. ES – Spain provided an extended Spanish study from 2017 by Prellezo, Raúl, Iriondo, Ane and Santurtún, Marina (original Spanish + English version) on Landing obligation's impact analysis of the megrim fisheries discards. *Reviewer's comments* *The supplementary information provided by Spain is extensive and thorough while the data from Ireland and France adds only limited value to that provided with the JR.* *The supplementary information provided by all three Member States does not alter the main findings of the EWG 20-04.*

Exemption	Haddock below minimum conservation reference size, by vessels using bottom trawls with a mesh size up to 119 mm in the West of Scotland Norway lobster fishery in ICES division 6a
Main findings of EWG 20-04	No information in support of the exemption was provided.
Supplementary information provided to the Commission post EWG 20-04	No supplementary information was provided.
Exemption	Ling below minimum conservation reference size MCRS caught by vessels using set longlines in ICES division 6a.
Main findings of EWG 20-04	Arguments regarding difficulties in improving selectivity are credible given the nature of the fisheries and the *de minimis* volume is estimated as small compared to overall ling catches. 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 not been provided. Additional information on hook selectivity in similar longline fisheries would be helpful if such studies exist. Discrepancy between the exemption request and wording in the supporting information needs to be resolved. It is unclear whether the estimates for catches and discards presented in the supporting information are specifically related to the fishery concerned. Based on data from 2013-2016, it is reported that a *de minimis* volume of 3% would represent a maximum amount of allowed discard for ling of 63 tonnes, which represents double the reported value in the supporting information. Information is only provided for the French fleet. Catch data and a description of the fisheries of other Member States availing of this exemption are needed.
Supplementary information provided to the Commission post EWG 20-04	The following supplementary information was received from Member States: FR - In the attached document, France suggests some wording modifications to get rid of the discrepancy between the JR and the annex. As already mentioned in the annex, it is known that longlines is already a very selective gear. Therefore, neither France nor our scientific institute can see the reasoning behind expensive studies to demonstrate this fact. According to the French observer program, there is no discard of hake by French longliners (targeting hake in area 4 and 6a) meaning that this fishery is highly selective. Still, because the minimum size of the hake is 27 cm and the minimum size of the ling is 63cm and despite this level of selectivity, it is possible for longliners to catch some lings below MCRS.µ *Reviewer's comments* *The rewording provided by France appears to have resolved the discrepancy between the JR and the supporting annex.* *The comments from France regarding the selectivity of longlines are intuitive and simply re-assert the statements in the supporting documentation included within the JR.*

	The supplementary information provided is largely qualitative and does not affect the findings of the EWG 20-04 given above.
High Survivability	
Exemption	Skates and rays (Rajiformes) caught by any fishing gear in the North Western Waters (ICES subareas 6 and 7) (Excluding Cuckoo Ray)
Main findings of EWG 20-04	For thornback ray, blonde ray, spotted ray and undulate ray, survival evidence is deemed relevant for the pulse, beam and otter trawls (80mm) and trammel nets (90mm) in 7e. It is difficult to assess applicability to the other gears/mesh sizes and areas without additional information on the fisheries with respect to their relevant operational and environmental characteristics. There was no explicit reporting against the road map. Future submissions should report against the three main tasks in the road map; i) quantifying catches and discards per species and métier; ii) generated discard survival evidence; and iii) stakeholder led adoption of codes of best practice to maximize discard survival. A summary table with all studies and fisheries would be helpful for further reporting. When published, the outputs of the ICES Workshop on incorporating discards into the assessments and advice of elasmobranch stocks (WKSHARK5) will provide useful context for this exemption
Supplementary information provided to the Commission post EWG 20-04	The following supplementary information was received from Member States: BE – Belgium provided a brief summary of project 'Raywatch' (North Sea, the English Channel, the western waters -Celtic Sea, Bristol Channel, Irish Sea - and the Bay of Biscay). The focus is on collecting discard figures and biological parameters of skates and rays and fill in knowledge gaps. BE – DEU – NL – Provided an overview for the survival studies in the North Sea, NWW and the Bay of Biscay. FR - France agrees with the addition of the following sentence: "When discarding skates and rays caught in cases referred to in paragraph 1, the skates and rays shall be released immediately." *Reviewer's Comments* *The brief summary of the project 'Raywatch' simply outlined the objectives and timeline of the project and no data or results were included.* *While the supplementary information provided by all three Member States is in itself, useful information, it does not alter the main findings of the EWG 20-04.*
Exemption	Cuckoo Ray caught by any fishing gear in the North Western Waters (ICES subareas 6 and 7)
Main findings of EWG 20-04	No additional information was provided for the French, Irish, Dutch fleets. There is currently one published study in area 7e, but it is difficult to assess applicability to the other area/gear combinations without additional information on the fisheries. The latest discard plan 2019/2239 does not include a specific request for survival evidence for cuckoo ray. See the evaluation on the generic skates and ray exemption for additional evidence.

Supplementary information provided to the Commission post EWG 20-04	No supplementary information specific to cuckoo ray was provided.
Exemption	Plaice (Pleuronectes platessa) caught in ICES divisions 7a to 7k by vessels having a maximum engine greater than 221 kW, and using beam trawls (TBB) fitted with a flip-up rope or benthic release panel; OR Plaice (Pleuronectes platessa) caught in ICES divisions 7a to 7k by vessels using beam trawls (TBB), having a maximum engine power of 221 kW or a maximum length of 24 meters, which are constructed to fish within 12 nautical miles of the coast and with average tow durations of no more than 1:30 hours
Main findings of EWG 20-04	The estimated discard survival estimates described here are variable between trips. The trips varied in time and area, and therefore in environmental conditions, by vessel, gear characteristics and catch composition. Estimates for the most recent trips are inferred and based on vitality, so these may have been influenced by any inconsistencies in performing vitality assessments. It is considered the data were sampled from a range of vessels that is representative of the relevant fleet. The specific requirement of the existing exemption was for additional survival evidence for plaice stock in ICES divisions 7h-k. No new data were provided from these areas. Studies previously assessed by STECF indicate that survival is higher in the coastal fishing grounds, and when seawater temperature is lowest. It is considered that, when fishing away from the coast, the environmental and technical attributes of fishing operations in 7h-k are consistent with the other areas covered by this exemption, therefore the survival of plaice discarded by beam trawlers in 7h is likely to be comparable with other areas in the Celtic Sea. Flanders Research for Agriculture, Fisheries and Food (ILVO) has developed a three-year (2019-2021) project ('Survival Monitoring - Overleving Monitoren') to gather additional survival data and further analyze existing and new data, for plaice in the North Sea 4a & 7d and 7fg (not for 7hjk). This project aims to produce new discard survival estimates for plaice in the Celtic Sea and North Sea beam trawl fisheries. Fishery information should be provided by relevant countries other than Belgium. The annual progress reports could be improved, specifically in detailing the scientific evidence on discard survival, and identifying new information from previously submitted evidence. A clearer highlighting of new science is encouraged in future reports.
Supplementary information provided to the Commission post EWG 20-04	The following supplementary information was received from Member States: BE – Belgium provided landings and discard information for beam trawl vessels with max engine power greater than 221 kW with flip-up rope and benthic release panel, as well as vessels with a max engine power of 221 kW, max length of 24 m with average tow duration of 1:30 hours. The information was given for 7a, 7d, 7e, 7f, 7g, 7h and 7j. FR - France agrees with the addition of the following sentence: "When

	discarding plaice caught in cases referred to in paragraph 1, the plaice shall be released immediately." *Reviewer's Comments* *The supplementary information provided by Belgium and France does not alter the main findings of the EWG 20-04.*
Exemption	Common sole (Solea solea) in ICES division 7a, 7e, 7f and 7g caught with otter trawl gears
Main findings of EWG 20-04	More information on the fleets availing of the exemption is needed, broken down by Member States. Without an understanding of the contributing factors associated with survival, and a corresponding inventory of otter-trawl fishing activity with respect to prevailing key conditions, it is not possible to evaluate whether the 50% survival estimate is valid for other otter trawl gears and fishing operations. It is considered that evidence generated from a single study in an inshore fishery in 7b may not represent the sole discard survival from all otter trawl fisheries in 7a, e, f and g. Equivalent evidence for other studies has supported exemptions that are limited to the fishing conditions under which the evidence was generated. The proposal extrapolates robust results from a single localized fishery to cover a large geographical area with insufficient information that the evidence is representative of the wider area. Understanding the catches of discards of sole generated by the proposed fleets is needed, along with the operational and technical methods of fishing. This will enable an assessment of the representativeness of the existing evidence for all potentially effected fleets. Also, analyses to understand factors influencing sole discard survival from existing studies would inform on the implications of extrapolating the current evidence. For fisheries where sole is caught and discarded under different conditions to that of the studied fisheries, new directly observed discard survival evidence would provide the best means of a robust assessment.
Supplementary information provided to the Commission post EWG 20-04	The following supplementary information was received from Member States: BE – Belgium provided limited information on sole catches in 7a, 7d, 7e, 7f, 7g, 7h, 7j for otter trawls. FR - France provides in an attached file, French catch and discard data for French otter trawlers operating in ICES area 7b,c e-k (STECF data base). *Reviewer's Comments* *The supplementary information provided by Belgium and France does not alter the main findings of the EWG 20-04.*

Table 1c. Main findings of the STECF EWG 20-04, summary of additional information received relating to exemptions presented and Reviewer's Comments: **SWW**

De minimis	
Exemption	Horse mackerel caught by vessels using beam trawls, bottom trawls and seines in ICES subareas 8 and 9
Main findings of EWG 20-04	Detailed data by fleet have been provided for the period 2015-2017. Catch data for 2018 and 2019 would have been useful to gain insight as to whether the situation in the fisheries has changed since 2017. No data were provided for Belgium. Costs of landing unwanted catches if the exemption is not granted have also been presented. The results of the analysis indicate the loss of earnings associated with the removal of the exemption. The analysis provided of the level of disproportionate costs incurred due to increased sorting and handling time provides a detailed, if rather generic, breakdown of these costs across a range of vessels and fisheries. It is not possible to establish whether the study provided in support the exemption is entirely representative of all the fisheries covered by the exemption, which are numerous and diverse. The study relates primarily to Spanish vessels and while data and information for the French and Portuguese fleets operating in subareas 8 and 9 are included, it is not clear how such data and information have been used in the estimates. There is only limited information to explain the level of *de minimis* required. There does not appear to be any relationship between the *de minimis* requested and the levels of unwanted catch. There is no indication of steps to be taken to reduce the residual unwanted catches
Supplementary information provided to the Commission post EWG 20-04	The following supplementary information was received from Member States: FR - For France, the Spanish study took into account the specificity of the French fleet. In the Annex 15 (previously send and again attached) parts 2.4.1.3 and 2.6.3 summed up the French metier operating in the Bay of Biscay and their catch composition. Then, part 3.2.1.3. summed up the location of French fishing ports and fishmeal companies in France. The fourth part of the report (estimation and analysis of the socio-economic impact of the application of the LO) also took into account French figures. Therefore, it seems to us that this study is representative for the French fleets operating in the Bay of Biscay. PT - The Spanish study (annex 15, PT pg. 16, 24, 40, 67 e 70)) concludes that for PT the economic impact for the trawling fleet of the absence of *de minimis* would be around € 2.5 million in total, corresponding to a decrease in profits of around 5%, without taking into account the additional costs with personnel. In the case of Horse mackerel, the total amount is € 1.5 million. The Portuguese and Spanish fishing fleets are very similar. There are several reasons to justify this similarity. First of all, it is necessary to highlight the almost identical geographical areas of operation between the Portuguese and the Spanish coast that makes the fishing patterns very similar too. Also the artisanal fleet in both countries are equal and therefore equally

	important for our coasts in terms of socioeconomic importance. *Reviewer's Comments* *The supplementary information provided points to information originally provided together with the SWW JR (Annex 15, Spanish study on costs of handling unwanted catches) which relates to the representativeness of the results to the French and Portuguese fleets.* *The EWG 20-04 main findings point out that while the Spanish study relates primarily to Spanish vessels and while data and information for the French and Portuguese fleets operating in subareas 8 and 9 are included, it is not clear how such data and information have been used in the estimates.* *While the supplementary information provided by France and Portugal assert that the results in Annex 15 can be considered representative of their national fleets, the main findings of the EWG 20-04 remain valid.*
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 20-04	Detailed data by fleet have been provided for the period 2015-2017. Catch data for 2018 and 2019 would have been useful to gain insight as to whether the situation in the fisheries has changed since 2017. Costs of landing unwanted catches if the exemption is not granted have also been presented. The results of the analysis presented indicate the loss of earnings associated with the removal of the exemption. The analysis provided on the level of disproportionate costs incurred due to increased sorting and handling time provides a detailed, if rather generic, breakdown of these costs across a range of vessels and fisheries. It is not possible to establish whether the study provided in support the exemption is entirely representative of all the fisheries covered by the exemption, which are numerous and diverse. The study relates primarily to Spanish vessels and while data and information for the French and Portuguese fleets operating in subareas 8 and 9 are included, it is not clear how such data and information have been used in the estimates. The French analysis of costs is generic and while it indicates there are additional costs associated with handling and storing unwanted catches, these are not quantified. The assertion that improvements in selectivity for horse mackerel in these fisheries are difficult achieve, intuitively, would appear reasonable. However, it is supported only with details from a review of selectivity studies that are not specific to horse mackerel. There is only limited information to explain the level of *de minimis* required. There does not appear to be any relationship between the *de minimis* requested and the levels of unwanted catch. There is no indication of steps to be taken to reduce the residual unwanted catches.
Supplementary information provided to the Commission post EWG 20-04	The following supplementary information was received from Member States: FR – For France, the Spanish study took into account the specificity of the French fleet. In the Annex 11 (previously send and again attached) parts 2.4.1.4 and 2.5.2 summed up the French metier operating in the Bay of Biscay and their catch composition. Then, part 3.2.1.2. summed up the location of French fishing ports and fishmeal companies in France. The fourth part of the report (estimation and analysis of the socio-economic impact of the application of the LO) also took into account French figures.

	Therefore, it seems to us that this study is representative for the French fleets operating in the Bay of Biscay. PT - The Portuguese and Spanish fleet fishing are very similar. Data on PT is covered in annex 6 pg. 12 and 56 (OTB). There are several reasons to justify this similarity. First of all, it is necessary to highlight the almost identical geographical characteristics between the Portuguese and the Spanish coast that makes the fishing patterns very similar too. Also the artisanal fleet in both countries are equal and therefore equally important for our coasts in terms of socioeconomic importance. *Reviewer's Comments* *The supplementary information provided points to information originally provided together with the SWW JR (Annex 15, Spanish study on costs of handling unwanted catches) which relates to the representativeness of the results to the French and Portuguese fleets.* *The EWG 20-04 main findings point out that while the Spanish study relates primarily to Spanish vessels and while data and information for the French and Portuguese fleets operating in subareas 8 and 9 are included, it is not clear how such data and information have been used in the estimates.* *While the supplementary information provided by France and Portugal assert that the results in Annex 15 can be considered representative of their national fleets, the main findings of the EWG 20-04 remain valid.*
Exemption	Mackerel caught by vessels using beam trawls, bottom trawls and seines) in ICES subareas 8 and 9
Main findings of EWG 20-04	Detailed data by fleet have been provided for the period 2015-2017. Catch data for 2018 and 2019 would be useful as it is not clear whether the situation in the fisheries has changed since 2017.No data are provided for Portugal. Costs of landing unwanted catches if the exemption is not granted have also been presented. The results of the analysis indicate the loss of earnings associated with the removal of the exemption. The analysis provided of the level of disproportionate costs incurred due to increased sorting and handling time provides a detailed, if rather generic, breakdown of these costs across a range of vessels and fisheries. It is not possible to establish whether the study provided in support the exemption is entirely representative of all the fisheries covered by the exemption, which are numerous and diverse. The study relates primarily to Spanish vessels and while data and information for the French and Portuguese fleets operating in subareas 8 and 9 are included, it is not clear how such data and information have been used in the estimates. There is only limited information to explain the level of *de minimis* required. There does not appear to be any relationship between the *de minimis* requested and the levels of unwanted catch. There is no indication of steps to be taken to reduce the residual unwanted catches.
Supplementary information provided to the Commission post EWG 20-04	The following supplementary information was received from Member States: FR - For France, the Spanish study took into account the specificity of the French fleet. In the Annex 13 (previously sent and again attached), parts 2.4.1.3 and 2.6.3 summed up the French metier operating in the Bay of Biscay and their catch composition. Then, part 2.7.3. maps the French

	vessels catches. The fourth part of the report (estimation and analysis of the socio-economic impact of the application of the LO) also took into account French figures. Therefore, it seems to us that this study is representative for the French fleets operating in the Bay of Biscay. PT - The Spanish study (annex 13, pg 8, 17, 23, 26, 30, 58, 72 e 73) concludes that for PT the economic impact for the trawling fleet of the absence of *de minimis* would be around € 2.5 million in total, corresponding to a decrease in profits of around 5%, without taking into account the additional costs with personnel. In the case of f mackerel, the total amount is € 397 000. Data for mackerel discards 4,5 t (data 2017) which correspond to 0,1% discard rate. The Portuguese and Spanish fishing fleets are very similar. There are several reasons to justify this similarity. First of all, it is necessary to highlight the almost identical geographical characteristics between the Portuguese and the Spanish coast that makes the fishing patterns very similar too. In addition, the artisanal fleet in both countries are equal and therefore equally important for our coasts in terms of socioeconomic importance. *Reviewer's Comments* *The supplementary information provided points to information originally provided together with the SWW JR (Annex 15, Spanish study on costs of handling unwanted catches) which relates to the representativeness of the results to the French and Portuguese fleets.* *The EWG 20-04 main findings point out that while the Spanish study relates primarily to Spanish vessels and while data and information for the French and Portuguese fleets operating in subareas 8 and 9 are included, it is not clear how such data and information have been used in the estimates.* *While the supplementary information provided by France and Portugal assert that the results in Annex 15 can be considered representative of their national fleets, the main findings of the EWG 20-04 remain valid.*
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 20-04	Detailed data by fleet have been provided for the period 2015-2017. Catch data for 2018 and 2019 would have been useful to gain insight as to whether the situation in the fisheries has changed since 2017. No data were provided for Belgium. The analysis provided of disproportionate costs shows that there will be an increase in handling and sorting time on board depending on vessels size. However, this is based on sorting catches of all species on board and not specific to mackerel. It is not possible to establish whether the study provided in support the exemption is entirely representative of all the fisheries covered by the exemption, which are numerous and diverse. The study relates primarily to Spanish vessels and while data and information for the French and Portuguese fleets operating in subareas 8 and 9 are included, it is not clear how such data and information have been used in the estimates. The justification for the exemption request based on selectivity improvements by regulatory measures to avoid the catches of mackerel will be hard to achieve without severe economic impacts on the revenue of the boats concerned is based on French selectivity trials, which do not relate

	specifically to mackerel. The conclusion that improving selectivity further is difficult, is intuitive, but it is not supported by quantitative information. There is only limited information to explain the level of *de minimis* required. There does not appear to be any relationship between the *de minimis* requested and the levels of unwanted catch. There is no indication of steps to be taken to reduce the residual unwanted catches.
Supplementary information provided to the Commission post EWG 20-04	The following supplementary information was received from Member States: FR - For France, the Spanish study took into account the specificity of the French fleet. In the Annex 9 (previously sent and again attached), parts 2.4.1.2 and 2.5.2 summed up the French metier operating in the Bay of Biscay and their catch composition. Then, part 3.2.1.2. summed up the location of French fishing ports and fishmeal companies in France. The fourth part of the report (estimation and analysis of the socio-economic impact of the application of the LO) also took into account French figures. Therefore, it seems to us that this study is representative for the French fleets operating in the Bay of Biscay. PT - The Spanish study (annex 13) concludes that for PT the economic impact for the trawling fleet of the absence of *de minimis* would be around € 2.5 million in total, corresponding to a decrease in profits of around 5%, without taking into account the additional costs with personnel. In the case of f mackerel the total amount is € 397 000. The Portuguese and Spanish fleet fishing are very similar. There are several reasons to justify this similarity. First of all, it is necessary to highlight the almost identical geographical characteristics between the Portuguese and the Spanish coast that makes the fishing patterns very similar too. In addition, the artisanal fleet in both countries are equal and therefore equally important for our coasts in terms of socioeconomic importance. *Reviewer's Comments* *The supplementary information provided points to information originally provided together with the SWW JR (Annex 15, Spanish study on costs of handling unwanted catches) which relates to the representativeness of the results to the French and Portuguese fleets.* *The EWG 20-04 main findings point out that while the Spanish study relates primarily to Spanish vessels and while data and information for the French and Portuguese fleets operating in subareas 8 and 9 are included, it is not clear how such data and information have been used in the estimates.* *While the supplementary information provided by France and Portugal assert that the results in Annex 15 can be considered representative of their national fleets, the main findings of the EWG 20-04 remain valid.*
Exemption	Megrim caught with bottom trawls, seines & beam trawls in ICES areas 8 & 9.
Main findings of EWG 20-04	Detailed data by fleet have been provided for the period 2015-2017. Catch data for 2018 and 2019 would have been useful to gain insight as to whether the situation in the fisheries has changed since 2017. No data are provided for Belgium. Similarly, the analysis provided of disproportionate costs shows that there will be an increase in handling and sorting time on board depending on vessels size. However, this is based on sorting catches of all species on

	board and not specific to megrim. It is not possible to establish whether the study provided in support the exemption is entirely representative of all the fisheries covered by the exemption, which are numerous and diverse. The study relates primarily to Spanish vessels and while data and information for the French and Portuguese fleets operating in subareas 8 and 9 are included, it is not clear how such data and information have been used in the estimates. There is only limited information to explain the level of *de minimis* required. There does not appear to be any relationship between the *de minimis* requested and the levels of unwanted catch. There is no indication of steps to be taken to reduce these residual unwanted catches.
Supplementary information provided to the Commission post EWG 20-04	The following supplementary information was received from Member States: FR - Last year France provided the result of the REDRESSE project conducted in the Bay of Biscay. There is also another ongoing project led by the French industry and the French program Aglia, OPTISEL. Indeed, an anglerfish grid (1040mm x 1075mm) was tested during some fishing trips in autumn 2018 by two French otter twin trawlers targeting anglerfish in the Bay of Biscay. It was put up in the right part of the trawl. Preliminary results show that this grid could have a good impact on the selectivity of megrim by reducing the catch of undersized fish. This device has to be tested during other fishing trips in order to be able to conclude something on the impact on the catch of the target species (anglerfish) but it still an interesting result and it shows that the fishing industry continue to set up selectivity projects in the Bay of Biscay even if an exemption is granted. For France, the Spanish study took into account the specificity of the French fleet. In the Annex 15, parts 2.4.1.3 and 2.6.3 summed up the French metier operating in the Bay of Biscay and their catch composition. Then, part 3.2.1.3. summed up the location of French fishing ports and fishmeal companies in France. The fourth part of the report (estimation and analysis of the socio-economic impact of the application of the LO) also took into account French figures. Therefore, it seems to us that this study is representative for the French fleets operating in the Bay of Biscay. PT - The Portuguese and Spanish fleet fishing are very similar. There are several reasons to justify this similarity. First of all, it is necessary to highlight the almost identical geographical characteristics between the Portuguese and the Spanish coast that makes the fishing patterns very similar too. In addition, the artisanal fleet in both countries are equal and therefore equally important for our coasts in terms of socioeconomic importance. *Reviewer's Comments* *The supplementary information provided points to information originally provided together with the SWW JR (Annex 15, Spanish study on costs of handling unwanted catches) which relates to the representativeness of the results to the French and Portuguese fleets.* *The EWG 20-04 main findings point out that while the Spanish study relates primarily to Spanish vessels and while data and information for the French and Portuguese fleets operating in subareas 8 and 9 are included, it is not clear how such data and information have been used in the estimates.* *While the supplementary information provided by France and Portugal*

	assert that the results in Annex 15 can be considered representative of their national fleets, and the preliminary results for the French project Aglia, OPTISEL *look promising, the main findings of the EWG 20-04 are unaffected and remain valid.*
Exemption	Megrim caught by vessels using gillnets in ICES subareas 8 and 9
Main findings of EWG 20-04	Detailed data by fleet have been provided for the period 2015-2017. Catch data for 2018 and 2019 would have been useful to gain insight as to whether the situation in the fisheries has changed since 2017. No discard data were provided for France, which has the highest reported landings. The analysis provided of disproportionate costs shows that there will be an increase in handling and sorting time on board depending on vessels size. However, this is based on sorting catches of all species on board and not specific to megrim. It is not possible to establish whether the study provided in support the exemption is entirely representative of all the fisheries covered by the exemption, which are numerous and diverse. The study relates primarily to Spanish vessels and while data and information for the French and Portuguese fleets operating in subareas 8 and 9 are included, it is not clear how such data and information have been used in the estimates. At the estimated level of *de minimis* volume requested and the reported level of unwanted catches means 100% of unwanted catches of megrim could potentially be discarded. The *de minimis* volume is estimated to be around 4 tonnes.
Supplementary information provided to the Commission post EWG 20-04	The following supplementary information was received from Member States: FR – France provided some data on Megrim catches (STECF data 2013-2016) by gillnets. *Reviewer's Comments* *The supplementary information provided does not affect the main findings of the EWG 20-04.*
Exemption	Plaice caught with bottom trawls, seines & beam trawls in ICES areas 8 & 9
Main findings of EWG 20-04	The exemption is only supported with qualitative arguments on selectivity, which do not differentiate between species and fisheries or relate to plaice. Intuitively, given the low level of unwanted catches of plaice and their morphology which makes improving selectivity difficult, it is reasonable to assume improving selectivity further would be difficult, but no attempt has been made to support this assumption. There is only limited information to explain the level of *de minimis* required. There does not appear to be any relationship between the *de minimis* requested and the levels of unwanted catch. The actual levels of unwanted catches are virtually zero and the estimated level of resulting *de minimis* would cover 100% of the unwanted catches, assuming such catches would remain very low. Only partial catch data have been presented for the French fleet. No information is provided for other fleets operating in the same fisheries.
Supplementary information	The following supplementary information was received from Member States: FR – France provides some data for its bottom trawls fisheries operating in

provided to the Commission post EWG 20-04	the Bay of Biscay (STECF data 2013-2016). According to STECF (average 2013-2016), 4% of the catches of plaice is discarded in French bottom trawls fisheries. There is no data in the Obsmer report as the catch of plaice represents less than 1% of the total catch for French bottom trawls and seines fisheries. Therefore, we cannot say that the STECF data changed from 2016 to 2018 and we have to take into account these figures. *Reviewer's Comments* *The supplementary information provided does not affect the main findings of the EWG 20-04.*
Exemption	Plaice caught by vessels using gillnets in ICES subareas 8 and 9
Main findings of EWG 20-04	In the absence of any substantive information to support this exemption, no evaluation can be made. The level of unwanted catches is so low that a *de minimis* exemption to discard plaice in the fisheries concerned is likely permit 100% of unwanted catches of plaice can be discarded.
Supplementary information provided to the Commission post EWG 20-04	The following supplementary information was received from Member States: ES – Spain has no data available of plaice caught in ICES subareas 8 and 9. *Reviewer's Comments* *The supplementary information provided does not affect the main findings of the EWG 20-04.*
Exemption	Anglerfish caught with bottom trawls, seines & beam trawls in ICES areas 8 & 9
Main findings of EWG 20-04	Detailed data have been provided for the French and Spanish fleets. Only partial catch data are presented with only discard data provided for Spain. No information on the level of unwanted catches for France is given, even though France accounts for 70% of the total landings of anglerfish in ICES subareas 8 and 9. Only limited catch and fleet information is presented for Portugal and no information is supplied for Belgium. Costs of landing unwanted catches if the exemption is not granted have been presented. The analysis also provided of disproportionate costs shows that there will be an increase in handling and sorting time on board depending on vessels size. However, this is based on sorting catches of all species on board and not specific to anglerfish. It is not possible to establish whether the study provided in support the exemption is entirely representative of all the fisheries covered by the exemption, which are numerous and diverse. The study relates primarily to Spanish vessels and while data and information for the French and Portuguese fleets operating in subareas 8 and 9 are included, it is not clear how such data and information have been used in the estimates. There is only limited information to explain the level of *de minimis* required. There does not appear to be any relationship between the *de minimis* requested and the levels of unwanted catch. There is no indication of steps to be taken to reduce the residual unwanted catches.

Supplementary information provided to the Commission post EWG 20-04	The following supplementary information was received from Member States: BE – Belgium provided the minimal landings for their fleet. FR – France provided some data for its bottom trawl fisheries operating in the Bay of Biscay (STECF data 2013-2016). According to STECF (average 2013 – 2016), 14% of the catches of anglerfish is discarded in French bottom trawl fisheries. According to the French observer program, in 2018, around 5% of the catch of anglerfish is discarded by French bottom trawl in the Bay of Biscay. Almost 100% of the anglerfish that is discarded is undersized. For France, the Spanish study took into account the specificity of the French fleet. In the Annex 18, parts 2.4.1.4 and 2.6.3 summed up the French metier operating in the Bay of Biscay and their catch composition. Then, part 3.2.1.3. summed up the location of French fishing ports and fishmeal companies in France. The fourth part of the report (estimation and analysis of the socio-economic impact of the application of the LO) also took into account French figures. Therefore, it seems to us that this study is representative for the French fleets operating in the Bay of Biscay. PT - The Portuguese and Spanish fishing fleet are very similar. There are several reasons to justify this similarity. First of all, it is necessary to highlight the almost identical geographical characteristics between the Portuguese and the Spanish coast that makes the fishing patterns very similar too. In addition, the artisanal fleet in both countries are equal and therefore equally important for our coasts in terms of socioeconomic importance. *Reviewer's Comments* *Supplementary information provided by France which concerns data submitted by France under the FDI data call, indicates that 14% of anglerfish catches are discarded in French bottom trawl fisheries in the Bay of Biscay. This compares to an equivalent estimate of 5% from the French OBSMER programme, almost all which are under-size.* *The supplementary information provided points to information originally provided together with the SWW JR (Annex 18, Spanish study on costs of handling unwanted catches) which relates to the representativeness of the results to the French and Portuguese fleets.* *The EWG 20-04 main findings point out that while the Spanish study relates primarily to Spanish vessels and while data and information for the French and Portuguese fleets operating in subareas 8 and 9 are included, it is not clear how such data and information have been used in the estimates.* *While the supplementary information provided by France and Portugal assert that the results in Annex 15 can be considered representative of their national fleets, and the preliminary results for the French project* Aglia, OPTISEL *look promising, the main findings of the EWG 20-04 are unaffected and remain valid.*
Exemption	Anglerfish caught by vessels using gillnets in ICES subareas 8 and 9
Main findings of EWG 20-04	Detailed data have been provided on the structure of the French and Spanish fleets. Only partial catch data are presented with only discard data provided for Spain. No information on the level of unwanted catches for France is given, even though France has 70% of the total landings of anglerfish from ICES subareas 8 and 9. Only limited qualitative catch

	information is presented for Portugal. Costs of landing unwanted catches if the exemption is not granted have been presented. The analysis also provides an indication of the disproportionate costs and shows that there will be an increase in handling and sorting time on board depending on vessels size. However, this is based on sorting catches of all species on board and not specific to anglerfish. It is not possible to establish whether the study provided in support the exemption is entirely representative of all the fisheries covered by the exemption, which are numerous and diverse. The study relates primarily to Spanish vessels and while data and information for the French and Portuguese fleets operating in subareas 8 and 9 are included, it is not clear how such data and information have been used in the estimates. There is only limited information to explain the level of *de minimis* required. There does not appear to be any relationship between the *de minimis* requested and the levels of unwanted catch. Th estimated *de minimis* volume is small and spread across a wide area and nearly 1000 vessels. Control and motoring of uptake of anglerfish discarded under the *de minimis* exemption would be challenging
Supplementary information provided to the Commission post EWG 20-04	The following supplementary information was received from Member States: BE – Belgium provided the minimal landings for their fleet. FR – France provided some data for it's gillnets fisheries operating in the Bay of Biscay (STECF data 2013-2016). According to STECF (average 2013 – 2016), 9% of the catches of anglerfish is discarded in French netters. According to the French observer program, in 2018, less than 1% of the catch of anglerfish is discarded by French netters in the Bay of Biscay. PT - The Portuguese and Spanish fleet fishing are very similar. There are several reasons to justify this similarity. First of all, it is necessary to highlight the almost identical geographical characteristics between the Portuguese and the Spanish coast that makes the fishing patterns very similar too. In addition, the artisanal fleet in both countries are equal and therefore equally important for our coasts in terms of socioeconomic importance. Portugal also provided gillnet information in subarea 8 and 9 (number of vessels and catches). *Reviewer's Comments* *Supplementary information provided by France which concerns data submitted by France under the FDI data call, indicates that 9% of anglerfish catches are discarded in French netters in the Bay of Biscay. This compares to an equivalent estimate of 1% from the French OBSMER programme, almost all which are under-size.* *The supplementary information provided points to information originally provided together with the SWW JR (Annex 18, Spanish study on costs of handling unwanted catches) which relates to the representativeness of the results to the French and Portuguese fleets.* *The EWG 20-04 main findings point out that while the Spanish study relates primarily to Spanish vessels and while data and information for the French and Portuguese fleets operating in subareas 8 and 9 are included, it is not clear how such data and information have been used in the estimates.*

	While the supplementary information provided by France and Portugal assert that the results in Annex 15 can be considered representative of their national fleets, and the preliminary results for the French project Aglia, OPTISEL *look promising, the main findings of the EWG 20-04 are unaffected and remain valid.*
Exemption	Whiting -by vessels using bottom trawls, seines & beam trawls in ICES subarea 8
Main findings of EWG 20-04	The arguments presented are generic and not specific to the relevant fisheries, accepting that there are indications that improving selectivity is difficult in mixed demersal fisheries in which whiting are caught without significant losses of other marketable catch. Many of the studies used to support the exemption date back to 2014 and earlier, noting new studies are ongoing. There does not appear to be any relationship between the *de minimis* requested and the levels of unwanted catch. The actual levels of unwanted catches are much greater than the estimated *de minimis* volume and will only cover a fraction of the unwanted catches. However, further selectivity work is planned to try to reduce these residual unwanted catches. No information is presented for Belgium although it is likely the Belgium beam trawl fleet would have some level of whiting catches.
Supplementary information provided to the Commission post EWG 20-04	The following supplementary information was received from Member States: FR - France already provided updated data in a dedicated annex (see Annex 4 previously send and again attached). In the attached DOC 2 (gillnets), France provides some data for its fisheries. According to STECF (average 2013 – 2016), 53% of the catches of whiting is discarded in French netters. According to the French observer program, in 2018, around 20% of the catch of whiting is discarded by French netters in the Bay of Biscay but there is very little catches of whiting in such fisheries (less than 5% of the total catch). Whiting caught with such gears is usually damaged, making the fish unsellable as it can drown itself. *Reviewer's Comments* *The supplementary information provided does not alter the main findings of the EWG 20-04.*
Exemption	Whiting caught by vessels using gillnets in ICES subarea 8
Main findings of EWG 20-04	Only partial catch data is presented and the information on levels of unwanted catch is incomplete. The arguments presented regarding difficulties in improving selectivity are credible, the qualitative nature of the information presented make it difficult to quantify the potential scale of losses of marketable catch. It is also not clear how expected losses would vary across the different gillnet fisheries involved. The arguments on disproportionate costs are generic and do not contain any specific information related to whiting. There does not appear to be any relationship between the *de minimis* requested and the large variation in reported levels of unwanted catch. The actual levels of unwanted catches are much greater than the estimated *de*

	minimis volume in some fisheries but is zero in others.
Supplementary information provided to the Commission post EWG 20-04	No supplementary information was provided.
Exemption	Pollack caught vessels using bottom trawls, seines & beam trawls in 8 and 9
Main findings of EWG 20-04	In the absence of any substantive information to support this exemption, no evaluation can be made. The level of unwanted catches is so low that a *de minimis* exemption to discard pollack in the fisheries concerned is likely to permit 100% of unwanted catches of pollack to be discarded.
Supplementary information provided to the Commission post EWG 20-04	The following supplementary information was received from Member States: BE – Belgium provided the minimal landings for their fleet. FR – France provided some data for its bottom trawl fisheries operating in the Bay of Biscay (STECF data 2013-2016). ES – Spain provided otter bottom trawl sampled information in subareas 8c 9a by IEO (number of vessels, trips, landings, discards, sampling coverage). *Reviewer's comments* *The supplementary information provided does not alter the main findings of the EWG 20-04.*
Exemption	Pollack caught by vessels using gillnets in ICES subareas 8 and 9
Main findings of EWG 20-04	In the absence of any substantive information to support this exemption, no evaluation can be made. The level of unwanted catches is so low that a *de minimis* exemption to discard pollack in the fisheries concerned is likely permit all unwanted catches of pollack to be discarded.
Supplementary information provided to the Commission post EWG 20-04	The following supplementary information was received from Member States: ES – Spain provided gillnets sampled information in subareas 8c 9a by IEO (number of vessels, trips, landings, discards, sampling coverage). *Reviewer's comments* *The supplementary information provided does not alter the main findings of the EWG 20-04.*
Exemption	Red Sea Bream caught by vessels using bottom trawls, seines & beam trawls in 9a
Main findings of EWG 20-04	Detailed catch data by fleet have been provided and a detailed analysis of the costs of landing *de minimis* volumes unwanted catches if the exemption is not granted has also been presented. This has been tailored to the fleets with a bycatch of red sea bream. The analysis provided of disproportionate costs shows that there will be an increase in handling and sorting time on board depending on vessels size. However, this is based on sorting catches of all species on board and not specific to red sea bream. The *de minimis* proportion requested (5%) is higher than the reported discard proportion, which is below 1% for the relevant fisheries combined. Hence, if granted, the exemption is likely to permit 100% of unwanted

	catches of red sea bream to be discarded.”
Supplementary information provided to the Commission post EWG 20-04	The following supplementary information was received from Member States: ES – Spain provided otter bottom trawls sampled information in subarea 9a by IEO (number of vessels, trips, landings, discards, sampling coverage). PT – Portugal provided bottom trawl information in subarea 9a (number of vessels, and catches). *Reviewer’s comments* *The supplementary information provided does not alter the main findings of the EWG 20-04.*
Exemption	Hake caught by vessels using trawls and seines in ICES subareas 8 and 9
Main findings of EWG 20-04	Detailed analyses of catch and landing distribution by fleet and for the species under examination, for both Spain and Portugal, as well as costs of landing *de minimis* volumes if the exemption was not granted are presented. Such analyses have been tailored to the fleets targeting hake and to those fleets with hake as a bycatch. The results indicate that there will be an increase in handling and sorting time on board depending on vessels size. The results are based on sorting catches of all species on board and not specific to hake, although given hake forms a high proportion of the catches in many metiers in SWW, the additional sorting and handling of unwanted catches would form a significant proportion of these costs. There is only limited information to explain the level of *de minimis* required. There does not appear to be any relationship between the *de minimis* requested and the levels of unwanted catch. However, further selectivity work is planned to try to find solutions to reduce these residual unwanted catches
Supplementary information provided to the Commission post EWG 20-04	The following supplementary information was received from Member States: ES – Spain provided otter bottom trawls sampled information in subarea 8c and 9a by IEO (number of vessels, trips, landings, discards, sampling coverage). PT - The Spanish study (annex 21) concludes that for PT the economic impact for the trawling fleet of the absence of *de minimis* would be around € 2.5 million in total, corresponding to a decrease in profits of around 5%, without taking into account the additional costs with personnel. In the case of f Hake the total amount is € 174 000. Portugal provided bottom trawl information in subarea 8 and 9 (number of vessels, and catches). *Reviewer’s Comments* *The supplementary information provided does not alter the main findings of the EWG 20-04 although the information from* Portugal highlights the anticipated losses to the fleet if a *de minimis* exemption to discard hake is not granted are €174 000.
Exemption	Sole caught by vessels using bottom -trawls, seines and beam trawls in 9a
Main findings of EWG 20-04	Detailed catch data by fleet have been provided and a detailed analysis of the costs of landing *de minimis* volumes unwanted catches if the exemption is not granted has also been presented. The analysis provided of disproportionate costs shows that there will be an increase in handling and sorting time on board depending on vessels size.

	However, this is based on sorting catches of all species on board and not specific to sole. The *de minimis* proportion requested is higher, then the reported discard proportion, which is below 1% for the relevant fisheries combined. Hence, if granted, the exemption is likely to permit 100% of unwanted catches of sole to be discarded."
Supplementary information provided to the Commission post EWG 20-04	The following supplementary information was received from Member States: ES – Spain provided otter bottom trawls sampled information in subarea 8c and 9a by IEO (number of vessels, trips, landings, discards, and sampling coverage). PT - The Spanish study (annex 25) concludes that for PT the economic impact for the trawling fleet of the absence of *de minimis* would be around € 2.5 million in total, corresponding to a decrease in profits of around 5%, without taking into account the additional costs with personnel. In the case of Sole the total amount is € 55 000. Portugal provided bottom trawl information in subarea 9a (number of vessels, and catches). *Reviewer's Comments* *The supplementary information provided does not alter the main findings of the EWG 20-04 although the information from* Portugal highlights the anticipated losses to the fleet if a *de minimis* exemption to discard sole in IXa is not granted are €55 000.
Exemption	Anchovy caught by vessels using beam trawls, bottom trawls and seines in ICES subareas 8 and 9
Main findings of EWG 20-04	Detailed data by fleet have been provided for the period 2015-2017. Catch data for 2018 and 2019 would have been useful to gain insight as to whether the situation in the fisheries has changed since 2017. No data are provided for Belgium. Costs of landing unwanted catches if the exemption is not granted have also been presented, although the costs presented apply to a range of species caught in the fisheries. There is only limited information to explain the level of *de minimis* required. There does not appear to be any relationship between the *de minimis* requested and the levels of unwanted catch. There is no indication of steps to be taken to reduce these residual unwanted catches.
Supplementary information provided to the Commission post EWG 20-04	The following supplementary information was received from Member States: ES – Spain provided otter bottom trawls sampled information in subarea 9a by IEO (number of vessels, trips, landings, discards and sampling coverage) and purse seine in subareas 8abd. Spain also provided a summary of a paper in preparation: Metier definition of the Spanish purse seine fishery targeting small pelagic species in the Bay of Biscay: Landings, discards and interactions with protected species. PT - Portugal provided bottom trawl information in subarea 8 and 9 (number of vessels, and catches). *Reviewer's comments* *The supplementary information provided does not alter the main findings of the EWG 20-04*

High Survivability	
Exemption	Skates and rays (Rajiformes) caught with all gears in ICES subareas 8 and 9 (Excluding Cuckoo Ray)
Main findings of EWG 20-04	The vitality data appears to adequately cover the fishing activity, characteristics and conditions of the Portuguese trammel net and trawl fisheries. Survival evidence was relevant for the French small otter trawl fishery, which contribute to 29% of the French discards in area 8a for the undulate ray (of concern given high discard rate in coastal fisheries for the areas of interest) (Morfin et al., 2019). Additional information on the Spanish fleet could help assess how representative the survival evidence is for the fishery, especially regarding seasons. The evidence collected in the Mediterranean Sea, with expected different environmental conditions than in area 9a, shows that survival of thornback ray is negatively affected by warmer waters. Because the trial in area 9a was conducted in March. It is expected there would be a lower chance for survival in the summer if water temperature is higher. There was significant effort in addressing data gaps, as the significant number of ongoing projects shows, and in reporting against the roadmap. An upcoming Portuguese study (delayed) will estimate the survival rates for the most important species based on captive observations (higher priority given to thornback ray caught in the net fisheries). An upcoming Spanish study (project application as annex) will estimate the survivability of skates and rays in the artisanal Galician fleet discards using acoustic telemetry in the environment of a marine protected area, identify technical improvements to reduce the impact of discarding. There was no explicit reporting against the road map. Future submissions should report against the three main tasks in the road map; i) quantifying catches and discards per species and métier; ii) generated discard survival evidence; and iii) stakeholder led adoption of codes of best practice to maximize discard survival. When published, the outputs of the ICES Workshop on incorporating discards into the assessments and advice of elasmobranch stocks (WKSHARK5) will provide useful context for this exemption.
Supplementary information provided to the Commission post EWG 20-04	No supplementary information was provided.
Exemption	Cuckoo Ray caught with all gears in ICES subareas 8 and 9
Main findings of EWG 20-04	Additional information on the Spanish fleet could help assess how representative the survival evidence is for the fishery, especially regarding seasons as above. There was significant effort in addressing data gaps as the significant number of ongoing projects can show, and in reporting against the roadmap. A new study is planned to obtain scientific evidences of the survivability of

	cuckoo ray in the Portuguese otter-trawl fisheries. An ongoing French study on survival of cuckoo ray in area 8 could not be reported due to the Covid crisis, but additional results are expected. There was no explicit reporting against the road map, which is recommended in the future. Future submissions should report against the three main tasks in the road map.
Supplementary information provided to the Commission post EWG 20-04	No supplementary information was provided.
Exemption	Red seabream caught with the artisanal gear voracera in ICES division 9a and with hooks and lines (gear codes: LHP, LHM, LLS, LLD) in ICES subareas 8 and 10 and in ICES division 9a.
Main findings of EWG 20-04	No additional information on survival and fishery compatibility has been provided. However, it is stated that discards for this species are negligible, being mostly related to fish below the minimum landing size. Additional experiments to obtain survival rates over a longer period under captive conditions are required. New experiments were planned to be conducted in late 2019/early 2020, to obtain survival rates for a longer period of time under captive conditions, but the trials have been postponed due to constraints acquiring material for the experiments.
Supplementary information provided to the Commission post EWG 20-04	The following supplementary information was received from Member States: PT - Azores (area 10) had already justified in 2018 this exemption, based on experimental work, and it was accepted by STECF. PT had already justified this exemption in 2019. A report was produced and sent to STECF in May 2019 ("Blackspot seabream (Pagellus bogaraveo) in Portugal mainland (ICES Division 27.9.a): fisheries characterization and survivability experiments") It was not possible to do any of additional studies this year. *Reviewer's Comments* *The comments from Portugal is noted and needs to be taken into account by the STECF in finalising its review and opinion on the work of the EWG 20-04.*
Exemption	Anchovy, horse mackerel and mackerel in purse seine fisheries (PS) in South Western Waters, provided that the net is not fully taken on board.
Main findings of EWG 20-04	Crowding time and density of fish within the net bunt are the most determinant factors for survival. The provided document shows that survival rates for all three species strongly decreased after a crowding time >20 min. However, under real fishing condition the crowding time related to slipping procedure was estimated to be less than 5 min. Under these conditions, the survival rates observed further increased to >91% for anchovy, >94% for horse mackerel, and >91% for mackerel. A complete report on a robust scientific discard survival study including detailed methodology of survival experiments would enable a robust assessment of this proposal.
Supplementary	The following supplementary information was received from Member States:

information provided to the Commission post EWG 20-04	PT – The Spanish study (annex 19) can be applied to Portugal, our fleets are very similar in terms of vessels species caught and gears. *Reviewer's Comments* *The supplementary information provided does not alter the man findings of the EWG 20-04.*
Technical Measures	
Exemption	Minimum conservation reference size for cod, red sea bream and sea bass caught in recreational fisheries in ICES subareas 8 and 9
Main findings of EWG 20-04	Given recreational fisheries contribute to the overall fishing mortality of stocks in SWW, applying the mcrs for commercial fisheries to recreational fisheries is a positive management measure. This will cement these in legislation and in the case of sea bass will avoid having to renew the mcrs annually in the TAC and quota Regulation for 2020. In subarea 8 the mcrs for cod, sea bass and red sea bream, the mcrs proposed for recreational fisheries is greater than the current mcrs for commercial fisheries. However, for the rest of the SWW, the mcrs is harmonised with the current regulations contained in Annex VII of Regulation (EU) 1241/2019. There is no reason given for the difference in mcrs between the two areas. Extending the increased mcrs to the whole area would increase the benefit of the measure and avoid having different mcrs applying in different adjacent management areas.
Supplementary information provided to the Commission post EWG 20-04	No supplementary information was provided.

Table 1d. Main findings of the STECF EWG 20-04, summary of additional information received relating to exemptions presented and Reviewer's Comments: **Baltic Sea**

High Survivability	
Exemption	Salmon in the Baltic Sea caught with trap-nets, creels/pots, fyke-nets and pound nets including Pontoon traps as long as Pontoon traps are equipped with an attached knot-less bag and as long as the total amounts of released salmon is kept at a low level.
Main findings of EWG 20-04	The evidence suggests that Pontoon trap equipped with an attached knot-less bag has potential to be gentler with salmon released after handling, mainly because the catch is never lifted above the water surface or dumped directly in the boat. In the case of traditional trap-net fisheries, it is possible to gently remove salmon from the gears "fish bag" one by one (by hand) and release them. The study assessing the survivability of salmon from trap-net fishery followed the normal commercial procedure and fish were carefully one-by-one lifted from the back of the trap-net to the boat where tagging was done. Since 2014 several studies focusing on post-release mortality of salmon captured in Pontoon traps have been initiated in Sweden. Results from

	these studies have only been published as short reports or memorandums, or in manuscripts under preparation inaccessible for evaluation. Detailed scientific reports of such studies would improve the assessment of the preliminary results obtained for Pontoon trap fisheries in the Baltic.
Supplementary information provided to the Commission post EWG 20-04	No additional information provided

Table 1e. Main findings of the STECF EWG 20-04, summary of additional information received relating to exemptions presented and Reviewer's Comments: **Mediterranean**

De minimis	
Exemption	Anchovy, sardine, mackerel and horse mackerel below mcrs by vessels using midwater trawls and purse seines in GSA 1, 2, 5, 6, 7,8, 9, 10, 11.1, 11.2 and 12 (Western Mediterranean)
Main findings of EWG 20-04	The justification is based on qualitative and limited quantitative economic data information and catch information gathered from the "LANDMED" project. On this basis, the proposal is to rollover the existing exemption which is due to expire at the end of this year for a further three years. Given no new information has been provided no new evaluation can be made. There is no quantitative evidence to support these assertions. Intuitively, achieving additional selectivity improvements would be difficult to achieve in such fisheries and the costs for sorting would be high given the nature of the species involved but there is still limited quantitative evidence to support these assertions. No discard data is provided for Spain and France. Therefore, it is not possible to compare the *de minimis* volume requested against the actual levels of unwanted catches. For Italy, there does not appear to be any relationship between the *de minimis* requested and the levels of unwanted catch, which Italy reports as zero for all small pelagic species. Without catch data for all fleets and for all management areas, there is no way of fully assessing whether the *de minimis* exemption is required at the percentage included in the current discard plan.
Supplementary information provided to the Commission post EWG 20-04	The following supplementary information was received from Member States: IT – Provided results of studies by Sartor et al. (2016) and Maynou et al. (2018) that the costs for disposal of catches as a waste were expected to range from 0.45 €/kg up to 0.65 €/kg, resulting in a potential yearly cost for "average" trawl vessel of 3000 euro. This amount is about 7.5% of the gross profit of the "average" vessel. Italy assumed that although these studies was targeted on trawl fisheries, many results can be extended also to small pelagic fisheries. Italy also provided information for midwater trawls and purse seines in GSA 9 and 11 (number of vessels and landings of anchovy, sardine, mackerel and horse mackerel). There are hardly any reported discard values for the concerned fisheries in PESCAMED area. *Reviewer's Comments* *The supplementary information provided does not alter the main findings of the EWG 20-04.*
Exemption	Anchovy, sardine, mackerel and horse mackerel below mcrs by vessels using midwater trawls and purse seines in GSA 15, 16, 19, 20, 22 23 and 25 (South-eastern Mediterranean)
Main findings of	The justification is based on qualitative and quantitative data provided by Greece. On this basis, the proposal from the PESCAMED group is to rollover

EWG 20-04	the existing exemption which is due to expire at the end of this year for a further three years. New information provided by Greece strengthens the justification for the exemption, if though it is not clear how representative it is for other the fleets of other Member States operating in the south-eastern Mediterranean. The level of *de minimis* requested, would cover 100% of the observed unwanted catches of small pelagic species in the south eastern Mediterranean. There is no information to explain why the levels of *de minimis* requested is required and in fact for three of the four Member States no unwanted catches are reported at all. There is no apparent relationship between the *de minimis* requested and the levels of unwanted catches reported.
Supplementary information provided to the Commission post EWG 20-04	The following supplementary information was received from Member States: IT – Provided results of studies by Sartor et al. (2016) and Maynou et al. (2018) that the costs for disposal of catches as a waste were expected to range from 0.45 €/kg up to 0.65 €/kg, resulting in a potential yearly cost for "average" trawl vessel of 3000 euro. This amount is about 7.5% of the gross profit of the "average" vessel. Italy assumed that although these studies was targeted on trawl fisheries, many results can be extended also to small pelagic fisheries. Italy also provided information for midwater trawls and purse seines in GSA 16 and 19 (number of vessels and landings of anchovy, sardine, mackerel and horse mackerel). There isn't any reported discard value for the concerned fisheries in SUDESTMED area. *Reviewer's Comments* *The supplementary information provided does not alter the main findings of the EWG 20-04.*
Exemption	Anchovy, sardine, mackerel and horse mackerel below mcrs by vessels using midwater trawls and purse seines in GSA 17 and 18 (Adriatic).
Main findings of EWG 20-04	The justification is based on qualitative and limited quantitative economic data information and catch information gathered mainly from the "LANDMED" project. On this basis, the proposal from the ADRIATIC group is to rollover the existing exemption which is due to expire at the end of this year for a further three years. Given no new information has been provided no new evaluation can be made. Intuitively, achieving additional selectivity improvements would be difficult to achieve in such fisheries and the costs for sorting would be high given the nature of the species involved but there is still limited quantitative evidence to support these assertions. Based on the catch data submitted, the level of *de minimis* requested would cover 100% of the observed unwanted catches of small pelagic species. There is no information to explain why such levels of *de minimis* is required. There does not appear to be any relationship between the *de minimis* requested and the levels of unwanted catch. The actual levels of unwanted catches seem minimal for most of these species and the actual level of resulting *de minimis* will cover more than twice the level of unwanted catches reported.
Supplementary information	The following supplementary information was received from Member States: IT – Provided results of studies by Sartor et al. (2016) and Maynou et al.

provided to the Commission post EWG 20-04	(2018) that the costs for disposal of catches as a waste were expected to range from 0.45 €/kg up to 0.65 €/kg, resulting in a potential yearly cost for "average" trawl vessel of 3000 euro. This amount is about 7.5% of the gross profit of the "average" vessel. Italy assumed that although these studies was targeted on trawl fisheries, many results can be extended also to small pelagic fisheries. Italy also provided information for midwater trawls and purse seines in GSA 17 and 18 (Adriatic) (number of vessels and catches of anchovy, sardine, mackerel and horse mackerel). *Reviewer's Comments* *The supplementary information provided does not alter the main findings of the EWG 20-04.*

2. INTRODUCTION

Joint recommendations for discard plans have the purpose to provide the Commission with the agreement among Member States cooperating at sea-basin level on the elements for the preparation of Union law (Commission delegated Act) in accordance with Article 15.6 of the CFP Regulation. 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 on *de minimis* exemptions;
- the fixation of minimum conservation reference sizes (MCRS);
- additional technical measures needed to implement the Landing Obligation; and
- the documentation of catches.

To date STECF have evaluated six sets of Joint Recommendations:

- In 2014 - Discard plans for pelagic species in all sea basins including the Mediterranean and cod and salmon in the Baltic Sea;
- In 2015 - Discard plans for demersal species in the NWW, SWW and the North Sea
- In 2016 – Revised discard plans for demersal species in the NWW, SWW and the North Sea and discard plans for demersal species in the Mediterranean and the Black Sea
- In 2017 – Revised discard plans for demersal species in the NWW, SWW and the North Sea and discard plans for demersal species in the Mediterranean and the Black Sea
- In 2018 – Revised discard plans for demersal species in the NWW, SWW and the North Sea and discard plans for demersal species in the Mediterranean.
- In 2019 – Revised discard plans for demersal species in the NWW, SWW and North Sea and discard plans for demersal species in the Mediterranean.

In addition, 6 STECF Expert Working Groups (EWG) have been convened. These have considered various aspects of the Landing Obligation and provided guidance to Member States and the Advisory Councils on the types of underpinning evidence that should be supplied to support the different elements of discard plans.

EWG 20-04 was convened to review the Joint Recommendations from the Member States regional groups for the implementation of the Landing Obligation in 2021 and beyond. This includes Joint Recommendations for demersal fisheries containing requests for *de minimis* and high survivability exemptions as well as separate Joint Recommendations for technical measures. Since 2019, the implementation of regional technical measures, including changes to MCRS fall under the legal

basis of the technical measures framework Regulation (Regulation (EU) 2019/2141), meaning regional groups were requested to submit separate JRs for technical measures.

Since 2020, all species come under the Regulation, and so the Joint Recommendations no longer contain plans for the phasing in of species. It is generally accepted that evaluation of documentation of catches is something which lies outside the remit of the STECF evaluation of Joint recommendations and EWG 20-04 has not considered this.

2.1. Terms of Reference for EWG-20-04

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 Policy[5] (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 on *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 current discard plans will expire either by 2020 or 2021 and should be replaced by provisions adopted under article 15(5) and specified in multiannual plans. Under the existing multiannual plans, provisions[6] specify that the Commission is empowered to adopt delegated acts following Article 18 of the CFP (Regionalisation procedure). For the discard plans expiring by 2020, the Joint Recommendations submitted by the Member States in 2020 will be in accordance with the relevant multiannual plan in place. In the Mediterranean, Regulation (EU) 2018/153 laying down *de minimis* exemptions (only) for certain fisheries targeting small pelagics will also expire at the

[5] Regulation (EU) 1380/2013

[6] 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

[6] 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

[6] 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

[6] 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

end of 2020. While the legal basis is different[7], the scientific assessment process is identical to the cases listed above.

Article 15(5) does not stipulate a specific period of validity as was the case with Article 15(6).

The STECF has reviewed the Joint Recommendations prepared by the regional groups of MS annually since 2014-2018 on fisheries subject to the LO in the subsequent year. The implementation of the LO has entered fully into force as of 1 January 2019. STECF is requested through this working group to review and evaluate the MS Joint Recommendations requesting either additional or continued (where the delegated acts expire in the end of 2020) exemptions for 2021.

Joint Recommendations on Technical Measures (Regulation)

All amendments, supplements, repeal or derogations from technical measures will be based upon the Technical Measures Regulation (Regulation (EU) 2019/1241) adopted in August 2019, Article 15. 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.

It was scheduled for 2020 to have specific dedicated working groups for these tasks; however, the current situation regarding COVID-19 impeded the organisation of these working groups. In order to have the necessary continuity, it is requested now to STECF to assess the Joint Recommendations that may be submitted.

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 elements, STECF should also review additional information supplied to support several of the exemptions granted for 2020 but with the provision that the Member States concerned should submit further data to the Commission to allow STECF to further assess these particular exemptions.

Technical measures

The expected Joint Recommendations will cover 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.

[7] Under Article 15(7) CFP, the Commission may adopt delegated act laying down *de minimis* exemptions only. While no joint recommendation is formally required, the MS should however provide the scientific evidence justifying the exemptions.

Terms of Reference

Based on the previous evaluations of the STECF, suggested structure of the next STECF evaluation, the Ad-hoc contract 19-01 on temporary *de minimis* exemptions, the Joint Recommendations that will be submitted by Member States regional groups, 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:*

c) *Exemptions agreed for 2020 on the basis of high survivability where there was a requirement for further information to be supplied. 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.*
d) *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:*

c) *The de minimis exemptions agreed for 2020 where there was a requirement for further information to be supplied. 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.*
d) *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 the Joint Recommendations submitted on the basis of the Technical Measures Regulation will be reviewed in this same EWG, STECF is also requested to:

3. 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.

4. 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.

2.2.Main elements of the discard plans

Based on the terms of reference, EWG 20-04 considered a combination of 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, as well as new exemption requests for *de minimis* and high survivability.

Additionally, EWG 20-04 has considered Joint Recommendations on regional technical measures. Such Joint Recommendations were received from the North Sea and SWW regional groups. They contained specific proposals on closed areas and selective gears as well as proposals in relation to MCRS for specific species caught in recreational fisheries.

The number of exemptions proposed in the JRs for evaluation by EWG 20-04 was comparable with the previous submissions in 2019 (EWG 18-06, STECF 18-02). The number of individual exemptions proposed for introduction or continuation in 2021 was 55 compared with 67 for 2019. This was made up of a limited number of new exemptions and multiple exemptions that were granted for one year, until the end of 2020.

For the Mediterranean, no Joint Recommendations were submitted but the different regional groups (SUDESTMED, PESCAMED and ADRIATICA); submitted additional supporting information relating to *de minimis* exemptions for small pelagic species (i.e. anchovy, sardine, mackerel and horse mackerel). Excluding the Mediterranean, the total number of individual proposed and assessed exemptions across all regions (NS, NWW, SWW, Baltic) was 52 (Table 2.2.1). The number of proposed exemptions in the previous year was 67 (STECF 19-08).

Table 2.2.1 Number of recommendations by type and region evaluated by EWG 20-04 (To be updated)

Region	High Survivability	*De minimis*
North Sea	7	9
NWW	4	9
SWW	3	19
Baltic	1	-
PESCAMED	-	1
SUDESTMED	-	1
ADRIATICA	-	1
Total	**15**	**40**

3. EWG 20-04 OBSERVATIONS

Following from previous EWGs (EWGs 15-10, 16-10, 17-08, 18-06 and 19-08 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 20-04 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

- EWG 20-04 acknowledges the difficulties experienced by the Member States Groups due to the Covid-19 pandemic in providing comprehensive Joint Recommendations.
- EWG 20-04 reiterates that the avoidance of unwanted catch through improved selectivity or other means should be the primary focus in implementing the Landing Obligation. STECF notes that the JRs received contained few measures to increase selectivity. EWG 20-04 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 utilization of quota to land low value catches.
- EWG 20-04 re-iterates the need to improve 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. As STECF has pointed out previously, innovative monitoring measures such as CCTV and Remote Electronic Monitoring (REM) have been applied in pilot studies and could be a more effective way to monitor the Landing Obligation to generate catch evidence for science and compliance.
- EWG 20-04 notes that many of the existing exemptions included under the discard plans were put in place under earlier discard plans from the period 2015-2018. EWG 20-04 re-iterates it would be timely for the Member States Groups and the Commission to review these exemptions and determine whether they need to be amended or are still required given likely changes in catch patterns, gears used, vessels involved and uptake.
- EWG 20-04 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 20-04 notes that for the 2020 JR's there are many cases where the information and data supplied is generic with the same studies and assumptions used to support multiple exemptions. For some exemptions no supporting information has been provided at all. EWG 20-04 acknowledges that the same exemption can impact several fisheries, but without any specific linkage to the stocks and fisheries involved, it is extremely difficult to make any evaluation as to whether the exemption makes sense or not.
- EWG 20-04 notes that in many cases the supporting information for exemptions relating to the fleets and fisheries involved are based on data from the period 2014-2016, stored in the publicly available STECF FDI database. More recent catch data should be available from DCF sampling carried out by the national research institutes in Member States and should be provided.
- EWG 20-04, in such cases the exemption, where historic catch data is used, it is difficult to evaluate the impact of the exemption compared to the current level of unwanted catches as the catch data may not be representative of the current catches in the relevant fisheries.

3.2.Observations on *de minimis* exemptions

- EWG 20-04 recognises there are many challenges for Member States in presenting appropriate information to support *de minimis* exemption based on disproportionate costs. STECF has proposed different analytical framework that can assist in the submission of economic cases for *de minimis* (STECF EWG 13-23 and EWG 16-10). The purpose of the economic analysis to support a *de minimis* exemption is to understand the scale, or proportionality, of the challenges faced by the group of vessels relevant to the *de minimis* exemption in comparison to the baseline situation pre-Landing Obligation.
- EWG 20-04 notes that for many cases Member States have provided arrange of economic analyses demonstrating disproportionate costs to justify *de minimis* exemptions. More than 90% of the proposed *de minimis* exemptions are based on such analyses. They demonstrate that the potential increase in workload in terms of time and operational costs and that due to storage limitations vessels may be forced to cut short fishing trips causing loss of income. However, EWG 20-04 highlights that there is no way to objectively judge whether such estimates amount to disproportionate costs. EWG 20-04 consider that simply stating that handling, storing and landing unwanted catches has an associated cost, is not sufficient to demonstrate that those costs are disproportionate. The priority should be improving selectivity and the introduction of avoidance measures to reduce the levels of unwanted catches and thus, reduce the costs for handling these unwanted catches.
- EWG 20-04 acknowledges the detailed economic analysis provided by the SWW Member States Group on the economic viability of unwanted catches that are subject to Landing Obligation in SWW. This employs a different methodology than previous studies to measure disproportionate costs of handling unwanted catches based on the loss of opportunity costs arising from the removal of *de minimis* exemptions. EWG 20-04 had only limited time to evaluate this methodology and would suggest a more detailed analysis be carried out to ensure the assumptions used and the results obtained are reasonable.
- EWG 20-04 notes that Member States have used 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. Greater silver smelt and boarfish in the NWW and industrial species bycatch in demersal fisheries the North Sea), catches from the entire fishery or fisheries have been used as the basis for the calculation. A small percentage has been applied to these total catches to give a higher *de minimis* volume than would have been the case if just the catches for that species in that fishery were used.
- EWG 20-04 notes 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 20-04 re-iterates 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 20-04 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 and the supporting information should contain indications on the measures to be taken to reduce these residual unwanted catches.
- EWG 20-04 has identified areas where there are limitations in the information presented or the methodologies used and, in some cases, where there are inconsistences. 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 of in comparison due to choke effects and utilization of quota for fish that have little or no value.

3.3.Observations on high survivability exemptions

- EWG 20-04 notes that few specific provisions included in the JR's submitted include measures to improve the documentation of catches. An exception is the inclusion of provisions for CCTV linked to the plaice survivability exemption in the North Sea. EWG 20-04 re-iterates the need to improve the collection of catch data. This includes fish discarded under *de minimis* and survivability exemptions.
- EWG 20-04 re-iterates that assessing what constitutes high survivability is problematic, which is made more complex by the limited information available and the variability in the available survival estimates. What is clear is that there are a wide range of factors that can affect survival, and these are likely to be the primary cause of the high variability observed across the various studies. However, identifying and quantifying these is difficult due to the relatively limited species-specific information and differences between experiments including timing, season, gear handling, observation period. This means that passing judgment on 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.
- EWG 20-04 observe that some trends are emerging from the survival evidence provided to support survivability exemptions. Most of the exemptions in the demersal fisheries have continued to focus on a few species, Norway lobster, plaice, sole and skates and rays. Studies on these species are indicating general differences in overall discard survival between gear types, whereby otter trawl fisheries have higher survival levels compared with beam (including pulse) trawl fisheries. The species most studied to date is plaice. Several studies on plaice have shown that discard survival is lower when more Norway lobster are caught. Also, season has been identified as an influencing factor in several studies, with higher plaice survival observed in winter months when seawater temperatures are lower. EWG 20-04 note that further information on factors shown to influence discard survival has been collated by the ICES Working Group on Methods to Estimate Discard Survival (ICES, 2020) and a meta-analysis of the relative importance of these factors across would be useful.
- EWG 20-04 observes that vitality data is increasingly being used to support high survival proposals because of calls for additional supporting information. 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. At this time, there is 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 20-04 observes that the same scientific studies are being provided to support different discard survival exemptions. EWG 20-04 consider that in some cases, this evidence is being extended over subsequent years beyond the point where it is scientifically defensible. There are examples for which a single study produces a robust estimate of discard survival in a localised fishery. This is then applied to the whole region;

and once established, the exemption is extended to other regions, based on technical similarities between fisheries. The result of this incremental stretching of the evidence is that the fate of a few hundred fish in a local fishery can provide the basis for exemptions for many fisheries across different regions. Our current knowledge of the factors influencing discard survival needs to improve before we can be confident in extrapolating discard survival evidence much beyond the conditions under which it was collected. Alongside this, data on the technical, biological and environmental conditions associated with relevant fisheries should be collected and compiled (some of which may be available through observer programmes), to provide context to extrapolating survival rates between fisheries.

- EWG 20-04 notes that several existing exemptions for plaice and sole are 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. 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 20-04 notes that several survivability exemptions – plaice and rays and skates – are linked to a roadmap 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 20-04 points out that there is no explicit reporting against the roadmap, which it makes it hard to assess progress. Structured reporting of the different tasks and their objectives as set out in the roadmaps would enable a more efficient and robust evaluation process. Moreover, it is noted that the timelines and specific objectives for the roadmaps are sometimes unclear and these need to be set out in definitive versions of the roadmap documents. This will assist member states in understanding the commitments made and will enable robust evaluations of the outputs.
- EWG 20-04 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. EWG 20-04 re-iterates the need for this to be discussed in the assessment forums for stocks with survival exemptions.
- EWG 20-04 recognises the challenges for Member States in presenting appropriate information to support survival exemptions. STECF has previously published a template for the provision of supporting evidence to assist the regional groups (STECF EWG 13-23 and EWG 16-10). These have been further refined and expanded here (Annex I), alongside a description of the critical review process that is applied to assess the quality of the discard survival estimates based on the ICES best practices guidance (Annex II).

3.4.Observations on technical measures

- EWG 20-04 notes despite many experiments to test selective gears, there are few examples of such gears being incorporated into the JRs submitted. Uptake of selective gears in most regions remains extremely low even in fisheries where unwanted catches remain high. Other than in the North Sea, virtually no new technical measures have been prosed for 2020.
- EWG 20-04 re-iterates 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 20-04 notes, that while in previous years some exemptions were predicated on the use of selective gears, no such exemptions were proposed for 2020, other existing exemptions where there was such a requirement included in the exemption.
- EWG 20-04 notes that there has been a notable drop-off in research and testing selective gears in most regions, even the levels of unwanted catches continue to be high in some fisheries. While there is no doubt that theCovid-19 pandemic may have impacted on some such studies, the decline in selectivity work is nonetheless concerning.

4. EVALUATION OF REGIONAL JOINT RECOMMENDATIONS

4.1. Structure of Advice – *de minimis* exemptions

In assessing each of the *de minimis* exemptions requested, EWG 20-04 has based their evaluation on the following three elements as described in STECF PLEN 19-01.

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. Provide the scientific evidence that underpins the exemption. Include a summary of the relevant supporting studies and experiments in the JR.

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). EWG 20-04 notes that as in previous years some Member States have used these templates in their JRs, but that completion remains patchy.

Regarding the underpinning information for *de minimis* exemptions EWG 20-04 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.

4.2. Structure of Advice – high survivability exemptions

In the case of high survivability exemptions, EWG 20-04 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 compatability
5. Additional evidence

Where possible, EWG 20-04 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. This review consists of a series of 'Yes'/'No' phrased questions. Positive responses ('Y') meant that the guidance was followed, and negative responses ('N') were given when it was not followed, or there was no evidence that it was followed. The most important criteria are captured in five 'key guidance questions', which are considered the most useful in assessing the quality of the study, both in terms of how robust the estimate is and how representative the derived discard estimates are of the defined fishery. 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).

requests.

4.3.Survivability of skates and rays – General considerations

EWG 20-04 notes that the high survivability exemptions for skates and rays included in the 2020 discard plans, have been retained in the proposals for 2021. EWG 20-04 re-iterates the general concerns over the exploitation of skates and rays, it is important that any exemptions are based on the most relevant and sound science. This underlines the requirement for continuing focussed studies designed to be representative of the fisheries seeking exemptions. EWG 20-04 restates the need for close monitoring and continued research to ensure these survival exemptions do not lead to over exploitation of skate and ray species.

EWG 20-04 reiterates that assessing what constitutes high survivability is complicated by the limited information available and the variability in survival estimates. This is particularly relevant for the skate and ray survival exemptions covering many species and fisheries. STECF 18-06 observed that the scope of the exemption for skates and rays was not consistent with other survivability exemptions and highlighted the risks in extrapolating survival evidence between species, fisheries and seasons.

EWG 20-04 restate that there is a range of factors that can affect survival but identifying and quantifying these is difficult due to the limited species-specific information and differences in the conditions between experiments. This means that assessing the representativeness of studies within an entire fishery is difficult, given the range of factors that can influence survival. Moreover, EWG 20-04 highlight that in the absence of complete fishery information on the catches and discards of the skate and rays 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 assessed.

EWG 19-08 noted that skate and ray survival rates can be highly variable between species and fisheries. EWG 19-08 noted there is a trend for smaller individuals of studied species and smaller species to have lower survival, inshore static nets are associated with higher survival and shorter tow durations are associated with higher survival. For some fisheries and species combinations the survival may be close to zero. EWG 20-04 note there has been a positive response to the roadmaps and substantial new and robust evidence on skates and rays is provided. This includes, from the North Sea, discard survival estimates from beam trawlers of 54% for thornback ray, 67% for blonde ray, 27% spotted ray (smaller species), and 58% for undulate rays. For otter trawlers, survival estimates of 72% for thornback rays and 86% for blonde rays. For trammel netters, discard survival is estimated at 99% for thornback rays. In the South Western Waters small otter trawl fishery discard survival was estimated at 49% for undulate ray.

EWG 20-04 suggest 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. EWG 20-04 note that, when published, the outputs of the ICES Workshop on incorporating discards into the assessments and advice of elasmobranch stocks (WKSHARK5) will provide important information for task (ii).

4.4.Survivability of plaice – General considerations

The discard plans introduced in 2020 included 12 high survivability exemptions for plaice in different fishing gears – beam trawls, otter trawls and trammel nets - across the NWW and the North Sea. EWG 18-06 and 19-08 noted that the evidence submitted to support these exemptions highlighted that survivability in most of the fisheries for which exemptions 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 will not survive. Therefore, most of these exemptions required the provision of additional scientific supporting evidence in 2020.

For beam trawl plaice survivability exemptions, the supporting evidence relates to the completion of a roadmap as referenced in 2019/2238; the main objectives of which are to increase survivability, as assessed by STECF; and provide annual reports on the progress on the survivability research programme. EWG 20-04 note that substantial research projects are ongoing in Belgium and the Netherlands which have the potential to meet the requirements of the roadmap. However, no new evidence was provided. To evaluate the outputs from the roadmap,

future submissions should include scientific evidence of the changes in discard survival that have been achieved in experimental trials. The 2019/2238 delegated regulation also refers to a roadmap for Fully Documented Fisheries. Further clarity on the objectives for this are needed before an evaluation can be provided. There is also no reference to a timetable for the completion of the roadmap or a definitive final version of a roadmap.

For the latest JRs assessed by EWG 20-04, Member States have proposed one new exemption and extensions to the existing ones. With these exemptions granted, it effectively means that almost all plaice catches in otter trawl, seine net and beam trawl fisheries are covered by a high survivability exemption. EWG 20-04 restates that the motivation for the proposed work is to mitigate against the economic costs of landing high volumes of unwanted plaice. It is noted that for beam trawlers, the justification for survivability exemption for plaice is based on the potential for improving survival and selectivity, but not on demonstrated high survival. EWG 20-04 also note that while there is a roadmap in the North Sea for beam trawls to increase plaice survival, there is none for the NWW, although the estimated discard survival is comparable, and the same evidence has been used to support the exemptions in both regions.

STECF PLEN 19-01 collated relevant plaice discard survival evidence from the North Sea and North Western Waters that has been used to support the proposed exemptions. 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. PLEN 19-01 mapped the most relevant discard estimate to the fleet catch estimates for each North Western waters plaice stock. EWG 20-04 observe that the new plaice survival evidence and new proposed exemptions do not notably change the estimated % total catches which are of dead discards as that reported by PLEN 19-01 (Table 4.4.1). For example, of the total catch of Irish Sea plaice (7a), 21-30% (by weight) is made up of dead discards from the beam trawl fleet.

Table 4.4.1 Estimated dead discards as a % of the total catch from each gear type per plaice stock in the North Western Waters region (from PLEN 19-01).

Stock	Gear	Estimated % of total catch from the stock that is of dead discards
7.a	beam	21-30%
	otter	14-15%
7.e	beam	9-12%
	otter	4-6%
7.f,g	beam	18-25%
	otter	5-22%
7.h,j,k	beam	?
	otter	8-13%

For the 7.h,j,k stock, a conditional bycatch TAC has been agreed due to the assessed poor status of the stock (ICES advised zero catches). Discard estimates are available only for otter trawls. While beam trawls account for most landings, there is no estimate of discard rate for this fleet. Under exemption, an estimated 8-13% of the known catch will be of dead discards from the otter trawl fleet. PLEN 19-01 observed that discard estimates for the beam trawl fleet are needed to assess the implications of a survivability exemption for this fleet. PLEN 19-01 also reiterated that avoidance of unwanted catch through improved selectivity or other means should be the primary focus in implementing the Landing Obligation, and the role of the survival exemptions should be made explicit within the bycatch reduction plans required for all stocks with zero catch advice.

EWG 20-04 also note that ICES have stated there is no distinct geographic separation between plaice catches in the different ICES subdivisions in the Celtic Sea and no obvious association between plaice caught in 7j and k with those caught in 7h. The several hundred miles between the inshore 7j fishery and the offshore 7h fishery supports the view that the 7h stock is more likely to be a continuation of the 7e stock (ICES, 2019). STECF FDI landings data show that beam trawl catches from the 7h-k stock are concentrated in 7h. Therefore, EWG 20-04 note that a review of the geographical distribution of the plaice 7h, j, k stock would be important to provide further context to the implications of this exemption. If it were confirmed that the 7h component was part of the 7e stock, which is fished at sustainable levels, this may reduce the risk to stock sustainability associated with maintaining this exemption.

Equivalent estimates were generated by ICES WGMEDS for the North Sea plaice stock (Table 4.4.2), whereby of the total catch from the stock, an estimated 23% (by weight) is made up of dead discards from the beam trawl fleet.

Table 4.4.2 Estimated dead discards as a % of the total catch from each gear type for the North Sea plaice stock (from PLEN 19-01).

Stock	Gear	Estimated % of total catch from the stock that is of dead discards
North Sea (Subarea 4 and Subdivision 20)	beam (BT2)	23%
	otter (TR2)	13%
	otter (TR1)	1%
	trammel (GT1)	<1%
	gill (GN1)	<1%

For high survivability recommendations, 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 19-08 also noted that introducing discard survival estimates is something which should be discussed in the assessment forums for more stocks and especially plaice, given the proliferation of exemptions.

References

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) 2019/2238.

Additionally, Commission Delegated Regulation (EU) No 1395/2014 (2) 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.

In 2020, a further set of Joint Recommendations has been submitted by the Member States. This consolidates the main elements of Regulation (EU) 2019/2238, provides additional information on many of the existing exemptions and adds several new exemptions. A separate JR has also been

submitted which consolidates the main elements of the pelagic fisheries discard plan contained in Regulation (EU) 2018/189.

The main elements of these JR's and which of these have been assessed by EWG 20-04 are summarised in table 5.1.

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

Elements	***Pelagic or Demersal discard plan***	***Status and relevant Article in current discard plan***	***Assessment by EWG 20-04 with relevant Annexes in JR***
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 10(a)	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 10(b)	Not assessed
Sole, cod, haddock, saithe, whiting and hake caught in the *Nephrops* 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 10(c)	Not assessed
Sole, haddock, whiting, cod, plaice, saithe, herring, Norway pout, greater silver smelt and blue whiting below MCRS caught in the *Pandalus* 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 10(d)	Not assessed
Cod and whiting below MCRS caught in the mixed demersal fishery using bottom trawls or	Demersal	Existing and unchanged Article 10(e)	Not assessed

seines of mesh size 70-99 mm in Union waters of ICES division 4c			
Whiting caught in bottom trawls 90-119mm with SELTRA panels and bottom trawls with a mesh size of 120mm and above in Union waters of ICES division in 3a	Demersal	Existing and unchanged Article 10(g)	Not assessed
Bycatch of plaice in fisheries caught in the *Nephrops* trawl fishery with a mesh size ≥ 80-99mm with a SEPNEP in ICES subarea 4	Demersal	Existing and unchanged Article 10(i)	Not assessed
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 10(j)	Not assessed
Whiting and cod 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	Temporary until end of 2020 Article 10(f)	Re-assessed based on new information Annex 6.3.6
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	Temporary until end of 2020 Article 10(h)	Re-assessed based on new information Annex 6.3.7
Horse mackerel caught using bottom trawls, seines and beam trawls with a mesh size between 80 and 99 mm in ICES subarea 4	Demersal	Temporary until end of 2020 Article 10(k)	Re-assessed based on new information Annex 6.3.8
Mackerel caught using bottom trawls, seines and beam trawls with a mesh size between 80 and 99 mm in ICES subarea 4	Demersal	Temporary until end of 2020 Article 10(l)	Re-assessed based on new information Annex 6.3.9
Bycatch of industrial species caught using bottom trawls, seines and beam trawls in ICES	Demersal	Temporary until end of 2020 Article 10(m)	Re-assessed based on new information Annex 6.3.10

subarea 4			
Ling below MCRS caught using longlines in ICES subarea 4	Demersal	Temporary until end of 2020 Article 10(n)	Re-assessed based on new information Annex 6.3.11
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 Article 3(a) of Pelagic Discard Plan	Re-assessed based on new information Annex A & 7.3.1.2
Blue whiting caught by industrial pelagic trawlers in ICES subarea 4	Pelagic	New	Assessed based on supporting information Annex A, 7.3.2.1, 7.4.1
Herring caught with vessels using bottom trawl and seine with mesh size of 80-99mm in ICES subarea 4	Demersal	New	Assessed based on supporting information Annex 6.4.2
High Survivability			
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; and Danish seines; in Union waters of ICES division 3a and subarea 4	Demersal	Existing Article 6(1a) and 1(b)	Not assessed
Mackerel and herring caught with purse seines under certain conditions in ICES division 3a and subarea 4	Pelagic	Existing Article 2 (Regulation (EU) No 1395/2014	Not assessed
Nephrops 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	Demersal	Existing with request for additional information for bottom trawls to be submitted by May 2020 for bottom trawls in ICES divisions 3a & subarea	Re-assessed based on new information Annexes 6.3.1a and 6.3.1b

mm equipped with a species selective grid in Union waters of ICES divisions 2a, 3a and subarea 4		4 Article 3(1b)	
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	Existing with request for additional information to be submitted in May every year Article 7	Re-assessed based on new information Annexes 6.2.1a and 6.2.1b
Skates and rays (*Rajiformes*) caught with all gears in in Union waters of ICES divisions 2a, 3a and subarea 4)	Demersal	Existing with request for additional information to be submitted in May each year Article 9	Re-assessed based on new information Annexes 6.2.2a, 6.2.2b, 6.2.2c and 6.2.2d
Plaice caught with bottom trawls with a mesh size of at least 120mm when targeting flatfish or round fish in ICES division 3a and ICES subarea 4	Demersal	Temporary exemption until end of 2020 Article 6(1c)	Re-assessed based on new information Annexes 6.3.2a-f
Plaice caught with trawls with a mesh size of at least 90-99 mm equipped with Seltra panel targeting flatfish or roundfish in ICES division 3a, — plaice caught with trawls with a mesh size of at least 80-99 mm targeting flatfish or roundfish in ICES subarea 4	Demersal	Temporary exemption until end of 2020 Article 6(2a) and 6(2b)	Re-assessed based on new information Annexes 6.3.2a -e and Annex 6.3.3
Turbot caught with trawls with a cod end larger than 80mm in ICES subarea 4	Demersal	Temporary exemption until end of 2020 Article 8	Re-assessed based on new information Annex 6.3.5
Plaice caught with mesh size 100-119 mm in ICES division 3a and ICES subarea 4	Demersal	Extension of existing exemption Article 6(2)	Assessed based on new information Annexes 6.3.3a-6.3.3d

5.1.North Sea – Proposals for *de minimis* exemptions

A description the main elements of the exemptions and EWG 20-04are provided in table 5.1.1. Only exemptions where an evaluation has been carried out are included.

Table 5.1.1 Summary of *de minimis* exemptions submitted as part of the North Sea Joint Recommendations (restricted to new or revised exemptions)

Exemption	Main Findings of EWG 20-04
Whiting and cod below the minimum conservation reference size by vessels using bottom trawls or seines with mesh size 70-99 mm in ICES divisions 4a and 4b. A combined maximum of 6% in 2020-2023 (of which a maximum of 2% can be used for cod discards) of the total annual catches of whiting and cod by vessels using the specified gears and in the specified area. (See Annex 6.3.6 for justification)	**1. Exemption status** Existing temporary exemption granted until the end of 2020 (Article 10-point f) of Regulation (EU) No 2019/2238). There is a separate exemption for cod and whiting included in the current delegated act for 4c (Article 10-point e). The delegated act does not specify that additional information is required for a similar exemption that applies in division 4c, therefore the EWG has not considered this exemption. **2. Definition of the fishery** Partial updated information on the fleets and fisheries has been supplied for the French, Dutch and German fleets to support the request. This is presented in the JR. No data for cod and whiting for France is supplied. The source of this data is not clear and there is a reference to issues with the STECF website. More detailed information on the French fisheries is supplied in the relevant Annex (6.3.6). However, this only applies to 4b. no information on the fisheries in 4a is provided. There is a discrepancy between the number of French vessels reported in the JR (260 vessels in 2018) and the Annex (157 vessels in 2018). There is also limited information on the German and Dutch fleets covered by the exemption. The JR specifies a combined quantity of whiting and cod below the minimum conservation reference size, shall not exceed 6 % in 2021 of the total annual catches of whiting and cod with the maximum amount of 1% cod. In the supporting annex the percentage is 5% with 1% cod, while in the delegated act the *de minimis* percentage is 6% with a maximum percentage of cod of 2%. As in 2019 the JR indicates that based on the data provided by France, Germany and the Netherlands, a *de minimis* exemption of 6% of whiting and cod (of which a maximum of 2% is cod) corresponds to total quantities of 253t of discarded whiting and 72t of discarded cod for the entire North Sea. This has not been updated for 2019 catch data. Based on catches for 2020 reported by ICES, the levels of *de minimis* are still less than 1% of the total catches. No information on the uptake of the *de minimis* in 2019 is provided. **3. Basis for the exemption** The supporting information provided is largely the same as in 2017, 2018 and 2019. The supporting annex provided by France refers to several historic selectivity studies – SELECMER, SELECCAB and SELECFISH - that were provided as justification in previous JRs. As commented on previously these report the results of various trials with selective gears. These trials were carried out in the southern North Sea (4c) and the Channel (7e and 7d). It is not clear how representative these trials are to fisheries in areas 4a and 4b covered by this exemption request. The Annex reports on an ongoing study – SELUX – which is due to be completed by the end of 2020. It focuses on using lights to improve selectivity and will be carried out in the fisheries in 4c and 7d. Information on disproportionate costs collected from the EDOE study that were reported in 2017, 2018 and 2019 are reported in the supporting Annex. This study indicates that for French vessels, given

	they are operating long trips, distant to ports, the costs for handling unwanted catches are disproportionate. According to the information presented, vessels would be forced to return to harbour more frequently, generating higher costs. **4. EWG 20-04 Observations** Limited new information is provided. The arguments presented regarding disproportionate costs for handling unwanted catches are based on previously submitted information. As noted in 2019, the arguments presented are generic and not specific to the relevant fisheries, accepting that there are indications that the impacts are quite significant in terms of disproportionate costs. The selectivity information provided has also previously be used to support this, and other exemptions. Many of the studies date back to 2014 and earlier, noting one new study is ongoing. Based on the information provided 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. No technical measures have been proposed by the Member States have been proposed to the knowledge of the EWG. Only partial information on catches and fleets are provided and in the case of the supporting annex, the data presented dates to 2016 or early. The supporting information supplied refers mainly to area 4c and 7d and for the French fleet. It is not clear how representative this information is to areas 4a and 4b, or the Dutch and German fleets availing of this exemption. The actual amount of *de minimis* being requested should be clarified as there are different percentages specified in the delegated act, JR and supporting Annex.
Exemption	Main Findings of EWG 20-04
Whiting below the minimum conservation reference size by vessels using beam trawls with mesh size 80-119mm in ICES subarea 4. A maximum of 3% of total combined catches of plaice and sole in fisheries with beam trawls 80-119mm for the period 2021-2023. (See Annex 6.3.7 for justification)	**1. Exemption status** Existing temporary exemption granted until the end of 2020 (Article 10-point h of Regulation (EU) No 2019/2238). A similar exemption applies in areas 7b-7k in the North Western waters for a broad range of gears including beam trawls The JR highlights that a level playing field should be ensured across sea basins, especially as areas 7d and 4c are adjacent. **2. Definition of the fishery** Updated catch information for the Dutch (2017 and 2018) and German fleets (2017-2019) is provided in the JR. This information is repeated in the supporting Annex (6.3.7) for the Dutch fleet. The *de minimis* volume for whiting is calculated to be 2460 tonnes, which is equivalent to 3% of the total catches of plaice and sole over the period 2014-2016. However, in the current delegated act, the *de minimis* volume is set at 2% of these catches. There is no explanation provided for the difference in *de minimis* percentage requested. Based on the catch data provided the additional 1% would amount to an additional 820 tonnes of whiting discarded. Based on the data provided the total unwanted catches of whiting is around 1600 tonnes. ICES reported total unwanted catches of whiting in area 4 in 2019 of 7692 tonnes for all gears. The *de minimis* exemption requested amounts to 33% of the total unwanted catches in the North Sea. No new information on the number of vessels involved is provided and it is not clear whether vessels from other Member States (e.g. Belgium)

	avail of this exemption. **3. Basis for the exemption** The supporting information provided is largely the same as in 2019. In annex 6.3.7, two studies are referenced, and the findings summarised. The first study was provided in 2019, a second study is referenced but not provided. The justification for the exemption is on the grounds of handling whiting catches onboard represents disproportionate costs for beam trawlers. The economic analysis quantifies the additional work personnel (in labour time) that is needed on board (3.6 FTE if all catches need to be landed, 0.37 in the case of BMS whiting). It concludes, in practical terms this would lead to an increase of at least 1 FTE on board to handle unwanted whiting catches. The analysis also shows that costs exceed revenues in landing such catches. **4. EWG 20-04 Observations** The information provided indicates that the costs of landing unwanted catches of whiting are significant and would require additional labour on board. However, given the *de minimis* volume would cover only a small part of the overall unwanted catches, the costs for handling the residual unwanted catches not discarded under the exemption would remain regardless of whether the exception is in place or not. The studies only cover the Dutch fleet and it is not clear whether it is representative of other fleets availing of this exemption. As indicated last year, calculating the *de minimis* based on catches of sole and plaice, means 100% of unwanted catches below mcrs can be potentially discarded. There is no evidence of attempts to increase selectivity to reduce unwanted catches, accepting this is difficult in beam trawl fisheries targeting sole. The actual amount of *de minimis* being requested should be clarified as there are different percentages specified in the delegated act (2%) compared to the JR (3%).
Exemption	Main Findings of EWG 20-04
Horse mackerel in the demersal mixed fisheries with bottom trawls with a mesh size between 80-99mm (TR2, BT2) in ICES subarea 4 A maximum of 7 % in 2020 and 6 % in 2021 of the total annual catches of horse mackerel made in the specified fishery. (See Annex 6.3.8 for justification)	**1. Exemption status** Existing temporary exemption granted until the end of 2020 (Article 10-point k of Regulation (EU) No 2019/2238). A similar exemption applies in areas 6 and 7b-7k in the North Western waters for bottom trawls and beam trawls **2. Definition of the fishery** Partial updated catch information has been provided in the JR for France, Netherlands and Germany. No data is presented For France for 2019. French, Dutch and German fleets to support the request. The source of this data is not clear, and some data seems to be extrapolated from STECF data for the period 2014-2016. The information on the fisheries and fleets is the same as in 2019, Detailed information on the French fisheries is supplied in the relevant Annex (6.3.8). As in 2019, no information is provided for other fleets availing of this exemption, although several fisheries are identified. This includes a reference to Swedish and Danish vessels in the Skagerrak, which is not covered by the exemption. There is a discrepancy between the number of French vessels reported in the JR (260 vessels in 2018)

	and the Annex (157 vessels in 2018). There is also limited information on the German and Dutch fleets covered by the exemption. The catch information presented in the supporting Annex has not been updated from 2019. Based on the information provided in the *de minimis* exemption of 7% of horse mackerel bycatches would correspond to total quantities of 106 tonnes for the entire North Sea. As identified by STECF in 2019, The data presented is taken mostly from the FDI database and is prior to 2017 so may not be representative of current catch patterns in the fisheries. **3. Basis for the exemption** The supporting information provided is largely the same as in 2019. The supporting annex provided by France refers to several historic selectivity studies – SELECMER, SELECCAB and SELECFISH - that were provided as justification in previous JRs. As commented on previously these report the results of various trials with selective gears. These trials were carried out in the southern North Sea (4c) and the Channel (7e and 7d). It is not clear how representative these trials are to other fisheries in covered by this exemption request. The results presented indicate improving selectivity for horse mackerel is difficult in French mixed demersal fisheries. Information on disproportionate costs collected from the EDOE study that were reported in 2019 are re-refenced in the supporting Annex. This study indicates that for French vessels, given they are operating long trips, distant to ports, the costs for handling unwanted catches are disproportionate. Vessels would be forced to return to harbour more frequently, generating higher costs. These are not specific to horse mackerel. **4. EWG 20-04 Observations** Limited new information is provided. The arguments presented regarding disproportionate costs for handling unwanted catches are based on previously submitted information. As noted in 2019, the arguments are generic and not specific to the relevant fisheries, accepting that there are indications that the impacts are quite significant in terms of disproportionate costs. The selectivity information provided has also previously be used to support this, and other exemptions. Many of the studies date back to 2014 and earlier. The supporting Annex indicates unwanted catches of horse-mackerel are low (< 3%) and highlights that selectivity for horse mackerel is already high. The evidence provided only partially supports this contention. In any case increasing selectivity for pelagic species may not necessarily be desirable as the mortality of escaping fish has been observed to be high (Lockwood et al. 1983; Suuronen et al. 1996). Only partial information on catches and fleets are provided and in the case of the supporting annex, the data presented dates to 2016 or early. The supporting information supplied refers mainly to area 4c and 7d and for the French fleet. It is not clear how representative this information for other fleets availing of this exemption.
Exemption	Main Findings of EWG 20-04
Mackerel in the demersal mixed fisheries with bottom trawls with a mesh	**1. Exemption status** Existing temporary exemption granted until the end of 2020 (Article 10-point l of Regulation (EU) No 2019/2238). A similar exemption

size between 80-99mm (TR2, BT2) in ICES subarea 4 A maximum of 7 % in 2020 and 6 % in 2021 of the total annual catches of mackerel made in the specified fishery. (See Annex 6.3.9 for justification)	applies in areas 6 and 7b-7k in the North Western waters for bottom trawls and beam trawls **2. Definition of the fishery** Partial updated catch information has been provided in the JR for France, Netherlands and Germany. No data is presented For France for 2019. French, Dutch and German fleets to support the request. The source of this data is not clear, and some data seems to be extrapolated from STECF data for the period 2014-2016. The information on the fisheries and fleets is the same as provided for the horse mackerel exemption above. The catch information presented in the supporting Annex has not been updated from 2019. Based on the information provided in the *de minimis* exemption of 7% of mackerel bycatches would correspond to total quantities of 77 tonnes for the entire North Sea. As identified by STECF in 2019, The data presented is taken mostly from the FDI database and is prior to 2017 so may not be representative of current catch patterns in the fisheries. **3. Basis for the exemption** The supporting information and justification provided for the exemption is the same as for horse mackerel above. **4. EWG 20-04 Observations** The EWG observations are the same as those for horse mackerel.
Exemption	Main Findings of EWG 20-04
Sprat, sandeel, Norway pout and blue whiting of all species under the Landing Obligation caught in the demersal mixed fisheries with trawls in ICES division 3a and ICES subarea 4 A maximum of 1 % in 2021 of the total catches of sprat, sandeel, Norway pout and blue whiting in the specified fishery. (See Annex 6.3.10 for justification)	**1. Exemption status** Existing temporary exemption granted until the end of 2020 (Article 10-point m of Regulation (EU) No 2019/2238). **2. Definition of the fishery** Partial updated catch information on bycatch of industrial species in Danish and Swedish demersal trawl and *Pandalus* trawl fisheries is provided. Catch data for Sweden in 2019 is missing and no data is presented for other fleets that may avail of this exemption. Other than the number of Swedish and Danish vessels involved in the fisheries, no additional information is provided. The catch information presented in the supporting Annex indicates the estimated *de minimis* volume is 457 tonnes based on the catch data presented (396 tonnes for Denmark and 62 tonnes for Sweden). These volumes are minimal compared to the overall catches of the Danish and Swedish fleets. **3. Basis for the exemption** As in 2019, 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. The volumes of unwanted catches are small (typically less than 5kg). No specific studies are provided to support this assumption. Additionally, the supporting Annex indicates that there are no options to improve selectivity without reducing catches of marketable species. **4. EWG 20-04 Observations** No additional documentation has been provided to support the

	continuation of this exemption, other than updated catch information. Therefore, the EWG makes the same observations as in 2019. The justification that the catches are insignificant in the demersal fisheries and options to improve selectivity have been exhausted are not supported with quantitative evidence. Intuitively, achieving additional selectivity improvements would be difficult to achieve in such fisheries and the costs for sorting would be high given the nature of the species involved.
Exemption	Main Findings of EWG 20-04
Ling in the demersal fishery for hake with longlines in ICES subarea 4 A maximum of 3% in 2021- 2023 of the total annual catches of ling caught with demersal vessels using set longlines. (See Annex 6.4.11 for justification)	**1. Exemption status** Existing temporary exemption granted until the end of 2020 (Article 10-point n of Regulation (EU) No 2019/2238). A similar exemption has been proposed by the NWW or area 6, given the fishery operates in both areas. **2. Definition of the fishery** No new information has been provided from 2019 other than the number of vessels involved in the fishery has been updated (i.e. 14 vessels compared to 10 in 2018). The estimated *de minimis* volume based on the catch data remains at 5 tonnes. **3. Basis for the exemption** The justification is unchanged from 2019 and based on longlines being highly selective gears. The supporting Annex indicates that to increase selectivity further is not possible without incurring high economic costs. The exemption is to cover small residual unwanted catches. No specific studies have been provided. **4. EWG 20-04 Observations** No additional documentation has been provided to support the continuation of this exemption, other than updated information on the number of vessels involved in the fishery. Therefore, the EWG re-iterates the observations from 2019. The arguments regarding difficulties in improving selectivity are credible given the nature of the fisheries and the *de minimis* volume is estimated as small compared to overall ling catches. 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 not been provided. No attempt has been made to quantify the potential scale of losses that would be incurred if the *de minimis* exemption was not granted. The supporting information re-affirms that 42% of ling classified as unwanted catches are below mcrs. It is not clear the reason for the other 58% previously discarded, which since 2019 must now be landed.
Exemption	Main Findings of EWG 20-04
Mackerel, horse mackerel, herring and whiting in the pelagic fishery carried out by pelagic trawlers up to 25 meters A maximum of 1% in	**1. Exemption status** Existing temporary exemption granted until the end of 2020 (Article 3-point a of Regulation (EU) No 1395/2014). This exemption was originally granted under the North Sea pelagic discards plan. A similar exemption has been proposed by the NWW for area 7d, given the fishery operates in both areas.

the period 2021-2023 of the total catches of mackerel, horse mackerel, herring and whiting in the specified fishery. (See Annex 7.3.1.2 for justification)	**2. Definition of the fishery** Annex 7.3.1.2 provides information on the French pelagic fishery. Additionally, the separate JR for the pelagic fisheries has a separate annex – Annex A – which largely contains the same information as 7.3.1.2. The relevance of the two Annexes, which are essentially the same, is unclear. Annex 7.3.1.2 provides a description of the vessels involved, the catch composition and the area of operation for the French fleet. It indicates 106 vessels operate in the fishery. No information is presented on other fleets that may avail of this exemption. According to the catch data presented for herring, mackerel, horse mackerel and whiting, catches combined for the French artisanal pelagic trawlers are 8,200 tonnes. Whiting would appear to make up most of the unwanted catches in the fishery (more than 50%). Mackerel and horse mackerel are discarded sporadically. Little or no unwanted catches of herring, which is the main target species are reported. The estimated *de minimis* volume of 1% of the total catches is estimated at 82 tonnes. 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 2014 and based both on improvements on selectivity in these fisheries is difficult to achieve and on the grounds of disproportionate costs of handling unwanted catches. The justification is largely qualitative and references several French selectivity studies – REJEMCELEC, DISCARDLESS, SIMBAD, REDRESSE, EODE. These studies contain relevant information that indicates that increasing mesh size or adopting selective devices such as grids or square mesh panels will lead to significant reductions of marketable catches of the target species. These reductions are not quantified. Arguments are also presented indicating the costs for handling and storing unwanted catches on board the vessels operating in the fishery would be disproportionate and the *de minimis* exemption helps to reduce these costs. No specific studies or data is provided to quantify these costs. The information presented is generic. **4. EWG 20-04 Observations** No additional documentation has been provided to support the continuation of this exemption since the last evaluation of the pelagic discard plan JR's for the North Sea carried out by STECF in 2014. Updated information on the number of vessels involved in the fishery and catch data from French observed data collected under the OBSMER programme has been provided. This data indicates similar levels of unwanted catches of mackerel, herring, horse mackerel and whiting reported in 2014. The information provided indicates that the *de minimis* is primarily covering unwanted catches of whiting in the fishery. The unwanted catches of herring, mackerel and horse mackerel are reported to be minimal and it is not clear why these species are included in the exemption, if the issue is around unwanted catches of whiting. Given only limited new information has been provided, the EWG observations largely re-iterate the STECF conclusions of 2014. It is not possible to precisely identify which vessels or trips would be subject to a *de minimis* exemption from the information given in the JR or whether it is intended that the exemption would apply to specific

	fishing operations within a given fishing trip. The justification assumes that the unwanted catches are insignificant in the pelagic fisheries and options to improve selectivity have been exhausted. There is no quantitative evidence to support these assertions although several French selectivity projects are referenced, which contain limited information on the specific species covered by the exemption. Intuitively, 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 but this cannot be fully assessed from the information supplied. The *de minimis* volume is estimated at 82 tonnes based on 2018 catch data. This volume of 82 tonnes is spread across 106 vessels operating in the fishery. The relatively high number of vessels compared to the low volume of *de minimis* brings into question of monitoring the exemption.
Fishery	Main Findings of EWG 20-04
Blue-whiting for industrial vessels using pelagic trawls in ICES subarea 4 A maximum of 5% of the total annual catches of blue whiting caught in these fisheries. (See Annexes 7.3.2.1 & 7.4.1 for justification)	**1. Exemption status** New request for an exemption. Similar exemptions are included under the NWW and SWW discard plans. **2. Definition of fisheries** A reasonably detailed description of the surimi factory vessel that operates in the North Sea, NWW and SWW to which this request applies. It is understood other vessels with blue whiting unwanted catches are not covered by this requested exemption. Annex 7.3.2.1 provides information on the French pelagic fishery. Annex 7.4.1 is the same document. Catch information is not provided, an average of 1% discard is presented for the European vessels from STECF values 2013-2016, but this value does not relate to the fishery involved for the exemption request. The *de minimis* request represents 5% to 7% of the targeted blue-whiting catch. No estimate of the volume this equates to is presented. **3. Basis for the exemption** The justification for this exemption is that due to food security reasons, damaged blue whiting cannot be processed on board and must be discarded. Additionally, undersize or damaged blue whiting cannot be processed properly by the filleting machines. The cost of landing and handling damaged blue whiting fish or fish too small is estimated to be uneconomically disproportionate. The supporting information is purely qualitative. It provides estimations of the additional handling cost is presented based on 5% to 7% of small or damaged blue whiting. **4. EWG 20-04 observations** Some discrepancies between the figures in the discard table (from 0,06%in 2013 to 2% in 2016) and the exemption request (5 and 6 %) make it difficult to evaluate the request. Data on the level of unwanted catches is presented in a misleading way (Table X. Discards compared to the catches of blue whiting by European vessel, in percentage). There does not appear to be any relationship between the level of *de*

	minimis requested and the levels of unwanted catch (reported to be 0.1% in the table referred to above). The actual levels of resulting *de minimis* is many times greater than the reported level of unwanted catch. Additional information on blue whiting discards in French pelagic trawler (OTM/PTM) fleet bellow 25 m targeting mackerel and herring in ICES division 4bc is presented. In Annex A of the JR. However, these elements are not relevant to this exemption request. No documentation is provided to support the assertion that selectivity is difficult to achieve on board the factory vessel covered by the requested exemption. Similarly, there is limited information to demonstrate that the costs of handling unwanted catches are disproportionate. There is no quantitative evidence to support the assertion that options to improve selectivity have been exhausted. even though, intuitively, achieving additional selectivity improvements would be difficult given the technical and sanitary specificities of the factory trawler involved.
Fishery	Main Findings of EWG 20-04
Herring for vessels using bottom trawl and seine (OTB, OTT, PTB, TBB, SSC, SPR, SDN, SX, SV) with mesh size of 80-99mm to catch herring in ICES subarea 4 A maximum of 6% in 2021 to 2023 and 5% from 2023, of the total annual catches of herring caught in the specified fisheries. (See Annex 6.4.2 for justification)	**1. Exemption status** New request for an exemption. **2. Definition of fisheries** Partial information on the fleets and fisheries has been supplied in the JR. A total of 260 vessels using bottom trawl and seine (OTB, OTT, PTB, TBB, SSC, SPR, SDN, SX, SV) for demersal fish in ICES subarea 4. Catch information is provided, based on STECF estimation for 2013-2016, vessels are catching 460 tonnes herring for an estimated volume of 459 tonnes of discards. The source of this data is not clear, but it is assumed to originate from the FDI database. More detailed information is supplied in the relevant Annex (6.4.2) for the French fisheries only. The supporting information provides an overview of the fisheries to which the exemption is to apply which identifies a fleet of 108 vessel bellow 18 meters and 51 vessels over 18 meters that operate in the East and South of the North Sea. A *de minimis* request of 6% of the total catch for 2021-2023 and 5% from 2023, represents an estimated maximum volume of 33.5 tonnes. **3. Basis for the exemption** The justification for the exemption is that improvements in selectivity, already to tested in the North Sea, to avoid the unwanted catches of the fleet will be hard to achieve without economic impacts on the revenue of the boats concerned. The supporting annex provided by France refers to several historic selectivity studies – SELECMER, SELECCAB and SELECFISH - that were provided as justification in previous JRs for other species. Additionally, economic analysis is provided based on EODE project results (Balazuc et al. 2016). It shows the increase of handling time and the cost of storing unwanted herring catches on board French demersal trawlers operating in the North Sea. However, the *de minimis* volume covers only a small proportion of the total unwanted catches reported for the fishery. Therefore, the costs for handling **4. EWG 20-04 observations**

	The supporting information concludes that selectivity improvement by regulatory measures to avoid the catches of herring will be hard to achieve without economic impacts on the revenue of the boats concerned. The information provided indicates that the costs of landing unwanted catches of herring are significant and would require additional labour on board. However, given the *de minimis* volume would cover only a small part of the overall unwanted catches, the costs for handling the residual unwanted catches not discarded under the exemption would remain regardless of whether the exception is in place or not. There is no indication of any measures to be taken to reduce these residual unwanted catches. The supporting information also provides a review of selectivity trial projects carried out since 2008. The results presented while designed for various species show reductions of unwanted catches including herring (up to 39%) but also corresponding losses of marketable catch associated with most of the gear modifications tested. Because of these losses, there seems a marked reluctance to use any of the gear options tested.

5.2.North Sea – Proposals for high survivability exemptions

A summary of the proposed high survivability exemptions is given in Table 5.2.1.

Table 5.2.1. Summary of high survivability submitted as part of the North Sea Joint Recommendations

High Survivability	
Fishery	Main Findings of EWG 20-04
Plaice below the minimum conservation reference size caught with 80-119 mm beam trawl gears (BT2) in ICES subarea 4 (beam trawl – Article 7 of Regulation (EU) No 2019/2238)	**1. Exemption status** 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. The existing exemption applies to beam trawlers equipped with the flip-up rope or benthos release panel (BRP) and with an engine power of more than 221 kW; or (b) by the vessels implementing the roadmap for Fully Documented Fisheries (FDF). 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. **2. Survival evidence** While several ongoing relevant research projects were described in last years' submission and again this year, no new scientific evidence on plaice discard survival is submitted. A new source of evidence was identified independently (Uhlmann et al; submitted for publication), which included some previously submitted data and new data. The study reported that plaice discard survival was between 4-59% for Belgian beam trawlers; the mean discard survival rate across all sampled trips was 21%. This was based on directly observed discard survival (10 trips) and inferred survival estimates based on vitality data (6 most recent trips). The highest survival was observed from coastal vessels during winter trips when seawater temperatures were lowest. Most data for the study were derived from ICES divisions 7d and 4b, with some trips from 4c and 7e and 1 trip in 7hg. The study was assessed to be scientifically robust, provided representative estimates of the fisheries investigated and was consistent with ICES guidance. The supporting documents describe substantial ongoing scientific projects, but no results are presented. A focus of these projects is to develop more selective beam trawl designs. Preliminary development has started on gear selectivity modifications aimed at reducing unwanted catches and increasing survival (brush footrope, selection and escape panel, wing rakes, rotating brush, kiwi cod end). Full trials of these gears and their influence on discard survival are planned for 2020-21. To meet the requirements of the FDF condition of the exemption, six vessels from the Netherlands have been equipped with electronic monitoring (EM) technology. The focus so far has been on securing participation from vessels, technology installations, developing protocols for skippers and scientists to generate data and providing training. The aim is to use EM to estimate catch weight and composition as well as discard weight and composition. Results were anticipated in April 2020 but were not provided. In Belgium, the work has been on developing species identification software under laboratory conditions, to analyse video footage from EM systems.

	There is no mention of pulse trawlers in the main JR document. Given that numbers of pulse trawlers are set to reduce, it is assumed that the selectivity and survival work is being conducted with conventional beam trawlers, but clarification is needed on this. For pulse trawlers, the discard survival estimates previously assessed by STECF were 14% (95%CI 11-18%). **3. Fishery context** An overview of fisheries provided vessels numbers, catches and discard estimates, separately for Belgium and the Netherlands. Catch data shows a reported discard rate of 50% for 2017-2018 for Belgium and 64% discard rate for the Dutch fleet. The Dutch fishery is by far the largest (>90% of plaice catches). **4. Survival and fishery compatibility** The estimated discard survival estimates described here are variable between trips. The trips varied in time and area, and therefore in environmental conditions, by vessel, gear characteristics and catch composition. It is considered the data were sampled from a range of vessels that is representative of the relevant fleet. **5. Additional evidence** Substantial research projects are ongoing in Belgium and the Netherlands which have the potential to meet the requirements of the roadmap as described in 2019/2238; the main objectives are to increase survivability, as assessed by STECF; and provide annual reports on the progress. To evaluate the outputs from the roadmap, future submissions should include scientific evidence of the changes in discard survival that have been achieved in a clearer manner. Delegated Regulation 2019/2238 also refers to a roadmap for the Fully Documented Fisheries. Further clarity on the objectives for this are needed before an evaluation can be provided. EWG 20-04 note that there is currently no timetable for the completion of the roadmap.
Skates and rays caught by all fishing gears in the North Sea in ICES division 3a and ICES subarea 4 (Article 9 of Regulation (EU) No 2019/2238)	All except cuckoo ray **1. Exemption status** Additional scientific information supporting existing exemption for the years 2020 and 2021 / extension of existing exemption to the years 2021-2023 (delegated act concerning the discard plan in the North Sea) / roadmap and report on the progress made to the survivability programs **2. Survival evidence** Three new studies were referenced (see below for cuckoo ray). Discard survival rates were not directly estimated for starry ray in the Dutch otter trawl and flyshoot fisheries (Overzee et al., 2019), but extrapolated based on a literature review for other species / fisheries (40% for starry ray in the otter trawl based on thornback ray in the pulse trawl, and 80% for starry ray in the fly shoot fishery based on plaice in the Danish seine). These estimates are considered indicative only due to the method applied. Survival rate in the Dutch pulse trawl (80mm) fishery (4c) of 53% (95%CI 40-65%) for thornback ray were reported (Schram and Molenaar, 2018). In addition, two trips sampled for spotted ray gave survival of 21% and 67%, respectively. The ICES critical review was applied. There was a limited number of observations, but the methods were considered robust for first indications of survival estimates. For thornback ray, some evidence was found for an effect of seafloor on discards survival probability, with the highest survival for muddy seafloors and the lowest survival for stony

	seafloor (Schram and Molenaar, 2019). Immediate and delayed mortality was reported for thornback ray, blonde ray, spotted ray and undulate ray after capture by beam trawl (Belgium, 80mm), otter trawl (Belgium and France, 80mm), gillnets (UK, 100mm) and trammel nets (France, 90mm) in the English Channel (7d) and North Sea (4c) (Van Bogaert et al., 2019). The ICES critical review was applied, and the survival estimates were considered robust (combination of on-board vitality assessments with captivity observations for up to 21 days, trip included as random effect that can capture an observer effect).When discarded by beam trawlers, total survival estimates were 54%, 67%, 27% and 58% for thornback, blonde, spotted and undulate rays, respectively, based on limited sample size (20<n<27). When discarded by otter trawlers, total (immediate and weighed delayed) survival estimates were 72% and 86% for thornback and blonde rays, respectively. Sample sizes for spotted rays and undulate rays caught by otter trawlers were too low (n<5) to produce reliable estimates. When discarded by trammel netters, total survival estimates were 99% for thornback rays. Sample sizes for blonde, spotted and undulate rays caught by trammel netters were too low (n<5) to produce reliable estimates. The thornback (n=190) and spotted (n=3) rays caught by gillnetters were not monitored onshore and hence no empirical discard survival estimates are available, but 54% were scored as "excellent" (vitality score A) and 33% as "good" (vitality score B). Immediate mortality for thornback rays caught by the gillnetters was 96%. For all of the four species tested, immediate and delayed discard survival were affected by injury and reflex scores, fish length (larger skates have a higher probability of immediate survival), sorting time and the amount of sand and stones in the catch (as categorical weight range). **3. Fishery context** The starry ray population size in the North Sea was estimated as total stock weight for 1980-2017 (Overzee et al., 2019). In the Dutch bottom-trawl and seine fishery, discard rate for starry ray is 100% as catch is almost exclusively discarded. Discard quantity for starry ray in the Dutch fleet is given in kg/day and kg/kg plaice landed for 7 métiers in 2009-2017. There is no information on number of vessels (Overzee et al., 2019). The Belgian fleet is described, including number of vessels in 2015 (van Bogaert and Keirsebelik, 2019), but there is only information on discard rates for Starry and Cuckoo ray. Information on the Swedish fishery for all skates and rays present in 3a was provided in annex 6.2.2c and evaluated in EWG 19-08. It is unclear whether the French, German and Danish fleets are concerned. There remains a gap in the evidence provided on relevant catches and discards per species and métier for all member states to provide context for this exemption. **4. Survival and fishery compatibility** Regarding starry ray in the Dutch otter trawl and flyshoot fishery, even though the proposed rates were adjusted for the commercial conditions of the fisheries of interest, i.e., taking into account sorting time and air exposure, the survival evidence cannot be considered a representative estimate. There is little evidence documenting in which respects pulse trawling could be compared to otter trawling with respect to mode of capture and therefore potential effects on discard survival. One may agree that fish caught by Scottish or Danish seining may show similar and relatively high survival, but comparison across families, i.e., flatfish and rays, is difficult to support given species-specific sensitivities and tolerances. For thornback ray, blonde ray, spotted ray and undulate ray, survival evidence is deemed relevant for the pulse, beam and otter trawls (80mm)

	and trammel nets (90mm) in 4c. It is difficult to assess applicability to the other gears/mesh sizes and areas without additional information on the fisheries. **5. Additional evidence** The ongoing projects demonstrate the significant effort in addressing data gaps to meet the objectives of the roadmap. However, all relevant reports should be appended as annexes, and not just referenced in tables. A summary table with all studies and fisheries such as annex 6.2.2a would be helpful for further reporting. Reporting against the agreed roadmap should be provided detailing progress against the three main tasks: i) quantifying catches and discards per species and métier; ii) generating discard survival evidence; and iii) stakeholder led adoption of codes of best practice to maximize discard survival. When published, the forthcoming outputs of the ICES Workshop on incorporating discards into the assessments and advice of elasmobranch stocks (WKSHARK5) will provide important information for task (ii). **Cuckoo ray** **1. Exemption status** In discard plan 2018/2035 additional evidence was requested on the discard survival of cuckoo ray. However, this was not included in 2019/2238. **2. Survival evidence** One new study (Van Bogaert and Keirsebelik, 2019) was referenced, but it did not provide a discard survival estimate. **3. Fishery context** Information on fishery for the Belgium fleet was given in Van Bogaert and Keirsebelik (2019, new), and for the Swedish fleet (Börjesson et al., 2019, evaluated in EWG 19-08). Cuckoo rays landings and discards weight as recorded by at-sea observers on-board commercial Belgian fishing vessels are given for the years 2014-2018. **4. Survival and fishery compatibility** Cuckoo ray is rarely caught in the North Sea by the Belgian and Swedish fisheries. No additional information was provided for the other fleets to evaluate the extend of the exemption. There is currently one published study in area 7e (Catchpole et al., 2017), but it is difficult to assess applicability to the other area/gear combinations without additional information on the fisheries. **5. Additional evidence** See above.
Plaice when targeting flatfish or round fish (Bottom trawls with a mesh size of at least 120mm) in ICES division 3a and ICES subarea 4 (Article 6(1) point c) and Article 6(4) of Regulation (EU)	**1. Exemption status** This exemption was granted for 2020 only on the condition that additional scientific information supporting the exemption is submitted not later than by 1 May 2020. The JR proposes to extend the exemption to 2021-2023. **2. Survival evidence** Six annexes with supporting information accompanied this request. None of these provided new discard survival estimates. Annex 6.3.2a is a paper by Noack et al. (in press) that reports on discard survival estimates of undersized plaice for otter trawls (90 mm) in 3a targeting plaice during summer. Estimated survival was 44%. The most important factor influencing plaice survival was air exposure time, with a reported drop in survival to 8% after 60 min. Sorting times are reported to be typically

No 2019/2238)	around 1 hour. Therefore, EWG 19-08 concluded that survival is expected to be lower than the reported 44% in the studied fishery, which was based on a sorting time of around 20 minutes. The same scientific information was previously assessed by EWG 19-08 (and PLEN 19-02), which considered that the method to generate survival estimates to be robust based on the ICES WKMEDS critical review methodology. Annex 6.3.2b is a paper by Savina et al. (2019) that reports on survival estimates of plaice in otter trawls (90 mm) in 3a targeting plaice or *Nephrops* during summer and winter separately. Also this report, in an earlier version, has been assessed by EWG 19-08 (and PLEN 19-02), which considered that the method to generate survival estimates to be robust. The study reported an estimated discard survival of 73% for plaice when targeting plaice and 40% when targeting Nephrops during winter. In summer, survival was lower (44%) when targeting plaice. The study did not assess plaice survival when targeting Nephrops during summer. The choice of estimating survival in 90 mm trawls instead of a trawl with a more typical mesh size (TR1) for targeting fish was to produce a worst-case scenario estimate according to the authors of the study. Related to this, Annex 6.3.2c is a short note from DTU on the applicability of the results presented in Annex 6.3.2a-and b, i.e. two studies on 90 mm trawls, on the mesh size range of 100-119 mm. The note suggests that the effect of catch composition is larger than the effect of mesh size based on these two studies and thus that avoidance of Nephrops in catches is more important for discard survival of plaice than mesh size. Annex 6.3.2d is a study by Karlsen et al. (2015) on the effect of catch composition (a mix of Nephrops and fish) on market quality of fish. The report concludes that a successful separation of fish from Nephrops in catches improves fish market quality. Annexes 6.3.2e and f are both reports that have previously been assessed by STECF (EWG 19-08 and PLEN 19-02) and reports on plaice discard survival in Baltic gill/trammel nets and the Danish seine fishery respectively. As discard survival rates between different gears and fisheries are not necessarily transferable these annexes where not considered to be directly related to the current request. **3. Fishery context** The fishery context is well described in the JR. The number of vessels and landings from the >120 mm fleet for 2017-2019 from all relevant countries are provided. Most countries also provided discard estimates for the same years. Reported discard rates for plaice are between 0.1-2%. **4. Survival and fishery compatibility** The two supporting studies with survival estimates (Annex 6.3.2a and b) were based on fish caught using a 90mm cod end mesh, compared to the requested exemption that applies to ≥ 120 mm trawls. EWG 19-08 noted that it is unlikely the survival rate when using a larger cod end mesh is lower than the reported rates of 44-75%. Apart from season, two other important factors influencing plaice survival, according to the underlying studies, was air exposure time and whether fish or Nephrops was targeted. Air exposure influenced a reported drop in survival to 8% after 60 min air exposure in the summer experiments. 60 minutes was in the 2019 JR also reported to be the average sorting time in the fishery when plaice is targeted. Therefore the 44% summer survival rate in the JR request (i.e. the average survival from the underlying scientific study) may not represent the survival rate in the fishery during summer as fleet sorting times can be longer than those observed in the survival study. As this request relates to

	the >120 mm fleet the effect of Nephrops in the catches is a minor issue as these fleets target fish and not Nephrops. **5. Additional evidence** Information about seasonal fishing patterns and sorting times for the fleet would be beneficial for a better assessment of this request.
Plaice caught with trawls with a mesh size of at least 90-99 mm equipped with Seltra panel targeting flatfish or roundfish in ICES division 3a, — plaice caught with trawls with a mesh size of at least 80-99 mm targeting flatfish or roundfish in ICES subarea 4 (Article 6(2) and Article 6(4) of Regulation (EU) No 2019/2238)	**1. Exemption status** This exemption was granted for 2020 only on the condition that additional scientific information supporting the exemption is submitted not later than by 1 May 2020. The JR proposes to extend the exemption to 2021-2023. **2. Survival evidence** Five annexes with supporting information accompanied this request. These five annexes are the same (6.3.2a-e) as for the previous request for the >120 mm trawls. None of these provided new estimates of discard survival. Annex 6.3.2a is a paper by Noack et al. (2020) that reports on discard survival estimates of undersized plaice for otter trawls (90 mm) in 3a targeting plaice during summer. Estimated survival was 44% (95% CI 37-52%). The most important factor influencing plaice survival was air exposure time, with a reported drop in survival to 8% after 60 min. The same scientific information was previously assessed by EWG 19-08 (and PLEN 19-02), which considered the method to generate survival estimates to be robust based on the ICES WKMEDS critical review methodology. Annex 6.3.2b is a paper by Savina et al. (2019) that reports on discard survival estimates for plaice in otter trawls (90 mm) targeting plaice and *Nephrops* in 3a during summer and winter separately. Also this report, in an earlier version, has been assessed by EWG 19-08 (and PLEN 19-02), which considered the method to generate survival estimates to be robust. The study reported an estimated discard survival of 73% (95% CI 63-83%) for plaice when targeting plaice and 40% (95 % CI 14-59%) when targeting Nephrops during winter. In summer, survival was lower (44%; 95% CI 34-61%) when targeting plaice. The study did not assess plaice survival when targeting Nephrops during summer. Related to this, Annex 6.3.2c is a short note from DTU Aqua on the applicability of the results presented in Annex 6.3.2a-and b, i.e. two studies on 90 mm trawls and other sources of evidence, on the mesh size range of 100-119 mm (i.e. more applicable for request 6.3.4 and 6.4.1). The note suggests that the effect of species in the catches is likely larger than the effect of mesh size based on Annex 6.3.2b and 6.3.2d, and thus that avoidance of Nephrops in catches is more important for survival of discarded plaice than mesh size. Annex 6.3.2d is a study by Karlsen et al. (2015) on the effect of catch composition (Nephrops and fish intermixture) on market quality of fish. The report concludes that a successful separation of fish from Nephrops in catches improves fish market quality. Annexes 6.3.2e and f are both reports that have previously been assessed by STECF (EWG 19-08 and PLEN 19-02) and are reports on plaice discard survival in gill/trammel nets and Danish seine respectively. As discard survival rates between different gears, areas and fisheries are not necessarily transferable these annexes were not considered to be directly related to the current request. Besides these supplemented studies, EWG 19-08 reviewed a study from area 4b on an otter trawl fishery targeting whiting using 90-99 mm (Catchpole et al. 2015). An estimated discard survival of 42% for plaice was given. However, as noted by the authors, the observation time was not

	sufficient, and a modelled survival probability of 19-20% was reported. **3. Fishery context** All relevant countries except France have provided individual fishery data. Annual plaice discard rates by member state are reported at 33-53% in 3a and 37-68% in area 4. The proposed exemption is limited to TR2-vessels targeting flatfish and roundfish and not vessels targeting other species like *Nephrops*. However, from the provided information EWG 20-04 note that also fleets targeting other species are included in the fishery data provided which means that not all of these vessels will be eligible for the exemption. It is noted that part of the fleet operates on the boundary between NWW and NS regions so there is utility in having consistency in these two regions. **4. Survival and fishery compatibility** The two supporting studies with survival estimates (Annex 6.3.2a and b) are based on fish caught using a 90mm cod end mesh, i.e. the same mesh size as the request. According to the underlying studies, apart from season, two other factors that were shown to influence plaice survival was air exposure time and whether fish or Nephrops was targeted. Air exposure influenced a reported drop in survival to 8% after 60 min air exposure in the summer experiments (Annex 6.3.2a). A large difference in the average sorting time depending on whether plaice of Nephrops is targeted (36 vs. 126 min) was reported (Annex 6.3.2b). A major target species for the 80-99 mm fleet in the northern North Sea and 3a is Nephrops. As this request relates to the part of the fleet that targets fish,F a definition of vessels targeting flatfish and roundfish would be needed to manage the implementation of this exemption. **5. Additional evidence** The request would benefit from a definition of how a directed fishery for flatfish and roundfish can be separated from directed fisheries for other important species in trawls using this mesh size range (e.g. Nephrops). This should consider the evidence indicating that more Nephrops in the catch reduces the survival of discarded plaice. Such a definition would facilitate the assessment of the likely effects of this exemption on the plaice stock and improve the possibility to communicating and enforcing the exemption .
Plaice caught with mesh size 100-119 mm in ICES division 3a and ICES subarea 4 (this is a new request: this concerns an extension of mesh sizes in Article 6(2) of Regulation (EU) No 2019/2238)	**1. Exemption status** This request is listed under the existing exemptions in the Scheveningen JR but is really a new request to fill the gap in mesh size range between 80-99 mm (6.3.3) and >120 mm (6.3.2), i.e. to also include 100-119 mm trawls. See also 6.4.1 where an identical text can be found. **2. Survival evidence** Five annexes with supporting information accompanied this request. These five annexes are the same (6.3.2a-e) as for the previous request for the 80-99 mm trawls (6.3.3). None of these provided new discard survival estimates. Annex 6.3.2a is a paper by Noack et al. (2020) that reports on discard survival estimates of undersized plaice for otter trawls (90 mm) in 3a targeting plaice during summer. Estimated survival was 44% (95% CI 34-61%). The most important factor influencing plaice survival was air exposure time, with a reported drop in survival to 8% after 60 min. Sorting times are reported to be typically around 1 hour. Therefore, EWG 19-08 concluded that survival is expected to be lower than the reported 44% in the studied fishery, which was based on a sorting time of around 20 minutes. The same scientific information was previously assessed by EWG 19-08 (and PLEN 19-02), which considered the method to generate survival estimates to be robust based on the ICES WKMEDS critical review

	methodology. Annex 6.3.2b is a paper by Savina et al. (2019) that reports on discard survival estimates for plaice in otter trawls (90 mm) in 3a targeting plaice or *Nephrops* during summer and winter separately. Also, this report, in an earlier version, has been assessed by EWG 19-08 (and PLEN 19-02), which considered the method to generate survival estimates to be robust. The study reported an estimated discard survival of 73% (95% CI 63-83%) for plaice when targeting plaice and 40% (95% CI 14-59%) when targeting Nephrops during winter. In summer, survival was lower (44%; 95% CI 34-64%) when targeting plaice. The study did not assess plaice survival when targeting Nephrops during summer. The choice of estimating survival in 90 mm trawls instead of a trawl with a more typical mesh size (TR1) for targeting fish was to produce a worst-case scenario estimate according to the authors of the study. Annex 6.3.2c is a short note from DTU on the applicability of the results presented in Annex 6.3.2a-and b, i.e. two studies on 90 mm trawls, on the mesh size range of 100-119 mm (i.e. this particular request). The note suggests that the effect of catch composition is larger than the effect of mesh size based on these two studies and thus that avoidance of Nephrops in catches is more important for discard survival of plaice than mesh size. Annex 6.3.2d is a study by Karlsen et al. (2015) on the effect of catch composition (Nephrops and fish intermixture) on market quality of fish. The report concludes that a successful separation of fish from Nephrops in catches improves fish market quality. Annexes 6.3.2e and f are both reports that have previously been assessed by STECF (EWG 19-08 and PLEN 19-02) and reports on plaice discard survival in Baltic gill/trammel nets and the Danish seine fishery respectively. As discard survival rates between different gears and fisheries are not necessarily transferable these annexes were not considered to be directly related to the current request. **3. Fishery context** No new information about the fleets, including landings, discards or number of vessels was provided in the JR. **4. Survival and fishery compatibility** The two supporting studies with survival estimates (Annex 6.3.2a and b) were based on fish caught using a 90mm cod end mesh, compared to the requested exemption that applies to 100-119 mm trawls. EWG 19-08 noted that it is unlikely the survival rate when using a larger cod end mesh is lower than the reported rates of 44-75%. Apart from season, two other important factors influencing plaice survival, according to the underlying studies, was air exposure time and whether fish or Nephrops was targeted. Air exposure influenced a reported drop in survival to 8% after 60 min air exposure in the summer experiments. 60 minutes was in the 2019 JR also reported to be the average sorting time in the Danish fishery when plaice is targeted. Therefore the 44% summer survival rate in the JR request (i.e. the average survival from the underlying scientific study) may not represent the survival rate in the fishery during summer as fleet sorting times can be longer than those observed in the survival study (if targeting other species than plaice). As this request relates to the 100-119 mm fleet, EWG 20-04 assess that the effect of Nephrops in the catches is probably a minor issue as these fleets primarily target fish and not Nephrops. However, the lack of any fishery information hampers the possibility to assess survival and fishery

	compatibility fully. **5. Additional evidence** Information about fleets and catches, including discards, for the fleets in all member states.
Turbot caught with beam trawls (TBB) with a cod-end equal to or larger than 80mm in ICES subarea 4 (Article 8(1) and 8(2) of Regulation (EU) No 2019/2238)	**1. Exemption status** This exemption was granted for 2020 only on the condition that additional scientific information supporting the exemption is submitted not later than by 1 May 2020. The JR proposes to extend the exemption to 2021-2023. In the first submission in 2018, no data on fisheries were provided and it was unclear if the exemption would apply to all trawl fisheries or just to beam trawlers and/or pulse trawlers. The 2019 submission included fisheries information, but no new discard survival estimates on beam trawls. **2. Survival evidence** No new discard survival evidence is provided. Previously submitted documents based on pulse-trawls reported a survival rate of 20-43%. **3. Fishery context** Catches, landings, discards and vessel numbers are now provided for all relevant EU countries (DE, BE, NL). The discard rates by country and year varied between 10-19% for 2017-2019. **4. Survival and fishery compatibility** It remains unclear whether the survival estimates provided from pulse trawling are relevant to this request, given that numbers of pulse trawlers are set to reduce, and likely to be replaced by beam trawlers. Based on the data provided, 2/3 of North Sea turbot landings are caught with beam trawls. In the BT2-fleet NL catches most (74%), followed by Belgium (9%), Germany (8%) and UK (8%). **5. Additional evidence** As repeated from last year's JR, the supporting information in Annex 6.3.5 mentions that research is committed by BE to estimate the survival of discarded turbot caught by beam trawlers in the North Sea in a project ('Survival Monitoring - Overleving Monitoren') that aims to improve survival estimates for both plaice and turbot in the beam trawl fishery during 2019-2021. Outputs from this work will enable a more robust evaluation of this proposed exemption.
Plaice caught with mesh size 100-119 mm in ICES division 3a and ICES subarea 4	**1. Exemption status** This is a new request but given its link with points 6.3.2. and 6.3.3, the exemption is explained and evaluated under point 6.3.4 (where it was introduced as an extension of 6.3.2 and 6.3.3.). The JR refers to request 6.3.4 and provides no additional information.
Additional scientific information for extending to 2021-2023 provisionally applicable exemptions granted in 2020: High survivability exemption for	**1.Exemption status** Request for additional information. There is an ongoing three-year exemption for *Nephrops* which requires additional scientific information to be submitted yearly for otter trawls. The exemption proposal refers to two different otter trawl fisheries, one targets *Nephrops* and the other Northern prawns. While the survival evidence is provided for the *Nephrops* fishery, fisheries context is only provided for the Northern prawn fishery. This is confusing and potentially also an artefact of Brexit. **2.Survival evidence**

Norway lobster caught with bottom trawls with a cod- end larger than 80mm or with a cod-end of at least 35 mm + species selective grid with bar spacing of maximum 19 mm in ICES divisions 2a, 3a and ICES subarea 4 (Article 3(1) point b) (1) and (b)(3) and Article 3(3) of Regulation (EU) No 2019/2238)	Some new evidence was provided for the Scottish East coast otter-trawl fishery in the Firth of Forth by having Scottish Fisheries Federation observers score trawled Norway lobsters for vitality and record operational and environmental fishing characteristics as part of routine at-sea observations. Annex 6.3.1: This new evidence included a comparison of on-board discarding practices and operational/environmental fishing characteristics of other TR2 twin-rig otter trawlers to evaluate whether the mode of operation of the single vessel from the survival study (Fox and Albalat, 2018; reviewed and evaluated previously following the ICES critical review criteria) is representative of the wider fleet. It was concluded that fishing and discarding practices differed, specifically, the prevalence of physical damage, and that survival of discarded *Nephrops* therefore may deviate to an unknown extent compared to the original study. Indeed, classifying injury and distinguishing between healed and unhealed injury may pose a challenge, especially if different observers are involved. The previously provided survival estimates (Fox and Albalat, 2018) remained the same: for the Scottish East Coast fishery (Firth of Forth), it was estimated that 74.5% (71.8-77.1%; 95% confidence interval) of Norway lobster survived being discarded in the summer. For the Scottish West Coast fishery (Minches), discard survival of Norway lobster was estimated to be 45.7% (43.4-48.3%; CI) in summer, 56.3% (53.5-59.4%) in winter (12 hauls for each season) and 52.7% (50.9-54.6%) across both seasons, based on data from one vessel using both TR2 and TR1 gear in equal replication throughout the trial (6 gear deployments each with 80 mm and 100 mm gear, in each season, respectively). The EWG were aware of additional published information that was not provided in the JR. A recently published analysis of *Nephrops* discard survival data from three separate studies from three different fisheries in the North Sea region highlighted the relevance of scoring the extent of injury and understanding their causality as to which (operational) factors contribute to its occurrence (Fox et al. 2020). These studies had been submitted as separate technical reports previously but a new combined analysis indicated that warmer water temperatures were attributed to a >10-fold increase in immediate mortality, emphasizing the relevance to consider fishing activity per season (and area). **3. Fishery context** Given the scope of the exemption proposal, additional information (summary of FDI catches 2016-2018) of the Swedish fishery for Northern prawn (Pandalus sp) was provided (as in the previous year). This indicated that Norway lobster is a low volume bycatch species. However, this provided fishery context (Annex 6.3.1b X) is inadequate given the potential scale of the fisheries involved and refers to a fishery for Northern prawn in which Nephrops are a bycatch species. Given that the majority of Nephrops are being landed by UK vessels, for which no further description was provided, and seeing that the UK withdrew from active participation in the regional groups to contribute to a coherent drafting of the Joint Recommendations, this proposal is difficult to evaluate. **4. Survival and fishery compatibility** There is no context provided to foster an understanding of which fisheries of which member state this exemption would apply to, other than providing additional information about fishery compatibility for the western North Sea otter-trawl fishery for *Nephrops* with 80 mm cod ends. Based on this work, different fishing practices within this fleet contribute to different injury rates which indicate potential for different survival rates also.

	5. Additional evidence An overview is needed per Member State fishery detailing fishing effort, landings, discards and operational characteristics with respect to the fisheries that were studied to quantify discard survival. The EWG re-iterates the concerns raised by PLEN 18-02 and 19-02 regarding the assumptions made on the survival estimates observed in the western North Sea and whether the estimates are representative for the whole of the North Sea, no additional evidence has been provided to address this. Furthermore, in line with PLEN 18-02 and 19-02, the request to extend the exemption to the fishery for Northern prawn, without an overview of operational and environmental characteristics of that particular fishery, or discard survival evidence from that fishery, there is no justification for this component of the proposed exemption.

References

Catchpole, T., Randall, P., Forster, R., Smith, S., Ribeiro Santos, A., Armstrong, F., Hetherington, S., *et al.* 2015. Estimating the discard survival rates of selected commercial fish species (plaice - *Pleuronectes platessa*) in four English fisheries (MF1234), Cefas report, Lowestoft, UK. pp108.

Catchpole, T., Wright, S., Bendall, V., Hetherington, S., Randall, P., Ross, E., Santos, A. R., et al. 2017. Ray Discard Survival: Enhancing evidence of the discard survival of ray species. CEFAS Report: 1–70.

Fox, C.J., Albalat, A., Valentinsson, D., Nilsson, H.C., Armstrong, F., Randall, P., Catchpole, T. (2020). Survival rates for Nephrops norvegicus discarded from Northern European trawl fisheries. ICES Journal of Marine Science. doi.org/10.1093/icesjms/fsaa037

H.M.J. van Overzee, J.J. Poos, J. Batsleer & P. Molenaar, 2019. Starry ray in the ottertrawl and flyshoot fishery. Wageningen, Wageningen Marine Research (University & Research centre), Wageningen Marine Research report. 38 pp.

Karlsen, J.D., L.A. Krag, C.M. Albertsen, R.P. Frandsen. From fishing to fish processing: separation of fish from crustaceans in the Norway lobster-directed multispecies trawl fishery improves seafood quality. PloS One 10 (2015) 1–20, https://doi.org/10.1371/journal.pone.0140864.

Noack, J.D., E. Savina, J.D. Karlsen. Survival of undersized plaice (*Pleuronectes platessa*) discarded in the bottom otter trawl and Danish seine mixed fisheries in Skagerrak. Mar. Pol. (2020). https://doi.org/10.1016/j.marpol.2020.103852

Schram, E., Molenaar, P., 2018. Discards survival probabilities of flatfish and rays in North Sea pulse-trawl fisheries. Wageningen, Wageningen Marine Research (University & Research centre), Wageningen Marine Research report C037/18. 39 pp.

Schram, E., Goedhart, P.W., Molenaar, P., 2019. Effects of abiotic variables on the survival of discarded bycatches in North Sea pulse-trawl fisheries. Wageningen, Wageningen Marine Research (University & Research centre), Wageningen Marine Research report C040/19. 33 pp.

Van Bogaert, N., Keirsebelik, H. 2019. Desktop study Cuckoo ray (Leucoraja naevus). Confidential internal nota requested by ir. Marc Welvaert. ILVO, Ostend, Belgium. 29 pp.

Van Bogaert, N., Ampe, B., Uhlmann, S., Torreele, E. 2020. Discard survival estimates of commercially caught skates of the North Sea and English Channel. INTERREG 2-Seas SUMARiS Output 5.1., 42 pp.

5.3.North Sea – Proposals for technical measures

Regulation (EU) 2019/1241 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.

Currently, regional technical measures for the North Sea are spread across Delegated Regulations (EU) No 2019/2238, Regulation (EU) No 1395/2014 and Regulation (EU) No 2020/123. All these Regulations expire at the end on 2020. Therefore, there is a requirement to enact a new delegated act, to be adopted on basis of Regulation (EU) No 2019/1241 and include the existing North Sea technical measures, as well as any new measures proposed by the Scheveningen Group. Based on this process, the Scheveningen Group has submitted a separate Joint Recommendation detailing North Sea technical measures. The main elements of these JR's and which of these have been assessed by EWG 20-04 are summarised in table 5.3.1.

Table 5.3.1 Main elements of the Joint Recommendations submitted for the North Sea

Elements	***Status with relevant Article in current discard plan***	***Assessment by EWG 20-04 with relevant Annexes in JR***
Specific technical measures in the Skagerrak	Existing Article 11 and relevant definitions of article 2 of Regulation (EU) No 2019/2238	Not Assessed (Supporting information included in JR and Annex 3.1)
The use of the SepNep	Existing Articles 2(4), 10(i) & 11	Assessed based on information supplied in Annexes 3.1, 3,2 and 3.2a-f
Protection of berried European lobster in ICES divisions 3a, 4a and 4b	New	Assessed based on information supplied in Annexes 3.3.1a – 3.3.1j
Amending the MCRS for European lobster in the Swedish exclusive economic zone in ICES division 3a;	New	Assessed based on information supplied in Annexes 3.3.1a – 3.3.1j
Seasonal closure for commercial and recreational fishery on European lobster In the Swedish exclusive economic zone in ICES division 3a;	New	Assessed based on information supplied in Annexes 3.3.1a – 3.3.1j
Prohibition to fish lobster with other gear than lobster pots in the Swedish exclusive economic zone in ICES division 3a	New	Assessed based on information supplied in the JR
Technical measures for sprat fisheries in an area along the	Existing Article 4a of Regulation (EU)	Assessed based on information supplied in the

Danish North Sea coast	N° 1395/2014	JR and Annex 4.1
Minimum conservation reference size for seabass caught in recreational fisheries in the ICES division 3a and ICES subarea 4	Existing Article 18 and Article 15(2) in combination with Article 2(2) of Regulation (EU) No 2019/1241	Assessed based on information supplied in the JR and Annex 5.1

A summary of the fishery information applicable to the proposals for technical measures is given in Table 5.3.2.

Table 5.3.2 Summary of *de minimis* exemptions submitted as part of the North Sea Joint Recommendations (restricted to new or revised exemptions)

Technical Measures	Main Findings of EWG 20-04
Specific technical measures in the Skagerrak (See Annex 3.1 for supporting information)	**1. Exemption status** Existing technical measures that will expire at the end of 2020. (Article 11 and relevant definitions of article 2 of Regulation (EU) No 2019/2238). Additional supporting information was provided in Annex 3.1 to the JR. **2. EWG 20-04 Observations** The specific technical measures in the Skagerrak have been agreed between the EU and Norway and are already included in Annex V, to Regulation (EU) No 2019/1241 (technical measures framework). The main elements have been previously assessed at different occasions by STECF (STECF 15-10 and PLEN 15-02) and their use is linked to existing *de minimis* and high survivability exemptions in the Skagerrak. Other elements are included in the current discard plan. No new assessment has been carried out as no new information or changes to these measures are included under the joint recommendation. The question relating to which Regulation the detail and definitions should be contained is a matter for the Commission to agree with the Scheveningen Group.
The use of the Sep Nep (See Annexes 3.2 and 3.2a-f for supporting information)	**1. Exemption Status** Existing technical measures that will expire at the end of 2020. (Articles 2(4), 10(i) & 11f Regulation (EU) No 2019/2238). Additional supporting information was provided in Annexes 3.2 and 3.2a-f to the JR. **2. EWG 20-04 Observations** STECF assessed the SEPNEP gear in 2017 (STECF EWG 17-08 and STECF PLEN 17-02). STECF concluded that detailed information was provided to support the use of the SEPNEP gear to reduce plaice discards in *Nephrops* fisheries. The case was well presented, and the information provided credible arguments for the use of the gear. It showed plaice discards can be reduced by up to 80% and reduced non-marketable *Nephrops* catches by 53-56%. These conclusions remain valid and in fact further supporting evidence of the effectiveness's of the SEPNEP has been provided with the JR. Based on the information provided the SepNep selectivity device complies with the provisions of Regulation 2019/1241 as an equivalent selectivity device in the context of the technical provisions set out for *Nephrops* directed fisheries (120mm cod end or sorting grid with a maximum bar spacing of 35mm) in part B of Annex V of Regulation (EC) 2019/1241. This is on the provision that the SEPNEP is used

	according to the specifications detailed in the supporting documentation. In this regard, the detailed description of the SEPNEP gear provided would be useful to include as an Annex to the delegated act.
Protection of berried European lobster in ICES divisions 3a, 4a and 4b (See Annexes 3.3.1 a to 3.3.1 j for supporting information)	**1. Exemption status** This is a request for a new technical measure. Supporting information is provided in Annexes 3.3.1 a to 3.3.1 j. **2. EWG 20-04 Observations** A large amount of information has been provided to support the introduction of a prohibition of landing berried lobster. Noting that some of the Annexes are not directly relevant to the request and two are in Swedish, there is compelling evidence in the other documents supplied to support the introduction of this measure. Long-term benefits to fishermen have been shown from increased landings of lobster due to stock recovery because of similar measures taken in other countries (e.g. Norway, Ireland, Canada, US). Modelling results from the UK suggest for a generic lobster stock indicate that landings of lobster would be 3-43% higher fifteen years after implementing a ban on landing egg bearing lobsters than in the baseline. The range in estimated benefits reflects baseline fishing patterns, with stocks more highly fished yielding greater benefits. Higher landings would have further benefits for others in the supply chain, such as processors. In some other countries (e.g. Ireland), the ban on landing berried lobster is supported with v-notching of berried lobsters prior to returning to the sea.
Amending the MCRS for European lobster in the Swedish exclusive economic zone in ICES division 3a. (See Annexes 3.3.1a to 3.3.1j for supporting information)	**1. Exemption status** This is a request for a new technical measure. Supporting information is included in the JR. **2. EWG 20-04 Observations** No specific supporting information is provided to support this request. Some relevant information is contained in Annexes 3.3.1a to 3.3.1j. Given this represents an increase in mcrs it has obvious benefits to stock conservation in combination with the other measures proposed, albeit to a relatively small area. Studies have shown that increasing the mcrs will mean the stock is exploited at a lower intensity, rebuilding is expected over time provided total fishing effort does not increase during the same period (Sundelof et al 2014). It is not clear from the JR why this (and the two measures listed below) is only being applied within the Swedish EEZ unlike the measure above that would apply in the whole of subdivisions 3a, 4a and 4b. Extending the mcrs to a wider area would increase the benefit to lobster stocks over the wider North Sea and Skagerrak area. It would also avoid having different mcrs applying in different adjacent management areas and create a level playing field for competing fishermen that sell into the same market under different rules.
Seasonal closure for commercial and recreational fishery on European lobster In the Swedish exclusive economic zone in ICES division 3a.	**1. Exemption Status** This is a request for a new technical measure. Supporting information is included in the JR. **2. EWG 20-04 Observations** No specific supporting information is provided to support this request. Some relevant information is contained in Annexes 3.3.1a to 3.3.1j. Given it represents a reduction in fishing mortality albeit to a

(See Annexes 3.3.1a to 3.3.1j for supporting information)	relatively small area, it is likely to have positive benefits to lobster stocks in combination with the other measures proposed. According to the JR, from no take zones it is known that density of lobster increases rapidly following ban on fishing (Bergström et al. 2016 (Annex 3.3.1i), *Moland et al. 2013*a (Annex 3.3.1 d)). However, in the absence of any supporting documentation it is not possible to quantify the potential benefit of the proposed seasonal closure.
Prohibition to fish lobster with gears other than lobster pots in the Swedish exclusive economic zone in ICES division 3a (Supporting information provided in JR)	**1. Exemption Status** This is a request for a new technical measure. Supporting information is included in the JR. **2. EWG 20-04 Observations** No supporting information is provided to support this request although given it represents a reduction in fishing mortality albeit to a relatively small area, it is likely to have positive benefits to lobster stocks in combination with the other measures proposed. It is evident from other countries (e.g. Ireland, UK and US) that banning the use of gillnets for targeting crustacean (lobster and crawfish) has had positive impacts on stocks (Woolmer et al. 2013; Xu et al., 2012). However, in the absence of any supporting documentation it is not possible to quantify potential benefits of the proposed measures.
Derogation to allow fishing in an area closed to fishing with certain gears along the Danish North Sea coast. (See Annex 4.1 for supporting information)	**1. Exemption Status** Existing technical measures that will expire at the end of 2020. (Article 4a of Regulation (EU) N° 1395/2014). Additional supporting information was provided in Annex 4.1 to the JR. **2. EWG 20-04 Observations** This request represents the continuation of a derogation to the technical measures for sprat fisheries in an area along the Danish North Sea coast "the sprat box". It allows fishing in the "sprat box with: (a) towed gear with a mesh size of less than 32 mm; (b) purse seines; or (c) gillnets, entangling nets, trammel nets and drift nets with a mesh size of less than 30 mm, No additional supporting evidence has been provided for this request and it is based principally on the 2017 ICES advice which took from the results from an experimental fishery in 2014 and 2015. The data from this experimental fishery showed that the number of herring per kg of sprat did not differ significantly between samples taken inside and outside the sprat box, but the weight of herring per kg sprat did differ significantly, with a higher percentage of herring by weight taken outside the box. This is confirmed in the ICES advice. The ICES advice concludes that if the TAC is set in accordance with scientific advice, is fully enforced and is complied with, then this measure is sufficient to control the bycatch of herring in the sprat fishery. On this basis, if the derogation is extended, it would be advisable to monitor activity within the sprat box to confirm levels of mixing of sprat and herring remain at the levels referred to in the ICES advice with the relaxing of the sprat box. Additionally, Member States should ensure compliance with the TAC as highlighted by ICES and that fishing effort, based on current effort levels in the fishery, do not increase significantly when the area is open to fishing.

	EWG 20-04 notes the statement in the JR that, "*the suspension of the sprat box has no harmful impact on the ecosystem*". However, none of the evidence presented specifically supports this assertion.
Minimum conservation reference size for seabass caught in recreational fisheries in the ICES division 3a and ICES subarea 4	**1. Existing** This is an existing technical measure under Article 18 and Article 15(2) in combination with Article 2(2) of Regulation (EU) No 2019/1241. **2. EWG 20-04 Observations** Given recreational fisheries contribute to the overall fishing mortality on the sea bass stock in the North Sea, applying the mcrs of 42cm for commercial fisheries to recreational fisheries is a positive management measure. This will cement this measure in legislation and avoid having to renew it annually in the TAC and quota Regulation for 2020.

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) 2018/2034 and (EU) 2019/2239. In 2020, a further set of Joint Recommendations has been submitted by the Member States. The main elements of these JR's and which have been assessed by EWG 20-04 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 20-04 with relevant Annexes in JR***
De minimis			
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 7d	Demersal	Existing 2018/2034-Article 8a Existing 2019/2239-Article 8a	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	Existing 2018/2034-Article 8b Existing 2019/2239-Article 8a	Not Assessed
Common sole caught in gillnets and trammel nets in ICES divisions 7d, 7e,	Demersal	Existing 2018/2034-Article 8c	Not Assessed

7f and 7g		Existing 2019/2239-Article 8b	
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 2018/2034-Article 8d Existing 2019/2239-Article 8c	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 2019/2239-Article 8l	Not Assessed
Blue whiting caught in the industrial pelagic trawler fishery in ICES division 5b and subareas 6 and 7	Pelagic	Existing Article 3a Regulation (EU) 1393/2014	Not Assessed
Albacore tuna caught using midwater pair trawls in ICES subarea 7	Pelagic	Existing Article 3b Regulation (EU) 1393/2014	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 3c Regulation (EU) 1393/2014	Not assessed
Haddock caught with bottom trawls, seines and beam trawls with a mesh size equal to or greater than 80 mm in ICES divisions 7b-7c and 7e-7k	Demersal	Temporary until end of 2020 2019/2239 Article 8d	Re-assessed on basis of new information Annex 3 and 3bis
Horse mackerel caught using bottom trawls, seines and beam trawls in ICES subarea 6 and ICES divisions 7b-7k	Demersal	Temporary until end of 2020 2019/2239 Article 8e	Re-assessed on basis of new information Annex 4

Mackerel caught using bottom trawls, seines and beam trawls in ICES subarea 6 and ICES divisions 7b-7k	Demersal	Temporary until end of 2020 2019/2239 Article 8f	Re-assessed on basis of new information Annex 5
Common sole caught using beam trawls with mesh size of 80-119mm with a large mesh panel in ICES divisions 7a, 7j and 7k	Demersal	Temporal until end of 2020 2019/2239 Article 8g	Re-assessed on basis of new information Annex 9
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	Temporary until end of 2020 2019/2239 Article 8h	Re-assessed on basis of new information Annex 10, 10bis and 10.3
For boarfish caught using bottom trawls in ICES divisions 7b-c & 7f-k	Demersal	Temporary until end of 2020 2019/2239 Article 8i	Re-assessed on basis of new information Annex 6
Greater silver smelt caught using bottom trawls with a mesh size greater or equal to 100mm in ICES division Vb (EU waters) and subarea VI	Demersal	Temporary until end of 2020 2019/2239 Article 8j	Re-assessed on basis of new information Annex 7
Haddock below MCRS caught using bottom trawls with a mesh size up to 119mm in the West of Scotland *Nephrops* fishery in ICES division 6a	Demersal	Temporary until end of 2020 2019/2239 Article 8k	Re-assessed on basis of new information Annex 8
Ling below MCRS caught by vessels using set longlines in ICES subarea 6a	Demersal	New	Assessed Annex 11
High Survivability			
Nephrops caught using pots, traps or creels in ICES subareas 6 and 7;	Demersal	Existing Article 3(1a)	Not assessed
Nephrops caught with bottom trawls with a mesh size equal to or larger than 100mm in	Demersal	Existing Article 3(1b)	Not assessed

ICES subarea 7			
Nephrops 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
Nephrops 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 VIId	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
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 2 Regulation (EU) 1393/2014	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 2(6) Regulation (EU) 1393/2014	Not assessed
Skates and ray species caught by any gear in ICES subareas VI and VII	Demersal	Temporary for cuckoo ray until end of 2019 Article 5	Re-assessed on basis of new information Annexes A & B
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	Demersal	Temporary until end of 2019 Article 6(1c) & 1(d)	Re-assessed on basis of new information Annex C

power of not more than 221kW; or less than 24m in length overall in ICES subarea 7			
Common sole below MCRS caught with bottom trawls with mesh size 80-99mm in ICES division VIIe	Demersal	Extension of existing exemption Article 4	Assessed on basis of new and existing information Annex F
Plaice caught using bottom trawls in ICES divisions 7a and 7b to 7k but excluding 7d, 7e, 7f, 7g	Demersal	New	Assessed Annex D
Plaice caught using seines in ICES division VIId	Demersal	New	Assessed Annex E

6.1.NWW – Proposals for *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 20-04
Haddock caught with bottom trawls, seines and beam trawls with a mesh size equal to or greater than 80 mm in ICES divisions 7b-7c and 7e-7k; A maximum of 5% in 2021, of the total annual catches of haddock caught in the specified fisheries (See Annex 3 and 3b for justification)	**1. Exemption status** Existing temporary exemption granted until the end of 2020 (Article 8-point d of Regulation (EU) 2019/2239). **2. Definition of the fishery** The supporting information provides a relatively detailed information on the main fisheries concerned. Detailed information is provided for the Irish and French fleets, but no information is provided for Belgium beam trawl fisheries. A discard rate of 43% was observed in 2018 (5436 tonnes landings and 5436 tonnes discards -ICES).87% of the discards were reported by Otter trawls,11% by Beam trawls, 2% by Seines and less than 1% by gillnets and other gears. **3. Basis for the exemption** The justification for the exemption is based principally on selectivity being difficult to achieve. Information is provided on French and Irish selectivity trials. The information provided indicates that improvements in selectivity lead to substantial short-term reductions in unwanted catches (up to 40%) of small gadoids (haddock and whiting) and mackerel and horse mackerel but also associated loss of marketable catch in the order of 20-40% depending on gear type and selective gear used. An analysis providing comparative estimates of current revenue to break-even revenue (CR/BER) for the estimated catches from current (baseline) gears and the anticipated catches from selectivity trial gear

	configurations is included for the Irish fleets and fisheries involved. There are indications that this analysis is representative of other fleets operating in the area. **4. EWG 20-04 Observations** The supported information provided in 2019 on catches and discards has been updated with information from the STECF-FDI database (2013-2016). Additional results from selectivity trials from Ireland and France have been provided as well as an update of the economic analysis for Irish vessels. All the additional information provided this year (Annexes 3 and 3bis) is in line with the supporting information accompanying the 2019 JR. The information provided indicates that for all gear configurations, the CR/BER for the current (baseline) shows in the short-term that the operational costs would be greater than the estimated revenue (i.e. in the short-term, the fishery would be operating at a loss). While the CR/BER estimates are likely to be rather imprecise, it seems reasonable to assume that the magnitude of change in CR/BER indicates that improvements in selectivity by adopting any of the gear configurations tested would result in significant losses in revenue in the short-term. Even if improvements in selectivity are achieved by adopting the gear configurations tested, it is highly likely that unwanted catches of haddock (and other species including cod and whiting) will continue. Since haddock and cod are high-risk choke species in these areas, granting a *de minimis* exemption will provide a buffer against exceeding the haddock and cod TAC and hence slightly reduce the risk of an early fishery closure. It may also provide an incentive to attempt to develop additional alternative means to improve selectivity and reduce unwanted catches. In addition, specific technical measures operating with bottom trawls or seins in the Celtic Sea protection zone are to become mandatory from 1 June 2020. The selectivity information provided indicates that introduction of such gears is expected to reduce unwanted catches of haddock, but it is too early to evaluate whether that will be achieved. The EWG also notes that based on data held in the STECF-FDI database for the years (average 2013 – 2016), a 5% *de minimis* would have implied a permitted discard for haddock up to a maximum of 843 tonnes. Such an amount represents 7.8% of the 2020 TAC for haddock in ICES areas 7b-k, 8, 9 and 10; COPACE 34.1.1 (10 859 tonnes).
Exemption	Main Findings of EWG 20-04
Horse mackerel caught in demersal mixed fisheries, by vessels using bottom trawls, seines and beam trawls in ICES subarea 6 and ICES divisions 7b to 7k. A maximum of 6% in 2021 and 5% up to 2023 of the total	**1. Exemption status** Modification of existing temporary exemption granted until the end of 2020 (Article 8-point e of Regulation (EU) 2019/2239). **2. Definition of the fishery** The supporting information is largely the same as that provided in support of the current (2020) exemption. Updated spatial effort estimates for French fleets, additional information relating to costs of handling and a table of relevant mesh size regulations are provided. An overview of the fisheries to which the exemption is to apply, together with data on selectivity trials, estimates of landings and

annual catches of horse mackerel in the specified fisheries. (See Annex 4 for justification)	discards of horse mackerel by the fleets concerned is given. An estimate of the anticipated weight of catch that would be discarded under a *de minimis* exemption of 6%, based on information from the FDI database (referred to as the STECF database in the Annex) held by the JRC is provided. For French fleets, estimates of the costs involved in handling unwanted catches are provided. The information is principally for the French fleets operating in the eastern Channel and southern North Sea According to the information presented the estimated weight that corresponds to the proposed *de minimis* exemption of 6% by weight of horse mackerel is 718 tonnes (for all European vessels using bottom trawl, beam trawl and seine in ICES 6 and 7b-k). This is based on the data for 2014-2016 held in the publicly available STECF FDI database. **3. Basis for the exemption** The supporting information indicates that the handling and storage on board of unwanted catches would increase the workload on board and leads to the hold of the vessels being filled more quickly, forcing the vessels to return to harbour early with shortened fishing trips. The request is supported with an analysis to estimate costs associated with handling and storing unwanted catches. A summary is also provided from the results of several selectivity studies carried out in Southern North Sea and English Channel. Such information relates only to the French fleet. **4. EWG 20-04 Observations** Inconsistencies between the text of the JR and the supporting Annex need to be resolved. The JR specifies up to a maximum 7% *de minimis* for horse mackerel in 2020 only, whereas Annex 4 relates to 6% in 2021 and 2022 and 5% from 2023, of the total annual catches of horse mackerel caught in the fisheries concerned. The justification for the exemption request is that selectivity improvements by regulatory measures to avoid the catches of horse mackerel will be hard to achieve without severe economic impacts on the revenue of the boats concerned. However, while such a conclusion is intuitive, it is not supported by quantitative information. The introduction of the specific technical measures for vessels operating with bottom trawls or seines in the Celtic Sea in 2020 under Article 13 of the TAC and quota regulation may reduce the unwanted catch of horse mackerel. If that is the case the catch corresponding to a 6% *de minimis* exemption would also be reduced accordingly. An analysis of costs generated due to hold overloading and an increase of the sorting time by the crew was provided. This is based on a French study. While estimates of the potential increase in workload are provided in terms of time are given and seem reasonable (increase of 30-40%), the analysis is generic. It is not possible to establish how representative the analysis is for the fisheries covered by the exemption. Information is only provided for the French fleet. Catch data and a description of the fisheries of other Member States availing of this exemption are needed.
Exemption	Main Findings of EWG 20-04

Mackerel caught by vessels using bottom trawls, seines and beam trawls in ICES subarea 6 and ICES divisions 7b to 7k; A maximum of 6% in 2021 and 5% up to 2023 of the total annual catches of mackerel in the specified fisheries. (See Annex 5 for justification)	**1. Exemption status** Modification of existing temporary exemption granted until the end of 2020 (Article 8-point f of Regulation (EU) 2019/2239). **2. Definition of the fishery** The supporting information is largely the same as that provided in support of the current (2020) exemption and for the information provided for the horse mackerel exemption. Updated spatial effort estimates for French fleets, additional information relating to costs of handling and a table of relevant mesh size regulations are provided. An overview of the fisheries to which the exemption is to apply, together with data on selectivity trials, estimates of landings and discards of mackerel by the fleets concerned are given. An estimate of the anticipated weight of catch that would be discarded under a *de minimis* exemption of 6%, based on information from the FDI database (referred to as the STECF database in the Annex) held by the JRC. For French fleets, estimates of the costs involved in handling unwanted catches are provided. The information is principally for the French fleets operating in the eastern Channel and southern North Sea. According to the information presented the estimated weight that corresponds to the proposed *de minimis* exemption of 6% by weight of mackerel is 798 tonnes (for all European vessels using bottom trawl, beam trawl and seine in ICES 6 and 7b-k) This is based on the data for 2014-2016 held in the publicly available STECF FDI database. **3. Basis for the exemption** The supporting information indicates that the handling and storage on board of unwanted catches would increase the workload on board and leads to the hold of the vessels being filled more quickly, forcing the vessels to return to harbour early with shortened fishing trips. The request is supported with an analysis to estimate costs associated with handling and storing unwanted catches. A summary is also provided from the results of several selectivity studies carried out in Southern North Sea and English Channel. Such information relates only to the French fleet. **4. EWG 20-04 Observations** Inconsistencies between the text of the JR and the supporting Annex need to be resolved. The JR specifies up to a maximum 7% *de minimis* for mackerel whereas Annex 5 relates to 6% in 2021 and 2022 and 5% from 2023, of the total annual catches of mackerel caught in the fisheries concerned. The justification for the exemption request is that selectivity improvements by regulatory measures to avoid the catches of mackerel will be hard to achieve without severe economic impacts on the revenue of the boats concerned. However, while such a conclusion is intuitive, it is not supported by quantitative information. The introduction of the specific technical measures for vessels operating with bottom trawls or seines in the Celtic Sea in 2020 under Article 13 of the TAC and quota regulation may reduce the unwanted catch of mackerel. If that is the case the catch corresponding to a 6% *de minimis* exemption would also be reduced accordingly. An analysis of costs generated due to hold overloading and an increase of the sorting time by the crew was provided. This is based on a French study. While estimates of the potential increase in

	workload are provided in terms of time are given and seem reasonable (increase of 30-40%), the analysis is generic. It is not possible to establish how representative the analysis is for other fisheries covered by the exemption. Information is only provided for the French fleet. Catch data and a description of the fisheries of other Member States availing of this exemption are needed.
Exemption	Main Findings of EWG 20-04
Boarfish caught by vessels using bottom trawls in ICES divisions 7b-c and 7f-k. A maximum of 0.5% in 2021 and later, of the total annual catches of boarfish made in ICES subarea 7b, c ,f-k (See Annex 6 for justification)	**1. Exemption status** Existing temporary exemption granted until the end of 2020 (Article 8-point I of regulation (EU) 2019/2239). **2. Exemption status** The supporting information is the same as last year with very minimal updates of the catch data. The supporting information provides an overview of the fisheries to which the exemption is to apply. Information is only provided for the French fleet. It is not clear whether the intention is for the exemption to apply to the fleets of other Member States. According to the information presented total catches of boarfish by the fleets concerned was 33,586 t (average 2013 -2016). It is not clear what portion of the total catch was discarded but 100 % of the boarfish catch was discarded by the French fleet. The estimated weight that corresponds to the proposed *de minimis* exemption of 0.5 % of boarfish is 168 tonnes, based on the data for 2013-2016 held in the FDI database. This represents about 0.8 % of the 2020 Union TAC for boarfish in the areas concerned. **3. Basis for the exemption** The justification for the exemption is 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 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 do not specifically refer to boarfish. **4. EWG 20-04 Observations** The supporting information concludes that selectivity 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. However, while such a conclusion is intuitive, it is not supported by quantitative information. The information presented is generic and does not relate to the unwanted catches of boarfish. The priority should be to improve selectivity to reduce the unwanted catches and therefore, the costs for handling such catches. Discrepancies exist between the wording in the delegated act (2239/2019) concerning the *de minimis* exemption for boarfish in 2020 and the proposal for a continuation of the exemption in the 2020 JR. The former specifies a 0.5% *de minimis* of the total annual catches [of boarfish (species codes BOC and BOR)] by vessels using bottom trawls in 7b, c, f-k. The latter specifies for vessels using bottom trawls, up to 0.5% of the total annual catches [of boarfish] for all

	gears in 7b, c f-k. Clearly the implications, in terms of permitted potential *de minimis* discard volume are markedly different. Using data for 2018 submitted by Member States to the STECF FDI database, the total catch of boarfish by all gears in 7b, c, f-k was 4220 t (discards 187 tonnes), whereas the total catch using bottom trawls was 179 tonnes (discards 178 tonnes. The implied discard volume for a 0.5% *de minimis* is small in each case (21 tonnes based on catches by all gears and < 1 tonne based on catches by bottom trawls. Almost all reported discards for 2018 (187 tonnes) were attributed to bottom trawls (178 t). Therefore a 0.5% *de minimis* would not have been sufficient to account for the discards of boarfish in bottom trawl fisheries reported for 2018. Information is only provided for the French fleet. Catch data and a description of the fisheries of other Member States availing of this exemption are needed. The EWG also notes that according to Annex XI of the control regulation (Commission Implementing Regulation (EU) No 404/2011 of 8 April 2011) the gear codes specified as bottom trawls in the delegated act (2239/2019) are incorrect. In the control regulation the codes OT, PT and TX are not defined.
Exemption	Main Findings of EWG 20-04
Greater silver smelt - bottom trawls with a mesh size greater or equal to 100mm in 5b (EU waters) and VI; A maximum of 0.5% in 2021 and beyond, of the total annual catches of great silver smelt in those areas and fisheries. (See Annex 7 for justification)	**1. Exemption status** Existing temporary exemption granted until the end of 2020 (Article 8-point j of Regulation (EU) 2019/2239). **2. Definition of the fishery** The supporting information provides an overview of the fisheries to which the exemption is to apply. Information is only provided for the French and the Spanish fleet. It is not clear whether the intention is for the exemption to apply to the fleets of other Member States. According to the information presented, total catches of greater silver smelt by the fleets concerned was 6,170 tonnes (average 2013 - 2016). From French data observer programs (targeting deep-sea species, saithe or hake), the greater silver smelt catches represent between 0.8% and 1.9% and 100 % were discarded prior to the full implementation of the Landing Obligation. The estimated weight that corresponds to the proposed *de minimis* exemption of 0.6 % (of greater silver smelt is 31 tonnes (for all European vessels using bottom trawl in ICES 5b (EU) and 6), based on the data for 2013-2016 held in the FDI database. This represents about 0.8 % of the 2019 Union TAC for greater silver smelt in the areas concerned. **3. Basis for the exemption** The justification for the exemption is based on article 15.c.i), due to difficulties to further increase selectivity in this highly selective fishery. A review of recent French selectivity experiments is provided, which describes trials carried out with several different selective gears as evidence. Additionally, Spanish selectivity trials in 2018 and 2019 using a Square Mesh Panel showed reductions of greater silver smelt catches of 37.7% and 30.7% respectively. The use of that panel is mandatory for the Spanish fleet from 1 July 2020. **4. EWG 20-04 Observations** The discrepancy between the gears specified in the JR and the

	supporting information (Annex 7) needs to be resolved. Nine gears are specified in the JR whereas only six are listed in the supporting information. Similarly, the JR requests a *de minimis* of 0.6% of the total annual catches whereas the supporting information specifies 0.5%. The landings of France and Spain in 2018 only amount to 8 tonnes, hereby representing only 0.3% of the EU landings. The *de minimis* volume proposed while cover 100% of the unwanted catches. The supporting information of the Spanish selectivity trials show that catches of greater silver smelt can be reduced by up to 38% by using a square mesh panel. The use of such a panel is mandatory for the Spanish fleet from 1 July 2020. It would seem logical that this measure or selectivity devices giving equivalent reductions be extended to include other vessels operating in the same fisheries. This would potentially reduce the level of unwanted catches of silver smelt and reduce the need for the exemption. As with the boarfish exemption, discrepancies exist between the wording in the delegated act (2239/2019) in 2020 and the proposal for a continuation of the exemption in the 2020 JR. The former specifies a 0.6% *de minimis* of the total annual catches [of greater silver smelt] by vessels using bottom trawls with a mesh size equal to or greater than 100 mm (TR1) in ICES division 5b (EU waters) and ICES subarea 6. The latter specifies for vessels using bottom trawls with a mesh size equal to or greater than 100 mm (TR1) in ICES division 5b (EU waters) and ICES subarea 6, up to 0.6% of the total annual catches [of greater silver smelt] from all gears in those areas. Clearly the implications, in terms of permitted potential *de minimis* discard volume are markedly different. Using data for 2018 submitted by Member States to the STECF FDI database, the total catch of silver smelt by all gears in 7b, c, f-k was 1026 tonnes (discards 3.4 tonnes), whereas the total catch using bottom trawls was 3.4 tonnes, all of which was discarded. In each case, the implied discard volume for a 0.6% *de minimis* is small (approximately 6 tonnes based on catches by all gears and < 1 tonne based on catches by bottom trawls). Information is only provided for the French fleet. Catch data and a description of the fisheries of other Member States availing of this exemption are needed. The EWG also notes that according to Annex XI of the control regulation (Commission Implementing Regulation (EU) No 404/2011 of 8 April 2011) the gear codes specified as bottom trawls in the delegated act (2239/2019) are incorrect. In the control regulation the codes OT, PT and TX are not defined.
Exemption	Main Findings of EWG 20-04
Common sole -beam trawls with a mesh size of 80-119 mm with increased selectivity (Flemish panel) in 7a, 7j and 7k. A maximum of 3% of the total annual catches of sole by	**1. Exemption status** Existing temporary exemption granted until the end of 2020 (Article 8-point g of Regulation (EU) 2019/2239). **2. Definition of the fishery** Additional information (Annex 9) supplied includes a description of the numbers of Belgian and Irish beam trawls vessels involved in the fishery in 7a, j, k in 2016-2019 and their associated catches. There information presented indicates that discards of sole from the fishery are of the order of 1 t or listed as 'minimal' depending on fleet and

vessels using the specified gear and fishery. (See Annex 9 for justification)	area. Information from ICES indicates that in 7a between 2011 and 2018, proportion of sole catches discarded on average was 6%. **3. Basis for the exemption** The additional information on selectivity of the gears in the fishery is provided. This includes selection ogives of sole, plaice, cod whiting and haddock based on meta-analysis of several selectivity studies This exemption is linked to the use of a new selective device (Flemish panel). It was made mandatory from 1 of January 2016 in the Belgian beam trawl fishery through national legislation. This reduces the catch of small sole with an enforced large mesh (120 mm) extension in front of the cod-end. With this panel the amount of sole below MCRS caught is 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 (around 3.5% - ICES-2019). The proposed 3% exemption is therefore in line with the sole below MCRS in these areas. The justification for the exemption is the same as the existing *de minimis* exemption for common sole for beam trawls in the Channel (7d, 7e) and the Celtic Sea (7f, 7g, 7h). Selectivity has been improved through the introduction of gear modifications (Flemish panel) and further improvements would lead to uneconomic losses of marketable catches. The *de minimis* is to cover residual unwanted catches. **4. EWG 20-04 Observations** EWG 20-04 noted the mesh size of the so-called Flemish panel specified in the Delegated Act was 120mm compared to what was originally tested, i.e. a 150mm panel. As pointed out by STECF previously, this may reduce the effectiveness of the panel and not give the reductions in unwanted catches observed in the trials. Information to demonstrate whether the 120 mm panel is equally as selective as the 150 mm panel is still lacking. Such information would explain the reasoning behind only requiring the panel to be constructed in 120mm rather than 150mm. It is not clear if the Flemish Panel will be used by the Irish fleet, which is responsible for around 8% of the catches in 7a in 2019. In this regard, the NWW Member States should consider including the Flemish Panel in a future technical measures JR, thereby making it mandatory for all beam trawl vessels in area 7.
Exemption	Main Findings of EWG 20-04
Megrim - beam trawls with a mesh size of 80-119 mm in 7; and bottom trawls in 7f, 7g, the part of 7h North of latitude 49° 30' North and the part of 7j North of latitude 49° 30' North and East of longitude 11° West, for catches comprising more than 55 % of whiting or 55 % of anglerfish, hake or megrim combined and in 7, outside the	**1. Exemption status** Existing temporary exemption granted until the end of 2020 (Article 8-point h of regulation (EU) 2019/2239). The wording of the exemption has been altered to reflect new technical measures introduced by Article 13 of Council Regulation (EU) 2020/123. **2. Definition of the fishery** There is limited information provided on the fisheries and fleets involved for France (Annex 10) and Spain (Annex 10bis). The information from France (Annex 10) indicates that the proposed exemption could involve up to 250 French vessels. No catch data are provided for the French fleet although charts of fishing effort and sampling effort are provided. Information on discards is limited to a single histogram of catches at length for megrim for 2018 and a statement that 6% of the megrim catch discarded by French bottom

abovementioned area; A maximum of 4% of the total annual catches of megrim by vessels using the specified gears and in the specified areas. (See Annex 10 for justification)	trawlers >18m targeting demersal fishes in the Celtic Sea, the Western Channel and the Irish sea is undersized (less than MCRS). Relevant quantitative information from Spain provided in Annex 10bis, includes information on catches, landings and discards for the Spanish bottom trawl metier targeting benthic fish and catch (retained and discard) data for 2014 – 2019 by ICES division. It also specifies discard rates for undersized megrim which are said to comprise most of the discards. However, the discarding ratio (volume of discard related to the total catch) of megrim specified in the text, a reduction from 41.8% in 2014 to 10.4% in 2019, does not correspond with the data presented in Table 2 (Annex 10 bis) which indicates a reduction from 29.5% in 2014 to 9.4% in 2019. **3. Basis for the exemption** The justification for the exemption is primarily based on limited evidence indicating that increased selectivity is difficult to achieve. Annex 10 bis describes several selectivity studies that have been or are being undertaken although the only results given are from a single selectivity study (experimental cod end 'Copo 2' (T0_80_T45_04_150) equipped with a 150mm square panel). The results indicate that this gear configuration indicated a 32% reduction in the discard rate for megrim in hauls targeting megrim and an overall reduction in the catch of megrim compared to the standard trawl 'Copo 1' of 19% (72 kg per haul). **4. EWG 20-04 Observations** It is not clear whether the intention is for the exemption to apply to fleets from Member States other than France and Spain, but it is anticipated that Irish trawlers and beam trawlers and Belgium beam trawls would also participate in the fisheries covered by the exemption. The supporting information from Spain (Annex 10 bis) concludes that an increase in selectivity is hard to achieve without loss of a part of the catch that is of marketable size. While such a conclusion is intuitive, it is not supported by quantitative information that can be verified and checked. A second conclusion from Annex 10 bis is that the obligatory landing of all unwanted megrim below legal size implies an additional cost in crew time and an increase of space onboard both which are a problem from the logistic and economic point of view. There is no information presented in either of the Annexes to support such a conclusion although an economic analysis previously provided in support of the 2019 JR (STECF 19-08) indicated that the additional time on board to handle unwanted catches of megrim is estimated to increase crew costs by approximately 40%.
Exemption	Main Findings of EWG 20-04
Ling below minimum conservation reference size MCRS caught by vessels using set longlines in ICES division 6a. A maximum of 3 %, of the total annual catches of ling in the specified fishery.	**1. Exemption status** The request for the exemption is a new request. A similar exemption is already included in the North Sea discard plan, given the fishery operates in both areas. **2. Definition of the fishery** The vessels and gears to which the exemption is to apply is clearly specified, i.e. vessels using set longlines. The information in Annex 11 on numbers of vessels relates to 14 French vessels only whereas discard estimates and percentages are derived from data in the STECF

(See Annex 11 for justification)	FDI database for the years 2013-2016 and relate to the entire EU fleet using longlines in 6a. The reported discard rate for ling is reported as 1.4% although for the French longline fleet 6.5% of the catch of ling is discarded, 14% of which is below the MCRS of 63cmm. **3. Basis for the exemption** The request for an exemption for *de minimis* is based on article 15.c.i), due to difficulties to further increase selectivity in this fishery. However, while such a conclusion is intuitive, it is not supported by quantitative information. Only limited descriptive information on hook shape and size for the French longline fleet is provided. **4. EWG 20-04 Observations** The arguments regarding difficulties in improving selectivity are credible given the nature of the fisheries and the *de minimis* volume is estimated as small compared to overall ling catches. 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 not been provided. Additional information on hook selectivity in similar longline fisheries would be helpful if such studies exist. Discrepancy between the exemption request and wording in the supporting information (Annex 11) needs to be resolved. Annex 11 states "a *de minimis* exemption is requested for ling below MCRS caught by vessels using set longlines (LLS) in ICES subarea 6a, up to 3% in 2020 and beyond of the total annual catches of ling caught with demersal vessels using set longlines. It is unclear whether the estimates for catches and discards presented in the supporting information are specifically related to the fishery concerned. In Annex 11 under "Selectivity of the fishery" the proportion of the catches of ling by all EU vessels using longlines (Fishing area not provided) that is discarded is 1.4% which equates to about 30 tonnes. Based on data from 2013-2016, it is reported (Annex 11) that a *de minimis* of 3% would represent a maximum amount of allowed discard for ling of 63 tonnes, which represents double the reported value in the supporting information. Using data for 2018 held in the FDI database, 3% of the total catch of ling by longliners in Division Via (2,619 tonnes) would equate to about 79 tonnes. While such volumes are relatively low compared to the TAC for ling (20,396 tonnes for EU waters 6, 7, 8, 9, 10, 12, 14 in 2020), they represent a potentially large number of below-MCRS (63 cm TL) individuals that could be legally discarded in Division 6a under the requested *de minimis* exemption. Information is only provided for the French fleet. Catch data and a description of the fisheries of other Member States availing of this exemption are needed.
Exemption	Main Findings of EWG 20-04
Haddock below minimum conservation reference size, by vessels using bottom trawls with a mesh size up to 119 mm in the West of Scotland Norway lobster fishery	**1. Exemption status** Existing temporary exemption granted until the end of 2020 (Article 8-point k of Regulation (EU) 2019/2239). **2. EWG 20-04 Observations** No information in support of the exemption was provided. Supporting information was provided in 2019 and reviewed in STECF 19-08 together with proposed exemptions for cod and whiting in the same

in ICES division 6a. A maximum of 3 %, of the total annual catches of haddock by vessels using the specified gears and the specified areas. (No supporting information provided)	fishery. The text of the STECF 19-08 review is repeated below as it remains relevant for this exemption. "*This is a new request for an exemption. Separate exemptions are proposed for cod, haddock and whiting but apply to the same fishery for Nephrops in the West of Scotland (ICES division 6a).* *Estimates of unwanted catches below MCRS are given and show for all three species the volume of de minimis requested will cover only a small proportion of the current unwanted catches.* *The justification for the exemption is largely based on an analysis of disproportionate cost of handling unwanted catches ashore which is estimated to equate to a net cost of approximately £100 per tonne. The costs seem reasonable, but there is no objective means to assess whether they are realistic or can be considered disproportionate.* *While not directly mentioned, the JR contains provisions to introduce selective gears into the Nephrops fishery. These gears will improve selectivity and should reduce unwanted catches. However, it would seem appropriate, given the current high levels of unwanted catches in this fishery to list the gears to be introduced through the existing discard plan into the Celtic Sea and the Irish Sea for Nephrops fisheries. The gear options listed in these areas include the SELTRA trawl and sorting grids which would be considered much more selective than the gear options proposed for the West of Scotland*".

6.2.NWW – Proposals for 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

High Survivability	
Fishery	Main Findings of EWG 20-04
Skates and rays (*Rajiformes*) caught by any fishing gear in the North Western Waters (ICES subareas 6 and 7)	All except cuckoo ray **1. Exemption status** Additional scientific information supporting existing exemption / reporting against roadmap requested and report on the progress made to the survivability programs **2. Survival evidence** None of the studies referenced in annex 13 were in relation to ICES areas 6 or 7. The evaluation of the relevant documents provided for the equivalent North Sea exemption showed that additional information on skates and rays discard survival is available but is not provided in the JR. Immediate and delayed mortality was reported for thornback ray, blonde ray, spotted ray and undulate ray after capture by beam trawl (Belgium, 80mm), otter trawl (Belgium and France, 80mm), gillnets (UK, 100mm) and trammel nets (France, 90mm) in the English Channel (7d) and North Sea (4c) (Van Bogaert et al., 2019). The ICES critical review was applied, and the survival estimates were considered robust (combination of on-board vitality assessments with captivity observations for up to 21 days). For thornback and blonde rays, total discard survival probability (immediate and delayed) were 54% and 67%, respectively, when discarded by beam trawlers, and 72% and 86%, respectively, when discarded by otter trawlers. For spotted ray and undulate rays, total survival was 27% and 58%, respectively, when discarded by beam trawlers. Sample sizes for spotted rays and undulate rays caught by otter trawlers and trammel netters were too low (n<10) to produce reliable estimates. The thornback and spotted rays caught by gillnetters were not monitored onshore and hence no empirical discard survival estimates are available, but 54% were scored as "excellent" (vitality score A) and 33% as "good" (vitality score B). For all four species tested, immediate and delayed discard survival were affected by injury and reflex scores, fish length (larger skates have a bigger chance of immediate survival), sorting time and the amount of sand and stones in the catch. Survival rates were not provided with confidence intervals. **3. Fishery context** The Belgian fleet is described, including number of vessels in 2015 (Van Bogaert and Keirsebelik, 2019), but there is no information on discard rates. There is no information on vessels and discard rates for any of the other fleets that may be concerned. There remains a gap in the evidence provided on relevant catches and discards per species and métier for all member states. **4. Survival and fishery compatibility** For thornback ray, blonde ray, spotted ray and undulate ray, survival evidence is deemed relevant for the pulse, beam and otter trawls (80mm) and trammel nets (90mm) in 7e. It is difficult to assess applicability to the other gears/mesh sizes and areas without additional information on the

	fisheries with respect to their relevant operational and environmental characteristics. **5. Additional evidence** There was no explicit reporting against the road map, which is recommended in the future. Future submissions should report against the three main tasks in the road map; i) quantifying catches and discards per species and métier; ii) generated discard survival evidence; and iii) stakeholder led adoption of codes of best practice to maximize discard survival. All relevant reports should be appended as annexes. The table provided in annex 13 did not explicitly refer to ICES areas 6 and 7, but to the North Sea. A summary table with all studies and fisheries would be helpful for further reporting (see annex 6.2.2a for example). When published, the outputs of the ICES Workshop on incorporating discards into the assessments and advice of elasmobranch stocks (WKSHARK5) will provide useful context for this exemption. **Cuckoo ray** **1. Exemption status** In discard plan 2018/2034 additional evidence was requested on the discard survival of cuckoo ray. However, this was not included in 2019/2239. **2. Survival evidence** None of the studies referenced in annex 13 were in relation with areas 6 or 7. The evaluation of the documents provided for the North Sea showed that additional information is however available, e.g., a literature study by Van Bogaert and Keirsebelik (2019) for the Belgian fleet, and observations of condition indices of cuckoo ray in an Irish otter-trawl fishery (Oliver et al., 2019). There is currently one available study in area 7e (Catchpole et al., 2017). **3. Fishery context** The evaluation of the documents provided for the North Sea showed that information for the Belgium fleet was given in Van Bogaert and Keirsebelik (2019). Cuckoo ray landings and discards weight as recorded by at-sea observers on-board commercial Belgian fishing vessels are given for the years 2014-2018. Cuckoo rays are most frequently encountered in 7a and 7f, and to a lesser extent in 7e. Cuckoo rays can be discarded up to 40kg/h in the central Irish Sea (7a) in Q2. **4. Survival and fishery compatibility** No additional information was provided for the other fleets (French, Irish, Dutch). There is currently one published study in area 7e, but it is difficult to assess applicability to the other area/gear combinations without additional information on the fisheries. **5. Additional evidence** The latest discard plan 2019/2239 does not include a specific request for survival evidence for cuckoo ray. See the evaluation on the generic skates and ray exemption for additional evidence.
Plaice (*Pleuronectes platessa*) caught in ICES divisions 7a to 7k by vessels having a maximum engine greater than 221	**1. Exemption status** Extension of the existing temporary exemption beyond 2020. The exemption is provisionally applicable until 31 December 2020 in ICES divisions 7h, 7j, 7k. Member states shall submit, not later than by 1 May 2020, additional scientific information supporting those exemptions as regards the plaice caught in ICES divisions 7h, 7j, 7k.

kW, and using beam trawls (TBB) fitted with a flip-up rope or benthic release panel; OR Caught in ICES divisions 7a to 7k by vessels using beam trawls (TBB), having a maximum engine power of 221 kW or a maximum length of 24 meters, which are constructed to fish within 12 nautical miles of the coast and with average tow durations of no more than 1:30 hours	**2. Survival evidence** The discard survival estimate of 4-59% is given in the justification provided (Annex 8), but with no reference to its origin. Therefore, while several ongoing relevant research projects were described in last years' submission and again this year, no new scientific evidence on plaice discard survival is submitted. A new source of evidence was identified independently (Uhlmann et al; submitted for publication), which included some previously submitted data and new data. The study reported that plaice discard survival was between 4-59%; the mean discard survival rate across all sampled trips was 21%. This was based on directly observed discard survival (10 trips) and inferred survival estimates based on vitality data (6 most recent trips). The highest survival was observed from coastal vessels during winter trips when seawater temperatures were lowest. Most data for the study were derived from ICES divisions 7d and 4b, with some trips from 4c and 7e and 1 trip in 7hg. The study was assessed to be scientifically robust, provided representative estimates and was consistent with ICES guidance. Other studies on discarded plaice from Celtic Sea beam trawlers that were previously submitted and assessed by STECF (EWG 17-08, 19-08) showed directly observed survival estimates of 4-15% (Catchpole et al, 2015), and inferred survival of 68% (47-76%) in 7f (inshore), 38% (24-47%) in 7e and 27% (16-41%) in 7h (Smith and Catchpole, 2017). **3. Fishery context** An overview of fisheries only for the Belgian beam trawl fleet was provided, updated from last year. This includes number of vessels, landings, discards and catch, for different plaice stocks, caught by 70-99 mm beam-trawl gears in ICES divisions 7a, 7d, 7e, 7fg and 7hjk, including % discard rates. Plaice discard rates for the Belgium beam across different ICES divisions and years ranged from 2.2-57.4%. Equivalent vessel, catch and discard data from other relevant countries are not provided. **4. Survival and fishery compatibility** The estimated discard survival estimates described here are variable between trips. The trips varied in time and area, and therefore in environmental conditions, by vessel, gear characteristics and catch composition. Estimates for the most recent trips are inferred and based on vitality, so these may have been influenced by any inconsistencies in performing vitality assessments. It is considered the data were sampled from a range of vessels that is representative of the relevant fleet. The specific requirement of the existing exemption was for additional survival evidence for plaice stock in ICES divisions 7h-k. No new data were provided from these areas. Studies previously assessed by STECF indicate that survival is higher in the coastal fishing grounds, and when seawater temperature is lowest. It is considered that, when fishing away from the coast, the environmental and technical attributes of fishing operations in 7h-k are consistent with the other areas covered by this exemption, therefore the survival of plaice discarded by beam trawlers in 7h is likely to be comparable with other areas in the Celtic Sea (see comment above on implications for survival exemption for plaice 7h-k stock). **5. Additional evidence** Flanders Research Institute for Agriculture, Fisheries and Food (ILVO) has developed a three-year (2019-2021) project ('Survival Monitoring - Overleving Monitoren') to gather additional survival data and further analyse existing and new data, for plaice in the North Sea 4a & 7d and 7fg (not for 7hjk). This project aims to produce new discard survival estimates for plaice in the Celtic Sea and North Sea beam trawl fisheries. Fishery

	information should be provided by relevant countries other than Belgium. As stated in EWG 19-08, the annual progress reports could be improved, specifically in detailing the scientific evidence on discard survival, and identifying new information from previously submitted evidence. A clearer highlighting of new science is encouraged in future progress reports.
Plaice (*Pleuronectes platessa*) caught in ICES divisions 7a, 7b, 7c, 7f, 7g, 7h, 7j and 7k caught with seine nets (Gear code: SCC).	**1. Exemption status** This is a new exemption. The proposed exemption would apply in the mixed demersal fishery conducted using Scottish seine (SCC) (also referred to as flyshooters) with 100 mm mesh turned 90 degrees (T90) or 120 mm diamond mesh (T0) in ICES divisions 7a and 7.b-k. While this is a new exemption, it is relevant to existing exemptions for plaice caught with Danish seines in ICES division 7d and in the North Sea. **2. Survival evidence** No directly observed discard survival estimates are provided. An inferred discard survival estimate of 87% (75-97%) was generated in a study with a Scottish seine vessel in ICES divisions 7f and h (Oliver et al.,2020). The study used vitality indicators of plaice and applied them to reported relationships between health and survival from a study on Danish seines in a fishery in Skagerrak and Kattegat. The EWG also note that the study is limited in scope, using one vessel over three days to sample 10 hauls. Vitality data is increasingly being used to support high survival proposals. STECF EWG 19-08 observed that, at this time, there is insufficient evidence to use vitality as a proxy for survival, outside of the fisheries from which vitality-survival relationships are available, to generate discard survival estimates with meaningful levels of confidence. The evidence provided assumes that the relationship between vitality and survival in a fishery in area 3a (from a sample of 281 plaice) is the same as a fishery in 7f and h. The study provided demonstrates that the technical attributes of the two fisheries are similar, but the average catch size was substantially higher and fishing depth much deeper in the new study. There is the potential for these differences to negatively influence the survival chances of discarded plaice. Furthermore, discard survival studies have demonstrated very different relationships between vitality and survival, depending on the area or season for example, even when the fisheries are technically similar. The approach to collecting the vitality data was in line with ICES guidance, however, there remains the potential for inconsistencies between scientific groups in the visual assessments of the fish and this will influence the inferred survival estimate. Therefore, the inferred estimate of discard survival supporting this recommendation is uncertain and should be used with caution. EWG 20-04 note that while the survival estimates provided are not robust in this case, the Scottish seine method of fishing is likely to be associated with relatively good survival levels due to the relatively low stress experience during the capture process. **3. Fishery context** An overview of fisheries only for Irish Scottish seine fleet was provided. This includes number of vessels, landings, discards and catch, for different plaice stocks, caught by Scottish seiners in ICES divisions 7a, 7bc, 7fg and 7hjk, including % discard rates. Equivalent data from other relevant countries are not provided. **4. Survival and fishery compatibility** Irish seine net vessels mainly operate off Ireland's south-west coast in ICES divisions 7. f,g and 7 h,j,k. The study was therefore conducted in one of the

	main fishing areas for Irish vessels and conducted under representative commercial conditions. However, the scope of the study was limited and is unlikely to have captured the variability in survival levels for this fishery. In the absence of information on the Scottish seine from other member states, the compatibility between the studied fishery and all the Scottish seine fisheries in 7a, b, c, f, g, h, j and k cannot be evaluated. EWG 19-08 identified that air exposure during sorting has a strong influence on survival for this gear type, therefore data on sorting times from those vessels which would come under exemption would enable a more complete evaluation. The proposal states that the survival estimates from the studied mesh of 100mm T90 cod end has equivalent selectivity to 120mm conventional cod end, which is used by some Scottish seiners. EWG 20-04 agree that the selective properties of these cod end configurations are likely to be comparable. **5. Additional evidence** Reliance on a study in Skagerrak and Kattegat to infer a discard survival estimate in the Celtic Sea introduces considerable uncertainty. Across all regions, there has currently been only one reported study on plaice discard survival from Danish seines and none from Scottish seines. Additional evidence is needed that would support the proposal includes directly observed representative discard survival from the fisheries covered by the proposed exemption. More details on the fishery, from all relevant member states, including vessel numbers, catches and catch composition, as well as technical aspects of the fishing operation such as sorting times, are needed for a full evaluation.
Common sole (*Solea solea*) in ICES division 7a, 7e, 7f and 7g caught with otter trawl gears (gear codes: OTT, OTB, TBS, TBN, TB, PTB, OT, PT, TX).	**1. Exemption status** This is a request for a new exemption. **2. Survival evidence** New survival evidence for < and > MCRS sole was provided from an empirical captivity study on an inshore otter trawl fishery in 7b. A census of 141 conventionally trawled-and-discarded sole catches were monitored in captivity for 8 days, alongside 19 sole from a benign treatment (30 min trawl). The study was done with one Irish otter trawler fishing with 80 mm cod end, and a 120-mm square-mesh panel in a single–rig configuration fishing for 4 days in late summer off the Irish West Coast. Sole were retained from 4 conventional and 4 control deployments. None of the control fish died. Overall survival of conventionally trawled sole was estimated at 50%, which corresponded to earlier estimates from ICES 4c and 7d (Randall et al., 2016; Ribeiro Santos et al., 2016) for this species discarded from otter trawls. Some mortality that occurred at day 8 of monitoring was excluded from the analyses. It was argued that these mortalities were unlikely to have been associated with the stressors of the catch and discard proves, but if included would have reduced the final survival estimate. An analysis of contributing factors associated with survival was not done. Overall, the method applied was robust, following a review using the ICES WGMEDS guidelines and critical review criteria. **3. Fishery context** Additional information provided aggregated catches and discards of sole from otter-trawl fisheries in 7a, and 7f,g, alongside summaries of the ICES stock advice. In the Irish and Celtic Seas, between ~5% and 15% of sole catches were discarded (aggregated across all fleets based on ICES data in 2018). An Irish otter-trawl fishery for *Nephrops* in 7f,g recorded discard rates of sole of 44% (sole are a bycatch species and discarded due to a lack of quota). Catch and discard statistics by each member state would be

	needed to provide an appropriate context. BT2 fisheries generated 90% of the landings. **4. Survival and fishery compatibility** To place the fishing configuration and conditions of the study within the wider context of the fleets to which this exemption could apply to, more information would be needed, broken down by member states. Without an understanding of the contributing factors associated with survival, and a corresponding inventory of otter-trawl fishing activity with respect to prevailing key conditions (i.e. catch volumes, fishing depth, trawling and on-deck sorting times, and local weather data), it is not possible to evaluate whether it is sensible to assume that the 50% survival estimate is valid for other otter trawl gears and fishing operations. It is considered that evidence generated from a single study in an inshore fishery in 7b may not represent the sole discard survival from all otter trawl fisheries in 7a,e,f and g. EWG 20-04 note that equivalent evidence for other studies has supported exemptions that are limited to the fishing conditions under which the evidence was generated. **5. Additional evidence** The proposal extrapolates robust results from a single localized fishery to cover a large geographical area with insufficient information that the evidence is representative of the wider area. Information on the operational and technical methods of fishing (e.g. seasonal patterns, haul duration and depth, trawl specifications, catch composition and sorting practices) compared with the studied fishery are needed. This will enable an assessment of the representativeness of the existing evidence for all potentially effected fleets. Also, analyses to understand factors influencing sole discard survival from existing studies would inform on the implications of extrapolating the current evidence. For fisheries where sole is caught and discarded under different conditions to that of the studied fisheries, new directly observed discard survival evidence would provide the best means of a robust assessment.

References

Fox, C J. Albalat, A. 2018. Post-catch survivability of discarded Norway lobsters (*Nephrops norvegicus*): Further investigations within the large-scale fleet operation. A study commissioned by Fisheries Innovation Scotland (FIS) http://www.fiscot.org/ and supported by The European Maritime and Fisheries Fund and The Scottish Government

Oliver, Martin, Matthew McHugh, Daragh Browne, Ronán Cosgrove (2020). Plaice survivability in the Irish seine net fishery BIM, Fisheries Conservation Report, April 2020

Randall, P., Ribeiro Santos, A., and Catchpole, T. 2016. Assessing the survival of discarded plaice in the English NE *Nephrops* trawl fishery. Lowestoft, UK. 37 pp.

Ribeiro Santos, A., Duggan, K., and Catchpole, T. 2016. Estimating the discard survival rates of Common sole (*Solea solea*) in the English east coast inshore otter trawl fishery – part of the Cefas ASSIST project (MF1232). Lowestoft, UK. 29 pp.

Sam Smith, Tom Catchpole (2017). Discard survival of plaice caught in English South West beam trawl fishery, Cefas ASSIST Project, March 2017Savina, E., T. Noack, J.D. Karlsen. Effects of season, target species and cod end design on the survival of undersized plaice (*Pleuronectes platessa*) discarded in the bottom otter trawl mixed fisheries in Skagerrak, Fish. Res. 219 (2019) 105311, https://doi.org/10.1016/j.fishres.2019.105311.

Smith, S., Elliot, S., and Catchpole, T. 2015. Estimating the discard survival rates of Common sole (*Solea solea*) and plaice (*Pleuronectes platessa*) in the Bristol Channel trammel net fishery and of plaice in the Bristol Channel otter trawl fishery. Lowestoft. 64 pp.

Uhlmann, S.S., Ampe, B., Vanden Berghe, C., Vanelslander, B. (submitted, 2020). Flatfish tell some tales: seawater temperature, catch composition, gear deployment and sorting durations contribute to mortality of European plaice (Pleuronectes platessa) caught-and-discarded by Belgian beam trawlers. Under review with Fisheries Research.

6.3.NWW – Proposals for technical measures

Regulation (EU) 2019/1241 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.

Currently, regional technical measures for the NWW are spread across Articles 9.10 and 11 of Regulation (EU) No 2019/2239 and Article 13 of Regulation (EU) No 2020/123. These measures will expire at the end of 2020. However, no Joint Recommendations for technical measures for the NWW was provided to EWG 20-04. Table 6.3.1 lists the current technical measures contained in the current delegated act.

Table 6.3.1 Main elements of the Joint Recommendations included under the current delegated act

Elements	***Status with relevant Article in current discard plan***	***Assessment by EWG 20-04 with relevant Annexes in JR***
Technical rules in the Celtic Sea protection zone - 7f, 7g and part of 7j	Existing	Not assessed
Technical rules in the Irish Sea – ICES division 7a	Existing	Not assessed
Technical rules in the West of Scotland – ICES Division 6a	Existing	Not assessed

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 new 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) 2018/2033. In 2019, a further set of Joint Recommendations was submitted by the Member States and assessed by EWG 19-08 and STECF PLEN 19-02. Based on these assessments an amended discard plan was adopted under Commission Delegated Regulation (EU) 2019/2237. This discard plan expires at the end of 2021, although some of the *de minimis* exemptions included were time limited to the end of 2020. Member States were requested to provide additional scientific information supporting those exemptions for assessment by STECF in 2020. Member States in the SWW submitted JRs with this supporting information and with information to support requests for *de minimis* exemptions that were not accepted by the Commission in 2019.

Additionally, Commission Delegated Regulation (EU) No 1394/2014 established a discard plan for certain pelagic fisheries and fisheries in the SWW. This was amended by Commission Delegated Regulation (EU) 2018/188, which extended the exemptions established under the original discard plan, while also adding some additional exemptions. This discard plan is due to expire at the end of 2020 and the Member States in the SWW have requested these exemptions be extended until the end of 2023. No new additional information has been submitted and EWG 20-04 has not assessed these exemptions.

The main elements of the new JR and which of these have been assessed by EWG 20-04 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			
Common sole caught with beam trawls and bottom trawls in directed fishery in ICES subareas 8 a,b	Demersal	Existing and unchanged Article 6b	Not assessed
Common sole caught in gillnets and trammel nets in ICES subareas 8 a,b	Demersal	Existing and unchanged Article 6c	Not assessed
Alfonsinos caught by hooks and lines in division 10	Demersal	Existing and unchanged Article 6d	Not assessed
Blue whiting caught in the industrial pelagic trawler fishery in ICES subarea 8	Pelagic	Existing Article 3a Regulation (EU) 1394/2014	Not assessed
Albacore tuna caught using midwater pair trawls in ICES subarea 7	Pelagic	Existing Article 3b Regulation (EU) 1394/2014	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 Article 3c Regulation (EU) 1394/2014	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 Article 3d Regulation (EU) 1394/2019	Not assessed
Hake caught with trawls and seines in directed fisheries in ICES subareas 8 and 9	Demersal	Temporary until end of 2019 Article 6a	Re-assessed based on new information Annexes 3.2, 3.4, 21 and 21b
Horse mackerel caught with bottom trawls, seines and beam trawls	Demersal	Temporary until end of 2019 Article 6f	Re-assessed based on new information Annexes 3.4 and 15

in ICES subareas 8 and 9			
Horse mackerel caught with gillnets in ICES subareas 8, 9 & 10 and CECAF 34.1.1, 34.1.2, 34.2.0	Demersal	Temporary until end of 2019 Article 6g	Re-assessed based on new information Annexes 3.3, 6 and 11
Mackerel caught with bottom trawls, seines and beam trawls in ICES subareas 8 and 9	Demersal	Temporary until end of 2019 Article 6h	Re-assessed based on new information Annexes 3.4 and 13
Mackerel caught with gillnets in ICES subareas 8, 9 & 10 and CECAF 34.1.1, 34.1.2, 34.2.0	Demersal	Temporary until end of 2019 Article 6i	Re-assessed based on new information Annexes 3.3, 7 and 9
Megrim caught with bottom trawls, seines and beam trawls in ICES subareas 8 and 9	Demersal	Temporary until end of 2019 Article 6l	Re-assessed based on new information Annexes 3 and 14
Megrim caught with gillnets in ICES subareas 8 and 9	Demersal	Temporary until end of 2019 Article 6m	Re-assessed based on new information Annexes 3 and 10
Plaice caught with bottom trawls, seines and beam trawls in ICES subareas 8 and 9	Demersal	Temporary until end of 2019 Article 6n	Re-assessed based on new information Annexes 3 and 5
Plaice caught with gillnets in ICES subareas 8 and 9	Demersal	Temporary until end of 2019 Article 6o	Re-assessed based on new information Annex 3
Anglerfish caught with bottom trawls, seines and beam trawls in ICES subareas 8 and 9	Demersal	Temporary until end of 2019 Article 6p	Re-assessed based on new information Annexes 3 and 18
Anglerfish caught with gillnets in ICES subareas 8 and 9	Demersal	Temporary until end of 2019 Article 6q	Re-assessed based on new information Annexes 3 and 12
Whiting caught with bottom trawls, seines and beam trawls in ICES subarea 8	Demersal	Temporary until end of 2019 Article 6r	Re-assessed based on new information Annex 4
Whiting caught with gillnets in ICES subarea 8 and 9	Demersal	Temporary until end of 2019 Article 6s	Re-assessed based on new information Annexes 8 and 9
Pollack caught with bottom trawls, seines and beam trawls in ICES	Demersal	Temporary until end of 2019 Article 6t	Re-assessed based on new information Annex 3

subareas 8 and 9			
Pollack caught with gillnets in ICES subareas 8 and 9	Demersal	Temporary until end of 2019 Article 6u	Re-assessed based on new information Annex 3
Anchovy caught with bottom trawls, seines and beam trawls in ICES subareas 8 and 9	Demersal	Temporary until end of 2019 Article 6j	Re-assessed based on new information Annex 23
Red Sea Bream caught with bottom trawls, seines and beam trawls in ICES Division 9a	Demersal	Temporary until end of 2019 Article 6w	Re-assessed based on new information Annex 24
Sole caught with bottom trawls, seines and beam trawls in ICES Division 9a	Demersal	Temporary until end of 2019 Article 6x	Re-assessed based on new information Annex 25
High survivability			
Nephrops caught with trawls in ICES subareas 8 and 9	Demersal	Existing and unchanged Article 3	Not assessed
Red seabream caught with "voracera" gear in ICES division 9a	Demersal	Existing and unchanged Article 5	Not assessed
Red sea bream caught with hooks and lines in ICES subarea 10	Demersal	Existing and unchanged Article 5	Not assessed
Skates and rays (*Rajiformes*) caught with all gears in ICES subareas 8 and 9	Demersal	Temporary for cuckoo ray until end of 2019 Article 4	Re-assessed based on Annex 1, 1bis, 1bis2
Red seabream caught with hooks and lines in ICES subareas 8 and 9a	Demersal	Extension of existing exemption Article 5	Re-assessed based on Annex 2
Anchovy, horse mackerel, jack mackerel and mackerel caught using purse seines in artisanal purse seine fisheries in ICES subareas 8 and 9	Pelagic	Existing Article 2 Regulation (EU) 1394/2014	Re- assessed based on Annex 19

7.1.SWW – Proposals for *de minimis* exemptions

A summary of the fishery information applicable to the proposed new or revised *de minimis* exemptions is provided in Table 7.1.1.

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

Horse mackerel caught by vessels using beam trawls, bottom trawls and seines in ICES subareas 8 and 9 A maximum of 5 % of the total annual catches of horse mackerel in the specified fisheries. (See annexes 3.4 and 15);	**1. Exemption Status** Existing temporary exemption granted until the end of 2020 (Article 6-point 1e of Regulation (EU) No 2019/2237). **2. Definition of the fisheries** Updated information is provided for Spain, France and Portugal. No information is provided for the Belgian fleet although catches of horse mackerel by Belgian vessels are thought to be negligible or absent. Detailed catch data have been provided for Spain, France and Portugal for the period 2015-2017. Total catches (in tonnes) of bottom trawl-caught Atlantic horse mackerel in ICES subareas 8 and 9, and the associated discard ranges are also given. Bottom trawl-caught horse mackerel make up around 3% of the total landings in ICES subarea 8 (part of the wider management area of 2a, 4a, 6, 7a-c, e-k, 8abde) and around 31% of total landings in ICES division 9a. The estimated average discards for horse mackerel for SWW Members States corresponds to approximately 8 % of total catches of horse mackerel by bottom trawls. *De minimis* volumes of trawl-caught Atlantic horse mackerel, per country and métier, in ICES subareas 8 and 9, are estimated based on 2017 data. According to the supporting information, discard rates range from 0.63% for the Portuguese fleet to 37.19 % for the French fleet. The metiers with the highest dicards are the ES_OTB_DEF_>=70_0_0 & FR_OTB_OTT_DEF_CEP_8ab with (83.26% and 70.85% discards respectively. Based on the total catches of horse mackerel for ICES subareas 8 and 9 of 27,945 tonnes, the estimated *de minimis* volume (7%) would be around 1,956 tonnes of horse mackerel. **3. Basis for the exemption** The information provided in support of the exemption is largely based on a detailed economic analysis of disproportionate costs resulting from the additional time required for handling and sorting unwanted catches on board Spanish vessels (General Secretariat for Fisheries, in cooperation with: Tragsatec, the University of Santiago de Compostela and AZTI Tecnalia, November 2019) - *the economic viability of managing unintentional catches according to the regulations and affected by the Landing Obligation*). This is a new study that was referred to in the supporting information provided in 2019 for this exemption. Based on extensive sampling (14 vessels over 46 days covering 93 hauls), estimates of the socio-economic impact of the application of the Landing Obligation are derived for the fleet segments under study. According to the provided estimates generated from this study, the combined economic impact from the elimination of the *de minimis* exemptions would be equivalent to €9.2 million euros for the four Member States involved in the fishery. These increased costs are for additional fish boxes, storage onboard of unwnated catches, increased workload, and loss of quota. Specifically to horse mackerel, the study indicates that in terms of lost opportunity costs, bottom trawlers in subareas 8 and 9 are estimated to experience losses amounting to €2.065.795 if the requested *de minimis* exemption for horse mackerel is not granted. This equates to

	22.48% of the total losses estimated for fleets subject to all the requested exemptions for all species in the JR, if all such exemptions are not granted. **4. EWG 20-04 observations** Detailed data by fleet have been provided for the period 2015-2017. Catch data for 2018 and 2019 would have been useful to gain insight as to whether the situation in the fisheries has changed since 2017. No data were provided for Belgium. Costs of landing unwanted catches if the exemption is not granted have also been presented. The results of the analysis indicate the loss of earnings associated with the removal of the exemption. The analysis provided of the level of disproportionate costs incurred due to increased sorting and handling time provides a detailed, if rather generic, breakdown of these costs across a range of vessels and fisheries. It is not possible to establish whether the study provided in support the exemption is entirely representative of all the fisheries covered by the exemption, which are numerous and diverse. The study relates primarily to Spanish vessels and while data and information for the French and Portuguese fleets operating in subareas 8 and 9 are included, it is not clear how such data and information have been used in the estimates. There is only limited information to explain the level of *de minimis* required. There does not appear to be any relationship between the *de minimis* requested and the levels of unwanted catch. There is no indication of steps to be taken to reduce the residual unwanted catches.
Horse mackerel by vessels using gillnets in ICES subareas 8, 9 and 10 and and CECAF zones 34.1.1, 34.1.2, 34.2.0 A maximum of 3 % of the total annual catches of horse mackerel in the specified fisheries. (See Annexes 3.3, 6 and 11);	**1. Exemption Status** Existing temporary exemption granted until the end of 2020 (Article 6-point 1f of Regulation (EU) No 2019/2237). **2. Definition of the fisheries** Detailed descriptions of the fleets by metier and fisheries is provided for Spain and France for 2017 in two seperate supporting annexes. Catches of horse mackerel by the Portuguese fleet, are reported to be negligible so no information is provided. No data are reported for Belgium, but it is unlikely Belgium has any catches of horse mackerel from gillnet fisheries. Catch data for Spain and France for 2015, 2016, 2017 as well as the average values on total catches (in tonnes) of Atlantic horse mackerel caugh by gillnets in ICES subareas 8 and 9 and the associated discard rates are reported. Horse mackerel catches make up around 6.7% of the total catches of TAC species by all vessels fishing with gillnets. The estimated average discard rate for all countries corresponds to approximately 2.5% of total catches (0% for FR and 2.63% for ESP). Based on the total catches of horse mackerel by gillnetters, the estimated *de minimis* volume (3%) amounts to 52 tonnes. **3. Basis for the exemption** The information provided in support of the exemption is largely based on a detailed economic analysis of disproportionate costs resulting from the additional time required for handling and sorting unwanted catches on board Spanish vessels (General Secretariat for Fisheries, in

	cooperation with: Tragsatec, the University of Santiago de Compostela and AZTI Tecnalia, November 2019) - *the economic viability of managing unintentional catches according to the regulations and affected by the Landing Obligation*). Additionally, a supporting annex (Annex VI: *De minimis request vessels using gillnets (GNS, GND, GNC, GTR, GTN*) to catch horse mackerel in ICES subarea 8 and 9. from France highlights similar costs for the French gillnet fleet. According to estimates generated from the Spanish study, in terms of lost opportunity costs, gillnetters in subareas 8 and 9 are estimated to experience losses amounting to €13,573 if the requested *de minimis* exemption for horse mackerel is not granted. This equates to 0.15 % 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. Estimates from the French analysis of disproportionate costs based on data from the period 2010-2012, indicate that additional sorting and handling unwanted catches on board gillnetters would equate to a loss of 2 days fishing time per fishing trip for a typical gillnet vessel. This is based on all species, rather than specifically relating to catches of horse mackerel. The assertion is also made that because of the overall high selectivity of gillnet fisheries it is difficult to improve selectivity further. A few studies on netters have been made in ICES subareas 8 and 9 by France under a project REDRESS (FR) from 2104 to 2017 that according to the information provided, supports this assertion. **4. EWG 20-04 observations** Detailed data by fleet has been provided for the period 2015-2017. Catch data for 2018 and 2019 would have been useful to gain insight as to whether the situation in the fisheries has changed since 2017. Costs of landing unwanted catches if the exemption is not granted have also been presented. The results of the analysis presented indicate the loss of earnings associated with the removal of the exemption. The analysis provided on the level of disproportionate costs incurred due to increased sorting and handling time provides a detailed, if rather generic, breakdown of these costs across a range of vessels and fisheries. Additionally, it is apparent that the volume of fish to be discarded under the *de minimis* exemption forms only a fraction of the total unwanted catches, including horse mackerel. Even if the *de minimis* is kept, the costs for handling the residual unwanted catches will remain. Therefore, the estimate of the additional costs represents an over-estimate of the costs associated with the removal of the exemption. The French analysis of costs is generic and while it indicates there are additional costs associated with handling and storing unwanted catches, these are not quantified. The assertion that improvements in selectivity for horse mackerel in these fisheries are difficult achieve, intuitively, would appear reasonable. However, it is supported only with details from a review of selectivity studies that are not specific to horse mackerel. It is not possible to establish whether the study provided in support the exemption is entirely representative of all the fisheries covered by the exemption, which are numerous and diverse. The study relates

	primarily to Spanish vessels and while data and information for the French and Portuguese fleets operating in subareas 8 and 9 are included, it is not clear how such data and information have been used in the estimates. There is only limited information to explain the level of *de minimis* required. There does not appear to be any relationship between the *de minimis* requested and the levels of unwanted catch. The actual levels of unwanted catches are highly variable across fisheries and the actual level of resulting *de minimis* in some cases will account for only a fraction of the unwnated catches. There is no indication of steps to be taken to reduce the residual unwanted catches.
Mackerel caught by vessels using beam trawls, bottom trawls and seines) in ICES subareas 8 and 9 A maximum of 5 % of the total annual catches of mackerel in the specified fisheries. (See annexes 3.4 and 13);	**1. Exemption Status** Existing temporary exemption granted until the end of 2020 (Article 6-point 1g of Regulation (EU) No 2019/2237). **2. Definition of the fisheries** Detailed descriptions of the fleets by metier and fisheries is provided for Spain and Portugal and France for the year 2017. Information for France is also included for 2018. No information is provided for the Belgian fleet although it is likely catches of mackerel are minimal with beam trawls. Catch data for the period 2005 to 2017 are provided for Spain, France and Portugal. In 2017, 80% of catches of mackerel were taken with pelagic trawls which are not covered by this exemption. Landings of mackerel from bottom trawls account for <1% of total mackerel catches in SWW. Spain is estimated to have the highest discard rate for mackerel caught with bottom trawls (30.3%) with the segment, ES_OTB_DEF_>=70_0_0, having the highest discards rate. Discards rates for the Portuguese and French bottom trawl fleets were 0.84% and 4.11 % repsectively. The estimated average discard rate for mackerel over all countries was 20%. Based on the total catches of mackerel in bottom trawl fisheries (20,000 t), the estimated *de minimis* volume (5%) would be in the order of 1,000 tonnes. **3. Basis for the exemption** The information provided in support of the exemption is largely based on a detailed economic analysis of disproportionate costs resulting from the additional time required for handling and sorting unwanted catches on board Spanish vessels (General Secretariat for Fisheries, in cooperation with: Tragsatec, the University of Santiago de Compostela and AZTI Tecnalia, November 2019) - the economic viability of managing unintentional catches according to the regulations and affected by the Landing Obligation). This is a new study that was referred to in the supporting information provided in 2019 for this exemption. The same economic analysis of disproportionate costs and loss of earnings resulting from the additional time required for handling and sorting unwanted catches on board Spanish vessels is used as justification for this exemption. Additionally, a supporting annex from France highlights similar costs for the French gillnet fleet. According to estimates generated from the Spanish study, in terms of lost opportunity costs, bottom trawlers in subareas 8 and 9 are estimated to experience losses amounting to €1.296.237 if the requested *de minimis* exemption for mackerel is not granted. This

	equates to 14.11% 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.". **4. EWG 20-04 observations** Detailed data by fleet has been provided for the period 2015-2017. Catch data for 2018 and 2019 would be useful as it is not clear whether the situation in the fisheries has changed since 2017.No data are provided for Portugal. Costs of landing unwanted catches if the exemption is not granted have also been presented. The results of the analysis indicate the loss of earnings associated with the removal of the exemption. The analysis provided of the level of disproportionate costs incurred due to increased sorting and handling time provides a detailed, if rather generic, breakdown of these costs across a range of vessels and fisheries. Additionally, it is apparent that the volume of fish to be discarded under the *de minimis* exemption forms only a fraction of the total unwanted catches, including mackerel. Even if the *de minimis* is kept, the costs for handling the residual unwanted catches will remain. Therefore, the estimate of the additional costs represents an over-estimate of the costs associated with the removal of the exemption. It is not possible to establish whether the study provided in support the exemption is entirely representative of all the fisheries covered by the exemption, which are numerous and diverse. The study relates primarily to Spanish vessels and while data and information for the French and Portuguese fleets operating in subareas 8 and 9 are included, it is not clear how such data and information have been used in the estimates. There is only limited information to explain the level of *de minimis* required. There does not appear to be any relationship between the *de minimis* requested and the levels of unwanted catch. The actual levels of unwanted catches are highly variable across fisheries and the actual level of resulting *de minimis* in some cases will account for only a fraction of the unwanted catches. There is no indication of steps to be taken to reduce the residual unwanted catches.
Mackerel by vessels using gillnets in ICES subareas 8 and 9 and and CECAF zones 34.1.1, 34.1.2, 34.2.0 A maximum of 3 % of the total annual catches of mackerel in the specified fisheries. (See annexes 3.3, 7 and 9);	**1. Exemption Status** Existing temporary exemption granted until the end of 2020 (Article 6-point 1h of Regulation (EU) No 2019/2237). **2. Definition of the fisheries** Detailed descriptions of the fleets by metier and fisheries is provided for Spain and for France. Two French gillnet fisheries operate in ICES subarea 8, comprising gillnetters smaller than 15m (422 vessels) and larger than 15m (74 vessels). No information is provided for Portugal. Catch data for mackerel from 2005 to 2017 is provided for Spain, France and Portugal in two separate supporting annexes. In 2017, catches from gillnets made up less than 0.3% of the total catches of TAC species caught with gillnets in ICES subareas 8 and 9. Catches of mackerel from the French fleet represent less than 4% of the total catches of mackerel. Spain is estimated to have the highest percentage of discarded mackerel (13.3%). France has neglegible discards. The estimated average discard proportion for all countries corresponds to approximately 11.28 % of total mackerel catches. Based on the catch data in the FDI database, gillnetters in ICES

	subarea 8 and 9 caught 1 915 tonnes of mackerel. Thus, a *de minimis* of 3% would represent an estimate volume of discards of 57 tonnes for all European vessels using nets in ICES 8 and 9. **3. Basis for the exemption** The information provided in support of the exemption is largely based on a detailed economic analysis of disproportionate costs resulting from the additional time required for handling and sorting unwanted catches on board Spanish vessels (General Secretariat for Fisheries, in cooperation with: Tragsatec, the University of Santiago de Compostela and AZTI Tecnalia, November 2019) - the economic viability of managing unintentional catches according to the regulations and affected by the Landing Obligation). Based on the Spanish study, in terms of lost opportunity costs, gillnetters in subareas 8 and 9 and CECAF areas are estimated to experience losses amounting to €11,485 if the requested *de minimis* exemption for mackerel is not granted. This equates to 0.12% 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." Additionally, a supporting annex (Annex VII: *De minimis* request vessels using gillnets (GNS, GND, GNC, GTR, GTN) to catch mackerel in ICES subarea 8 and 9. from France highlights similar costs for the French gillnet fleet. The assertion is also made that because of the overall high selectivity of gillnet fisheries it is difficult to further improve selectivity for mackerel. A few studies on netters have been made in ICES area 8 and 9 by French under project REDRESS (FR) from 2104 to 2017 that according to the supporting information support this asssertion. It is also reported that spatio-temporal measures are already taken (voluntary) by French fishermen to reduce the catches of mackerel such as avoidance of juveniles, reduced immersion times and limits of the length of net; which also reduce unwanted catches. **4. EWG 20-04 observations** Detailed data by fleet has been provided for the period 2015-2017. Catch data for 2018 and 2019 would have been useful to gain insight as to whether the situation in the fisheries has changed since 2017. No data were provided for Belgium. The analysis provided of disproportionate costs shows that there will be an increase in handling and sorting time on board depending on vessels size. However, this is based on sorting catches of all species on board and not specific to mackerel. It is not possible to establish whether the study provided in support the exemption is entirely representative of all the fisheries covered by the exemption, which are numerous and diverse. The study relates primarily to Spanish vessels and while data and information for the French and Portuguese fleets operating in subareas 8 and 9 are included, it is not clear how such data and information have been used in the estimates. The justification for the exemption request based on selectivity improvements by regulatory measures to avoid the catches of mackerel will be hard to achieve without severe economic impacts on the revenue of the boats concerned is based on French selectivity trials, which do not relate specifically to mackerel. The conclusion that

	improving selectivity further is difficult, is intuitive, but it is not supported by quantitative information. There is only limited information to explain the level of *de minimis* required. There does not appear to be any relationship between the *de minimis* requested and the levels of unwanted catch. The actual levels of unwanted catches are highly variable across fisheries and in some cases, the actual level of resulting *de minimis* will account for only a fraction of the unwanted catches. There is no indication of steps to be taken to reduce the residual unwanted catches.

Fishery	Main findings of EWG 20-04
Megrim caught with bottom trawls, seines & beam trawls in ICES areas 8 & 9. A maximum of 5 % of the total annual catches of megrim in the specified fisheries. (See annexes 3 and 14)	**1. Exemption status** Existing temporary exemption granted until the end of 2020 (Article 6-point 1i of Regulation (EU) No 2019/2237). **2. Definition of fisheries** Detailed information on the Spanish, Portuguese, French and Belgian fleets catching megrim as a target or bycatch species in ICES subareas 8 and 9 for 2005-2017 is provided. The supporting Annex provides information on the number of fishing vessels by category. These include bottom pair trawls, otter trawls targeting demersal species, otter trawls targeting pelagic and demersal species, bottom other trawls targeting crustaceans and demersal fishes, gillnets. Spain reported 132 vessels in North Iberian waters, 134 vessels in South Iberian waters and 28 vessels in the Bay of Biscay). France had 601 vessels in the Bay of Biscay operating in several subareas and fisheries in ICES subareas 8 and 9. Most megrim catches in 2018 (>97%) came from the Bay of Biscay, Cantabrian Sea, Galician waters and Portuguese waters, whereas the rest comes from the Gulf of Cádiz. It is estimated that about 97% of the catch is taken by bottom trawlers. In the 2015-2017 period, the estimated average discard of megrim from bottom trawls corresponded to approximately 11% of total catches. French bottom trawl fleets were responsible for the largest percentages of megrim discards (15.5% discarded from a reported average total catch of 1746 tonnes). Spanish bottom trawlers had much lower levels of discards (2.8% discarded from a reported total catch of 1392 tonnes). However, reported discard rates are highly variable for all Member States in across subareas 8 and 9. Based on a reported total catch for 2017 of 2954 tonnes for the SWW region, a 5% *de minimis* volume would correspond to 143 tonnes of megrim. The supporting information estimates that approximately 49% of the total number of vessels subject to the Landing Obligation that operated using bottom trawls in ICES areas 8 and 9 have megrim catches. Significant differences in the megrim discard rates exist between different metiers. Typically, the percentage of discards range between 0 and 5% of the catch, with exception of the bottom otter trawls targeting both crustaceans and demersal fishes in South Spanish Iberian waters (OTB_MCD_>=55_0_0) (69.5%). French and Portuguese trawl fleets have much lower discards of megrim and therefore the *de minimis* exemption is less relevant for these trawl fleets. **3. Basis for the exemption**

	The information provided in support of the exemption is largely based on a detailed economic analysis of disproportionate costs resulting from the additional time required for handling and sorting unwanted catches on board Spanish vessels (General Secretariat for Fisheries, in cooperation with: Tragsatec, the University of Santiago de Compostela and AZTI Tecnalia, November 2019) - the economic viability of managing unintentional catches according to the regulations and affected by the Landing Obligation). The study indicates that in terms of lost opportunity costs, Bottom trawlers in subareas 8 and 9 are estimated to experience losses amounting to €726.228 if the requested *de minimis* exemption for megrim is not granted. This equates to 7.9% 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. No information is provided on research to improve selectivity in fisheries where megrim is caught as a target or bycatch species. The supporting information reports that despite advances and availability of fishmeal and fish oil manufacturing Spanish companies, outlets for unwanted megrim catches remain extremely limited. **4. EWG 20-04 observations** Detailed data by fleet have been provided for the period 2015-2017. Catch data for 2018 and 2019 would have been useful to gain insight as to whether the situation in the fisheries has changed since 2017. No data are provided for Belgium. Similarly, the analysis provided of disproportionate costs shows that there will be an increase in handling and sorting time on board depending on vessels size. However, this is based on sorting catches of all species on board and not specific to megrim. It is not possible to establish whether the study provided in support the exemption is entirely representative of all the fisheries covered by the exemption, which are numerous and diverse. The study relates primarily to Spanish vessels and while data and information for the French, Belgian and Portuguese fleets operating in subareas 8 and 9 are included, it is not clear how such data and information have been used in the estimates. There is only limited information to explain the level of *de minimis* required. There does not appear to be any relationship between the *de minimis* requested and the levels of unwanted catch. The actual levels of unwanted catches are highly variable across fisheries and the actual level of resulting *de minimis* in some cases will account for only a fraction of the unwanted catches. There is no indication of steps to be taken to reduce these residual unwanted catches.
Fishery	Main findings of EWG 20-04

Megrim caught by vessels using gillnets in ICES subareas 8 and 9 A maximum of 4 % of the total annual catches of megrim in the specified fisheries. (See annexes 3 and 10)	**1. Exemption status** Existing temporary exemption granted until the end of 2020 (Article 6-point 1i of Regulation (EU) No 2019/2237). **2. Definition of fisheries** Detailed information on the Spanish and French fleets fishing megrim in ICES subareas 8 and 9 is provided for the period 2005-2017 period. The supporting Annex provides information on the number of fishing vessels using gillnets from Spain (331 vessels) and France (496 vessels) fishing in North Iberian waters and Bay of Biscay respectively. These vessels target a range of species in coastal and offshore waters, among which megrim is an important bycatch. Spanish gillnetters caught an annual average of 20 tonnes and France 26 tonnes. The corresponding estimated *de minimis* volume (1.84 tonnes) corresponds to 4% of the total catch (46 tonnes) Data on megrim landings is given for Spain and France. Catches of megrim by gillnetters make up around 3% of their total catches. Data on megrim discards is only provided for Spain and are reportedly low with an average rate of 2.7% of the total catch. The average discard range for all species is 4.7% of the total catch. For Portuguese gillnetters, discards of megrim are "residual" and are mostly damaged individuals and no quantitative information is presented. The percentage of discards ranged between 0 and 14% across métiers. The GNS_DEF_60-79_0_0 métier in North and Northwest Iberian waters had the highest discard rate at 14.3%. **3. Basis for the exemption** The information provided in support of the exemption is largely based on a detailed economic analysis of disproportionate costs resulting from the additional time required for handling and sorting unwanted catches on board Spanish vessels (General Secretariat for Fisheries, in cooperation with: Tragsatec, the University of Santiago de Compostela and AZTI Tecnalia, November 2019) - the economic viability of managing unintentional catches according to the regulations and affected by the Landing Obligation). The study indicates that in terms of lost opportunity costs, gillnetters in subareas 8 and 9 are estimated to experience losses amounting to €8.808 if the requested *de minimis* exemption for megrim is not granted. This equates to 0.1% 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. The supporting information reports that despite advances and availability of fishmeal and fish oil manufacturing Spanish companies, outlets for unwanted megrim catches remain extremely limited. **4. EWG 20-04 observations** Detailed data by fleet have been provided for the period 2015-2017. Catch data for 2018 and 2019 would have been useful to gain insight as to whether the situation in the fisheries has changed since 2017. No discard data were provided for France, which has the highest reported landings. The analysis provided of disproportionate costs shows that there will be an increase in handling and sorting time on board depending on vessels size. However, this is based on sorting catches of all species on board and not specific to megrim.

	It is not possible to establish whether the study provided in support the exemption is entirely representative of all the fisheries covered by the exemption, which are numerous and diverse. The study relates primarily to Spanish vessels and while data and information for the French and Portuguese fleets operating in subareas 8 and 9 are included, it is not clear how such data and information have been used in the estimates. At the estimated level of *de minimis* volume requested and the reported level of unwanted catches means 100% of unwanted catches of megrim could potentially be discarded. The *de minimis* volume is estimated to be around 4 tonnes.
Fishery	Main findings of EWG 20-04
Plaice caught with bottom trawls, seines & beam trawls in ICES areas 8 & 9 A maximum of 5 % of the total annual catches of plaice in the specified fisheries. (See annex 3 and 5)	**1. Exemption status** Existing temporary exemption granted until the end of 2020 (Article 6-point 1i of Regulation (EU) No 2019/2237). **2. Definition of fisheries** Detailed information on French bottom trawl fleets with bycatch of plaice in Bay of Biscay is provided. Three categories are established: bottom-trawlers (OTB, OTT, PTB) targeting demersal fishes and cephalopods (393 vessels in 2018); Bottom-trawlers targeting *Nephrops* (195 vessels in 2018) and Danish seines (SDN) targeting demersal species (13 vessels in 2018). No information is provided for the Spanish and Portuguese fleets. Catch estimates for plaice are given for the French fleets based on the FDI database for the period 2013-2016. Plaice catches in ICES subarea 8 and 9 are estimated at 79 tonnes representing less than 0.3% of the total catches of TAC species from these areas. For all bottom trawls in SWW, the estimates of unwanted catches of plaice are minimal. However, the estimates are uncertain since no quantitative information on plaice catches by the Portuguese trawl fleet were provided. Based on the FDI data (average 2013-2016), the estimated maximum volumes of plaice that would be theoretically discarded under a *de minimis* (5%) would be 4 tonnes for all European vessels using bottom trawls in ICES 8 and 9. **3. Basis for the exemption** The basis for the exemption is a French report (Annex V: *De minimis* request for vessels using bottom trawl (OTB, OTT, PTB, OT, TBN, TBS, TX, SSC, SPR, TB, TBB, SDN, SX, SV) to catch plaice in ICES subarea 8 and 9) which indicates improvements in selectivity being difficult to achieve, This is based on a review of historic selectivity studies carried out by France. These studies were carried out in the relevant French fisheries but do not specifically reference plaice catches. There is no reference to disproportionate costs. **4. EWG 20-04 observations** As in 2019, the exemption is only supported with qualitative arguments on selectivity, which do not differentiate between species and fisheries or relate to plaice. Intuitively, given the low level of unwanted catches of plaice and their morphology which makes improving selectivity difficult, it is reasonable to assume improving selectivity further would be difficult, but no attempt has been made to support this assumption.

	There is only limited information to explain the level of *de minimis* required. There does not appear to be any relationship between the *de minimis* requested and the levels of unwanted catch. The actual levels of unwanted catches are virtually zero and the estimated level of resulting *de minimis* would cover 100% of the unwanted catches, assuming such catches would remain very low. Only partial catch data has been presented for the French fleet. No information is provided for other fleets operating in the same fisheries. The information presented also is from 2016 and it is unclear how representative it is of the current situation in the relevant fisheries.
Fishery	Main findings of EWG 20-04
Plaice caught by vessels using gillnets in ICES subareas 8 and 9 A maximum of 3 % of the total annual catches of plaice in the specified fisheries (See annex 3)	**1. Exemption status** Existing temporary exemption granted until the end of 2020 (Article 6-point 1i of Regulation (EU) No 2019/2237). **2. Definition of fisheries** A description of the French fisheries in the Bay of Biscay (ICES Area 8) is provided. The fleets involved are the same fleets referred to in the horse mackerel, mackerel and megrim gillnet exemptions. No information is provided for other Member States. No catch data is provided and other than limited qualitative information there are no data presented on the level of unwanted catches of plaice in gillnet fisheries in subareas 8 and 9. **3. Basis for the exemption** No information is presented to support this exemption. **4. EWG 20-04 observations** In the absence of any substantive information to support this exemption, no evaluation can be made. The level of unwanted catches is so low that a *de minimis* exemption to discard plaice in the fisheries concerned is likely permit 100% of unwanted catches of plaice can be discarded
Fishery	Main findings of EWG 20-04
Anglerfish caught with bottom trawls, seines & beam trawls in ICES areas 8 & 9 A maximum of 5 % of the total annual catches of anglerfish in the specified fisheries. (See annex 3 and 18)	**1. Exemption status** Existing temporary exemption granted until the end of 2020 (Article 6-point 1i of Regulation (EU) No 2019/2237). **2. Definition of fisheries** Detailed information on the Spanish and French fleets with catches of anglerfish as a target or bycatch in subareas 8 and 9 over the period 2005-2017 period is provided. This includes 132 vessels in North Iberian waters, 134 vessels in South Iberian waters and 28 vessels in the Bay of Biscay from Spain and 601 French vessels in the Bay of Biscay. No information is presented for the Portuguese and Belgian fleet. Detailed landings are provided by all countries in ICES subareas 8 and 9. Anglerfish (*L. piscatorius and L. budegassa*) landings from trawls make up between 30% of total catches of anglerfish by all gears in the Cantabrian and Atlantic Iberian waters and 80% of the total catches of anglerfish by all gears from the Bay of Biscay, depending on the area and fishery. Beam trawls make up between 7% -10% of catches of

	anglerfish. Discard data are presented for the Spanish trawl fleets for 2017 only, indicating that the average proportion of the anglerfish catch discarded by that fleet is 0.4% (6,217 tonnes caught of which 25 tonnes was unwanted catch). The proportion discarded varies between métiers from 0% and 19%. The highest percentage is reported by the Spanish Iberian bottom otter trawls targeting both crustaceans and demersal fishes (OTB_MCD_>=55_0_0) in the Gulf of Cádiz and South Portuguese waters which are reported in the Spanish report to discard 66% of the total volume of discarded anglerfish of the entire Spanish trawling fleet. **3. Basis for the exemption** The information provided in support of the exemption is largely based on a detailed economic analysis of disproportionate costs resulting from the additional time required for handling and sorting unwanted catches on board Spanish vessels (General Secretariat for Fisheries, in cooperation with: Tragsatec, the University of Santiago de Compostela and AZTI Tecnalia, November 2019) - the economic viability of managing unintentional catches according to the regulations and affected by the Landing Obligation). The study indicates that in terms of lost opportunity costs, bottom trawlers in subareas 8 and 9 are estimated to experience losses amounting to €1.578.777 if the requested *de minimis* exemption for anglerfish is not granted. This equates to 17.2% 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. The supporting information reports that despite advances and availability of fishmeal and fish oil manufacturing Spanish companies, outlets for unwanted anglerfish catches remain extremely limited. **4. EWG 20-04 observations** Detailed data have been provided for the French and Spanish fleets. Only partial catch data are presented with only discard data provided for Spain. No information on the level of unwanted catches for France is given, even though France accounts for 70% of the total landings of anglerfish in ICES subareas 8 and 9. Only limited catch and fleet information is presented for Portugal and no information is supplied for Belgium. Costs of landing unwanted catches if the exemption is not granted have been presented. The analysis also provided of disproportionate costs shows that there will be an increase in handling and sorting time on board depending on vessels size. However, this is based on sorting catches of all species on board and not specific to anglerfish. It is not possible to establish whether the study provided in support the exemption is entirely representative of all the fisheries covered by the exemption, which are numerous and diverse. The study relates primarily to Spanish vessels and while data and information for the French, Belgian and Portuguese fleets operating in subareas 8 and 9 are included, it is not clear how such data and information have been used in the estimates. There is only limited information to explain the level of *de minimis* required. There does not appear to be any relationship between the *de minimis* requested and the levels of unwanted catch. The actual levels of unwanted catches are highly variable across fisheries and the actual level of resulting *de minimis* in some cases will account for only a

	fraction of the unwanted catches. There is no indication of steps to be taken to reduce the residual unwanted catches.
Fishery	Main findings of EWG 20-04
Anglerfish caught by vessels using gillnets in ICES subareas 8 and 9 A maximum of 4 % of the total annual catches of anglerfish in the specified fisheries. (See annexes 3 and 12)	**1. Exemption status** Existing temporary exemption granted until the end of 2020 (Article 6-point 1i of Regulation (EU) No 2019/2237). **2. Definition of fisheries** Detailed information on the Spanish and French fleets fishing with catches of anglerfish as a target or bycatch species in subareas 8 and 9 over the period 2005-2017 period is provided. This information gives the number of fishing vessels from a range of gillnet fisheries. The fisheries involve 331 and 496 French vessels No information is presented for the Portuguese fleet. Belgium has no reported gillnet activity in SWW. Landings data for anglerfish catches in gillnet fisheries is given for Spain and France in ICES subareas 8 and 9. Anglerfish (*L. piscatorius and L. budegassa*) landings from gillnets make up between 6% in the Bay of Biscay and 57% from Cantabrian and Atlantic Iberian waters. Discard data are presented for the Spanish gillnet fleets for 2017 only, indicating that the proportion of anglerfish discarded by the Spanish fleet is 3.5%. This varies between métiers from 0% to 4.7%. In 2017, Spanish gillnetters caught an annual average of 619 tonnes of anglerfish (29% of the total catches of anglerfish by gillnets) and France 1533 tonnes (70% of the total anglerfish catches in gillnets). Based on the reported total catches of anglerfish for the combined Spanish and French gillnet fleets (2014-2016), a *de minimis* exemption to discard 4% equates to 86 tonnes. **3. Basis for the exemption** The information provided in support of the exemption is largely based on a detailed economic analysis of disproportionate costs resulting from the additional time required for handling and sorting unwanted catches on board Spanish vessels (General Secretariat for Fisheries, in cooperation with: Tragsatec, the University of Santiago de Compostela and AZTI Tecnalia, November 2019) - the economic viability of managing unintentional catches according to the regulations and affected by the Landing Obligation). The study indicates that in terms of lost opportunity costs, gillnetters in subareas 8 and 9 are estimated to experience losses amounting to €384.132 if the requested *de minimis* exemption for anglerfish is not granted. This equates to 4.2% 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. **4. EWG 20-04 observations** Detailed data have been provided on the structure of the French and Spanish fleets. Only partial catch data are presented with only discard data provided for Spain. No information on the level of unwanted catches for France is given, even though France has 70% of the total landings of anglerfish from ICES subareas 8 and 9. Only limited qualitative catch information is presented for Portugal.

	Costs of landing unwanted catches if the exemption is not granted have been presented. The analysis also provides an indication of the disproportionate costs and shows that there will be an increase in handling and sorting time on board depending on vessels size. However, this is based on sorting catches of all species on board and not specific to anglerfish. It is not possible to establish whether the study provided in support the exemption is entirely representative of all the fisheries covered by the exemption, which are numerous and diverse. The study relates primarily to Spanish vessels and while data and information for the French and Portuguese fleets operating in subareas 8 and 9 are included, it is not clear how such data and information have been used in the estimates. There is only limited information to explain the level of *de minimis* required. There does not appear to be any relationship between the *de minimis* requested and the levels of unwanted catch. The actual levels of unwanted catches are highly variable across fisheries and the actual level of resulting *de minimis* is small and spread across a wide area and nearly 1000 vessels. Control and motoring of uptake of anglerfish discarded under the *de minimis* exemption would be challenging.

Exemption	Main Findings of EWG 20-04
Whiting -by vessels using bottom trawls, seines & beam trawls in ICES subarea 8 A maximum of 5 % of the total annual catches of whiting in the specified fisheries (See Annex 4)	**1. Exemption status** Existing temporary exemption granted until the end of 2020 (Article 6-point 1o of Regulation (EU) No 2019/2237). **2. Definition of the fishery** Detailed information is provided for French bottom trawler fleet with bycatch of whiting. This includes 393 vessels (8-37m) targeting demersal fishes and cephalopods in the Bay of Biscay. Catches of whiting correspond to 6% of total bottom trawl catches in 2018. Unwanted catches of whiting make up 15% of the total whiting catches of the French bottom trawl fleet. There is also a French bottom otter-trawl or otter twin trawls fleet of 195 vessels targeting *Nephrops* and 13 Danish seiners targeting demersal species operating in the Bay of Biscay. Both of these fleets would also be subject to the exemption. Catches of whiting for these French fleets combined amount to around ~2,900 tonnes/year. Unwanted catches of whiting amount to 35-37% of total whiting catches. Based on the reported catches of whiting by the combined French bottom trawl fleet in 2018, a 5% *de minimis* exemption would equate to about 140 tonnes. **3. Basis for the exemption** The basis for the exemption is a French report (Annex IV: *De minimis* request for vessels using bottom trawls (OTB, OTT, PTB, OT, TBN, TBS, TX, SSC, SPR, TB, TBB, SDN, SX, SV) to catch whiting in ICES subarea 8.), which indicates improvements in selectivity being difficult to achieve. This is based on a review of historic selectivity studies carried out by France. These studies show that if the size selectivity of the gear is improved, there are significant losses of marketable catch. They cover a range of species and are not specific to whiting. Further information is provided on trials carried out in 2018, with four different prototypes grids in the Bay of Biscay *Nephrops* trawl fishery. During 2019, one prototype was selected and tested. The supporting information indicates that a grid design tested during the CELSELEC

	project in the Celtic Sea will be tested in the Bay of Biscay in future. Results of these trials are not presented. The supporting Annex contends that the gear used is already selective for whiting and this combined with is the low catch of whiting make, the *de minimis* (~140 tonnes /year) to be the best alternative that provides the fishery with the required management flexibility. This is pending the results from the planned trials with the grid designs. **4. EWG 20-04 Observations** As noted in 2019, the arguments presented are generic and not specific to the relevant fisheries, accepting that there are indications that improving selectivity is difficult in mixed demersal fisheries in which whiting are caught without significant losses of other marketable catch. The selectivity information provided has also previously be used to support this, and other exemptions. Many of the studies date back to 2014 and earlier, noting new studies are ongoing. There is only limited information to explain the level of *de minimis* required. There does not appear to be any relationship between the *de minimis* requested and the levels of unwanted catch. The actual levels of unwanted catches are much greater than the estimated *de minimis* volume and will only cover a fraction of the unwanted catches. However, the supporting Annex does refer to further selectivity work that will be undertaken to try to reduce these residual unwanted catches. As whiting, approach the southern limit of their distribution in subarea 8, it is unlikely that the exemption would be relevant for many Spanish and Portuguese vessels No information is presented for Belgium although it is likely the Belgium beam trawl fleet would have some level of whiting catches.
Exemption	Main Findings of EWG 20-04
Whiting caught by vessels using gillnets in ICES subarea 8 A maximum of 4 % of the total annual catches of whiting in the specified fisheries. (See Annexes 8 and 9)	**1. Exemption status** Existing temporary exemption granted until the end of 2020 (Article 6-point 1p of Regulation (EU) No 2019/2237). **2. Definition of the fishery** Detailed information is provided for French gillnet fleets with a bycatch of whiting. These fleets are diverse, composed of many small vessels, which deploy different gears with a wide range of mesh sizes. These fleets include 422 vessels (11m) targeting mixed species including sole and anglerfish. Catches of whiting correspond to 2% of total catches in 2018. Unwanted catches of whiting make up 20% of the total whiting catches. There is also a French gillnet fleet of 74 vessels operating further offshore in the Bay of Biscay targeting sole, anglerfish and crustaceans. Discard rates for whiting of up to 40% are reported for this fleet although a discard rate of 65% is reported for the metier GTR_GNS_DEF_CRU_VIII. Overall unwanted catches are highly variable across the French gillnet fleets ranging from 0.7% - 68%. Very limited information is provided by Spain. Portugal reports no catches of whiting. **3. Basis for the exemption** The basis for the exemption is a French report (Annex VIII: *De minimis* request for vessels using gillnets (GNS, GND, GNC, GTR, GTN) to catch whiting in ICES subarea 8) which indicates

	improvements in selectivity being difficult to achieve. Reference is made to a French study (REDRESSE) from 2014 which found no practical solutions to improve selectivity or reduce unwanted catches in general. This study was not specific to whiting. There is no reference to disproportionate costs. Generic arguments about increased costs of handling are also presented as in previous years. No further detail over and above what was presented in 2019 is provided. **4. EWG 20-04 Observations** Only partial catch data is presented and the information on levels of unwanted catch is incomplete. As in 2019, while the arguments presented regarding difficulties in improving selectivity are credible, the qualitative nature of the information presented make it difficult to quantify the potential scale of losses of marketable catch. It is also not clear how expected losses would vary across the different gillnet fisheries involved. The arguments on disproportionate costs are generic and do not contain any specific information related to whiting. There is only limited information to explain the level of *de minimis* required. There does not appear to be any relationship between the *de minimis* requested and the large variation in reported levels of unwanted catch. The actual levels of unwanted catches are much greater than the estimated *de minimis* volume in some fisheries but is zero in others.
Exemption	Main Findings of EWG 20-04
Pollack caught vessels using bottom trawls, seines & beam trawls in 8 and 9 A maximum of 5 % of the total annual catches of pollack in the specified fisheries. (See Annex 3)	**1. Exemption status** Existing temporary exemption granted until the end of 2020 (Article 6-point 1q of Regulation (EU) No 2019/2237). **2. Definition of the fishery** Detailed information is provided for French bottom trawler fleet with a bycatch of pollack. This includes 393 vessels (8-37m) targeting demersal fishes and cephalopods in the Bay of Biscay. There is also a French bottom otter-trawl or otter twin trawls fleet of 195 vessels targeting *Nephrops* and 13 Danish seiners targeting demersal species operating in the Bay of Biscay. No information is provided on the level of unwanted catches for pollack. No information is provided for Spain and Belgium. Portugal reports no unwanted catches. **3. Basis for the exemption** No information is presented to support this exemption. **4. EWG 20-04 Observations** In the absence of any substantive information to support this exemption, no evaluation can be made. The level of unwanted catches is so low that a *de minimis* exemption to discard pollack in the fisheries concerned is likely to permit 100% of unwanted catches of pollack to be discarded.
Exemption	Main Findings of EWG 20-04
Pollack caught by vessels using gillnets	**1. Exemption status** Existing temporary exemption granted until the end of 2020 (Article

in ICES subareas 8 and 9- A maximum of 2 % of the total annual catches of pollack in the specified fisheries. (See Annex 3)	6-point 1q of Regulation (EU) No 2019/2237). **2. Definition of the fishery** Detailed information is provided for French gillnet fleets with bycatch of pollack. These fleets are diverse, composed of many small vessels, which deploy different gears with a wide range of mesh sizes. These fleets include 422 vessels (11m) targeting mixed species including sole and anglerfish. There is also a French gillnet fleet of 74 vessels operating further offshore in the Bay of Biscay targeting sole, anglerfish and crustaceans. Discard rates of up to 1.3% for pollack are reported for this fleet. Very limited information is provided by Spain. Portugal reports no catches of whiting. **3. Basis for the exemption** No information is presented to support this exemption. **4. EWG 20-04 Observations** In the absence of any substantive information to support this exemption, no evaluation can be made. The level of unwanted catches is so low that a *de minimis* exemption to discard pollack in the fisheries concerned is likely permit all unwanted catches of pollack to be discarded.
Exemption	Main Findings of EWG 20-04
Red Sea Bream caught by vessels using bottom trawls, seines & beam trawls in 9a A maximum of 5 % of the total annual catches of red sea bream in the specified fisheries. (See Annex 24)	**1. Exemption status** This exemption was also submitted in 2019 but was not included in the discard plan for 2020. **2. Definition of the fishery** Detailed information of the fleets and catches from the relevant Spanish and Portuguese fleets. Spain reports 133 trawlers targeting crustaceans and mixed demersal species in the Gulf of Cadiz (OTB_MCD_55_0_0) which have small catches of Red Sea Bream averaging 12,04 tonnes /year with an average discard rate of 0.64%. Portugal reports a low bycatch of red sea bream in the fleet (32 vessels) targeting mixed demersal species (OTB_DEF). These bycatches amount to 20,33 tonnes/year with an average discard rate of 0.34%. France and Belgium report no catches of Red Sea Bream in their bottom trawl and beam trawl fisheries in SWW. The estimated *de minimis* volume (5%) based on catches of 32 tonnes equates to 1.6 tonnes of red sea bream for all bottom trawl fisheries in SWW. **3. Basis for the exemption** The information provided in support of the exemption is largely based on a detailed economic analysis of disproportionate costs resulting from the additional time required for handling and sorting unwanted catches on board Spanish vessels (General Secretariat for Fisheries, in cooperation with: Tragsatec, the University of Santiago de Compostela and AZTI Tecnalia, November 2019) - the economic viability of managing unintentional catches according to the regulations and affected by the Landing Obligation). Based on extensive sampling (14 vessels over 46 days covering 93 hauls), estimates of the socio-economic impact of the application of the Landing Obligation are derived for the fleet segments under study. 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. The supporting information states that improvements in selectivity are difficult to achieve but no further information to support this assertion is included. **4. EWG 20-04 Observations** Detailed catch data by fleet has been provided and a detailed analysis of the costs of landing *de minimis* volumes unwanted catches if the exemption is not granted has also been presented. This has been tailored to the fleets with a bycatch of red sea bream. The analysis provided of disproportionate costs shows that there will be an increase in handling and sorting time on board depending on vessels size. However, this is based on sorting catches of all species on board and not specific to red sea bream. The *de minimis* proportion requested (5%) is higher than the reported discard proportion, which is below 1% for the relevant fisheries combined. Hence, if granted, the exemption is likely to permit 100% of unwanted catches of red sea bream to be discarded."
Hake caught by vessels using trawls and seines in ICES subareas 8 and 9 A maximum of 5 % of the total annual catches of hake in the specified fisheries. (See annexes 3.2, 3.4, 21 and 21 bis);	**1. Exemption basis** Existing temporary exemption granted until the end of 2020 (Article 6-point 1A of Regulation (EU) No 2019/2237). **2. Definition of the fisheries** Detailed descriptions of the fleets by metier and fisheries that are impacted by this exemption is provided (Annex 21b - *De minimis* Exemption Consolidation Request of 5% for Hake (*Merluccius merluccius*) for 2020 and thereafter Proposed from Spain for Trawlers Catching Hake in the Bay of Biscay ICES 8abd). Updated information for France for 2018 including the number of vessels, information regarding fleet activity, and mesh sizes used is given. Catch data by Member State for the period 2015- 2017 were provided. Average total catches (in tonnes) of bottom trawl-caught hake in ICES subareas 8 and 9 as well as the associated discard percentage rates are presented. On average the discard rate for all trawl fleets in thea area is 25.87%. Spain and France have the highest discard rates of around 28%. The metiers ES_PTB_DEF_>=70_0_0 and FR_OTB_CRU_8a,b had the highest discard rates ; For the Portuguese fleet a discard rate of less than 1% is reported. **3. Basis for the exemption** The information provided in support of the exemption is largely based on a detailed economic analysis of disproportionate costs resulting from the additional time required for handling and sorting unwanted catches on board Spanish vessels (General Secretariat for Fisheries, in cooperation with: Tragsatec, the University of Santiago de Compostela and AZTI Tecnalia, November 2019) - the economic viability of managing unintentional catches according to the regulations and affected by the Landing Obligation). The study indicates that in terms of lost opportunity costs, bottom trawlers in subareas 8 and 9 are estimated to experience losses

	amounting to €2.763.053 if the requested *de minimis* exemption for hake is not granted. This equates to 30.1% 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. A review of selectivity experiments carried out to improve selectivity in hake fisheries is also provided (Annex 21- *De minimis* Exemption Consolidation Request of 5% for Hake (*Merluccius merluccius*) for 2021, 2022 and 2023 proposed from Spain for Trawlers Catching Hake in the Bay of Biscay ICES 8abd). This reports on the results of selectivity trials and was presented in 2019 as supporting information. While most of such trials have shown reductions in unwanted catches of hake, uptake for these gears has not occurred due to losses of marketable catch. Further trials by Spain are planned in 2020-2021 to fill the gaps in knowledge and assess whether further improvements can be achieved. **4. EWG 20-04 observations** Detailed analyses of catch and landing distribution by fleet and for the species under examination, for both Spain and Portugal, as well as costs of landing *de minimis* volumes if the exemption was not granted are presented. Such analyses have been tailored to the fleets targeting hake and to those fleets with hake as a bycatch. The results indicate that there will be an increase in handling and sorting time on board depending on vessels size. The results are based on sorting catches of all species on board and not specific to hake, although given hake forms a high proportion of the catches in many metiers in SWW, the additional sorting and handling of unwanted catches would form a significant proportion of these costs. There is only limited information to explain the level of *de minimis* required. There does not appear to be any relationship between the *de minimis* requested and the levels of unwanted catch. The actual levels of unwanted catches are much greater than the estimated *de minimis* volume. The *de minimis* discards will account for only a fraction of the unwanted catches of hake. However, the supporting Annex does refer to further selectivity work that will be carried out to try to find solutions to reduce these residual unwanted catches.
Exemption	Main Findings of EWG 20-04
Sole caught by vessels using bottom - trawls, seines and beam trawls in 9a A maximun of 5 % of the total annual catches of sole in the specified fisheries. (See Annex 25)	**1. Exemption status** This exemption was submitted in 2019 but was not included in the discard plan for 2020. There are existing exemptions for sole in ICES divisions 8a and 8b. **2. Definition of the fishery** Detailed information of the fleets and catches from the relevant Spanish and Portuguese fleets. Spain reports bycatch of sole from 55 trawlers targeting crustaceans in the Gulf of Cadiz (OTB_MCD_55_0_0) of 40,28 tonnes per annum; with an average discard rate of 0.08%. Portugal reports bycatch of sole in the fleet (32 vessels) targeting mixed demersal species (OTB_DEF). These bycatches amount to 59.03 tonnes and no unwanted catches. France reported no catches of sole in their bottom trawl and beam trawl fisheries in subarea 9a. The estimated *de minimis* volume of 5% based on catches of 99 tonnes equates to 4.95 tonnes of sole for all bottom trawl fisheries in

	9a. **3. Basis for the exemption** The information provided in support of the exemption is largely based on a detailed economic analysis of disproportionate costs resulting from the additional time required for handling and sorting unwanted catches on board Spanish vessels (General Secretariat for Fisheries, in cooperation with: Tragsatec, the University of Santiago de Compostela and AZTI Tecnalia, November 2019) - the economic viability of managing unintentional catches according to the regulations and affected by the Landing Obligation). The study indicates that in terms of lost opportunity costs, bottom trawlers 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. The supporting information states that improvements in selectivity are difficult to achieve but no further information to support this assertion is included. **4. EWG 20-04 Observations** Detailed catch data by fleet has been provided and a detailed analysis of the costs of landing *de minimis* volumes unwanted catches if the exemption is not granted has also been presented. The analysis provided of disproportionate costs shows that there will be an increase in handling and sorting time on board depending on vessels size. However, this is based on sorting catches of all species on board and not specific to sole. It is not possible to establish whether the study provided in support the exemption is entirely representative of all the fisheries covered by the exemption, which are numerous and diverse. The study relates primarily to Spanish vessels and while data and information for the Portuguese fleet operating in subareas 9a are included, it is not clear how such data and information have been used in the estimates The *de minimis* proportion requested is higher, then the reported discard proportion, which is below 1% for the relevant fisheries combined. Hence, if granted, the exemption is likely to permit 100% of unwanted catches of sole to be discarded."
Anchovy caught by vessels using beam trawls, bottom trawls and seines in ICES subareas 8 and 9. A maximum of 5 % of the total annual catches of anchovy in the specified fisheries. (See annex 23)	**1. Exemption basis** This exemption was submitted in 2019 but was not included in the discard plan for 2020. **2. Definition of the fisheries** Catch data and fisheries information are provided for BE, ES, FR and PRT. Estimated landings data are provided from 2005 to 2017 provided for subarea 8 and division 9a. For 2017, catches of anchovy are mostly from purse seine fisheries, which are not covered by this exemption. Discard data are provided for Spain, France and Portugal, for 2015, 2016, 2017 for bottom trawl-caught anchovy in ICES subareas 8 and 9 subareas. The total average catch (2015-2017) of anchovy in ICES subareas 8 and 9 over the period 2015-2017 with bottom trawls is

	218 tonnes. For the Spanish bottom trawl fleets, 100% of anchovy were discarded. The Portuguese trawl fleet reported a discard rate of 14.9%. No disacrd rate is presented for France. The estimated average discard rate for all countries corresponds to approximately 90.9 % of the total catches; of anchovy in bottom trawls although the volumes are small. Based on total catches of 218 tonnes, the estimated *de minimis* volume (5%) is 11 tonnes. **3. Basis for the exemption** The information provided in support of the exemption is largely based on a detailed economic analysis of disproportionate costs resulting from the additional time required for handling and sorting unwanted catches on board Spanish vessels (General Secretariat for Fisheries, in cooperation with: Tragsatec, the University of Santiago de Compostela and AZTI Tecnalia, November 2019) - the economic viability of managing unintentional catches according to the regulations and affected by the Landing Obligation). The study indicates that in terms of lost opportunity costs, bottom trawlers in subareas 8 and 9 are estimated to experience losses amounting to €2.803 if the requested *de minimis* exemption for anchovy is not granted. This equates to 0.03% 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. **4. EWG 20-04 observations** Detailed data by fleet have been provided for the period 2015-2017. Catch data for 2018 and 2019 would have been useful to gain insight as to whether the situation in the fisheries has changed since 2017. No data are provided for Belgium. Costs of landing unwanted catches if the exemption is not granted have also been presented, although the costs presented apply to a range of species caught in the fisheries. It is not possible to establish whether the study provided in support the exemption is entirely representative of all the fisheries covered by the exemption, which are numerous and diverse. The study relates primarily to Spanish vessels and while data and information for the French and Portuguese fleets operating in subareas 8 and 9 are included, it is not clear how such data and information have been used in the estimates. There is only limited information to explain the level of *de minimis* required. There does not appear to be any relationship between the *de minimis* requested and the levels of unwanted catch. The actual levels of unwanted catches are highly variable across fisheries and the actual level of resulting *de minimis* in some cases will account for only a fraction of the unwanted catches of anchovy. There is no indication of steps to be taken to reduce these residual unwanted catches.

7.2.SWW – Proposals for 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

High Survivability	
Fishery	Main Findings of EWG 20-04
Skates and rays (Rajiformes) caught with all gears in ICES subareas 8 and 9 Art. 3 - 2 (a) (d)	**All except Cuckoo ray** **1. Exemption status** Additional scientific information supporting existing exemption / roadmap and report on the progress made to the survivability programs **2. Survival evidence** 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%. New evidence was provided for thornback ray in area 9a with bottom otter trawl. Barragán-Méndez et al. (report) reported survival ranging between 60.7 ± 0.1 % and 91.1 ± 0.0 % (mean ± SEM). The ICES critical review was applied. 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). A tagging experiment on undulate ray in area 8a was presented to EWG 19-08 but could not be evaluated without the full report, is provided (Morfin et al., 2019). The ICES critical review was applied, and the estimates were considered robust. After capture under commercial conditions (small otter trawl), 144 undulate rays were tagged with an acoustic transmitter, and at least 49% (95%CI 42-57%) were found to have survived the first 14 days after released. Smaller individuals had a lower chance of survival. **3. Fishery context** Information was evaluated in EWG 19-08 for the Portuguese fleet including gear type, number of vessels and estimated landings and discards. 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 were 515.7 t with 484 t discards in 2017. There was no additional information regarding the Spanish fleet. **4. Survival and fishery compatibility** As evaluated in EWG 19-08, the vitality data appeared to adequately cover the fishing activity, characteristics and conditions of the Portuguese trammel net and trawl fisheries. Survival evidence was relevant for the French small otter trawl fishery, which contribute to 29% of the French discards in area 8a for the undulate ray (of concern given high discard rate in coastal fisheries for the areas of interest) (Morfin et al., 2019). 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. Because the trial in area 9a was conducted in March, one may expect lower chance for survival in the summer if water temperature is indeed showed to be higher. **5. Additional evidence** There was significant effort in addressing data gaps as the significant number of ongoing projects can show, and in reporting against the roadmap. An upcoming Portuguese study (delayed) will estimate the survival rates for the most important species based on captive observations (higher priority given to thornback ray caught in the net fisheries). An upcoming Spanish study (project application as annex) will estimate the survivability of skates and rays in the artisanal Galician fleet discards using acoustic telemetry in the environment of a marine protected area, identify technical improvements to reduce the impact of discarding. There was no explicit reporting against the road map, which is recommended in the future. Future submissions should report against the three main tasks in the road map; i) quantifying catches and discards per species and métier; ii) generated discard survival evidence; and iii) stakeholder led adoption of codes of best practice to maximize discard survival. All relevant reports should be appended as annexes. A summary table with all studies and fisheries would be helpful for further reporting. When published, the outputs of the ICES Workshop on incorporating discards into the assessments and advice of elasmobranch stocks (WKSHARK5) will provide useful context for this exemption. **Cuckoo ray** **1. Exemption status** Additional scientific information supporting existing exemption (until 2022 for Cuckoo ray caught by trammel nets in ICES subareas 8 and 9, and 2021 for Cuckoo ray caught with bottom trawls in ICES subarea 8) **2. Survival evidence** Previous evidence from Portugal in area 9 for cuckoo ray was evaluated in EWG 19-08, based on vitality data that do not constitute discard survival estimates but indicate survival potential. New evidence is provided for cuckoo ray in area 9a with bottom otter trawl. Barragán-Méndez et al. (report) reported survival ranging between 59.4 ± 0.1 % and 92.9 ± 0.0 % (mean ± SE). The ICES critical review was applied. The study did not use control individuals, and there was no observation to asymptote (only up to 48h), therefore survival estimates may be underestimated. 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). **3. Fishery context** Information on the Portuguese and Spanish fleets was evaluated in EWG 19-08. **4. Survival and fishery compatibility**

	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. Because the trial in area 9a was conducted in March, one may expect lower chance for survival in the summer if water temperature is indeed showed to be higher. **5. Additional evidence** There was significant effort in addressing data gaps as the significant number of ongoing projects can show, and in reporting against the roadmap. A new study is planned to obtain scientific evidences of the survivability of cuckoo ray in the Portuguese otter-trawl fisheries. An ongoing French study on survival of cuckoo ray in area 8 could not be reported due to the Covid crisis, but additional results are expected. There was no explicit reporting against the road map, which is recommended in the future. Future submissions should report against the three main tasks in the road map.
Fishery	Main Findings of EWG 20-04
Red sea bream caught with the artisanal gear *voracera* in ICES division 9a and with hooks and lines (gear codes: LHP, LHM, LLS, LLD) in ICES subareas 8 and 10 and in ICES division 9a. Art. 3 - 3 (a)	**1. Exemption status** Exemption was granted (Delegated Regulation (EU) 2019/2237) until the end of 2021. The delegated act stipulates that Member States having a direct management interest shall submit as soon as possible, but not later than by 1 May every year additional scientific information supporting the exemption. This is a request for an extension for 2021-2023. **2. Survival evidence** There are no new survival estimates provided. However, concerning the voracera in ICES division 9a, the STECF 18-06 concluded that the studies represented reasonably sound scientific evidence for the survival of red sea bream. Concerning the demersal longline fisheries in Portuguese mainland waters (ICES sub-Division 9.a), the STECF 19-08 identified limitations in the provided study on the survival of discarded red sea bream because the monitoring period was too short (36 h). This is likely to have overestimated survival and further studies were needed to generate robust estimates. **3. Fishery context** No additional description for the fishery context has been provided (see EWG 19-08 for information previously provided). Fisheries information was provided and assessed by EWG 19-08. **4. Survival and fishery compatibility** No additional information on survival and fishery compatibility has been provided. However, it is stated that discards of undersized fish for this species are negligible (high size selectivity). **5. Additional evidence** Additional experiments to obtain survival rates for a longer time under captive conditions are required. New experiments were planned to be conducted in late 2019/early 2020, to obtain survival rates for a longer period under captive conditions, but the trials have been postponed due to constraints acquiring material for the experiments.

Fishery	Main Findings of EWG 20-04
Anchovy, horse mackerel and mackerel in purse seine fisheries (PS) in South Western Waters, provided that the net is not fully taken on board. Art. 6	**1. Exemption status** Exemption was granted (Delegated Regulation (EU) 1394/2014) until the end of 2020. This is a request for an extension. **2. Survival evidence** A summary of recent studies assessing the survivability of small pelagics (including anchovy, horse mackerel and mackerel) caught with purse seine in Spanish South Western Waters has been provided. The results show the following survival rates for the three species: anchovy >80%, horse mackerel >75%, and mackerel >60%. During survival experiments, fish were transferred from the bunt of the purse seine to the tanks on board by a pump, representing an additional source of stress for the fish. On this basis, it is reasonable that the survival rates would be higher in a commercial slipping operation (e.g., net not fully taken on board) than in the survival experiment. This summary reported partial details on the methodology of the study, so the ICES critical review could not be applied, and the robustness of the survival estimates cannot be determined. **3. Fishery context** No description of the fishery context is provided. **4. Survival and fishery compatibility** Crowding time and density of fish within the net bunt are the most determinant factors for survival. The provided document shows that survival rates for all three species strongly decreased after a crowding time >20 min. However, under real fishing condition the crowding time related to slipping procedure was stated to be less than 5 min. Under these conditions, the survival rates observed further increased to >91% for anchovy, >94% for horse mackerel, and >91% for mackerel. **5. Additional evidence** In accordance with EWG 19-08, a complete report on the relevant scientific discard survival study including detailed methodology would enable an assessment of the quality of the survival estimates. Empirical data on crowding time and fish density during slipping events from relevant vessels would enable an assessment of the representativeness of the survival estimates.

7.3.SWW – Proposals for technical measures

Regulation (EU) 2019/1241 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 includes 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.

Currently, regional technical measures for the SWW are mostly contained in the technical measures framework. However, a specific derogation relating to the mcrs of anchovy is included under Commission Delegated Regulation (EU) No 1394/2014 (SWW pelagic discard plan). It is also incorporated as a footnote to the mesh size table in Annex VII of Regulation (EU) 2019/2141. This was assessed by STECF in 2014 (PLEN 14-02). A derogation to the mcrs for horse mackerel in certain fisheries in ICES division 8c and ICES subarea 9 is also included in Article 4 of SWW pelagic discard plan. This was assessed by STECF in 2016 (EWG 16-10 and PLEN 16-02). These exemptions will expire at the end of 2020.

Additionally, Article 2 of the technical measures gives an empowerment to the Commission to extend technical measures to recreational fisheries in cases where recreational fishing has a significant impact in a given region. In this regard the SWW Member States has proposed mcrs for recreational fisheries for sea bass, red sea bream and cod. In the case of sea bass this provision has already been included in the Fishing Opportunities regulation for 2020 (Regulation (EU) 2020/123). The main elements of the SWW technical measures included in the JR and which of these have been assessed by EWG 20-04 are summarised in table 7.3.1.

Table 7.3.1 Main elements of the Joint Recommendations submitted for the SWW

Elements	***Status with relevant Article in current discard plan***	***Assessment by EWG 20-04 with relevant Annexes in JR***
Minimum conservation reference size for anchovy) caught in ICES subarea 9 and CECAF area 34.1.	Existing Article 4 of Regulation (EU) 1394/2014 and Annex VII of Regulation (EU) 2019/1241	Not Assessed See STECF PLEN 14-02 for assessment
Derogation to the minimum conservation reference size for horse mackerel caught in ICES division 8c and ICES subarea 9 s	Existing Article 4 of Regulation (EU) 1394/2014	Not Assessed See STECF EWG 16-10 for assessment
Minimum conservation reference size for Sea bass, red sea bream and cod caught in recreational fisheries in ICES subareas 8 and 9	Existing Article 18 and Article 15(2) in combination with Article 2(2) of Regulation (EU) No 2019/1241	Assessed Supporting information included in the JR

A summary of the fishery information applicable to the new or revised *de minimis* exemptions is given in Table 6.3.2.

Table 6.3.2 Summary of *de minimis* exemptions submitted as part of the SWW Joint Recommendations (restricted to new or revised exemptions).

Technical Measures	Main Findings of EWG 20-04
Minimum conservation	**1. Existing**

reference size for cod, red sea bream and sea bass caught in recreational fisheries in ICES subareas 8 and 9	This is an existing technical measure under Article 18 and Article 15(2) in combination with Article 2(2) of Regulation (EU) No 2019/1241. **2. EWG 20-04 Observations** Given recreational fisheries contribute to the overall fishing mortality of stocks in SWW, applying the mcrs for commercial fisheries to recreational fisheries is a positive management measure. This will cement these in legislation and in the case of sea bass will avoid having to renew the mcrs annually in the TAC and quota Regulation for 2020. EWG 20-04 notes in subarea 8 the mcrs for cod, sea bass and red sea bream, the mcrs proposed for recreational fisheries is greater than the current mcrs for commercial fisheries. However, for the rest of the SWW, the mcrs is harmonised with the current regulations contained in Annex VII of Regulation (EU) 1241/2019. There is no reason given for the difference in mcrs between the two areas. Extending the increased mcrs to the whole area would increase the benefit of the measure and avoid having different mcrs applying in different adjacent management areas.

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 is valid until 31 December 2017 after which it is assumed most of the elements of this discard plan will be subsumed into the multiannual plan for the stocks of cod, herring and sprat in the Baltic Sea - Regulation (EU) 2016/1139 as per Article 7 of this Regulation. In 2017 a new set of Joint Recommendations has been submitted by the Member States in the Baltic. The main elements of the JR and which of these have been assessed by EWG 20-04 are summarised in table 8.1.

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

Elements	***Status with relevant Article in current discard plan***	***Assessment by EWG 20-04 with relevant Annexes in JR***
De minimis		
None	NA	NA
High Survivability		
Cod, plaice and salmon caught with trap-nets, creels/pots, fyke-nets and pound net	Existing Article	Not assessed
Salmon caught with trap-nets, creels/pots, fyke-nets and pound nets including Pontoon traps	New	Assessed Various supporting documents
Minimum conservation reference size		
Baltic Cod	Existing and unchanged	Not assessed
Technical Conservation Measures		
Modifications to T90 cod end	Existing and unchanged*	Not assessed

8.1.Proposals for 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

High Survivability	
Fishery	Main Findings of EWG 20-04
Salmon in the Baltic Sea caught with trap-nets, creels/pots, fyke-nets and pound nets including Pontoon traps as long as Pontoon traps are equipped with an attached knot-less bag and as long as the total amounts of released salmon is kept at a low level. (Studies by Östergren et al. 2020 & Siira et al., 2006)	**1. Exemption status** Exemption was granted (Delegated Regulation (EU) 2018/306) until the end of 2020. This is a request for an extension, but with additional specifications of the design of pontoon traps eligible for the exemption. **2. Survival evidence** A review of recent studies assessing the survivability of salmon caught with different types of traps in the Baltic was provided (Östergren et al., 2020). PLEN 14-02 stated that for trap-nets, fyke-nets, evidence indicates that immediate discard mortality is typically less than 10%, however, PLEN 14-02 could not evaluate whether it is appropriate to assume equivalent mortality rates for creels/pots and pound nets. Since such gears operate by trapping fish inside a static netting structure operating in a similar way to those examined, it was deemed reasonable to assume that mortality for these gears will also be low. PLEN 14-02 did advise further work to confirm whether this assumption is valid. This proposal is to include exemption for a specified design of pontoon trap, to add to the list of exempted gears. Pontoon traps are a relatively recent development of the traditional trap-net. Pontoon traps have a rigid structure around the fish chamber which makes the catch less susceptible for seal depredation and gear less sensitive to seal damage. Catch handling of the Pontoon traps, i.e., lifting the fish chamber into air and emptying the catch onto the boat deck, may imply lower survival probability for released catch than traditional trap nets and pontoon traps equipped with an attached knot-less bag. The preliminary results show that the survival of salmon in Pontoon traps and Pontoon traps equipped with an attached knot-less bag was 29% and 52%, respectively. The higher mortality was attributed to an exceptionally high natural mortality that occurred in the study area in 2019 (control mortality 22%). The supplemented information only presented partial details of the original scientific study, so the quality of the estimates could not be established. An additional study (Siira et al., 2006) assessing the survivability of salmon caught with traditional trap-nets in the Gulf of Bothnia was provided. From a tag-recapture experiment the capture/release survival was estimated at 96% and 79% for two tagged groups, with an average of 89%. The ICES critical review method was applied and showed that overall, the method to generate survivability evidence was appropriate and the estimates robust. ICES Advice on fishing opportunities, catch, and effort (Subdivisions 22-31 and 32) were also provided. **3. Fishery context** An overview of fisheries by country and area for the period 2017-2019 was provided. This includes adapted quota, catch quota utilization, salmon caught in LO exempted gears, and number of discarded salmon (0.7-4.3% in number). Apart from these discards in the directed fishery

	for salmon, discards of by-caught salmon also occur outside the salmon season because the trap- and pontoon nets are also used when targeting other (non-quota) species in the Northern Baltic. **4. Survival and fishery compatibility** Physiological stress during handling is the main reason for salmon mortality, chronic stress, and increased risk of infection. The evidence suggests that Pontoon trap equipped with an attached knot-less bag has potential to be gentler with salmon released after handling, mainly because the catch is never lifted above the water surface or dropped directly in the boat (as with the normal procedure when emptying Pontoon traps). In the case of traditional trap-net fisheries, it is possible to gently remove salmon from the gears "fish bag" one by one (by hand) and release them. The study assessing the survivability of salmon from trap-net fishery followed the normal commercial procedure and fish were carefully one-by-one lifted from the back of the trap-net to the boat where tagging was done. The proposal states that the exemption should apply only if the total amounts of released salmon is kept at a low level. Information on what is considered a low level are needed and information on what proportion of fishing events this would apply to are needed to assess the relevance to the fishery. The implication is that survival decreases with higher release levels, but it was not possible to confirm this assumption. **5. Additional evidence** Since 2014 several studies focusing on post-release mortality of salmon captured in Pontoon traps have been initiated in Sweden. Results from these studies have only been published as short reports or memorandums, or in manuscripts under preparation inaccessible for evaluation. Detailed scientific reports of final results of such studies would enable an assessment of the quality of the discard survival estimates obtained for Pontoon trap fisheries in the Baltic. If the exemption were to apply only when release levels are low, this would need to be defined in a regulation.

References

ÖSTERGREN, J., BLOMQVIST, C., DANNEWITZ, J., PALM, S., FJÄLLING, A. 2020. Discard mortality of salmon caught in different gears. SLU ID: SLU.aqua.2020.5.5-2 2020-03-20. 21 pp.

SIIRA, A., SUURONEN, P., IKONEN, E. & ERKINARO, J. 2006. Survival of Atlantic salmon captured in and released from a commercial trapnet: Potential for selective harvesting of stocked salmon. Fisheries Research, 80, 280-294.

9. MEDITERRANEAN – OVERVIEW OF JOINT RECOMMENDATIONS

Commission Delegated Regulation (EU) 2018/2036 that amended Delegated Regulation (EU) 2017/86 established a discard plan for certain demersal fisheries in the in the Adriatic Sea, the south-eastern Mediterranean Sea and the western Mediterranean Sea. It covers demersal fisheries for sole, hake, scallop, Venus shells, carpet shells, red mullet and deep-water rose shrimp. The *de minimis* exemptions included under this amended discard plan are valid until 31 December 2021, having been re-assessed in 2019 by EWG 18-06 and STECF PLEN 19-02. Given it is valid until 2021, no new JR were submitted in 2020 and therefore EWG 20-04 did not carry out any further assessment of these exemptions.

Commission Delegated Regulation (EU) 2018/161 established a *de minimis* exemption to the Landing Obligation for certain small pelagic fisheries in the Mediterranean Sea. It covers pelagic fisheries for. anchovy, sardine, mackerel and horse mackerel in the GFCM (General Fisheries for the Commission of the Mediterranean) Areas 1, 2, 5, 6, 7, 8, 9, 10, 11.1, 11.2, and 12 (Western Mediterranean Sea);15, 16, 19, 20, 22, 23 and 25 (South Eastern Mediterranean Sea); and 17 and 18 (Adriatic Sea).The exemptions included are valid until 31 December 2020. Given these *de minimis* exemptions are due to expire, the Member States Regional Groups (PESCAMED, ADRIATIC and SUDESTMED) submitted additional information and updated data to support the continuation of these exemptions. The main elements of the existing discard plan which have been assessed by EWG 20-04 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 20-04 with relevant Annexes in JR***
Anchovy, sardine, mackerel and horse mackerel caught using midwater trawls and purse seines in GFCM GSAs 1, 2, 5, 6, 7,8, 9, 10, 11.1, 11.2 and 12 (Western Mediterranean)	Pelagic	Temporary until end of 2020 Article 3 and Annex I	Re-assessed based on supporting information supplied by Spain and France
Anchovy, sardine, mackerel and horse mackerel caught using midwater trawls and purse seines in GFCM GSAs 15, 16, 19, 20, 22 23 and 25 (south-eastern Mediterranean and Malta Island and South of Sicily)	Pelagic	Temporary until end of 2020 Article 3 and Annex II & IV	Re-assessed based on supporting information provided by Greece, Malta, Cyprus and Italy
Anchovy, sardine, mackerel and horse mackerel caught using midwater trawls and purse seines in GFCM GSAs 17 and 18 (Adriatic Sea)	Pelagic	Temporary until end of 2020 Article 3 and Annex III	Re-assessed based on supporting information provided by Croatia, Italy and Slovenia

9.1.Proposals for *de minimis* exemptions

A summary of the information provided to support the *de minimis* exemptions for small pelagic species (i.e. anchovy, sardine, mackerel and horse mackerel) in the Western Mediterranean and South-eastern Mediterranean and Adriatic is provided in table 9.1.1.

Table 9.1.1 Summary of *de minimis* exemptions submitted for the Mediterranean exemptions relating to small pelagic species.

Exemption	Main Findings of EWG 20-04
Anchovy, sardine, mackerel and horse mackerel below mcrs by vessels using midwater trawls and purse seines in GSA 1, 2, 5, 6, 7,8, 9, 10, 11.1, 11.2 and 12 (Western Mediterranean) A maximum of 5 % of the total annual catches of any species subject to a minimum size caught with midwater trawls and 3% of the total annual catches of any species caught with purse seines may be discarded. (Supporting information provided by Spain and France)	**1. Exemption status** Existing temporary exemption granted until the end of 2020 (Article 2 and Annex I of Regulation (EU) No 2018/161). There is no specific request for supporting information in the Delegated Act. **2. Definition of the fishery** Catch data and information on the number of vessels involved in the fisheries has been provided by Italy (2018-2019 data for purse seines in GSAs 9-11), Spain (2018 data for purse seines for GSAs 1,5 and 6) and France (2017-2018 data for midwater trawls in GSA 7). Vessel numbers are reported to have declined significantly in all countries since 2014. Italy reports no unwanted catches of anchovy, mackerel, horse mackerel and sardine for GSAs 9-11 apart from 17 tonnes of unwanted catches of anchovy in the purse seine fishery in GSA 10. This compares to an estimated *de minimis* volume of around 400 tonnes of all small pelagic species combined. Spain only reports levels of unwanted catches from GSA 1, No data is available for GSAs 5 and 6 even though there are significant landings of small pelagic species in these management areas. The data presented for GSA 1 only presents the percentage of unwanted catches in proportion to commercial catches. Discard rates are not reported. France has provided landings and unwanted catch data for 2017 and 2018 for the small pelagic species. It is assumed this is for vessels using midwater trawls although the information provided is not clear. Data is only provided for GSA 7, even though the supporting information suggests there is fishing activity in GSA 8. Discard rates of 5%, 9%, 19% and 56% are reported for anchovy, sardine, mackerel and horse mackerel respectively. The discard rate for horse mackerel is high although total catches are relatively low (around 130 tonnes). **3. Basis for the exemption** No new supporting information was requested or provided. The basis for the exemption is the justification submitted for the original exemption request in 2017. The main points are re-iterated in documents from Italy and Spain. It indicates that the gear used is highly species selective and therefore further improvements in selectivity are difficult to achieve. Increasing mesh size above the legal minimum mesh size of 20mm will also lead to increased damage of small pelagics, particularly anchovy and sardine due to meshing in the gear. Additionally, the costs for handling small volumes of pelagic species on board are considered disproportionate and that there is lack of facilities onshore to handle such catches. This is based largely on information provided by the MEDAC in 2014. **4. EWG 20-04 Observations** The justification is based on qualitative and limited quantitative economic data information and catch information gathered from the

	"LANDMED" project. On this basis, the proposal is to rollover the existing exemption which is due to expire at the end of this year for a further three years. Given no new information has been provided no new evaluation can be made. There is no quantitative evidence to support these assertions. Intuitively, achieving additional selectivity improvements would be difficult to achieve in such fisheries and the costs for sorting would be high given the nature of the species involved but there is still limited quantitative evidence to support these assertions. The catch data presented is incomplete for Spain and France as no discard data is presented. Therefore, it is not possible to compare the *de minimis* volume requested against the actual levels of unwanted catches. Additional catch data should be provided. For Italy, there does not appear to be any relationship between the *de minimis* requested and the levels of unwanted catch, which Italy reports as zero for all small pelagic species. Without catch data for all fleets and for all management areas, there is no way of fully assessing whether the *de minimis* exemption is required at the percentage included in the current discard plan.
Exemption	Main Findings of EWG 20-04
Anchovy, sardine, mackerel and horse mackerel below mcrs by vessels using midwater trawls and purse seines in GSA 15, 16, 19, 20, 22 23 and 25 (South-eastern Mediterranean) A maximum of 5 % of the total annual catches of any species subject to a minimum size caught with midwater trawls and 3% of the total annual catches of any species caught with purse seines may be discarded (Supporting information provided by Greece, Cyprus, Malta and Italy)	**1. Exemption status** Existing temporary exemption granted until the end of 2020 (Article 2 and Annexes II and IV of Regulation (EU) No 2018/161). There is no specific request for supporting information in the Delegated Act. **2. Definition of the fishery** Catch data and information on the number of vessels involved in the fisheries has been provided by Italy (2019 data for midwater trawls and purse seines in GSAs 16 and 19), Cyprus (2017-2019 data for purse seines in GSA 25), Greece (2019 data for purse seines in GSAs 20,22, 23) and Malta (2018 data for purse seines in GSA 15). Vessel numbers have declined in the Member States that have provided information (i.e. Italy and Greece). Italy reports no unwanted catches of anchovy, mackerel, horse mackerel and sardine for GSAs 16 and 19 in the purse seine and midwater trawl fisheries. Cyprus reports total catches of < 8 tonnes for the small pelagic species and no unwanted catches. Greece reports discard rates of less than 5% for anchovy, sardine and mackerel. Unwanted catches of horse mackerel are high with discard rates of 52% and 74% in GSAs 20 and 22 respectively. Greece reports there is only a limited market for horse mackerel which gives rise to the high discard rates. Malta reports no unwanted catches of mackerel and horse mackerel in GSA 15. No catches of anchovy and sardine are reported. **3. Basis for the exemption** No new supporting information was requested and the basis for the exemption. As indicated for the Adriatic and western Mediterranean, the justification is primarily based on information submitted to support the original exemption request in 2017. However, Greece has provided additional information generated from the DISCARDLESS, MINOUW, Vioaxiopoio projects and used the STECF "Multi-criteria Performance Matrix for the Economic Analysis of *De minimis* proposal", developed in

	2018 (STECF, 2018). This provides information on the costs for handling unwanted catches onboard and ashore. It shows the costs to be prohibitive in Greek fisheries. Although is not specific to small pelagic fisheries. Information from selectivity trials and national spatial/temporal closures in place are also provided, which to a certain extent indicate improvements in selectivity would be difficult to achieve. They also report on the effectiveness of closures in place under national legislation. **4. EWG 20-04 Observations** The justification is based on qualitative and quantitative data provided by Greece. On this basis, the proposal from the PESCAMED group is to rollover the existing exemption which is due to expire at the end of this year for a further three years. The new information provided by Greece strengthens the justification for the exemption, if though it is not clear how representative it is for other the fleets of other Member States operating in the south-eastern Mediterranean. The level of *de minimis* requested, 5% for midwater trawls and 3% for purse seines would cover 100% of the observed unwanted catches of small pelagic species in the south eastern Mediterranean is not well justified. There is no information to explain why the levels of *de minimis* requested are required and in fact for three of the four Member States no unwanted catches are reported at all. Therefore, there does not appear to be any relationship between the *de minimis* requested and the levels of unwanted catches reported.
Exemption	Main Findings of EWG 20-04
Anchovy, sardine, mackerel and horse mackerel below mcrs by vessels using midwater trawls and purse seines in GSA 17 and 18 (Adriatic). A maximum of 5 % of the total annual catches of any species subject to a minimum size caught with midwater trawls and 3% of the total annual catches of any species caught with purse seines may be discarded. (Supporting information supplied by Croatia, Italy and Slovenia)	**1. Exemption status** Existing exemption granted until the end of 2020 (Article 2 and Annex III of Regulation (EU) No 2018/161). There is no specific request for supporting information in the Delegated Act. **2. Definition of the fishery** Catch data and information on the number of vessels involved in the fisheries has been provided by Croatia (2017-2019 data for purse seines), Italy (2019 data for midwater trawls and purse seines) and Slovenia (2019 data - Gillnets, longlines and bottom trawls). Vessel numbers have declined significantly by around 30-40% in Italy and Croatia. In Slovenia there has been no purse seine fishing activity in 2019. Croatia reports low levels of unwanted catches of anchovy, sardine and mackerel (< 10 tonnes) in 2019. No unwanted catches of horse mackerel are reported. Discard rates for anchovy and sardine were less than 0.5%. No data on the discard rate is reported for mackerel. Italy also reports very low levels of unwanted catches in both midwater trawls and purse seines in both GSA 17 and 18. Other than for anchovy in the purse seine fishery in GSA 17 (24 tonnes), anchovy in the midwater trawl fishery in GSA 17 (144 tonnes) and sardine in the midwater trawl fishery in GSA17 (177 tonnes), reported unwanted catches are less than 5 tonnes and many are zero. Discard rates in all cases are less than 3%, except for horse mackerel caught as a bycatch in the purse seine fishery, where a discard rate of 17% is reported. However, this is based on very small catches (total catch of 8 tonnes). Slovenia report very small catches of small pelagics (less than 10 tonnes) and no unwanted catches for any species or with any gear.

	3. Basis for the exemption No new supporting information was requested or provided. The basis for the exemption is the justification submitted for the original exemption request in 2017. The main points are re-iterated in a letter from Croatia in which it indicates that the gear used is highly species selective and therefore further improvements in selectivity are difficult to achieve. Increasing mesh size will also lead to increased damage of small pelagics, particularly anchovy and sardine meshed in the gear. Such catches will not be sellable for human consumption. The costs for handling small volumes of pelagic species on board are considered disproportionate based on analysis provided by MEDAC in 2014. **4. EWG 20-04 Observations** The justification is based on qualitative and limited quantitative economic data information and catch information gathered mainly from the "LANDMED" project. On this basis, the proposal from the ADRIATIC group is to rollover the existing exemption which is due to expire at the end of this year for a further three years. Given no new information has been provided no new evaluation can be made. Intuitively, achieving additional selectivity improvements would be difficult to achieve in such fisheries and the costs for sorting would be high given the nature of the species involved but there is still limited quantitative evidence to support these assertions. Based on the catch data submitted, the level of *de minimis* requested, 5% for midwater trawls and 3% for purse seines would cover 100% of the observed unwanted catches of small pelagic species in GSA 17 and 18. There is no information to explain why such levels of *de minimis* are required. There does not appear to be any relationship between the *de minimis* requested and the levels of unwanted catch. The actual levels of unwanted catches seem minimal for most of these species and the actual level of resulting *de minimis* will cover more than twice the level of unwanted catches reported.

10. 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 20-04 concludes that:

- 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 EWG 20-04 recognizes 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.
- It is difficult to provide conclusive advice on whether the information presented is sufficient to accept or reject any individual application based on the exemption provisions. The subjective nature of the conditionalities – "high survival", "very difficult to achieve" or "disproportionate costs" –means that the final decision on whether to permit or reject a proposal should not be based solely on the scientific opinion of the EWG on the evidence presented.

- 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 2020 JRs where the quality of submission is poor or absent, making it difficult to conduct an analysis. EWG 20-04 encourages Members States Regional Groups to use the templates developed by STECF to supply fisheries and fleet descriptors; in the case of *de minimis* exemptions provide economic data to support such proposals; and for high survival exemptions provide all relevant survival information (details provided in Annex I).
- There is a need to improve 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. As STECF has pointed out previously, innovative monitoring measures such as CCTV and Remote Electronic Monitoring (REM) have been applied in pilot studies and could be a more effective way to monitor the Landing Obligation to generate catch evidence for science and compliance.
- The supporting information for some exemptions relating to the fleets and fisheries involved are based on data from the period 2014-2016, stored in the publicly available STECF FDI database. More recent catch data should be provided, for example from DCF sampling carried out by the national research institutes in Member States.
- 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. Further EWG 20-04 stresses that improving selectivity or avoidance methods to reduce the catches of unwanted catches should be the priority.
- Many of the existing exemptions were included under the discard plans for 2015-2017. EWG 20-04 observes that there has been little attempt to review these exemptions as to whether the fisheries have changed in terms of catch patterns, gears used, vessels involved and in the case of *de minimis* the uptake of the volume of catch allowed to be discarded. As concluded by STECF PLEN 19-02 it would be timely for the Member States Groups and the Commission to review these exemptions and determine whether they need to be amended or are still required.
- The number of *de minimis* exemptions based on disproportionate costs continues to increase. More than 90% of the proposed *de minimis* exemptions in the JRs are based on disproportionate costs. As in 2019, the same generic information on the costs of handling unwanted catches is used to support multiple exemptions making it difficult to make an evaluation of individual exemptions as there is lack of specific information at a fishery level.
- Member States have used 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. brown shrimp in the NWW and North Sea and industrial species bycatch in demersal fisheries the North Sea), catches from the entire fishery or fisheries have been used as the basis for the calculation. A small percentage has been applied to these total catches to give a higher *de minimis* volume

than would have been the case if just the catches for that species in that fishery were used.

- 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.
- *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.
- Assessing what constitutes high survivability is 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 (STECF PLEN 17-02), highlighting that 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 be discussed in the assessment forums for stocks with survival exemptions.
- As in 2019, the same scientific studies are being provided to support different discard survival exemptions. In some cases, this evidence is being extended to other fisheries and sea basins beyond the point where it is scientifically defensible. There are examples for which a single study produces a robust estimate of discard survival in a localised fishery. This is then applied to the whole region; and once established, the exemption is extended to other regions, based on technical similarities between fisheries. The result of this incremental stretching of the evidence is that the fate of a few hundred fish in a local fishery can provide the basis for exemptions for many fisheries across different regions.
- Where survivability exemptions are linked to a roadmap setting out work planned to develop survival estimates and accompanying measures to increase survivability, the JRs should report against the different tasks set out in the roadmap to facilitate future evaluations.
- There has been a notable drop-off in research and testing selective gears in most regions, even the levels of unwanted catches continue to be high in some fisheries. While there is no doubt that the Covid-19 pandemic may have impacted on some such studies, the decline in selectivity work is nonetheless concerning.

11. 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.

Bergström, U., Sköld, M., Wennhage, H. & Wikström, A. (2016). Ekologiska effekter av fiskefria områden i Sveriges kust- och havsområden. Aqua reports 2016:20. Institutionen för akvatiskaresurser, Sveriges lantbruksuniversitet, Öregrund. 207 s.

ICES (2016). Report of the second Inter Benchmark Protocol for sea bass in the Irish Sea, Celtic Sea, English Channel, and southern North Sea 1 December 2015 31 March 2016. ICES IBPB ASS 2 REPORT 2016. ICES Advisory Committee. ICES CM 2016/ACOM:31

ICES (2017). ICES Special Request Advice Greater North Sea Ecoregion. EU request to assess the effects of lifting the "sprat box" sr.2017.06. Version 2: 10 April 2017.

ICES (2019). 414 | ICES SCIENTIFIC REPORTS 1:29 | ICES, 29 Plaice (*Pleuronectes platessa*) in divisions 7h–k (Celtic Sea South, southwest of Ireland)

ICES (2020). Working Group on Methods for Estimating Discard Survival (WGMEDS; outputs from 2019 meeting). ICES Scientific Reports. 2:8. 75 pp. Editors: Tom Catchpole and Sven Sebastian Uhlmann. http://doi.org/10.17895/ices.pub.6003

Lockwood S.J., Pawson, M.G. and Eaton D.R. (1983): The effects of crowding on mackerel (*Scomber scombrus):* physical conditions on mortality. Fish. Res. 2, 129-147.

Moland, E., Ulmestrand, M., Moland Olsen, E., Stenseth C. (2013). Long-term decrease in sex-specific natural mortality of European lobster within a marine protected area. Mar Ecol Prog Ser. Vol. 491: 153–164, 2013. doi: 10.3354/meps10459

Sundelof A., Grimm V., Ulmestrand M., Fiksen, O. (2015). Modelling harvesting strategies for the lobster fishery in northern Europe: the importance of protecting egg-bearing females. Popul Ecol (2015) 57:237–251. DOI 10.1007/s10144-014-0460-3.

Suuronen, P., Erickson, D. and Orrensalo, A. (1996). Mortality of herring escaping from pelagic trawl cod ends. Fish. Res., 25: 305–321.

Scientific, Technical and Economic Committee for Fisheries (STECF) – Landing obligation in EU fisheries (STECF-13-23). (2013). Publications Office of the European Union, Luxembourg, EUR 26330 EN, JRC 86112, 115 pp.

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) – 48th Plenary Meeting Report (PLEN-15-01). 2015. Publications Office of the European Union, Luxembourg, EUR 27220 EN, JRC 95802, 75 pp.

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) – – 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) – 54th Plenary Meeting Report (PLEN-17-01). (2017). Publications Office of the European Union, Luxembourg; EUR 28569 EN; doi:10.2760/33472

Scientific, Technical and Economic Committee for Fisheries (STECF) – Technical measures (STECF-17-02); (2017). Publications Office of the European Union, Luxembourg; EUR 28359 EN; doi:10.2760/51636

Scientific, Technical and Economic Committee for Fisheries (STECF) – 56th Plenary Meeting Report (PLEN-17-03). (2017). Publications Office of the European Union, Luxembourg; ISBN 978-92-79-77297-9, doi:10.2760/605712, JRC109344

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) – Technical Measures – Improving selectivity to reduce the risk of choke species (STECF-18-02); (2018). Publications Office of the European Union, Luxembourg, 2018, ISBN 978-92-79-79382-0, doi:10.2760/41580, JRC111821

Scientific, Technical and Economic Committee for Fisheries (STECF) – 57th Plenary Meeting Report (PLEN-18-01), Publications Office of the European Union, Luxembourg, 2018, ISBN 978-92-79-85804-8, doi:10.2760/088784, JRC111800

Scientific, Technical and Economic Committee for Fisheries (STECF) – 59th Plenary Meeting Report (PLEN-18-03). Publications Office of the European Union, Luxembourg, 2018, ISBN 978-92-79-98374-0, doi:10.2760/335280, JRC114701

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) – 60th Plenary Meeting Report (PLEN-19-01). Publications Office of the European Union, Luxembourg, 2019, ISBN 978-92-76-02904-5, doi:10.2760/56785, JRC116423

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

Woolmer A., Woo, J. and Bayes, J. (2013). Review of Evidence for Best Practice in Crustacean Fisheries Management in Wales. Report to Welsh Government Fisheries and Marine Unit. October 2013. 41pp.

Xu, C., & Schneider, D. C. (2012). Efficacy of conservation measures for the American lobster: reproductive value as a criterion. ICES Journal of Marine Science, 69: 1831 – 1839.

12. 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) 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.

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) 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.

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.

13. 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 LO subject Vessels)	Estimated Discards*	Estimated Catch	Discard Rate**	Estimated *de minimis* 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	Captive / Vitality / Taggin	Completed/ Ongoing/ Delayed/	Species, area, gear	Survival estimate (95% confidence interval)	Describe observed effects of the operational (e.g., haul duration,	New evidence / already submitted in	Reference of the report or published article	Annex number for the provided evidenc

				additional evidence/ extension of existing exemption/ new exemption	g	Upcoming			catch weight, catch composition, sorting time, air exposure), biological (e.g., fish size) and environmental (e.g., temperature, fishing depth) factors	YEAR		e
…	…	…	…	…	…	…		…	…	…	…	…

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?
	Traditional tags - Are catches in the fishery sufficiently large to provide the required tag return rate to estimate discard survival?
	Acoustic, DST tags - Can the death of an individual be accurately determined from the data?
	Acoustic tags - Does the acoustic receiver array provide full coverage of the area?
	Pop-off DST-tags - 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?

14. CONTACT DETAILS OF EWG-20-04 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

STECF members		
Name	**Affiliation[1]**	**Email**
Casey, John	Independent consultant	blindlemoncasey@gmail.com
Catchpole, Thomas	CEFAS Lowestoft Laboratory,	thomas.catchpole@cefas.co.uk

(EWG co-chair)	Pakefield Road, Lowestoft, Suffolk, UK, NR33 0HT	
Grati, Fabio	National Research Council (CNR) – Institute for Biological Resources and Marine Biotechnologies (IRBIM), L.go Fiera della Pesca, 2, 60125, Ancona, Italy	fabio.grati@cnr.it
Jung, Armelle	DRDH, Techopôle Brest-Iroise, BLP 15 rue Dumont d'Urville, Plouzane, France	armelle.jung@desrequinsetdeshommes.org
Rihan, Dominic (EWG co-chair)	BIM, Crofton Road, Dun Laoghaire, Ireland	rihan@bim.ie
Valentinsson, Daniel	Swedish University of Agricultural Sciences (SLU), Department of Aquatic Resources, Turistgatan 5, SE-45330, Lysekil, Sweden	daniel.valentinsson@slu.se
Vanhee, Willy	Independent consultant	wvanhee@telenet.be

Invited experts		
Name	**Affiliation[1]**	**Email**
Lloret, Josep	University of Girona, Institute of Aquatic Ecology, 17003, Girona, Spain	josep.lloret@udg.edu
Pereira, Joao	Direção-Geral de Recursos Naturais, Segurança e Serviços Marítimos, Portugal	jmfpsquid@gmail.com
Savina, Esther	Technical University of Denmark, National Institute of Aquatic Resources, (DTU Aqua), Willemoesvej 2, 9850 Hirtshals or "Anker Engelunds Vej 1, 2800 Kgs. Lyngby	esav@aqua.dtu.dk
Uhlmann, Sven Sebastian	Flanders Research Institute for Agriculture, Fisheries and Food, Belgium	sven.uhlmann@gmx.net
Viva, Claudio	Centro Interuniversitario di Biologia Marina (CIBM), Italy	viva@cibm.it

European Commission		
Name	**Affiliation[1]**	**Email**
Doerner, Hendrik	JRC, STECF secretariat	jrc-stecf-secretariat@ec.europa.eu
Eichhorst, Julia	DG MARE C1	Julia.EICHHORST@ec.europa.eu
Ivanescu, Raluca	DG MARE C1	Raluca.IVANESCU@ec.europa.eu
Kisieliauskas, Mindaugas	DG MARE C1	Mindaugas.KISIELIAUSKAS@ec.europa.eu
Kopp, Antoine	DG MARE C1	Antoine.KOPP@ec.europa.eu
Marcovic, Laurent	DG MARE D1	Laurent.MARKOVIC@ec.europa.eu
Martin, Maria Aira	DG MARE C1	Maria.AIRA-MARTIN@ec.europa.eu
Ranshuysen, Evelien	DG MARE D3	Evelien.RANSHUYSEN@ec.europa.eu
Shrives, Jonathan	DG MARE C1	Jonathan.SHRIVES@ec.europa.eu

Observers		
Name	**Affiliation[1]**	**Email**
XXXXX	XXXXX	XXXXXX

15. LIST OF BACKGROUND DOCUMENTS

Background documents are published on the meeting's web site on:
https://stecf.jrc.ec.europa.eu/ewg2004

List of background documents:

EWG-20-04 – Doc 1 - Declarations of invited and JRC experts (see also section 14 of this report – List of participants)

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STECF

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