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Reports of the Scientific, Technical and Economic Committee for Fisheries (STECF) - Evaluation of the landing obligation joint recommendations (STECF-18-06)

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EWG-18-06 report:

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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 reviews of joint recommendations from Member States regional groups for the implementation of the landing obligation in 2019.

SCIENTIFIC, TECHNICAL AND ECONOMIC COMMITTEE FOR FISHERIES (STECF) - Evaluation of the landing obligation joint recommendations (STECF-18-06)

THE EWG-18-06 REPORT AND ADDITIONAL INFORMATION WAS REVIEWED DURING THE PLENARY MEETING HELD IN Brussels, 2-6 July 2018

Request to the STECF

STECF is requested to review the report of the STECF Expert Working Group meeting, and the additional information received from the Regional Groups after the EWG, evaluate the findings and make any appropriate comments and recommendations.

STECF response

Background of the EWG 18-06

The report of the Expert Working Group 18-06 (STECF EWG 18-06) 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 2019. Joint recommendations for discard plans represent the agreement among Member States (MS) cooperating regionally on the elements for the preparation of Union law (Commission delegated act) in accordance with Article 15.6 of the Common Fisheries Policy. These elements are: definitions of fisheries and species; *de minimis* and high survivability exemptions; fixation of minimum conservation references sizes; additional technical measures to implement the landing obligation; and the documentation of catches. EWG 18-06 reviewed the new or amended joint recommendations from the North Sea, North Western waters (NWW), South Western waters (SWW) and Western Mediterranean. EWG 18-06 also carried out an analysis of the progression in implementing the landing obligation, working to the following Terms of Reference:

1. *Screen any changes in the defined fisheries to be subject to the landing obligation in 2019 for potential, provide comment on the potential impact in terms of changes in the scope i.e. increases in the level of the fleet covered and provide comment where appropriate if such changes may potentially introduce any unintended consequences e.g. different conditions in different sea basins.*
2. *Review the supporting documentation underpinning exemptions on the basis of high survivability in respect of:*
    - *Exemptions agreed for 2018 on the basis of high survivability where there was a requirement for further information to be supplied.*
    - *New exemptions based on high survivability. In data poor situations, assess what further supporting information may be available and how this be supplied in the future (e.g. survival studies, tagging experiments).*
3. *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:*

- *De minimis exemptions agreed for 2018 where there was a requirement for further information to be supplied.*
- *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).*
- *Consider the potential implications where joint recommendations have proposed combined (multi-species) de minimis exemptions.*

4. *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.*
5. *Review the supporting documentation provided for technical measures aimed at increasing gear selectivity for reducing or, as far as possible, eliminating unwanted catches.*

STECF observations

As noted by EWG 18-06, ahead of the final year of full implementation of the Landing Obligation in 2019, the number of exemptions proposed in the JRs for the EWG 18-06 to consider was higher than in previous years. The listed exemptions increased from just over 40 for 2018 to nearly 70 for 2019. . For the Mediterranean, in some cases the same recommendations were proposed by the different regional groups (SUDESTMED, PESCAMED and ADRIATICA); these groups submitted seven of the same exemptions. The EWG 18-06 combined these across the regions and assessed them as seven separate exemptions, which meant that the total number of proposed and assessed exemptions across all regions (NS, NWW, SWW, MED) was 58 (Table 1).

Table 1. Number of recommendations by type and region evaluated by EWG 18-06.

	Recommendations evaluated		
Region	*de minimis*	high survivability	Total
North Sea	8	8	16
North Western Waters	5	10	15
South Western Waters	10	3	13
Mediterranean (consolidated)	8	6	14
Total	31	27	58

As stated by EWG 18-06, the high number of recommendations reflects that 100 out of 175 stocks are currently subject to LO (excluding the Med), either fully or partially, and the remaining 75 stocks and partially implemented stocks will have to be brought in under the LO at the beginning of 2019.

To manage the large number of recommendations, the STECF response is structured as follows: general observations, then specific observations on the joint recommendations submitted from each of the region, North Sea (Table 2), North Western Waters (Table 3), South Western Waters (Table 4), and Mediterranean (Table 5).

EWG 18-06 reviewed only the new or amended joint recommendations from each region. As part of this evaluation, EWG 18-06 identified specific data shortfalls in the material submitted to support JRs. Following EWG 18-06, regional groups were requested to provide additional data and supporting information by the Commission so that it could be considered by STECF PLEN 18-02. For each JR, the EWG response is summarized. Then the STECF comments include a description of any information received after EWG 18-06. The supporting evidence dealt with by plenary could not be scrutinised and checked for consistency in such depth and detail as was carried out in the dedicated EWG. In this regard, STECF emphasises that the JRs, including supporting evidence based on the templates developed by STECF, should be submitted in a timely manner to allow for proper assessment by STECF and the EWG.

STECF acknowledges that the EWG 18-06 has addressed all of the Terms of Reference. The focus of the EWG evaluation and the STECF review was on the assessment of the JRs. The high number of recommendations meant however that it was not possible for EWG 18-06 to apply the same level of scrutiny to each proposal as in previous years.

STECF observes that the role of EWG 18-06 and STECF PLEN 18-02, and any future STECF meetings to evaluate joint recommendations, is to evaluate the scientific rigor and robustness of the underpinning information supplied by Member States to support the joint recommendations. STECF cannot adjudicate on whether exemptions should be accepted or not.

STECF observes that the EWG 18-06 is of the opinion that the quality of submissions to support the exemptions has, in many cases, improved since the first JR's were submitted in 2014. In particular, EWG 18-06 recognises progress made in carrying out discard survival experiments, which follow the recommendations made by ICES and STECF. However, EWG 18-06 also notices that there were many *de minimis* cases where the quality of submission had fallen, making it difficult to make any evaluation at all. In 2017, Member State Regional Groups generally used the templates developed by STECF to supply fisheries and fleet descriptors, but this year fewer recommendations were supported with this information.

In line with STECF PLEN 17-01, 18-01, and EWG 18-06, STECF highlights the "lack of [required] reporting by vessel operators of fish discarded under exemptions…". There was little included to address this in the latest JR's, and STECF stress again 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. As STECF PLEN 18-01 pointed out, 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 enforce the landing obligation (STECF EWG 13-23).

EWG 18-06 highlighted the marked increase in the number of combined *de minimis* recommendations requested for 2019. Following an assessment of this approach by STECF PLEN 18-01, it was shown that, under a combined *de minimis* of 5%, the discards of individual species can be substantially more than 5%. There are currently no combined *de minimis* in place which allow more than 5% discards for any single stock. STECF previously concluded that to be in line with CFP objectives, the maximum possible amount of combined *de minimis* for each stock that could potentially be discarded, should be deducted from the TAC of that stock. STECF observe that in several cases, the submissions from the regional groups have provided combined *de minimis* cases using the tables developed in STECF PLEN 18-01 to illustrate the implications of the proposal.

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), highlighting that medium survival rates in high discarding fisheries still lead to high discard mortality rates. An example is given in Figure 4.3.1. Plots are interpreted by noting that the lower bar in each case shows the discard rate while the upper bar shows the effect of the addition of the estimated survivability. The key observation is the size of the red 'dead discards' bar in the upper plot and the percentage of the overall catch from the exempted fishery that this would represent. In the example given, the dead discards with an exemption in place makeup around 15% of the total catch for this fleet. It is important to note that the percentage scales in each plot are scaled and so the numbers need to be read carefully. In some cases, the percentage of dead discards is small (below 5%), while in others it can be higher, indicating that a significant proportion of the catch is returned to the sea and dies in the exempted fishery (assuming no change in selectivity).

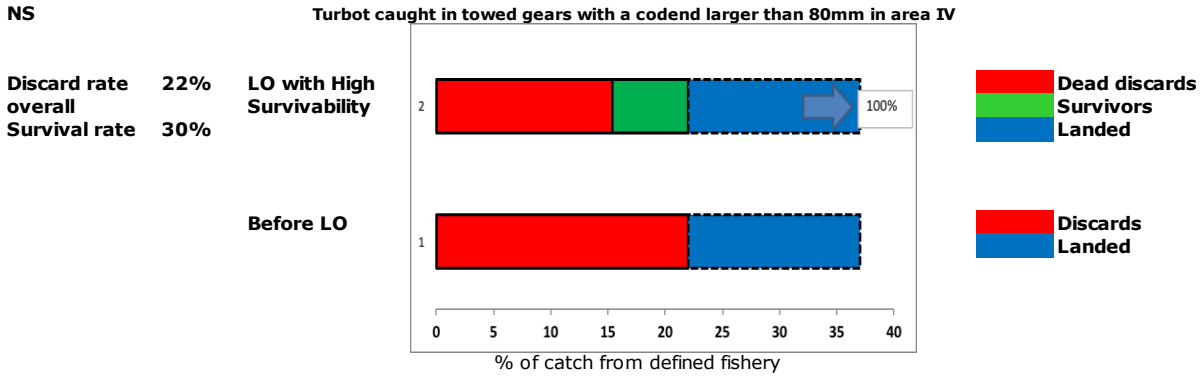


Figure 1. Illustration of the share of dead discards vs. survivors depending on discard and survival rates.

Plots are included for the North Sea and NWW requests. For the SWW and Mediterranean areas, the high survival exemption requests were either i) not supported by scientific studies or ii) lacking in discard rate information or iii) associated with zero discard estimates. In some cases, where either the survival rate or discard rate is variable, two plots are included to illustrate the range of outcomes.

Regarding survival, a number of studies have documented that survival rates decrease with sorting time, and can become significantly lower after prolonged air exposure. Therefore, STECF re-iterates the observations of EWG 18-06 that exposure time should be factored into the discard plan if survival exemptions are to be granted.

STECF 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. However, other than the North Western Waters, none of the JR's include any concrete proposals for increasing selectivity. In the NWW, in some case the measures proposed are not likely to increase selectivity over and above the current minimum requirements.

STECF reiterates other relevant observations from previous evaluations of JRs:

- Survival experiments do not cover all complex "situations" and therefore many gaps in knowledge remain regarding differences in survival rates concerning different areas, seasons & temperature, handling practices, habitat (discarding bottoms), experimental conditions vs commercial conditions, etc.;
- The subjective nature of the conditionalities for exemptions (high survival, disproportionate costs, *de minimis* & economic data) means that the observations and conclusions are based on many assumptions;
- Many of the requests for *de minimis* exemptions remain of a "national nature" rather than regionally focused;
- While many regional groups use the template developed by STECF, there are still limitations in the information provided (landings, fleets, speculative assumptions). Often information is provided for one fleet but not for other fleets using similar gears and which would be also affected. In these cases, further clarification may be required.

The outputs of the EWG evaluations and STECF review are summarised in Tables 4.3.2-5, the number of recommendations means that the volume of information is still substantial. As a means to visualise an overview of the outcome of the assessments, figures were devised to illustrate the quality of evidence associated with each recommendation. The figures do not indicate that STECF supports the exemption or not, but rather show whether the supporting information and data supplied was of good quality and adequate to conduct an evaluation (Figures 2-5). The evidence is separated into three categories, i) the clarity of the request – was the recommendation clear, ii) the justification – is there empirical evidence on selectivity, economic implications of handling catches or discard survival rates which supports the request, and iii) the fishery information, which provides context for the recommendation – the number of vessels and quantity of catch etc. Figures 2-6 show that the quality of the evidence used to support the JRs varies within, and between, regions. STECF notes that the lowest quality of evidence is associated with justifying *de minimis* exemptions.

Table 2. Main findings of the STECF EWG 18-06 and summary of additional information received relating to exemptions presented: **North Sea**.

De minimis	
Recommendation	Whiting and cod caught using bottom trawls (OTB, < 100mm (TR2)
Main findings of EWG 18-06	Existing exemption but revised by increasing the scope of this exemption to the whole of area IV. The original exemption only applied in area IVc. The justification is largely the same as in 2017. No new information provided to support widening the scope of the exemption. Information is only supplied for the FR fleet although indications that NL vessels are involved. Suggested additional data to be requested: a) Information to support widening the scope of the exemption.
Comments STECF PLEN 18-02	STECF notes that evidence of fishing effort in IVb was provided for the French fleet to the PLEN 18-02. This is based on VMS tracks for three vessels covering a short period in June 2018. STECF concludes this information supports increasing the scope of this exemption for the French vessels. STECF notes no fleet information has been provided for other Member States.
Recommendation	Fish bycatch in Northern prawn trawl fishery with a sorting grid, with unblocked fish outlet in area IIIa
Main findings of EWG 18-06	Existing combined species *de minimis* but revised by increasing the number of species included under the exemption reflecting species previously not under the landing obligation. The justification is the same as in 2017. Additional catch data has been provided for the species added. The volumes of *de minimis* are quite low reflecting the relatively low levels of unwanted catches in this fishery.
Comments STECF PLEN 18-02	No additional comments
Recommendation	Fish bycatch in a *Nephrops* targeted trawl fishery
Main findings of EWG 18-06	Existing combined species *de minimis* but revised through the inclusion of hake to the list of species covered by this exemption. The basis for the exemption is the same as in 2017. Additional catch data has been provided for hake. The volumes of *de minimis* are quite low reflecting the relatively low levels of unwanted catches in this fishery.
Comments STECF PLEN 18-02	No additional comments
Recommendation	Bycatch in the brown shrimp fishery in the North Sea
Main findings of EWG 18-06	New exemption. Based on major increases in selectivity being difficult to achieve beyond existing measures. In addition, the handling of unwanted catches is regarded as having an economically disproportionate impact given the difficulties in sorting very small undersized individuals from the target species. No supporting documentation is provided to support either of these assertions even though it is likely that both are important for this fishery. A reasonably detailed description of the fishery and fleets is provided but there is no breakdown by Member State and the catch data is only provided as a percentage of the overall catches and not by volume. Suggested additional data

	to be requested: a) Supporting documentation on disproportionate costs of i) separating out small fish and ii) need for extra crew. b) Breakdown of the fleets by Member State and the catch data is only provided as a percentage of the overall catches and not by volume.
Comments STECF PLEN 18-02	STECF notes that additional information on disproportionate costs has been provided to the PLEN 18-02. This information adequately documents the increasing time required for sorting small fish from the brown shrimp catch as well as providing economic data relating to the costs of employing extra crew to carry out this sorting on board. STECF notes that a breakdown of the fleets involved in the fishery has also been provided and a justification for not supplying catch data relating to bycatch volumes has also been supplied which seems reasonable.
Recommendation	Pelagic species under landing obligation for demersal vessels using bottom trawls (OTB, OTT, PTB, TBB) of mesh size 70-99mm (TR2, BT2) in the North Sea (area IV)
Main findings of EWG 18-06	New combined species *de minimis*. Based on improvements in selectivity being difficult to achieve and also on disproportionate costs of handling unwanted catches of pelagic species on board. Limited supporting information is provided regarding either of these conditionalities. Reference to some French selectivity studies although they do not relate directly to the selectivity of pelagic species. Additionally, there is a reference to a French study (EODE study) which deals with disproportionate costs but not specifically with handling catches of pelagic species. A detailed description of the relevant French fisheries and fleets is provided. No information provided on other fleets who may wish to avail of this exemption. Indication that beam trawls are to be included but no catch or fleet information is provided. Suggested additional data to be requested: a) Supporting information regarding either i) improvements in selectivity being difficult to achieve or ii) on disproportionate costs of handling unwanted catches of pelagic species onboard. b) Catch or fleet information on i) other fisheries involving UK, NL, SE and DK vessels or on ii) beam trawls.
Comments STECF PLEN 18-02	STECF notes that additional supporting information has been provided to PLEN 18-02 in the form of two selectivity studies carried out in France in 2010 and 2014. These studies contain limited information for pelagic species but show that pelagic bycatch can be reduced in the TR2 fisheries using a range of selective gears. The reports also show the consequential reductions in marketable catches associated with the use of these selective gears. While these supporting studies are informative, STECF is unable to assess whether this demonstrates that improvements in selectivity to reduce pelagic bycatch are very difficult to achieve in these fisheries owing to the limited scope and scale of the studies. STECF also cannot assess whether the losses associated with the use of the gears tested would render the fisheries uneconomic. Further, STECF notes that current levels of unwanted catches in the TR2 fisheries are amongst the highest in any demersal fisheries in the North east Atlantic but the legal gears used (80mm+80mm smp) are relatively unselective. STECF notes that no further information on disproportionate costs has been provided. STECF notes that clarification regarding the catch data is provided, which indicates the original data supporting the exemption covers catches from all vessels fishing with TR2 and BT2 gears in the North Sea. This data has been extracted from the FDI database and is presented as aggregated data covering the fleets from all Member States and both gear types. No breakdown of catches by gear type and no breakdown of the fleets involved in the relevant fisheries have been provided. Therefore, STECF concludes that it is still difficult to assess

	the extent of this *de minimis* exemption.
Recommendation	Ling (*Molva molva*) for vessels using bottom trawls (OTB, OTT and PTB) > 100mm in the North Sea (area IV)
Main findings of EWG 18-06	New exemption. Based on improvements in selectivity being difficult to achieve given the relevant fisheries are already selective. No supporting information is provided other than referring to the morphology of ling, which makes reducing unwanted catches of ling difficult. Reference to several French studies although they do not relate directly to the selectivity of ling. Suggested additional data to be requested: A detailed description of the relevant French fishery and fleet is provided. No information on other fleets which may wish to avail of this exemption. Suggested additional data to be requested: a) Supporting information on selectivity being difficult to achieve, other than referring to the morphology of ling. b) Clarification that this exemption would apply to similar fleets from other Member States. There is reference to DE vessels operating in the fishery, but no details are provided.
Comments STECF PLEN 18-02	STECF notes that no new supporting information has been provided to the PLEN 18-02 to support this exemption. The only arguments put forward are that the gear used in the fisheries are already selective in the relevant fisheries and that improving selectivity further will render the fisheries uneconomic While it is reasonable to assume that improvements in selectivity to reduce unwanted catches of ling are technically challenging given their morphology, STECF cannot definitively assess the impact on the fisheries of improving selectivity and whether such improvements are very difficult to achieve in the relevant fisheries. STECF notes that no additional catch or fleet information has been provided for the fleets from other Member States who may participate in the fisheries (i.e. DE and UK).
Recommendation	Bycatch of industrial species for demersal vessels using TR1, TR2 or BT2 in areas IIIa and IV)
Main findings of EWG 18-06	New combined species exemption. Based on handling of unwanted catches are regarded as economically disproportionate given the difficulties in sorting very small undersized individuals from the target species. No supporting documentation is provided other than that the catches are insignificant in the demersal fisheries. Indications that there are no methods available to reduce bycatch of industrial species in these fisheries, but no supporting information is provided. Very limited information on the fleets and fisheries. Reference to beam trawl fisheries but no information is provided on the catches or fleets involved. Suggested additional data to be requested: a) Supporting detailed documentation on catches b) Clarification on the fleets and fisheries to which this exemption would be applied.
Comments STECF PLEN 18-02	STECF notes that no additional supporting information has been provided to the PLEN 18-02 so no assessment can be made as to whether improvements in selectivity are very difficult to achieve or whether the costs of handling unwanted catches are disproportionate. However, STECF acknowledges that the catch information provided show the level of bycatch in the relevant fisheries is minimal so the volume of *de minimis* will be small. STECF notes that additional catch information has been provided for the Swedish fleets using TR1 and TR2 gears in the North Sea and Skagerrak. No information has been supplied for the beam trawl fisheries.

Recommendation	Whiting caught by beam trawls 80-119mm in the North Sea (area IV)
Main findings of EWG 18-06	New exemption. Based on major increases in selectivity being difficult to achieve over and above measures already introduced into the fishery. In addition, the handling of unwanted catches is regarded as economically disproportionate given the difficulties in sorting very small undersized individuals being difficult to sort from the target species. Limited supporting evidence, other than reference to several selectivity studies being undertaken in NL and reference to several studies that have looked at the economic impacts of the landing obligation. These show, in a general sense, that additional handling on board of unwanted catches generates extra costs and sorting time for crews. Catch data provided for only the NL fleet. Not clear whether fleets from other Member States intend to avail of this exemption. Suggested additional data to be requested: a) Evidence to support the assertions that selectivity difficult to achieve and handling small undersized fish involves disproportionate costs. b) Detailed information on the fleets and fisheries to which this exemption is to be applied.
Comments STECF PLEN 18-02	STECF notes that additional supporting information has been provided to the PLEN 18-02 in the form of an impact assessment study. However, this study is in Dutch and STECF is unable to assess whether it supports the proposed exemption. STECF notes detailed catch and fleet information has been provided for all BT2 fleets. The catch information shows that the volume of *de minimis* requested is greater than the observed discards in the fisheries. This is because the *de minimis* is calculated on the combined total catches of plaice and sole. STECF does not understand the logic behind this approach and notes that this may act as a dis-incentive to improve selectivity for whiting in the relevant fisheries as all unwanted catches of whiting could potentially be discarded
High survivability	
Recommendation	Common sole (undersized only) caught with trawl gears in area IVc
Main findings of EWG 18-06	Existing exemption that EWG 18-06 did not assess but notes that the information on nursery areas has not been provided. Suggested additional data to be requested: a) location of sole nursery grounds.
Comments STECF PLEN 18-02	STECF notes that no new information on nursery areas has been provided.
Recommendation	*Nephrops* caught by demersal trawls with a codend larger than 80mm (70mm/35mm)
Main findings of EWG 18-06	Consolidation of several previous exemptions. No information is provided on fleets and catch data is only provided for the UK. There is an inconsistency in the fishery data provided for UK. Based on a scientific study on post-catch survivability following the ICES WKMEDS recommendations. Survival rates were provided for two areas: i) west coast (Minches): overall rate 53%; 45.7% in summer; 56.3% in winter; ii) east coast (Firth of Forth): survival rate in summer was 74.5%. Survival results for the Scottish west coast appear representative of the wider fleet operating on the west coast. However, for the east coast, substantial differences were observed, meaning to apply the discard survival estimates to the whole fleet in this fishery would require several assumptions to be made. There is limited information to assess whether these assumptions are justified and therefore whether the results from the studies are representative for the

	whole of the east coast. No assessment could be carried out of whether extending the survival rates to the *Pandalus* fishery is justified as no supporting information was provided. The gears and characteristics of the fishery are very different to the *Nephrops* fishery which means the survival estimates provided cannot be considered representative of the *Pandalus* fishery. Suggested additional data to be requested: a) Detailed catch and discard figures.
Comments STECF PLEN 18-02	STECF re-iterates the concerns raised by EWG 18-06 regarding the assumptions made on the survival estimates observed in the east coast fisheries and whether the estimates are representative for the whole area. Nonetheless the supporting scientific information is based on a robust approach and the validation technique used in the context of the wider fleets is reasonable. STECF also re-iterates the concerns raised by EWG 18-06 on the lack of information to justify the inclusion of the *Pandalus* fishery in this exemption. STECF notes the additional catch data submitted by the UK to the PLEN 18-02 addresses the inconsistencies identified by EWG 18-06. STECF notes that depending on gear, survival estimates range between 38% (SELTRA) to 75%(Grid). At the prevailing discard rate (6%) indicated in the JR supporting material, the range of survivability values imply that between 2 and 4% of the overall catch of the gears affected by this exemption is discarded and dies (Fig. 2).
Recommendation	Bycatch of plaice by vessels using setnets in areas IIIa and IV
Main findings of EWG 18-06	Based on studies in Danish fisheries in the Baltic Sea, and on the assumption that the principles and evidence are also applicable to the North Sea. The studies provide initial evidence of the survivability caught with trammel nets. Results from the study showed 100% survivability. Studies should be repeated in the North Sea with a more complete analysis (more samples; considering the environmental conditions and the fishing handling practices, long term mortality, air exposure, etc.) in representative fisheries. In addition, no data is provided for other types of static nets. The handling procedures related to the discarding of plaice particularly those to minimize air exposure, are a key factor affecting the survivability of this species. These should be well specified in the discard plan if the exemption is granted. Suggested additional data to be requested: a) Fishery data for the static 'net' categories.
Comments STECF PLEN 18-02	STECF notes additional catch and fleet information has been provided to the PLEN 18-02. STECF has no additional comments on the supporting information which seems reasonable. STECF notes that the survival estimate is 100%, if confirmed over a range of conditions this implies that none of the overall catch of the gears affected by this exemption is discarded and dies (Fig. 2).
Recommendation	Bycatch of plaice by vessels using Danish seine in areas IIIa and IV
Main findings of EWG 18-06	Fleet information is supplied only for the Denmark, but it is assumed no other Member States has vessels using this gear. No detailed catch information is presented. Data only shows percentages of unwanted catch of plaice, which is on average 8% by volume in the Skagerrak, and 1% in the North Sea. The supporting study provides evidence on the survivability of discarded plaice in Danish Seine fisheries. The sample size is high enough to obtain reliable estimates of overall survival rates and the survival rates are likely to represent the lowest survival rates expected during the year given the study was carried out during the summer months.

	The study only covers the Skagerrak, but it seems reasonable to assume that the results are broadly representative given the proximity of the areas, similar catch compositions and the gears are identical. The large differences in survival rates with increasing air exposure (before and after 30 minutes) shows this is an important factor that should be incorporated in the discard plan if the exemption is granted. Suggested additional data to be requested: a) Information on the air exposure times during the catch sorting process in the commercial fleet.
Comments STECF PLEN 18-02	STECF notes that additional information has been provided to the PLEN 18-02 regarding sorting times at the fleet level. This shows that based on the average catch rates, the estimated sorting time would be 45 minutes. However, the survival studies show that survival rates decrease significantly after sorting times of 30 minutes. STECF highlights that if sorting times are on average longer than 30 minutes then the survival rates observed are not applicable for this fishery. The actual survival rates will be significantly lower.
Recommendation	Plaice below MCRS caught by 80-119mm beam trawls (BT2) in area IV
Main findings of EWG 18-06	No data on the fleets or fisheries is provided and it is unclear as to whether the exemption is to apply to all beam trawl fisheries or just to vessels using pulse trawls. There is no justification for the three-year duration other than to allow further studies to be carried out and additional control measures to be introduced. There is no indication the exemption would be removed if follow-up studies did not show reasonable survival rates for discarded plaice. The JR states that "plaice has a proven potential for high survival, given already existing high survival exemptions in place in the North Sea and other regions". However, the results of all the studies provided do not corroborate this statement as the mean survival rates presented are in all cases lower than 20%. The survival studies presented were all carried out with pulse trawls and EWG 18-06 cannot assess whether the results presented are representative of standard beam trawl gears used. If the intention is for this exemption to cover standard beam trawl gear as well as pulse trawls then it would be appropriate to repeat these studies with standard beam trawl gear. The request includes a description of the fisheries concerned and indicates that the exemption is conditional on a package of measures and incentives which affect two different components of the fleet in various ways. However, the reasoning for considering these two fleet segments (< 221kw and > 221kw) is not justified. For the small vessel fleet (<221 kw) the exemption applies if the average trawl duration is <90 min. However, the threshold of 90 min is not well supported because the results presented in the show that no effect of short (90 instead of 120 min) hauls on discards survival probability could be detected. For the large vessels (>221kw) a package of measures and incentives towards more selective fishing will be developed over a three-year period. However, little detail is provided on how these measures will be introduced. The total sample sizes used in the survival studies are adequate to obtain an overall survival rate. However, although the sea trips were spread out over the year (January, May, June, July, September, October, December) to account for the potential effect of variable environmental and fishing conditions on discards survival, the low number of individuals in each trip prevents using these as reliable monthly survival estimates. The studies show survival was strongly affected by fish condition. Therefore, the recommendation that measures aimed at increasing the survival of discards should focus on improving the condition of discarded fish during the capture process rather than the catch processing seems appropriate. Suggested additional data to be requested: a) Reasoning for why a three-year period is requested for the exemption.

Comments STECF PLEN 18-02	STECF acknowledges that the supporting scientific study is of good quality. STECF notes that survivability in this case is affected by many factors and that survivability is highly variable. STECF re-iterates the concerns raised by EWG 18-06 regarding the estimated survival rates which are less than 20%. STECF also highlights that given the indicative high discard rates and relatively the low survival rates it is likely that significant quantities of plaice discarded will not survive. STECF also re-iterates the concerns raised by EWG 18-06 regarding the representativeness of the survival estimates from the pulse trawl fishery to standard beam trawls. If the intention is for this exemption to include standard beam trawls or other towed gears then additional survival studies should be carried out. STECF re-iterates the concerns of the EWG 18-06 regarding the duration of the exemption and notes that no further justification for the length of the exemption (3 years) has been provided. STECF notes that the available survival estimate is relatively low at 20%, while plaice discard rate in the North Sea is quite high at 34% (ICES 2018). Assuming the discard rate of <mcrs plaice is at least 34%, this implies that at least 27% of the undersized catch affected by this exemption is discarded and dies (Fig. 2).
Recommendation	Bycatch of plaice using trawl (OTB, PTB) of mesh sizes ≥120mm in areas IIIa and IV in winter
Main findings of EWG 18-06	Based on a scientific study on discard survival of plaice caught in the demersal trawl mixed fishery in the Skagerrak during summer 2017 and winter 2018. The study followed the ICES WKMEDS guidelines with large sample sizes. The mean survival rate for undersized plaice was higher in winter (75%) than in summer (44%). The mean rate for undersized plaice caught when targeting *Nephrops* during winter was lower (41%) than when targeting plaice in the same season. The larger amount of *Nephrops* in the catch caused more physical damage to the fish, reducing survival rates. In the summer when targeting plaice, discard survival rates were affected by air exposure duration. After 60 minutes exposure, the survival rates dropped to 8%. The air exposure times used in the experiment were within commercial practice, but it is not known if air exposure time is higher at the fleet level. The low survival values in summer justifies the exemption being restricted to winter months as indicated in the JR. Suggested additional data to be requested: a) Data on catch and discard quantities. b) Information on the air exposure times during the catch sorting process in the commercial fleet.
Comments STECF PLEN 18-02	STECF notes that additional information has been provided to the PLEN 18-02 on the typical sorting times by catch size. Information on average catch weights in the relevant fisheries is also provided. This information shows that average sorting times are in the region of 40-60 minutes. STECF highlights that survival rates in the supporting study dropped to < 10% with sorting times greater than 60 minutes in the summer months. The actual survival rates in the fishery are likely to be much lower than those observed and this re-enforces the recommendation to restrict this exemption to the winter months. STECF notes that the winter survival estimate is 75%. The prevailing discard rates provided in the JR supporting material indicate values of 60% in III and 6.4% in IV. These discard values imply that between 2 and 15% of the overall catch of the gears affected by this exemption is discarded and dies (Fig. 2). STECF notes that additional catch and fleet information has been provided by Sweden.
Recommendation	Skates and rays caught by all fishing gears in the North Sea (areas IIIa, IV and EU waters of IIa)
Main findings of	New exemption. Scope is very wide covering all species of skates and rays and

EWG 18-06	also all fishing gears, which is a major concern. The JR also recommends that discard rates need to be included in the annual ICES assessment and a methodology devised to calculate quota uplifts for skate and ray species to take account of discards. The JR contains a comprehensive review of the existing estimates of discard and survival rates of skate and rays, based on existing information and survival studies. This review shows discard rates and survivability estimates depend greatly on the species, area and métier considered. An average survival estimate of 45% is put forward in the JR. Vitality data on discarded skates and rays show less variability, with most (>95%) rays in longline, otter trawl and static net fisheries being alive and in good or moderate condition at the point of release. However, the supporting information highlights there are significant data gaps that need to be addressed. More work is needed to fill the gaps and provide a more complete picture of survival across different skate and ray species in different fisheries/areas/métiers. During the period of the requested exemption (i.e. 3 years), the aim is to promote good practice by fishermen as well as implementing avoidance and selectivity measures to minimise the unwanted catches of skate and rays. However, it is not clear which of these measures will be implemented by each fishery or their likely effectiveness. The justification for the three-year period is limited, if the recommendation is awarded, a shorter period would allow for the exemption to be reviewed quickly in the light of emerging data. Very few landings and discards data provided. EWG18-06 recognises these data are sparse and that there are quite a lot of species, however, Regional Group should provide whatever they do have to assist inform the evaluations.
Comments STECF PLEN 18-02	STECF acknowledges that a significant amount of information has been presented to support this proposed exemption. However, STECF observes that the scope of this exemption is wide, covering many species and fisheries, and as such, not consistent with existing survivability exemptions. STECF recognizes that the effects of different variables on discard survival is not well understood and this introduces risks in extrapolating discard survival evidence between species, fisheries and seasons. STECF notes that the raw data underpinning the information provided in the JR has been supplied, although this is of limited value other than confirming the basis for the proposed exemption.
Recommendation	Turbot caught in towed gears with a codend larger than 80mm in area IV
Main findings of EWG 18-06	No data on the fleets or fisheries (e.g. fleet, landings and discard rates) involved is provided. It is also unclear as to whether the exemption is to apply to all trawl fisheries or just to vessels using pulse trawls. The exemption is proposed on a temporary basis for three years. However, there is no justification provided. Based on survival studies which provide a preliminary survival rate estimate of 30% with provision for further studies The survival rates in summer were higher than in winter which is unusual based on results of previous survival studies with different species. Given this unexpected outcome, it would seem appropriate to repeat the survival studies to confirm this is the case. The survival studies presented were all carried out with pulse trawls. EWG 18-06 cannot assess whether the results presented are representative of standard beam trawl gears or other trawl gears. If the intention is for this exemption to cover demersal trawls and standard beam trawl gear as well as pulse trawls then it would seem appropriate to repeat these studies with these gears. The total sample sizes used in the survival studies are adequate to obtain an overall survival rate. However, although the sea trips were spread out over the year (January, May, June, July, September, October, December) to account for the potential effect of variable environmental and fishing conditions on discards survival, the low number of individuals in each trip prevents using these as reliable monthly survival estimates. The studies show survival was strongly affected by fish condition backing up the

	recommendation made in the JR that measures aimed at increasing the survival of discards should focus on improving the condition of discarded fish during the capture process rather than the catch processing. Suggested additional data to be requested: a) Data on catch and discard quantities.
Comments STECF PLEN 18-02	STECF re-iterates the concerns raised by EWG 18-06 regarding the survival rates estimated which are typically 30% with considerable variability. STECF also highlights that given the indicative discard rates which for some fleets are high and survival rates are relatively low in the BT2 fishery then it is likely that significant quantities of turbot discarded will not survive. Most catches of turbot are taken in the BT2 fishery. STECF notes that for the towed areas combined (beam trawl and otter trawl) the available combined discard rate was 22% and the survival estimate is relatively low at 30%. This implies that at least 15% of the undersized catch made by the gears affected by this exemption is discarded and dies (Fig. 2). STECF notes that the survival estimates are based on studies carried out in the pulse trawl fishery. STECF cannot assess the representativeness of these estimates compared to standard beam trawls or TR2 gears. Further studies to consider the effects of differing environmental conditions and fishing operations would seem appropriate. STECF notes that detailed catch and fleet information has been supplied to the PLEN 18-02 for both TR2 and BT2 fisheries.

Table 3. Main findings of the STECF EWG 18-06 and summary of additional information received relating to exemptions presented: **North Western Waters**.

Recommendation	Whiting caught with bottom trawls and seines >80mm and pelagic trawls and beam trawls (80-119mm) to catch whiting in the Eastern Channel (VIId)
Main findings of the EWG 18-06	Existing provision but with a request to also include beam trawls (BT2). No supporting information has been provided to substantiate this extended request. Suggested additional data to be requested: a) Data on the fishery, including catch and discard quantities.
Comments STECF PLEN 18-02	Additional fishery information provided to PLEN 18-02 by France, Netherlands and UK. Data for UK is not clearly explained but the quantities appear to be small. Information indicates that most catches are made by French trawlers and that the BT2 gear does not appear to add significant quantities. STECF concludes that the addition of BT2 does not materially alter the original justification and evidence for this exemption.
Recommendation	Combined *de minimis* for Gadoids (cod, haddock, whiting) caught using bottom trawls, seines and beam trawls of greater than or equal to 80mm mesh size in the Celtic Sea and the Channel (ICES VIIb-c, e-k)
Main findings of the EWG 18-06	This request involves the use of 'safeguards' and the approach was evaluated by STECF Plenary 2018-01. EWG 18-06 note that studies on selectivity have been provided only for the Irish fleets with general information from France. Fishery information on all fleets is required (not just French and Irish) and STECF further notes that there are some inconsistencies in the data provided. EWG 18-06 notes that since the requested 5% *de minimis* provides only a partial solution (discard rates are 27% for TR1 and 53% for TR2), improvements in

	selectivity are required. Due to several remaining questions, lack of key data, incomplete selectivity data and general shortage of material justifying disproportionate costs, EWG 18-06 is unable to fully assess the merits of this case. Suggested additional data to be requested: a) Data on the fishery, including catch and discard quantities (other than for France and Ireland). b) Clarification on landings and discard data provided. Estimated landings and the estimated discards for gadoids report the same value, and this is not consistent with the reported discard rate.
Comments STECF PLEN 18-02	Additional fishery information provided to PLEN 18-02 by NL and UK. Inconsistencies were sorted out. Fishery data provided by Spain related to an exemption that was not requested in the JR. The combination of species were different to the original proposal contained in the JR. STECF notes that while there is partial information on selectivity this is limited to one fleet and there is little information to justify an argument on the basis of disproportionate cost. STECF concludes that in the absence of supporting information, no assessment can be made as to whether improvements in selectivity are very difficult to achieve or whether the costs of handling unwanted catches are disproportionate. The basis of the safeguard component of this request was considered by STECF Plenary 2018-01. STECF reiterates its conclusion that to be in line with CFP objectives, the maximum possible amount of *de minimis* (i.e. the maximum amount including safeguard) for each species that could potentially be discarded, must be deducted from the respective TACs.
Recommendation	Undersized whiting in the TR2 *Nephrops* trawl fishery in ICES division VIIa
Main findings of the EWG 18-06	EWG 18-06 notes that 99% of the whiting catch (558t UK and 535t IE) is discarded because it is below the MCRS, and that a *de minimis* of 5% would produce a volume of 28t UK and 27t IE. The *de minimis* level provides only a partial solution to reducing discards, indicating that significant selectivity improvements are still required.
Comments STECF PLEN 18-02	STECF agrees with the EWG comments. STECF notes that in order to reduce discards there will need to be a focus on improvements in selectivity and/or the development of other measures to avoid <MCRS fish.
Recommendation	Undersized by-catches of haddock in the TR1 demersal trawl fisheries in ICES area VIIa
Main findings of the EWG 18-06	The discards of haddock under MCRS amount to 3.3 tonnes in UK, and 34 tonnes in Ireland. The *de minimis* volume requested for Ireland is 3 tonnes, which is a small proportion of expected discarding. EWG 18-06 notes that there are several relevant selectivity studies providing increased selectivity which will remove most of the undersized catch. EWG 18-06 notes that the argument that handling costs have a disproportionate negative economic impact, is ambiguous for the UK fleet, since 70% of the small quantity of haddock discards are >MCRS and may be sold. Recent observer data suggest a discard rate of only 0.6% which would render the *de minimis* request excessive. EWG 18-06 concludes that there are selective gears which could reduce discards.
Comments STECF PLEN 18-02	STECF agrees with the EWG comments. STECF further concludes that the justification for this exemption is weak and that uptake of

	selective gears should be a matter of priority.
Recommendation	By-catches of pelagic species (mackerel, horse mackerel, herring, boarfish, greater silver smelt) caught by vessels using bottom trawls and seines, and beam trawls in ICES subarea VI and VIIb-k
Main findings of the EWG 18-06	Information (on selectivity and disproportionate costs) to support the justification for this combined *de minimis* was not provided. TR2 pelagic discards (STECF data for all countries- 2016) amount to about 6% of discards but no comparable information was presented on beam trawl and seine fisheries included in this exemption. EWG 18-06 notes that the supporting information proposes a safeguards approach (25%) based on a French discard profile indicating that safeguards should be revised over time. Profiles are required for other countries. STECF (PLEN 18-01) provided advice on a similar combined *de minimis* request (see above) incorporating safeguards and raised several concerns. Due to lack of information, EWG 18-06 is unable to assess whether selectivity is difficult to improve in this fishery or whether costs of handling unwanted catches are disproportionate. Suggested additional data to be requested: a) Fishery information for beam trawl and seine net fisheries. b) Information related to safeguards countries other than France, including discard profiles.
Comments STECF PLEN 18-02	Additional fishery information was provided to PLEN 18-02 for several countries. STECF notes that supporting studies were not provided and so STECF is unable to assess whether this indicates that improvements in selectivity to reduce pelagic bycatch are very difficult to achieve in these fisheries. STECF also cannot assess whether the losses associated with the use of the gears tested would render the fisheries uneconomic. Further, STECF notes that current levels of unwanted catches in some of the small mesh fisheries covered by this *de minimis* are amongst the highest in any demersal fisheries in the North east Atlantic but the legal gears used (80mm+80mm smp) are relatively unselective.
High Survivability	
Recommendation	Common sole (undersized only) caught with trawl gears in area VIId
Main findings of the EWG 18-06	Existing provision. EWG 18-06 notes that new information in relation to nursery areas (as requested in the 2018 discard plan COM 2018/46) was not provided in the JR. Suggested additional data to be requested: a) Location of sole nursery grounds.
Comments STECF PLEN 18-02	No new information was supplied to the STECF Plenary on the location of nursery grounds in VIId. Additional comments were, however, provided by the UK outlining the difficulties of identifying nursery ground areas. STECF notes, however, that a late submission was made by France after the Plenary. This consisted of the coordinates of 5 small areas located along the French coast in VIId (no charts were provided). There was no accompanying text to explain whether the positions represent updates of existing information, or to indicate the source of the material, or the significance of those areas to the sole population in VIId. No information was available for the English coastal areas and therefore STECF was unable to further evaluate the relevance of the

	nursery grounds in the context of this existing exemption.
Recommendation	*Nephrops* in the TRI fisheries in Area VII and in the TR2 fisheries in Area VII in combination with highly selective gears
Main findings of the EWG 18-06	EWG 18-06 considers that the supporting scientific work involving a 300 mm square mesh panel (SELTRA) trawl is robust and the results (64%) are in line with previous discard survival estimates for highly selective *Nephrops* trawls from North Sea and Skagerrak. EWG 18-06 notes that the scope of the proposed exemption in terms of areas, seasons and variability of fisheries and gears is broader than in other existing exemptions based on *Nephrops* survival. Furthermore, the other gear options proposed as eligible for the exemption (TR1 and a variety of TR2 trawls) have different selection properties compared with the SELTRA trawl. Since catch volume, catch composition and fleet characteristics are important in *Nephrops* discard survivability, EWG 18-06 suggests that the estimate in the current study (64%) may not be representative of all the proposed gear options in area VII. EWG 18-06 also notes that the proposed derogation is linked to suggested changes in technical measures. EWG 18-06 further notes that the supporting fisheries documentation for countries other than Ireland is insufficient to assess the overall magnitude and effect of this exemption. Suggested additional data to be requested: a) Data on the fishery (from countries other than Ireland), including catch and discard quantities.
Comments STECF PLEN 18-02	Additional quantitative fishery information was received by PLEN 18-02 from France and the UK providing a good indication of the scale of the fishery affected by this exemption. STECF agrees with EWG18-06 that the SELTRA trawl estimate of 64% survival is supported by a robust study. STECF notes, however, that the uncertainty surrounding survival rates in the various other gears and fisheries potentially covered by this exemption makes it difficult to assess the overall effect on the extensive *Nephrops* fisheries in VII. STECF notes that assuming the 64% survival rate applies to all gears, then at a discard rate of around 15% (provided in the JR documentation), this implies that only about 5% of the overall catch of the gears affected by this exemption is discarded and dies (Fig. 2).
Recommendation	*Nephrops* caught by 80-110mm otter trawl gears in ICES subarea VIa, within 12 miles of coasts
Main findings of the EWG 18-06	EWG 18-06 notes that the supporting scientific report presents new estimates of *Nephrops* discard survival rate and also discusses the wider application of this new survival estimate in Northwest waters and North Sea waters more generally. The reported annual mean survival rate for *Nephrops* in TR1 and TR2 based on the new summer and winter trials on one vessel was 53% (46% in summer and 56% in winter). EWG 18-06 judges that the supporting scientific information is based on a robust approach and that the validation technique used in the context of the wider fleets is commendable. Owing to skewed sampling of individuals in the summer experiment, EWG 18-06 considers that the reported survival rate (53%) may be an overestimate. EWG 18-06 notes that, similar to the area VII proposal, the scope of the proposed exemption is broader than other existing *Nephrops* exemptions based on survival. Furthermore, the proposal is also very similar to, and based on much the same supporting information, as the proposal for exemption of *Nephrops* in North Sea trawls. Given that almost all the catches are made by Scotland, the available

	fishery data (for Scotland only) is adequate to assess the scale of any potential impact. EWG 18-06 also notes that the discard rate is relatively low (7%) in the area meaning that the risk of unaccounted mortality due to a survival exemption is probably limited.
Comments STECF PLEN 18-02	STECF agrees with the EWG 18-06 observations and concludes that the survivability study is robust and indicates a survival rate of 53%. Combined with the discard rate of 7% (indicated in the accompanying fishery data), this implies that about 2% of the overall catch of the gears affected by this exemption is discarded and dies (Fig. 2).
Recommendation	Skates and ray species caught by any gear in the North Western Waters (areas VI and VII)
Main findings of the EWG 18-06	This request is identical to one submitted by the Scheveningen group for the North Sea. A comprehensive analysis/synthesis of the existing estimates of discard and survival rates of skate and rays, based on existing literature and studies has been provided. EWG 18-06 notes that discard rates and survivability estimates depend greatly on the species, area and métier considered. Although an average value (45%) of discard rate over 2014-2016 for skates and ray species combined is presented, estimates can vary greatly between species and within species. Similar to this, the survival rates can greatly vary between species and fisheries. Health vitality data on discarded skates and rays show less variability, with most (>95%) rays in longline, otter trawl and netting fisheries being alive and in good or moderate condition at the point of release EWG 18-06 notes that the current data outlined in support of the requested exemption is very limited because the high variability in survivability estimates and the existent data gaps. EWG 18-06 acknowledges that more work is needed to fill the gaps and provide a more complete picture of survival across different skate and ray species in different fisheries/areas/métiers. EWG 18-06 notes there is a necessity to have catch and discard data by species. Given the patchy nature of the data, EWG 18-06 is concerned about the current wide scope of the request. EWG 18-06 notes that in the case of the North Sea request, the North Sea Member States aim to promote good practice as well as implement avoidance and selectivity measures to minimise the chance of skate and ray species being caught. EWG 18-06 however cannot evaluate which of these measures will be implemented by each fishery. EWG-06 also suggest a cautious approach in relation to the duration of any exemption, if the recommendation is awarded, a shorter period would allow for the exemption to be revisited quickly in the light of emerging new data. Suggested additional data to be requested: a) Any additional data on landings and discards
Comments STECF PLEN 18-02	STECF acknowledges that a significant amount of information has been presented to support this proposed exemption. However, STECF observes that the scope of this exemption is wide, covering many species and fisheries, and as such, not consistent with existing survivability exemptions. STECF recognizes that the effects of different variables on discard survival is not well understood and this introduces risks in extrapolating discard survival evidence between species, fisheries and seasons. STECF notes that the raw data underpinning the information already provided in the JR was received by PLEN 18-02 has been supplied to STECF, although this is of limited additional value other than confirming the basis for the proposed exemption.
Recommendation	Plaice caught by trammel nets in ICES divisions VIId and VIIe

Main findings of the EWG 18-06	The supplementary material to the JR provided as scientific evidence of the high survivability of plaice is too limited to be reviewed. Experimental details about a large extent of the study are missing (e.g. analysis, control group, vitality assessment and animal observations). Fleet and fishery descriptions are only provided for the United Kingdom, EWG 18-06 notes that without provision of more complete information it is not possible to assess the merits of this proposed high survivability exemption. Suggested additional data to be requested: a) Fleet and fishery descriptions for countries other than UK. b) Scientific evidence of the survivability of discarded plaice, including experimental details (e.g. analysis, control group, vitality assessment and animal observations).
Comments STECF PLEN 18-02	Additional material was supplied to PLEN 18-02. A comprehensive and detailed paper provides scientific information indicating a plaice survival rate of 73% in the trammel net fishery in VIId and VIIe. Fishery information was provided by UK and France. STECF concludes that the survivability study is robust and indicates a survival rate of 73%. Combined with the discard rate of 32% indicated in the accompanying document, this implies that about 9% of the overall catch of the gears affected by this exemption is discarded and dies (Fig. 2).
Recommendation	Plaice caught by trammel nets in ICES divisions VIIf and VIIg
Main findings of the EWG 18-06	The supplementary material to the JR provided as scientific evidence of the high survivability of plaice is too limited to be reviewed. Experimental details about a large extent of the study are missing (e.g. analysis, control group, vitality assessment and animal observations). EWG 18-06 notes that without provision of more complete information it is not possible to assess the merits of this proposed high survivability exemption. Suggested additional data to be requested: a) Fleet and fishery descriptions for countries other than UK. b) Scientific evidence of the survivability of discarded plaice, including experimental details (e.g. analysis, control group, vitality assessment and animal observations).
Comments STECF PLEN 18-02	Additional material was supplied to PLEN 18-02. A comprehensive and detailed paper provides scientific information indicating a plaice survival rate of 49% in the trammel net fishery in VIIf and VIIg. Fishery information was provided by UK and France supplied a fishery description. STECF concludes that the survivability study is robust and indicates a survival rate of 49%. STECF notes that the additional information indicated a discard rate in the UK fishery of 73%, with a survival rate of 49% this implies that 37% of the overall catch of the gears affected by this exemption is discarded and dies (Fig. 2).
Recommendation	Plaice caught by Otter Trawls in ICES divisions VIId and VIIe
Main findings of the EWG 18-06	The supplementary material to the JR provided as scientific evidence of the high survivability of plaice is too limited to be reviewed. Experimental details about a large extent of the study are missing (e.g. analysis, control group, vitality assessment and animal observations). EWG 18-06 notes that without provision of more complete information it is not possible to assess the merits of this proposed high survivability exemption. Suggested additional data to be requested:

	a) Fleet and fishery descriptions for countries other than UK. b) Scientific evidence of the survivability of discarded plaice, including experimental details (e.g. analysis, control group, vitality assessment and animal observations).
Comments STECF PLEN 18-02	Additional material was supplied to PLEN 18-02. A comprehensive and detailed paper provides scientific information from the western channel (VIIe) indicating a plaice survival rate of 64% in the otter trawl fishery. It is assumed this also applies in VIId. Fishery information was provided by UK and France supplied a fishery description. STECF concludes that the survivability study is robust and indicates a survival rate of 64%. STECF notes that the additional information indicated a discard rate in the UK fishery of 32%, with a survival rate of 64% this implies that around 11% of the overall catch of the gears affected by this exemption is discarded and dies (Fig. 2).
Recommendation	Plaice caught by otter trawl gears in ICES subarea VIIf and VIIg
Main findings of the EWG 18-06	The supplementary material to the JR provided as scientific evidence of the high survivability of plaice is too limited to be reviewed. Experimental details about a large extent of the study are missing (e.g. analysis, control group, vitality assessment and animal observations). EWG 18-06 notes that without provision of more complete information it is not possible to assess the merits of this proposed high survivability exemption. Suggested additional data to be requested: a) Fleet and fishery descriptions for countries other than UK. b) Scientific evidence of the survivability of discarded plaice, including experimental details (e.g. analysis, control group, vitality assessment and animal observations).
Comments STECF PLEN 18-02	Additional material was supplied to PLEN 18-02. A comprehensive and detailed paper provides scientific information from the Bristol channel (VIIf and VIIg) indicating a plaice survival rate of 78% in the otter net fishery. Fishery information was provided by UK and France supplied a very brief fishery description. STECF concludes that the survivability study is robust and indicates a survival rate of 78%. STECF notes that the additional information indicated a discard rate in the UK fishery of 73%, with a survival rate of 78% this implies that around 16% of the overall catch of the gears affected by this exemption is discarded and dies (Fig. 2).
Recommendation	Plaice caught with beam trawls in ICES subareas VIIa to VIIk
Main findings of the EWG 18-06	The documentation provided shows that survivability is highly variable (4-93%) and significantly related to trawl duration, sorting duration, wave height, sea temperature, sediment catch and total catch. The scientific underpinning of these conclusions is considered to be robust and gives an indication on which factors could potentially improve survivability for plaice in this fishery. Proposed gear modifications will likely increase plaice survivability but the extent of these improvements is unknown and should be studied. Fleet and fishery descriptions are provided for Ireland, but the source related to numbers supplied is unknown. There are other countries associated with the proposed exemption that have not been described. EWG 18-06 notes that without provision of more complete information it is not possible to assess the merits of this proposed high survivability exemption. Suggested additional data to be requested: a) Missing fleet and fishery descriptions.

Comments STECF PLEN 18-02	Additional fishery information was provided to PLEN 18-02 by France and UK but not from Belgium, a key participant in this fishery. STECF agrees with the EWG 18-06 that the scientific study of survivability in a traditional beam trawl is of good quality. STECF notes that survivability in this case is affected by many factors and that survivability is highly variable (4-93%). STECF further notes that as a consequence of this variability it is not possible to reliably assess what the impact of this exemption is likely to be. STECF notes that discard rates provided by the Regional Group are at least 40%. Based on the range of estimates for survivability a 40% discard rate would imply that anywhere between 3% and 38% of the overall plaice catch of the gears affected by this exemption would be discarded and die (Fig 4.3.2).STECF suggests that gear modifications to improve survivability or, better still, selectivity should be further developed and adopted.
Recommendation	Fish caught in pots, traps and creels in North Western Waters
Main findings of the EWG 18-06	The supporting information provided is essentially identical to the information behind an existing exemption in the North Sea that was evaluated by EWG 17-03. The exemption assumes that all fish released from pots and creels have the same survival chances as cod released from pots used to target fish. There is no direct evidence to support this, but it is reasonable to infer that, at the point of release, and assuming environmental and technical operations are comparable, the likelihood of survival is high. The risk of substantial predation by seabirds of discarded fish needs to be considered in such an exemption (as in the North Sea discard plan). Fleet and fishery descriptions are detailed for Scotland, but there are other countries associated with the proposed exemption that was not submitted. Suggested additional data to be requested: a) Missing fleet and fishery descriptions.
Comments STECF PLEN 18-02	Additional fishery information was provided to PLEN 18-02 for UK and Ireland. STECF notes that some of the figures provided are difficult to interpret and, depending on MS, relate to different things. STECF agrees with the EWG that survival of fish discarded from trap and pot fishing is likely to be substantial. STECF notes that since there is a risk of avian predation, mitigation measures (such as sub-surface release) could reduce the impact on survivability.
Technical Measures	
Recommendation	Range of selective measures for the demersal fisheries in the Celtic Sea and Irish Sea
Main Findings of EWG 18-06	The NWW JR contains a series of proposals for the use of selective gears. While the majority of these represent improvements in selectivity, there is one case where the proposal is likely to reduce selectivity. This case is the proposed derogation for vessels with <10% gadoids to use and 80mm cod end + 100mm SMP in a part of area VIIf, which represents a reduction in selectivity from the current Regulations in place. Other gear options for vessels with >55% whiting or anglerfish, hake and megrim combined are not likely to increase selectivity from the current minimum requirements. Notwithstanding this, the proposed changes to increase selectivity in North Western Waters is one of very few attempts from regional groups to mitigate issues with unwanted catches in relation to the phasing-in of the Landing Obligation.
Comments STECF PLEN 18-02	STECF agree with the conclusions of the EWG

Table 4. Main findings of the STECF EWG 18-06 and summary of additional information received relating to exemptions presented: **South Western Waters**.

De minimis	
Recommendation	Hake caught with trawls in directed fisheries in ICES subareas VIII and IX
Main Findings of EWG 18-06	Existing but re-assessed on basis of new information. Unable to assess fully whether the request demonstrates that selectivity is difficult to achieve or whether the cost of handling unwanted catches is disproportionate. Suggested additional data to be requested: a) It is stated that "There is no way to calculate the number of vessels practicing one métier at any time of the year. Thus, it is not possible to calculate a discard rate for the specific vessels practicing each métier which are subject to the LO but a discard rate for the overall otter trawl fleet is available". EWG is unable to evaluate, given the information provided, how the métier-specific discard rates were calculated. b) More clarifications are needed for the 'non-Spanish data' in Table 1 (data for French, Belgian and Portuguese métiers). It is unclear to which year(s) they refer and how the respective calculations of discards have been made. c) More clarifications are needed for two of Spanish métiers in the Bay of Biscay, namely "Bottom otter trawl (OTB_MCF>70) targeting mixed cephalopod and demersal species in Div. 8abd" and "Bottom otter trawl (OTB_MPD>70) targeting mixed pelagic and demersal species in Div. 8abd". These métiers are not included in Table 1 and it is stated in the text that "In 2018, trips deployed by these gears "are not currently under the landing obligation". d) The Regional Group should supply, if available, additional information on selectivity and socio-economics relevant to this exemption for countries other than Spain.
Comments STECF PLEN 18-02	Fleet, catch and discard data (b above) were provided to the PLEN 18-02 by France and Spain (appended to STECF EWG 18-06). Additional data on how the métier-specific discard rates were calculated (b above) were provided by Spain. Following a post-stratification of the métiers for randomly sampled trips, discards estimates are calculated within the same strata (métiers), quarter and area of fishing following standard procedures of discard raising commonly used in ICES. For (c) above, a response from Spain confirmed that these métiers are currently not under the landing obligation. STECF note that these métiers will be subject to the landing obligation from 2019 and are not included within the *de minimis* request. STECF agree with the conclusions of the EWG and emphasize that the information to support the justification is weak and priority should be given to improving selectivity.
Recommendation	By catches pelagic species: horse mackerel (*Trachurus spp*.), mackerel (*Scomber scombrus*), anchovy (*Engraulis encrasicolus*) and boarfish (*Caproidae*). Combined *de minimis* for the species up to a maximum of 7% in 2019 and 2020, and up to a 6% in 2021 of the total annual catches of these species made by **trawlers** (gear codes: OTT, OTB, PTB, OT, PT, TBN, TBS, TX, SSC, SPR, TB, TBB, SDN, SX, SV) in fisheries in ICES divisions VIII and IX.
Main Findings of EWG 18-06	Unable to assess fully whether the request demonstrates that selectivity is difficult to achieve or whether the cost of handling unwanted catches is disproportionate. Suggested additional data to be requested: a) Information on economics or selectivity studies. b) Information on number of vessels involved and no information on Spanish and Portuguese fleets.

	c) Information on observer trip numbers compared to total fishing trips. d) Information on discard rates except for France.
Comments STECF PLEN 18-02	Additional information was provided to the PLEN 18-02 by France and Spain. *Additional information from France*: All French trawlers fishing in areas 8 and 9 are relevant to this exemption (615 vessels). OBSMER observer program sampled on average 0.2% of the trips and 12% of the vessels for these fisheries. The main métiers involved are: • *Nephrops* trawlers in the Bay of Biscay: 16.3% of vessels (28 over 172 vessels) and 0.2% of fishing trips (35 over 17 337 trips) • Mixed bottom trawlers: 7.2% of vessels (26 over 360 vessels) and 0.2% of fishing trips (42 over 18 716 trips) *Additional information from Spain:* Information on selectivity trials and costs of handling and landing unwanted catches (a above) were provided. The study presented showed the limited potential for square mesh panel designs (80-90mm mesh) to enhance the selectivity towards some of these species. Detailed costs and challenges associated with handing and landing unwanted catches are provided. STECF note that the main cause of these difficulties is the targeting of unregulated species (with no TAC and MCRS, such as red mullet, pouts, squids), at a size which coincides with undersized species (MRCS) with TACs. *Additional information from Spain:* For c and d above, data on observed trips, discard rates and vessel numbers have been provided (appended to STECF EWG 18-06). STECF consider that while some evidence is presented on difficulties in improving selectivity and difficulties in handling, there is only partial justification for the recommendation and priority should be given to improving selectivity.
Recommendation	By-catches of anglerfish (*Lophiidae*), sole (*Solea spp*.), turbot (*Psetta maxima*), red seabream (*Pagellus bogaraveo*), great forkbeard (*Phycis blennoides*), a combined *de minimis* up to a maximum of 7% in 2019 and 2020, and up to a 6% in 2021 of the total annual catches of these species made by **trawlers** (gear codes : OTT, OTB, PTB, OT, PT, TBN, TBS, TX, SSC, SPR, TB, SDN, SX, SV) in the Gulf of Cadiz part of ICES subarea IXa.
Main Findings of EWG 18-06	Unable to assess fully whether the request demonstrates that selectivity is difficult to achieve or whether the cost of handling unwanted catches is disproportionate. Suggested additional data to be requested: a) Information on economics or selectivity studies b) Information on observer trip numbers compared to total fishing trips.
Comments STECF PLEN 18-02	Additional information was provided to the PLEN 18-02 by Spain*:* For b above, data on observed trips, discard rates and vessel numbers have been provided (appended to STECF EWG 18-06). STECF consider that while some evidence is presented on difficulties in improving selectivity and difficulties in handling, there is only partial justification for the recommendation and priority should be given to improving selectivity. STECF observe that anglerfish is proposed for *de minimis* exemption for all trawlers in two different requests for the same area (IX, IXa).
Recommendation	By-catches of the species megrim (*Lepidorhombus spp*.), anglerfish (*Lophiidae)*, plaice (*Pleuronectes platessa*), whiting (*Merlangius merlangus*) and pollack (*Pollachius pollachius*), a combined *de minimis* up to a maximum of 5% of the total annual catches of these species made by **trawlers** (gear codes: OTT, OTB, PTB, OT, PT, TBN, TBS, TX, SSC, SPR, TB, TBB, SDN, SX, SV) in divisions VIII and IX.
Main Findings of EWG 18-06	Unable to assess fully whether the request demonstrates that selectivity is difficult to achieve or whether the cost of handling unwanted catches is disproportionate. Suggested additional data to be requested: a) Information on numbers of vessels involved.

Comments STECF PLEN 18-02	Additional information was provided to the PLEN 18-02 by France, Portugal and Spain. *Additional information from France*: All French trawlers fishing in areas 8 and 9 are relevant to this exemption (615 vessels). *Additional information from Spain*: More fishery data have been provided (appended to STECF EWG 18-06)Data provided by Portugal had no supporting description and cannot be interpreted by STECF. STECF consider that while some evidence is presented on difficulties in improving selectivity and difficulties in handling, there is only partial justification for the recommendation and priority should be given to improving selectivity. STECF observe that anglerfish is proposed for *de minimis* exemption for all trawlers in two different requests for the same area (IX, IXa).
Recommendation	By-catches of the species megrim (*Lepidorhombus spp*.), anglerfish (*Lophiidae*), plaice (*Pleuronectes platessa*), whiting (*Merlangius merlangus*) and pollack (*Pollachius pollachius*), a combined *de minimis* up to a maximum of 4% of the total annual catches of these species made **by gillnetters** (gear codes: GNS, GND, GNC, GTR, GTN) in divisions VIII and IX**.**
Main Findings of EWG 18-06	Unable to assess fully whether the request demonstrates that selectivity is difficult to achieve or whether the cost of handling unwanted catches is disproportionate. Suggested additional data to be requested: a) References on economic/selective studies. b) The request based on disproportionate costs is from the risk of presence of choke species that may generate hold overloading and increase the sorting time on board for the crew management, but no supporting information is provided. c) Number of vessels involved.
Comments STECF PLEN 18-02	Additional information was provided to the PLEN 18-02 by France, Portugal and Spain. *Additional information from France*: All French gillnetters fishing in areas 8 and 9 are relevant to this exemption (267 vessels). *Additional information from Spain:* Vessel numbers have been provided; two independent estimates of the total *de minimis* weight were provided but were not comparable, at 1.4 tonnes and 28 tonnes (appended to STECF EWG 18-06)v). There was a lack of clarity in the presentation of the Portuguese data and it could not be evaluated by STECF. STECF agree with the conclusions of the EWG and emphasize that the information to support the justification is weak.
Recommendation	By-catches of the following pelagic species: horse mackerel (*Trachurus spp*.), mackerel (*Scomber scombrus*), anchovy (*Engraulis encrasicolus*) and boarfish (*Caproidae*), a combined *de minimis* for the species up to a maximum of 3% in 2019, 2020 and 2021, of the total annual catches of these species made **by gillnetters** (gear codes: GNS, GND, GNC, GTR, GTN) in fisheries in ICES divisions VIII and IX, X and CECAF areas 34.1.1, 34.1.2, 34.2.0.
Main Findings of EWG 18-06	Unable to assess fully whether the request demonstrates that selectivity is difficult to achieve or whether the cost of handling unwanted catches is disproportionate. Suggested additional data to be requested: a) Information on economic/selective studies. b) Request based on disproportionate costs is from the risk of presence of choke species that may generate hold overloading and increase the sorting time on board for the crew management. No references were reported. c) Information on number of vessels. d) Catch and discard profile only provided for Spain –material for other MSs should be provided. e) Information on the number of observer trips relative to total number of fishing

	trips.
Comments STECF PLEN 18-02	Additional information was provided to the PLEN 18-02 by France, Portugal and Spain. *Additional information from France*: All French gillnetters fishing in areas 8 and 9 are relevant to this exemption (267 vessels). OBSMER observer program sampled on average 1% of the trips and 20% of the vessels for these fisheries. The main métiers involved are: • Gillnetters in the Bay of Biscay under 15 meters length: 23.5% of vessels (100 over 426 vessels) and 0.6% of fishing trips (187 over 32 016 trips) • Gillnetters in the Bay of Biscay over 15 meters length: 16.4% of vessels (12 over 73 vessels) and 1.3% of fishing trips (47 over 3 513 trips) *Additional information from Spain:* Data provided give discard rate estimates of 13% for mackerel and 12% for horse mackerel, however caution is advised as this is based on limited data from 2010-11; it is noted that the relevant vessels have not been included the Spanish National Sampling Plan since 2003. In a separate response, the combined discard rates are given at 2.75%, the recommendation is applicable for 68 vessels and the total *de minimis* volume is estimated at 65 tonnes. There was a lack of clarity in the presentation of the Portuguese data and it could not be evaluated by STECF. STECF agree with the conclusions of the EWG and emphasize that the information to support the justification is weak.
Recommendation	For by-catches of the following pelagic species: horse mackerel (*Trachurus spp*.), mackerel (*Scomber scombrus*), anchovy (*Engraulis encrasicolus*) and boarfish (*Caproidae*), a combined *de minimis* for the species up to a maximum of 1% in 2019, 2020 and 2021, of the total annual catches of these species made by for **longliners** (codes: LHP, LHM, LLS, LLD) in fisheries in IX, X and CECAF area s 34.1.2, 34.2.0
Main Findings of EWG 18-06	Unable to assess fully whether the request demonstrates that selectivity is difficult to achieve or whether the cost of handling unwanted catches is disproportionate. Suggested additional data to be requested: a) Request based on disproportionate costs from the risk of presence of choke species that may generate hold overloading and increase the sorting time on board for the crew management. No references were reported. b) Are anchovy and boarfish required here? c) Number of vessels involved. d) Catch and discard profiles.
Comments STECF PLEN 18-02	Additional information was provided to the PLEN 18-02 by Portugal and Spain. *Additional information from Spain:* For Spain, species of interest are mackerel and horse mackerel (relates to b above). For c and d above, no data on discards on board longline métiers are available. Longlines are not included in the Spanish National Sampling Plan. The number of vessels is 64 (appended to STECF EWG 18-06)). There was a lack of clarity in the presentation of the Portuguese data and it could not be evaluated by STECF. STECF agree with the conclusions of the EWG and emphasize that the information to support the justification is weak.
Recommendation	By-catches of all species regulated with TAC and quota, a combined *de minimis* up to a maximum of 1% in 2019, 2020 and 2021 of the total annual catches made by the **artisanal fleet** in ICES divisions VIII, IX, X and CECAF areas 34.1.1, 34.1.2, 34.2.0.

Main Findings of EWG 18-06	Unable to assess fully whether the request demonstrates that selectivity is difficult to achieve or whether the cost of handling unwanted catches is disproportionate. Suggested additional data to be requested: a) Information on France and Portugal fisheries. b) Annex I cited in the text was not provided.
Comments STECF PLEN 18-02	Additional information was provided to the PLEN 18-02 by France and Spain. *Additional information from France:* The SWW group proposes to replace "artisanal fleet" by "vessels up to 25 meters length overall", as it is already stated in the R(CE) 2018/190 for example to define artisanal fishery in the pelagic discard ban for NWW (same in R(CE) 2018/189 for North Sea). *Additional information from Spain:* For b above, reference to Annex I should have been deleted before submission. Information on fisheries is provided (appended to STECF EWG 18-06)), which gives 4455 vessels relevant to this exemption and an estimated *de minimis* volume of 103 tonnes. STECF do not consider that vessels up to 25 meters length overall can be categorized as artisanal. The SWW skates and ray survivability recommendation (below) reports 4455 as the total number of all vessels, indicating that this exemption for artisanal vessels is for all Spanish vessels in this region. STECF agree with the conclusions of the EWG and emphasize that the information to support the justification has not been provided. STECF observes that this *de minimis* proposal overlaps with all others presented, and implies that the same species might receive multiple *de minimis* exemptions.
Recommendation	*De minimis* exemption to the landing obligation of alfonsinos (*Beryx spp*.) captured by **bottom hook and line** in Central North Atlantic Waters (ICES sub-area X)
Main Findings of EWG 18-06	The evidence presented supports the justification based on difficulties in improving selectivity and of disproportionate costs.
Comments STECF PLEN 18-02	STECF has no further comments.
Recommendation	*De minimis* exemption to the landing obligation of greater forkbeard (*Physis blennoides*) captured by **bottom hook and line** in Central North Atlantic Waters (ICES sub-area X)
Main Findings of EWG 18-06	The evidence presented supports the justification based on difficulties in improving selectivity and of disproportionate costs.
Comments STECF PLEN 18-02	STECF has no further comments.
High Survivability	
Recommendation	Skates and rays (*Rajiformes*) caught with all gears in ICES subareas VIII and IX.
Main Findings of EWG 18-06	Extrapolating the outcomes of the DESCARSEL study to *all* skates and rays caught with *all* gears in subareas *VIII and IX (as requested in the JR)* is difficult to justify without additional information. A time limited survival exemption from 1 January 2019 until 31 December 2021 is proposed. If the recommendation is awarded, a shorter period may allow the suitability of the exemption to be reviewed more quickly in the light of the latest evidence. Suggested additional data to be requested: a) A detailed description of the fleets and fisheries covered by 'all gears'. b) Numerical table of fishery information.

	c) Power point presentation (with main points from the DESCARSEL project and next work planned) is used as supporting evidence to justify the exemption but the presentation is not in English.
Comments STECF PLEN 18-02	Additional information was provided to the PLEN 18-02 by France and Spain. *Additional information from France*: All French trawlers, netters and longliners are relevant to this exemption (over 1000 vessels). The ENSURE project has preliminary results showing a high potential of survivability for skates and rays, sole, plaice and seabass. The following discard data (which does include *Raja undulata*) was supplied from the based on OBSMER observer program: • Trawls: skates and rays represent 13.4% of catches. Discards represents 37.4% of skates and rays catches. • Nets: skates and rays represent 1.4% of catches. Discards represent 28% of skates and rays catches. • Hooks and lines: skates and rays represent 0.2% of catches. Discards represent 100% of skates and rays catches. These data are only for *Raja microocellata*. A table of fishery information including catch weights be species and gear was not supplied. *Additional information from Spain*: fishery information was provided (appended to STECF EWG 18-06)) giving 4455 vessels, an overall discard rate of 29% and an estimated discard survival rates of 58% and 95.5% from studies provided. STECF note that no further details are provided on the discard survival evidence to justify the exemption. STECF observe that the scope of this exemption is wide, covering many species and fisheries, and as such, not consistent with existing survivability exemptions. STECF recognizes that the effects of different variables on discard survival are not well understood and this introduces risks in extrapolating discard survival evidence between species fisheries and seasons. No further justification for the duration of the exemption is provided,
Recommendation	Red seabream (*Pagellus bogaraveo*) caught with artisanal gear called "voracera" used in the south of Spain in ICES subareas IXa.
Main Findings of EWG 18-06	The studies provided represent sound scientific evidence for the discard survival of red sea bream. Provision of fishery data would help assess the quantities of fish involved.
Comments STECF PLEN 18-02	Additional information was provided to the PLEN 18-02 by Spain: fishery information has been provided which gives 11 vessels relevant for this recommendation, a discard rate of 0% and a discard survival rate of 90.6 ± 6.2%. STECF agree with the conclusions of the EWG.
Recommendation	Red seabream (*Pagellus bogaraveo*) caught in ICES subareas X with hooks and lines.
Main Findings of EWG 18-06	The studies provided represent sound scientific evidence for the discard survival of red sea bream. Provision of fishery data would help assess the quantities of fish involved.
Comments STECF PLEN 18-02	STECF agree with the conclusions of the EWG, no additional fishery information was received.

Table 5. Main findings of the STECF EWG 18-06 and summary of additional information received relating to exemptions presented: **Mediterranean**.

De minimis	
Recommendation	6% in 2019 and 2020, 5% in 2021 of total annual catches of Hake and Mullets caught by trammel and gill nets
Main Findings of EWG 18-06	Existing provision – modified. Spatial measure suggestions were provided in the annex by MEDAC. There is sound science and excellent detail in many of these. Suggested additional data to be requested: a) Information to support claim of disproportionate costs. b) Fishery information by member state fleets.
Comments STECF PLEN 18-02	SUDESTMED and PESCAMED responded to the request for additional data to PLEN 18-02. SUDESTMED did not provide any additional supporting evidence. They made a general statement that it was not feasible for Mediterranean Member States to create onshore handling stations for undersized specimens and there is a focus on improving selectivity. The work of the MINOUW project on "Handling, storage, transport and utilization of unwanted catches" was mentioned but no details were provided. PESCAMED provided detailed catch and fleet information for FR and ES but no further supporting information to justify the exemption. No information was provided by ADRIATICA. No further STECF assessment was possible.
Recommendation	6% in 2019 and 2020, 5% in 2021 of total annual catches of Hake and Mullets caught by rapido beam trawls
Main Findings of EWG 18-06	Existing exemption. The basis for the acceptance of the 1% *de minimis* previously supported cannot be the same when applying for a 6-fold increase in *de minimis* level. Suggested additional data to be requested: a) Discard data (per species and MS) to support the increase in *de minimis* rate b) Information on disproportionate cost changes that justify the increase in *de minimis* rate
Comments STECF PLEN 18-02	See SUDESTMED response above to PLEN 18-02. No further STECF assessment was possible. STECF agree with the conclusions of the EWG and emphasize that specific information to support the justification has not been provided.
Recommendation	6% in 2019 and 2020, 5% in 2021 of total annual catches of Common Sole caught by trawl nets
Main Findings of EWG 18-06	This request represents a *de minimis* rate increase from 3 to 6% on an existing exemption. The data source supporting the existing exemption could not be identified and no additional data were provided. There is no scientific justification to change the current derogation based on the information provided. Suggested additional data to be requested: a) Discard percentages per MS and trawl fleet to support the increase *de minimis* rate b) Information on disproportionate cost changes that justify the *de minimis* rate increase
Comments STECF PLEN 18-02	See SUDESTMED response above to PLEN 18-02. No further STECF assessment was possible. STECF agree with the conclusions of the EWG and emphasize that specific information to support the justification has not been provided.
Recommendation	In July, August and September - 6% in 2019 and 2020, 5% in 2021 of total catches of Norway lobster caught by bottom trawls during these months
Main Findings of	The request for a *de minimis* which is higher than estimated discard rates is difficult

EWG 18-06	to justify. Suggested additional data to be requested: a) Justification for disproportionate costs specific to *Nephrops* fishery. b) Clarify if the composition of the trawling fleets targeting *Nephrops* per member state.
Comments STECF PLEN 18-02	See SUDESTMED response above to PLEN 18-02. Additional catch and fleet information was provided by PESCAMED. No further STECF assessment was possible. STECF agree with the conclusions of the EWG and emphasize that specific information to support the justification has not been provided.
Recommendation	7% in 2019 and 2020, 6% in 2021 of total annual catches of demersal finfishes under landing obligation for under MCRS specimens - **Hake, Mullets and pelagic species excepted** - caught by bottom trawls
Main Findings of EWG 18-06	Given that this exemption covers a broad group of species with a wide range of discard rates there may be a risk that an average discard rate across the species will mask higher discard rates for individual species. The incentive to reduce high discard rates for individual species may also be reduced and quantifying the permitted discards under such a complex exemption will be particularly challenging. It is not clear to which fleets the exemptions and for which species. Suggested additional data to be requested: a) A breakdown of fleets by MS, a list of species and discard rates b) Supporting studies on disproportionate costs – couldn't be found online.
Comments STECF PLEN 18-02	See SUDESTMED response above to PLEN 18-02. Additional catch and fleet information was provided by PESCAMED for FR and ES. No further STECF assessment was possible. STECF agree with the conclusions of the EWG and emphasize that specific information to support the justification has not been provided.
Recommendation	7% in 2019 and 2020, 6% in 2021 of total annual catches of demersal finfishes under landing obligation for under MCRS specimens - **Hake, Mullets and pelagic species excepted** - caught by trammel and gill nets
Main Findings of EWG 18-06	Discard levels suggested to be lower than the requested *de minimis*. Only partial data on the proportion of discards which are below MCRS is provided. Suggested additional data to be requested: a) Specific information on disproportionate cost relevant to this request b) A breakdown of fleets by MS, a list of species and respective discard rates
Comments STECF PLEN 18-02	See SUDESTMED response above to PLEN 18-02. Additional catch and fleet information was provided by PESCAMED for FR and ES. No further STECF assessment was possible. STECF agree with the conclusions of the EWG and emphasize that specific information to support the justification has not been provided.
Recommendation	7% in 2019 and 2020, 6% in 2021 of total annual catches of demersal finfishes under landing obligation for under MCRS specimens - Hake, Mullets and pelagic species excepted - caught by hooks and lines
Main Findings of EWG 18-06	Discard levels suggested to be lower than the requested *de minimis*. Only partial data on the proportion of discards which are below MCRS is provided. Suggested additional data to be requested: a) Specific information on disproportionate cost relevant to this request b) A breakdown of fleets by MS, a list of species and respective discard rates
Comments STECF	See SUDESTMED response above to PLEN 18-02. Additional catch and fleet

PLEN 18-02	information was provided by PESCAMED for FR and ES. No further STECF assessment was possible. STECF agree with the conclusions of the EWG and emphasize that specific information to support the justification has not been provided.
Recommendation	7% in 2019 and 2020, 6% in 2021 of total annual by-catches of pelagic species (Anchovy, Sardine, Mackerel, Horse mackerel) under landing obligation
Main Findings of EWG 18-06	The discard proportions presented far exceed the *de minimis* requested. The request raises questions as to how the member states would resolve the issue of the *remaining unwanted catch* if no landing facilities exist on-land. Suggested additional data to be requested: a) Gear specifications are provided – assumed that this refers to demersal gears. Please confirm. b) A list of relevant species (and respective discard rates).t
Comments STECF PLEN 18-02	See SUDESTMED response above to PLEN 18-02. PESCAMED have provided catch and fleet information for FR and ES. No further STECF assessment was possible. STECF agree with the conclusions of the EWG and emphasize that specific information to support the justification has not been provided.
High survivability	
Recommendation	Scallop (*Pecten jacobeus*), Carpet clams (*Venerupis* spp.), Venus shells (*Venus* spp.) caught by mechanized dredges
Main Findings of EWG 18-06	No new evidence provided despite requests from the Commission. EWG has not assessed this further.
Comments STECF PLEN 18-02	PESCAMED have provided limited catch and fleet information to PLEN 18-02 for FR and IT. PESCAMED also re-iterated that this exemption was granted in 2017 on the basis that these species are sold alive. As in 2017, STECF does not consider this as a scientific justification, notes that no additional supporting information has been provided and has therefore not assessed this further.
Recommendation	Norway lobster (*Nephrops norvegicus*) caught by bottom trawls, excepted during the months of July, August and September
Main Findings of EWG 18-06	Modified request because no new evidence to support high survival in the summer months (Jul, Aug, Sep) generated by the regional group. No additional assessment was conducted.
Comments STECF PLEN 18-02	STECF has no further comments.
Recommendation	Deep water rose shrimp (*Parapanaeus longirostris*) caught by bottom trawls
Main Findings of EWG 18-06	Data provided on catches and discards for France and Spain only, but no information provided on survivability specific to this fishery. EWG 18-06 was unable to assess this request, suggested that relevant evidence on survivability is requested.
Comments STECF PLEN 18-02	STECF notes that PESCAMED has provided catch and fleet information to PLEN 18-02 for FR but no additional supporting information. PESCAMED indicate that no scientific evidence is available to support this exemption and indicate that if the high survivability exemption cannot be granted then this species would be included in the combined *de minimis* for demersal finfish. STECF agree with the conclusions of the EWG and emphasize that specific information to support the exemption has not been provided. STECF notes that if a decision is taken to include this species in the combined *de minimis* for demersal

	finfish then supporting information would be required.
Recommendation	Red sea bream (*Pagellus bogaraveo*) caught by hooks and lines
Main Findings of EWG 18-06	A detailed description of the fisheries, catch, estimated discards, discard rates was not provided. Survival studies are provided in support of this exemption. EWG recommends similar studies are conducted at different times of the year and other locations in the Mediterranean. Suggested additional data to be requested: a) Description of MS and associated fisheries, including catches, discards and discard rates. c) Details on seasonal and area changes in fishery composition and environmental conditions.
Comments STECF PLEN 18-02	STECF notes that PESCAMED has provided catch and fleet information to PLEN 18-02 for ES, FR and IT, and that further survival evidence would strengthen this case.
Recommendation	Lobster (*Homarus gammarus*) and crawfish (Palinuridae) caught by nets and by pots and traps
Main Findings of EWG 18-06	No supporting data was provided. EWG notes that discard survival rate is expected to be high in pots and traps but would require additional information. EWG was unable to assess the request. Some indication of scale of fisheries is also needed.
Comments STECF PLEN 18-02	STECF notes that PESCAMED has provided catch and fleet information to PLEN 18-02 for IT and FR. PESCAMED have also provided a survival study conducted with trammel nets carried out in the Balearic Islands. STECF notes that this is a reasonably robust study which shows short-term survival rates of undersized crawfish of 78.5% noting that the sample size was quite small (16 individuals).
Recommendation	Norway lobster (*Nephrops norvegicus*) caught by pots and traps
Main Findings of EWG 18-06	There is no data provided on fisheries or discards. Discard survival rates of *Nephrops* caught in traps are known to be high in other regions. In the Atlantic, they appear to decrease with decreasing latitude, but remain above 80% as far south as Portugal. However, EWG cannot infer survival rates in the Mediterranean from results obtained in other areas.
Comments STECF PLEN 18-02	STECF notes that PESCAMED has provided catch and fleet information to PLEN 18-02 for IT and FR. PESCAMED also indicate that catches of Norway lobster are low in these fisheries (< 1 tonne in the FR fisheries). STECF agree with the conclusions of the EWG and emphasize that specific information to support the exemption has not been provided. STECF recognizes that the effects of different variables on discard survival is not well understood and this introduces risks in extrapolating discard survival evidence between species fisheries and seasons.

STECF conclusions

STECF endorses the findings presented in the Report of the EWG 18-06 and agrees with the following conclusions:

- The role of EWG 18-06 and any future STECF EWGs set up to evaluate joint recommendations remains to evaluate the scientific rigour and robustness of the underpinning information supplied by Member States to support the main elements of joint recommendations. STECF cannot adjudicate on whether exemptions should be accepted or not.
- EWG 18-06 re-iterates that 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 there is a large element of judgement required in deciding on whether to permit or reject a proposal that cannot be based solely on scientific option of the evidence presented.

- Anomalies between sea basins (see for example EWG 17-03) such as fleets fishing a TAC species in two adjacent areas, one covered by the LO and one not covered, should no longer occur. As a consequence, EWG 18-06 has not spent time on this TOR. EWG-06 does, however, note that with the increasing number of exemptions in all areas, there is increasing scope for different exemptions (and associated conditions) to be in place in adjacent areas and for trans boundary fishing operations to have to deal with growing complexity in this aspect of the LO.
- EWG 18-06 notes that the quality of submissions to support the exemptions has, in many cases, improved since the first JR's were submitted in 2014. In particular EWG 18-06 recognises the progress made in the carrying out of survival experiments which in a number of cases closely follows the recommendations made by STECF and also ICES. EWG 18-06 has noticed, however, that there are quite a few cases where the quality of submission has fallen making it very difficult to conduct an analysis at all. EWG-06 also notes that whereas last year Member State Regional Groups generally used the templates developed by STECF in 2016 to supply fisheries and fleet descriptors, this year fewer had done so.

  EWG 18-06 continues to point out that some of the exemptions submitted by the regional groups are very much presented as ″national″ rather than regional exemptions. In many cases the information provided originates from one single Member State and while other Member States may be included frequently the information on the respective fleets are not provided. In developing future cases it would be better if exemptions were regionally focused and covering all relevant fleets. This would help the Commission avoid having to request additional information and clarifications from Member States on which fleets the exemptions should apply and also make it much easier for STECF to evaluate them.
- EWG 18-06 reiterates that when using the provisions of *de minimis* under Article 15, the requirements of Article 2 of the Common Fisheries Policy CFP) to fish at FMSY can only be met if the *de minimis* discard quantities are deducted from the agreed catch opportunity (TAC) arising from FMSY based advice. If *de minimis* were operated as an addition to the FMSY-advised catch, then mortality rates would be predicted to exceed the FMSY target. Furthermore, depending on the way in which the *de minimis* quantity is calculated and applied (for example 5% of an aggregate catch of several stocks applied as a *de minimis* on one stock) the departure from FMSY could be substantial. EWG 18-06 considers that the only relevant way is to apply the *de minimis* % to the total catch of the given species in the given fishery where the exemption is sought. This is not always the case in the exemptions submitted by the Member States regional group.
- EWG 18-06 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.

- STECF has consistently proposed that the justification for *de minimis* exemptions is largely economic. However, EWG 18-06 acknowledges that providing detailed information for individual fisheries is challenging. Therefore, it is apparent that STECF will only be able to consider the validity of the supporting information underpinning the exemptions provided and due to the lack of economic data in many cases will not be able to carry out any meaningful analysis of the economic impacts. If a deeper analysis is required by DGMARE, then, this needs to be discussed with the Member States and Advisory Councils so that they are clear what information should be provided and also with STECF to establish what they should evaluate. In this regard EWG 18-06 highlights the alternative option appraisal approach in *de minimis* submissions developed by EWG 16-06.
- EWG 18-06 re-iterates that assessing what constitutes high survivability is problematic, which is made more complex by the limited information available and the high 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 18-06 notes that obliging fishermen to land catches of fish that would otherwise have survived the discarding process could, in some specific cases, result in negative consequences for the stock. This is because any surviving discarded fish contribute positively to the stock and landing those individuals therefore removes that benefit. Where discards are included in the stock assessment but the (known) survival is not accounted for, this in effect elevates fishing mortality and changes in exploitation pattern which may lead to reductions in fishing opportunities to maintain fishing mortality levels consistent with management objectives (e.g. FMSY). Conversely, if they are not included in the assessment, then the mortality is higher than estimated, even if part of the discards survive, and in this case, bringing everything to land would provide better control of fishing mortality. For some stocks (e.g. *Nephrops*) ICES takes account of discard survival rate – in future this is something which should be discussed in the assessment forums for other species also.
- EWG 18-06 considers that avoidance of unwanted catch through improved selectivity or other means should be the primary focus implementing the landing obligation and should also consider the potential benefits for other stocks and the broader ecosystem that would arise from changes in exploitation patterns. Therefore, the choice of survival levels/value(s) in the context of article 15.2(b) will depend on which objective (e.g. avoidance of waste; improve stock sustainability; improve financial viability) is set as a priority. Nevertheless, provided the methodologies employed in carrying out survival experiments are appropriate, and the limitations of the results are fully explored, EWG 18-06 considers that the decision to accept or reject an exemption proposal based on the survival value presented is largely one for managers.
- EWG 18-06 notes that article 15.5(c)(ii) states that where continued discarding is permitted through the application of *de minimis* provisions, whilst these catches "shall not be counted against the relevant quotas; however, all such catches shall be fully recorded". EWG 18-06 re-iterates that no specific provisions have been included in the JR's to address this. In this regard EWG 18-06 stresses the need to improve the collection of catch documentation data. As highlighted in by STECF PLEN 17-01 and 18-01, there would appear a lack of "lack of reporting by vessel

operators of fish discarded under exemptions, discards of fish currently not subject to the landing obligation and catches of fish below MCRS". The joint recommendations evaluated by EWG 18-06 would strongly benefit from containing provisions that strengthen data collection in this respect. As STECF PLEN 17-01 pointed out, innovative monitoring measures such as CCTV and Remote Electronic Monitoring (REM) have been applied only in pilot studies but would be a more effective way to enforce the landing obligation if applied in a commercial setting (STECF EWG 13-17). If the data situation does not improve and the true quantities being caught as reported do not reflect the actual removals, they may have a significant impact on the quality of scientific advice for next year's fishing opportunities, as additional quota top-ups allocated in combination with continued discarding may also compromise the achievement of the MSY objective.

- EWG 18-06 notes that some exemptions have been in place for some time now but have not taken account of new data, information or circumstances which may render a necessary change to the exemption. EWG 18-06 considers that some updating procedure is required to ensure that exemptions only remain in place if required and still justified by the available information.
- EWG 18-06 notes the marked increase in the number of combined *de minimis* cases which were requested for 2019. These cases allow for potentially large quantities of fish to continue to be discarded. *De minimis* cases of any kind require careful monitoring of catches and the quantities of fish being discarded, the need for enhanced monitoring to ensure the combined *de minimis* cases operate appropriately is imperative.
- The increasing numbers of exemptions in some areas raises the question of whether in fact all fisheries in some areas have exemptions and thereby diminish the overall objectives of the Landing Obligation.

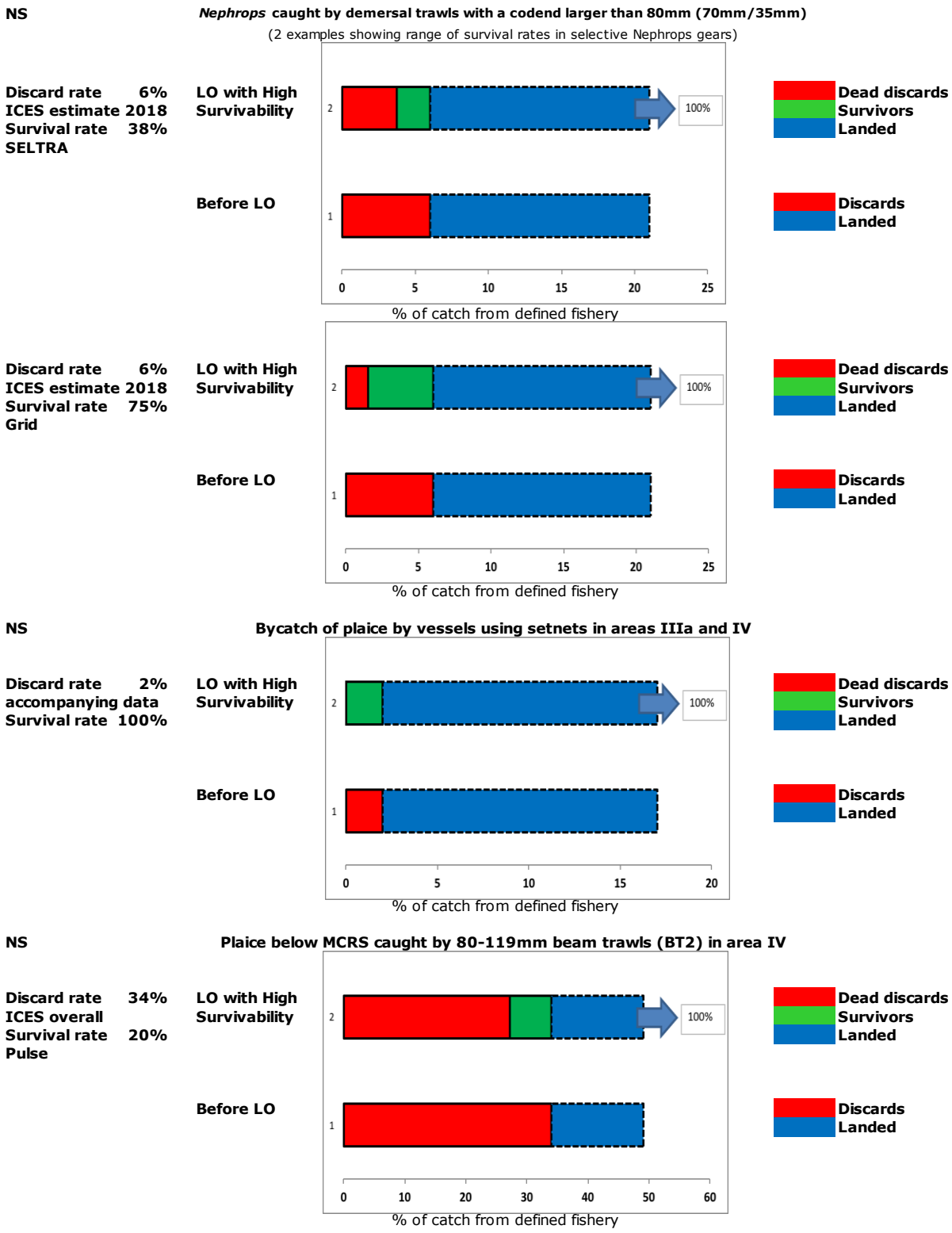


Figure 2. Plots of survivability estimates in the context of prevailing discard estimates for North Sea (NS) and North Western Waters (NWW) associated with proposed exemptions.

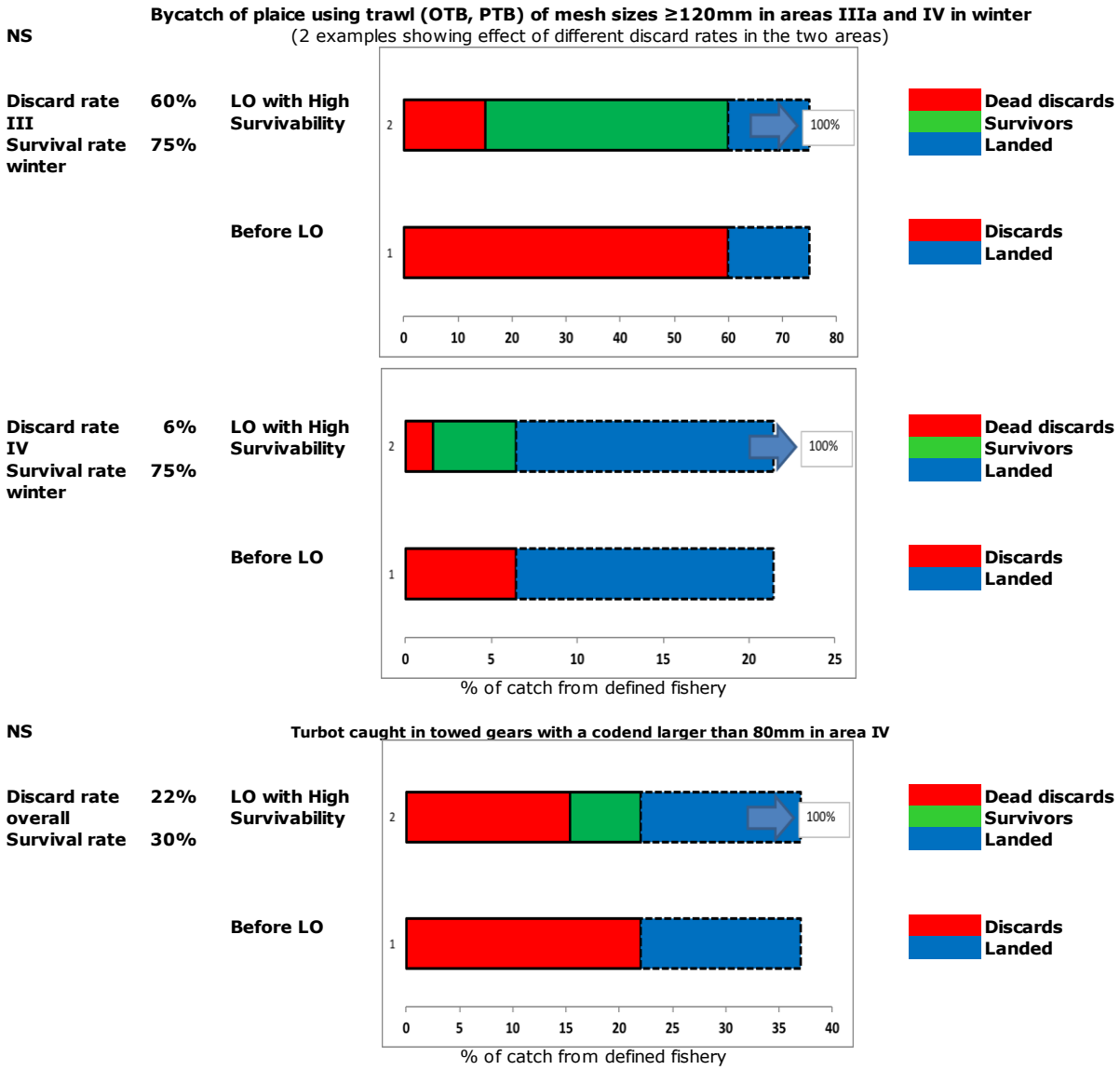
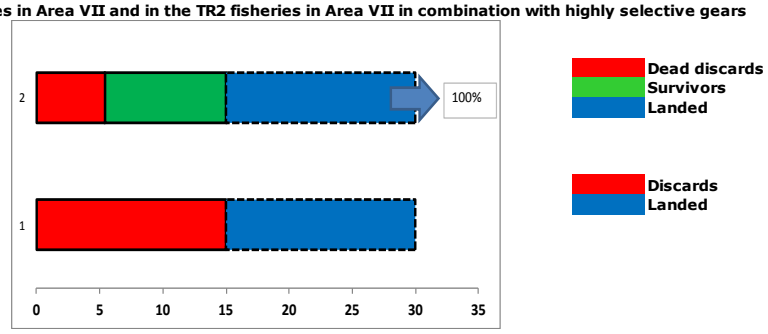


Figure 2 cont'd.

NWW Nephrops in the TRI fisheries in Area VII and in the TR2 fisheries in Area VII in combination with highly selective gears

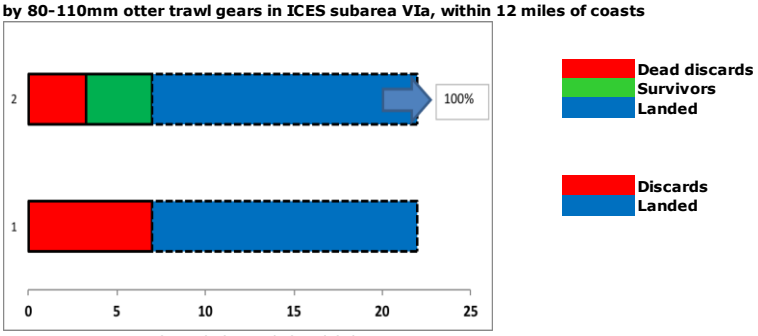
Discard rate 15%
Survival rate 64%



% of catch from defined fishery

NWW Nephrops caught by 80-110mm otter trawl gears in ICES subarea VIa, within 12 miles of coasts

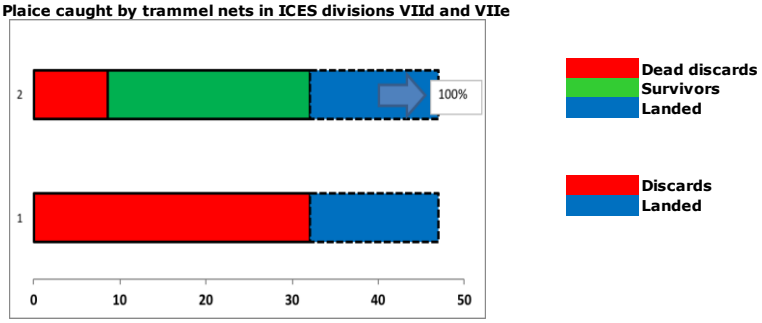
Discard rate 7%
Survival rate 53%



% of catch from defined fishery

NWW Plaice caught by trammel nets in ICES divisions VIId and VIIe

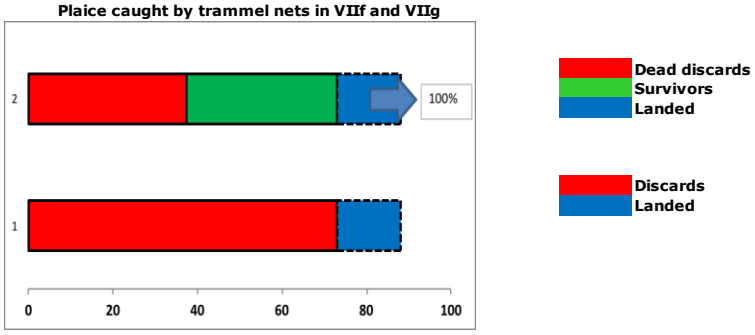
Discard rate 32%
Survival rate 73%



% of catch from defined fishery

NWW Plaice caught by trammel nets in VIIf and VIIg

Discard rate 73%
Survival rate 49%



% of catch from defined fishery

Figure 2 cont'd.

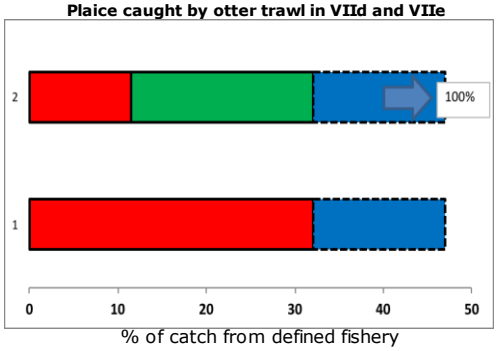
NWW

Plaice caught by otter trawl in VIId and VIIe

Discard rate **32%** **LO with High Survivability**

Survival rate **64%**

Before LO



Dead discards
Survivors
Landed

Discards
Landed

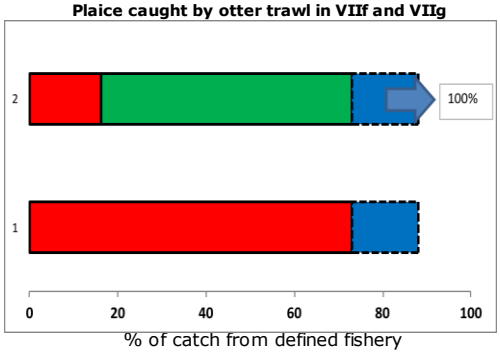
NWW

Plaice caught by otter trawl in VIIf and VIIg

Discard rate **73%** **LO with High Survivability**

Survival rate **78%**

Before LO



Dead discards
Survivors
Landed

Discards
Landed

NWW

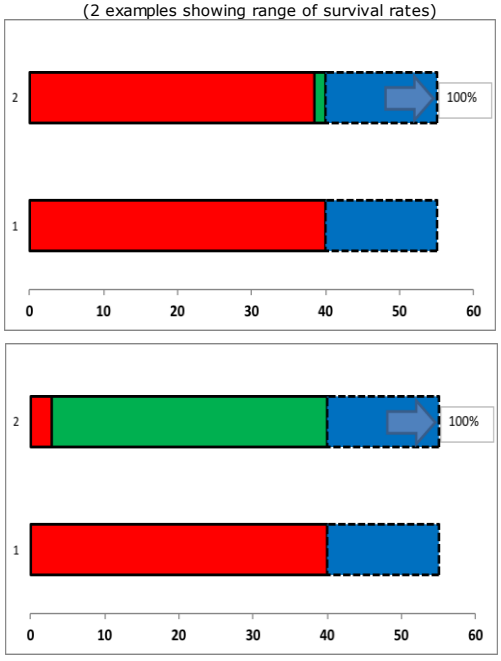
Plaice caught with beam trawls in VIIa to VIIk
(2 examples showing range of survival rates)

Highly variable survival estimates

Discard rate **40%** **LO with High Survivability**

Survival rate **4%**

Before LO



Dead discards
Survivors
Landed

Discards
Landed

Discard rate **40%** **LO with High Survivability**

Survival rate **93%**

Before LO

Dead discards
Survivors
Landed

Discards
Landed

Figure 2 cont'd.

De minimis		EWG before additional requests		STECF after additional requests	
	Clear Request	**Supporting information**	**Fishery data**	**Supporting information**	**Fishery data**
Whiting and cod caught using bottom trawls (OTB, < 100mm (TR2)					
Fish bycatch in Northern prawn trawl fishery with a sorting grid, with unblocked fish outlet in area IIIa					
Fish bycatch in *Nephrops* targeted trawl fishery					
Bycatches in the brown shrimp fishery in the North Sea					
Pelagic species under landing obligation for demersal vessels using bottom trawls (OTB,OTT, PTB, TBB) of mesh size 70-99mm (TR2, BT2) in the North Sea (area IV)					
Ling (*Molva molva*) for vessels using bottom trawls (OTB, OTT and PTB) > 100mm in the North Sea (area IV)					
Bycatch of industrial species for demersal vessels using TR1, TR2 or BT2 in areas IIIa and IV)					
Whiting caught by beam trawls 80-119mm in the North Sea (area IV)					

High survivability		EWG before additional requests		STECF after additional requests	
	Clear Request	**Supporting information**	**Fishery data**	**Supporting information**	**Fishery data**
Common sole (undersized only) caught with trawl gears in area IVc		*		*	
Nephrops caught by demersal trawls with a codend larger than 80mm (70mm/35mm)					
Bycatch of plaice by vessels using nets in areas IIIa and IV					
Bycatch of plaice by vessels using Danish seine in areas IIIa and IV					
Plaice below MCRS caught by 80-119mm beam trawls (BT2) in area IV					
Bycatch of plaice using trawl (OTB, PTB) of mesh sizes ≥120mm in areas IIIa and IV in winter					
Skates and rays caught by all fishing gears in the North Sea (areas IIIa, IV and EU waters of IIa)					
Turbot caught in towed gears with a codend larger than 80mm in area IV					

***** existing exemption for which nursery ground information required

Figure 3. A summary of the quality of evidence for North Sea JRs given separately for *de minimis* and high survivability requests. Rows= exemptions requests; shaded columns = an indication of evidence quality for: the clarity of the exemption request, the supporting information to justify the request and the fishery information (catches, landings, discards etc). This information based on EWG 18-06 (first three columns and the STECF PLEN 18-02 following evaluation of additional information requested by Commission from Regional Groups. Colours: Dark blue – Full clarity/comprehensive and good quality supporting information or data; Light blue – not completely clear/ partial information or data supporting the request; White – incoherent request/no information or data to support the request.

NOTE: Dark blue shading should not be taken to imply that STECF supports the exemption. Rather that STECF considered that the supporting information and data supplied was of good quality and adequate to conduct an evaluation.

De minimis		EWG before additional requests		STECF after additional requests	
	Clear Request	Supporting information	Fishery data	Supporting information	Fishery data
Whiting caught with bottom trawls and seines ≥100mm and pelagic trawls to catch whiting in the Celtic Sea and the Channel					
Gadoids (cod, haddock, whiting) caught using bottom trawls, seines and beam trawls of greater than or equal to 80mm mesh size in the Celtic Sea and the Channel (ICES VIIb-c, e-k)					
Undersized whiting in the TR2 Nephrops trawl fishery in ICES division VIIa					
Undersized by-catches of haddock in the TR1 demersal trawl fisheries in ICES area VIIa					
Bycatch of pelagic species (mackerel, horse mackerel, herring, boarfish, greater silver smelt) caught by vessels using bottom trawls and seines, and beam trawls in ICES subarea VI and VIIb-k					

High survivability		EWG before additional requests		STECF after additional requests	
	Clear Request	Supporting information	Fishery data	Supporting information	Fishery data
Common sole (Solea solea) <MCRS caught by otter trawl gears (OTT, OTB, TBS, TBN, TB, PTB, OT, PT, TX) with cod end mesh size of 80-99 mm in ICES division VIId within six nautical miles of the coast and outside identified nursery areas with defined fishing operations					
Nephrops in the TRI fisheries in Area VII and in the TR2 fisheries in Area VII in combination with highly selective gears					
Nephrops caught by 80-110mm otter trawl gears in ICES subarea VIa, within 12 miles of coasts					
Skates and ray species caught by any gear in the North Western Waters (areas VI and VII)					
Plaice caught by trammel nets in ICES divisions VIId and VIIe					
Plaice caught by trammel nets in ICES divisions VIIf and VIIg					
Plaice caught by Otter Trawls in ICES divisions VIId and VIIe					
Plaice caught by otter trawl gears in ICES subarea VIIf and VIIg					
Plaice caught with beam trawls in ICES subareas VIIa to VIIk					
Fish caught in pots, traps and creels in North Western Waters					

Figure 4. A summary of the quality of evidence for North Western Waters JRs given separately for *de minimis* and high survivability requests. Rows= exemptions requests; shaded columns = an indication of evidence quality for: the clarity of the exemption request, the supporting information to justify the request and the fishery information (catches, landings, discards etc). This information based on EWG 18-06 (first three columns and the STECF PLEN 18-02 following evaluation of additional information requested by Commission from Regional Groups. Colours: Dark blue – Full clarity/comprehensive and good quality supporting information or data; Light blue – not completely clear/ partial information or data supporting the request; White – incoherent request/no information or data to support the request.

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De minimis		EWG before additional		STECF after additional	
	Clear Request	Supporting information	Fishery data	Supporting information	Fishery data
Hake caught with trawls in directed fisheries in ICES subareas VIII and IX					
pelagic species: horse mackerel (Trachurus spp.), mackerel (Scomber scombrus), anchovy (Engraulis encrasicolus) andboarfish (Caproidae),caught by trawlers (OTT, OTB, PTB, OT, PT, TBN, TBS, TX, SSC, SPR, TB,TBB, SDN, SX, SV) in ICES divisions VIII and IX.					
anglerfish (Lophiidae), sole (Solea spp.), turbot (Psetta maxima), red seabream (Pagellus bogaraveo), great forkbeard (Phycis blennoides) caught by trawlers (OTT, OTB, PTB, OT, PT, TBN, TBS, TX, SSC, SPR, TB, SDN, SX, SV) in the Gulf of Cadiz (part of ICES subarea IXa).					
megrim (Lepidorhombus spp.), anglerfish (Lophiidae), plaice (Pleuronectes platessa), whiting (Merlangius merlangus) and pollack (Pollachius pollachius), caught by trawlers (OTT, OTB, PTB, OT, PT, TBN, TBS, TX, SSC, SPR, TB,TBB, SDN, SX, SV) in divisions VIII and IX.					
megrim (Lepidorhombus spp.), anglerfish (Lophiidae), plaice (Pleuronectes platessa), whiting (Merlangius merlangus) and pollack (Pollachius pollachius) caught by gillnetters (GNS, GND, GNC, GTR, GTN) in divisions VIII and IX.					
pelagic species: horse mackerel (Trachurus spp.), mackerel (Scomber scombrus), anchovy (Engraulis encrasicolus) and boarfish (Caproidae), caught by gillnetters (GNS, GND, GNC, GTR, GTN) in ICES divisions VIII and IX, X and CECAF areas 34.1.1, 34.1.2, 34.2.0.					
pelagic species: horse mackerel (Trachurus spp.), mackerel (Scomber scombrus), anchovy (Engraulis encrasicolus) and boarfish (Caproidae), caught by longliners (codes: LHP, LHM, LLS, LLD) in ICES divisions VIII and IX, X and CECAF areas 34.1.1, 34.1.2, 34.2.0.					
For by-catches of all species regulated with TAC and quota, caught by the artisanal fleet in ICES divisions VIII, IX, X and CECAF areas 34.1.1, 34.1.2, 34.2.0.					
For by-catches of alfonsinos (*Beryx spp*.) caught by hooks and lines (LHP, LHM, LLS, LLD) in division X.					
great forkbeard (*Phycis blennoides*) caught by hooks and lines (LHP, LHM, LLS, LLD) in division X.					

High survivability		EWG before additional		STECF after additional	
	Clear Request	Supporting information	Fishery data	Supporting information	Fishery data
Skates and rays (*Rajiformes*) caught with all gears in ICES subareas VIII and IX.					
Red seabream (*Pagellus bogaraveo*) caught with artisanal gear called "voracera" used in the south of Spain in ICES subareas IXa.					
Red seabream (*Pagellus bogaraveo*) caught in ICES subareas X with hooks and lines.					

Figure 5. A summary of the quality of evidence for South Western Waters JRs given separately for *de minimis* and high survivability requests. Rows= exemptions requests; shaded columns = an indication of evidence quality for: the clarity of the exemption request, the supporting information to justify the request and the fishery information (catches, landings, discards etc.). This information based on EWG 18-06 (first three columns and the STECF PLEN 18-02 following evaluation of additional information requested by Commission from Regional Groups. Colours: Dark blue – Full clarity/comprehensive and good quality supporting information or data; Light blue – not completely clear/ partial information or data supporting the request; White – incoherent request/no information or data to support the request.

NOTE: Dark blue shading should not be taken to imply that STECF supports the exemption. Rather that STECF considered that the supporting information and data supplied was of good quality and adequate to conduct an evaluation.

De minimis		EWG before additional		STECF after additional	
	Clear Request	Supporting information	Fishery data	Supporting information	Fishery data
6% in 2019 and 2020, 5% in 2021 of total annual catches of Hake and Mullets caught by trammel and gill nets					
6% in 2019 and 2020, 5% in 2021 of total annual catches of Hake and Mullets caught by rapido					
6% in 2019 and 2020, 5% in 2021 of total annual catches of Common Sole caught by trawl nets					
In July, August and September, 6% in 2019 and 2020, 5% in 2021 of total catches of Norway lobster caught by bottom trawls during these months					
7% in 2019 and 2020, 6% in 2021 of total annual catches of demersal finfishes under landing obligation for under MCRS specimens - **Hake, Mullets and pelagic species excepted** - caught by bottom trawls					
7% in 2019 and 2020, 6% in 2021 of total annual catches of demersal finfishes under landing obligation for under MCRS specimens - **Hake, Mullets and pelagic species excepted** - caught by trammel and gill nets					
7% in 2019 and 2020, 6% in 2021 of total annual catches of demersal finfishes under landing obligation for under MCRS specimens - **Hake, Mullets and pelagic species excepted** - caught by hooks and lines					
7% in 2019 and 2020, 6% in 2021 of total annual by-catches of pelagic species (Anchovy, Sardine, Mackerel, Horse mackerel) under landing obligation					

High survivability		EWG before additional		STECF after additional	
	Clear Request	Supporting information	Fishery data	Supporting information	Fishery data
Scallop (*Pecten jacobeus*), Carpet clams (*Venerupis* spp.), Venus shells (*Venus* spp.) caught by mechanized dregdes (gear code: HMD)					
Norway lobster (*Nephrops norvegicus*) caught by bottom trawls (gear codes: OTB, OTT, PTB, TBN, TBS, TB, OT, PT and TX), excepted during the months of July, August and September					
Deep water rose shrimp (*Parapanaeus longirostris*) caught by bottom trawls (gear codes: OTB, OTT, PTB, TBN, TBS, TB, OT, PT and TX)					
Red sea bream (*Pagellus bogaraveo*) caught by hooks and lines (gear codes: LHP, LHM, LLS, LLD, LL, LTL, LX)					
Lobster (*Homarus gammarus*) and crawfish (Palinuridae) caught by nets (gear codes: GNS, GN, GND, GNC, GTN, GTR, GEN) and by pots and traps (gear codes: FPO, FIX)					
Norway lobster (*Nephrops norvegicus*) caught by pots and traps (gear codes: FPO, FIX)					

Figure 6. A summary of the quality of evidence for Mediterranean JRs given separately for *de minimis* and high survivability requests. Rows= exemptions requests; shaded columns = an indication of evidence quality for: the clarity of the exemption request, the supporting information to justify the request and the fishery information (catches, landings, discards etc). This information based on EWG 18-06 (first three columns and the STECF PLEN 18-02 following evaluation of additional information requested by Commission from Regional Groups. Colours: Dark blue – Full clarity/comprehensive and good quality supporting information or data; Light blue – not completely clear/ partial information or data supporting the request; White – incoherent request/no information or data to support the request.

NOTE: Dark blue shading should not be taken to imply that STECF supports the exemption. Rather that STECF considered that the supporting information and data supplied was of good quality and adequate to conduct an evaluation.

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

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REPORT TO THE STECF

EXPERT WORKING GROUP ON Evaluation of the landing obligation joint recommendations (EWG-18-06)

Brussels, Belgium, 4-8 June 2018

1 EXECUTIVE SUMMARY

EWG 18-06 reviewed the joint recommendations from Member States regional groups for the implementation of the landing obligation in 2019. Joint recommendations for discard plans have the purpose of providing the Commission with the agreement among Member States cooperating regionally on the elements for the preparation of Union law (Commission delegated act) in accordance with Article 15.6 of the Common Fisheries Policy. These elements are: definitions of fisheries and species; *de minimis* and high survivability exemptions; fixation of minimum conservation references sizes; additional technical measures to implement the landing obligation; and the documentation of catches. EWG 18-06 has reviewed the new or amended joint recommendations from the North Sea, North-western waters (NWW), South-western waters (SWW) and Western Mediterranean.

General Observations

In reviewing the joint recommendations received, EWG 18-06 highlights a number of general observations. Some of these re-iterate those made in the previous 2014 - 2017 reports relating to the evaluation of joint recommendations. Several are new observations. EWG-06 notes that ahead of the full implementation of the Landing Obligation in 2019 there have been a greater number of exemptions sought than in previous years.

The role of EWG 18-06 and any future STECF EWGs set up to evaluate joint recommendations remains to evaluate the scientific rigour and robustness of the underpinning information supplied by Member States to support the main elements of joint recommendations. STECF cannot adjudicate on whether exemptions should be accepted or not.

EWG 18-06 re-iterates that 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 there is a large element of judgement required in deciding on whether to permit or reject a proposal that cannot be based solely on scientific option of the evidence presented.

EWG 18-06 notes that the quality of submissions to support the exemptions has, in many cases, improved since the first JR's were submitted in 2014. In particular EWG 18-06 recognises the progress made in the carrying out of survival experiments which in a number of cases closely follows the recommendations made by STECF and also ICES. EWG 18-06 has noticed, however, that there are quite a few cases where the quality of submission has fallen making it very diffuclt to conduct an analysis at all. EWG-06 also notes that whereas last year Member State Regional Groups generally used the templates developed by STECF in 2016 to supply fisheries and fleet descriptors, this year fewer had done so. EWG 18-06 continues to point out that some of the exemptions submitted by the regional groups are very much presented as ″national″ rather than regional exemptions. In many cases the information provided originates from one single Member State and while other Member States may be included frequently the information on the respective fleets are not provided. In developing future cases it would be better if exemptions were regionally focused and covering all relevant fleets. This would help the Commission avoid having to request additional information and clarifications from Member States on which fleets the exemptions should apply and also make it much easier for STECF to evaluate them.

EWG 18-06 reiterates that when using the provisions of *de minimis* under Article 15, the requirements of Article 2 of the Common Fisheries Policy CFP) to fish at FMSY can only be met if the *de minimis* discard quantities are deducted from the agreed catch opportunity (TAC) arising from FMSY based advice. If *de minimis* were operated as an addition to the FMSY-advised catch, then mortality rates would be predicted to exceed the FMSY target. Furthermore, depending on the way in which the *de minimis* quantity is calculated and applied (for example 5% of an aggregate catch of several stocks applied as a *de minimis* on one stock) the departure from FMSY could be substantial. STECF 17-03 considers that the only relevant way is to apply the *de minimis* % to the total catch of the given species in the given fishery where the exemption is sought. This is not always the case in the exemptions submitted by the Member States regional group.

EWG 18-06 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.

STECF has consistently proposed that the justification for *de minimis* exemptions is largely economic. However, EWG 18-06 acknowledges that providing detailed information for individual fisheries is challenging. Therefore, it is apparent that STECF will only be able to consider the validity of the supporting information underpinning the exemptions provided and, due to the lack of economic data in many cases, will not be able to carry out any meaningful analysis of the economic impacts. If a deeper analysis is required by DGMARE, then, this needs to be discussed with the Member States and Advisory Councils so that they are clear what information should be provided and also with STECF to establish what they should evaluate. In this regard EWG 18-06 highlights the alternative option appraisal approach in *de minimis* submissions developed by EWG 16-06.

EWG 18-06 re-iterates that assessing what constitutes high survivability is problematic, and that this is made more complex by the limited information available and the high 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 18-06 notes that obliging fishermen to land catches of fish that would otherwise have survived the discarding process could, in some specific cases, result in negative consequences for the stock. This is because any surviving discarded fish contribute positively to the stock and landing those individuals therefore removes that benefit. Where discards are included in the stock assessment but the (known) survival is not accounted for, this in effect elevates fishing mortality and changes in exploitation pattern which may lead to reductions in fishing opportunities to maintain fishing mortality levels consistent with management objectives (e.g. FMSY). Conversely, if they are not included in the assessment, then the mortality is higher than estimated, even if part of the discards survive, and in this case, bringing everything to land would provide better control of fishing mortality. For some stocks (eg *Nephrops*) ICES takes account of discard survival rate – in future this is something which should be discussed in the assessment forums for other species also.

EWG 18-06 considers that avoidance of unwanted catch through improved selectivity or other means should be the primary focus in implementing the landing obligation recognising the potential benefits for other stocks and the broader ecosystem that would arise from changes in exploitation patterns. Therefore, the choice of survival levels/value(s) in the context of article 15.2(b) will depend on which objective (e.g. avoidance of waste; improve stock sustainability; improve financial viability) is set as a priority. Nevertheless, provided the methodologies employed in carrying out survival experiments are appropriate and the limitations of the results are fully explored, EWG 18-06 considers that the decision to accept or reject an exemption proposal based on the survival value presented is largely one for managers.

EWG 18-06 notes that article 15.5(c)(ii) states that where continued discarding is permitted through the application of *de minimis* provisions, whilst these catches "shall not be counted against the relevant quotas; however, all such catches shall be fully recorded". EWG 18-06 re-iterates that no specific provisions have been included in the JR's to address this. In this regard EWG 17-03 stresses the need to improve the collection of catch documentation data. As highlighted in by STECF PLEN 17-01 and 18-01, there would appear a "lack of reporting by vessel operators of fish discarded under exemptions, discards of fish currently not subject to the landing obligation and catches of fish below MCRS". The joint recommendations evaluated by EWG 18-06 would strongly benefit from containing provisions that strengthen data collection in this respect. As STECF PLEN 18-01 pointed out, innovative monitoring measures such as CCTV and Remote

Electronic Monitoring (REM) have been applied only in pilot studies but would be a more effective way to enforce the landing obligation if applied in a commercial setting (STECF EWG 13-23). If the data situation does not improve and the true quantities being caught as reported do not reflect the actual removals, they may have a significant impact on the quality of scientific advice for future year's fishing opportunities, since full catch allocations as a basis for TACs in combination with continued discarding may also compromise the achievement of the MSY objective.

EWG 18-06 notes that some exemptions have been in place for some time now but have not taken account of new data, information or circumstances which may render a necessary change to the exemption. EWG 18-06 considers that some updating procedure is required to ensure that exemptions only remain in place if required and still justified by the available information.

EWG 18-06 notes the marked increase in the number of combined *de minimis* cases which were requested for 2019. These cases allow for potentially large quantities of fish to continue to be discarded. *De minimis* cases of any kind require careful monitoring of catches and the quantities of fish being discarded, the need for enhanced monitoring to ensure the combined *de minimis* cases operate appropriately is imperative.

The increasing numbers of exemptions in some areas raises the question of whether in fact all fisheries in some areas have exemptions and thereby diminish the overall objectives of the Landing Obligation. EWG 18-06 reviewed this for the SWW and provided a summary table.

Evaluation of regional joint recommendations

EWG 18-06 did not spend time screening fishery definitions included in the JRs for the North Sea, NWW and SWW, and Western Mediterranean. Based on previous analysis relatively few transboundary issues and inconsistencies where fisheries straddle different areas were identified.

EWG 18-06 have also carried out an analysis of the progression in implementing the landing obligation. This analysis provides an overview of the percentage of TAC species from 2015 to 2018 now subject to the LO (partial or fully) compared to the percentage of TACs species not yet included. EWG 18-06 considers this to be a simplified indicator of progress so far with implementation of the landing obligation and of what is still left to fall under the landing obligation. It does not attempt to quantify landing obligation coverage in terms of actual catches but focuses solely on the proportion of TACs. This analysis indicates a rather steep increase in the number of stocks required to be brought under the LO in 2019

EWG 17-03 has evaluated the exemptions and other requests contained in the JR's submitted by the Regional Groups of Member States. The following is a summary of the main observations for each of these exemptions by region.

<u>North Sea</u>

De minimis	
Fishery	Main Findings of EWG 18-06
Whiting and cod caught using bottom trawls (OTB, < 100mm (TR2) in the North Sea	Existing exemption but revised by increasing the scope of this exemption to the whole of area IV. The original exemption only applied in area IVc. The justification for this exemption is largely the same as in 2017. There is no new information to support widening the scope of the exemption presented. On this basis EWG 18-06 cannot evaluate whether it is appropriate or not to extend this exemption. Information is only supplied for the FR fleet although the JR indicates NL vessels are also involved.
Fish bycatch in Northern prawn trawl fishery with	Existing combined species *de minimis* but revised by increasing the number of species included under the exemption reflecting species previously not

a sorting grid, with unblocked fish outlet in area IIIa	under the landing obligation. The basis for the exemption is the same as in 2017. Additional catch data has been provided for the species added. As in 2017 even with the additional species, volumes of *de minimis* are quite low reflecting the relatively low levels of unwanted catches in this fishery.
Fish bycatch in *Nephrops* targeted trawl fishery	Existing combined species *de minimis* but revised through the inclusion of hake to the list of species covered by this exemption reflecting the phasing in of additional species under the Landing Obligation. The basis for the exemption is the same as in 2017. Additional catch data has been provided for hake. As with 2017 the volumes of *de minimis* are quite low reflecting the relatively low levels of unwanted catches in this fishery.
Bycatches in the brown shrimp fishery in the North Sea	New exemption. The justification is based on major increases in selectivity being difficult to achieve over and above measures already introduced into the fishery. In addition the handling of unwanted catches are regarded as uneconomically disproportionate given the difficulties in sorting very small undersized individuals being difficult to sort from the target species. No supporting documentation is provided to support either of these assertions even though it is safe to assume both are valid assertions for this fishery. A reasonably detailed description of the fishery and fleets is provided but there is no breakdown of the fleets by Member State and the catch data is only provided as a percentage of the overall catches and not by volume.
Pelagic species under landing obligation for demersal vessels using bottom trawls (OTB,OTT, PTB, TBB) of mesh size 70-99mm (TR2, BT2) in the North Sea (area IV)	New combined species *de minimis*. The justification is based on improvements in selectivity being difficult to achieve and also on disproportionate costs of handling unwanted catches of pelagic species onboard. No supporting information is provided regarding either of these conditionalities other than reference to some French selectivity studies. These studies consider selectivity measures tested in the relevant fisheries although they do not relate directly to the selectivity of pelagic species. There is also a reference to a French study (EODE study) which deals with disproportionate costs but not specifically with handling catches of pelagic species. A detailed description of the relevant French fisheries and fleets is provided. However, there is no information provided on other fleets who may wish to avail of this exemption. In addition the JR indicates beam trawls are to be included in the exemption but no catch or fleet information is provided.
Ling (*Molva molva*) for vessels using bottom trawls (OTB, OTT and PTB) > 100mm in the North Sea (area IV)	This is a new exemption. The justification is based on improvements in selectivity being difficult to achieve. The JR makes the assertion that this fishery is already selective. No supporting information is provided for this assertion other than referring to the morphology of ling, which makes reducing unwanted catches of ling difficult. The JR does refer to a number of French studies which consider selectivity measures tested in the relevant fisheries although they do not relate directly to the selectivity of ling. A detailed description of the relevant French fishery and fleet is provided. However, there is no information on other fleets which may wish to avail of this exemption.
Bycatch of industrial species for demersal vessels using TR1, TR2 or BT2 in areas IIIa and	New combined species exemption. The justification is that handling of unwanted catches are regarded as uneconomically disproportionate given the difficulties in sorting very small undersized individuals from the target species. No supporting documentation is provided to support this assertion other than that the catches are insignificant in the demersal fisheries and therefore this satisfies the conditions set out in Article 15. The JR also

IV)	indicates that there are no methods available to reduce bycatch of industrial species in these fisheries but again no information is provided to backup this assertion. There is very limited information on the fleets and fisheries to which this exemption is to be applied. There is also a reference to BT2 fisheries in the JR but no information is provided on the catches or fleets involved.
Whiting caught by beam trawls 80-119mm in the North Sea (area IV)	New exemption. The justification for this exemption is based on major increases in selectivity being difficult to achieve over and above measures already introduced into the fishery. In addition the handling of unwanted catches are regarded as uneconomically disproportionate given the difficulties in sorting very small undersized individuals being difficult to sort from the target species. There is only limited evidence to support both of these assertions, other than reference to a number of studies being undertaken in NL. Similarly, on disproportionate costs, limited information is provided. There is reference to several studies that have looked at the economic impacts of the landing obligation, which in a general sense show that additional handling onboard of unwanted catches due to the landing obligation generates extra costs and sorting time for crews. An example referring specifically to whiting is provided although little detail is provided and the claims made are unsubstantiated. Catch data is provided for only the NL BT2 fleet. There is no indication on the numbers of vessels involved and only limited catch data is provided. It is not clear whether fleets from other Member States intend to avail of this exemption,

High Survivability	
Fishery	Main Findings of EWG 18-06
High survival exemption for 'undersized' common sole (sole less than MCRS of 24cm) caught by 80-99mm otter trawl gears in ICES area 4c within 6 nautical miles of coasts, albeit outside identified nursery areas	Existing exemption. The exemption is being requested for continuation in both the North Sea (area IVc) and North Western Waters (area VIId). EWG 18-06 reiterates that a requirement to provide the position of nursery areas is indicated in the relevant Regulation. So far these nursery ground positions have not been provided or evaluated.
High survival exemption for *Nephrops* caught by demersal trawls with a cod end larger than 80mm (70mm/35mm)	Consolidation of several previous exemptions. The EWG 18-06 notes that no information is provided on EU landing fleets. The EWG also notes that there is an inconsistency in the fishery data provided for UK because the landings were 19,601t, whereas the provided estimates of catch and discards were 3,635t and 332 t, respectively (the provided estimate of 9% discard rate is thus also uncertain). The EWG 18-06 suggests the JRSG to check these values and provide new estimates for the UK. The request is based on a scientific study on post-catch survivability of discarded *Nephrops* on Scottish waters. The trials followed the ICES WKMEDS recommendations. Survival rates were provided by two areas: i)

	west coast (Minches): overall rate 53%; 45.7% in summer; 56.3% in winter; ii) east coast (Firth of Forth): survival rate in summer was 74.5%. According to this study, survival results for the Scottish west coast were in range with the wider fleet information indicating that the discard survival estimates are representative of the wider fleet operating on the west coast. This was not the case for the east coast as substantial differences were observed, whereby applying the discard survival estimates to the whole fleet in this fishery would require important assumptions to be made. Given the limited information, EWG18-06 is unable to assess whether these assumptions are justified. EWG 18-06 is not able to assess whether extending the survival rates to the Pandalus fishery is justified but notes that gears and characteristics of the fisheries are very different.
By-catch of plaice by vessels using nets in ICES areas 3a and 4	The LO shall not apply to plaice (*Pleunonectes platessa*) caught in ICES area 3a and 4 by vessels using nets (GNS, GTR, GTN, GEN). The cases described come from Danish fisheries in areas 23 and 22, but the JR suggests the principles and evidence are also applicable to the North Sea. Results from a study carried out in ICES areas 22 and 23 showed that all individuals were alive at the end of the observation periods 4-10 days (100% survivability). The vitality (injury and reflexes) of *P. platessa* fished with trammel net is not severely affected after capture, with most (2/3) of the fish presenting a very low (10%) level of abrasion. Although the methodological approach of the study is limited in scope, EWG 18-06 considers that it provides initial and basic evidence of the survivability of *P. platessa* caught with trammel nets. However, it is suggested that the studies are repeated in the North Sea with a more complete analysis (more samples; taking into account the environmental conditions and the fishing handling practices, long term mortality, air exposure, etc) in representative fisheries. EWG 18-06 also notes that no data is provided for other types of static nets. However, the results provided for the trammel net could also apply to other nets considering the similar characteristics of all these set nets, except if the handling practices are different from net to net). EWG 18-06 considers that the handling procedures related to the discard of plaice should be well specified, particularly to minimize air exposure, which seems a key factor affecting the survivability of this species.
By-catch of plaice by vessels using Danish seine in ICES areas 3a and 4	The LO shall not apply to plaice (*Pleunonectes platessa*) caught in ICES area 3a and 4 by vessels using Danish seine. Mean survival rate from targetted studies is judged to be above 78%. JR also suggests plaice should be discarded swiftly in order to minimize air exposure. The JRSG does not provide data on total landings or discards from the fishery, but only percentages of unwanted catch of plaice (8% in Skagerrak, 1% in the North Sea). The JRSG request is supported by a survivability study in the Danish seine fishery in Skagerrak during summer 2017. No information is provided on whether the results of this study could be extrapolated to the whole area involved in the JR. Handling and vitality assessments in that study were conducted according to ICES WKMEDS guidelines (ICES 2014). The EWG 18-06 considers that the total number of individuals analyzed is high enough to obtain reliable estimates of overall survival rates. The study took place in summer,

	representing a worst-case scenario for survival. The mean survival rate for undersized plaice was 78%, though it depended on air exposure: it increased to 86% if released <30 min after capture, but decreased to 20% after 30 min. The air exposure times used in the experiment were within commercial practice, but it is not known if air exposure times are higher at the fleet level. The EWG 18-06 considers that having this information is very important for this JR given the large differences in survival rates between fish released before and after 30 min.
Temporary high survival exemption for plaice below MCRS caught by 80-119mm beam trawl gears (BT2) in ICES area 4	It is requested to exempt from the LO plaice of less than 27 cm in length caught in 80-119mm beam trawl gears in ICES area 4. The JRSG requests a temporary (3 years) high survival exemption for plaice in the beam trawl fisheries with meshes between 80mm and 119 mm (BT2) in the North Sea (ICES area IV and II). The JRSG indicates that the exemption is conditional on a package of measures and incentives which would be applied according to the vessel size The EWG 18-06 notes that the reasoning for considering the two vessel size segments is not justified by the JRSG. For vessels <221 kw the exemption will be applied whenever the average trawl duration is <90 min (although experimental results did not show any difference with longer tows). For vessels >221 kw several technical measures will be adopted to improve selectivity. According to the JRSG, the technical measures include the flip-up rope and the benthic release panel, which are effective in reducing the mortality of discarded fish. The EWG 18-06 also notes that the JRSG does not provide data on the fisheries (e.g. fleet, landings, discard rates) taking place in the ICES area 4. The JRSG provides survival estimates from a scientific study on discards survival probabilities of flatfish in North Sea pulse-trawl fisheries. The study followed the ICES guidelines methodology. The EWG notes that the total sample size (558 individuals) is reliable to obtain an overall survival rate, but the low per trip sample size prevents using these monthly estimates. EWG 18-06 notes that the mean survival rates are in all cases lower than 20%. The overall discards survival probability for plaice was 14%. At individual trip level, the probabilities ranged from 1% (Sept) and 3% (July) to 20% (Dec, Feb) and 22% (Oct). In conclusion, although the JRSG states that "plaice has a proven potential for high survival, given already existing high survival exemptions in place in the North Sea and other regions", the EWG 18-06 notices that the results of all the studies provided do not agree with this statement because the mean survival rates are in all cases lower than 20%.
By-catch of plaice by vessels using trawl (OTB, PTB) of mesh sizes ≥ 120 mm in ICES areas 3a and 4 in winter	The study reported in Annex K comes from Danish fisheries in ICES area 3a, but the JRSG considers that the principles and evidence are applicable to the entire North Sea. However, no compelling reasoning is provided on this consideration. The JRSG is based on a scientific study on discard survival of plaice caught in the bottom otter trawl (OTB) demersal mixed fishery in Skagerrak during summer 2017 and winter 2018. The study was conducted onboard a commercial vessel following the ICES WKMEDS guidelines. The EWG 18-06 notes that the number of Danish vessels in the OTB fleet provided by this study in the text and in Fig. 8 does not agree and need clarification. The EWG 18-06 also notes that the number of individuals analyzed in this study was high for a reliable survival analysis: 333 in summer, and 274 and

	279 in winter for *Nephrops* and plaice target species fisheries respectively. The mean survival rate for undersized plaice was higher in winter (75%) than in summer (44%). The mean rate for undersized plaice caught when targeting *Nephrops* during winter was lower (41%) than when targeting plaice in the same season. The larger amount of *Nephrops* in the catch caused more physical damage to the fish due to the hard exoskeleton of the lobster. In the summer when targeting plaice, discard survival was affected by air exposure duration, dropping to 8% if released after 60 min of air exposure. The air exposure times used in the experiment were within commercial practice, but it is not known if air exposure time is higher at the fleet level. The EWG 18-06 notes that such a low survival values in summer justifies the JRSG request being restricted to winter months.
High survival exemption for skates and rays caught by all fishing gears in the North Sea (areas 4, 3a and EU waters of 2a)	The LO shall not apply to skate and ray quota species caught by any fishing gear in the North Sea until 31 December 2021 (it is proposed as a temporary management measure while Member States collect additional information on survival). The JR also suggest discards need to be included in the annual ICES assessment or a new protocol should be devised to calculate uplift for skate and ray species. The Scheveningen group has provided a complete analysis/synthesis of the existing estimates of discard and survival rates of skate and rays, based on existing literature and studies. EWG 18-06 notes that discard rates and survivability estimates depend greatly on the species, area and métier considered. Although an average value (45%) of discard rate over 2014-2016 for skates and ray species combined is presented, estimates can vary greatly between species and within species. Similar to this, the survival rates can greatly vary between species and fisheries. Furthermore, the synthesis indicates large variability in experimental duration with many examples of short term experiments on ray species. Health vitality data on discarded skates and rays show less variability, with most (>95%) rays in longline, otter trawl and netting fisheries being alive and in good or moderate condition at the point of release EWG 18-06 notes that the current data outlined in support of the requested exemption is very limited because the high variability in survivability estimates and the existent data gaps. EWG 18-06 acknowledges that more work is needed to fill the gaps and provide a more complete picture of survival across different skate and ray species in different fisheries/areas/métiers. EWG 18-06 notes there is a necessity to have catch and discard data by species. EWG 18-06 notes that during the period of the requested temporary exemption, the North Sea Member States aim to promote good practice to fishers as well as implement avoidance and selectivity measures to minimise the chance of skate and ray species being caught. EWG 18-06 however cannot evaluate which of these measures will be implemented by each fishery. EWG-06 also suggest a cautious approach in relation to the duration of the exemption, a shorter period would allow for the exemption to be revisited quickly in the light of emerging new data. EWG 18-06 notes that the scientific problems described above for the North Sea skates and rays (complexity/data gaps, etc), as well as the potential measures to tackle momentarily these problems (e.g. handbook of good practice; search for new selectivity measures, etc), could also apply to many other species, métiers and areas (See section 5.4)
Temporary high survival	The JRSG requests a temporary exemption of 3 years (2019-2021) from the LO for turbot (*Scophthalmus maximus*) caught with towed gears with a cod

exemption (2019-2021) for turbot caught by towed gears with a cod end larger than 80mm in ICES area 4.	end larger than 80mm in ICES area 4. As a condition of the exemption the turbot should be returned whole/undamaged to the sea as swiftly as possible and over the grounds where they were caught. The JRSG also suggests the exemption should be extended to turbot caught by trawl (OTB, PTP) of mesh sizes ≥ 80 mm in ICES areas 3a and 4. The JRSG does not provide information on the fishery involved in this request (fleet, landings, discards, etc). The request is based on a recent scientific study on discards survival probabilities of flatfish in North Sea pulse-trawl fisheries. The study followed the ICES guidelines. The EWG 18-06 notes that although the sea trips were spread out over the year, the low number of individuals in each trip prevents using these individual estimates. The overall discards survival probability for turbot, based on 111 individuals, was estimated at 30% (20 to 43%). Individual trip survival values ranged from 0% (Jan, Feb) to 63% (July). Based on these unexpected results (higher survival rates in summer compared to winter) the EWG 18-06 suggests that further studies are needed to have reliable survival estimates for turbot. The study also reveals that catch-processing time seems to have no effect on fish condition nor discards survival. However, discards survival was strongly affected by fish condition, whereby the authors of this study recommend that measures aimed at increasing discards survival focus on improving the condition of discarded fish during the capture process rather than the catch processing. EWG 18-06 observes that no data on the fleets or fisheries (e.g. fleet, landings, discard rates) involved is provided. EWG 18-06 further observes it is unclear as to whether the exemption is to apply to all trawl fisheries or just to vessels using pulse trawls. EWG 18-06 notes that the JR states the exemption is on a temporary basis for three years. However, EWG 18-06 notes that there is no justification for this and also points out that the lifespan of the discard plan is three years as well. EWG 18-06 considers the preliminary estimate of survival of 30% to be somewhat low acknowledging that the studies proposed may allow time for improvements in the fishery (gear selectivity, survivability data). EWG 18-06 considers it a decision for managers to decide whether the survival rate coupled with the proposed additional measures is sufficient to justify the exemption. EWG 18-06 also notes that the survival rates in summer were higher than in winter which is unusual based on results of previous survival studies with different species. Given this unexpected outcome, EWG 18-06 considers it appropriate to repeat the survival studies to confirm this is the case. EWG 18-06 notes that the survival studies presented were all carried out with pulse trawls. EWG 18-06 cannot assess whether the results presented are representative of standard beam trawl gears or other trawl gears but based on the differences in operation of the pulse trawl it is likely that the survival rates would be lower with standard beam trawls and similar with other towed gears. If the intention is for this exemption to cover demersal trawls and standard beam trawl gear as well as pulse trawls then EWG 18-06 considers it appropriate to repeat these studies with these gears. EWG 18-06 notes that the total sample sizes used in the survival studies are adequate to obtain an overall survival rate. However, although the sea trips were spread out over the year (January, May, June, July, September, October, December) to account for the potential effect of variable

	environmental and fishing conditions on discards survival. EWG 18-06 considers the low number of individuals in each trip prevents using these as reliable monthly survival estimates. EWG 18-06 observes that the survival probability estimates apply to year-round pulse-trawl fisheries, but, the results show variation in survival rates throughout the year. As the studies note, this means that the overall survival probability for a species is not necessarily representative for its discards survival at any specific time of the year. The nature of this variation remains to be established. The studies also reveal that catch-processing time seems to have no effect on fish condition or on the survival rate of discards. EWG 18-06 notes that the studies show survival was strongly affected by fish condition. Therefore the recommendation made in the JR that measures aimed at increasing the survival of discards should focus on improving the condition of discarded fish during the capture process rather than the catch processing seems appropriate.

North Western Waters

De minimis	
Fishery	Main Findings of EWG 18-06
Whiting caught with bottom trawls and seines >80mm and pelagic trawls and beam trawls (80-119mm) to catch whiting in the Eastern Channel (VIId)	Existing provision but with a request to also include beam trawls (BT2). No supporting information has been provided to substantiate this extended request.
Combined *de minimis* for Gadoids (cod, haddock, whiting) caught using bottom trawls, seines and beam trawls of greater than or equal to 80mm mesh size in the Celtic Sea and the Channel (ICES VIIb-c, e-k)	This request has been evaluated by STECF Plenary 2018-01, where it was noticed that the latest submission provides clarification on some observations made by STECF in the previous reviews. STECF concluded that to be in line with CFP objectives, the maximum possible amount of *de minimis* (i.e. the maximum safeguard amount) for each species that could potentially be discarded, must be deducted from the TAC. EWG 18-06 notices that only detailed information for the French and Irish fleets is provided. If the intention is to apply this *de minimis* to other fleets (i.e. Spanish and UK), then information on these fleets is needed. EWG 18-06 note that studies on selectivity have been provided only for the Irish fleets. While only general information on ongoing selectivity trials in France is provided. EWG 18-06 notices that in the "Template for the provision of information that defines the fisheries to which *de minimis* exemptions should apply (Annex IV)" the estimated landings and the estimated discards for gadoids report the same value (9097.84 tons), and this is not consistent with the

	reported discard rate (53%). EWG notices that the 5% *de minimis* level provides only partial solution to sorting and handling challenges as discard rates are 27% for TR1 and 53% for TR2, indicating significant selectivity improvements are still required. Due to a number of remaining questions, lack of key data, incomplete selectivity data and general shortage of material justifying disproportionate costs, EWG 18-06 is unable to fully assess the merits of this case.
Undersized whiting in the TR2 *Nephrops* trawl fishery in ICES division VIIa	EWG notices that 99% of whiting catch is discarded because below the MRCS (558t UK and 535t IE), and that a *de minimis* of 5% would produce a volume of 28t UK and 27t IE. EWG notices that the 5% *de minimis* level provides only partial solution when discard rates are 99%, indicating significant selectivity improvements are still required. Discarding at requested *de minimis* levels will not remove all unwanted catches, but only a very small fraction.
Undersized by-catches of haddock in the TR1 demersal trawl fisheries in ICES area VIIa	The ratios of discards of haddock under MCRS indicate a total of 3.3 tonnes in UK, and 34 tonnes in Ireland. The minimis volume requested for Ireland is 3 tonnes, which is a small part of expected discarding. EWG 18-06 notes that there are several selectivity studies with good results to minimize haddock discards by modification of fishing line, which is not used yet by Irish fleet. Increasing selectivity will remove most of the under sized catch. EWG 18-06 notes that the argument of handling costs of all haddock would have a disproportionate negative economic impact, is ambiguous for UK fleet, since the amount of haddock discards is low 1.9 tonnes in UK vessels and under sized fish is 30%, which 70% of commercial sizes which may be sold for human consumption. The supporting documentation (Annex XIIa) refers to observer program in 2017 carrying out 81 hauls (mean length of hauls was 10 hours) with a haddock discard rate of only 0.6%. EWG 18-06 notes that if this is a representative discard rate then the *de minimis* request is excessive.
By-catches of pelagic species (mackerel, horse mackerel, herring, boarfish, greater silver smelt) caught by vessels using bottom trawls and seines, and beam trawls in ICES subarea VI and VIIb-k	EWG 18-06 notes that Annex XIII support discard exemption for mackerel, horse-mackerel, herring and, boarfish and greater silver smelt combined of the total annual catches of these species by vessels using bottom trawls (OTB, OTT and PTB) in ICES subarea 6 and 7b-k. No scientific information is presented on beam trawl and seine fisheries related with this exemption. Discards for TR2 fleet in ICES 6 and 7 b-k (STECF data for all countries-2016) of mackerel, horse mackerel, herring and boarfish represent approximately 6% of overall discards. EWG18-06 notes that the supporting information presents safeguards of 25%. The data provided are based on STECF data but discard rates are estimated from French observer program data. Those safeguards should be revised if necessary and according to discard profile that can evolve over the years. The STECF (EWG 18-01) has previously reviewed the suggestion of a combined *de minimis* in 2017 for the North Western Waters combined *de minimis* request for gadoids. Several concerns were raised by STECF on how such a methodology would be applied to annual quota setting in the North Western Waters. Due to lack of information, EWG 18-06 is unable to assess whether

	selectivity is difficult to improve in this fishery or whether cosdt of handling unwanted catches are disproportionate. The EWG 18-06 notes the lack of information for several important gear types rendering it not possible to judge the scale of the request.

High Survivability	
Fishery	Main Findings of EWG 18-06
Common sole (undersized only) caught with trawl gears in area VIId	Existing provision. EWG 18-06 notes that new information in relation to nursery areas (as requested in the 2018 discard plan COM 2018/46) was not provided in the JR.
Nephrops in the TRI fisheries in Area VII and in the TR2 fisheries in Area VII in combination with highly selective gears	EWG 18-06 considers that the new scientific underpinnning presented is robust and the results are in line with previous discard survival estimates for highly selective *Nephrops* trawls from the North Sea and Skagerrak areas. In the reported study a 300 mm square mesh panel (SELTRA) trawl was studied. EWG 18-06 notes that the scope of the proposed exemption in terms of areas and variability of fisheries and gears covered is much broadened compared to currently implemented *Nephrops* survival exemptions, which typically are limited in terms of gears, areas, catch handling routines and sometimes seasons. Related to this, the other gear options also proposed to be eligible for the exemption (TR1 and a variety of TR2 trawls) has very different selective properties than the SELTRA trawl. As catch volume and catch composition but also various fleet characteristics are important factors behind *Nephrops* discard survivability, EWG 18-06 is not convinced that the estimate provided in the current study (64%) is representative for all the proposed TR1 and TR2 and fisheries in area VII. EWG 18-06 notes that the proposed derogation is linked to the suggested changes of technical measures (see below). EWG 18-06 further notes that the supporting documentation provides sufficient information (fleet size, targeted species, catches, discards) for Ireland. Fisheries descriptions of other countries fleets are lacking which makes the magnitude and effects of this exemption difficult to assess.
Nephrops caught by 80-110mm otter trawl gears in ICES subarea VIa, within 12 miles of coasts	EWG 18-06 notes that the cited report presents new scientific estimates of *Nephrops* discard survival rate and also discuss the wider applicability and representativeness of this new survival estimate in Northwest waters and North Sea waters. The reported annual mean survival rate for *Nephrops* in TR1 and TR2 based on the new summer and winter trials on one vessel was 53% (46% in summer and 56% in winter). EWG 18-06 judges that the supporting scientific information is of good scientific quality and is based on state of the art methods. Furthermore, the approach chosen to validate the representativity of the captive survival estimates on the wider fleets is commendable. Due to skewed sampling of individuals in the summer captive experiment, EWG 18-06 assess that the reported survival rate (53%) may be an overestimate. EWG 18-06 notes that, similar to the area VII proposal, the scope of the proposed exemption in terms of areas and variability of fisheries and gears covered is much broadened compared to currently implemented *Nephrops* survival exemptions, which typically are limited in terms of gears, areas, catch handling routines and sometimes seasons. This proposal is also very similar to, and based on much the same supporting information, as the proposal for exemption of *Nephrops* in North Sea trawls (see X.X).

	EWG 18-06 notes that discard rate is rather low (7%) in the area meaning that the risk of unaccounted mortality due to a survival exemption is probably limited. The supporting documentation also provides information (fleet size, targeted species, catches, discards) for UK-Scotland only, which is probably sufficient as they dominate fisheries in this area.
Skates and ray species caught by any gear in the North Western Waters (areas VI and VII)	See EWG response in North Sea Section above and Section 5.4
Plaice caught by trammel nets in ICES divisions VIId and VIIe	The supplementary material provided as scientific evidence of the high survivability of Plaice is too limited to be reviewed. Experimental details about a large extent of the study are missing (e.g. analysis, control group, vitality assessment and animal observations). Fleet and fishery descriptions are provided for the United Kingdom, but there are other countries associated with the proposed exemption that have not been described. EWG 18-06 notes that without provision of more complete information it is not possible to assess the merits of this proposed high survivability exemption.
Plaice caught by trammel nets in ICES divisions VIIf and VIIg	The supplementary material provided as scientific evidence of the high survivability of Plaice is too limited to be reviewed. Experimental details about a large extent of the study are missing (e.g. analysis, control group, vitality assessment and animal observations). Fleet and fishery descriptions are provided for the United Kingdom, but there are other countries associated with the proposed exemption that have not been described. EWG 18-06 notes that without provision of more complete information it is not possible to assess the merits of this proposed high survivability exemption.
Plaice caught by Otter Trawls in ICES divisions VIId and VIIe	The supplementary material provided as scientific evidence of the high survivability of Plaice is too limited to be reviewed. Experimental details about a large extent of the study are missing (e.g. analysis, control group, vitality assessment and animal observations). The survival rate presented comes from the short observation period and it differs from the forecasted survival rate, which is lower. Fleet and fishery descriptions are provided for the United Kingdom, but there are other countries associated with the proposed exemption that have not been described. EWG 18-06 notes that without provision of more complete information it is not possible to assess the merits of this proposed high survivability exemption.
Plaice caught by otter trawl gears in ICES subarea VIIf and VIIg	The supplementary material provided (Annex VII) as scientific evidence of the high survivability of Plaice is too limited to be reviewed. Experimental details about a large extent of the study are missing (e.g. analysis, control group, vitality assessment and animal observations). The estimation of survival rate was realized by copying of the survival rate from individuals within the vitality assessment groups generated from an otter trawl working in the neighbouring ICES sub division. Therefore the survival rate presented is not scientifically underpinned and should be interpreted with caution.

	Fleet and fishery descriptions are provided for the United Kingdom and Ireland, but there are other countries associated with the proposed exemption that have not been described. EWG 18-06 notes that without provision of more complete information it is not possible to assess the merits of this proposed high survivability exemption.
Plaice caught with beam trawls in ICES subareas VIIa to VIIk	The documentation provided shows that survivability is highly variable (4-93%) and significantly related to trawl duration, sorting duration, wave height, sea temperature, sediment catch and total catch. The scientific underpinning of these conclusions is considered to be robust and gives an indication on which factors could potentially improve survivability for Plaice in this fishery. Fleet and fishery descriptions are provided for Ireland, but the source related to numbers supplied is unknown. There are other countries associated with the proposed exemption that have not been described. The proposed gear modifications will likely increase the survivability for Plaice but the extent of these improvements is unknown and should be studied. EWG 18-06 notes that without provision of more complete information it is not possible to assess the merits of this proposed high survivability exemption.
Fish caught in pots, traps and creels in North Western Waters	Existing exemption in the North Sea that was evaluated EWG 17-03. The provided core information is essentially identical to the information behind the North Sea exemption. The exemption assumes that all fish released from pots and creels have the same survival chances as cod released from pots used to target fish. There is no direct evidence to support this but it is reasonable to infer that, at the point of release, and assuming environmental and technical operations are comparable, the likelihood of survival is high. The risk of substantial avian predation of discarded fish needs to be considered in such an exemption (as in the North Sea discard plan) Fleet and fishery descriptions are detailed for Scotland, but there are other countries associated with the proposed exemption that was not submitted.

Technical measures	
Fishery	Main Findings of EWG 18-06
Technical rules in the 1. Celtic Sea protection zone - VIIf, VIIg and part of VIIj: raised baseline and derogations for: * vessels with >5% NEP *vessels with >55% WHG or anglerfish hake	The JR proposes to change minimum gear standards for several trawl fisheries operating in the area by 1st July 2019. EWG 18-06 notes that area VIId and VIIe are not covered by this attempt to increase genereral selectivity which is surprising given the documented quantities of unwanted catches also in these areas. EWG 18-06 assess that the proposed new baseline gears will increase roundfish selectivity. However the T90 alternative may decrease flatfish selectivity (if this is an issue). For the derogations, the gear options proposed for vessels with >5% *Nephrops* will all increase selectivity although the documented selectivity is very different among the alternative gears Some of the gear options for vessels with >55% whiting or anglerfish, hake and megrim combined will most likely not increase selectivity from the

and megrims combined * vessels with <10% gadoids	current minimum requirement due to reduced codend mesh size (currently 100mm + 100 SMP). In fact selectivity may even be reduced in these cases. Likewise the option for vessels with <10% gadoids in area 7f east of 5 degrees west will reduce the selectivity (by reduced mesh size in the SMP).
2. New minimum standards in the Irish Sea VIIa * 5 alternative gears for vessels with >5% *Nephrops* * 2 alternatives for vessels with >10% haddock, cod and skates/rays combined *vessels with <10% haddock, cod and skates/rays combined and <30% *Nephrops*	The JR proposes to change minimum gear standards for several trawl fisheries operating in the area by 1st January 2019. EWG 18-06 assess that, similar to the Celtic Sea protection zone proposal above, the suggested new gear options for *Nephrops* vessels (>5%) will all increase selectivity although the documented selectivity is very different among the alternatve gears that can be used. The gear options for vessels with >10% cod, haddock and skates and rays combined will all increase selectivity The last proposed derogation, for vessels with catches <10% of haddock, cod and skates and rays combined, will increase selectitivity. The meaning of the exemption for vessels with >30% *Nephrops* is however unclear to EWG 18-06.

South Western Waters

Hake caught with trawls in directed fisheries in ICES subareas VIII and IX	Existing but re-assessed on basis of new information EWG 18-06 acknowledges that a large amount of new information has been provided to support this exemption which to some extent addresses the comments raised by STECF in 2017. The SWW Member states provided information (in the Template provided by the EWG 17-03) concerning the sea area, gear type, number of vessels subjected to the Landing Obligation and estimated landings, discards and volumes of *de minimis* required (Table 1). Furthermore, several reports of hake selectivity studies, carried out for the Spanish métiers by IEO and AZTI, and using square mesh panels or T90 mesh codends, were submitted by the SWW group, showing that, occasionally, the use of T90 mesh improves selectivity compared to the T0 mesh. Some clarifications are needed regarding the Table 1: i)It is stated that "There is no way to calculate the number of vessels practicing one métier at any time of the year. Thus, it is not possible to calculate a discard rate for the specific vessels practicing each métiers which are subject to the LO but a discard rate for the overall otter trawl fleet is available". STECF is unable to evaluate, given the information provided, how the métier-specific discard rates were calculated in Table 1. ii)More clarifications are needed for the 'non-Spanish data' in Table 1 (data for French, Belgian and Portuguese métiers). It is unclear to which year(s)

	they refer and how the respective calculations of discards have been made. iii)More clarifications are needed for two of the Spanish métiers in the Bay of Biscay, namely "Bottom otter trawl (OTB_MCF>70) targeting mixed cephalopod and demersal species in Div. 8abd" and "Bottom otter trawl (OTB_MPD>70) targeting mixed pelagic and demersal species in Div. 8abd". These métiers are not included in Table 1 and it is stated in the document provided that in 2018, trips deployed by these gears "are not currently under landing obligation". Regarding the French fleets catching herring, except for data compiled in Table 1, no other information (regarding selectivity and disproportionate costs) is provided by the SWW group. Information on the socio-economic impacts of increasing selectivity and/or of implementing the landing obligation are only provided for certain Spanish métiers. However, EWG 18-06 recalls that additional information on the likely economic consequences of increasing the selectivity for Portuguese fleets (IXa) was submitted in 2017 and assessed in STECF PLEN 17-02. EWG 18-06 notes that according to the information provided, there is a likelihood of increasing of effort on board being required in sorting catches and deteriorating safety conditions. EWG 18-06 cannot assess whether this is specific to the métier examined or generic to all métiers subject to the landing obligation. Owing to continuing lack of information other than for Spain, EWG 18-06 is unable to assess fully whether the request demonstrates selectivity difficult to achieve or whether the cost of handling unwanted catches area disproportionate.
By catches pelagic species: horse mackerel (Trachurus spp.), mackerel (Scomber scombrus), anchovy (Engraulis encrasicolus) and boarfish (Caproidae). Combined *de minimis* for the species up to a maximum of 7% in 2019 and 2020, and up to a 6% in 2021 of the total annual catches of these species made by trawlers (gear codes : OTT, OTB, PTB, OT, PT, TBN, TBS, TX, SSC, SPR, TB,TBB, SDN, SX, SV) in fisheries in ICES divisions VIII and IX.	New request up to a maximum of 7% in 2019 and 2020, and up to a 6% in 2021 of the total annual catches of these species. Due to difficulties of further increasing selectivity in this mixed fishery, and due to disproportionate costs of full implementation of the LO. According to the request, the fleet is particularly vulnerable to the risk of commercial catch losses an improvement in selectivity would cause. However, no references on economic/selective studies were reported. Justification for disproportionate costs is based on a study *(Balazuc et al. 2016)*. According to the study, total landing obligation enforcement would cause an increase in work-time on board of around 30% to 60%. Besides, 20% of the fishing trip could be affceted by hold overloading issues. Description of states of the stocks affected by this exemption, according to ICES. Number of vessels not provided. Two French fisheries of TR2 and TR1 exist in ICES subarea 8 but no description of Spanish and Portuguese fleet. By-catch species contribute high rates of discards for the Spanish fleet. French information is based on an observer programme Obsmer. No information regarding the number of observations compared to number of fishing operations; *De minimis* of 7% is calculated on the total catch of by-catches species in question. In addition, a so-called safeguard percentage of 25% on top of the 7% quota is added. MSs provided numerical tables separately and not always fully completed. France did provide complete indicative discard rates, and estimated volumes of *de minimis* requested. EWG-06 notes that combining catches to calculate *de minimis* increases the volume of *de minimis* available; Owing to lack of information EWG 18-06 is unable to assess fully whether the request demonstrates selectivity difficult to achieve or whether the cost

	of handling unwanted catches area disproportionate.
By-catches of anglerfish (Lophiidae), sole (Solea spp.), turbot (Psetta maxima), red seabream (Pagellus bogaraveo), great forkbeard (Phycis blennoides), a combined *de minimis* up to a maximum of 7% in 2019 and 2020, and up to a 6% in 2021 of the total annual catches of these species made by **trawlers** (gear codes : OTT, OTB, PTB, OT, PT, TBN, TBS, TX, SSC, SPR, TB, SDN, SX, SV) in the Gulf of Cadiz part of ICES subarea IXa.	New request up to a maximum of 7% in 2019 and 2020, and up to a 6% in 2021 of the total annual catches of these species; due to difficulties of further increasing selectivity in this mixed fishery, and due to disproportionate costs of full implementation of the landing obligation. According to the request, the fleet is particularly vulnerable for the risk of commercial catch losses an improvement in selectivity would cause. However, no references on economic/selective studies were reported. Justification for disproportionate costs is based on the management of the undersized fish in port as the quantities are very low and spread in many small ports with no possibilities to find operators that wants to use this catch. JR also indicates hold overloading and increases in the sorting time by the crew as problems. However, no references on economic/selective studies were reported A short description of fishery is provided together with number of vessels, indicative discard rates, estimated volumes of *de minimis* requested (see table below). States of the stocks affected by this exemption is not presented. Supporting information is based on an IEO observer programme but the number of observations compared to the total number of fishing operations is not provided. *De minimis* of 7% is calculated on the total catch of by-catches species in question. A so-called safeguard percentage of 25% on the 7% quota is added. The justification for the safeguard is to limit the risk of discarding only one species and because discard rates can be significantly different from one species to another. It stated that the safeguards should be revised according to prevailing discard profiles that can evolve over time**.** Combining catches to calculate *de minimis* increases the volume of *de minimis*; Owing to lack of information EWG 18-06 is unable to assess fully whether the request demonstrates selectivity difficult to achieve or whether the cost of handling unwanted catches area disproportionate.
By-catches of the species megrim (Lepidorhombus spp.), anglerfish (Lophiidae), plaice (Pleuronectes platessa), whiting (Merlangius merlangus) and pollack (Pollachius pollachius), a combined *de minimis* up to a maximum of 5% of the total annual catches of these species made by	New request up to a maximum of 5% of the total annual catches of these species; due to difficulties of further increasing selectivity in this mixed fishery, and due to disproportionate costs of the full implementation of the LO. Potential choke species are present in this mixed fishery. Justification for disproportionate costs is based on a study *(Balazuc et al. 2016)*. According to the study, total landing obligation enforcement would cause an onboard work-time increase of around 30% to 60%. Besides, 20% of fishing trip could be affected by hold overloading issues. A description is provided of states of the stocks affected by this exemption, based on ICES advice. Concise description of French fleet is given and for the rest of the member states a table of metiers in SWW is presented. The number of vessels is not provided; A catch and discard profile based on the STECF web based tool (2013-2016) is included but EWG-06 notes that in the text it states that data used are not always representative; thus an extreme care on the interpretation and use of the estimates presented below is needed. A description with figures of composition of catches, landings and discards is provided; *De minimis* of 5% is calculated on the total catch of by-catch species in question. A discard profile is provided to estimate maximum volumes of species that would be theoretically discarded under a *de minimis* (based on STECF data, average 2013-2016). A so-called safeguard percentage of 25% quota is added on top of the 5% *de minimis* quota. The justification is in

trawlers (gear codes: OTT, OTB, PTB, OT, PT, TBN, TBS, TX, SSC, SPR, TB,TBB, SDN, SX, SV) in divisions VIII and IX.	order to limit the risk of discarding only one species and because discard rate can be significantly different from one species to another. The JR indicates that those safeguards should be revised according to prevailing discard profiles that can evolve over time**.** Combining catches to calculate *de minimis* increases the volume of *de minimis*; Owing to lack of information, particularly on selectivity, EWG 18-06 is unable to assess fully whether the request demonstrates selectivity difficult to achieve or whether the cost of handling unwanted catches area disproportionate.
By-catches of the species megrim (Lepidorhombus spp.), anglerfish (Lophiidae), plaice (Pleuronectes platessa), whiting (Merlangius merlangus) and pollack (Pollachius pollachius), a combined *de minimis* up to a maximum of 4% of the total annual catches of these species made **by gillnetters** (gear codes: GNS, GND, GNC, GTR, GTN) in divisions VIII and IX**.**	New request up to a maximum of 4% of the total annual catches of these species; due to difficulties of further increasing selectivity, and due to disproportionate costs of full implementation of the landing obligation; According to the request, the fleet is particularly vulnerable to the risk of commercial catch losses an improvement in selectivity would cause. However, no references on economic/selective studies were reported. Justification for disproportionate costs is based on the risk of presence of choke species and the problems of hold overloading and increased sorting time on board for the crew management. No references were reported. A description of states of the stocks affected by this exemption is provided, based on ICES advice and there is a concise description of the French fleet. For the rest of the member states a table of metiers in SWW is presented. The number of vessels not provided. Catch and discard profiles are based on STECF web-based tool (2013-2016). In the text it states that data used are not always representative; thus an extreme care on the interpretation and use of the estimates presented below is needed. A description with figures of composition of catches, landings and discards is provided A *de minimis* of 4% is calculated on the total catch of by-catches species in question. A discard profile is provided to estimate maximum volumes of species that would be theoretically discarded under a *de minimis*; (Based on STECF data, average 2013-2016) (see table below). A so-called safeguard percentage of 25% quota is added on top of the 4% *de minimis* quota. Justification for this is the same as previous request Combining catches to calculate *de minimis* increases the volume of *de minimis*; Owing to lack of information EWG 18-06 is unable to assess fully whether the request demonstrates selectivity difficult to achieve or whether the cost of handling unwanted catches area disproportionate.
By-catches of the following pelagic species: horse mackerel (Trachurus spp.), mackerel (Scomber scombrus), anchovy (Engraulis encrasicolus) and boarfish (Caproidae), a combined *de minimis* for the species up to a maximum of 3% in 2019 ,2020 and 2021, of the total annual	New request up to a maximum of 3% of the total annual catches of these species; due to difficulties of further increasing selectivity, and due to disproportionate costs of full implementation of the landing obligation; According to the request, the fleet is particularly vulnerable to the risk of commercial catch losses an improvement in selectivity would cause. However, no references on economic/selective studies were reported. The justification for disproportionate costs is based on the risk of presence of choke species, hold overloading and increased the sorting time on board for the crew management. No references were reported. EWG -06 noted a discrepancy between title and text regarding the *de minimis* request. i.e. 3% in title, increasing up to 6% in the text after 2020 without indication of an ending year. An e-mail was sent for clarification and MS reply indicated that it was a mistake and that the request is 3% for all the three years concerned. A Description of states of the stocks affected by this exemption is provided based on ICES advice. There is also a description of the gear and a table of metiers in use in the area by Member State but the number of vessels not provided. For Portugal a table with only catch is presented. Catch and

catches of these species made **by gillnetters** (gear codes: GNS, GND, GNC, GTR, GTN) in fisheries in ICES divisions VIII and IX, X and CECAF areas 34.1.1, 34.1.2, 34.2.0.	discard profiles were presented only for Spain and are based on IEO observer programme – there was no information regarding the number of observations compared to the total number of fishing operations; A so-called safeguard percentage of 25% quota is added on top of the *de minimis* quota. Justification as previous request. Combining catches to calculate *de minimis* increases the volume of *de minimis*; Owing to lack of information EWG 18-06 is unable to assess fully whether the request demonstrates selectivity difficult to achieve or whether the cost of handling unwanted catches area disproportionate.
For by-catches of the following pelagic species: horse mackerel (Trachurus spp.), mackerel (Scomber scombrus), anchovy (Engraulis encrasicolus) and boarfish (Caproidae), a combined *de minimis* for the species up to a maximum of 1% in 2019 ,2020 and 2021, of the total annual catches of these species made by for longliners (codes: LHP, LHM, LLS, LLD) in fisheries in IX, X and CECAF área s 34.1.2, 34.2.0	New request up to a maximum of 1% of the total annual catches of these species; due to difficulties of further increasing selectivity, and due to disproportionate costs of full implementation of the landing obligation; The specificity of longlines, hooks and lines fisheries justifies the exemption request due to how complicated it is to improve the selectivity. Long lines etc are already very selective Justification for disproportionate costs is based on the risk of presence of choke species, hold overloading and increased sorting time on board for the crew management. No references were reported. EWG-06 considers that the presence of anchovy and boarfish in this group probably due to a drafting error; check whether the Regional Group wants to remove both species; A description of states of the stocks affected by this exemption is provided based on ICES advice. A table of metiers in use in the area by Member State is presented but the number of vessels not provided. Catch and discard profiles are not provided. In the text of the request it states *'According to the discard profile of the fishery (see annexe I)'* however Annex I is not provided. A request to Regional Group is needed. A numerical table is included in the JR without any explanation and it was not possible to identify the MS concerned or if numbers relate to catches, landings or discards – this needs clarification. Combining catches to calculate *de minimis* increases the volume of *de minimis*; Owing to lack of information EWG 18-06 is unable to assess fully whether the request demonstrates selectivity difficult to achieve or whether the cost of handling unwanted catches area disproportionate.
By-catches of all species regulated with TAC and cuota, a combined *de minimis* up to a maximum of 1% in 2019, 2020 and 2021 of the total annual catches made by the **artisanal fleet** in ICES divisions VIII, IX, X and CECAF areas 34.1.1,	New request up to a maximum of 1% of the total annual catches of these species; due to difficulties of further increasing selectivity, and due to disproportionate costs of full implementation of the landing obligation**.** JR stated that selectivity is difficult to achieve as catches are comprised by large number of species (some with and some without TAC) and so improvement is limited by the decrease in profitability of the metiers. In addition, the landing obligation would generate negative impacts through extra time handling previously discarded fishes, and putting at risk the security of fishers at sea due to full use of storage on-board coupled with often adverse sea conditions. A description of fishery is provided but no information from France and Portugal. Request is based on two different studies performed in Spain: On board observers: Basque Country (175 vessels). Description of the fishery and a table of metiers in use in the area; 11 metiers-5 sampled. Detailed description of methodology and results in terms of catch and

34.1.2, 34.2.0.	discards by metier shown in the request . Fishermen interviews: Cantabria, Asturias, Basque Country to identify percentage of catches and discards in Asturias and Cantabria. Catch and discard profile not provided, whereas in the text it states: *According to the discard profile of the fishery (see annexe I)*- however Annex I is not provided. A so-called safeguard percentage of 25% quota is added on top of the *de minimis* quota. EWG-06 notes that combining catches to calculate *de minimis* increases the volume of *de minimis*. Owing to lack of information EWG 18-06 is unable to assess fully whether the request demonstrates selectivity difficult to achieve or whether the cost of handling unwanted catches area actually disproportionate.
De minimis exemption to the landing obligation of alfonsinos (Beryx sp.) captured by **bottom hook and line** in Central North Atlantic Waters (ICES sub-area X)	New request of 5% *de minimis* exemption for Alfonsinos hooks and lines fisheries in ICES sub-area X. Due to difficulties of further increasing selectivity: long line are already selective**:** Estimated selectivity curves for both species are shown in the request. The *de minimis* request was also made on a socio-economic basis: area is an outermost region, economy based on the activity of this fleet, with distance and market obstacles. Avoidance measures for those species already used in the region include technical and tactical strategies and this has contributed to the decreasing catch of alfonsinos. Supporting document from Azores Autonomous Region including exhaustive description of Azores fisheries and a full list of management measures is listed. The request provides a series of historical trends on landing and discards data. Data analysis on discards is made with data obtained within the DCF and Discardless project; Catch and discard profile presented for the two species. EWG 18-06 considers that on the basis of the evidence presented the justification for difficulties on the grounds of selectivity and of disproportionate costs are supported
De minimis exemption to the landing obligation of greater forkbeard (*Physis blennoides*) captured by **bottom hook and line** in Central North Atlantic Waters (ICES sub-area X)	New request for 3% *de minimis* exemption for greater forkbeard hooks and lines fisheries in ICES sub-area X. Due to difficulties to further increase selectivity: long line is already selective gear. The *de minimis* request was also made on a socio-economic basis: the area is an outermost region, economy based on the activity of this fleet, with distance and market obstacles Supporting document from Azores Autonomous Region including exhaustive description of Azores fisheries, and a full list of management measures. The request provides a series of historical trends on landing and discards data. Data analysis on discards is made with data obtained within the DCF and Discardless project including an exhaustive description of methodology. A table is shown with information on catch and discards for all species contributing to over 1% of the total catch of the bottom longline and handline; however, *Physis* doesn't appear in the table (= low catches!!); Catch and discard profile presented for *Physis*. EWG 18-06 considers that on the basis of the evidence presented the justification for difficulties on the grounds of selectivity and of disproportionate costs are supported

High Survivability

Fishery	Main Findings of EWG 18-06
Nephrops caught with trawls in ICES subareas VIII and IX	Existing and unchanged. Not assessed by EWG 18-06
Skates and rays (*Rajiformes*) caught with all gears in ICES subareas VIII and IX.	New request similar to NS and NWW a more general discussion is included in section 5.4 A detailed description of the fleets and fisheries covered by 'all gears' is missing and a numerical table is not provided A Power point presentation (with main points from the DESCARSEL project concerning survivability of skates and rays in trawling and trammel nets) is used as supporting evidence to justify the exemption but the presentation is not in English and results could not be fully evaluated. Evidence for high survival rates is based on DESCARSEL project (several ray species caught with gillnets and bottom trawlers in 8c and 9a) and long term onshore survival monitoring (up to 2 months). The DESCARSEL project is well presented and the information provided is reasonable. Survival rates are species and gear dependent. The EWG-06 notes that extrapolating the outcomes of the DESCARSEL study to *all* skates and rays caught with *all* gears in subareas *VIII and IX (as requested in the JR)* is difficult to justify without additional information*.* More time is needed to extend the knowledge related to the survivability of skates and rays and in the meantime South Western Waters Regional Group proposes that a time limited survival exemption is introduced from 1 January 2019 until 31 December 2021. Given the sensitive nature of these species and the ongoing and emerging information, a shorter period may allow the suitability of the exemption to be reviewed more quickly in the light of the latest data.
Red seabream (*Pagellus bogaraveo*) caught with artisanal gear called "voracera" used in the south of Spain in ICES subareas IXa.	New exemption is requested for areas from the Strait of Gibraltar, Atlantic (SWW) and Mediterranean (PESCAMED). A description of the fishery is provided but the numerical table is missing Detailed information is provided to support this exemption which is based on the use of a highly selective fishing gear called "Voracera" (a special type of longline) and the short period that it remains in the water (15-30 minutes). The case is well presented and the information provided is reasonable. Evidence for high survivability comes from 2 studies: <u>Marking-recapture study</u> (annex II) Small sized fish seem to be better at bearing the stress associated with both fishing manoeuvres and the marking work: their behaviour after release showed obvious signs of rapid recovery, heading towards to the sea bottom. EWG-06 notes that this relates to short term survival. <u>Survivability study</u> (annex I) Individuals under 33 cm total length caught in the Strait of Gibraltar using voracera fishing gear present survival rates of 90.6 ± 6.2%. The surviving animals manage to recover their basal homeostatic levels and exhibit effective physiological recovery between 5 and 24 hours after capture. This study was carried out during the month of November 2017, in the prevailing environmental conditions at the time (temperature, salinity, etc.) so the conclusions have to take into account this limitation. However, the Strait of Gibraltar does not have a great variation in these conditions throughout the year, so a similar survival and recovery rates are expected during other periods, although complementary studies should be carried out confirm this. EWG 18-06 considers that the studies represent reasonably sound scientific evidence for the survival of red sea bream following discarding. Provision of

	quantitative fishery data would help in the assessment of the scale of the problem and the likely quantities of fish involved.
Red seabream (*Pagellus bogaraveo*) caught in ICES subareas X with hooks and lines.	New request. The information to compile a numerical table of related fishery data is more or less provided in the text, but the numerical table as such is missing. The supporting evidence to justify the requested high survival exemption is well presented and the information provided is reasonable: i)Results from an onboard observer survey (413 individuals) are presented showing a 76% vigorous vitality status (strength in its body, moves without stimulus and is able to do a 'tail-flip', strong swim towards the bottom) for blackspot seabreams caught with deep-water bottom longline and 73% for the blackspot seabreams caught with handlines, implying a potentially increased post-release survival probability. ii)Results from a satellite telemetry tagging programme (in place since 2001) onboard commercial fisheries are presented showing a 67% survival, 8 days after capture. The data presented here may represent high potential for an exemption to the LO via directly demonstrated high survival rates of fish discarded under experimental conditions. EWG 18-06 notes that the handling conditions in the commercial fishery may differ to this and would like to see some discussion of this. EWG 18-06 considers that the studies represent reasonably sound scientific evidence for the survival of red sea bream following discarding. Provision of quantitative fishery data would help in the assessment of the scale of the problem and the likely quantities of fish involved.

MCRS	
Fishery	Main Findings of EWG 18-06
Horse mackerel in ICES VIIIc and IXa	Existing and unchanged Not assessed by EWG 18-06

<u>Mediterranean</u>

De minimis	
Fishery	Main Findings
6% in 2019 and 2020, 5% in 2021 of total annual catches of Hake and Mullets caught by trammel and gill nets	Existing provision – modified. The Regional groups propose a higher rate than previously (from 1% to 6%), justified by "disproportionate costs". No information provided for trammel or gill nets and such information as is presented is not sufficiently disaggregated. A description of the fleet and fisheries is provided (MEDAC annex) and a description of the countries involved is provided (MEDAC annex). Additional discrimination of the data needs to be provided to support the request. Spatial measure suggestions were provided in the annex by MEDAC. There is sound science and excellent detail in many of these.

6% in 2019 and 2020, 5% in 2021 of total annual catches of Hake and Mullets caught by rapido beam trawls	This request represents a rate hike from 1 to 6%. There may be a higher rate of discards in this gear of by-catch species than the target species (sole), but it is unclear just how much. Discard rates suggested by MEDAC to in general not exceed 5% It is unclear whether it is a fishery conducted exclusively by Italy or also by Croatian fleets EWG 18-06 considers that the basis for the acceptance of the *de minimis* value previously supported cannot be the same when applying for a 6-fold increase
6% in 2019 and 2020, 5% in 2021 of total annual catches of Common Sole caught by trawl nets	This request represents rate hike from 3 to 6%. EWG -06 was unable to determine the source of the data in support of the former derogation – apparently national levels of discards are never reported No additional data were provided, EWG 18-06 is unable to determine the appropriate level of *de minimis*. EWG 18-06 notes there is no scientific justification to change the current derogation on the basis of the information provided.
In July, August and September - 6% in 2019 and 2020, 5% in 2021 of total catches of Norway lobster caught by bottom trawls during these months	New request, justified by disproportionate costs of landing in general (but not for *Nephrops* specifically). It is unclear if the trawling fleet targeting *Nephrops* in France is the same as the multispecies fleets presented, even though data on *Nephrops* are included in a combination with the other species. Spanish data are divided by fleet. Italian data also by fleet. No other data. Data presented in the JRs cover only two countries and a number of trawling fleets (1 France; 3 Spain); Italian data are missing from the JRs but were received during the EWG (Italian trawling fleets presented include some Adriatic data) It is also unclear whether fleets of the MS covered are a sample or the total French discard rates = 3%; Average Spanish discard rates (3 fleets) = 0,9% (0,8 – 2%):Italian discard rates = 0,2% (WMED), 0,75% (Adriatic) There are no data on possible monthly variations of the discard rates, so assuming constant level of discarding throughout the year EWG 18-06 notes that given that the rationale for the landing obligation is to encourage changes in fishing behaviour, the request for a higher than needed *de minimis* is difficult to justify
7% in 2019 and 2020, 6% in 2021 of total annual catches of demersal finfishes under landing obligation for under MCRS specimens - **Hake, Mullets and pelagic species excepted** - caught by bottom trawls	This is a new request which covers covers a complex species mix of at least 10 species (excluding pelagics) caught by fleets of seven MS. Supporting information is provided in 2 annexes, one from PESCAMED and one from MEDAC. The PESCAMED annex provides some detailed data for French and Spanish fleets. Some additional Italian data were received during the EWG. The MEDAC document provides aggregated data across fleets. Discard rates presented for relevant species vary significantly across fleets depending on their target species and fishing depth. It is not very clear which fleets the various exemptions would apply to. Tables of data provided show different combinations of species relevant to multiple exemptions. This makes interpretation and analysis of specific exemptions difficult without significant clarification and reworking of the data. EWG 18-06 *de minimis* rate of 7% is significantly higher than discard rates averaged across fleets for many of the demersal species (although some species show very high discard rates). Estimating total *de minimis* volumes is very difficult because data is presented in different formats both within and across the two annexes. Additional data provided by MEDAC, based on the

	STECF Mediterranean data from 2014 to 2016, gives a *de minimis* volume for all finfish species of 839 tons. The PESCAMED annex presents discard volumes and associated costs for Spanish and French trawl fleets but it is not clear which species are covered (Table 7 in Annex D1 of PESCAMED). The discard volumes given here for these two fleets are 436 tonnes for France and 12282 tonnes for Spain. The justification for the exemption is based mainly on excessive costs due to small-scale multi-specific fisheries, limited hold capacities, and lack of infrastructure to handle unwanted catches. The risk of incentivising a black market for small fish is also cited. Reasonable arguments are presented concerning high costs of handling and transport and a lack of utilisation options. Some costs, e.g. transport costs of €300 per ton, sound high but some of the supporting studies referenced in the PESCAMED annex (e.g. CRPMEM PACA, 2015) are impossible to find online and should have been included as further annexes. EWG 18-06 notes that given that this exemption covers a broad group of species with a wide range of discard rates there may be a risk that an average discard rate across the species will mask higher discard rates for individual species. The incentive to reduce high discard rates for individual species may also be reduced. EWG 18-06 also notes that quantifying discards permitted under such a complex exemption will be particularly challenging. Technical measure suggestions are provided in the annex by MEDAC.
7% in 2019 and 2020, 6% in 2021 of total annual catches of demersal finfishes under landing obligation for under MCRS specimens - **Hake, Mullets and pelagic species excepted** - caught by trammel and gill nets	This is a new request that is assumed to apply to the catches of the species under MCRS (except the ones highlighted in the request). The JRs propose a rate of 7% justified by "disproportionate costs" but no information about costs is provided for trammel and gill nets *(some information provided in the MEDAC annex 2016)* The limited information on discards provided in the MEDAC annex suggest levels to be lower than the requested *de minimis*: generally below 5% in the western Mediterranean, below 1% in the Adriatic but frequently between 5% and 20% in the central eastern Mediterranean (not south eastern Mediterranean); Discard rates for gill and trammel nets for four demersal finfish species in the western Mediterranean for which data are provided are also low, ranging from 0 to 2,3% EWG 18-06 notes that only partial data on the proportion of discards which are below MCRS is provided Technical measure suggestions are provided in the annex by MEDAC.
7% in 2019 and 2020, 6% in 2021 of total annual catches of demersal finfishes under landing obligation for under MCRS specimens - Hake, Mullets and pelagic	This is a new request which is assumed to apply to the catches of the species under MCRS (except the ones highlighted in the request) PESCAMED propose a rate of 7% justified by "disproportionate costs" but no information about costs is provided for trammel and gill nets *(some information provided in the MEDAC annex 2016)* The MEDAC annex provides some discard data for the Adriatic (approximately 2% for European hake) and central eastern (not south eastern) Mediterranean (above 5% for European hake, red seabream and mackerels) A description of the fleet and fisheries is provided (MEDAC annex) and a description of the countries involved is provided (MEDAC annex) Technical measure suggestions are provided in the annex by MEDAC.

species excepted - caught by hooks and lines	
7% in 2019 and 2020, 6% in 2021 of total annual by-catches of pelagic species (Anchovy, Sardine, Mackerel, Horse mackerel) under landing obligation	This is a new request. There is no gear specification and it is assumed it applies to demersal gear. The MS, gear and species discrimination is insufficient Although they may not represent the total, discard proportions presented are characteristically high, far exceeding the *de minimis* requested Declared French discards = 401.85 tons; declared Spanish discards = 7790.08 tons; declared Italian horse mackerels discards in the WMed = 322,11 tons; Adriatic = 584,18 tons; SEMed = 1181,1 tons EWG-06 notes the request raises questions as to how the member states would resolve the issue of the *remaining unwanted catch*, if no landing facilities exist on-land

High survivability	
Fishery	Main Findings
Scallop (*Pecten jacobeus*), Carpet clams (*Venerupis* spp.), Venus shells (*Venus* spp.) caught by mechanized dregdes	No new evidence is provided in spite of continuous requests from the Commission. The exemption has been rolled over twice without additional data being provided Published evidence suggests survival may be high (reference material was suggested within the report of EWG 17-03 to that effect). Some criticism was made by EWG 17-03 on the arguments previously used to support the request. No additional arguments provided this time EWG 18-06 has not assessed this further
Norway lobster (*Nephrops norvegicus*) caught by bottom trawls, excepted during the months of July, August and September	Modified request to drop the current whole year exemption because no new evidence to support high survival in the summer months (Jul, Aug, Sep) There has been no additional scientific studies developed to provide additional field work evidence on the survival of Norway lobster at sea Additional recommendations for survival enhancement based on handling procedures might improve survivability, but it was previously considered sufficient by EWG 17-03 No additional assessments were conducted EWG 18-06 notes that survivability data were previously considered justified for the 9 months presently included in the request
Deep water rose shrimp (*Parapanaeus longirostris*) caught by bottom trawls	This is a new request. Data available on catches and discards (volume and percentage) for France and Spain only - Available information on MEDAC JR, provided by both PESCAMED and ADRIATICA EWG 18-06 notes ther was no data on survivability in fishery catches. The request points to a link to an FAO species fact sheet containing a list of over 100 publications of which none appear to provide information valuable to this request

	EWG 18-06 was unable to further assess this request.
Red sea bream (*Pagellus bogaraveo*) caught by hooks and lines	This is a new request. Red sea bream is the target of the fishery. Red sea bream constitutes 2/3 of the total average catch. The object of the exemption is fishes under mcrs Studies are provided in support of this exemption. A detailed description of the countries involved not provided in JR request. Fleet and area covered by study is Spain. A detailed description of the fisheries is not provided nor is catch, estimated discards, discard rates. Estimated discard survival rate high - 90.6 ± 6.2%. This study was carried out during the month of November of the year 2017, in certain environmental conditions (temperature, salinity, etc.), so that the conclusions have to take into account this limitation. The environmental conditions such as temperature and depth are two important factors for survival so EWG 18-06 recommend the inclusion of temperature measurements, to investigate red sea bream survival under local conditions. It is important to know what the survival rate is when bottom temperature, surface temperature and atmospheric temperature are mostly homogenous, and when temperatures differ strongly. As it is mentioned in the study, however the Strait of Gibraltar does not have a great variation in environmental conditions throughout the year, so a similar survival and recovery rate can be expected during other periods, although complementary studies should be carried out to support the hypothesis. EWG 18-06 recommends similar studies are conducted in other times of the year and other locations in the Mediterranean, particularly the easternmost ranges. EWG 18-06 requests detail on fishery composition and environmental conditions within a year and between areas
Lobster (*Homarus gammarus*) and crawfish (Palinuridae) caught by nets and by pots and traps	This is a new request. No supporting data was provided, other than an unclear statement about applicability of results from the Atlantic to the Mediterranean – but no references to studies in the Atlantic were provided EWG 18-06 was unable to further assess the request EWG 18-06 notes that survival rate is expected to be high in pots and traps (as in the northern Atlantic) but would require additional studies in order to fully understand the extent of the request. The position is not the same for nets and dedicated studies are needed before the request can properly be considered.
Norway lobster (*Nephrops norvegicus*) caught by pots and traps	This is a new request. There is no data provided on fisheries or on discards. Some supporting documentation was provided, but this did not include data for the Mediterranean. A statement about applicability of results from the Atlantic to the Mediterranean is offered Survival rates of *Nephrops* caught in traps are known to be high. In the Atlantic they appear to decrease with decreasing latitude but remain above 80% as far south as Portugal (Annex C in all JRs). Several derogations on survivability of *Nephrops* caught with traps have been previously granted by the Commission in Delegated acts of the NWW, Scheveningen and NS areas. EWG 18-06 can make no direct inference as to the applicability of the results obtained in other areas in relation to the Mediterranean

2 INTRODUCTION

2.1 Background

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;
- additional technical measures needed to implement the landing obligation; and
- the documentation of catches.

To date STECF have evaluated four 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[1];
- In 2015 - Discard plans for demersal species in the NWW, SWW and the North Sea[2]
- In 2016 – Revised discard plans for demersal species in the NWW, SWW and the North Sea and also discard plans for demersal species in the Mediterranean and the Black Sea[3]
- In 2017 – Revised discard plans for demersal species in the NWW, SWW and the North Sea and also discard plans for demersal species in the Mediterranean and the Black Sea

In addition, 6 STECF Expert Working Groups (EWG)[4] 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 18-06 was convened to review the joint recommendations from the Member States regional groups for the implementation of the landing obligation in 2019. Since 2019 is the point at which all species should come under the Regulation, the joint recommendations do not 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 STECF and EWG 18-06 has not considered this.

2.2 Terms of reference

Based on the previous evaluations and the likely joint recommendations that will be submitted by MS regional groups, the following draft terms of reference are proposed:

STECF is requested to:

6. *Screen any changes in the defined fisheries to be subject to the landing obligation in 2019 for potential, provide comment on the potential impact in terms of changes in the scope i.e. increases in the level of the fleet covered and provide comment where appropriate if such*

[1] STECF PLEN-14-02
[2] STECF-15-10 2015
[3] STECF-16-10
[4] STECF 13-23, STECF 14-01, STECF 14-06, STECF 14-19, STECF 15-14, STECF 15-10

changes may potentially introduce any unintended consequences e.g. different conditions in different sea basins.

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

    - *Exemptions agreed for 2018 on the basis of high survivability where there was a requirement for further information to be supplied.*

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

8. *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:*

    - *De minimis exemptions agreed for 2018 where there was a requirement for further information to be supplied.*

    - *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).*

    - *Consider the potential implications where joint recommendations have proposed combined (multi-species) de minimis exemptions.*

9. *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.*

10. *Review the supporting documentation provided for technical measures aimed at increasing gear selectivity for reducing or, as far as possible, eliminating unwanted catches.*

2.3 Main elements of discard plans to be considered by STECF

Based on the terms of reference, EWG 18-06 adopted the following approach in considering the elements of discard plans.

Definition of Fisheries

Since all commercial species under TAC management (or Minimum Landing Size Regulations in the Mediterranenan) will come under the landing obligation in 2019, the requirement for screening and evaluation of the scope of coverage of the landing obligation is no longer a pertinent issue. EWG 18-06 did not spend time considering this, particularly in view of the increased number of exemptions sought within the Joint Recommendations.

De minimis, High Survivability and MCRS

The main elements that EWG 18-06 have evaluated are additional exemptions for *de minimis* or exemptions on the basis of high survivability.

In addition to any new elements, EWG 18-06 also reviewed additional information supplied to support previously granted exemptions granted but, on which, the Commission requested additional information from Member States. In the case of the latter, EWG18-06 was only aware of the high survivability exemptions for common sole in the North Sea and North Western Waters and the high survivability exemption for scallop, carpet clams and Venus shells caught with mechanised dredges (HMD) in GSAs 1, 2, 5 and 6. No additional information was available for these previous exemptions

MCRS

EWG 18-06 notes that no proposals for changes to MCRS have been put forward by any of the Member States regional groups for 2019

Technical Measures

Regulation (EU) 2015/812 introduced an amendment to the CFP Basic Regulation to expressly allow discard plans to include technical measures. Such measures should be strictly linked to the implementation of the landing obligation and aim to increase selectivity and reduce unwanted catches.

EWG 18-06 was requested to evaluate in general terms any submissions of technical measure developments and proposals provided in the Joint Recommendations:

A Technical Measure submission was provided by the North West Waters Regional Group and Section 6.3 contains some commentary of the North Sea position on Technical Measures.

3 GENERAL OBSERVATIONS

EWG 18-06 highlights a number of general observations. Some of these re-iterate those made in the previous reports (2014 – 2017) relating to the evaluation of joint recommendations. Several are new observations.

1 The role of EWG 18-06 and any future STECF EWGs set up to evaluate joint recommendations remains to evaluate the scientific rigour and robustness of the underpinning information supplied by Member States to support the main elements of joint recommendations. STECF cannot adjudicate on whether exemptions should be accepted or not.

2 EWG 18-06 re-iterates that 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 there is a large element of judgement required in deciding on whether to permit or reject a proposal that cannot be based solely on scientific evaluation of the evidence presented.

3 Anomalies between sea basins (see for example EWG 17-03) such as fleets fishing a TAC species in two adjacent areas, one covered by the LO and one not covered, should no longer occur. As a consequence, EWG 18-06 has not spent time on this TOR. EWG-06 does, however, note that with the increasing number of exemptions in all areas, there is increasing scope for different exemptions (and associated conditions) to be in place in adjacent areas and for trans boundary fishing operations to have to deal with growing complexity in this aspect of the LO.

4 EWG 18-06 notes that the quality of submissions to support the exemptions has, in many cases, improved since the first JR's were submitted in 2014. In particular EWG 18-06 recognises the progress made in the carrying out of survival experiments which in a number of cases closely follows the recommendations made by STECF and also ICES. EWG 18-06 has noticed, however, that there are quite a few cases where the quality of submission has fallen making it very diffuclkt to conduct an analysis at all. EWG-06 also notes that whereas last year Member State Regional Groups generally used the templates developed by STECF in 2016 to supply fisheries and fleet descriptors, this year fewer had done so. EWG 18-06 continues to point out that some of the exemptions submitted by the regional groups are very much presented as ″national″ rather than regional exemptions. In many cases the information provided originates from one single Member State and while other Member States may be included frequently the information on the respective fleets are not provided. In developing future cases it would be better if exemptions were regionally focused and covering all relevant fleets. This would help the Commission avoid having to request

additional information and clarifications from Member States on which fleets the exemptions should apply and also make it much easier for STECF to evaluate them.

5 EWG 18-06 reiterates that when using the provisions of *de minimis* under Article 15, the requirements of Article 2 of the Common Fisheries Policy CFP) to fish at FMSY can only be met if the *de minimis* discard quantities are deducted from the agreed catch opportunity (TAC) arising from FMSY based advice. If *de minimis* were operated as an addition to the FMSY-advised catch, then mortality rates would be predicted to exceed the FMSY target. Furthermore, depending on the way in which the *de minimis* quantity is calculated and applied (for example 5% of an aggregate catch of several stocks applied as a *de minimis* on one stock) the departure from FMSY could be substantial. STECF 18-06 considers that the only relevant way is to apply the *de minimis* % to the total catch of the given species in the given fishery where the exemption is sought. This is not always the case in the exemptions submitted by the Member States regional group.

6 EWG 18-06 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.

7 STECF has consistently proposed that the justification for *de minimis* exemptions is largely economic. However, EWG 18-06 acknowledges that providing detailed information for individual fisheries is challenging. Therefore it is apparent that STECF will only be able to consider the validity of the supporting information underpinning the exemptions provided and due to the lack of economic data in many cases will not be able to carry out any meaningful analysis of the economic impacts. If a deeper analysis is required by DGMARE, then, this needs to be discussed with the Member States and Advisory Councils so that they are clear what information should be provided and also with STECF to establish what they should evaluate. In this regard EWG 18-06 highlights the alternative option appraisal approach in *de minimis* submissions developed by EWG 16-10.

8 EWG 18-06 re-iterates that assessing what constitutes high survivability is problematic, which is made more complex by the limited information available and the high 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.

9 EWG 18-06 notes that obliging fishermen to land catches of fish that would otherwise have survived the discarding process could, in some specific cases, result in negative consequences for the stock. This is because any surviving discarded fish contribute positively to the stock and landing those individuals therefore removes that benefit. Where discards are included in the stock assessment but the (known) survival is not accounted for, this in effect elevates fishing mortality and changes in exploitation pattern which may lead to reductions in fishing opportunities to maintain fishing mortality levels consistent with management objectives (e.g. FMSY). Conversely, if they are not included in the assessment, then the mortality is higher than estimated, even if part of the discards survive, and in this case, bringing everything to land would provide better control of fishing mortality. For some stocks (eg *Nephrops*) ICES takes account of discard survival rate – in future this is something which should be discussed in the assessment forums for other species also.

10 EWG 18-06 points out that in the majority of survival studies used to justify exemptions from the LO, no account is taken for any predation effects on discard survival, including sea birds. It is therefore agreed that the 'up-to-standards' methodology currently used in all

European studies for estimating discard survival might overestimate discard survival by not accounting for the potential effect of predation. On the other hand, these studies also tend to underestimate discard survival due to minor transportation/captivity effects.

11 EWG 18-06 considers that avoidance of unwanted catch through improved selectivity or other means should be the primary focus implementing the landing obligation and should also consider the potential benefits for other stocks and the broader ecosystem that would arise from changes in exploitation patterns. Therefore, the choice of survival levels/value(s) in the context of article 15.2(b) will depend on which objective (e.g. avoidance of waste; improve stock sustainability; improve financial viability) is set as a priority. Nevertheless, provided the methodologies employed in carrying out survival experiments are appropriate, and the limitations of the results are fully explored, EWG 18-06 considers that the decision to accept or reject an exemption proposal based on the survival value presented is largely one for managers.

12 EWG 18-06 notes that article 15.5(c)(ii) states that where continued discarding is permitted through the application of *de minimis* provisions, whilst these catches "shall not be counted against the relevant quotas; however, all such catches shall be fully recorded". EWG 17-03 re-iterates that no specific provisions have been included in the JR's to address this. In this regard EWG 17-03 stresses the need to improve the collection of catch documentation data.

13 As highlighted by STECF PLEN 17-01 and 18-01, there would appear a lack of "lack of reporting by vessel operators of fish discarded under exemptions, discards of fish currently not subject to the landing obligation and catches of fish below MCRS". The joint recommendations evaluated by EWG 17-03 would strongly benefit from containing provisions that strengthen data collection in this respect. As STECF PLEN 17-01 pointed out, innovative monitoring measures such as CCTV and Remote Electronic Monitoring (REM) have been applied only in pilot studies but would be a more effective way to enforce the landing obligation if applied in a commercial setting (STECF EWG 13-23). If the data situation does not improve and the true quantities being caught as reported do not reflect the actual removals, they may have a significant impact on the quality of scientific advice for next year's fishing opportunities, as additional quota top-ups allocated in combination with continued discarding may also compromise the achievement of the MSY objective.

4 PROGRESSION IN IMPLEMENTATION OF THE LANDING OBLIGATION

EWG 18-06 have updated the analysis of the progression in implementing the landing obligation first carried out by EWG 17-.03 during the evaluation of last year's joint recommendations. This analysis provides an overview of the percentage of TAC species from 2015 to 2019 subject to the LO (partially or fully) compared to the percentage of TACs species not yet included. EWG 18-06 considers this to be a simplified indicator of progress so far with implementation of the landing obligation and of what is still left to fall under the landing obligation. It does not attempt to quantify landing obligation coverage in terms of actual catches but focuses solely on the proportion of TACs. A catch-based indicator would be of value in providing an alternative impression of the extent of LO coverage in 2019 and beyond and could be developed by a future EWG.

The analysis is based on the following method and subject to a number of assumptions and qualifications:

- The underlying data for the table are the Fishing Opportunities Regulations for the NE Atlantic fishing opportunities (includes a number of RFMO's), the Baltic and the deep-sea species. The Mediterranean stocks are not included in this analysis given it relates to TAC species. The information on whether a TAC is at least partially subject to the LO is based on the specifications in the relevant discard plans (demersal, pelagic, Baltic) for 2015 to 2018, and on the current joint recommendations for 2019. Last year's figures for 2018 were updated to refer to the agreed discard plan rather than the underlying joint recommendation, and the values for 2019 were added, but all other values remained the same.
- TACs covering more than one area have been incorporated into a single category titled 'Across regions' in Fig. XX (e.g. TAC for mackerel covers a wide area) to avoid double-counting TACs in multiple sea basins.

- TACs which have been removed from the TAC and quota Regulations, those that were not yet included in the TAC Regulation in any given year and TACs solely referring to as in third country's waters and therefore not subject to the landing obligation are excluded from the analysis. The analysis however still includes TACs which – in addition to EU or international waters – contain third countries waters and would therefore be only partially under the LO. However, the analysis is not distinguishing between these partially covered TACs and those that are fully subject to the LO (in terms of the area they refer to).

EWG 18-06 highlights that up until last year some discard plans contained limitations/ specifications (such as gear type, mesh size, catch composition threshold), which excluded parts of the fisheries falling under the relevant TACs from the LO. EWG 17-03 therefore considered such TACs as partially subject to the LO, because there were still fleet segments outside of the fisheries definitions in the discard plans. However, in line with Article 15 of the Common Fisheries Policy and the current set of joint recommendations for 2019 and beyond, all catches of species with TACs or in the case of the Mediterranean with minimum sizes, will be subject to the landing obligation from January 2019 onwards. Therefore, EWG 18-06 considers the percentage of TACs at least partially subject to the LO to be 100% for 2019 (Fig. XX and Table XY). This does not imply that all *catches* of TAC species will have to be landed from 2019 onwards, because many are subject to exemptions, which means that the actual LO coverage is not 100%. EWG 18-06 has therefore carried out a preliminary analysis to quantify the number of exemptions adopted in the discard plans for 2015 to 2018 and requested for 2019 in the current set of joint recommendations.

The analysis of exemptions is based on the following method, and subject to a number of caveats as outlined below:

- The results illustrate the number and increase in exemptions adopted since the coming into force of the landing obligation in 2015. For 2015 to 2018, the figures are based on a count of the total number of exemptions (including existing, modified and new ones) as listed in the relevant demersal discard plans (pelagic discard plans not included in the analysis), whereas for 2019 the figures are based on a count of the exemption requests as listed in the current set of joint recommendations.
- EWG 18-06 notes that the figures presented need to be treated with caution, because the way exemptions or the underlying requests are listed (and counted on that basis) is not always the same between different years, or between the discard plans and the underlying joint recommendations. For example, in some cases one request is split into more than one exemption in the relevant discard plan. Moreover, in some cases the type of an exemption changed between the years from *de minimis* to high survival. Therefore, the absolute number of exemptions in some cases may seem to have changed only marginally or not at all between two years, even though new *de minimis* exemptions were added, because at the same time existing *de minimis* exemptions were changed into high survival exemptions. Finally, many exemptions cover more than one species (or stocks of the same species) and/or gear type and counting such an exemption as just 1 (as done for this analysis for reasons of simplicity) could therefore be misleading if the results are misinterpreted as a measure of exemption coverage in terms of stocks, TACs or fisheries.
- EWG 18-06 highlights that this indicator is to be treated as a preliminary indicator of trends in the number of exemptions adopted (and requested) throughout the years but does not allow for any conclusion about the actual exemption coverage in terms of catches. EWG 18-06 considers that in future a more elaborate indicator of LO coverage could be developed, quantifying the amount or percentage of fishing opportunities (or even the tonnage of observed catch) under the LO versus that covered by exemptions.
- In addition to quantifying the number of exemptions overall throughout the years, EWG 18-06 also quantified the number of a) combined (versus single species) *de minimis* exemptions, and b) exemptions (both combined and single species), for which the *de minimis* amount is calculated based on total annual catches of more than just one species, thus increasing the overall requested *de minimis* amount.

Results

Table 4.1 and Figure 4.1 show the progression in implementing the landing obligation, across TAC species in Union waters and non-Union waters (excluding the Mediterranean). For 2019 when the full implementation of the LO is due, a further 43% of all TACs included in the analysis (75 out of 175 TACs) are due to come under the LO. This represents a steep increase compared to the slow progress made between 2015 and 2018 (from 26% to 57% of TACs at least partially covered).

Table 4.1 Summary of no. of TACs subject to the LO since 2015

Year	Total number of TACs	Number of TACs not under LO	Number of TACs partially under LO (area-wise)	Number of TAC fully under LO (area-wise)
2015	176	130	8	38
2016	179	100	27	52
2017	174	82	34	58
2018	175	75	39	61
2019*	175	0	22	153

* Based on joint recommendations for 2019 (all other years based on relevant discard plans)

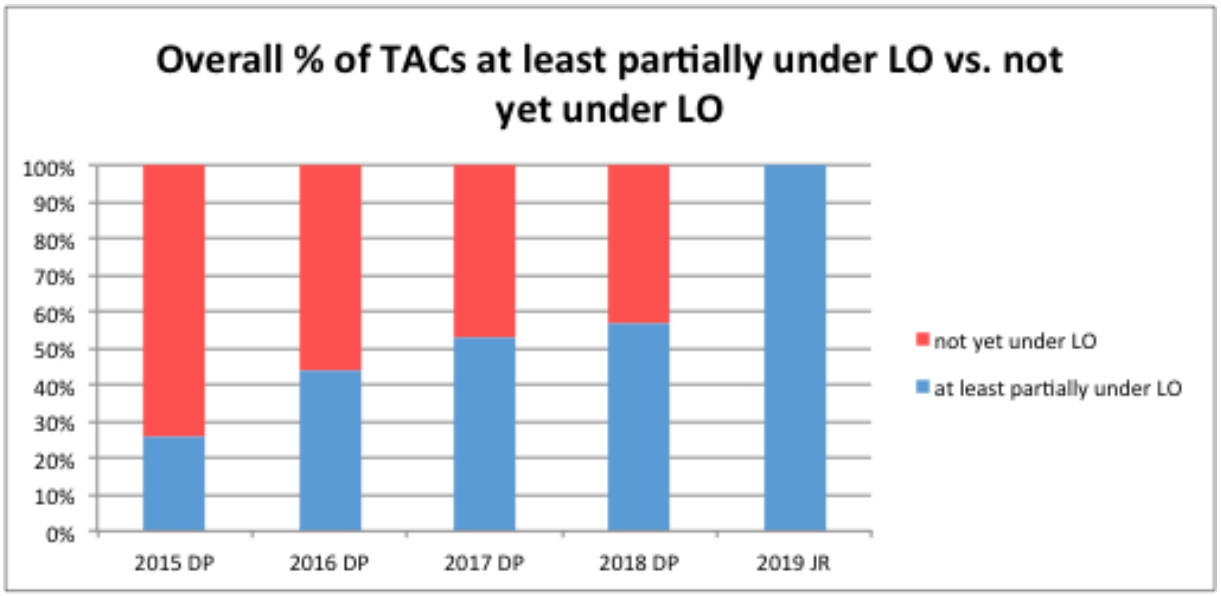

Figure 4.1 Percentage of TACs at least partially subject to the Landing Obligation from 2015 to 2019 (2015 to 2018 data based on respective discard plans, 2019 data based on current set of joint recommendations).

Taking this by region, it shows that all stocks in the Baltic have been subject to the landing obligation since 2017. In the other three sea basins – North Sea, NWW and SWW - progress has varied between 74% in the North Sea to around 47% in the NWW for 2018, whereas 2019 will see (at least partial) coverage increase to 100%. For the TACs which straddle two or more regions 48% of stocks were covered in 2018, meaning that the remaining 52% will be added in 2019. In non-Union waters (other) only the Highly Migratory species have so far been subject to the landing obligation, meaning a big remaining increase of coverage from 14% in 2018 to 100% in 2019. Figure 4.2 shows the progression by sea basin.

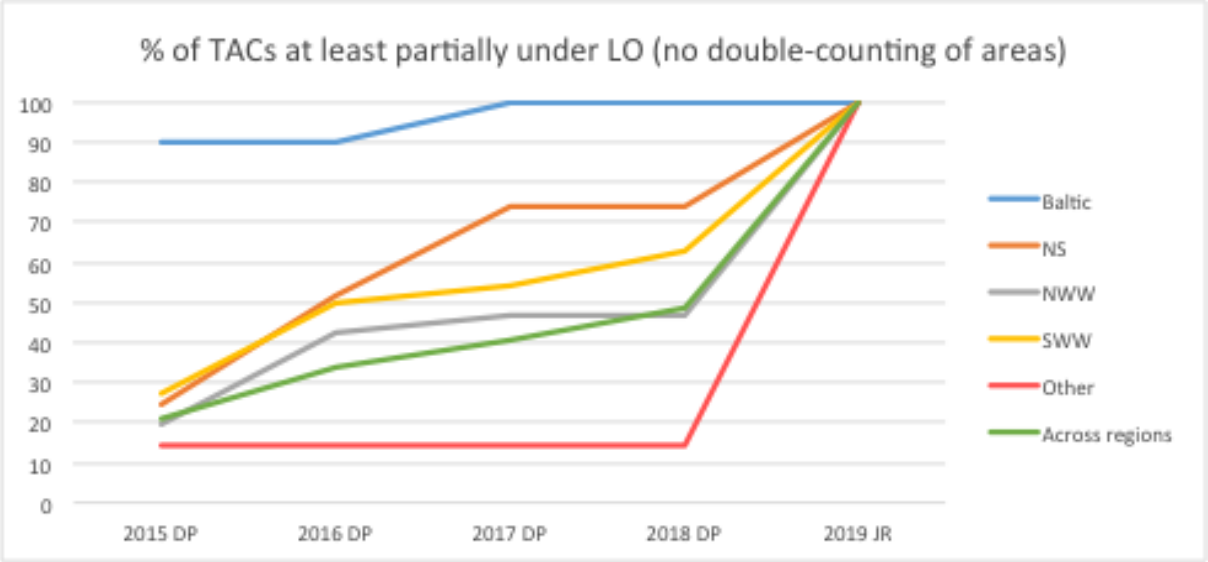

Figure 4.2 Percentage of TACS Partially or fully subject to the landing obligation by sea basin and by year

EWG 18-06 notes that the scale of changes in LO coverage from 2018 to 2019 implied by the figures is essentially an underestimate because, for some of the areas, the specifications of the discard plans up to 2018 resulted in only partial coverage. For 2019, these limiting specifications disappear. On the other hand, EWG 18-06 highlights that the actual LO coverage in terms of landed catches will not be 100% from 2019 because many fisheries have been subject to exemptions, effectively decreasing the amount of landed material.

Overall results from the analysis of trends in the numbers of exemptions is shown in Figures 4.3 and illustrates a marked rise in the numbers of exemptions sought for the first full year of LO implementation (2019). *De minimis* and high survivability cases (combined) rose from just over 40 in 2018 to nearly 70 for 2019

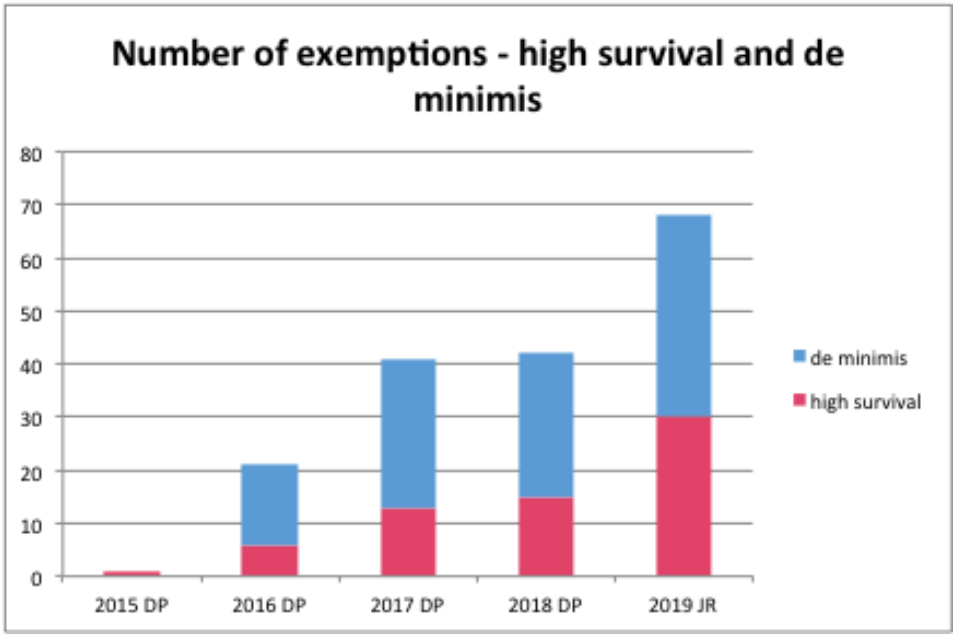

Figure 4.3 Overall number of exemptions (*de minimis* and high survival) 2015-2019 based on discard plans (DP) or joint recommendations (JR)

Figures 4.4 and 4.5 illustrate the trends in exemptions by area for *de minimis* and high survival respectively. *De minimis* exemptions increased fairly steadily (apart from 2018) to over 35 cases, higher overall than high survival exemptions. EWG-06 notes a amarked increase in combined de minis cases for 2019. High survival exemptions increased more slowly to begin with but show a marked increase in requests for 2019 (reaching a total of 30). It should be noted that these figures do not contain requests for the SE Mediterranean or the Adriatic.

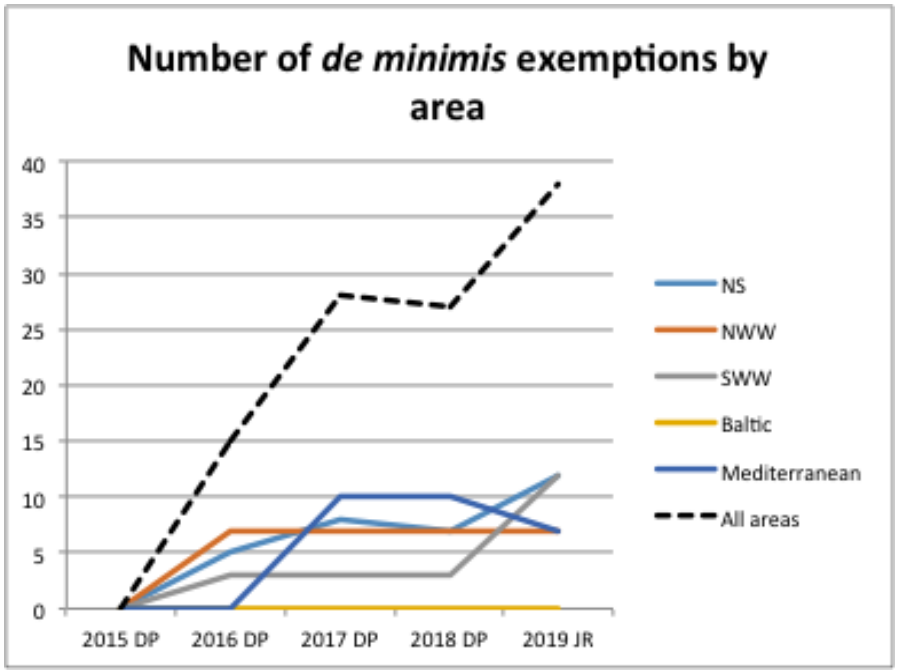

Figure 4.4 Number of *De minimis* exemptions by area (2015 to 2019)

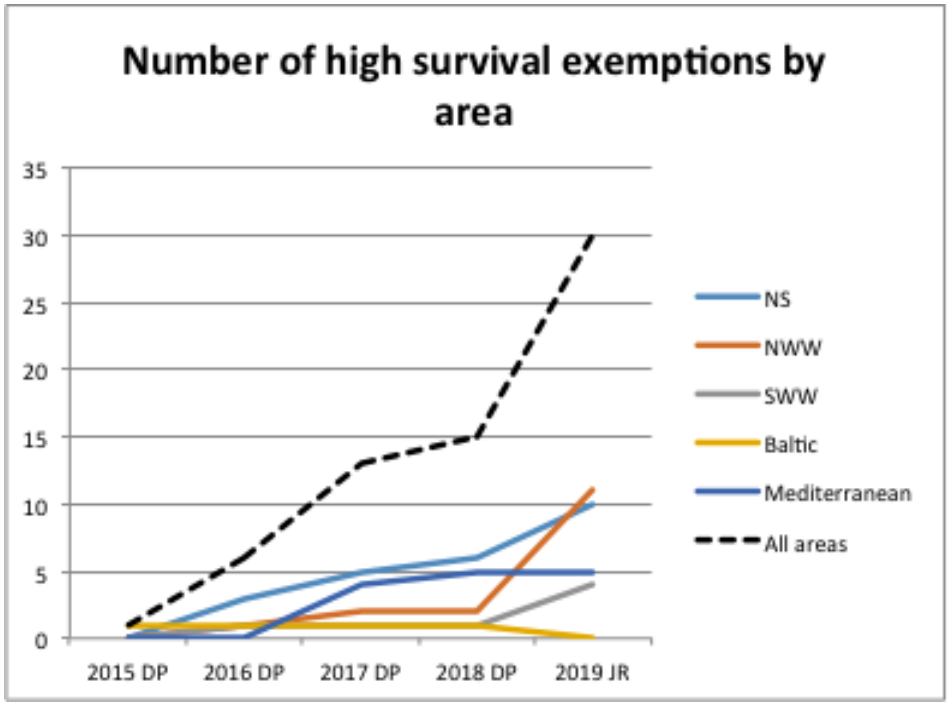

Figure 4.5 Number of high survival exemptions by area (2015 to 2019)

5 Evaluation of Regional Draft Joint Recommendations

5.1 Definition of Fisheries

TOR 1 is a request for the EWG 18-06 to comment on the definition of fisheries included in the different JRs or on the timetable for inclusion of the different fisheries. However, EWG-06

considers that this TOR (which also appeared in the TORs of previous evaluations) has less relevance since all TAC species will be included in the LO in 2019. Anomalies between sea basins (see for example EWG 17-03) such as fleets fishing a TAC species in two adjacent areas, one covered by the LO and one not covered, should no longer occur. As a consequence, EWG 18-06 has not spent time on this TOR. EWG-06 does, however, note that with the increasing number of exemptions in all areas, there is increasing scope for different exemptions (and associated conditions) to be in place in adjacent areas and for trans boundary fishing operations to have to deal with growing complexity in this aspect of the LO. Given the large number of exemptions to evaluate, EWG-06 did not have time to review all the potential anomalies and inconsistences. On the other hand EWG-06 did spend some time considering emerging issues relating to exemptions which cut across Regional boundaries. The most prominent ones for now relate to *Nephrops* survivability, survivability of skates and rays and the increasing incidence of combined *de minimis* requests. These issues are discussed later on in Section 5.

5.2 STRUCTURE OF ADVICE – *DE MINIMIS* AND SURVIVABILITY EXEMPTIONS

In assessing each of the *de minimis* and high survivability exemptions requested, EWG 18-06 have based their evaluation on two elements:

1. Is the exemption well circumscribed in terms of the fisheries involved, the number of vessels, indicative discard rates and in the case of *de minimis* exemptions, estimated volumes of *de minimis* requested?
2. Is the exemption underpinned by robust scientific information that justifies the exemption?

EWG 16-06 provided a template for provision of information relating to the fisheries for *de minimis* exemptions and for survivability exemptions. EWG 18-06 notes that some Member States have used these templates in their JRs but that the completion is patchy. For information these templates are included in Annex 1.

On the second element, regarding the underpinning information EWG 18-06 has based their observations on the approaches of previous STECF evaluations of the JRs. In addition, in the case of high survivability, an evaluation of the discard survival study reports used as a guide the review approach used by EWG 17-03. This was based on the practical guidance developed by ICES Workshop on Methods for Estimating Discard Survival (WKMEDS) on how to conduct discard survival assessments from which a bespoke critical review framework was developed for discard survival research. The 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 2. There are more details on the critical review process available in the ICES WKMED meeting reports (ICES, 2016).

5.3 *NEPHROPS* – GENERAL CONSIDERATIONS

EWG 18-06 notes that since 2015 an increasing number of proposals in joint recommendations for different regions recommend to grant exemptions based on high survivability for trawl caught *Nephrops*. Scientific studies performed prior to the landing obligation typically reported discard survival rates of trawled *Nephrops* within the range of 30-50% (preliminary meta-analysis by ICES WKMEDS, 2015). Individual replicates within studies naturally had a wider range. These studies varied in quality but usually represented conventional *Nephrops* trawl fisheries of that time. In contrast, all current high survival exemptions in the discard plans (except the conditional Mediterranean exemption) are based on somewhat higher survival estimates from studies on non-standard gears or from fisheries with modified catch-handling practises. Examples are gears with increased species selectivity such as trawls with large mesh panels or grids in the North Sea region and the mandatory use of a new chute system in Southwestern waters (Table 5.1). EWG

18-06 notes that in several of the joint recommendations for 2019 there is proposals to widen the applicability of these survival exemptions also to more conventional trawl fisheries. This is understandable due to the growing evidence base of reasonably coherent captive survival rates in recent studies, but due to the fact that most new studies still are from non-standard gears or catch handling practises, such a widening of the scope calls for careful analyses of the adequacy in each region. The growing number of studies suggests that such analyses may well be timely now. ICES WKMEDS has published best practise guidance on methods for discard survival studies and will also report on a meta-analysis of factors affecting *Nephrops* discard survival. Knowledge of the influence of important factors is central in attempts to generalize discard survival estimates from individual studies to the wider fleets.

Table 5.1 *Nephrops* survival exemptions in trawl fisheries proposed each year since 2015 for the four regions. Colour coding: Green - Accepted in a delegated act without conditions; Yellow - Conditionally accepted in a delegated act; Grey - Proposed for 2019

	North Sea		Southwestern waters		Mediterranean Sea		Northwestern waters	
Year of discard plan (year of JR)	Exemption applied for (area, gear type)	Estimated discard survival rate from provided studies	Exemption applied for (area, gear type)	Estimated discard survival rate from provided studies	Exemption applied for (area, gear type)	Estimated discard survival rate from provided studies	Exemption applied for (species, area, gear type)	Estimated discard survival rate from provided studies
2016 (2015)	trawls >70 mm with grid or >90mm with SELTRA panel	grid 75% (winter) SELTRA 59% (winter)	trawls in ICES divisions VIII and IX	51% (too short observation period)				
2017 (2016)	trawls >70 mm with grid or >90mm with SELTRA panel	**grid 55%** (winter:75% ;summer:42%) **SELTRA 46%** (winter:59% ;summer:38%	trawls in ICES divisions VIII and IX	41% (normal handling); 46% (improved handling)				
	trawls >80mm and equipped with a Netgrid selectivity device in area IV	62% (winter)						
2018 (2017)	trawls >70 mm with grid or >90mm with SELTRA panel	**grid 55%** (winter:75% ;summer:42%) **SELTRA 46%** (winter:59% ;summer:38%	trawls in ICES divisions VIII and IX	37% (normal handling); **51% (chutes**)	trawls in the western Mediterranean	winter:74% spring:36% summer:6%		
	trawls >80mm and equipped with a Netgrid selectivity device in area IV	**62%** (winter)						
2019 (2018)	*Nephrops in all trawls >80mm (70mm/35mm) in inside 12 Nm in Areas 2 (EU), 3a and 4*	no specific estimate but refers to previous NS-exemptions (netgrid, grid, SELTRA) and a new UK study with 74% survival for an inshore vessel	trawls in ICES divisions VIII and IX	37% (normal handling); 51% (chutes)	trawls in the western Mediterranean (except jul-sep)	winter:74% spring:36% (summer:6 %)	80-110mm otter trawl gears in ICES subarea VIa, within 12 miles of coasts	53% (winter:56% summer:46 %)
							TRI and TR2 fisheries in Area VII in combination with highly selective gears	64% (SELTRA summer)

5.4 SKATES AND RAYS -GENERAL CONSIDERATIONS

EWG-06 notes that three requests for exemptions for skates and rays were made for 2019. These groups of elasmobranchs present a particular challenge to the implementation of the landing obligation in that taken as a group they are widely distributed occurring in various habitats often at relatively low abundance. Distribution is not always predictable so that avoidance through spatial measures is not straightforward and the morphology of these species is such that there are very limited selectivity solutions available. In addition to this the exploitation status of these species is variable and given the generally slow growth and low fecundity, some species are at increased risk of over-exploitation. The charismatic nature of the group has tended to result in management considerations which are conservation driven and the application of TAC management is relatively recent with limited catching opportunities in many cases.

The growing concern over skates and rays has increasingly led to calls for specific management for these groups and STECF was recently asked to provide advice on suitable management for these groups (STECF 2017c) based on the work of an expert group (EWG 17-10, report STECF 2017d), which was convened to address the subject. The compilation of available data and literature revealed numerous gaps and shortfalls across the rather extensive species list. Unfortunately, basic information such as discard rates was often unavailable and accurate recording of landings of different species was questioned. These deficiencies make it difficult to understand the scale of the problem relating to implementation the landing obligation.

Studies of survivability of skates and rays following capture and release from fishing gear have, in some cases, produced results suggesting that high survivability exemptions might offer a solution and, indeed the three requests covered in this report (one each for North Sea, NWW and SWW) are for exemptions based on high survivability. In the case of the North Sea and the NWW requests, the evidence provided in support of the case comes from an extensive literature review (the same review in each case) containing numerous citations – some of which are quite old. The material does not relate directly to the fisheries in question and was not always conducted in experiments representative of fishing practise on board a vessel. Highest survival rates were generally obtained in non-trawl fishing operations. The SWW request is largely based around an ongoing survival study on board fishing netters and trawlers (DESCAREL) for which early results suggest high survival rates from static nets (trammel net survivability is 87-100%, bottom trawl survivability is 47.7-69.9%). In view of 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.

In developing an approach to the LO for Skates and Rays, EWG-06 considers that the following basic requirements should be considered:

- Efforts should be made to fully quantify catches (landings and discards) of skates and rays. Regional Groups should consult available ICES data and encourage MS to increase monitoring efforts
- Continuing need for species and fishery specific survival studies
- Pay particular attention to the development of good handling practice
- Where high survival exemptions are granted, particularly based on partial or incomplete studies, a cautious approach would be preferable, granting exemption for only a short period and requiring updates from the scientific studies before extending the exemption period.

5.5 COMBINED *DE MINIMIS* – GENERAL CONSIDERATIONS

All four of the JRs received from the Member States Regional Groups contain requests for combined de miminis. These vary in scope in terms of the number of species and gears combined and the methodology used to calculate the *de minimis* volume. These differences mean that the volume of *de minimis* that potentially would be available to discard varies considerably from proposal to proposal.

While Article 15(5c) does not prohibit a combined *de minimis* approach, the likely impacts are different depending on the approach taken in calculating the *de minimis* volume. For instance in the North Sea there are several examples where the number of species included under the exemption is limited to two or three species (e.g. whiting and cod in bottom trawl fisheries in the North Sea) and the volumes of *de minimis* for some of these species are limited. There are also several cases (e.g. fish bycatch in the Northern prawn fishery) where the actual volumes are small, typically less than 100 tonnes, across multiple species. In these cases individual *de minimis* volume estimates are provided for each species and are generally in the range of 0.1 and 25 tonnes. In other cases, for instance the combined *de minimis* for gadoids in the NWW, the volumes of *de minimis* are much higher, given the catches of fish that could potentially be discarded are much larger, (e.g. in the order of 2,400 tonnes). There are also two specific cases where the combined *de minimis* applies to ten or more species subject to the landing obligation. In these cases, the discard rates for the individual species can vary considerably. For instance, one particular *de minimis* in the Mediterranean covers fourteen species with discard rates between 0 and 75%.

Specific comments on the various combined *de minimis* proposed are provided in the regional chapters but EWG 18-06 considers it appropriate to highlight some general issues identified in previous STECF advice (STECF 13-23, 15-17, 17-08 and PLEN 15-03 and 18-01) as follows:

- In choosing to take a combined *de minimis* approach, regional groups should be mindful of the dangers of using such a mechanism to allow the discarding of significant quantities of fish and effectively increasing catches well in excess of desired or intended levels. To avoid the risk of this occurring, *de minimis* exemptions are best based on a percentage to the total catch of the given species in the given fishery where the exemption is sought (i.e. a single species approach).
- Without accurate catch data for the relevant stocks it is extremely difficult to assess the potential impacts and collective effects of any combined *de minimis*. However, there is considerable uncertainty associated with discards estimates and the aggregation of the data sources (FDI levels). This is more apparent in some sea basins than in others. For example, in the Mediterranean the quality of catch data for many species is extremely limited, yet there are multiple proposals for combined *de minimis* covering multiple species where there are no discard estimates at all.
- There are recognised difficulties in establishing and operating *de minimis* exemptions and difficulties associated with monitoring and controlling them. In addition, there are difficulties in TAC setting under a combined *de minimis*, particularly in cases where the TAC areas and the areas covered by the combined *de minimis* are different (For example the combined gadoid *de minimis* in NWW covers VIIb-k excluding VIId but the TACs for haddock and whiting cover the whole of VIIb-k).
- The effect of the combined *de minimis* approach is to modify the proportions of each species that can be discarded compared to single species *de minimis*. The differences in catch and discard rate between species means that with a combined *de minimis*, there will be less *de minimis* available for certain species and more of others, compared with the single species approach. In this regard, the combined *de minimis* approach offers an alternate composition of discards rather than an increasing flexibility.
- The principle of the *de minimis* exemptions is to deal with difficulties in selectivity and sorting and handling, and that all catches discarded under *de minimis* should be counted against quota. However, in almost all cases submitted the justifications used to support the proposed combined *de minimis* are generic. They are based on the principle that

improvements in selectivity are difficult to achieve in mixed fisheries and that there will be disproportionate costs associated with sorting catches of multiple species in mixed fisheries. In few cases are these assertions backed up with specific studies.

- In line with CFP objectives, the maximum possible amount of *de minimis* (i.e. the maximum safeguard amount) for each species that could potentially be discarded, must be deducted from the TAC. Consequently, the deduction from the TAC to account for *de minimis* discards is higher than for single species *de minimis*. There is thus a direct trade-off between flexibility of *de minimis* and the precautionary TAC deduction.
- The use of a combined *de minimis* requires that monitoring requirements are significantly increased to include integrated international real-time catch monitoring and reporting, and this is not currently in place and not likely to be achieved in the near future.

6. 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 IIa. On the basis of 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) 2018/45 In 2018, a further set of Joint Recommendations has been submitted by the Member States. The main elements of these JR's and which of these have been assessed by EWG 18-06 are summarised in table 6.1.

Table 6.1 Main elements of the Joint Recommendations submitted for the North Sea

Elements	***Status***	***Section***
De minimis		
Whiting caught in bottom trawls 90-119mm with SELTRA panels an bottom trawls with a mesh size of 120mm and above in the Skagerrak and Kattegat (area IIIa)	Existing- not assessed	
Bycatch of plaice in fisheries caught in the *Nephrops* trawl fishery with a mesh size ≥ 80-99mm with a SEPNEP in ICES area IIa and IV	Existing- not assessed	
Vessels using nets to catch sole in the North Sea (areas IIIa, IV,a,b and c and EU waters of IIa)	Existing- 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	Existing- not assessed	
Whiting and cod caught using bottom trawls (OTB, < 100mm (TR2)	Existing but revised Extended to include the whole of IV	6.1.1

Fish bycatch in Northern prawn trawl fishery with a sorting grid, with unblocked fish outlet in area IIIa	Existing but revised Additional species added – hake, Norway pout, Argentine spp. Herring and blue whiting	6.1.2
Fish bycatch in *Nephrops* targeted trawl fishery	Existing but revised Hake included	6.1.3
Nephrops caught by bottom trawls with a mesh size of 80-99mm	Not included in new JR	
Bycatches in the brown shrimp fishery in the North Sea	New -assessed	6.1.4
Pelagic species under landing obligation for demersal vessels using bottom trawls (OTB,OTT, PTB, TBB) of mesh size 70-99mm (TR2, BT2) in the North Sea (area IV)	New-assessed	6.1.5
Ling (*Molva molva*) for vessels using bottom trawls (OTB, OTT and PTB) > 100mm in the North Sea (area IV)	New-assessed	6.1.6
Bycatch of industrial species for demersal vessels using TR1, TR2 or BT2 in areas IIIa and IV)	New-assessed	6.1.7
Whiting caught by beam trawls 80-119mm in the North Sea (area IV)	New-assessed	6.1.8
High Survivability		
Common sole (undersized only) caught with trawl gears in area IVc	Existing- Not assessed Note about the nursery areas needs to be sent to MS New data continue to suggest that survival in small trawl gears is high compared to other gears	
Nephrops caught using pots	Existing - Not assessed	
Fish bycatch in pots and fyke nets in area IIIa and IV	Existing - Not assessed	
Nephrops caught with trawl gears with a Netgrid selectivity device in area IV	Existing	6.2.1

Nephrops caught with trawl gears in area IIIa	Existing	(The three exemptions are now combined into one overall *Nephrops* survivability exemption)
Nephrops caught by demersal trawls with a codend larger than 80mm (70mm/35mm)	Existing	
Bycatch of plaice by vessels using nets in areas IIIa and IV	New-assessed	6.2.2
Bycatch of plaice by vessels using Danish seine in areas IIIa and IV	New-assessed	6.2.3
Plaice below MCRS caught by 80-119mm beam trawls (BT2) in area IV	New-assessed	6.2.4
Bycatch of plaice using trawl (OTB, PTB) of mesh sizes ≥120mm in areas IIIa and IV in winter	New-assessed	6.2.5
Skates and rays caught by all fishing gears in the North Sea (areas IIIa, IV and EU waters of IIa)	New-assessed	6.2.6
Turbot caught in towed gears with a codend larger than 80mm in area IV	New-assessed	6.2.7
Minimum conservation reference size		
Nephrops in the Skagerrak/Kattegat	Existing- Not assessed	
Technical Conservation Measures		
Definition of the SEPNEP	Existing- Not assessed	
Definition of the Belgium/Flemish panel	Existing- Not assessed	
Technical rules in the Skagerrak and Kattegat	Existing- Not assessed	

6.1 North Sea – Proposals for *de minimis* exemptions

A summary of the fishery information applicable to the new or revised *de minimis* applications are given in Table 6.1.1.

Table 6.1.1 Summary of *de minimis* exemptions submitted as part of the North Sea Joint Recommendations (restricted to new or revised exemptions) **Note:** This table contains additional material supplied by the Regional Group in response to the Commission's request following initial review by EWG-18-06

Country	Exemption applied for (species, area, gear type)*	Species as bycatch or target	Number of vessels subject to LO	Landings (by vessels subject to the LO)	Estimated discards*(tonnes)	Estimated catch (tonnes)	Discard rate	Estimated *de minimis* volumes (tonnes)
FR, NL	Whiting, cod, area IV, TR2 bottom trawls	Target and Bycatch	FR- 115 vessels < 18m FR – 47 vessels > 18m	6,347t (cod and whiting combined –FR data only)	6,534t (cod and whiting combined – FR data only)	12,882t (cod and whiting combined- FR data only)	~43% (FR data only)	772t (6% FR data only)
SE	Haddock, whiting, cod, sole, saithe, hake below mcrs; area IIIa; Bottom trawls with 70mm codend and 35mm grid	Bycatch	104 vessels	Haddock – 0.2t Whiting – 2.4t Cod – 0.5t (split 0.2t IIIaN and 0.3t IIIaS) Sole – 1.9t Saithe – 0t Hake – 0.3t	Haddock – 5.6t Whiting – 43t Cod – 31.2t (split 10.7t IIIaN and 20.5t IIIaS) Sole – 3.9t Saithe – 0.7t Hake – 13.5t	Haddock – 5.8t Whiting – 45.4t Cod – 31.7t (split 10.9t IIIaN and 20.8t IIIaS) Sole – 5.8t Saithe – 0.7t Hake – 13.8t	Haddock – 96.9% Whiting – 94.7% Cod – 98.4% Sole – 67.5% Saithe – 96.1% Hake – 97.3%	Haddock – 4.5t Whiting – 11.2t Cod – 25.3t (split 8.7t IIIaN and 16.6t IIIaS) Sole – 0.6t Saithe – 0.3t Hake – 8.8t
SE	Haddock, sole, whiting, cod, siathe, plaice, herring, Norway pout, greter silver smelt, blue whiting; area IIIa; bottom trawls with sorting grid with unblocked fish outlet	Bycatch	43 vessels	Haddock – 0t Whiting – 0t Cod – 0.7t Plaice – 0t Sole – 0t Saithe – 0.6t Hake – 0.1t Argentine – 0t Herring – 0t Norway pout – 0.4t Blue whiting – 0.2t	Haddock – 0.7t Whiting – 3.7t Cod – 1.6t Plaice – 0.5t Sole – 0.3t Saithe – 0.1t Hake – 0.5t Argentine – 0.05t Herring – 2.1t Norway pout – 25.1t Blue whiting – 3.8t	Haddock – 0.7t Whiting – 3.7t Cod – 2.3t Plaice – 2.3t Sole – 0.3t Saithe – 0.7t Hake – 0.6t Argentine – 0.05t Herring – 2.1t Norway pout – 25.5t Blue whiting – 4.0t	Haddock–96% Whiting – 100% Cod – 68% Plaice – 88.9% Sole – 98.3% Saithe – 14% Hake – 86.2% Argentine – 100% Herring – 99.2% Norway pout – 98.4% Blue whiting – 95.9%	Haddock – 0.7t Whiting – 3.7t Cod – 1.2t Plaice – 0.5t Sole – 0.3t Saithe – 0.1t Hake – 0.5t Argentine – 0.1t Herring – 1t Norway pout – 25.1t Blue whiting – 3.8t
DK, DE,BE, UK, FR & NL	Sprat, sandeel, cod, whiting, plaice, sole, lemon sole, turbot,	Bycatch	BE -22 DE – 183 DK – 27 FR- 1 NL – 181	negligible	7% of the overall catches of brown shrimp (~3738 tonnes based on 2016 landings)	~53,394 tonnes	~100%	~3,738 tonnes (7%)

	brill, area IV, beam trawls		UK - 43					
FR, UK, NL, SE, DK	Mackerel, herring, horse mackerel, area IIIa & IVb,c, TR2 bottom trawls	Bycatch	FR - 47 (No information for other MS)	MAC – 1072t HER – 395t JAX – 183t (All EU TR2 and BT2 fisheries)	MAC – 30t HER – 164t JAX – 1805t (All EU TR2 and BT2 fisheries)	MAC – 1102t HER – 559t JAX – 1988t (All EU TR2 and BT2 fisheries)	MAC – 3% HER- 29% JAX – 91%	MAC- 166t HER – 120t JAX – 33t (Based on FR proposal with 7% DM with 25% safeguard)
FR	Ling, area IVa, TR1 bottom trawls	Bycatch	FR – 7 (No information for other MS)	3358t	177t	3,535t	ICES reports ~5%	106t (3%)
DK,SE	Sandeel, blue whiting, sprat, Norway pout, areas IIIa, IIIb and IV, Bottom trawls	Bycatch	SE – 7 TR 1 in IV; 23 TR1 in IIIa; 111 TR2 in IIIa No information fro DK	0t – DK Negligible - SE	109.5t – DK 36.54t - SE	109.5t – DK 36.54t - SE	100%	1.46t
NL, BE, DE	Whiting, area IV, BT2 Beam trawls	Bycatch	No information supplied	BE – 12.09t DE- 6.14t FR – 0.01t NL- 194t UK – 12.52t	BE – 60.7t DE- 105.5t FR – 0.07t NL- 798t UK – 6.67t	BE – 72.79t DE- 111.64t FR – 0.08t NL- 992t UK – 55.73t	79%	1050t (1640t in JR) based on 2% of total NL catches of plaice and sole)

6.1.1 Whiting and cod caught using bottom trawls (OTB, < 100mm (TR2)

Background

This is an existing exemption that was introduced in 2015 and has since been revised in 2017 and now again in 2018. The JR indicates that the intention is to increase the scope of this exemption to cover the whole of area IV. The original exemption only applied in area IVc.

EWG 18-06 observations

EWG 18-06 observes that the justification for the exemption is largely the same as in 2017. There is no new information supplied to support widening the scope of the exemption presented - on this basis EWG 18-06 cannot evaluate whether it is appropriate or not to extend it. The JR does refer to increased control and monitoring of this exemption, but no details are provided of what control and monitoring measures may be taken.

6.1.2 Fish bycatch in Northern prawn trawl fishery with a sorting grid, with unblocked fish outlet in area IIIa

Background

This is an existing exemption introduced in 2015 and has been revised in 2018 to reflect phasing of new species under the Landing Obligation in 2019. The JR proposes that the list of species under this exemption is increased to include hake, Norway pout, Argentine and blue whiting.

EWG 18-06 observations

EWG 18-06 observes that the basis for the exemption is the same as in 2017. Additional catch data has been provided for the species added. As in 2017 even with the additional species, volumes of *de minimis* are quite low reflecting the relatively low discards of undersized fish in this fishery through the mandatory use of sorting grids.

6.1.3 Fish bycatch in a Nephrops targeted trawl fishery

Background

This is an existing exemption introduced in 2015 and has been revised in 2018 to reflect phasing of new species under the Landing Obligation in 2019. The JR proposes that the list of species under this exemption is increased to include hake

EWG 18-06 observations

EWG 18-06 observes that the basis for the exemption is the same as in 2017. Additional catch data has been provided for hake. As in 2017 even with hake added, volumes of *de minimis* are quite low reflecting the relatively low discards of undersized fish in this fishery and the requirement to use selective gears that help to keep these unwanted catches at relatively low levels.

6.1.4 Bycatches in the brown shrimp fishery in the North Sea

Background

The JR includes a request for a new *de minimis* exemption relating to bycatch of all species subject to catch limits in the brown shrimp (*Crangon crangon*) fishery in the North Sea. The exemption requests that in 2019 for the brown shrimp fishery, a *de minimis* exemption of up to 7% in the first two years, 6% in the following two years and 5% thereafter of the total catch in this fishery for all species subject to catch limits. This exemption would apply in ICES areas IVa and IVb.

The request for an exemption for *de minimis* is based on article 15.5.c.i) and ii), due to difficulties to improve selectivity in a short-term period and disproportionate costs of handling the catches of unwanted catches in this fishery, in particular significantly additional labour costs for catch sorting, that a full landing obligation would imply in this fishery.

Basis for exemption

This exemption is supported by catch information from German observer trips in the fishery over the period 2006-2017 by quarter. Information on the relative contribution (%) of unwanted catches to the total catch in the fishery is provided for TAC managed stocks. Aggregated information from 61 trips is provided. This represents around 1% of all trips during this period. Discard rates for 13 TAC stocks caught in the fishery are estimated at close to 100% with most below MCRS. Based on the observer data the unwanted catches are estimated at 7% of the total catches in the brown shrimp fishery.

The justification for this exemption is based on major increases in selectivity being difficult to achieve over and above measures already introduced into the fishery. In addition, the handling of unwanted catches is regarded as disproportionately uneconomical given the difficulties in sorting very small undersized individuals being difficult to sort from the target species. The JR indicates an additional crew member would be required to carry out this sorting on board.

EWG 18-06 observations

EWG 18-06 observes that no supporting documentation, in the form of specific studies or reports, is provided to support this exemption in terms of improvements in selectivity being difficult to achieve or the costs of handling unwanted catches are disproportionate. However, EWG 18-06 considers that given the specificities of this fishery which are well documented and show that the unwanted catches in this fishery are generally of very small fish, it is safe to assume that both are valid assertions, noting there is no attempt in the annex to substantiate this claim.

EWG 18-06 notes that a reasonably detailed description of the fishery and fleets is provided. However, there is no breakdown of the fleets by Member States and the catch data is only provided as percentages of the overall catch and not by volume.

6.1.5 Pelagic species under landing obligation for demersal vessels using bottom trawls (OTB,OTT, PTB, TBB) of mesh size 70-99mm (TR2, BT2) in the North Sea (area IV)

Background

The JR includes a request for a new combined species *de minimis* exemption for bycatch of pelagic species (i.e. mackerel, herring and horse mackerel) caught in demersal trawl fisheries with a mesh size of 70-99mm in the North Sea. The exemption requests a *de minimis* exemption of up to 7% in 2019 and 2020, 6% in the following two years and 5% thereafter of the total annual catches of pelagic species in these fisheries. This exemption would apply to catches in the whole of area IV.

The request is based on article 15.5.c.i) and ii), due to difficulties to improve selectivity in a short-term period and disproportionate costs of handling the catches of unwanted catches in this fishery. The JR states the Landing Obligation would increase the working time on board and generate storage issues on board, implying early return to port for vessels impacted while also increasing costs.

Basis for exemption

This exemption is similar to a combined species *de minimis* submitted for the NWW. It is based on French catch data extracted from the FDI database. It takes the combined catches of mackerel, herring and horse mackerel in the French TR2 fleet in the North Sea and applies a 25% "safeguard" to allow for flexibility between the three stocks. The *de minimis* would appear to be developed primarily to allow a higher *de minimis* for horse mackerel as this is the species with the highest volumes of unwanted catches currently. The total volume of *de minimis* is in the order of 256 tonnes of which, within this overall limit, a maximum of 166 tonnes could be horse mackerel, 120 tonnes mackerel and 33 tonnes herring.

EWG 18-06 observations

EWG 18-06 observes that a detailed description of the relevant French fisheries and fleets is provided. However, it is not clear whether the intention is that this exemption would apply to similar fleets from other Member States. There is reference to other fisheries involving UK, the Netherlands, Sweden and Denmark vessels but no information is provided. In addition, the JR refers to beam trawls in the exemption but there is no fleet information or catch data provided in the annex. EWG 18-06 notes that including additionally vessels will increase the volume of *de minimis* requested and the amount deducted from the relevant TACs.

EWG 18-06 observes that the justification for this exemption is based on improvements in selectivity being difficult to achieve and also on disproportionate costs of handling unwanted catches of pelagic species on board. No supporting information is provided regarding either of these conditionalities although the JR and Annex do refer to a number of French studies. These studies consider selectivity measures tested in the relevant fisheries although they do not relate directly to the selectivity of pelagic species. There is also a reference to a French study (EODE study) which deals with disproportionate costs. Similarly, this study relates to the relevant French fleet but does not deal specifically with handling catches of pelagic species. Several Irish selectivity studies are also included in the references although they are no mentioned in the supporting annex.

EWG 18-06 notes that in the case of mackerel and horse mackerel the management area covers the entire North Sea and Western waters (areas VI and VII), while the *de minimis* proposed is only for area IV. For these stocks there are Member States who have quota allocations for these species but do not have reciprocal demersal fishing opportunities in the North Sea (e.g. Ireland and Spain). In setting TACs in the future to take account of the *de minimis* volumes these Member States will potentially lose quota as a result but will receive no benefit from the *de minimis* as they do not fish in this area. Member States should be aware of these implications.

6.1.6 Ling (Molva molva) for vessels using bottom trawls (OTB, OTT and PTB) > 100mm in the North Sea (area IV)

Background

The JR includes a request for a *de minimis* exemption for catches of ling below MCRS caught in demersal trawl fisheries with a mesh size of greater than 100mm mesh size in the North Sea. The exemption requests that for these fisheries, a *de minimis* exemption up to 3% of the total annual catches of ling should apply. This exemption would apply in the whole of area IV.

The request for an exemption for *de minimis* is based on article 15.5.c.i), due to difficulties to improve selectivity in the short term in this fishery and the economic losses to the fleets involved improvements in selectivity would cause.

Basis for exemption

This *de minimis* is based primarily on French catch data from the FDI database and also observer data (Obsmer project) from the saithe fishery in the northern North Sea (area IVa). Ling are a bycatch in this fishery, making up around 2% of the overall catches with ling discards accounting for 2-5% of the total volume of TAC species discarded in the French saithe fishery. Based on the FDI catch data for ling for all Member States vessels using demersal trawls greater than 100mm (TR1), the estimated *de minimis* volume would be around 106 tonnes based on total catches of 3,535 tonnes with TR1 gear.

The justification for this exemption is that improvements in selectivity are difficult to achieve in the saithe fishery. The JR makes the assertion that this fishery is already selective as the French fleet currently typically use a codend mesh size of between 110-120mm in this fishery. The JR does refer to a number of French selectivity studies (SELECCAB, SELECMER). These studies consider selectivity measures tested in mixed demersal trawl fisheries although they do not relate directly to the selectivity of ling or relate specifically to the saithe fishery. Several Irish studies are also included in the reference section to the annex although they are not directly referred to in the annex itself.

EWG 18-06 observations

EWG 18-06 notes that only information on the saithe fishery is described in the JR and annex but would assume that this exemption would apply to all vessels using the defined gear (e.g. TR1 gear) in the North Sea.

EWG 18-06 observes that a detailed description of the French saithe fishery with information on the fleet involved is given and catch data are provided. However, it is not clear whether the intention is that this exemption would apply to similar fleets from other Member States (see reference to the *de minimis* volume above). There is reference to German vessels operating in the fishery but no details are provided.

EWG 18-06 observes that no supporting information is provided to justify this exemption other than referring to the morphology of ling, which makes reducing unwanted catches of ling difficult. EWG 18-06 considers this to be a reasonable assumption, noting there is no attempt in the annex to substantiate this claim. Due to the lack of information, EWG 18-06 is unable to assess fully whether this demonstrates that selectivity is difficult to improve in this fishery.

6.1.7 Bycatch of industrial species for demersal vessels using TR1, TR2 or BT2 in areas IIIa and IV)

Background

The JR includes a request for a combined species *de minimis* exemption for bycatch of industrial species (i.e. sprat, sandeel, Norway Pout and blue whiting) caught in demersal trawl and beam trawl fisheries in the Skagerrak and North Sea. The exemption requests that in these fisheries, a *de minimis* exemption up to 1% of the total annual catches should apply. This exemption would apply in the whole of areas IIIa and IV.

The request for an exemption for *de minimis* is based on article 15.5.c.ii, due to disproportionate costs for handling and sorting these unwanted catches. The JR states that these species are abundant and occur in large schools, so it is inevitable that these species are sometimes caught even in gears with large meshes. The difficulty of on board handling of unwanted catches of industrials species, which are generally small, and the resulting additional economic costs required to sort and store them due to the Landing Obligation are put forward as justification for this exemption. The JR also points out that the amounts represent an insignificant impact on the relevant stocks.

Basis for exemption

This exemption is based on Danish observer data of catches of industrial species (i.e. sprat, sandeel, Norway pout and blue whiting) in Danish demersal trawl fisheries in the North Sea and Skagerrak. In the annex to the JR demersal fisheries are defined as fisheries using gears with mesh sizes above 80mm. The data presented shows total discards of 323.5 tonnes made up of 278.5 tonnes of Norway Pout, 35 tonnes of blue whiting, 10 tonnes of sprat and 0 tonnes of sandeel across a range of Danish demersal fisheries with mesh sizes 32-120mm. No other catch data is provided and there is no indication of the estimated *de minimis* volume.

The justification for this exemption is related to disproportionate costs of handling and storing unwanted catches on board. No information is provided to support this assertion other than repeating the statement contained in the JR that these catches are unavoidable, will create additional costs for the vessels and in any case are insignificant in terms of the overall TACs for these industrial species,

EWG 18-06 observations

EWG 18-06 observes that this exemption is supported with very limited information. No information on the fleets involved and only limited discard data for a range of Danish demersal trawl fleets is provided. It is assumed this exemption would apply to similar fleets of other Member States. However, there is no indication of the level of discards generated by these fleets. There is also a reference to BT2 fisheries but again no information is provided on catches or beam trawl fleets involved.

EWG 18-06 notes that the discard data presented in the annex detailing the bycatch in 2017 includes discards from the crustacean trawl fisheries (*Pandalus* fishery) with a mesh size of between 32-69mm. The discards in this fishery make up almost 80% of the total discards reported. However, the JR and annex indicate that the exemption applies to only demersal trawl and beam trawl fisheries with a mesh size greater than 80mm. Clarification is required to confirm whether the intention is to include the *Pandalus* fishery in this exemption. If this is not the case, then the discards amount to 40.5 tonnes.

EWG 18-06 is unclear as to why sandeel is included given the discard data presented shows no discards of sandeel in any of the fisheries.

EWG 18-06 observes the justification for this exemption is that handling of unwanted catches are regarded as uneconomically disproportionate given the difficulties in sorting very small undersized individuals from the target species. No supporting documentation is provided to support this assertion other than that the catches are insignificant in the demersal fisheries and therefore this satisfies the conditions set out in Article 15. The EWG 18-06 accepts that it is likely to be difficult to sort such bycatch in demersal trawl fisheries but notes that no information has been provided to support this and cannot assess whether this does satisfy the conditions set out in Article 15. The JR also indicates that there are no methods available to reduce bycatch of industrial species in these fisheries. Again, no information is provided to support this assertion.

6.1.8 Whiting caught by beam trawls 80-119mm in the North Sea (area IV)

Background

The JR includes a request for a *de minimis* exemption for whiting below MCRS caught in beam trawl fisheries with a mesh size of 80-119mm in the North Sea. The exemption requests that in these fisheries, a *de minimis* exemption up to 2% of the total annual catches of plaice and sole should apply. This exemption would apply in the whole of area IV.

The request for an exemption for *de minimis* is based on article 15.5.c.i and ii, due to difficulties in improving selectivity in the short term and disproportionate costs for handling and sorting unwanted catches of whiting. The JR states that the vessels involved in the fishery are operating long fishing days (typically 4-5 days) at considerable distance from ports. Without the exemption, these vessels would be forced to return to port earlier and incur additional costs.

Basis for exemption

The exemption is based largely on FDI catch data from the BT2 beam trawl fishery in the North Sea. The *de minimis* is calculated on the basis of whiting catches as a percentage of the total catches of plaice and sole which are the main target species in this fishery. Based on Dutch catch data for the BT2 fleet, the JR indicates that 83% of whiting caught in this fishery are discarded. This represents 0.9% of the total catches in the fishery. Set against the total catches of plaice and sole, the discards of whiting account for 1.4%. According to the JR the *de minimis* exemption of 2% would correspond to a *de minimis* volume of 1234t of whiting being discarded.

The justification for this exemption is based on major increases in selectivity being difficult to achieve over and above measures already introduced into the fishery. In addition, the handling of unwanted catches are regarded as uneconomically disproportionate given the difficulties in sorting very small undersized individuals being difficult to sort from the target species. There is limited evidence to support both of these assertions provided in the supporting annex. In relation to improving selectivity, the annex refers to studies being undertaken in the Netherlands. On disproportionate costs there is reference to several studies that have looked at the economic impacts of the landing obligation, which in a general sense show that additional handling on board of unwanted catches due to the landing obligation generates extra costs and sorting time for crews. An example referring specifically to whiting is provided although little detail is provided.

EWG 18-06 observations

EWG 18-06 observes that there is very limited information on the fleets and fisheries to which this exemption is to be applied. Limited catch data is provided for only the Dutch BT2 fleet. There is no indication on the numbers of vessels involved and no catch data for other Member States are provided.

EWG 18-06 notes that the JR states the *de minimis* is at a level of 2%. However, the supporting annex refers to a *de minimis* rate of 5%. In addition, the JR estimates the *de minimis* volume at 1234 tonnes based on average catches over the period 2014-2016. However, the supporting annex states that average discards of whiting were 895 tonnes for this period for the Dutch BT2 fleet. It is unclear why the *de minimis* being sought is larger than the discards reported in the Annex.

EWG 18-06 notes that the justification for this exemption is based on major increases in selectivity being difficult to achieve over and above measures already introduced into the fishery. However, there is limited evidence to support both of these assertions. EWG 18-06 is unable to assess fully whether this demonstrates improvements in selectivity are difficult to achieve in this fishery. Similarly, on disproportionate costs, limited information is provided. There is reference to several studies that have looked at the economic impacts of the landing obligation, but these are rather generic. A specific example relating to whiting is mentioned although little detail is provided, and the claims made are unsubstantiated. Due to lack of information, EWG 18-06 is unable to assess fully whether this demonstrates selectivity is difficult to improve in this fishery or whether the costs of handling unwanted catches are disproportionate.

6.2 North Sea - Proposals for survivability exemptions

A summary of the fishery information applicable to the new or revised survivability applications are given in Table 6.2.1.

Table 6.2.1 Summary of high survivability submitted as part of the North Sea Joint Recommendations (restricted to new or revised exemptions). **Note:** This table contains additional material supplied by the Regional Group in response to the Commission's request following initial review by EWG-18-06

	Exemption applied for (species, area, gear type)*	***Species as bycatch or target***	***Number of vessels subject to the LO***	***Landings (by LO subject Vessels)***	***Estimated Discards****	***Estimated Catch***	***Discard Rate***	***Estimated discard survival rate from provided studies***
UK	*Nephrops*;, area IV; demersal trawls with a codend larger than 80mm (70mm/35mm	Target/bycatch	No information provided	22,014t	1,298t	23,312t	6%	42-75% (grid-Annex F); 38-59% (SELTRA – Annex F); 62% (NETGRID – Annex g); 53% (conventional trawl > 80mm codend – Annex H)
BE, DE, DK, UK, FR, NL, SW	*Plaice; areas IIIa and IV; set nets*	Bycatch	402 vessels	3885.13t	79.87t	3965t	2%	100%
DK	Plaice; areas IIIa and IV; Danish seine	Target	19 vessels – IIIa 8vessels - IV	No information	No information	No information	8% - Skagerrak 1% - North Sea	78%

	Plaice below MCRS; area IV; 80-119mm beam trawls (BT2) i	Target	52 vessels - BE 16 vessels – DE 3 vessels – DK 13 vessels - UK 2 vessels – FR 93 vessels - NL	34000t	30000t	64,000t	47%	15-20%
SE	Plaice; areas IIIa and IV in winter; using trawl (OTB, PTB) of mesh sizes ≥120mm	Bycatch	16 Vessels-IV 23 vessels - IIIa	187t	0.59t	187.59t	0.3%	75%
	Skates and Rays; area IIIa, IV & EU waters of IIa; All gears	Target/Bycatch	65 vessels – DK 200-220 vessels – FR 200 vessels - DE 134 vessels – NL 140 vessels – SE 610 vessels - UK	1188.1t (all species)	Not reported	Not reported	Thornback Ray – 45% Blonde ray – 17% Sandy ray – 0% Spotted ray – 43% Cuckoo ray – 41% Starry ray – 100%	~45%

BE, DE, DK FR, NL, UK	Turbot; area IV; in towed gears with a codend larger than 80mm	Bycatch	No information provided	BE – 81.53t (TR2) & 178.44t (BT2) DE – 74.09t (TR2) & 161.88t (BT2) DK – 17.45t (TR2) FR – 1.01t (TR2) & 0.2t (BT2) NI – 113t (TR2) & 1540t (BT2) UK – 50.4t (TR2) & 171.04t (BT2)	BE – 8.37t (TR2) & t 181.34(BT 2) DE – 6.8t (TR2) & 30.97t (BT2) DK – 0.5t (TR2) FR – 0.11t (TR2) & 0.07t (BT2) NI – 15t (TR2) & 424t (BT2) UK – 0.54t (TR2) & 3.43t (BT2)	BE – 89.9t (TR2) & 359.78t (BT2) DE – 80.89t (TR2) & 192.85t (BT2) DK – 17.95t (TR2) FR – 1.12t (TR2) & 0.27t (BT2) NI – 128t (TR2) & 1964t (BT2) UK – 50.94t (TR2) & 174.47t (BT2)	BE – 5% (TR2) & 36% (BT2) DE – 4.8% (TR2) & 25% (BT2) DK – 1.4% (TR2) FR – 1.3% (TR2) & 13% (BT2) NI – 5.6%(TR 2) & 12% (BT2) UK – 3.2% (TR2) & 1% (BT2)	20-43%

6.2.1 Nephrops caught by demersal trawls with a codend larger than 80mm (70mm/35mm)

Background

Article 4 of the current discard plan for the North Sea (Regulation (EU) 2018/45) contains three exemptions for *Nephrops* on the basis of demonstrated high survivability. These are:

- catches in ICES Division IIIa with bottom trawls (OTB, TBN) with a mesh size of at least 70 mm equipped with a species selective grid with bar spacing of maximum 35 mm
- catches in ICES Division IIIa with bottom trawls (OTB, TBN) with a mesh size of at least 90 mm equipped with a seltra panel; and
- in winter months (October to March), catches in the functional units Farn Deeps (FU6), Firth of Forth (FU8) and Moray Firth (FU9) with bottom trawls (OTB, TBN) with a mesh size of at least 80 mm equipped with a netgrid selectivity device.

EWG 18-06 did not consider these exemptions further.

The new JR for 2019 consolidates these exemptions and also includes a new exemption for all catches of *Nephrops* caught by demersal trawls with a codend larger than 80mm or 70mm when equipped with a species selective grid with bar spacing of maximum 35mm) in ICES areas II, IIIa and IV. The JR also states that based on the scientific evidence described in the supporting Annex the exemption should also cover demersal trawls with a codend of at least 35 mm equipped with a species selective grid with bar spacing of maximum 19 mm used in the *Pandalus* fishery.

Basis for exemption

The exemption is supported by a number of survival studies, several of which have already been submitted to support the existing *Nephrops* exemptions. Of relevance to the new exemption (i.e. *Nephrops* caught by demersal trawls with a codend larger than 80mm) is a study conducted by Fox and Albalat. 2018). The main findings of this study are summarised in Annex H to the JR. Survival trials in this study were carried out using the captive observation methodology, following recommendations set out by ICES WKMEDS and with monitoring periods of up to 13 days. This trial was partly carried out in the *Nephrops* fishery off the West Coast of Scotland (Minches) as well as in the North Sea (Firth of Forth). In the commercial *Nephrops* off the Scottish west coast (Minches) annual mean *Nephrops* discards survival estimates of 53% (24 hauls) were obtained using both TR2 and TR1 trawl gears. Survival estimates across the year varied between 45.7% (43.4-48.3%) in summer and 56.3% (53.5-59.4%) in winter. In the fishery off the Scottish east coast (Firth of Forth) mean *Nephrops* discards survival estimates were 74.5% in summer (6 hauls) using TR2 gear with confidence intervals of 71.8-77.1%.

In general terms, survival results for the west coast were in the range of the wider fleet information indicating that the discard survival estimates are representative of the wider fleet operating on the west coast. For the Firth of Forth, there were substantial differences in the estimates of discard rates, occurrence of injuries and immediate mortalities between the two vessels, which also fished in different locations. To apply the discard survival estimates to the whole fleet in this fishery would require assumptions that these differences do not influence overall discard survival. The survival estimates obtained in the recovery trials are likely to be most representative of smaller (<15m) vessels operating in the inner Firth of Forth and less representative of larger vessels fishing further offshore.

During the study an ROV was deployed to observe discarded *Nephrops* when they reached the seafloor. Undamaged discarded *Nephrops* appeared to exhibit normal behaviour on release and began to explore their surroundings quickly even after 3.6 hours of aerial exposure.

EWG 18-06 observations

EWG 18-06 observes that there are inconsistencies in the catch data provided. The JR states that the advised catch of *Nephrops* in 2018 for all EU fleets fishing with demersal trawls in ICES areas II, IIIa,IV is 23,312t and 1,298t respectively, with an estimated discard rate of 6% (based on ICES catch advice for Functional Units in EU waters in 2018). For the UK, there is an inconsistency in the values because the landings were 19,601t, whereas the provided estimates of catch and discards were 3,635t and 332 t, respectively (the provided estimate of 9% discard rate is thus also uncertain). The EWG 18-06 suggests the JRSG should check these values and provide new estimates for the UK.

EWG 18-06 observes that the JR only provides information on the UK fleet and states that a total of 234 UK vessels are involved in the relevant fisheries. No information is provided on vessels from other Member States who may participate in these fisheries.

EWG 18-06 notes that the exemption is based on the assumption that the fishing practices on the west coast of Scotland resulting in survival rates of 53% are representative of general fishing practices by the smaller vessels fishing for *Nephrops* anywhere within 12 miles of coastlines using gear o80-110mm in all areas. Given only limited information is provided, EWG 18-06 is unable to assess fully whether this is a reasonable assumption (See Section 5.3).

EWG 18-06 notes that no information is provided to support extending the exemption to the Pandalus fishery using demersal trawls with a codend of at least 35 mm equipped with a species selective grid with bar spacing of maximum 19 mm. Given this fishery has very different characteristics to the targeted *Nephrops* fisheries, in terms of gears used, prevailing environmental conditions and indicative catch rates, EWG 18-06 is unable to assess whether the survival rates observed are applicable to the *Pandalus* fishery.

6.2.2 Bycatch of plaice by vessels using nets in areas IIIa and IV

Background

The 2018 JR proposes a new exemption on the basis of high survivability for bycatch of plaice (*Pleuronectes platessa*) by vessels using gillnets, set gillnets, combined gillnets-trammel nets and gillnets and entangling nets (GNS, GTR, GTN and GEN) in the North Sea and Skagerrak (ICES areas IIIa and IV). Plaice caught with these gears should be discarded swiftly in order to minimise air exposure.

Basis for exemption

The exemption is supported by a Danish study (Ern et al., 20xx) carried out in set-net fisheries in the Baltic Sea (areas 22 and 23). The JR considers that the results of this study are representative of similar fisheries in the North Sea.

The study estimated discard survival in 118 plaice from 13 different fleets of nets, conducted by two fishing vessels over seven fishing days between November 2017 and February 2018. Individuals were caught using trammel nets having sea bed temperatures at 2–7°C; salinity, 11-14 ppt; depth, 7–18m; soaking time, 24–48h, and kept for 4-10 days in live-wells within local harbours for observation of post-capture survival rate. Fish were individually tagged, and the vitality assessed via catch-related injuries and reflex impairment after capture and at the end of the predetermined observation periods. Following transfer to the live-wells, the post-capture survival rate was monitored every 6 hours for a period of 4-10 days.

Results showed that all individuals were alive at the end of the observation periods 4-10 days (100% survivability). Furthermore, the vitality (injury and reflexes) of *P. platessa* fished with trammel net was not severely affected after capture, with most (2/3) of the fish presenting a very low (10%) of abrasion. It was noted be that other injuries (e.g. blood clots and head wounding) were generally small and recoverable. Similar results were obtained with the assessments of reflex impairment, which showed that >90% of the 118 fish completed all three responses (Evade, Righting, Tail grab) when stimulated, both after capture and at the end of the observation periods.

EWG 18-06 observations

EWG 18-06 observes that no catch or fleet information is provided for any Member State so the extent of the exemption and the fleets to which it would apply is unknown.

Although the methodological approach of the study is limited in scope, EWG 18-06 considers that it provides some initial and basic evidence of the survivability of *P. platessa* caught with trammel nets. The justification is based on a small sample size and short observation period, was carried out in a fishery outside the North Sea, covers only one season with no investigation of impact of environmental conditions or effects of time out of water on the plaice observed. EWG 18-06 suggests that the studies should be repeated in the North Sea to ensure the survival rates obtained in the Baltic Sea are representative. These studies should address the issues identified with the original studies with respect to sample size; prevailing environmental conditions, on board handling practices, long term mortality, air exposure, etc.

EWG 18-06 also notes that no data are provided for other types of static nets (set gillnets, combined gillnets-trammel nets and gillnets and entangling nets). EWG 1806 cannot assess whether the results provided for the trammel net are representative of the other types of set nets. This is only relevant if other types of set-nets are used in the North Sea.

EWG 18-06 considers that the handling procedures related to the discard of plaice should be well specified, particularly to minimize air exposure which according to studies carried out with other gears such as Danish Seine (see section 6.2.3), as this seems a key factor affecting the survivability of this species.

6.2.3 Bycatch of plaice by vessels using Danish seine in areas IIIa and IV

Background

The JR requests that the Landing Obligation shall not apply to plaice (*Pleuronectes platessa*) caught in the North Sea and Skagerrak (ICES area IIIa and IV) by vessels using Danish seines. Plaice caught with these gears should be discarded swiftly in order to minimise air exposure.

According to the JR, in 2017, the Danish seine fishery targeting demersal fish with >120 mm mesh size comprised 19 vessels (power range 67-901 kW) operating in the Skagerrak and 8 vessels (power range 139-681 kW) in the North Sea. The fishery in the Skagerrak occurs all year round, while in the North Sea it occurs mainly from March to November.

Basis for exemption

Plaice in the Skagerrak has been assessed together with the North Sea stock since 2015 and it is considered to have full reproductive capacity and to be sustainably harvested (ICES Advice 2017). At the stock level, the proportion of unwanted catch is on average 57% (years 2011-2016, ICES Advice 2017).

The exemption is supported by a survivability study carried out by DTU Aqua in the Danish Seine fishery in the Skagerrak during the summer of 2017 (REFERENCE). According to the DTU-Aqua study, plaice is a candidate species for obtaining an exemption from the LO because it has no swim bladder and is considered robust with respect to surviving the fishing process.

Handling and vitality assessments were carried out according to ICES WKMEDS guidelines (ICES 2014). Six fish were sampled on five occasions during the sorting process to cover the entire air exposure time of the catch. The study took place during August-October 2017, when the water temperature is at its highest and thus represents a 'worst-case' scenario for survival.

The mean survival rate for undersized plaice was 78% (CI: 67-87%), but this was affected by air exposure. If fish were released less than 30 minutes after capture, the survival probability was 86% (CI: 46-97%). This dropped to 20% (CI: 4-62%) after 30 min of air exposure. The air exposure times used in the experiment were within commercial practice, but it is not known if air exposure times are higher at the fleet level.

EWG 18-06 observations

EWG 18-06 notes that fleet information is supplied only for the Denmark. EWG 18-06 assumes no other Member States has vessels using this gear. EWG 18-06 also notes that data only show percentages of unwanted catch of plaice, which is on average 8% by volume in the Skagerrak, and 1% in the North Sea (data from the Data Collection Framework database) are provided. No detailed catch information is presented in the JR.

Although the methodological approach of the study is limited in scope, EWG 18-06 considers that the supporting provides basic evidence of the survivability of *P. platessa* caught with Danish seines. The study only covers the Skagerrak and for this reason EWG 18-06 is unable to assess definitively whether the results are representative of the fishery in the North Sea. However, EWG 18-06 considers it is reasonable to assume that the results are broadly representative given the proximity of the areas, the similar catch compositions and the identical gears.

EWG 18-06 considers that the total number of individuals analysed (N=281) is high enough to obtain reliable estimates of overall survival rates. EWG 18-06 further notes that survival rates provided in this study would thus represent the lowest survival rates expected during the year.

EWG 18-06 notes the large differences in survival rates with increasing air exposure (before and after 30 minutes). EWG 18-06 considers this an important factor that should be incorporated in framing the exemption in the subsequent discard plan.

6.2.4 Plaice below MCRS caught by 80-119mm beam trawls (BT2) in area IV

Background

The JR requests an exempt from the Landing Obligation for plaice below MCRS (i.e. 27cm) caught in beam trawl gears with a mesh size of 80-119mm in the North sea (ICES area (II and IV) on the basis of demonstrated high survivability. This exemption is based on a combination of results from survivability studies, efforts made to improve selectivity in the fishery and the socio-economic impacts of the Landing Obligation on the beam trawl fleet of having to land large quantities of undersized plaice.

The JR states that the exemption would be conditional on a range of measures and incentives:

- BT2 vessels < 221kw or less than 24m in length overall, which are constructed to fish in the twelve mile zone, can avail of the 3-year temporary exemption for high survivability for flatfish if the average trawl duration is less than ninety minutes.
- BT2 vessels >221kw) or greater than 24m can avail of the exemption on the basis of a package of measures and incentives towards more selective fishing to be developed in the coming three years.

Basis for exemption

The exemption is supported by a combination of information on the potential to increase survival of discards by technical measures in beam trawls technical measures as well as high survivability studies of discarded plaice:

A short note prepared by Polet et al., (not dated) describes the benefits to the survivability of plaice of employing certain technical devices in beam trawls that reduce the capture of stones and debris. Twotechnical modifications: i) flip-up rope rigged on top of the bobbin rope in the net opening; ii) 'benthic release panel' a square mesh panel inserted in the belly of the trawl, just in front of the codend are described. The note itself provides little detail but refers to different scientific studies by Fonteyne and Polet (2002), Revill and Jennings (2005) and Soetaert et al. (2016) that demonstrate the potential of these techniques.

The results from two survivability studies are presented in Molenaar and Schram (2018) and Schram and Molenaar (2018). In the first of these studies, different measures to increase discard survival of plaice in the 80 mm pulse-trawl fisheries were assessed under commercial fishing conditions. Measures tested were a water filled hopper (8 sea trips), short hauls (90 instead of 120 min, 4 sea trips) and a knotless codend (1 sea trip) with undersized plaice. All sea trips were conducted in the Southern North Sea and were spread over the year to account for potential seasonal variation in discards survival. In total 558 plaice from conventional fisheries (ca. 60 per sea trip) were collected: 478 plaice for the water filled hopper treatment (ca. 60 per sea trip), 200 plaice from short hauls (ca. 40 and 60 each in two sea trips) and 60 plaice from the knotless cod-end. For all sea trips combined, no significant effect of a water filled hopper on plaice discards survival probability could be detected with 16% (95%CI 12-19%) for the conventional dry hopper and 20% (95%CI 15-25%) for the water filled hopper. For all sea trips combined, no effect of short (90 instead of 120 min) hauls on discards survival probability could be detected: survival probabilities for plaice discards were equal at 11% (95% CI 8-15%) for both short and conventional hauls.

The second study reported by Schram and Molenaar (2018) was carried out using the methodology advised in the ICES guidelines for discards survival studies (ICES, 2016). A total of 558 fish were used for survivability estimates, between 59 and 80 individuals per trip. The overall discards survival probability for plaice was 14% (11-18% CI). At individual trip level, the probabilities ranged from 1% (Sept) and 3% (July) to 20% (Dec, Feb) and 22% (Oct).

The results of these trials showed that the deployment of a water filled hopper does not result in higher survival probability for plaice discards than a conventional dry hopper in year-round pulse-trawl fisheries. Similarly, survival probability of plaice discards cannot be increased by reducing haul duration from 120 to 90 min or by using a knotless codend. Previous work on the survival of discards from pulse-trawl fisheries resulted in survival probability estimates of 15% (95%CI: 11-19%) for plaice. The more recent study showed survival probability estimate of 14% (95%CI 11-18%) was reported for plaice (Schram and Molenaar, 2018).

EWG 18-06 observations

EWG 18-06 observes that no data on the fleets or fisheries is provided. EWG 18-06 further observes it is unclear as to whether the exemption is to apply to all beam trawl fisheries or just to vessels using pulse trawls.

EWG 18-06 notes that the JR states the exemption is on a temporary basis for three years. However, EWG 18-06 notes that there is no justification for this and also points out that the lifespan of the discard plan is three years as well. The JR states that "*plaice has a proven potential for high survival, given already existing high survival exemptions in place in the North Sea and other regions*". However, EWG 18-06 notes that the results of all the studies provided do not corroborate this statement as the mean survival rates presented are in all cases lower than 20%.

EWG 18-06 notes that the survival studies presented were all carried out with pulse trawls. EWG 18-06 cannot assess whether the results presented are representative of standard beam trawl gears used but based on the differences in operation of the two gear types it is likely that the survival rates would be lower with standard beam trawls. If the intention is for this exemption to cover standard beam trawl gear as well as pulse trawls then EWG 18-06 considers it appropriate to repeat these studies with beam trawl gear.

EWG 18-06 observes that the request includes a description of the fisheries concerned and indicates that the exemption is conditional on a package of measures and incentives which affect two different components of the fleet in various ways. However, EWG 18-06 notes that the reasoning for considering these two fleet segments is not justified in the JR.

EWG 18-06 observes that for the small vessel fleet (<221 kw) the exemption applies if the average trawl duration is <90 min. However, EWG18-06 considers that the threshold of 90 min is not well supported because the results presented in the supporting Annexes (Annex Jiii) shows that "*no effect of short (90 instead of 120 min) hauls on discards survival probability could be detected*".

EWG 18-06 further observes for the large vessels (>221kw) that the package of measures and incentives towards more selective fishing will be developed over a three-year period. However, EWG 18-06 notes that little detail is provided on how these measures will be introduced and whether the exemption would be removed if the supporting studies did not show reasonable survival rates for discarded plaice.

The EWG notes that the sampling size used is reliable for survival studies.

EWG 18-06 notes that the total sample sizes used in the survival studies are adequate to obtain an overall survival rate. However, although the sea trips were spread out over the year (January, May, June, July, September, October, December) to account for the potential effect of variable environmental and fishing conditions on discards survival, EWG 18-06 considers the low number of individuals in each trip prevents using these as reliable monthly survival estimates.

EWG 18-06 observes that the survival probability estimates apply to year-round pulse-trawl fisheries, but, the results show variation in survival rates throughout the year. As the studies note, this means that the overall survival probability for a species is not necessarily representative for its discards survival at any specific time of the year. The nature of this variation remains to be established. The studies also reveal that catch-processing time seems to have no effect on fish condition or on the survival rate of discards.

EWG 18-06 notes that the studies show survival was strongly affected by fish condition. Therefore, the recommendation made in the JR that measures aimed at increasing the survival of discards should focus on improving the condition of discarded fish during the capture process rather than the catch processing seems appropriate.

6.2.5 Bycatch of plaice using trawl (OTB, PTB) of mesh sizes ≥120mm in areas IIIa and IV in winter

Background

The JR requests an exemption from the Landing Obligation for plaice caught using trawls (OTB, PTB) with a mesh size of ≥ 120 mm targeting flatfish or roundfish in the winter months (1st November to 30th April in the North sea and Skagerrak (ICES area II and IV) on the basis of demonstrated high survivability. The exemption is conditional on plaice being discarded swiftly in order to minimise air exposure to ensure survival rates are maintained at levels of around 75%. The JR also indicates that further scientific studies on survival rates in winter should be carried out with an evaluation to be completed during 2019.

Basis for exemption

The exemption is based on a scientific study carried out by DTU-Aqua (REFERENCE). The study provides detailed catch data by month for the Danish OTB fleet by area and mesh size. The DTU-Aqua study was carried out onboard a commercial vessel following the ICES WKMEDS guidelines. According to this study, plaice is a candidate species for obtaining an exemption from the Landing Obligation because it has no swim bladder and is considered robust with respect to surviving the fishing process.

According to this study, in 2017 based on DCF data the Danish OTB fleet in the fishery in Skagerrak comprised 102 vessels in the size range 11.00-19.99 m and power range 67-365 kW. In the North Sea the relevant fleet comprises only 11 vessels (size and power ranges of 11.00-16.99 m and 126-365 kW, respectively. Based on detailed catch data provided for the Danish OTB fleet by area and mesh size, the proportion of unwanted catch of plaice is on average 60.4% in volume with 90-119 mm mesh size and 7.4% with >120 mm mesh in the Skagerrak, and 6.4% in volume with 90-119mm mesh size and 3.4% with >120 mm mesh in the North Sea (data from the Data Collection Framework database from 2015-2017). The study is based on samples of 333 plaice in summer and 274 and 279 in winter in the directed *Nephrops* fishery and directed fish fishery respectively.

Results from the study show that with a commercial standard codend (90mm diamond), the mean survival rate for undersized plaice was higher in the winter 75% (CI: 67-83%) than in the summer, 44% (CI: 37-52%). The results show a reduction in survival rates for undersized plaice when targeting *Nephrops* in the winter of 41% (28-57%). This was similar when targeting plaice during the summer. The study concludes that a higher proportion of *Nephrops* in the catch reduces survival due to increased damage. In the summer when targeting plaice, discard survival was affected by air exposure duration, dropping to 8% (CI: 2-31%) if released after 60 minutes of air exposure. However, this was not observed in winter, even when targeting *Nephrops.* Discard survival was primarily driven by damages/loss of reflexes. The air exposure times used in the experiment were in line with commercial practice on board the trials vessel, but it is not known if this is consistent at the fleet level.

EWG 18-06 observations

EWG 18-06 observes that only catch and fleet information is provided for the Danish fleet. No information is provided for other Member States who may wish to avail of this exemption.

EWG 18-06 observes that there are inconsistencies in the number of Danish vessels reported in the supporting study. EWG 18-06 also considers that it would be relevant to report on the number of vessels and respective catches of vessels targeting fish and vessels targeting

Nephrops, given the presence of *Nephrops* leads to increase damage to the fish catch, leading to to lower survival rates from discarded plaice.

EWG 18-06 notes that the supporting study only covers the Skagerrak and for this reason EWG 18-06 is unable to assess definitively whether the results are representative of the fishery in the North Sea. However, EWG 18-06 considers it is reasonable to assume that given the proximity of the areas, the catch compositions are similar, and the gears used are identical that the results are broadly representative.

EWG 18-06 notes that the low observed survival rates in summer justify the request in the JR to restrict the exemption to the winter months noting that during the summer months increased air exposure reduces survival rates significantly.

6.2.6 Skates and rays caught by all fishing gears in the North Sea (areas IIIa, IV and EU waters of IIa)

Background

The 2018 JR proposes a new exemption on the basis of high survivability for skates and rays caught by all fishing gears in the North Sea and Skagerrak (ICES areas IIIa and IV and EU waters of IIa). Specifically, the JR requests that the exemption should apply for three years until 31 December 2021 as a temporary management measure while Member States collect additional information on survival and additional management measures are introduced. Furthermore, the JR requests that discards of skates and rays should be included in the annual ICES stock assessment and a new protocol developed to calculate quota uplifts for skate and ray species to take account of catches previously discarded.

Basis for exemption

The JR provides a comprehensive review of the existing estimates of discard rates and survival rates of different species of skate and rays included under the combined TAC that is currently used to manage these species. The review is based on existing literature and a range of survival studies with different gears and species. Data on fleet numbers are provided for all North Sea countries, as well annual catch, landings discards 2014-2016, all species combined.

The information provided reports an average discard rate value of 45%over the period 2014-2016 for skates and ray species combined. Estimates can vary greatly (i) between species (e.g. from 0% in sandy ray to 100% in Starry ray) and (ii) within species (e.g. from 57-69% in Thornback ray in ICES VIIf otter trawl fishery to 95% in the same species in ICES IVc trammel net fishery).

Survival rates are reported for a range of gears and species and show a similar level of variation (e.g. 34-35% for cuckoo ray in the VIIe beam trawl fishery to 95% for thornback ray in the IVc trammel net fishery).Health vitality data on discarded skates and rays from a ten-year period for certain fisheries show less variability, with most (>95%) rays in longline, otter trawl and netting fisheries being alive and in good or moderate condition at the point of release (there is little immediate mortality).

The JR also provides a detailed description of a framework for research to accompany the high survival exemption for skates and rays. This includes details of ongoing and planned survival studies, as well as ways to improve survival through enhanced handling measures and changes to fishing practice and gears. Possible avoidance and selectivity improvements are also discussed and a reporting requirement for vessels availing of the exemption is also provided.

EWG 18-06 observations (see sections 5.4, 7.2.4 and 8.2.1) EWG 18-06 notes that the JR states the exemption is on a temporary basis for three years. However, EWG 18-06 notes that there is no justification for this and also points out that the lifespan of the discard plan is three years as well. The exemption does not provide any indication of whether the exemption would be

amended or removed during the three-year period if the results from the planned studies showed survival rates low in a particular fishery or for a particular species.

EWG 18-06 notes that, according to the results presented, discard rates and survivability estimates depend greatly on the species, area and métier considered. EWG 18-06 further notes that the current data outlined in support of the requested exemption is limited because the high variability in survivability estimates and the existent data gaps.

EWG 18-06 acknowledges that more work is needed to fill the gaps and to provide a more complete picture of survival across different skate and ray species in different fisheries/areas/métiers.

EWG 18-06 acknowledges the synthesis provided by the Scheveningen group of the existing estimates of discard and survival rates of skate and rays, based on existing literature and different studies. Data collection has already started and the request for exemption is rather well documented. However, EWG 18-06 considers it the decision of managers whether enough evidence has been supplied to support the exemption proposed for all species and all gears in the North Sea.

EWG 18-06 notes that studies are ongoing and and that the Member States acknowledge they will implement new studies during the three years of the requested exemption. However, there is still little information on how the data collection will be pursued and which further research will be conducted to investigate the impact of environmental conditions (sea-bed type, temperature etc.), handling conditions (fishing gear, time outside water etc.) and fishing area on survival rates.

EWG 18-06 agrees with the JR that there is an urgent need for better catch data by species. However, EWG 18-06 recognises that in practice this will take time and remains limited by accurate e species identification which creates deficiencies in the data reported.

EWG 18-06 notes that during the period of the requested temporary exemption, the North Sea Member States aim to promote good practice by fishermen making use of the potential exemption. Such practices potentially would maximise the chance of survival of skate and ray species, and to promote avoidance and selectivity measures to minimise the chance of skate and ray species being caught. EWG 18-06 notes that the list of measures detailed in the JR is extensive, but it is not possible to evaluate which of these measures will be implemented by each fishery or provide any assessment of the effectiveness of these measures.

6.2.7 Turbot caught in towed gears with a codend larger than 80mm in area IV

Background

The JR requests a temporary exemption of 3 years (2019-2021) from the Landing Obligation for turbot (*Scophthalmus maximus*) caught in towed gears with a codend larger than 80mm in the North Sea (ICES area IV). The JR indicates that over the 3-year period improvements will be made in the fishery through selectivity trials as well as the introduction of a pilot programme to introduce fully documented fisheries. As a condition of the exemption the JR notes that turbot should be returned whole/undamaged to the sea as swiftly as possible and over the grounds where they were caught.

Basis for exemption

The request is based on a recent scientific study conducted by Schram and Molenaar, (2018) on commercial vessels using pulse trawl gear. The methodology used in this study was in accordance with the ICES guidelines for discards survival studies (ICES, 2016). The results were collected during sea trips throughout the year (January, May, June, July, September, October, December) to account for the potential effect of variable environmental and fishing conditions on discards survival.

The study shows survival of turbot discards ranged from 0% to 63% among sea trips. The overall discards survival probability for turbot was estimated at 30% with a 95% confidence interval of 20 to 43%. The overall estimates are based on 111 individuals. Individual trip survival values ranged from 0% (Jan, Feb) to 63% (July). However, there were a low number of individuals in each trip (from 7 to 31). All these estimates apply to year-round pulse-trawl fisheries, but, discards survival shows variation throughout the year. As this study notes, this means that the overall survival probability for a species is not necessarily representative of discards survival at any specific time of the year. The nature of this variation remains to be established.

The study also reveals that catch-processing time seems to have no effect on fish condition or on the survival of discarded turbot. However, survival was strongly affected by fish condition, and the JR recommends that measures aimed at increasing discards survival should focu on improving the condition of discarded fish during the capture process rather than the catch processing.

EWG 18-06 observations

EWG 18-06 observes that no data on the fleets or fisheries (e.g. fleet, landings, discard rates) involved is provided. EWG 18-06 further observes it is unclear as to whether the exemption is to apply to all trawl fisheries or just to vessels using pulse trawls.

EWG 18-06 notes that the JR states the exemption is on a temporary basis for three years. However, EWG 18-06 notes that there is no justification for this and also points out that the lifespan of the discard plan is three years as well.

EWG 18-06 considers the preliminary estimate of survival of 30% to be somewhat low, acknowledging that the studies proposed may allow time for improvements in the fishery (gear selectivity, survivability data). EWG 18-06 considers it a decision for managers to decide whether the survival rate coupled with the proposed additional measures is sufficient to justify the exemption.

EWG 18-06 also notes that the survival rates in summer were higher than in winter which is unusual based on results of previous survival studies with different species. Given this unexpected outcome, EWG 18-06 considers it appropriate to repeat the survival studies to confirm this is the case.

EWG 18-06 notes that the survival studies presented were all carried out with pulse trawls. EWG 18-06 cannot assess whether the results presented are representative of standard beam trawl gears or other trawl gears but based on the differences in operation of the pulse trawl it is likely that the survival rates would be lower with standard beam trawls and similar with other towed gears. If the intention is for this exemption to cover demersal trawls and standard beam trawl gear as well as pulse trawls then EWG 18-06 considers it appropriate to repeat these studies with these gears.

EWG 18-06 notes that the total sample sizes used in the survival studies are adequate to obtain an overall survival rate. However, although the sea trips were spread out over the year (January, May, June, July, September, October, December) to account for the potential effect of variable environmental and fishing conditions on discards survival. EWG 18-06 considers the low number of individuals in each trip prevents using these as reliable monthly survival estimates.

EWG 18-06 observes that the survival probability estimates apply to year-round pulse-trawl fisheries, but, the results show variation in survival rates throughout the year. As the studies note, this means that the overall survival probability for a species is not necessarily representative for its discards survival at any specific time of the year. The nature of this variation remains to be established. The studies also reveal that catch-processing time seems to have no effect on fish condition or on the survival rate of discards.

EWG 18-06 notes that the studies show survival was strongly affected by fish condition. Therefore, the recommendation made in the JR that measures aimed at increasing the survival of discards should focus on improving the condition of discarded fish during the capture process rather than the catch processing seems appropriate.

6.3 North Sea – Proposals for technical measures

The JR does not contain any new proposals for technical measures. Existing measures relating to use of the SEPNEP trawl and specific measures for demersal trawl fisheries in the Skagerrak are maintained. The use of the Flemish panel in the BT2 beam trawl fishery for sole linked to an existing *de minimis* exemption this fishery is also maintained.

EWG 18-06 notes that while there is evidence of improvements in selectivity in many demersal fisheries in the North Sea and Skagerrak, it is also evident that there are still fisheries within this area where the level of unwanted catches remains high and improvements in selectivity should be considered to reduce such catches. In particular despite numerous trials and pilot projects to test more selective gears, small mesh demersal trawl mixed fisheries using TR2 gears (70-99mm mesh size) in the southern North Sea continue to have high levels of unwanted catches.

7 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 Vb, VI and VII). On the basis of 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) 2018/46. In 2018, a further set of Joint Recommendations has been submitted by the Member States. The main elements of these JR's and which of these have been assessed by EWG 18-06 are summarised in table 7.1.

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

Elements	***Status***	***Section***
De minimis		
Common sole caught in gillnets and trammel nets in the Channel and the Celtic Sea	Existing	Not assessed
Common sole caught with beam trawls with a mesh size of 80-119mm with increased mesh sizes in the extension of the beam trawl	Existing	Not assessed
Whiting caught with bottom trawls and seines <100mm and pelagic trawls to catch whiting in the Channel	Existing but revised	Extended to include bottom trawls and seines with mesh size equal or greater than 80mm (OTB, SSC, OTT, PTB, SDN, SPR, TBN, TBS, TB, SX, SV, OT, PT, TX), pelagic trawls (OTM, PTM) and beam trawls (BT2) with mesh size of 80-119mm in the Eastern Channel (ICES division VIId).

Whiting caught with bottom trawls and seines ≥100mm and pelagic trawls to catch whiting in the Celtic Sea and the Channel	Existing but revised	Added to *de minimis* above. Not included Celtic Sea
Nephrops caught with bottom trawls with a mesh size of 80-99mm in ICES subareas VI and VII	Not included in new JR	Not assessed
Whiting caught with bottom trawls and seines <100mm and pelagic trawls to catch whiting in the Celtic Sea	Not included in new JR	Not assessed
Combined *de minimis* for species under the landing obligation for vessels using bottom trawls >80mm in the Celtic Sea and the English Channel	Not included in new JR	Not assessed
Gadoids (cod, haddock, whiting) caught using bottom trawls, seines and beam trawls of greater than or equal to 80mm mesh size in the Celtic Sea and the Channel (ICES VIIb-c, e-k)	New	Annex X
Undersized whiting in the TR2 *Nephrops* trawl fishery in ICES division VIIa	New	Annex XI, XIa, XIb, XIc
Undersized by-catches of haddock in the TR1 demersal trawl fisheries in ICES area VIIa	New	Annex XII, XIIa
Bycatch of pelagic species (mackerel, horse mackerel, herring, boarfish, greater silver smelt) caught by vessels using bottom trawls and seines, and beam trawls in ICES subarea VI and VIIb-k	New	Annex XIII
High Survivability		
Nephrops caught by pots, traps or creels (gear codes FPO and FIX) in ICES subareas VI and VII	Existing	Not assessed
Common sole (Solea solea) <MCRS caught by otter trawl gears (OTT, OTB, TBS, TBN, TB, PTB, OT, PT, TX) with cod	Existing but additional info required according to discard plan	Added to *de minimis* above. Not included Celtic Sea

end mesh size of 80-99 mm in ICES division VIId within six nautical miles of the coast and outside identified nursery areas with defined fishing operations		
Nephrops in the TRI fisheries in Area VII and in the TR2 fisheries in Area VII in combination with highly selective gears	New	
Nephrops caught by 80-110mm otter trawl gears in ICES subarea VIa, within 12 miles of coasts	New	
Skates and ray species caught by any gear in the North Western Waters (areas VI and VII)	New	
Plaice caught by trammel nets in ICES divisions VIId and VIIe	New	
Plaice caught by trammel nets in ICES divisions VIIf and VIIg	New	
Plaice caught by Otter Trawls in ICES divisions VIId and VIIe	New	
Plaice caught by otter trawl gears in ICES subarea VIIf and VIIg	New	
Plaice caught with beam trawls in ICES subareas VIIa to VIIk	New	
Fish caught in pots, traps and creels in North Western Waters	New	
Minimum conservation reference size		
Technical Conservation Measures		
Technical rules in the Celtic Sea protection zone - VIIf, VIIg and part of VIIj: raised baseline + derogations for: * >[5%] NEP *(WHG, angler, HKE+megs) *<10% gadoids	New	
New minimum standards in the Irish Sea VIIa: *5 alternative TR2 options for	New	

NEP vessels [5%] *2 alts for >[10%] HAD, COD, skates/rays *<[10%] HAD, COD, skates/rays *>30% *Nephrops*		

7.1 NWW – Proposals for *de minimis* exemptions

A summary of the fishery information applicable to the new or revised *de minimis* applications is provided in Table7.1.1.

Table 7.1.1 Summary of fishery information for proposed *de minimis* exemptions as submitted for the NWW (restricted to new or re-assessed exemptions). **Note:** This table contains additional material supplied by the Regional Group in response to the Commission's request following initial review by EWG-18-06

Whiting using bottom trawls and seines with mesh size equal or greater than 80mm, pelagic trawls and beam trawls with mesh size of 80-119mm in the Eastern Channel (ICES division VIId)

Country	**Exemption applied for (species, area, gear type)**	**Species as bycatch or target**	**Number of vessels subject to LO**	**Estimated landings - gadoids (in tonnes) - 2016**	**Estimated discards - gadoids (in tonnes)**	**Estimated catch - gadoids (in tonnes)**	**Discard rate**	**Estimated *de minimis* maximum volume (in tonnes) - 5% exemption**
FR	Whiting VIId-IVc	By catches	6 seines	164 t	263 t	427 t	61.6%	21.4 t
FR	Whiting VIId-IVc	Target and by catches	47 Bottom trawls >18m	2 637 t	1 569 t	4 206 t	37.3%	210.3 t
FR	Whiting Western VIId	bycatch	120 bottom trawls <18m	81 t	166 t	246 t	67.2%	12.3 t
FR	Whiting Eastern VIId	bycatch	115 bottom trawls <18m	14 t	71 t	85 t	83.1%	4.3 t
NLD	Species : WHG Area : VIId Gear type : SSC	bycatch	15	Gadoids: 585, of which WHG: 544	Gadoids: 560 Of which WHG: 557	WHG: 1101	51%	55 t
UK			18	WHG 93				

Gadoids (cod, haddock, whiting) caught using bottom trawls, seines and beam trawls of greater than or equal to 80mm mesh size in the Celtic Sea and the Channel (ICES VIIb-c, e-k)

Country	Exemption applied for (species, area, gear type)	Species as bycatch or target	Number of vessels subject to LO	Estimated landings - gadoids (in tonnes) - 2016	Estimated discards - gadoids (in tonnes)	Estimated catch - gadoids (in tonnes)	Discard rate	Estimated *de minimis* maximum volume (in tonnes) - 5% exemption
EU (mixed fishery)	species: whiting, haddock and cod area: VII gear types: TR1	target and by-catch	FR = 132 IE = 127	14414.74	8710.98	23125.73	27%	1002.88
EU (mixed fishery)	species: whiting, haddock and cod area: VII gear types: TR2	Target and bycatch	IE = 188 FR = 152 NL =10 UK = 46 (incl TR1)	9097.84	5195.95	14293.80	53%	619.16

Undersized whiting in the TR2 *Nephrops* trawl fishery in ICES division VIIa

Country	Exemption applied for (species, area, gear type)	Species as a bycatch or target	Number of vessels subject to LO	Landings (by LO subject Vessels)	Estimated Discards	Estimated Catch	Discard Rate	Estimated *de minimis* volumes
UK, Ireland	Whiting, Area VIIa, Demersal trawl for *Nephrops* (TR2)	bycatch	146 UK 169 IE	3t UK 2t IE	558t UK 535t IE	561t UK 537t IE	99% UK 99% IE	28t UK 27t IE

Undersized haddock in the TR1 trawl fishery in ICES division VIIa

UK	Haddock VIIa TR1	Both	23	588	12	599	2%	12

IE	Haddock VIIa TR1	Both	17	103	34	137	25%	3

Bycatch of pelagic species (mackerel, horse mackerel, herring, boarfish, greater silver smelt) caught by vessels using bottom trawls and seines, and beam trawls in ICES subarea VI and VIIb-k

Country	**Exemption applied for (species, area, gear type)**	**Species as bycatch or target**	**Number of vessels subject to LO**	**Estimated landings - gadoids (in tonnes) - 2016**	**Estimated discards - gadoids (in tonnes)**	**Estimated catch - gadoids (in tonnes)**	**Discard rate**	**Estimated *de minimis* maximum volume (in tonnes) - 5% exemption**
EU (mixed fishery)	Bycatch pelagic area: VII gear types: bottom trawls and seines	bycatches	FR = 152 of which 6 seiners	175.2 t	1 939.19 t	2 114.39 t	91.7%	105.77 t
IE*	; Bottom trawls and seines, beam trawls; Area VI	bycatch		0 tonnes (all species)	Mackerel – 7t Herring – 13t Horse mackerel – 14.5t Argentine and Boarfish – no discards	Mackerel – 7t Herring – 13t Horse mackerel – 14.5t Argentine and Boarfish – no catch	100% - Mackerel, horse Mackerel and herring	NA
IE*	Bottom trawls and seines, beam trawls; Area VIIb-k	bycatch		Mackerel – 9t Herring – 86t Horse mackerel – 1 t Boarfish and Argentine – no landings	Mackerel – 106t Herring – 584t Horse mackerel – 204t Boarfish and Argentine – no discards	Mackerel – 115t Herring – 670t Horse mackerel – 205t Boarfish and Argentine – no catches	Mackerel – 92% Herring – 87% Horse mackerel – 99.5%	NA
NLD	Area : VIId, VIIe	Bycatch / target	15	324 ton Of which : MAC : 166 HER : 1 HOM : 157	MAC: 208 HER: 999 HOM: -	MAC: 374 HER: 1000 HOM: 157	MAC: 57% HER: 100% HOM: 0%	
UK	Area VI and VII	Bycatch	54	282				

ES	area: VII gear types: TR2	Bycatch	16 (20 all fleet TR1+TR2)	0.052	2572	2572	99.9%	129
ESP(AZTI)	OTT, OTB, PTB, OT, PT, TBN, TBS, TX, SSC, SPR, TB,TBB, SDN, SX, SV (Subarea 6)	By catch	2	(WHB) 0 (ARU) 0	(WHB) 0.219 (ARU) 21.890 TOTAL 22.10	(WHB) 0 (ARU) 0	(WHB) 100% (ARU)100%	(WHB) 0.011 (ARU) 1.094 TOTAL 1.105

7.1.1 Whiting caught with bottom trawls and seines >80mm and pelagic trawls and beam trawls (80-119mm) to catch whiting in the Eastern Channel (VIId)

Background

This whiting exemption is based on a previous exemption butxtended to include bottom trawls and seines with mesh size equal or greater than 80mm (OTB, SSC, OTT, PTB, SDN, SPR, TBN, TBS, TB, SX, SV, OT, PT, TX), pelagic trawls (OTM, PTM) and beam trawls (BT2) with mesh size of 80-119mm and limited to the Eastern Channel (ICES division VIId).

The basis for the exemption

This is a modification of an existing provision so the basis is considered to still apply. No justification is provided as to the addition of beam trawls or the intention to now restrict this to the Esatern Channel.

EWG 18-06 observations

No supporting information was provided to substantiate this extended request. EWG 18-06 requires more information on any changes in fisheries scale before it is possible to provide advice on thos proposal.

7.1.2 Gadoids (cod, haddock, whiting) caught using bottom trawls, seines and beam trawls of greater than or equal to 80mm mesh size in the Celtic Sea and the Channel (ICES VIIb-c, e-k)

Background

On the basis of scientific background and rationale provided in Annex X the North Western Waters Group recommends that by way of derogation from Article 15(1) of Regulation (EU) No 1380/2013, up to a maximum of 7% of the total annual catches for years one (2019) and two (2019), and 6% for year three (2021) of gadoids (cod, haddock, whiting) for vessels using bottom trawls, seines and beam trawls of mesh size greater than or equal to 80mm in ICES divisions VIIb-c and VIIe-k. The request for an exemption for *de minimis* is based on article 15.c.i), due to difficulties to further increase selectivity in this mixed fishery, and on article 15.c.ii), due to disproportionate costs a total application of the landing obligation would cause in this fishery. The fleet is particularly vulnerable to the risk of commercial catch losses an improvement in selectivity would cause.

The basis for the exemption

This *de minimis* exemption relates to TR1 and TR2 fisheries in the Celtic Sea and the Channel. The TR1 fishery is characterized as a mixed fishery, mainly targeting 'gadoid' species, such as haddock (*Melanogrammus aeglefinus*), cod (*Gadus morhua*) and whiting (*Merlangus merlangus*) as well as anglerfishes and megrims. The countries that contributed most effort in TR1 fisheries in

the Celtic Sea and Channel were France, Spain, Ireland and England. In 2016, 132 French vessels of more than 18m took part in this activity in the Celtic Sea and Western channel. In 2016, around 127 Irish vessels greater than 12m in length were recorded using TR1 gear in the Celtic Sea.
The trawlers with a codend mesh size range 80-100mm (TR2) is the fishery with second highest effort in Celtic Sea, accounting for 18% of the total effort. Most of the TR2 effort is mainly operated by English and French vessels, however most of the Spanish effort in the Celtic Sea are TR2 and is likely to be underestimated due to a lack of data. Overall 138 Irish vessels were involved in these fisheries in the Celtic Sea in 2016. In 2016, 152 French vessels took part in this activity, mainly in the Western channel.

Based on the STECF web-based data tool (2013-2016) catch and discard profiles were calculated for both TR1 and TR2. For TR1, catches of gadoids (whiting, haddock, cod) represented approximately 28.5% of overall catches (based only on the catch of TAC species) and discards for those species represented 38% of the total volume of the discards of TAC species. For TR2, catches of gadoids (whiting, haddock, cod) represented approximately 20% of overall catches (based only on the catch of TAC species) and discards for those species represented 13% of the total volume of the discards of TAC species.

Ireland is looking at further gear modifications to improve selectivity (e.g. T90 codends or larger mesh square mesh panels) (Browne et al., 2016; Cosgrove et al. 2016 and Tyndall et al., 2017) and France is also running programs on selectivity (CELSELECT, REJEMCELECT).

Based on the STECF web-based data tool, mixed demersal vessels in Celtic Sea and Western Channel caught 70432.2 tonnes of TAC species (average 2013-2016) of which 20057.6 tonnes were whiting, cod and haddock catches. Thus, a *de minimis* of 7% would represent theoretically a maximum volume of discards of 1404 tonnes (for all European vessels using TR1 gear in Celtic sea and Western Channel). Discards of each species would represent: whiting 33%, haddock, 61.5% and cod 5.1% of the total gadoids discard volume (cod, whiting, and haddock). TR2 mixed demersal vessels in Celtic Sea and Western Channel caught 61378.89 tonnes of TAC species (average 2013-2016) of which 12383 tonnes were whiting, cod and haddock catches. Thus, a *de minimis* of 7% would represent theoretically a maximum volume of discards of 867 tonnes (for all European vessels using TR2 gear in Celtic sea and Western Channel). Discards of each species would represent: whiting 53%, haddock 43% and cod 3.64% of the total gadoids discard volume (cod, whiting, and haddock).

The supporting documentations refer to selectivity trials in France (Annex I; REJEMCELEC project) and Ireland (Annex V; TR1 and TR2). For France no results have been presented, it is stated that the study results will be communicated through information letters and two meetings with partners and media. In Ireland the main conclusions of such experiments are the following: discard of haddock (TR1 and TR2) are high; improving selectivity should result in increased catches of larger haddock with a higher economic value which will help to offset any short-term losses; the TR1 mixed gadoid fishery is selective only for whiting, but any increases in selectivity will undoubtedly reduce the marketable catch of whiting, hake and flatfish species; TR2 *Nephrops* fisheries moving from 80mm+120mm smp to using an 80mm codend with a 300mm smp, SELTRA box codend or sorting grid will increase the selectivity for haddock significantly (50-90%) without unduly reducing catches of *Nephrops*; in TR2 mixed demersal fisheries, an increase in codend mesh from 80mm to 100mm would give a general improvement for discarding of other species such as hake.

EWG 17-03 observations

The STECF has already evaluated this *de minimis* request in the past and during the Plenary 18-01, where it was noticed that the latest submission provided clarification on some previous STECF observations. STECF Plenary 18-01 observed that the effect of the combined *de minimis* approach is to modify the proportions of each species that can be discarded. The differences in catch and discard rate between species means that with a combined *de minimis*, there is less whiting and cod available under a *de minimis* exemption and more haddock, compared with the single species

approach. Therefore, the combined *de minimis* approach offers an alternate composition of discards.

STECF Plenary 18-01 conclusions:

- STECF concludes that to be in line with CFP objectives, the maximum possible amount of *de minimis* (i.e. the maximum safeguard amount) for each species that could potentially be discarded, must be deducted from the TAC. Consequently, the deduction from the TAC to account for *de minimis* discards is higher than for single species *de minimis*. There is thus a direct trade-off between flexibility of *de minimis* and the precautionary TAC deduction; in this case a 25% flexibility requires a 25% higher deduction from each stock TAC.
- STECF concludes that under a combined *de minimis* of 7% with 25% safeguard, the allowed discards can be substantially more than 7% for the individual species. For example, in the proposal, for haddock catches taken by TR2, a *de minimis* level of up to 12.7% would be possible.
- STECF concludes that the total amount of discards permitted under a combined *de minimis* with a safeguard should be same as the sum of single species *de minimis* for the same stocks. Rather than increasing flexibility, the effect of a combined species *de minimis* is to modify the relative quantities that can be discarded of the selected species. STECF is not aware of differences in handling difficulties between different species which would justify the need for securing higher *de minimis* levels for some species.
- STECF concludes that based on the proposal, for the three single-species *de minimis* provisions, around 80% of the historical discards would need to be landed (assuming no selectivity improvements). The combined *de minimis*, with a 25% safeguard flexibility, does not reduce the overall amount of unwanted catches to be landed (~80%), and for each stock >75% of historical discards would still need to be landed, demonstrating the limited benefits of this approach.
- STECF concludes that the use of a safeguard requires that monitoring requirements are significantly increased to include integrated international real-time catch monitoring and reporting, and this is not currently in place but also not likely to be achieved in the near future.

EWG 18-06 notices that only detailed information for the French and Irish fleets is provided. If the intention is to apply this *de minimis* to other fleets, then information on these fleets is needed.

The assertion that it is difficult to improve selectivity is supported for the Irish fleets only. Information on ongoing selectivity trials in France is provided.

EWG 18-06 notices that in the "Template for the provision of information that defines the fisheries to which *de minimis* exemptions should apply (Annex IV)" the estimated landings and the estimated discards for gadoids report the same value (9097.84 tons), and this is not consistent with the reported discard rate (53%).

EWG 18-06 notices that the 5% *de minimis* level provides only partial solution to sorting and handling challenges when discard rates are 27% for TR1 and 53% for TR2, indicating significant selectivity improvements are still required.

Due to these remaining questions, lack of certain key data, incomplete selectivity data and general shortage of material justifying the exemption on the grounds of disproportionate cost, EWG 18-06 is unable to fully assess the merits of this case.

7.1.3 Undersized whiting in the TR2 Nephrops trawl fishery in ICES division VIIa

Background

A *de minimis* exemption is requested for catches of undersized whiting caught by the demersal trawl fishery targeting *Nephrops*, using cod ends of between 70-99mm (TR2) in the Irish Sea. A *de minimis* is sought on the basis that scientific evidence demonstrates additional selectivity cannot be easily achieved without compromising the current target fishery. Additional selectivity will have increasing impact on the target catch removing the economic benefit of the fishery without significant improvement in discard reduction.

The basis for the exemption

Total catches of whiting in Area VIIa by TR2 vessels were 1,098 tonnes in 2016 (STECF data) with landings of 5 tonnes and discards of 1,093 tonnes, giving a discard rate of 99%. Irish catches in 2016 were 537 tonnes (2 tonnes landings and 535 tonnes discards) and UK catches were 561 tonnes (3 tonnes landings and 558 tonnes discard). Discards included all fish below MCRS. A total of 315 vessels are using TR2 in Area VIIa, 146 are UK vessels and 169 are vessels from Ireland.

EWG 18-06 observations

EWG notes that 99% of whiting catch are discarded because they are below the MRCS (558t UK and 535t IE), and that a *de minimis* of 5% would produce a volume of 28t UK and 27t IE.

EWG notes that the 5% *de minimis* level provides only partial solution when discard rates are 99%, indicating significant selectivity improvements or other means of reducing undersized whiting catches are still required. Discarding at the requested *de minimis* levels will not remove all unwanted catches, but only a very small fraction.

7.1.4 Undersized by-catches of haddock in the TR1 demersal trawl fisheries in ICES area VIIa

Background

The JR of the North Western Waters Group recommends that by way of derogation from Article 15(1) of Regulation (EU) No 1380/2013 up to a maximum of 2% of the total annual catches for years one (2019), two (2020) and three (2021) of bycatch of undersized haddock by vessels using large mesh eliminator trawls with 120mm codends and other bottom trawls fishing with 120mm codends in ICES division VIIa.

The basis for the exemption

The request for an exemption for *de minimis* is based on article 15.5.c.i) and ii), due to difficulties to improve selectivity in the short-term and disproportionate costs of handling the catches of haddock, in particular significant additional labour costs for catch sorting, that a full landing obligation would imply in this fishery.

The exemption relates to TR1 fisheries in the Irish Sea (ICES 7a) which are likely to catch and discard haddock, a stock which ICES reports is within MSY requirements. The supporting documentation (Annex XII and Annex XIIa) refers to the following fisheries: i) Vessels using large mesh eliminator trawls with 120mm codend. ii) Other bottom trawls fishing with 120mm codends.

For UK vessels, the species is mainly caught in both the directed *Nephrops* fishery and in targeted whitefish fisheries. UK vessels use eliminator trawls. Irish vessels use a normal bottom trawl and a trawl with raised fishing line is also being tested. Catch information for the UK and Irish vessels involved is shown in the table below.

TR1	Discard (t)	Landing (t)	Discard Rate %	% Below MCRS	Total Catch (t)	Percentage requested	*De minimis* Volume (t)	Volume of u/s discards (t)
HAD –UK	11.7	587.5	1.9	29.4	599.2	2%	11.9	3.44
HAD – IE	34	103	25	100	137	2%	3	34

The quantities of discards of haddock under MCRS indicate a total of 3.4 tonnes in UK, and 34 tonnes in Ireland. This means the *de minimis* volume requested by the UK is more than required to eliminate the undersized component of the haddock catch. The *de minimis* volume requested for Ireland is 3 tonnes, which is substantially smaller than that required to eliminate the discarding of undersized haddock.

The supporting documentation (Annex XII) refers to recent works of discard rates and selectivity measures. EWG 18-06 notes that there are several selectivity studies with good results suggesting that haddock discards can be minimized by modification of fishing line but that these are not currently used by the Irish fleet. Increasing selectivity would apparently remove most of the under sized Irish catch.

EWG 18-06 Observations

EWG 18-06 notes that although the *de minimis* would not be sufficient to cover all the Irish undersized discards, the uptake of the more selective gears reported in the annex would enable the discards to be eliminated. The fact that the selectivity studies suggest that the new gears remove most if not all undersized haddock raises the question of the need for the *de minimis* at al.

EWG 18-06 notes that the argument of handling costs of all haddock would have a disproportionate negative economic impact, is ambiguous for UK fleet, since the haddock discard rate is low (1.9%) in UK vessels and since under sized fish accounts for only 30%. This means that 70% of discards are of commercial sizes which may be sold for human consumption.

EWG 19-06 further notes that the supporting documentation (Annex XIIa) also refers to an UK observer program in 2017 carrying out 81 hauls (mean length of hauls was 10 hours) with a haddock discard rate of only 0.6% which is less than appears in the table above. This would imply that only a very small quantity of discards is involved and that the requested *de minimis* is excessive. Without clarification of the most appropriate discard rate for the UK vessels, EWG 18-06 cannot further assess the justification for the *de minimis*.

7.1.5 Bycatch of pelagic species (mackerel, horse mackerel, herring, boarfish, greater silver smelt) caught by vessels using bottom trawls and seines, and beam trawls in ICES subarea VI and VIIb-k

Background

The JR of the North Western Waters Group recommends that by way of derogation from Article 15(1) of Regulation (EU) No 1380/2013 up to a maximum of 7% of the combined total annual catches of mackerel, horse mackerel, herring, boarfish and greater silver smelt for years one (2019) and two (2020) and 6% of the combined total annual catches of these species for year three (2021) caught by vessels using bottom trawls and seines, and beam trawls in ICES subarea VI and VIIb-k.

The basis for the exemption

The request for an exemption for *de minimis* is based on article 15.5.c.i) and ii), due to difficulties of improving selectivity in a short-term period and disproportionate costs of handling the catches of pelagic species, in particular significant additional labour costs for catch sorting, that a full landing obligation would imply on this fishery.

The STECF (EWG 18-01) has previously reviewed the suggestion from the North Western Waters of a combined *de minimis* request for gadoids. Several concerns were raised by STECF on how such a methodology would be applied to annual quota setting in the North Western Waters. STECF Plenary observed that the effect of the combined *de minimis* approach is to modify the proportions of each species that can be discarded because the differences in catch and discard rates between species. The combined *de minimis* approach offers an alternate composition of discards rather than an increasing flexibility (see section 7.1.3 above)

This *de minimis* exemption relates to bottom trawls and seines, and beam trawls in ICES subarea VI and VIIb-k. The information to support the exemption (Annex XIII) refers only to bottom trawl TR2 fishery as follows:

1. Irish (IR) trawlers targeting *Nephrops*
2. Spanish (SP) trawls targeting megrim, anglerfish and hake.
3. French (FR) and English (UK) trawls targeting anglerfish, gadoid species and non-quota species (cuttlefish and squid).

Following table is prepared from data included in Annex.

Table. Specifying *de minimis* for 2019 of demersal trawl fleet in ICES 6 and 7b-k (JR AnnexXIII) .

Species subject to the DM	Total catch	Estimated discard share composition on overall catches	Estimated discard share composition (DS)	Maximum volume of discard with a 3% DM (in tonnes)	Maximum volume of discard with a 4% DM (in tonnes)	Maximum volume of discard with a 5% DM (in tonnes)	Maximum volume of discard with a 6% DM (in tonnes)	Maximum volume of discard with a 7% DM (in tonnes)	Applicable rules for DM use	Maximum discard share	Estimate of Maximum volume under a 7% de minimis
horse macke	836.98	2.79%	42%	26.75	35.67	44.58	53.50	62.42	25% of the	52.69%	78.02
mackerel	558.84	1.73%	26%	16.55	22.06	27.58	33.09	38.61	estimated	32.59%	48.26
herring	718.57	2.09%	32%	20.07	26.76	33.45	40.14	46.83	discard	39.53%	58.54
boarfish	1.00	0.01%	0%	0.10	0.13	0.16	0.19	0.22	share	0.19%	0.28
Total	2115.39	7%	100%	63.46	84.62	105.77	126.92	148.08	compositio		

Table. Summary of *De minimis* exemption request for bycatch of pelagic species (mackerel, horse mackerel, herring, boarfish, greater silver smelt) caught by vessels using bottom trawls and seines, and beam trawls in ICES subarea VI and VIIb-k

EWG 18-06 notes that Annex XIII provides some supporting material for the discard exemption for mackerel, horse-mackerel, herring and, boarfish and greater silver smelt combined, up to a maximum of 7 % in 2019 and 2020 and up to a maximum of 6% in 2021 of the total annual catches of these species by vessels using bottom trawls (OTB, OTT and PTB) in ICES subarea 6 and 7b-k. No scientific information is presented on beam trawl and seine fisheries related with this exemption. EWG 18-06 notes that data on greater silver smelt is not clear

The supporting documentation (Annex XIII) refers to works on selectivity measures but also to the difficulties of improving selectivity in the mixed fishery. The document states that volume and composition of catches can be unpredictable and vary from a year to another.

EWG18-06 notes that the supporting information presents safeguards. The data estimates are based on the STECF web-based tool. In order to limit the risk of discarding only one species and because discard rate can be significantly different from a species to another it is proposed to put in place a safeguard of 25%. On the overall discard volume permitted by this exemption, only the proportion calculated (+25%) could be discarded on the overall discard (estimates of the maximum volume under 7% *de minimis* with safeguards is provided in table). Those safeguards should be revised if necessary and according to discard profile that can evolve over the years.

EWG 18-06 Observations

Due to lack of information, EWG 18-06 is unable to assess whether selectivity is difficult to improve in this fishery or whether the costs of handling unwanted catches are disproportionate. The EWG 18-06 notes the lack of information for several important gear types rendering it not possible to judge the scale of the *de minimis* request. The lack of clarity about the use of the 'safeguard' also renders this request difficult to justify.

7.2 NWW – Proposals for Survivability Exemptions

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

Table 7.2.1 Summary of fishery data associated with high survivability exemptions submitted as part of the NWW Joint Recommendation. **Note:** This table contains additional material supplied by the Regional Group in response to the Commission's request following initial review by EWG-18-06

***Nephrops* in the TRI fisheries in Area VII and in the TR2 fisheries in Area VII in combination with highly selective gears**

Country	Exemption applied for (species, area, gear type)	Species as bycatch or target	Number of vessels subject to the landing obligation	Landings (by landing obligation subject vessels)	Estimated Discards	Estimated Catch	Discard Rate	Estimated discard survival rate from provided studies
IE	*Nephrops* VII (including VIIa but excluding VIId) TR vessels using Otter Trawls	Target and Bycatch	114	9148	1735	10883	16%	64%
UK	*Nephrops* VII TR vessels using Otter Trawls	Target	179	7336	na	na	na	64%
FR	*Nephrops* VII TR vessels using Otter Trawls	Target	24	241 t	40 t	281 t	14%	64%

***Nephrops* in the otter trawl fisheries (80-110mm) in Area Va**

Country	Exemption applied for (species, area, gear type)	Species as bycatch or target	Number of vessels subject to the landing obligation	Landings (by landing obligation subject vessels)	Estimated Discards	Estimated Catch	Discard Rate	Estimated discard survival rate from provided studies

Scotland	*Nephrops*, Area VIa, otter trawl 80mm - 110mm	*Nephrops*	234 vessels in Scotland use nephrop trawls as main method of fishing	19,601t (all landings by this gear type)	722t	11,077	7%	53%

Skates and ray species caught by any gear in the North Western Waters (areas VI and VII)

Country	**Exemption applied for (species, area, gear type)**	**Species as bycatch or target**	**Number of vessels subject to the landing obligation**	**Landings (by landing obligation subject vessels)**	**Estimated Discards**	**Estimated Catch**	**Discard Rate**	**Estimated discard survival rate from provided studies**
FR	Skates and Rays		Around 900 vessels					
IE	Skates and rays, Area VI & VII, all gears	Both	188	960t	1099-233t*	2059-3294	53%-71%	NA
NL	Species: RJC, RJH, RJM Area: VIId, VIIe Gear type: SSC	Bycatch	15	7,64				
ES	All gears	Bycatch	20 Trawlers 2 Gillnets 45 Longlines	418.114	296.089	714.203	41%	

Plaice Area VIId and VIIe TR2 vessels using Trammel nets

Country	**Exemption applied for (species, area, gear type)**	**Species as bycatch or target**	**Number of vessels subject to the landing obligation**	**Landings (by landing obligation subject vessels)**	**Estimated Discards**	**Estimated Catch**	**Discard Rate**	**Estimated discard survival rate from provided studies**

UK	Plaice Area VIId and VIIe vessels using Trammel nets	By catch	87	62t	33.3t	104.16t	32%	73%
FR	Trammel		VIId 160 VII 262					

Plaice VIIf, g Trammel nets

Country	Exemption applied for (species, area, gear type)	Species as bycatch or target	Number of vessels subject to the landing obligation	Landings (by landing obligation subject vessels)	Estimated Discards	Estimated Catch	Discard Rate	Estimated discard survival rate from provided studies
UK	Plaice VIIf, g Trammel nets	Bycatch	7	0.18t	No discard data (22.86t based on area discard rate)	23.02t	No discard data (73% for stock in VIIf, g)	49%
FR	Trammel							

Plaice VIId and VII TR vessels using Otter Trawls

Country	Exemption applied for (species, area, gear type)	Species as bycatch or target	Number of vessels subject to the landing obligation	Landings (by landing obligation subject vessels)	Estimated Discards	Estimated Catch	Discard Rate	Estimated discard survival rate from provided studies
UK	Plaice VIId and VIIe TR vessels using Otter Trawls	By catch	205	504t	237t	741t	32%	64%
FR	Trawl		VIId 162 VIId(W) 125 VIIe 152					

Plaice VIIf, g TR vessels using Otter Trawls

Country	Exemption applied for	Species as bycatch	Number of vessels subject to	Landings (by landing	Estimated Discards	Estimated Catch	Discard Rate	Estimated discard survival

	(species, area, gear type)	or target	the landing obligation	obligation subject vessels)				rate from provided studies
UK	Plaice VIIf, g TR vessels using Otter Trawls	Bycatch	49	13t	17.85t based on area discard rate	30.85t	73% for stock in VIIf, g	78%
IE	IE: TR Otter Trawls	Bycatch	64	14.5t	20t	34.5t	28%	78%
FR	Trawl		155					

Plaice caught with beam trawls in ICES subareas VIIa to VIIk

Country	Exemption applied for (species, area, gear type)	Species as bycatch or target	Number of vessels subject to the landing obligation	Landings (by landing obligation subject vessels)	Estimated Discards	Estimated Catch	Discard Rate	Estimated discard survival rate from provided studies
IE	Plaice, VIIa and b-k	Bycatch	13	269	255	524	49%	8-73%
BE								
UK	Plaice, VIIa and b-k	Target and bycatch	59	1326	na	na	na	
FR	Plaice, VIIa-k Beam trawls	Target and bycatch	19	84.64 t	57.33 t	141.97 t	40.4%	8-73%

Fish caught in pots, traps and creels in North Western Waters

Country	Exemption applied for (species, area, gear type)	Species as bycatch or target	Number of vessels subject to the landing obligation	Landings (by landing obligation subject vessels)	Estimated Discards	Estimated Catch	Discard Rate	Estimated discard survival rate from provided studies
Scotland	All fish species in area 6a caught in pots, traps and creels	bycatch	1,400	71,265t in total; of which 15,977t of *Nephrops*; and 3,739t of other species	n/a	n/a	n/a	>90%
UK	All fish species in	bycatch	451	87t fish (bass)	n/a	n/a	n/a	UK data

	area 6a caught in pots, traps and creels							
IE*	All fish species in 6a caught in pots, traps and creels	bycatch	575 < 10m 82 10-12m 19 12-18m (covers VI and VII)	15,123 t (mostly brown crab, lobster and whelk)	n/a	n/a	n/a	UK data

*DC-MAP data for 2016

7.2.1 Common sole (Solea solea) <MCRS caught by otter trawl gears (OTT, OTB, TBS, TBN, TB, PTB, OT, PT, TX) with cod end mesh size of 80-99 mm in ICES division VIId within six nautical miles of the coast and outside identified nursery areas with defined fishing operations

Background

Existing provision. Assessment of latest information confirmed the original observations on survival rates in small trawls.

EWG 17-03 observations

EWG 18-06 notes that new information in relation to nursery areas (as requested in the 2018 discard plan COM 2018/46) was not provided in the JR. Regional Group was requested to provide the relevant information.

7.2.2 Nephrops in the TRI fisheries in Area VII and in the TR2 fisheries in Area VII in combination with highly selective gears

Background

The 2018 JR from the Northwestern waters regional group proposes a high survival exemption for *Nephrops* in area VII. The proposed exemption covers *Nephrops* caught in TR1 (>100 mm) trawls and in TR2 (70-99 mm) trawls. However, eligibility for the use of this exemption, both TR1 and TR2 is conditional on the use of one a list of selective gear options (i.e baseline TR1 and TR2 trawls are not proposed to be exempted).

The basis for the exemption

The documentation underpinning the proposed exemption (Annex I) clarifies that the exemption is for area VII (except the eastern channel) and is coupled to the proposed changes of technical measures (section 6 of the JR). For the TR1 trawls this implies increased mesh size in either the codend, square mesh panels or changed mesh orientation (T90). For the TR2 trawls the list of alternative selective gear options encompasses grids or large mesh escape panels.

Apart from references to studies previously evaluated by STECF from the North Sea and Skagerrak on *Nephrops* trawls with increased selectivity (Swedish grid, SELTRA-panel and Netgrid), the proposal is also supplemented with a recent Irish study of *Nephrops*, that estimated a 64% survival rate during summer in a SELTRA-equipped trawl in area VIIb (Annex Ia).

EWG 18-06 Observations

EWG 18-06 judges that the new Irish study is scientifically robust and undertaken in line with the ICES WKMEDS-guidelines. EWG 18-06 however also notes that all the alternative gear options eligible for the proposed exemption (TR1 and some different TR2 trawls) most likely have very different selective properties. Since catch volume and catch composition are important factors affecting *Nephrops* discard survival, other proposed gears may lead to different survival rates than the 64% in the Irish study. The survival estimate is however similar to earlier studies on selective *Nephrops* trawls from the North Sea and Skagerrak (Swedish grid, SELTRA-panel and Netgrid), studies that have previously been evaluated by STECF.

EWG 18-06 considers that the suggested broadening of the exemption from highly selective *Nephrops* trawls to other types of TR1 and TR2 trawls can be questioned since the estimated survival in this study may not be representative of that for other gears in the wider fishery. For a EWG 18-06 to complete a more comprehensive assessment, a more in depth study is required.

EWG 18-06 notes that the supporting tabulated information (fleet size, targeted species, catches, discards) only covers Ireland. Similar information for other countries is missing and it is therefore impossible to assess the impact of this proposed survivability exemption

7.2.3 Nephrops caught by 80-110mm otter trawl gears in ICES subarea VIa, within 12 miles of coasts

Background

An exemption is proposed in the 2018 JR for *Nephrops* caught by 80-110 mm otter trawls in area VIa, within 12 miles off the coast. The cited report presents new scientific estimates of survival rates and also discusses the wider applicability and representativeness of new and old *Nephrops* discard survival estimates in Northwest waters, the North Sea and elsewhere.

The basis for the exemption

EWG 18-06 notes that the scope of the proposed exemption in terms of areas and variability of fisheries and gears covered is much broadened compared to currently implemented *Nephrops* survival exemptions, which typically are limited in terms of gears, areas and sometimes seasons. This proposal is very similar to, and based on much the same supporting information, as the proposal for exemption of *Nephrops* in North Sea trawls (see X.X)

The information provided is a summary of an extensive Scottish report of *Nephrops* survival work in both Northwestern waters and the North Sea performed during 2016-17 (Fox and Albalat 2018). The study reports on a series of trials performed with observers on three different commercial vessels using 80–99mm gear, fishing in the North Minch. Data from 10 tows in the summer and 14 in the winter was obtained. Additionally, the report also contains new captive observation estimates of survival for TR1 and TR2 trawls in area VIa during summer and winter months but also from a similar experiment in the North Sea.

The reported annual mean survival rate for *Nephrops* in TR1 and TR2 based on the new summer and winter trials on one vessel in the Minches (VIa) was 52.7% (50.9%-54.6%; 95% c.i.) (45.7% in summer and 56.3% in winter). The authors cautioned that the summer estimate was based on individuals sampled only at the start of the sorting process while the winter estimate covered individuals selected throughout the sorting process, which may mean that the summer survival is overestimated. Furthermore, the reported survival estimate from the North Sea study (one TR2-vessel in the Firth of Forth during summer) was 74% (71.8%-77.1%; 95% c.i.). Both estimates were derived using the captive observation method, thus excluding predation effects. In order to assess whether the survival estimates were representative of the wider fleet operating on the Scottish west coast, the scientist also compared environmental conditions, fishing practises and damages to *Nephrops* on 24 hauls by 6 other vessels operating in the area over the year. Based on this, the report concluded that the captive survival estimate from the trial in the Minches was likely within the range of what would be expected in the wider fishery. For the corresponding North Sea study, the conclusion was that the captive survival estimate was only applicable for smaller inshore vessels and not for the entire fleet. The proportion of damaged *Nephrops*, individuals with poor vigour and the quantity of non-*Nephrops* catch were the main factors

affecting discard survival. The report also recommends a number of catch handling strategies in order to maximise survival likelihood for *Nephrops* including hopper design and seawater spraying of catches but also recommends consideration of the use of more selective fishing gears to improve survival by reducing non-*Nephrops* catch.

EWG 18-06 Observations

EWG 18-06 judges that the supporting scientific information is of good scientific quality and is based on state of the art methods (as recommended by ICES WKMEDS). Furthermore, the approach chosen to try to validate how representative the captive survival estimates were of the wider fleets is commendable.

Based on the scientific underpinning, EWG 18-06 evaluate that the proposal of a *Nephrops* survival exemption for all TR1 and TR2 vessels is somewhat better substantiated in area VIa than in the North Sea. This is because the supporting study showed that the estimated annual survival rate (53%), based on the wider fleet survey, indicated that the conditions during the survival trials were within the range of the conditions of the wider fleet in VIa (which was not the case for the North Sea fleet). Also, the fact that the fisheries in area VIa are strongly dominated by Scottish vessels, while in the North Sea region a number of other countries participate in the *Nephrops* trawl fisheries.

EWG 18-06 notes that fleets from other countries were not covered in the fleet survey part of the report or discussed in the JR proposal. Since, however, most fishing activity in VIa is by the Scottish fleet the estimated survival rate is probably representative (but see below).

Regarding the reported survival estimates in the area VIa study, EWG 18-06 agree with the report notion that the summer estimate (46%) should be treated with caution due to de skewed sampling of individuals for the captive observation experiment. EWG 18-06 assess that a more representative sampling would likely have resulted in a lower annual survival estimate than the 53% reported. However, as the method used for weighing the winter and summer estimates is unclear to EWG 18-06, it is not possible to assess the potential effect on the annual survival estimate. EWG 18-06 further notes that the referenced study included very similar gears (TR1-TR2 twin trawl) and took place in the same area (Minches) as another important *Nephrops* survival study from the 1990's (Wileman et al. 1999). The results in Wileman et al is not discussed or referred to in the new study but these showed a much lower summer survival rate (≈25%). EWG 18-06 suggests that the various findings of this study be better incorporated in the discussion in order to better understand *Nephrops* discard survival. At the same time, EWG 18-06 notes that discard rates are rather low (7%) in the area meaning that the risk of unaccounted mortality due to a survival exemption is probably small.

The supporting tabled information provides detailed information (fleet size, targeted species, catches, discards) for UK-Scotland, which EWG 18-06 considers is probably sufficient as they are clearly dominant in *Nephrops* fisheries in the area.

7.2.4 Skates and ray species caught by any gear in the North Western Waters (areas VI and VII)

Background

On the basis of scientific evidence and rationale provided in Annex III of the JR, the North Western Waters group recommends that by way of derogation from Article 15(1) of Regulation (EU) No 1380/2013, the landing obligation shall not apply to skate and ray species subject to catch limits caught by any fishing gear in the North Western Waters.

EWG 17-03 observations

EWG 18-06 notes that the observations and consideration included in section 6.2.6 for the North Sea are also appropriate here. Additional, general discussion of skates and ray survivability is included in section 5.4

7.2.5 Plaice caught by trammel nets in ICES divisions VIId and VIIe

Background
The 2018 JR from the North-western waters regional group proposes a high survival exemption for plaice caught in division VIId and VIIe. The proposed exemption covers plaice caught by TR2 (70-99 mm) trawl vessels using trammel nets. The NWW-JR states that this exemption would reduce the risk of vessels being prevented from continuing to fish at sea due to their low plaice quota.

The basis for the exemption

Supplementary material is provided (Annex IV) as scientific evidence of the high survivability of Plaice in this area.

EWG 18-06 Observations

EWG 18-06 notes that the supplementary material provided as scientific evidence of the high survivability of plaice in this area and the information on fishing practice is too limited to be reviewed. Experimental details about a large part of the study are missing (e.g. analysis, control group, vitality assessment and animal observations). Fleet and fishery descriptions are provided for the United Kingdom, but the source related to the numbers supplied is unknown. There are other countries associated with the proposed exemption that have not been described.

EWG 18-06 note that without provision of more complete information it is not possible to assess the merits of this proposed high survivability exemption.

EWG 18-06 notes that this exemption is very similar to the next (area VIIf and VIIg) exemption with the documentation displaying a similar level of detail.

7.2.6 Plaice caught by trammel nets in ICES divisions VIIf and VIIg

Background
The 2018 JR from the North-western waters regional group proposes a high survival exemption, similar to the previous exemption, for plaice caught in division VIIf and VIIg. The proposed exemption covers plaice caught by TR2 (70-99 mm) trawl vessels using trammel nets. The NWW-JR states that this exemption would reduce the risk of vessels being prevented from continuing to fish at sea due to their low plaice quota.

The basis for the exemption

Supplementary material is provided (Annex V) as scientific evidence of the high survivability of plaice in this area.

EWG 18-06 Observations

EWG 18-06 notes that the supplementary material provided as scientific evidence of the high survivability of plaice in this area and the information on fishing practice is too limited to be reviewed. Experimental details about a large part of the study are missing (e.g. analysis, control group, vitality assessment and animal observations). Fleet and fishery descriptions are provided for the United Kingdom, but the source related to the numbers supplied is unknown. There are other countries associated with the proposed exemption that have not been described.

EWG 18-06 note that without provision of more complete information it is not possible to assess the merits of this proposed high survivability exemption.

EWG 18-06 Notes that this exemption is very similar to the previous (area VIId and VIIe) exemption with the documentation displaying a similar level of detail.

7.2.7 Plaice caught by Otter Trawls in ICES divisions VIId and VIIe

Background
The 2018 JR from the Northwestern waters regional group proposes a new high survival exemption for plaice caught in division VIId and VIIe. The proposed exemption covers plaice caught by TR2 (70-99 mm) trawl vessels using otter trawls. The NWW-JR states that this exemption would reduce the risk of vessels being prevented from continuing to fish at sea due to their low plaice quota.

The basis for the exemption

Supplementary material is provided (Annex VI) as scientific evidence of the high survivability of plaice in this area.

EWG 18-06 Observations

The supplementary material provided as scientific evidence of the high survivability of plaice in this area and the information on fishing practice is too limited to be reviewed. Experimental details about a large part of the study are missing (e.g. analysis, control group, vitality assessment and animal observations). The survival rate presented was derived from an experiment with a short observation period and differed from the forecasted survival rate. Fleet and fishery descriptions are provided for the United Kingdom, but the source related to the numbers supplied is unknown. There are other countries associated with the proposed exemption that have not been described.

EWG 18-06 note that without provision of more complete information it is not possible to assess the merits of this proposed high survivability exemption.

EWG 18-06 Notes that this exemption is very similar to the next (area VIIf and VIIg) exemption with the documentation displaying a similar level of detail.

7.2.8 Plaice caught by otter trawl gears in ICES subarea VIIf and VIIg

Background
The 2018 JR from the North-western waters regional group proposes a new high survival exemption for plaice caught in division VIIf and VIIg. The proposed exemption covers plaice caught by TR2 (70-99 mm) trawl vessels using otter trawls. The NWW-JR states that this exemption would reduce the risk of vessels being prevented from continuing to fish at sea due to their low plaice quota.

The basis for the exemption

Supplementary material is provided (Annex VII) as scientific evidence of the high survivability of plaice in this area.

EWG 18-06 Observations

The supplementary material provided as scientific evidence of the high survivability of plaice in this area and fishing practice is too limited to be reviewed. Experimental details about a large part of the study are missing (e.g. analysis, control group, vitality assessment and animal observations). The estimation of survival rate was not assessed in the study. However, the survival rate presented was achieved by copying that from another study on an otter trawler in a neighbouring ICES sub division. Individuals ranked in the same vitality assessment groups as the

other study were given the same survival rate in this study. Therefore, the survival rate presented cannot be considered as scientifically underpinned and is of limited value. A number of variables (e.g. sea surface temperature and sea conditions) that could differ between the areas can have a strong influence on survivability and such effects are not covered in the vitality assessment alone. Fleet and fishery descriptions are provided for the United Kingdom and Ireland, but the source related to the numbers supplied is unknown. There are other countries associated with the proposed exemption that have not been described.

EWG 18-06 note that without provision of more complete information it is not possible to assess the merits of this proposed high survivability exemption.

EWG 18-06 also notes that this exemption is very similar to the previous (area VIId and VIIe) exemption with the documentation displaying a similar level of detail. The documentation states that Ireland intends to carry out survivability trials for plaice in June and July of 2018.

7.2.9 Plaice caught with beam trawls in ICES subareas VIIa to VIIk

Background
The 2018 JR from the North-western waters regional group proposes a new high survival exemption for plaice caught in VIIa to VIIk. The proposed exemption is a three-year temporary exemption that covers plaice caught by two BT2 vessels with separate gear modification measures for the >221kw and the <221kw or 24 meters vessels.

The exemption would be for:

- For BT2 vessels of >221kw which use the flip-up rope or benthic release panel.
- For smaller BT2 vessels, with an engine power of not more than 221kw or less than 24m in length overall, which are built to fish in the twelve-mile zone, if the average trawl duration is less than ninety minutes.

Basis for exemption

The proposal is supported by a recent Belgian study of survivability of plaice in the highly diverse Belgian beam trawl fishing fleet. Over the years the footprint of this fishery is said to have decreased by the shrinking fleet size and reduction of fuel and seabed impact due to lighter and different gears (e.g. sumwing or outrigger trawls). Additionally, Belgian trawlers are, since January 2016, obliged to use the 'Flemish-panel' to reduce the retention of <MCRS sole. The 'Flemish-panel' is a 3-m long, large mesh (120-mm) panel in front of the codend. When targeting brown shrimp (*Crangon crangon*), coastal vessels are obliged to use bycatch reduction panels (BRD, named "zeeflap") between Dec 1 and May 31 with 16-31 mm nets. The report mentions the potential of the currently banned pulse fishing method to further decrease discards. Fifteen survival trips were carried out with different types of vessels from the Belgian beam trawl fleet fishing with 80mm cod ends. This covered the range of beam trawls from 4m to 12m and one vessel fishing with a sumwing.

The documentation provided in Annex VIII shows that survivability is highly variable (4-93%) and significantly related to trawl duration, sorting duration, wave height, sea temperature, sediment catch and total catch.

EWG 18-06 Observations

EWG 18-06 judges that the methods used are scientifically robust and undertaken in line with the ICES WKMEDS-guidelines.

EWG 18-06 concludes that the highly variable survival rate is not surprising when considering the broad approach of the study, the large range of gears and vessels used, different conditions on board and varying conditions at sea. The scientific underpinning of these conclusions, as presented in Annex VIIIa, is considered robust and gives an indication of the combined situation

for the Belgian fleet and which factors could potentially improve survivability for plaice in this fishery.

EWG 18-06 notes, however, that the study was unable to give an indication to what extent the survivability could realistically be improved. The proposed gear modifications will likely increase the survivability of plaice, but the extent of these improvements is unknown and this should be studied.

EWG 18-06 notes that fleet and fishery descriptions are provided for Ireland, but the source related to numbers supplied is unknown. There are other countries associated with the proposed exemption that have not been described.

EWG 18-06 notes that without provision of more complete information it is not possible to further assess the merits of this proposed high survivability exemption at the overall fishery level.

7.2.10 Fish caught in pots, traps and creels in North Western Waters

Background

The North Western Waters Group JR recommends that the landing obligation shall not apply to fish caught in pots, traps and creels in North Western Waters. This is a new proposal in NWW but the same exemption is in the current NS discard plan.

Basis for exemption

Much of the supporting evidence for this exemption is identical to the information that supported the current North Sea exemption and was thus evaluated by STECF last year (see STECF 17-08). Another section of the annex provides a detailed overview of the Scottish fisheries with pots, traps and creels in the North Sea and North-western waters, including a qualitative interview study of by-catch in these fisheries.

EWG 18-06 Observations

As the central supporting information in this proposal is identical to the information that supported the current North Sea exemption and was thus evaluated by STECF last year. The description of fleets and fisheries only covers the Scottish fleets. EWG 18-06 suspects that also other countries will use this exemption of it is granted.

EWG 18-06 echoes last year's conclusions, i.e. that the overall quantities of fish associated with the proposed exemption are negligible. Therefore, given that the gear types are relatively benign and provided discarding under the exemption is monitored, the impact is likely to be minimal.

EWG 18-06 reiterates that the risk of substantial avian predation of discarded fish needs to be considered in such an exemption (see EWG 17-08 report). In the 2018 discard plan for the North Sea (COM 2018/45) the use of this survival exemption is conditioned on that the fish shall be released immediately and below the sea surface.

7.3 North Western Waters – proposals for technical measures

Background

The 2018 JR from the North-western waters regional group proposes changes of technical measures for bottom trawls and seines to improve selectivity. The proposal contains two different packages, one for the Celtic Sea Protection Zone and one for the Irish Sea.

<u>1. Celtic Sea Protection Zone</u>

From 1st July 2019, unless otherwise stated, the following will apply to all fishing vessels operating with bottom trawls or seines in the Celtic Sea Protection Zone (waters inside ICES divisions VIIf, VIIg and the part of VIIj that lies north of latitude 50°N and east of 11°W):

(a)

- 110mm codend +120mm smp; or
- 100mm T90 codend (with the possibility of increasing mesh size to 110mm from 1st January 2020, depending on the results of further trials); or
- 100mm+160mm smp.

By derogation:

(b)

- For vessels with catches of more than *5%* of *Nephrops*, one of the following gear options should be used:
    - 300mm SMP (vessels under 12m may use a 200mm smp);
    - SELTRA box trawl with 270mm diamond mesh 300mm smp; or
    - Sorting Grid with 35mm bar spacing or similar net grid; or
    - 100mm+100mm smp

(c)

- For vessels with catches of more than 55% of whiting or 55% of anglerfish, hake or megrim combined, one of the following gear options should be used:
    - 100mm codend +100mm smp;
    - 90mm T90 codend and extension;
    - 80mm codend + 160mm smp; or
    - 80mm codend + 2m x 100mm square mesh cylinder

(d)

- For vessels with catches below 10% of gadoids in 7f east of 5 degrees west the following should be used:
    - 80mm cod end + 100mm SMP

<u>2. Irish Sea</u>

From 1st January 2019 the following will apply to fishing vessels operating with bottom trawls or seines in the Irish Sea (VIIa)

(a) For vessels with a codend mesh size equal or larger than 70mm and less than 100mm (TR2) with catches of more than 5% of *Nephrops*, one of the following gear options should be used:

- 300mm SMP (vessels under 12m may use a 200mm smp);
- SELTRA box trawl with 270mm diamond mesh or 300mm smp;
- Sorting Grid with 35mm bar spacing as defined in Annex XIVa to Regulation (EC) 850/98;
- CEFAS Net grid;
- Flip-flap trawl of specification defined

(b) For vessels operating with bottom trawls and seines with catches of more than 10% of haddock, cod and skates and rays combined, one of the following options should be used:

- 120mm codend; or
- An eliminator trawl with 600mm large mesh panels and 100mm codend.

(c) For vessels with catches below 10% of haddock, cod and skates and rays combined, a codend mesh size of 100mm+100mmm smp should be used. This is not applicable to vessels with more than 30% of *Nephrops*.

EWG 18-06 Observations

EWG 18-06 was not able to make a detailed analysis of the proposed changes of technical measures but here only provides a qualitative assessment of the likely direction of change in selectivity for each of the proposed changes. The qualitative assessment is summarised below:

1. Celtic Sea Protection Zone: EWG 18-06 notes that the propsosed changes in general attempts to raise the baseline selectivity for several fisheries with problematic levels of unwanted catches. However, area VIId and VIIe are not covered in the proposal which is surprising given the documented issues with unwanted catches also in these areas.

(a) EWG 18-06 interprets the proposed changes as the new baseline selectivity in the area. The proposal in general will lead to an increased roundfish selectivity. However, the T90 alternative may decrease flatfish selectivity (if this is an issue in these fisheries).

(b) Proposed alternative gear options for the *Nephrops* fleets (>5% *Nephrops*). EWG judges that all alternatves will increase selectivity although the documented selectivity is very different among the alternative gears.

(c) EWG 18-06 assess that some of these gear options for vessels with >55% whiting or anglerfish, hake and megrim combined will most likely not increase selectivity from the current minimum requirement due to reduced codend mesh size (currently 100mm + 100 SMP). In fact, selectivity may even be reduced in these cases.

(d) Similarly, EWG 18-06 estimate that the proposed derogation for vessels with <10% gadoids will lead to a reduction in selectivity.

2. Irish Sea

(a) This are the proposed future gear alternative for the *Nephrops* fishery. EWG 18-06 assess that, as for the Celtic Sea protection zone proposal above, the suggested new gear options for *Nephrops* vessels (>5%) will all increase selectivity although the documented selectivity is very different among the alternatve gears that can be used.

(b) EWG 18-06 interprets the proposed changes as the new baseline selectivity for fisheries targeting fish (vessels with >10% cod, haddock and skates and rays combined). EWG 18-06 judges that the proposed changes will increase selectivity compared to the current minimum requirements.

(c) The proposed gear option for vessels with catches <10% of haddock, cod and skates and rays combined, will increase selectivity. The meaning of the exemption for vessels with >30% *Nephrops* is however unclear to EWG 18-06.

To summarise, EWG 18-06 assess that most but not all proposed gear changes will likely increase selectivity for several major fisheries in some of the areas in North-western waters. Some of the proposals will risk a reduction in selectivity however. Notwithstanding this, EWG 18-06 notes that the proposed changes to increase selectivity in North-western waters is one of very few attempts from regional groups to mitigate issues with unwanted catches in relation to the phasing-in of the landing obligation.

8 SOUTH-WESTERN WATERS - 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). On the basis of 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) 2018/44. In 2018, a further set of Joint Recommendations has been submitted by the Member States. The main elements of these JR's and which of these have been assessed by EWG 18-06 are summarised in table 8.1.

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

Elements	***Status***	***Section***
De minimis		
Common sole caught with beam trawls and bottom trawls in directed fishery in ICES subareas VIIIa,b	Existing and unchanged ?check?	Not assessed
Common sole caught in gillnets and trammel nets in ICES subareas VIIIa,b	Existing and unchanged ?check?	Not assessed
Hake caught with trawls in directed fisheries in ICES subareas VIII and IX	Existing but re-assessed on basis of new information	Section …
pelagic species: horse mackerel (*Trachurus spp.*), mackerel (*Scomber scombrus*), anchovy (*Engraulis encrasicolus*) andboarfish (*Caproidae*),caught by trawlers (OTT, OTB, PTB, OT, PT, TBN, TBS, TX, SSC, SPR, TB,TBB, SDN, SX, SV) in ICES divisions VIII and IX.	New	combined *de minimis* *(+- similar North Sea)*
anglerfish (*Lophiidae*), sole (*Solea spp.*), turbot (*Psetta maxima*), red seabream (*Pagellus bogaraveo*), great forkbeard (*Phycis blennoides*) caught by trawlers (OTT, OTB, PTB, OT, PT, TBN, TBS, TX, SSC, SPR, TB, SDN, SX, SV) in the Gulf of Cadiz (part of ICES subarea IXa).	New	combined *de minimis*
megrim (*Lepidorhombus spp.*), anglerfish (*Lophiidae*), plaice (*Pleuronectes platessa*), whiting	New	combined *de minimis*

(*Merlangius merlangus*) and pollack (*Pollachius pollachius*), caught by trawlers (OTT, OTB, PTB, OT, PT, TBN, TBS, TX, SSC, SPR, TB,TBB, SDN, SX, SV) in divisions VIII and IX.		
megrim (*Lepidorhombus spp*.), anglerfish (*Lophiidae*), plaice (*Pleuronectes platessa*), whiting (*Merlangius merlangus*) and pollack (*Pollachius pollachius*) caught by gillnetters (GNS, GND, GNC, GTR, GTN) in divisions VIII and IX.	New	combined *de minimis*
pelagic species: horse mackerel (*Trachurus spp*.), mackerel (*Scomber scombrus*), anchovy (*Engraulis encrasicolus*) and boarfish (*Caproidae*), caught by gillnetters (GNS, GND, GNC, GTR, GTN) in ICES divisions VIII and IX, X and CECAF areas 34.1.1, 34.1.2, 34.2.0.	New	combined *de minimis*
pelagic species: horse mackerel (*Trachurus spp*.), mackerel (*Scomber scombrus*), anchovy (*Engraulis encrasicolus*) and boarfish (*Caproidae*), caught by longliners (codes: LHP, LHM, LLS, LLD) in ICES divisions VIII and IX, X and CECAF areas 34.1.1, 34.1.2, 34.2.0.	New	combined *de minimis*
For by-catches of all species regulated with TAC and quota, caught by the artisanal fleet in ICES divisions VIII, IX, X and CECAF areas 34.1.1, 34.1.2, 34.2.0.	New	combined *de minimis*
For by-catches of alfonsinos (*Beryx spp*.) caught by hooks and lines (LHP, LHM, LLS, LLD) in division X.	New	
great forkbeard (*Phycis blennoides*) caught by hooks and lines (LHP, LHM, LLS, LLD) in division X.	New	
High Survivability		
Nephrops caught with trawls in ICES subareas VIII and IX	Existing and unchanged	Not assessed (ping pong, plen: all info available (def fisheries & robust scientific estimates of

		discard and survival rates)
Skates and rays (*Rajiformes*) caught with all gears in ICES subareas VIII and IX.	New (similar to other regions)	a time limited survival exemption. Additional survival studies (proposal) are planned, including medium-long term study (1-2 months) with onshore monitoring of fish.
Red seabream (*Pagellus bogaraveo*) caught with artisanal gear called "voracera" used in the south of Spain in ICES subareas IXa.	New	
Red seabream (*Pagellus bogaraveo*) caught in ICES subareas X with hooks and lines.	New	
Minimum conservation reference size		
NA		
Technical Conservation Measures		
NA		

8.1 SWW – Proposals for *de minimis* exemptions

A summary of the *de minimis* applications are given in Table 8.1.1.

Table 8.1.1 Data summaries of *de minimis* exemptions as submitted for the SWW (restricted to new or re-assessed exemptions) **Note:** This table contains additional material supplied by the Regional Group in response to the Commission's request following initial review by EWG-18-06

Data from France and Spain on: Hake caught with trawls in directed fisheries in ICES subareas VIII and IX

Country	**Exemption applied for (species, area, gear type)**	**Species as bycatch or target**	**Number of vessels subject to the landing obligation**	**Landings (by landing obligation subject vessels)**	**Estimated Discards**	**Estimated Catch**	**Discard Rate**	**Estimated 5% *de minimis***
FR	Hake ICES 8 and 9 Bottom trawls	Target and Bycatch	Around 600 vessels	17152.68 t	2354.32 t	19507t	12%	975.35 t
ESP	OTT, OTB, PTB, OT, PT, TBN, TBS, TX, SSC, SPR, TB, SDN, SX, SV	TARGET/BY-CATCH	217	6661 8c9a 7163	2100	9263	22.7%	399

Data from Spain on: By-catches of the species megrim (*Lepidorhombus spp*.), anglerfish (*Lophiidae*), plaice (*Pleuronectes platessa*), whiting (*Merlangius merlangus*) and pollack (*Pollachius pollachius*), a combined *de minimis* up to a maximum of 5% of the total annual catches of these species made by trawlers (gear codes: OTT, OTB, PTB, OT, PT, TBN, TBS, TX, SSC, SPR, TB, TBB, SDN, SX, SV) in divisions VIII and IX.

Country	**Exemption applied for (species, area, gear type)**	**Species as bycatch or target**	**Number of vessels subject to the landing obligation**	**Landings (by landing obligation subject vessels)**	**Estimated Discards**	**Estimated Catch**	**Discard Rate**	**Estimated 5% *de minimis***
ESP (reponse 1)	OTT, OTB, PTB, OT, PT, TBN, TBS, TX, SSC, SPR, TB, TBB, SDN, SX, SV	TARGET/BY-CATCH	217	3255				162
ESP (response 1)	OTT, OTB, PTB, OT, PT, TBN, TBS, TX, SSC, SPR, TB, TBB, SDN, SX, SV in area 8 abd	TARGET/BY-CATCH	7	(MEG)222 (ANF)137 (WHG)12 TOTAL 71	(MEG) 7 (ANF) 0 (WHG) 4 TOTAL 11	(MEG) 29 (ANF) 37 (WHG) 16 TOTAL 82	(MEG)3 (ANF)0 (WHG) 25 Total 3	(MEG) 1.45 (ANF) 6.85 (WHG) 0.8 TOTAL 19.1
ESP (response 2)	OTT, OTB, PTB, OT, PT, TBN, TBS, TX, SSC, SPR,	TARGET/BY-CATCH	217	3255 **8c9a 2279**	395	2673	14.7%	20

	TB,TBB, SDN, SX, SV							

Data from Spain on: By catches pelagic species: horse mackerel (*Trachurus* spp.), mackerel (*Scomber scombrus*), anchovy (*Engraulis encrasicolus*) and boarfish (*Caproidae*). Combined *de minimis* for the species up to a maximum of 7% in 2019 and 2020, and up to a 6% in 2021 of the total annual catches of these species made by **trawlers** (gear codes: OTT, OTB, PTB, OT, PT, TBN, TBS, TX, SSC, SPR, TB, TBB, SDN, SX, SV) in fisheries in ICES divisions VIII and IX.

Country	**Exemption applied for (species, area, gear type)**	**Species as bycatch or target**	**Number of vessels subject to the landing obligation**	**Landings (by landing obligation subject vessels)**	**Estimated Discards**	**Estimated Catch**	**Discard Rate**	**Estimated 7% *de minimis***
ESP	OTT, OTB, PTB, OT, PT, TBN, TBS, TX, SSC, SPR, TB, SDN, SX, SV	TARGET/BY-CATCH	217	16806 8c9a 19402	4627	24029	19	324

Data from Spain on: By-catches of the species megrim (*Lepidorhombus spp*.), anglerfish (*Lophiidae*), plaice (*Pleuronectes platessa*), whiting (*Merlangius merlangus*) and pollack (*Pollachius pollachius*), a combined *de minimis* up to a maximum of 4% of the total annual catches of these species made by **gillnetters** (gear codes: GNS, GND, GNC, GTR, GTN) in divisions VIII and IX.

Country	**Exemption applied for (species, area, gear type)**	**Species as bycatch or target**	**Number of vessels subject to the landing obligation**	**Landings (by landing obligation subject vessels)**	**Estimated Discards**	**Estimated Catch**	**Discard Rate**	**Estimated 4% *de minimis***
ESP (response 1)	GNS, GND, GNC, GTR, GTN	TARGET/BY-CATCH	68	697				28
ESP (reponse 2)	GNS, GND, GNC, GTR, GTN	TARGET/BY-CATCH	68	697 8c9a 177	28	205	13.75%	1.4079

Data from Spain on: By-catches of the following pelagic species: horse mackerel (*Trachurus spp*.), mackerel (*Scomber scombrus*), anchovy (*Engraulis encrasicolus*) and boarfish (*Caproidae*), a combined *de minimis* for the species up to a maximum of 3% in 2019, 2020 and 2021, of the total annual catches of these species made **by gillnetters** (gear codes: GNS, GND, GNC, GTR, GTN) in fisheries in ICES divisions VIII and IX, X and CECAF areas 34.1.1, 34.1.2, 34.2.0.

Country	**Exemption applied for (species, area, gear type)**	**Species as bycatch or target**	**Number of vessels subject to the landing obligation**	**Landings (by landing obligation subject vessels)**	**Estimated Discards**	**Estimated Catch**	**Discard Rate**	**Estimated 3% *de minimis***

ESP (response 1)	GNS, GND, GNC, GTR, GTN	BY-CATCH					(MAC) 13% (JAX) 12%	
ESP (response 2)	GNS, GND, GNC, GTR, GTN	BY-CATCH	68	2182 378.988	11	390	2.75%	0.32 65,4

Data from Spain on: By-catches of the following pelagic species: horse mackerel *(Trachurus* spp.), mackerel (*Scomber scombrus*), anchovy (*Engraulis encrasicolus*) and boarfish (*Caproidae*), a combined *de minimis* for the species up to a maximum of 1% in 2019 ,2020 and 2021, of the total annual catches of these species made by for **longliners** (codes: LHP, LHM, LLS, LLD) in fisheries in ICES divisions VIII and IX, X and CECAF areas 34.1.1, 34.1.2, 34.2.0.

Country	**Exemption applied for (species, area, gear type)**	**Species as bycatch or target**	**Number of vessels subject to the landing obligation**	**Landings (by landing obligation subject vessels)**	**Estimated Discards**	**Estimated Catch**	**Discard Rate**	**Estimated 1% *de minimis***
ESP	LHP, LHM, LLS, LLD	BY-CATCH	64	1.893	?	?	?	183

Data from Spain on: By-catches of all species regulated with TAC and quota, a combined *de minimis* up to a maximum of 1% in 2019, 2020 and 2021 of the total annual catches made by the artisanal fleet in ICES divisions VIII, IX, X and CECAF areas 34.1.1, 34.1.2, 34.2.0.

Country	**Exemption applied for (species, area, gear type)**	**Species as bycatch or target**	**Number of vessels subject to the landing obligation**	**Landings (by landing obligation subject vessels)**	**Estimated Discards**	**Estimated Catch**	**Discard Rate**	**Estimated 1% *de minimis***
ESP	Small scale census	TARGET/BY-CATCH	4455	10329	516,45	10845	5%	103,29

Data from Spain on:By-catches of anglerfish (*Lophiidae*), sole (*Solea spp*.), turbot (*Psetta maxima*), red seabream (*Pagellus bogaraveo*), great forkbeard (*Phycis blennoides*), a combined *de minimis* up to a maximum of 7% in 2019 and 2020, and up to a 6% in 2021 of the total annual catches of these species made by trawlers (gear codes : OTT, OTB, PTB, OT, PT, TBN, TBS, TX, SSC, SPR, TB, SDN, SX, SV) in the Gulf of Cadiz part of ICES subarea IXa.

Country	**Exemption applied for (species, area, gear type)**	**Species as bycatch or target**	**Number of vessels subject to the landing obligation**	**Landings (by landing obligation subject vessels)**	**Estimated Discards**	**Estimated Catch**	**Discard Rate**	**Estimated 7% *de minimis***
ESP	OTT, OTB, PTB, OT, PT, TBN, TBS, TX, SSC, SPR, TB, SDN, SX, SV GULF OF CADIZ	BY-CATCH	130	95 **8c9a** 76	20	97	20.8%	1.414

8.1.1 Hake caught with trawls in directed fisheries in ICES subareas VIII and IX

Background

The discard plan for SWW for 2016 contained in Regulation (EU) 2015/2439 included a *de minimis* exemption for hake by vessels using trawls targeting hake in ICES subareas VIII and IX. This was on the basis that increasing selectivity in the fisheries concerned would lead to losses of marketable fish that would make the fisheries potentially uneconomic. The exemption allowed for discarding of up to a maximum of 7 % in 2017 and up to 6 % in 2018 of the total annual catches of hake in the respective fisheries. This exemption was granted with the provision that additional discard data and any other relevant scientific information supporting the exemption should be provided to STECF for further evaluation in 2016. STECF carried out an analysis of additional information duly supplied by the SWW Member States regional group in 2016 at EWG 16-06 and the STECF PLEN 16-02. On the basis of this evaluation the exemption was reconfirmed and included in Regulation (EU) 2016/2374 implementing the discard plan for SWW. However, STECF noted that the selectivity trials for hake had only been carried out in the most selective of the fleet involved and therefore requested that additional selectivity studies were conducted for the other fleets. In this regard new information supplied by the SWW Member States was duly assessed by EWG 17-08, including reports of hake selectivity studies carried out in Spain and a study to assess the disproportionate costs of handling catches in the various mixed fisheries in SWW waters. In response to the main findings of the EWG 17-08, the Commission has requested additional information from the Member States. This new information submitted was evaluated by STECF PLEN 17-02. The SWW Regional Group submitted additional information supporting the exemption in May 2018.

Basis of the exemption

Characteristics of the fisheries - The SWW Member states provided information (in the Template provided by the EWG 17-08) concerning the sea area, gear type, number of vessels subjected to the Landing Obligation and estimated landings, discards and volumes of *de minimis* required (Table 1).

Selectivity studies - Additional information is presented in the documents provided by the SWW Member States concerning the selectivity of the Spanish métiers targeting hake in SWW waters:

<u>Spanish métiers in Bay of Biscay</u>

1. Experimental trials on board commercial Pair Trawlers (March to April 2016 and November 2016) (corresponding métier: Pair bottom trawl (PTB_DEF>70) targeting hake in Div. 8abd)
2. Experimental trials on board "baka" trawlers (20-26 March 2017 and 27 March-2 April 2017) (corresponding métier: Bottom otter trawl (OTB_DEF>70) targeting demersal species in Div. 8abde)
3. Research cruise on R/V Emma Bardam (June 2017)

These studies were made by AZTI and focused on the Square Mesh panel (SMP) as the option to improve selectivity and specifically on options to increase the contact between the SMP and hake. Results showed that the gear options tested resulted in limited reductions of catches of undersized hake. The trials also showed that, for otter trawls (OTB_DEF>70), losses of other commercial species can be significant.

<u>Spanish métiers in the North and Northwestern Iberian fishing grounds (ICES 8c and 9a)</u>

1. Selectivity trials on board commercial Bottom trawl OTB_DEF>=55: Assessment of T90 mesh in a multispecies bottom trawl fishery (DESCARSEL1116) – autumn 2016
2. Selectivity trials on board commercial Bottom trawl OTB_MDP>=55: Assessment of T90 mesh in a multispecies bottom trawl fishery (DESCARSEL1116) – autumn 2016
3. Selectivity trials on board commercial Pair trawl PTB_DEF>=55: Assessment of square mesh panels in a multispecies pair bottom trawl fishery (DESCARSEL 1016) – autumn 2016

4. Experimental selectivity trials on board research vessel: Assessment of diamond and T90 mesh and square mesh panels in a multispecies bottom trawl fishery: OTB_DEF and OTB_MDP (DESCARSEL0917) – September 2017

In trials (1) and (2) and (4) above, the objective was to assess the change in selectivity of OTB_DEF and OTB_MDP when using T90 mesh codends. The results of (1) and (2) indicated a high percentage of juvenile hake escaping through the mesh (compared to T0) implying that the T90 codend is a possible solution to reduce the discard rates of hake but also other species like blue whiting and horse mackerel. In trials (4) with OTB_MDP, no significant differences between T0 and T90 were found.

The trials (3) and (4) with SMPs were less successful in reducing the catch of undersized hake indicating that the contact of hake with the panel and subsequent escarpment is low. The use of panels also results in the loss of individuals of commercial size which could potentially cause some economic loss.

Socioeconomic impacts

Results of a simulation study for pair trawlers in the Bay of Biscay are presented showing that, from the capital owner perspective, it is not worth to invest in a selectivity improvement (increase in mesh size) given that the return of the necessary investment will be negative.

Furthermore results from a study "Work and effort evaluation for "baka" trawler (OTB) crew from Division 8abd after application of Hake Landing Obligation measures" are presented showing that the increased handling of large multi-specific biomass on board will have impacts on crew safety (high percentage of working days at sea with unacceptable number of working hours (i.e. > 14 hours per day, the established maximum number of hours per working day [ILO's Agreement 180 and Directive 1999/63/CE] and high percentage of working days with levels of effort above recommended levels [hard work > 2000-2500 kcal/day]).

EWG 17-03 Observations

EWG 18-06 notes that in relation to characteristics of the fisheries, some clarifications are needed regarding this Table:

1. It is stated that "There is no way to calculate the number of vessels practicing one métier at any time of the year. Thus, it is not possible to calculate a discard rate for the specific vessels practicing each métiers which are subject to the LO but a discard rate for the overall otter trawl fleet is available". STECF is unable to evaluate, given the information provided, how the métier-specific discard rates were calculated.
2. More clarifications are needed for the 'non-Spanish data' in Table 1 (data for French, Belgian and Portuguese métiers). It is unclear to which year(s) they refer and how the respective calculations of discards have been made.
3. More clarifications are needed for two of Spanish metiers in the Bay of Biscay, namely "Bottom otter trawl (OTB_MCF>70) targeting mixed cephalopod and demersal species in Div. 8abd" and "Bottom otter trawl (OTB_MPD>70) targeting mixed pelagic and demersal species in Div. 8abd". These métiers are not included in Table 1 and it is stated in the text that "In 2018, trips deployed by these gears "are not currently under landing obligation".

EWG 18-06 notes that selectivity data and studies aiming at improving selectivity are only provided for the Spanish métiers. EWG 18-06 encourages the continuation of studies with different gear and mesh configurations to improve the selectivity of the bottom trawl gears catching hake in SWW.

EWG 18-06 notes that information on the socio-economic impacts of increasing selectivity and/or of the implementation of the landing obligation are only provided for certain Spanish métiers. EWG 18-06 encourages the continuation of studies on the socioeconomic impacts of increasing selectivity and of implementing the LO at vessel and fleet levels is SWW.

Due to continuing lack of information on fleets other than the Spanish one, EWG 18-06 is unable to assess fully whether the request demonstrates selectivity is difficult to improve in this fishery or whether the costs of handling unwanted catches are disproportionate.

8.1.2 Pelagic species: horse mackerel (Trachurus spp.), mackerel (Scomber scombrus), anchovy (Engraulis encrasicolus) and boarfish (Caproidae), caught by trawlers (OTT, OTB, PTB, OT, PT, TBN, TBS, TX, SSC, SPR, TB,TBB, SDN, SX, SV) in ICES divisions VIII and IX.

Background

This is a request up to a maximum of 7% in 2019 and 2020, and up to a 6% in 2021 of the total annual catches of these species; due to difficulties to further increase selectivity in this mixed fishery, and due to disproportionate costs implied by the full implementation of the landing obligation.

The basis of the exemption

According to the request, the fleet is particularly vulnerable to the risk of commercial catch losses that an improvement in selectivity would cause. However, no references on economic/selective studies were reported.

The justification for disproportionate costs is based on a study *(Balazuc et al. 2016)*. According to the study, full enforcement of the landing obligation would cause an on-board work-time increase of around 30% to 60%. Besides, 20% of fishing trip could be affected by hold overloading issues

A description of states of the stocks affected by this exemption is provided and based on ICES advice.

The information provided suggest that by-catch species are present and that there is a high rate of discards for the Spanish fleet;

EWG 18-06 Observations

EWG 18-06 notes that fishery information on the number of vessels is not provided and while some information on two French fisheries (TR2 and TR1) operating in ICES subarea 8 is given, there are no descriptions of the Spanish and Portuguese fleets. French information is based on an observer programme, Obsmer, but no information is given regarding the number of observations compared to the total number of fishing operations;

EWG 18-06 notes that a *de minimis* of 7% is calculated on the total catch of the by-catch species in question. In addition, a so called 'safeguard' percentage of 25% on top of the 7% quota is added. MSs separately provided numerical tables and these were not always complete so that the scale of the potential *de minimis* quantity was not evident in the request. In this case only France provided complete indicative discard rates and estimated volumes of *de minimis* requested (see table below).

EWG 18-06 notes that combining catches to calculate *de minimis* increases the volume of *de minimis* available.

Due to lack of information, EWG 18-06 is unable to assess fully whether the evidence demonstrates selectivity is difficult to improve in this fishery or whether the costs of handling unwanted catches are disproportionate.

Species subject to the DM	Total catch	Estimated discard share composition on overall catches	Estimated discard share composition (DS)	Maximum volume of discard with a 2% DM (in tonnes)	Maximum volume of discard with a 3% DM (in tonnes)	Maximum volume of discard with a 4% DM (in tonnes)	Maximum volume of discard with a 5% DM (in tonnes)	Maximum volume of discard with a 6% DM (in tonnes)	Maximum volume of discard with a 7% DM (in tonnes)	Applicable rules for DM use	Maximum discard share	Estimate of Maximum volume under a 7% de minimis
JAX	182.508	2%	**14.2%**	4.5	6.8	9.1	11.3	13.6	15.9	25% of the estimated discard share	17.7%	19.8
MAC	956.374	4%	**35.0%**	11.2	16.8	22.4	28.0	33.6	39.2		43.8%	49.0
BOR	460.028	6%	**50.8%**	16.3	24.4	32.5	40.6	48.8	56.9		63.5%	71.1
Total	1599	12%	100%	32.0	48.0	64.0	79.9	95.9	111.9			

8.1.3 Anglerfish (Lophiidae), sole (Solea spp.), turbot (Psetta maxima), red seabream (Pagellus bogaraveo), great forkbeard (Phycis blennoides) caught by trawlers (OTT, OTB, PTB, OT, PT, TBN, TBS, TX, SSC, SPR, TB, SDN, SX, SV) in the Gulf of Cadiz (part of ICES subarea IXa).

Background

This is a request for up to a maximum of 7% in 2019 and 2020, and up to a 6% in 2021 of the total annual catches of these species; due to difficulties of further increasing selectivity in this mixed fishery, and due to disproportionate costs that full implementation of the landing obligation would imply.

The basis for the exemption

According to the request, the fleet is particularly vulnerable to the risk of commercial catch losses an improvement in selectivity would cause and the justification for disproportionate costs is based on the management and handling of the undersized fish in port since the quantities are very low and spread between many small ports with no possibility of finding operators that want to use these catches. In addition, hold overloading and increased sorting time by the crew is considered a problem.

EWG 16-06 Observations

EWG 18-06 notes that no references on economic/selective studies were reported and the perceived overloading and increased sorting times seem inconsistent with the observation that quantities involved are very small.

EWG notes that a short description of the fishery is provided but the states of the stocks affected by this exemption, are not presented. The number of vessels, indicative discard rates and estimated volumes of the requested *de minimis are* provided; (see table below). Information is based on the IEO observer programme, however, no information is given regarding the number of observations compared to the total number of fishing operations.

EWG notes that *de minimis* of 7% is calculated on the total catch of by-catches species in object and a so-called safeguard percentage of 25% on the 7% quota is added. The justification for this is in order to limit the risk of discarding only one species and because discard rates can be significantly different from one species to another it is proposed to provide some flexibility. The request states that the safeguards should be revised if necessary and according to the prevailing discard profile that can evolve over time**.**

EWG notes that combining catches to calculate *de minimis* increases the volume of *de minimis*;

Due to lack of information, EWG 18-06 is unable to assess fully whether this demonstrates selectivity is difficult to improve in this fishery or whether the costs of handling unwanted catches are actually disproportionate.

The Species subject to DM	**Total catch**	**Estimated discard share composition on overall**	**Estimated discard share composition (DS)**	**Maximum volume of discard with a 7% DM (**	**Applicable rules for DM use**	**Maximun discard share**	**Estimate of Maximum volume under a 7 % *de minimis***

		catches		in tonnes)			
Sole	12,90	1,00%	14,28%	0,90	25% of the estimated discard share composition	17,85%	1,13
Red Seabream	0,66	0,05%	0,73%	0,05		0,92%	0,06
Great Forkbeard	17,67	1,37%	19,56%	1,24		24,45%	1,55
Anglerfish	59,11	4,58%	65,43%	4,14		81,78%	5,17
Total	90,34	7,00%	100,00%	6,32		125,00%	7,91

8.1.4 Megrim (Lepidorhombus spp.), anglerfish (Lophiidae), plaice (Pleuronectes platessa), whiting (Merlangius merlangus) and pollack (Pollachius pollachius), caught by trawlers (OTT, OTB, PTB, OT, PT, TBN, TBS, TX, SSC, SPR, TB, TBB, SDN, SX, SV) in divisions VIII and IX.

Background

This is a request for up to a maximum of 5% of the total annual catches of these species; due to difficulties of further increasing selectivity in this mixed fishery, and due to disproportionate costs implied by full implementation of the landing obligation. There are also choke species issues linked to the mixed fishery.

The basis of the exemption

The justification for disproportionate costs is based on a study *(Balazuc et al. 2016)*. According to the study, full enforcement of the landing obligation would cause an onboard work-time increase of around 30% to 60%. In addition, 20% of fishing trip could be affected by hold overloading issues.

A description of the states of the stocks affected by this exemption is based on ICES advice and a concise description of French fleet is provided. For the rest of the member states a table of metiers in SWW is presented although numbers of vessels are not provided. Catch and discard profiles are based on the STECF web-based tool (2013-2016). In the text, however, it states that data used are not always representative so extreme care is required in the interpretation and use of the estimates presented

EWG 18-06 Observations

EWG notes that a quantitative description of the composition of catches, landings and discards is provided and the *de minimis* of 5% is calculated on the total catch of by-catches species in question. A discard profile to estimate maximum volumes of species that would be theoretically discarded under a *de minimis* exemption is presented (based on STECF data, average 2013-2016) (see below), and a so-called safeguard percentage of 25% quota is added on top of the 5% *de minimis* quota. The justification for the safeguard is to limit the risk of discarding only one species and because discard rates can be significantly different from one species to another, it is intended to provide some flexibility. It is stated that the safeguards should be revised if necessary and according to prevailing discard profile that can evolve over time**.**

EWG 18-06 also notes that combining catches to calculate *de minimis* increases the volume of *de minimis*.

Due to lack of information, particularly relating to selectivity, EWG 18-06 is unable to assess fully whether the case justifies and exemption because selectivity is difficult to improve in this fishery or whether the costs of handling unwanted catches are actually disproportionate.

Species subject to the DM	Total catch	Estimated discard share composition on overall catches	Estimated discard share composition (DS)	Maximum volume of discard with a 2% DM (in tonnes)	Maximum volume of discard with a 3% DM (in tonnes)	Maximum volume of discard with a 4% DM (in tonnes)	Maximum volume of discard with a 5% DM (in tonnes)	Applicable rules for DM use	Maximum discard share	Estimate of Maximum volume under a 5% *de minimis*
Anglerfish	7948.7	0.5%	**12%**	48.4	72.6	96.8	121.0	25% of the estimated discard share composition	15%	151.3
Megrim	8814.4	2.9%	**69%**	272.7	409.0	545.4	681.7		86%	852.2
Plaice	78.9	0.02%	**0.4%**	1.5	2.3	3.0	3.8		0.5%	4.7
Pollack	243.5	0.01%	**0.1%**	0.6	0.9	1.1	1.4		0.2%	1.8
Whiting	2696.1	0.8%	**18%**	72.4	108.7	144.9	181.1		23%	226.4
Total	19781.7	4%	100%	395.6	593.5	791.3	989.1			

8.1.5 Megrim (Lepidorhombus spp.), anglerfish (Lophiidae), plaice (Pleuronectes platessa), whiting (Merlangius merlangus) and pollack (Pollachius pollachius) caught by gillnetters (GNS, GND, GNC, GTR, GTN) in divisions VIII and IX.

Background

This is a request for up to a maximum of 4% of the total annual catches of these species; due to difficulties of further increasing selectivity, and due to disproportionate costs implied by full implementation of the landing obligation.

The basis for the exemption

According to the request, the fleet is particularly vulnerable to the risk of commercial catch losses an improvement in selectivity would cause. However, no references on economic/selective studies were reported.

Justification for the disproportionate costs is based on the risk of occurrence of choke species that may generate hold overloading and increase the sorting time on board for the crew management but again no supporting studies were provided.

A description of states of the stocks affected by this exemption, based on ICES advice was provided, along with a concise description of the French fleet affected. For the rest of the member states a table of metiers in SWW is presented but numbers of vessels were not provided. A catch and discard profile is based on the STECF web-based tool (2013-2016). In the text it stated that the data used are not always representative, so extreme care in the interpretation and use of the estimates presented is needed.

EWG 18-06 Observations

EWG 18-06 notes that a quantitative description of composition of catches, landings and discards is provided and a *de minimis* of 4% is calculated on the total catch of by-catches species in question. The discard profile is provided to estimate maximum volumes of species that would be

theoretically discarded under a *de minimis*; (this is based on STECF data, average 2013-2016) (see table below). A so-called safeguard percentage of 25% quota is added on top of the 4% *de minimis* quota – the justification for this is the same as in the previous request.as previous request

EWG also notes that combining catches to calculate *de minimis* increases the volume of *de minimis*.

Due to lack of information, EWG 18-06 is unable to assess fully whether this demonstrates that selectivity is difficult to improve in this fishery or whether the costs of handling unwanted catches are actually disproportionate.

Species subject to the DM	Total catch	Estimated discard share composition on overall catches	Estimated discard share composition (DS)	Maximum volume of discard with a 2% DM (in tonnes)	Maximum volume of discard with a 3% DM (in tonnes)	Maximum volume of discard with a 4% DM (in tonnes)	Applicable rules for DM use	Maximum discard share	Estimate of Maximum volume under a 4% *de minimis*
ANF	3069.7	8.20%	**38%**	36.1	54.2	72.2		47.70%	90.3
LEZ	67	0.30%	**1%**	1.4	2.1	2.8		1.80%	3.5
PLE	53.1	0.10%	**1%**	0.6	0.9	1.1	25% of the estimated discard share composition	0.80%	1.4
POL	935.1	2.20%	**10%**	9.5	14.3	19		12.60%	23.8
WHG	610.8	10.70%	**50%**	47.1	70.7	94.2		62.20%	117.8
Total	4735.7	21%	100%	94.7	142.1	189.4			

8.1.6 Pelagic species: horse mackerel (Trachurus spp.), mackerel (Scomber scombrus), anchovy (Engraulis encrasicolus) and boarfish (Caproidae), caught by gillnetters (GNS, GND, GNC, GTR, GTN) in ICES divisions VIII and IX, X and CECAF areas 34.1.1, 34.1.2, 34.2.0.

Background

This is a request for up to a maximum of 3% of the total annual catches of these species; due to difficulties of further increasing selectivity, and due to the disproportionate costs implied by full implementation of the landing obligation.

The basis for the exemption

According to the request, the fleet is particularly vulnerable to the risk of commercial catch losses that an improvement in selectivity would cause. However, no references on economic/ selectivity studies were reported.

The justification for disproportionate costs is based on the risk of occurrence of choke species that may generate hold overloading and increase the sorting time on board for the crew management. No supporting material was presented on this however.

A description of the states of the stocks affected by this exemption is based on ICES advice and a description of the gear and a table of active metiers in the area is presented for the Member States.

The Number of vessels not provided, however for Portugal a table of catches is presented. Catch and discard profiles were presented only for Spain (see table below) and are based on IEO observer programme; no information is given regarding the number of observations compared to the total number of fishing operations.

EWG 18-06 Observations

EWG 18-06 notes there was a discrepancy between the title and the text regarding the *de minimis* request: In the title, 3% was cited with an apparent increase cited in the text up to 6% after 2020 and without any indication of an ending year. The MS concerned clarified the issue stating that it was a mistake and that the request is 3% for all the three years concerned.

EWG notes that a so-called safeguard percentage of 25% quota is added on top of the *de minimis* quota – the justification for this is the same as in previous requests although it is not clear how this operates as a safeguard.

EWG 18-06 also notes that combining catches to calculate *de minimis* increases the volume of *de minimis*;

Due to lack of information, EWG 18-06 is unable to assess fully whether this demonstrates that selectivity is difficult to improve in this fishery or whether the costs of handling unwanted catches are actually disproportionate.

Country	Species subject to DM	Total catch	Estimated discard share composition on overall catches	Estimated discard share composition (DS)	Maximum volume of discard with a 3% DM (in tonnes)	Applicable rules for DM use	Maximun discard share/ species	Estimate of Maximum volume under a 3% *de minimis*
ESP	**horse mackerel**	81,22	1,70	56,71	2,44	25% of the estimated discard share composition	70,89	3,05
ESP	**mackerel**	61,20	1,28	42,73	1,84		53,42	2,29
ESP	**boarfish**	0,80	0,02	0,56	0,02		0,69	0,70
	total	143,22	3,00	100,00	4,30			

8.1.7 Pelagic species: horse mackerel (Trachurus spp.), mackerel (Scomber scombrus), anchovy (Engraulis encrasicolus) and boarfish (Caproidae), caught by longliners (codes: LHP, LHM, LLS, LLD) in ICES divisions VIII and IX, X and CECAF areas 34.1.1, 34.1.2, 34.2.0.

Background

This is a request for up to a maximum of 1% of the total annual catches of these species; due to difficulties of further increasing selectivity, and due to disproportionate costs implied by the full implementation of the landing obligation;

The basis for the exemption

In the specific case of longlines, hooks and lines fisheries the exemption request is justified owing to the difficulty of improving selectivity in gear which is already very selective.

The justification for disproportionate costs is based on the risk of occurrence of choke species and of excess fish that may generate hold overloading and increase the sorting time on board for the crew management. No supporting material was provided however.

A description of the states of the stocks affected by this exemption is provided and based on ICES advice. A table of metiers in use in the area is presented but the number of vessels is not provided.

EWG 18-06 Observations

EWG 18-06 notes that the presence of anchovy and boarfish in this group is probably a drafting error, the Commission may wish to confirm with the Regional Group whether it wishes to remove both species.

EWG 18-06 notes that catch and discard profiles are not provided despite the text of the request stating *'according to the discard profile of the fishery (see annexe I)'.* Annex I is not provided and a request was made to the Regional Group to provide this. Furthermore, in the documentation a table of quantitative material is included without any indication of source or content. It was not possible to identify the MS concerned or if the numbers represent catches, landings or discards – this needs clarification.

Due to lack of information, EWG 18-06 is unable to assess fully whether this demonstrates that selectivity is difficult to improve in this fishery or whether the costs of handling unwanted catches are actually disproportionate.

8.1.8 For by-catches of all species regulated with TAC and quota, caught by the artisanal fleet in ICES divisions VIII, IX, X and CECAF areas 34.1.1, 34.1.2, 34.2.0.

Background

This is a request for up to a maximum of 1% of the total annual catches of these species; due to difficulties of further increasing selectivity, and due to disproportionate costs implied by full implementation of the landing obligation**.**

The basis of the exemption

The Joint Recommendation stated that selectivity is difficult to achieve since catches comprise a large number of diverse species (some with and some without a TAC) and so improvement is limited by the potential decrease in profitability of the metiers if smaller species are selected out.

It was also argued, that the landing obligation would generate negative impacts through vessel operators having to invest more time in on-board handling of previously discarded fish. There was also concern for the security of fishers at sea owing to full use of allowable storage on-board coupled with often adverse sea conditions.

A description of the fishery was provided but there was no information from France or Portugal. The request is based on two different studies performed in Spain. A report of on board observer work covering a fleet of 175 vessels in the Basque country provided a detailed description of the fishery and a table of the 11 metiers in use in the area, 5 of which were sampled. A detailed description of methodology was provided and results in terms of catch and discards by metier was shown in the request.

Fishermen's interviews in Cantabria, Asturias and the Basque Country provided information on catches and the percentage of discards in Asturias and Cantabria.

EWG 18-06 Observations

EWG 18-06 notes that selectivity information and economic studies are not provided.

EWG 18-06 notes that catch and discard profiles were not provided, whereas in the text of the request it was stated that '*according to the discard profile of the fishery (see annexe I)';* Annex I was not, however, provided. In the request a so-called safeguard percentage of 25% quota is added on top of the *de minimis* quota but details of this are not elaborated.

EWG 18-06 notes that combining catches to calculate *de minimis* increases the volume of *de minimis*;

Due to lack of information, EWG 18-06 is unable to assess fully whether this demonstrates that selectivity is difficult to improve in this fishery or whether the costs of handling unwanted catches are actually disproportionate.

8.1.9 For by-catches of alfonsinos (Beryx spp.) caught by hooks and lines (LHP, LHM, LLS, LLD) in division X.

Background

This is a request for a 5% *de minimis* exemption in the Alfonsinos hooks and lines fisheries in ICES sub-area X. It is pointed out that difficulties in further increasing selectivity arise because long line fishing is already very selective**.** Estimated selectivity curves for both species are shown in the request. The *de minimis* request was also made on the grounds of socio-economic issues mainly relating to the fact this fishery operates in one of the outermost regions where the economy is based on the activity of this fleet and where there are distance and market obstacles to overcome.

Avoidance measures of the species concerned are already used in the region include technical and tactical strategies and this has contributed to a decrease in the catch of alfonsinos.

The basis for the exemption

It is pointed out that difficulties in further increasing selectivity arise because long line fishing is already very selective**.** Estimated selectivity curves for both species are shown in the request. The *de minimis* request was also made on the grounds of socio-economic issues mainly relating to the fact this fishery operates in one of the outermost regions where the economy is based on the activity of this fleet and where there are distance and market obstacles to overcome.

Avoidance measures of the species concerned are already used in the region include technical and tactical strategies and this has contributed to a decrease in the catch of alfonsinos.

Supporting document is provided by the Azores Autonomous Region and an exhaustive description of Azores fisheries together with a full list of management measures is provided. The request includes a series of historical trends of landing and discards data. Analysis of discards is made with data obtained from the DCF and from the EU funded Discardless project.

Catch and discard profile presented for the two species; see table below

Country	**Exemption applied for (species, area, gear type)**	**Species as bycatch or target**	**Landings (by LO subject vessels) (2014)**	**Estimated discards (2014)**	**Estimated catch (2014)**	**Discard Rate (2014)**	**Maximum volume of discard with 5% DM (in tonnes)**
Portugal	Beryx splendens, ICES area X, bottom longline and handline	By-catch	111.0	22.9 – 16.3 (excluding discards due to damaged individuals)	154.1	14.9% - 10.6 % (excluding discards due to damaged individuals)	7.7

Portugal	Beryx decadactylus, ICES area X, bottom longline and handline	By-catch	22.5	0.56 – 0.39 (excluding discards due to damaged individuals)	24.1	2.3% - 1.6% (excluding discards due to damaged individuals)	1.2

EWG 18-06 Observations

EWG 18-06 considers that on the basis of the evidence presented the justification for difficulties on the grounds of selectivity or disproportionate costs are supported.

8.1.10 Greater forkbeard (Phycis blennoides) caught by hooks and lines (LHP, LHM, LLS, LLD) in division X.

Background

This is a request for the allocation of 3% *de minimis* exemption for greater forkbeard hooks and lines fisheries in ICES sub-area X.

The basis for the exemption

It is pointed out that difficulties in further increasing selectivity arise because long line fishing is already very selective**.** The *de minimis* request was also made on the grounds of socio-economic issues mainly relating to the fact this fishery operates in one of the outermost regions where the economy is based on the activity of this fleet and where there are distance and market obstacles to overcome.

A supporting document is provided by the Azores Autonomous Region and an exhaustive description of Azores fisheries together with a full list of management measures is provided. The request includes a series of historical trends of landing and discards data. Analysis of discards is made with data obtained from the DCF and from the EU funded Discardless project and an exhaustive description of methodology is given.

A table is shown with information on catch and discards for all species contributing to over 1% of the total catch of the bottom longline and handline; however greater forkbeard itself does not appear in the table, presumably because catches are very low.

A catch and discard profile is presented for greater forkbeard; see table below

EWG 18-06 Observations

EWG 18-06 considers that on the basis of the evidence presented the justification for difficulties on the grounds of selectivity or disproportionate costs are supported.

Species as bycatch or target	**Landings (by LO subject vessels) (2014)**	**Estimated discards (2014)**	**Estimated catch (2014)**	**Discard Rate (2014)**	**Maximum volume of discard with 3% DM (in tonnes)**

Bycatch	9.1	0.44 – 0.23 (excluding discards due to damaged individuals)	9.6	4.8% - 2.5% (excluding discards due to damaged individuals)	0.29

8.2 SWW- Proposals for survivability exemptions

A summary of the high survivability applications are given in Table 8.2.1.

Table 8.2.1 Summary of high survivability exemptions submitted as part of the SWW Joint Recommendations (restricted to new or re-assessed exemptions) **Note:** This table contains additional material supplied by the Regional Group in response to the Commission's request following initial review by EWG-18-06

Data from Spain on: Skates and rays (Rajiformes) caught with all gears in ICES subareas VIII and IX.

Country	**Exemption applied for (species, area, gear type)**	**Species as bycatch or target**	**Number of vessels subject to the landing obligation**	**Landings (by landing obligation subject vessels)**	**Estimated Discards**	**Estimated Catch**	**Discard Rate**	**Estimated discard survival rate from provided studies**
ESP	ALL TRAWLERS ALL GILLNETTS ALL LONGLINES ARTISANAL FLEET **Areas VIII and IX**	ALL SKATES AND RAYS REGULATED	225 68 76 4455	957 (8c9a 323)	135	460	29%	58% 95,5%

Data from Spain on: Red seabream (*Pagellus bogaraveo*) caught with artisanal gear called "voracera" used in the south of Spain in ICES subareas IXa.

Country	**Exemption applied for (species, area, gear type)**	**Species as bycatch or target**	**Number of vessels subject to the landing obligation**	**Landings (by landing obligation subject vessels)**	**Estimated Discards**	**Estimated Catch**	**Discard Rate**	**Estimated discard survival rate from provided studies**
ESP	VORACERA Gear type	TARGET	11	11	0	11	0%	90.6 ± 6.2%.

	LLS_DWS (Deepwater set-longlines) with hook size bigger than 3,95 cm length and 1,65 cm width							

8.2.1 Skates and rays (Rajiformes) caught with all gears in ICES subareas VIII and IX.

Background

This is a high survivability request which is similar to those requested for the North Sea and NWW. A general discussion of high survivability exemptions for skates and rays is included in Section 5.4.

The basis of the exemption

A power point presentation (with main points arising from the DESCARSEL project and next stages of the planned work) is used as supporting evidence to justify the exemption - unfortunately the presentation is not in English and it is difficult to evaluate the content. The evidence for high survival rates is based on the DESCARSEL project and in particular the results for several ray species caught with gillnets and bottom trawlers in areas VIIIc and IXa). The DESCARSEL project is well presented and the information provided is reasonable.

EWG 18-06 Observations

EWG 18-06 notes that survival rates appear to be species and gear dependent. Whether the estimates are fit for purpose in the context of the fisheries concerned or in terms of long term vs short term mortality is difficult to say. Furthermore, a detailed description of the fleets and fisheries covered by 'all gears' was not provided and there was no fishery statistics information included with the request with which to assess the scale of the problem.

The EWG-06 notes that extrapolating the outcomes of the DESCARSEL study to *all* skates and rays caught with *all* gears in subareas VIII and IX (as requested in the JR) is difficult to justify without additional information.

EWG 18-06 considers that more time is required to develop the research and to extend the knowledge related to the survivability of skates and rays. In the meantime, the South Western Waters Regional Group proposed that a time limited survival exemption should be introduced from 1 January 2019 until 31 December 2021. Given the uncertainty surrounding the representativeness of the estimates and the likelihood that new material will emerge during the course of the DESCAREL project which might lead to adjustments in survival rate estimates, shorter trial periods (for example, one year at a time) would be preferable.

8.2.2 Red seabream (Pagellus bogaraveo) caught with artisanal gear called "voracera" used in the south of Spain in ICES subareas IXa.

Background

This new exemption is requested for two regional areas ie. the Strait of Gibraltar, Atlantic (SWW) and Mediterranean (PESCAMED).

The basis of the exemption

A description of the fishery is provided but the numerical table of fishery data is missing. Detailed

information is provided to support this exemption which is based on the use of a highly selective fishing gear called "Voracera" (a special type of longline) and the short period that it remains in the water (15-30 minutes). The case is well presented, and the information provided is reasonable. The evidence for high survivability comes from 2 studies:

Marking-recapture study (annex II) Small sized fish seem to be better at bearing the stress associated with both fishing manoeuvres and the marking work: their behaviour after release showed obvious signs of rapid recovery, heading towards to the sea bottom.

Survivability study (annex I) Individuals under 33 cm total length caught in the Strait of Gibraltar using voracera fishing gear had survival rates of 90.6 ± 6.2%. The surviving animals managed to recover their basal homeostatic levels, essentially demonstrating an effective physiological recovery, between 5 and 24 hours after the capture.

EWG 18-06 Observations

EWG 18-06 notes that this study was carried out during the month of November 2017, under environmental conditions (temperature, salinity, etc.) associated with that time of year so any conclusions should take into account this limitation. However, the Strait of Gibraltar does not have a great variation in these conditions throughout the year, so similar survival and recovery rates are expected during other periods. Complementary studies should be carried out to confirm this.

EWG 18-06 considers that the studies represent reasonably sound scientific evidence for the survival of red sea bream following discarding. Provision of quantitative fishery data would help in the assessment of the scale of the problem and the likely quantities of fish involved.

8.2.3 Red seabream (Pagellus bogaraveo) caught in ICES subareas X with hooks and lines.

Background

This is a request for a high survival exemption in a hook and line fishery.

The basis of the exemption

The information to compile a numerical table of fishery data is more or less provided in the text, but the completed table was not provided in the request. The supporting evidence to justify the requested high survival exemption is well presented and the information provided is reasonable.

Two sources of information are used. i)Results from onboard observer surveys (413 individual fish) are presented showing a 76% vigorous vitality status (strength in its body, moves without stimulus and is able to do a 'tail-flip', strong swimming towards the bottom when released) for blackspot seabreams caught with deep-water bottom longline and 73% for the blackspot seabreams caught with handlines. These results suggest a reasonably high post-release survival probability but do not provide information on the medium to longer term survival outcomes since these were not monitored.

ii) Results from a satellite telemetry tagging programme (in place since 2001) onboard commercial fisheries are presented showing a 67% survival, 8 days after capture. The data presented here represent a directly demonstrated high survival rate of fish discarded carefully under experimental conditions. Whether this is representative of the typical treatment in the commercial fishery is not clear.

EWG 18-06 Observations

EWG 18-06 considers that the studies represent reasonably sound scientific evidence for the survival of red sea bream following discarding. Some discussion about how representative the

experimental conditions prevailing in the telemetry tagging programme are would enhance the assessment of this request.

EWG 18-06 also notes that completion of the tables of quantitative fishery data would help in the assessment of the scale of the problem and the likely quantities of fish involved.

9 MEDITERRANEAN - OVERVIEW OF JOINT RECOMMENDATIONS

Commission 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 plan was updated in 2017 by Commission Delegated Regulation 2018/153.

In 2018, PESCAMED (Spain, France and Italy), SUDESTMED (Cyprus, Greece, Italy and Malta) and ADRIATICA (Croatia and Italy) the three groups of Member States from the Mediterranean, submitted new sets of joint recommendations. The main elements of the existing discard plan and the new JRs and which of these have been assessed by EWG 18-06 are summarised in table 9.1.

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

Exemption	Status	Section	MS Group
De minimis			
6% in 2019 and 2020, 5% in 2021, of total annual catches of Hake and Mullets caught by bottom trawls	Existing	Not assessed	PESCAMED
6% in 2019 and 2020, 5% in 2021, of total annual catches of Hake and Mullets caught by bottom trawls	Existing	Not assessed	SUDESTMED
6% in 2019 and 2020, 5% in 2021, of total annual catches of Hake and Mullets caught by bottom trawls	Existing	Not assessed	ADRIATICA
6% in 2019 and 2020, 5% in 2021 of total annual catches of Hake and Mullets caught by trammel and gill nets	Existing but modified (1% to 6%)	9.1.1	PESCAMED
6% in 2019 and 2020, 5% in 2021 of total annual catches of Hake and Mullets caught by trammel and gill nets	Existing but modified (1% to 6%)		SUDESTMED
6% in 2019 and 2020, 5% in 2021 of total annual catches of Hake and Mullets caught by trammel and gill nets	Existing but modified (1% to 6%)		ADRIATICA

6% in 2019 and 2020, 5% in 2021, of total annual catches of Deep water rose shrimp caught by bottom trawls	Existing	Not assessed	SUDESTMED
6% in 2019 and 2020, 5% in 2021 of total annual catches of Hake and Mullets caught by rapido	Existing but modified (1% to 6%)	9.1.3	ADRIATICA
6% in 2019 and 2020, 5% in 2021 of total annual catches of Common Sole caught by trawl nets	Existing but modified (3% to 6%)	9.1.4	ADRIATICA
In July, August and September, 6% in 2019 and 2020, 5% in 2021 of total catches of Norway lobster caught by bottom trawls during these months	New	9.1.2	PESCAMED
In July, August and September, 6% in 2019 and 2020, 5% in 2021 of total catches of Norway lobster caught by bottom trawls during these months	New		SUDESTMED
In July, August and September, 6% in 2019 and 2020, 5% in 2021 of total catches of Norway lobster caught by bottom trawls during these months	New		ADRIATICA
7% in 2019 and 2020, 6% in 2021 of total annual catches of demersal finfishes under landing obligation for under MCRS specimens - **Hake, Mullets and pelagic species excepted** - caught by bottom trawls	New	9.1.5	PESCAMED
7% in 2019 and 2020, 6% in 2021 of total annual catches of demersal finfishes under landing obligation for under MCRS specimens - **Hake, Mullets and pelagic species excepted** - caught by bottom trawls	New		SUDESTMED
7% in 2019 and 2020, 6% in 2021 of total annual catches of demersal finfishes under landing obligation for under MCRS specimens - **Hake, Mullets and pelagic species excepted** - caught by bottom trawls	New		ADRIATICA
7% in 2019 and 2020, 6% in 2021 of total annual catches of	New	9.1.6	PESCAMED

demersal finfishes under landing obligation for under MCRS specimens - **Hake, Mullets and pelagic species excepted** - caught by trammel and gill nets			
7% in 2019 and 2020, 6% in 2021 of total annual catches of demersal finfishes under landing obligation for under MCRS specimens - **Hake, Mullets and pelagic species excepted** - caught by trammel and gill nets	New		SUDESTMED
7% in 2019 and 2020, 6% in 2021 of total annual catches of demersal finfishes under landing obligation for under MCRS specimens - **Hake, Mullets and pelagic species excepted** - caught by trammel and gill nets	New		ADRIATICA
7% in 2019 and 2020, 6% in 2021 of total annual catches of demersal finfishes under landing obligation for under MCRS specimens - **Hake, Mullets and pelagic species excepted** - caught by hooks and lines	New	9.1.7	PESCAMED
7% in 2019 and 2020, 6% in 2021 of total annual catches of demersal finfishes under landing obligation for under MCRS specimens - **Hake, Mullets and pelagic species excepted** - caught by hooks and lines	New		SUDESTMED
7% in 2019 and 2020, 6% in 2021 of total annual catches of demersal finfishes under landing obligation for under MCRS specimens - **Hake, Mullets and pelagic species excepted** - caught by hooks and lines	New		ADRIATICA
7% in 2019 and 2020, 6% in 2021 of total annual by-catches of pelagic species (Anchovy, Sardine, Mackerel, Horse mackerel) under landing obligation	New	9.1.8	PESCAMED
7% in 2019 and 2020, 6% in 2021 of total annual by-catches of pelagic species (Anchovy, Sardine, Mackerel, Horse mackerel)	New		SUDESTMED
7% in 2019 and 2020, 6% in 2021 of total annual by-catches of	New		ADRIATICA

pelagic species (Anchovy, Sardine, Mackerel, Horse mackerel)			
High survivability			
Sole caught in GFCM/GSAs 17 and 18 with rapido (beam trawl- TBB).	Existing	Not assessed	ADRIATICA
Scallop (*Pecten jacobeus*), Carpet clams (*Venerupis* spp.), Venus shells (*Venus* spp.) caught by mechanized dregdes (gear code: HMD)	Existing but revisited	9.2.6	PESCAMED
Norway lobster (*Nephrops norvegicus*) caught by bottom trawls (gear codes: OTB, OTT, PTB, TBN, TBS, TB, OT, PT and TX), excepted during the months of July, August and September	Existing but revised	9.2.1	PESCAMED
Norway lobster (*Nephrops* norvegicus) caught by bottom trawls (gear codes: OTB, OTT, PTB, TBN, TBS, TB, OT, PT and TX), excepted during the months of July, August and September	Existing but revised		SUDESTMED
Norway lobster (*Nephrops* norvegicus) caught by bottom trawls (gear codes: OTB, OTT, PTB, TBN, TBS, TB, OT, PT and TX), excepted during the months of July, August and September	Existing but revised		ADRIATICA
Deep water rose shrimp (*Parapanaeus longirostris*) caught by bottom trawls (gear codes: OTB, OTT, PTB, TBN, TBS, TB, OT, PT and TX)	New	9.2.2	PESCAMED
Deep water rose shrimp (*Parapanaeus longirostris*) caught by bottom trawls (gear codes: OTB, OTT, PTB, TBN, TBS, TB, OT, PT and TX)	New		ADRIATICA
Red sea bream (*Pagellus bogaraveo*) caught by hooks and lines (gear codes: LHP, LHM, LLS, LLD, LL, LTL, LX)	New	9.2.3	PESCAMED
Red sea bream (*Pagellus bogaraveo*) caught by hooks and lines (gear codes: LHP, LHM, LLS, LLD, LL, LTL, LX)	New		ADRIATICA
Red sea bream (Pagellus bogaraveo) caught by hooks and	New		SUDESTMED

lines (gear codes: LHP, LHM, LLS, LLD, LL, LTL, LX)			
Lobster (*Homarus gammarus*) and crawfish (Palinuridae) caught by nets (gear codes: GNS, GN, GND, GNC, GTN, GTR, GEN) and by pots and traps (gear codes: FPO, FIX)	New	9.2.4	PESCAMED
Lobster (Homarus gammarus) and crawfish (Palinuridae) caught by nets (gear codes: GNS, GN, GND, GNC, GTN, GTR, GEN) and by pots and traps (gear codes: FPO, FIX)	New		SUDESTMED
Lobster (Homarus gammarus) and crawfish (Palinuridae) caught by nets (gear codes: GNS, GN, GND, GNC, GTN, GTR, GEN) and by pots and traps (gear codes: FPO, FIX)	New		ADRIATICA
Norway lobster (*Nephrops norvegicus*) caught by pots and traps (gear codes: FPO, FIX)	New	9.2.5	PESCAMED
Norway lobster (*Nephrops* norvegicus) caught by pots and traps (gear codes: FPO, FIX)	New		SUDESTMED
Norway lobster (*Nephrops* norvegicus) caught by pots and traps (gear codes: FPO, FIX)	New		ADRIATICA
Technical measures			
use on a voluntary basis of codend trawls and/or extension fitted with a T90 50mm mesh size	Not a request	Not assessed	PESCAMED
real time closure trials	Not a request	Not assessed	PESCAMED

The EWG note that *de minimis* exemptions reported in the MEDAC annex have been included in all JRs, whilst the technical measures have not. MEDAC advice for the granting of *de minimis* exemption should be considered complementary to the management proposals aimed to reduce the catch of undersized specimens through spatio-temporal closures of nursery/spawning areas of the species associated with the highest percentages of discards and landings ("Strategy for not reaching the *De minimis* threshold"). The EWG recognizes the effort of the Mediterranean AC aimed to provide information on catches, discard rate and nominal effort related to the three macroareas, fisheries and species, even though data on the catches referred to in the different countries have been aggregated. However, some information provided by the MEDAC graphs (DCF source) can be complementary to the data provided by member states for the *de minimis* evaluation.

The MEDAC annex also appears to gather up-to-date scientific studies and articles in support of the strategy of decreasing unwanted catches through the identification of nursery and spawning areas for the species in Annex III of REGMED which are more frequently discarded[5].

According to MEDAC graphs, in the Western Mediterranean, Anchovy (*Engraulis encrasicolus*), Spanish sea bream (*Pagellus acarne*), Common pandora (*Pagellus erythrinus*) and Atlantic horse mackerel (*Trachurus trachurus*) are the species that, although not already exempted, are associated with the highest percentages of discards and landings. For those species MEDAC provided a summary table of the areas and periods where spatio-temporal closures should be most effective for the avoidance of undersized specimens.

The mention in both SUDESTMED and ADRIATICA of the possibility of spatio-temporal closures is noteworthy and promising, but no specific recommendations or legal provisions were explicitly made to take advantage of the possibility of avoiding catches of undersized specimens of some of the most relevant species, as identified by a number of researchers.

9.1 Mediterranean – proposals for *de minimis*

A summary of the *de minimis* applications is given in Table 9.1.1.

Table 9.1.1 Summary of exemption applications submitted as part of the Mediterranean Joint Recommendations. **NOTE** – although some fishery data were supplied following an additional request from the Commission, this was very difficult to interpret and was not organised in a coherent way.

Country	*Exemption applied for (species, area, gear type)**	*Fishery Description (mesh size + area)*	*Landings (by LO subject Vessels)*	*Estimated Discards**	*Estimated Catch*	*Discard Rate*	*Estimated discard survival rate from provided studies*
de minimis exemptions							
Croatia, Cyprus, France, Greece, Italy, Malta, Spain	6% to 5% Hake and Mullets, Med, bottom trawling	Existing - No modification, not assessed					
Croatia, Cyprus, France, Greece, Italy, Malta, Spain	1% of total hake and mullets, Med, gillnets & trammelnets	Dropped					
Croatia, Cyprus, France,	6% to 5% Hake and Mullets,	unknown	unknown	unknown	unknown	unknown	--

[5] CALL MARE/2014/27, Study on the evaluation of specific management scenarios for the preparation of MAPs in the Mediterranean and the Black Sea; Colloca et al study (2015) "The Seascape of Demersal Fish Nursery Areas in the North Mediterranean Sea, a First Step Towards the Implementation of Spatial Planning for Trawl Fisheries" and MEDISEH results.

Greece, Italy, Malta, Spain	Med, gillnets & trammelnets						
Croatia, Cyprus, France, Greece, Italy, Malta, Spain	6% to 5% Nep in Jul & Aug & Sep, Med, trawl	variable	Available only for whole year	Available only for whole year	Available only for whole year	variable	--
Cyprus, Greece, Italy, Malta	6% to 5% Deep water rose shrimp, SEMed, bottom trawls	Existing - No modification, not assessed					
Croatia, Italy	1% Hake and Mullets, Adriatic, rapido	Dropped					
Croatia, Italy	6% to 5% Hake and Mullets, Adriatic, rapido	unknown	unknown	unknown	unknown	unknown	--
Croatia, Italy	3% Common Sole, Adriatic, trawl	Dropped					
Croatia, Italy	6% to 5% Common Sole, Adriatic, trawl	unknown	unknown	unknown	unknown	unknown	--
Croatia, Cyprus, France, Greece, Italy, Malta, Spain	7% to 6% demersal finfish (with exceptions), Med, trawl	unknown	unknown	unknown	unknown	unknown	--
Croatia, Cyprus, France, Greece, Italy, Malta, Spain	7% to 6% demersal finfish (with exceptions), Med, gillnets & trammelnets	unknown	unknown	unknown	unknown	unknown	--
Croatia, Cyprus, France, Greece, Italy, Malta, Spain	7% to 6% demersal finfish (with exceptions), Med, hooks & lines	unknown	unknown	unknown	unknown	unknown	--
Croatia, Cyprus, France, Greece, Italy, Malta, Spain	7% to 6% anchovy, sardine, mackerel & horse mackerel, Med, unknown	unknown	unknown	unknown	unknown	unknown	--

9.1.1 De minimis exemption for 6% in 2019 and 2020, 5% in 2021 of total annual catches of Hake and Mullets caught by trammel and gill nets

Background

A similar request was formerly the object of a Joint Recommendation for a derogation in the Mediterranean Sea, for hake (*Merluccius merluccius*) and red mullet (*Mullus* spp.), up to a maximum of 1 % of the total annual catches of these species by vessels using gillnets. The former derogation first appeared in the Commission Delegated Regulation (EU) 2017/86, of 20 October 2016, as a derogation from Article 15(1) of Regulation (EU) No 1380/2013. In the Commission Delegated Regulation (EU) 2018/153, of 23 October 2017, it was reworded to include an additional gear: 'for hake (*Merluccius merluccius*) and red mullets (*Mullus* spp.), up to a maximum of 1 % of the total annual catches of these species by vessels using gillnets and trammel nets'. EGW 18-06 considers the intent is for the former derogation to be replaced by the current request, although this request was presented in the PESCAMED, ADRIATICA and SUDESTMED JRs as a continuation of the derogation previously granted.

Basis for exemption

The basis for justifying the exemption is in relation to disproportionate costs for small-scale multi-species fisheries, with hazards linked to the excessive loading of holds of limited capacity, and in the absence of infrastructure to handle unwanted catches once landed.

Supporting evidence for this justification (and for the other *de minimis* exemptions recommended in the Mediterranean) is given in two annexes, one from PESCAMED (Annex D1 of the PESCAMED JR) and another from MEDAC (Annex D2 of the PESCAMED JR and Annex D of the ADRIATICA and SUDESTMED JRs). The supporting annex from PESCAMED provides an additional justification for *de minimis* exemptions on the basis that "landing of this under sized fish could cause collateral damage to the stocks as the fleet is particularly vulnerable to the risk of a black market developing for undersized fish". The document argues that the "black market issue" is exacerbated by the fact that Mediterranean fisheries are not managed by TACs and quota and thus there is not the same incentive to avoid catching them.

For trammel and gill nets, the following comments are provided in the MEDAC annex: "Even if the variety of species caught by gill and trammel nets (respectively GNS and GTR) is greater than the purse seiners, the discard rate never exceeds 5% of total catches" in the Western Mediterranean, while the same is said to be true for the Adriatic. In the Eastern Mediterranean, for gillnets hake discard rates slightly exceed 5%, whereas mullets never exceed 2,5% (from the graph); for trammel nets, they are only significant for surmullets (exceeding 10%).

EWG 18-06 observations

EWG 18-06 notes that a description of the fleet, fisheries, and countries involved is provided in the MEDAC annex. However, additional discrimination by member state and fleet needs to be provided to support the request. Spatial measure suggestions were provided in the annex by MEDAC that might be an important complement to this request. There is sound science and excellent detail in many of these, but they cannot be considered since no provision for the operational introduction of measures of this type was offered.

EWG 18-06 does not consider this derogation request to be a continuation of Commission Delegated Regulation (EU) 2017/86, of 20 October 2016, modified on the 23rd October 2017 by Delegated Regulation (EU) 2018/153, as the basis for the acceptance of the *de minimis* value previously supported cannot be the same when applying for a 6-fold increase in the *de minimis*, especially as information on the current volume of discards is scant. Furthermore, the characteristics of the gear for the variety of fleets and member states are unknown and may vary across the Mediterranean.

EWG 18-06 considers that the data available here, and those on discard volumes for the species in similar gear elsewhere, suggest that the percentage of *de minimis* sought is unnecessarily high

and may only be needed as a complement of the *de minimis* obtained for other gear. Annex D1 of the PESCAMED JR also states that "As in longlines, there is no rate for under MCRS discards due to the low quantities of discard in this gear". The change requested is therefore not in keeping with the objectives of Article 15 of Regulation (EU) No 1380/2013 and does not provide an incentive for a reduction of unwanted catches. The maintenance of the previously accepted *de minimis* rate, which is valid for 2019, would appear to be better justified.

Due to incomplete information, EWG 18-06 is unable to assess fully whether this demonstrates that selectivity is difficult to improve in this fishery or whether the costs of handling unwanted catches are actually disproportionate.

9.1.2 De minimis exemption in July, August and September, for 6% in 2019 and 2020, 5% in 2021 of total catches of Norway lobster caught by bottom trawls during these months

Background

Species covered by Annex III of REGMED. This new request is complementary to the high survivability exemption requested between October and June(see below)

Basis for exemption

The request was based on the hazards linked to the excessive loading of holds of limited capacity together with the absence of infrastructure to handle unwanted catches once landed. In addition to this, the lower survivability rates of the Norway lobsters caught by bottom trawls during the summer months (July, August and September) render that type of exemption inappropriate.

EWG 18-06 observations

EWG 18-06 notes that the new requested exemption for Norway lobster caught by bottom trawl (gear codes:OTB, OTT, PTB, TBN, TBS, TB, OT, PT AND TX) was justified by disproportionate costs of landing in general (not for *Nephrops* in particular).

EWG 18-06 is unclear if the trawling fleet targeting *Nephrops* in France is the same as the multispecies fleets presented, even though data on *Nephrops* are included in a combination with the other species. Spanish data are divided by fleet, but it is not clear whether these fleets are using different gears.

Furthermore, data presented in the JRs cover seven-member states and a number of trawling fleets, but the fleets of only two-member states were listed (1 France; 3 Spain) (Annex D1 of the PESCAMED JR); Italian data are missing from the JR but were received during the EWG (1 trawling fleet). No fleets of the remaining member states were identified.

EWG 18-06 notes that landings for the summer months were not presented, however an average discard rate for the French fleet was calculated to be 3% while for Spain (3 fleets) it was 0,9% (0,8 – 2%) and for Italy 0,2%. EWG 18-06 is unable to determine the discard rates for the fleets of the other four-member states. No data exist on possible monthly variations of the discard rates, so it is assumed that a constant level of discarding occurs throughout the year.

Given that the rationale for the landing obligation is to encourage changes in fishing behaviour, the request for a higher than needed *de minimis* for the three-member states that provided data, is difficult to justify. EWG 18-06 is not able to determine whether the situation in the remaining member states is similar. Neither ADRIATICA nor SUDESTMED presented supporting information on this *de minimis*.

Due to incomplete information, EWG 18-06 is unable to further assess whether this demonstrates that selectivity is difficult to improve in this fishery or whether the costs of handling unwanted catches are actually disproportionate.

9.1.3 De minimis exemption for 6% in 2019 and 2020, 5% in 2021 of total annual catches of Hake and Mullets caught by rapido

Background

This request was formerly the object of a Joint Recommendation for a derogation in the Adriatic Sea, "for hake (*Merluccius merluccius*) and red mullet (*Mullus* spp.), up to 1 % of the total annual catches of these species by vessels using rapido (beam trawl)". The former derogation appeared in the Commission Delegated Regulation (EU) 2017/86, of 20 October 2016, as a derogation from Article 15(1) of Regulation (EU) No 1380/2013. In the Commission Delegated Regulation (EU) 2018/153, of 23 October 2017, it was not modified. EGW 18-06 considers the intent is for the former derogation to be replaced by the current request, although this request was presented in the ADRIATICA JR as a continuation of the derogation previously granted.

Basis for exemption

The basis for justifying the exemption is in relation to disproportionate costs for small-scale multi-species fisheries caused by "hazards linked to the full load of holds of limited capacity, and in the absence of infrastructure to handle unwanted catches once landed".

Unlike the PESCAMED JR, which includes a supporting annex on the *de minimis* requests, no supporting evidence for this justification is given by ADRIATICA. The MEDAC annex (Annex D) also provides no additional justification for *de minimis* exemption related to the rapido beam trawl. The only reference to the rapido beam trawl relates to the fact that sole are the target species and that "estimate of discard for the by catch species with minimum size gave values in general lower than 5%".

EWG 18-06 observations

EWG 18-06 understands there may be a higher rate of discards in this gear of by-catch species than the target species (sole). The MEDAC annex estimates discard rates for sole to be "around 1%". No data is available for the species for which the exemptions is requested, and the only other reference to by-catch discard rates suggests that they may in general not exceed 5%. In this case, the gears are likely to be relatively homogenous and according to STECF-15-19, only Italy is involved in the fishery. It would seem possible to provide more specific data to support the request, which might have been done if this had not perhaps been considered a granted derogation.

EWG 18-06 does not consider this derogation request to be a continuation of Commission Delegated Regulation (EU) 2017/86, of 20 October 2016, as the basis for the acceptance of the *de minimis* value previously supported cannot be the same when applying for a 6-fold increase in the *de minimis*, especially as information on the current volume of discards for the species involved is very scant. Some earlier documentation suggests that for trawls in the area (not necessarily rapido) that discard rates can be higher than the 1% derogation obtained. Discard rates of between 3.8 and 15.7% for *Merluccius merluccius* and between 1.6 and 13.1% for *Mullus barbatus* have been reported by STECF-16-10, but EWG 18-06 is unable to determine whether these are similar for rapido beam trawls.

EWG 18-06 considers that the change from 1% to 6% requested, is not in keeping with the objectives of Article 15 of Regulation (EU) No 1380/2013 and does not provide an incentive for a reduction of unwanted catches. The maintenance of the previously accepted *de minimis* rate, which is valid for 2019, would not require a re-assessment. In light of the fact that no supporting evidence backs the claim for the level of *de minimis* intended, the unchanged basis for the exemption does not seem to justify the change in the derogation.

Due to incomplete information, EWG 18-06 is unable to further assess whether this demonstrates that selectivity is difficult to improve in this fishery or whether the costs of handling unwanted catches are actually disproportionate.

9.1.4 De minimis exemption for 6% in 2019 and 2020, 5% in 2021 of total annual catches of Common Sole caught by trawl nets

Background

A similar request was formerly the object of a Joint Recommendation for a derogation in the Adriatic Sea, "for common sole (*Solea solea*), up to 3 % for 2017 and 2018 and up to 2 % for 2019 of the total annual catches of this species by vessels using trawl nets". The former derogation appeared in the Commission Delegated Regulation (EU) 2017/86, of 20 October 2016, as a derogation from Article 15(1) of Regulation (EU) No 1380/2013. In the Commission Delegated Regulation (EU) 2018/153, of 23 October 2017, it was not modified. EWG 18-06 considers the intent is for the former derogation to be replaced by the current request, although this request was presented in the ADRIATICA JR as a continuation of the derogation previously granted.

Basis for exemption

The basis for justifying the exemption is in relation to disproportionate costs for small-scale multi-species fisheries caused by "hazards linked to the full load of holds of limited capacity, and in the absence of infrastructure to handle unwanted catches once landed".

Unlike the PESCAMED JR, which includes a supporting annex on the *de minimis* requests, no supporting evidence for this justification is given by ADRIATICA. The MEDAC annex (Annex D) also provides no additional justification for *de minimis* exemption related to sole caught with bottom trawls.

EWG 18-06 observations

EWG 18-06 was unable to determine the source of the data in support of the former derogation, as this is not evident in STECF 16-10 and is taken as already assessed in SETCF 17-08. STECF 16-10 highlights: "EWG 16-06 notes that the precise *de minimis* percentages have yet to be specified by the relevant Member States since the MEDAC proposal states that 'Member States will proceed to define the level of their respective *de minimis* percentage according to their national level of reported discards'".

EWG 18-06 considers it likely that the level of the *de minimis* in the current derogation is that which was requested in the MEDAC JR in 2016. There does not appear to be an exact basis to justify the current level of the exemption, however, as no additional data were provided, EWG 18-06 is unable to determine the appropriate level of *de minimis*. EWG 18-06 simply notes that there seems to be no justification to change the current derogation, particularly by increasing the level of the *de minimis*.

9.1.5 De minimis exemption for 7% in 2019 and 2020, 6% in 2021 of total annual catches of demersal finfishes under landing obligation for under MCRS specimens - Hake, Mullets and pelagic species excepted - caught by bottom trawls

Background

The three JRs recommend the inclusion of a *de minimis* exemption for a broad group of up to 14 demersal species, which are listed in Annex III of Regulation (EC) N° 1967/2006 specifying individual MCRS. This group does not include hake and red mullets as they are covered by an existing exemption, nor does it include bycatch of pelagic species in demersal fishing gears, as there is a specific exemption requested for those. The exemption would apply to fleets of Croatia, Cyprus, France, Greece, Italy, Malta and Spain. The *de minimis* percentages requested are 7% in 2019 and 2020 and 6% in 2021.

Basis for exemption

The basis for justifying the exemption is in relation to disproportionate costs for small-scale multi-species fisheries caused by "hazards linked to the full load of holds of limited capacity, and in the absence of infrastructure to handle unwanted catches once landed". The PESCAMED annex presents reasonable arguments and references supporting studies concerning high costs of handling and transport and a lack of utilisation options. Some costs, e.g. transport at €300 per ton, sound high but it was not possible to find detailed information online for some of the supporting studies referenced and these could have been included as further annexes.

Supporting evidence for this justification (and for the other *de minimis* exemptions recommended in the Mediterranean) is given in two annexes, one from PESCAMED (Annex D1 of the PESCAMED JR) and another from MEDAC (Annex D2 of the PESCAMED JR and Annex D of the ADRIATICA and SUDESTMED JRs). The supporting annex from PESCAMED provides an additional justification for *de minimis* exemptions on the basis that "landing of this under sized fish could cause collateral damage to the stocks as the fleet is particularly vulnerable to the risk of a black market for undersized fish." The document argues that the "black market issue" is exacerbated by the fact that Mediterranean fisheries are not managed by TAC and quota and thus there is not the same incentive to avoid catching them.

The PESCAMED document provides partial information according to the format outlined in STECF Plen-17-02 which aims to standardise *de minimis* supporting information. The format proposed by STECF aims to quantify the potential overall volume of discards which could be subject to a *de minimis* exemption.

Supporting information is provided in 2 annexes, one from PESCAMED and one from MEDAC. The PESCAMED annex provides some detailed data for French and Spanish trawler fleets. Some additional Italian data were received during the EWG, covering the 3 Mediterranean areas. The MEDAC document provides aggregated data across all fleets of each of the Mediterranean areas. Discard rates presented for relevant species vary significantly across MS fleets (Tables 9.1.5.1, 9.1.5.2 and 9.1.5.3) but there is insufficient detail provided in the data (mesh sizes, area of operation, depth etc) to assess why this may be. It is not very clear which fleets the various exemptions would apply to and the Spanish data provided indicates that there are significant differences within MS fleets depending on target species, depth etc.

Table 9.1.5.1. Discard rates for relevant species and MS fleets in the Western Mediterranean

			Medac	France	Spain	Italy
			2014-2016	2016	2013-2016	2014-2016
SBG	Gilthead seabream	Sparus aurata	0.03	1		
SOL	Common sole	Solea vulgaris		0		
BSS	European seabass	Dicentrarchus labrax		33	0	
PAC	Common pandora	Pagellus erythrinus	26.7	1	0.4	65
SBA	Spanish sea-bream	Pagellus acarne	43.3	19	0.6	
SBR	Red sea-bream	Pagellus bogaraveo	74.7	58	5.4	
RPG	Common sea-bream	Pagrus pagrus	6.7		0	
ANN	Annular sea-bream	Diplodus annularis	3.3	31		
CTB	Two-banded sea-bream	Diplodus vulgaris	28.0	0		
SWA	White sea-bream	Diplodus sargus		0		
SRG	Sea bream ssp.	Diplodus spp.	0.3		0.1	

Table 9.1.5.2. Discard rates for relevant species and Italian fleets in the Adriatic Mediterranean (GSA 17 and 18)

				Estimated Discards	Estimated Catch		Discards percentage ***
Deep water rose shrimp		DPS_17_OTB		105,64	422,99		24,98
Deep water rose shrimp		DPS_18_OTB		14,10	775,90		1,82
European hake		HKE_17_OTB		73,69	1917,30		3,84
European hake		HKE_17_TBB		4,08	50,11		8,15
European hake		HKE_18_OTB		79,70	1703,00		4,68
Surmullet		MUR_17_OTB		0,00	5,01		0,00
Red mullet		MUT_17_OTB		669,10	2836,92		23,59
Red mullet		MUT_17_TBB		9,76	72,03		13,55
Red mullet		MUT_18_OTB		98,80	1505,20		6,56
Norwegian lobster		NEP_17_OTB		3,29	449,36		0,73
Norwegian lobster		NEP_18_OTB		2,62	340,04		0,77
Common sole		SOL_17_OTB		6,97	366,13		1,90
Common sole		SOL_17_TBB		23,27	1111,23		2,09
		Total Italian fleet		1091,02	11555,21		9,44

Table 9.1.5.3. Discard rates for relevant species and Italian fleets in the South East Mediterranean

			Estimated Discards	Estimated Catch		Discards percentage ***
Deep water rose shrimp	DPS_16_OTB		70,72	5797,03		1,22
Deep water rose shrimp	DPS_19_OTB		15,50	579,20		2,68
European hake	HKE_16_OTB		138,25	1439,03		9,61
European hake	HKE_19_OTB		9,00	275,30		3,27
Atlantic horse mackerel	HOM_16_OTB		1024,29	1212,36		84,49
Atlantic horse mackerel	HOM_19_OTB		156,81	219,28		71,51
Surmullet	MUT_16_OTB		24,92	222,99		11,17
Surmullet	MUT_19_OTB		0,60	153,10		0,39
Axillary seabream	SBA_19_OTB		0,82	10,18		8,06
	Total Italian fleet		1440,89	9908,45		14,54

EWG 18-06 observations

EWG 18-06 notes that the tables of data provided show different combinations of species relevant to multiple exemptions. This makes interpretation and analysis of specific exemptions difficult without significant clarification and reworking of the data. Estimating total *de minimis* volumes is very difficult because data are presented in different formats both within and across the two annexes. Additional data provided by MEDAC, based on the STECF Mediterranean data from 2014 to 2016, gives a *de minimis* volume for all finfish species in trawls of 240 tons. The assessment by EWG 18-06 is further complicated by the fact that the exemption is to allow the discarding of under MCRS fish while only partial data on the proportion of discards which are below MCRS is provided.

EWG 18-06 considers that a *de minimis* rate of 7% is significantly higher than discard rates averaged across fleets for many of the demersal species. Conversely some of the species show very high discard rates. The transition from these currently high discard rates to the *de minimis* level will be challenging without significant changes in the fishing pattern, either through improvements in selectivity or by avoiding areas of higher unwanted catch as outlined in the MEDAC annex. The high handling costs for unwanted catch outlined in the PESCAMED annex provide an incentive for the fleets involved to adapt their behaviour.

Given that this exemption covers a broad group of species with a wide range in discard rates EWG 18-06 considers there may be a risk that an average discard rate across the species will mask higher discard rates for individual species. The incentive to reduce high discard rates for individual species may also be reduced. This could be addressed with the addition of a safeguard percentage (a specified maximum possible amount of *de minimis* for each species that could potentially be discarded) as has been proposed in other regions (e.g. NWW). Additionally, quantifying discards permitted under such a complex exemption will be particularly challenging.

EWG 18-06 notes that suggestions for technical measures, in particular spatial approaches, are provided in the MEDAC annex which if implemented may help to address the issue of reducing discard rates in the longer term.

Due to incomplete information and material requiring clarification, EWG 18-06 is unable to further assess whether this demonstrates that selectivity is difficult to improve in this fishery or whether the costs of handling unwanted catches are actually disproportionate.

9.1.6 De minimis exemption for 7% in 2019 and 2020, 6% in 2021 of total annual catches of demersal finfishes under landing obligation for under MCRS specimens - Hake, Mullets and pelagic species excepted - caught by trammel and gill nets

Background

The three JRs recommend the inclusion of a new *de minimis* exemption for a broad group of up to 14 demersal species, which are listed in Annex III of Regulation (EC) N° 1967/2006 specifying individual MCRS. This group does not include hake and red Mullets as they are covered by an existing exemption nor does it include bycatch of pelagic species in demersal fishing gears, as there is a specific exemption requested for those. The exemption would apply to fleets of Croatia, Cyprus, France, Greece, Italy, Malta and Spain. The *de minimis* percentages requested are 7% in 2019 and 2020 and 6% in 2021.

Basis for exemption

The basis for justifying the exemption is in relation to disproportionate costs for small-scale multi-specific fisheries caused by "hazards linked to the full load of holds of limited capacity, and in the absence of infrastructure to handle unwanted catches once landed".

Supporting evidence for this justification (and for the other *de minimis* exemptions recommended in the Mediterranean) is given in two annexes, one from PESCAMED (Annex D1 of the PESCAMED JR) and another from MEDAC (Annex D2 of the PESCAMED JR and Annex D of the ADRIATICA and SUDESTMED JRs). The supporting annex from PESCAMED provides an additional justification for *de minimis* exemptions on the basis that "landing of this under sized fish could cause collateral damage to the stocks as the fleet is particularly vulnerable to the risk of a black market for undersized fish." The document argues that the "black market issue" is exacerbated by the fact that Mediterranean fisheries are not managed by TAC and quota and thus there is not the same incentive to avoid catching them.

EWG 18-06 Observations

EWG understands that the 7% *de minimis* rate is applied to the total catches of the relevant species with trammel and gill nets rather than to catches with all gears, but clarification is needed on this as the distinction would have a significant impact on allowable *de minimis* volumes.

EWG notes, however, that no data are provided either for the ADRIATICA or SUDESTMED, and no information is provided in the PESCAMED annex for trammel and gill net fisheries, other than the statement that "there is no rate for under MCRS discards due to the low quantities of discard in this gear." This circumstance doesn't mean that there are no discards in trammel and gillnets, but rather that discards are usually low. Some information is provided in the MEDAC annex on discards per species (under and over MCRS), generally below 5% in the western Mediterranean, below 1% in the Adriatic but frequently between 5% and 20% in the central eastern Mediterranean (not south eastern Mediterranean). Discard rates for gill and trammel nets for four demersal finfish species in the western Mediterranean for which data are provided are also low, ranging from 0 to 2,3%.

The assessment by EWG18-06 is therefore complicated by the fact that the exemption is to allow the discarding of under MCRS fish, while only partial data on the proportion of discards which are below MCRS is provided. Given that the rationale for the landing obligation is to encourage changes in fishing behaviour, the request for a higher than needed *de minimis* is difficult to justify, but equally, a resolution of the problem of cases where discards are proportionately high (e.g. seabreams) needs to be found. Technical measure suggestions are provided in the annex by MEDAC, suggesting other possibilities, such as avoiding juvenile concentration areas.

Due to incomplete information, EWG 18-06 is unable to further assess whether the case presented demonstrates that selectivity is difficult to improve in this fishery or whether the costs of handling unwanted catches are actually disproportionate. Additional information on catches is also required.

9.1.7 De minimis exemption for 7% in 2019 and 2020, 6% in 2021 of total annual catches of demersal finfishes under landing obligation for under MCRS specimens - Hake, Mullets and pelagic species excepted - caught by hooks and lines

Background

The three JRs recommend the inclusion of a new *de minimis* exemption for a broad group of up to 14 demersal species, which are listed in Annex III of Regulation (EC) N° 1967/2006 specifying individual MCRS. This group does not include Hake and Red Mullets as they are covered by an existing exemption nor does it include bycatch of pelagic species in demersal fishing gears, as there is a specific exemption requested for those. The exemption would apply to fleets of Croatia, Cyprus, France, Greece, Italy, Malta and Spain. The *de minimis* percentages requested are 7% in 2019 and 2020 and 6% in 2021.

Basis for exemption

The basis for justifying the exemption is in relation to disproportionate costs for small-scale multi-specific fisheries caused by "hazards linked to the full load of holds of limited capacity, and in the absence of infrastructure to handle unwanted catches once landed".

Supporting evidence for this justification (and for the other *de minimis* exemptions recommended in the Mediterranean) is given in two annexes, one from PESCAMED (Annex D1 of the PESCAMED JR) and another from MEDAC (Annex D2 of the PESCAMED JR and Annex D of the ADRIATICA and SUDESTMED JRs). The supporting annex from PESCAMED provides an additional justification for *de minimis* exemptions on the basis that "landing of this under sized fish could cause collateral damage to the stocks as the fleet is particularly vulnerable to the risk of a black market of undersized fish." The document argues that the "black market issue" is exacerbated by the fact that Mediterranean fisheries are not managed by TAC and quota and thus there is not the same incentive to avoid catching them.

EWG 18-06 observations

The PESCAMED annex states only that discards are low in longline fisheries. EWG 18-06 understands that the 7% *de minimis* rate is applied to total catches of the relevant species with

hooks and lines, rather than to catches with all gears, but clarification is needed on this, as the distinction would have a significant impact on allowable *de minimis* volumes.

EWG notes that neither ADRIATICA nor SUDESTMED provide any discard reference figures. PESCAMED propose a rate of 7% justified by "disproportionate costs". Annex D1 states that "discard rates in long lines in Mediterranean Sea are 0 because discard under one tonne haven't been taken into account for the data". The MEDAC annex provides some discard data for the Adriatic (approximately 2% for European hake) and central eastern (not south eastern) Mediterranean (above 5% for European hake, red seabream and mackerels).

EWG 18-06 notes that the economic arguments presented in the PESCAMED annex can be equally applied to unwanted catch from all fishing methods. However, the lack of data provided in either annex for hook and line fisheries means that no assessment of discard rates, *de minimis* volumes or the justification for this *de minimis* exemption can be made. Technical measure suggestions are provided in the annex by MEDAC, which were not formally conveyed in the PESCAMED JR. EWG 18-06 consider there is potential value in technical measures that may avoid unwanted catches.

Overall, the incomplete information available means that EWG 18-06 is unable to further assess whether this demonstrates that selectivity is difficult to improve in this fishery or whether the costs of handling unwanted catches are actually disproportionate.

9.1.8 De minimis exemption for 7% in 2019 and 2020, 6% in 2021 of total annual by-catches of pelagic species (Anchovy, Sardine, Mackerel, Horse mackerel) under landing obligation

Background

The JRs request the inclusion of a new *de minimis* exemption for a group of pelagic species including horse mackerels, mackerels, sardine and anchovy, all listed in Annex III of Regulation (EC) N° 1967/2006 which specifies a MCRS, presumably caught as a bycatch in demersal fishing gears. The exemption would apply to all fleets targeting demersal species in Croatia, Cyprus, France, Greece, Italy, Malta and Spain. The *de minimis* percentages proposed are 7% in 2019 and 2020 and 6% in 2021.

Basis for exemption

The basis for justifying the exemption is in relation to disproportionate costs for small-scale multi-specific fisheries caused by "hazards linked to the full load of holds of limited capacity, and in the absence of infrastructure to handle unwanted catches once landed".

Supporting evidence for this justification (and for the other *de minimis* exemptions recommended in the Mediterranean) is given in two annexes, one from PESCAMED (Annex D1 of the PESCAMED JR) and another from MEDAC (Annex D2 of the PESCAMED JR and Annex D of the ADRIATICA and SUDESTMED JRs). The supporting annex from PESCAMED provides an additional justification for *de minimis* exemptions on the basis that "landing of this under sized fish could cause collateral damages to the stocks as the fleet is particularly vulnerable to the risk of a black market for undersized fish." The document argues that the "black market issue" is exacerbated by the fact that Mediterranean fisheries are not managed by TAC and quota and thus there is not the same incentive to avoid catching them.

Data presented in the JRs cover two countries and a number of trawling fleets (1 France; 3 Spain); Italian data are missing from the JRs but were received during the EWG; In total 9 species (or groups of species) are identified in the French dataset, of which a subset of 5 is listed in the Spanish dataset and a subset of 3 is listed in the Italian dataset. For the western Mediterranean, total catches of the pelagic species covered in the French fishery table amount to 2771,43 tons, of which 14,5% are discarded. The total catches of the pelagic species covered in the Spanish fisheries tables amounts to 22385,3 tons, of which 34,8% are discarded. Total catches of the pelagic species (*Trachurus* spp.) covered in the Italian fisheries tables amount to 409,3 tons, of which 78,7% are discarded. For the Adriatic and South Eastern Mediterranean,

only Italian data are available (Tables 9.1.8.1 and 9.1.8.2). The numbers provided are not clearly identifiable and it is also unclear what part of the total they represent.

EWG 18-06 observations

EWG 18-06 is not able to determine whether the catch figures provided are an accurate representation of the situation throughout the Mediterranean.

EWG 18-06 notes the variability in the assemblage of species in each data set suggesting that the data tables presented are subsets of the total. However, all discard proportions presented are characteristically high, far exceeding the *de minimis* requested, which raises questions as to how the member states would resolve the issue of the remaining unwanted catch, under the scenario of difficulties described in the basis for the exemption.

Table 9.1.8.1. Discard rates for relevant species and Italian fleets in the Adriatic Mediterranean

				Estimated Discards	Estimated Catch		Discards percentage ***
Anchovy		ANE_17_OTB		267,20	313,85		85,14
Mediterranean horse mackerel		HMM_18_OTB		10,03	124,27		8,07
Atlantic horse mackerel		HOM_18_OTB		306,95	825,65		37,18
		Total Italian fleet		584,18	1263,77		46,22

Table 9.1.8.2. Discard rates for relevant species and Italian fleets in the South East Mediterranean

				Estimated Discards	Estimated Catch		Discards percentage ***
Atlantic horse mackerel		HOM_16_OTB		1024,29	1212,36	544,65	84,49
Atlantic horse mackerel		HOM_19_OTB		156,81	219,28	251,01	71,51
		Total Italian fleet		1181,10	1431,63		82,50

Due to incomplete information and a lack of clarity in the available material, EWG 18-06 is unable to further assess whether this demonstrates that selectivity is difficult to improve in this fishery or whether the costs of handling unwanted catches are actually disproportionate.

9.2 Mediterranean - Proposals for survivability exemptions

A summary of the high survivability applications is given in Table 9.2.1.

Table 9.2.1 Summary of high survivability exemptions submitted as part of the Mediterranean Joint Recommendations (restricted to new or re-assessed exemptions). **NOTE** – although some fishery data were supplied following an additional request from the Commission, this was very difficult to interpret and was not organised in a coherent way.

Country	*Exemption applied for (species, area, gear type)**	*Fishery Description (mesh size + area)*	*Landings (by LO subject Vessels)*	*Estimated Discards**	*Estimated Catch*	*Discard Rate*	*Estimated discard survival rate from provided studies*

High survivability exemptions							
Croatia, Cyprus, France, Greece, Italy, Malta, Spain	Norway lobster (excepted Jul, Aug, Sep), Mediterranean, trawl	target	unknown	unknown	unknown	unknown	Winter 74%; Spring 36%
Croatia, France, Italy, Spain	Deep-water rose shrimp, WMed & Adriatic, trawl	unknown	unknown	unknown	unknown	unknown	unknown
Croatia, Cyprus, France, Greece, Italy, Malta, Spain	*Red sea bream (Pagellus bogaraveo), Mediterranean, hooks and lines*	target	unknown	unknown	unknown	unknown	90.6 ± 6.2% (for vorancera fishing gear only)
Croatia, Italy	Sole, Adriatic, Rapido beam trawl	Existing - No modification, not assessed					
Croatia, Cyprus, France, Greece, Italy, Malta, Spain	Lobster and crawfish, Mediterranean, nets and pots & traps	unknown	unknown	unknown	unknown	unknown	unknown
Croatia, Cyprus, France, Greece, Italy, Malta, Spain	Norway lobster, Mediterranean, pots & traps	unknown	unknown	unknown	unknown	unknown	unknown
Spain, France, Italy	Scallops & Venus shells & carpet clams, WMed, mechanised dredges	unknown	unknown	unknown	unknown	unknown	unknown

9.2.1 High Survivability exemption for Norway lobster (Nephrops norvegicus) caught by bottom trawls (gear codes: OTB, OTT, PTB, TBN, TBS, TB, OT, PT and TX), excepted during the months of July, August and September

Background

According to Regulation (EU) 2018/153 article 3 high survival rates shall apply in 2018 to Norway lobster (*Nephrops norvegicus*) caught with all bottom trawls (OTB, OTT, PTB, TBN, TBN, TBS, TB, OT, PT, TX) in the Western Mediterranean Sea. Article 3, paragraph 3 states that "By 1 May 2018, Member States having a direct management interest in the fisheries in the Mediterranean Sea shall submit to the Commission additional discard data to those provided in the Joint Recommendations of 2 and 28 June as well as 6 July 2017 and any other relevant scientific information supporting the exemption laid down in paragraph 1. For Norway lobster (*Nephrops norvegicus*), Member States shall submit data that would provide additional proof for survival rates in the summer months. The Scientific, Technical and Economic Committee for Fisheries (STECF) shall assess those data and that information by July 2018 at the latest".

Basis for exemption

Several cases for high survivability of Norway lobster have in the past been submitted by Member States of the Mediterranean and elsewhere, as possible derogations of the Landing Obligation. In several cases, scientific evidence demonstrates high survival rates under certain conditions, justifying the derogation. The document entitled 'Additional information about high survivability of Norway Lobster (*Nephrops norvegicus*) in Western Mediterranean', presented as an annex to the PESCAMED JR, explains that "due to lack of time and budgetary restrictions, no additional scientific studies have been developed to provide additional field work evidence on the survival of Norway lobster at sea". The same document provides new survival recommendations for Norway Lobster (*Nephrops norvegicus*) in terms of handling procedures to minimise exposure to air and limit physical damage.

Detailed analyses and evaluation of survivability for this species in the area and seasons covered in this request were provided in the report of EWG 17-08 (pages 87-88) and will not be revisited here (see table 10.2.1.1 for a summary of the survival rates obtained).

Table 10.2.1.1 Summary of survivability values for *Nephrops norvegicus* in the Western Mediterranean, as reported by EWG 17-08

Season	Month	Mean	C.I.
Winter	January	0.739	0.699-0.781
Spring	May	0.357	0.309-0.412

EWG 18-06 observations

EWG 18-06 understands that the high survival exemption in effect for the whole year is to be dropped in favour of a similar request covering the months of January to June and October to December.

EWG 18-06 notes that Member States did not provide additional data that demonstrate higher survival rates in the summer months than previously obtained. Instead, the PESCAMED, ADRIATICA and SUDESTMED JRs opted for a default to the months during which higher survival rates had been demonstrated.

EWG 18-06 notes that a *de minimis* request has been made to cover the summer months (see Section 9.1)

9.2.2 High Survivability exemption for Deep water rose shrimp (Parapanaeus longirostris) caught by bottom trawls (gear codes: OTB, OTT, PTB, TBN, TBS, TB, OT, PT and TX), in the Western Mediterranean and Adriatic

Background

This species is covered by Annex III of REGMED. This request is for a derogation covering a high survival exemption as already exists for the same species in the South Eastern Mediterranean. In effect this is a request previously granted elsewhere in the Mediterranean and requested again.

Basis for exemption

No basis is provided other than "The Pescamed Group recommends the introduction" and "Croatia and Italy recommend the introduction" of this high survivability exemption.

EWG 18-06 observations

EWG 18-06 notes that available data on catches and discards (volume and percentage) for France and Spain are not clearly associated to specific gear. In fact, it is not apparent if the species is

mainly caught by the general demersal trawl fisheries or whether there may be a specific gear used for crustacean catches. There is information available in the MEDAC annex: in the Western Mediterranean, about 1700 tons are landed and discards comprise about 4% of total catches; in the Adriatic about 1600 tons are landed and discards amount to about 9% of the total catches. These data are aggregated across Member States, covering fleets operating with bottom trawl gear (OTB).

More importantly EWG 18-06 notes that no data on survivability are provided. The specific request points to a link to an FAO species fact sheet containing a list of over 100 publications of which none appear to provide information on survivability in catches, and only biological details on the species.

EWG 18-06 maintain that a study on survivability in the fisheries involved in the catch of this species needs to be conducted before any considerations on the possibility of a high survivability exemption are made.

9.2.3 High Survivability exemption for Red sea bream (Pagellus bogaraveo) caught by hooks and lines (gear codes: LHP, LHM, LLS, LLD, LL, LTL, LX)

Background

In the context of the landing obligation, an exemption on the basis of high survivability is requested for red sea bream in the western Mediterranean and SWW hooks and lines *(gear codes: LHP, LHM, LLS, LLD, LL, LTL, LX)* fisheries. This is a new exemption.

Basis for exemption

SWW regional group and Mediterranean regional groups provided studies in support of this derogation, linked under "High Survivability Exemption of Red Sea Bream for Artisanal Fleet of Voracera Operating in the Strait of Gibraltar", which includes a study carried out by the Secretaría General de Pesca (Spanish Ministry) through the collaboration with the Biology department of the University of Cadiz in 2017 - "Information to support the exemption from Landing obligation for high survivability of red bream (*Pagellus bogaraveo*) after its capture by artisanal longline fisheries "voracera" (Ignacio Ruiz Jarabo et al. 2018) and a report of the Instituto Español de Oceanografia (2017) "Report on marking-recaptures experiences of red sea bream in the area of the strait of Gibraltar". EWG 18-06 evaluated these studies.

The fishing gear called "voracera" is a special type of longline used historically in the south of Spain around the Strait of Gibraltar. This fishing line targets red sea bream (*Pagellus bogaraveo*) and is used by a small fleet from Tarifa, Algeciras and Ceuta ports mainly; these represent a closed group of authorized vessels from this artisanal fleet that fish both in Atlantic and in Mediterranean waters. Red sea bream constitutes about 2/3 of the total average catch. The red sea bream is exploited in the area of the Strait of Gibraltar by an artisanal fleet based in the port of Tarifa and, to a lesser extent, in Algeciras and Ceuta. This species is caught with a specific hook and line design called "voracera", which is set with the help of a stone or block of concrete and remains in the water around 15 to 30 minutes.

The current legislation contemplates a minimum first capture size of 33 cm, but smaller specimens under this size are usually captured. The main objective of the presented study has been to evaluate the survival capacity of these specimens after having been fished with the "voracera" in the Strait of Gibraltar. The aim of the study is to evaluate the survival capacity of non-commercial sizes (<33 cm in total length) of the red sea bream (*Pagellus bogaraveo*) after artisanal hook fishing in the Strait of Gibraltar. There were two specific objectives in the study: 1. Evaluation of the survival rates of individuals captured by commercial, fisheries boats. 2. Analysis of physiological responses to stress caused by fishing to evaluate the recovery capacity of the captured animals.

A total of 14 hauls of "voracera" (between 3 and 5 hauls per day) were made on the fishing grounds of "Bad stones" (latitude 35-36º 54-56 ', longitude 05º 48-49') and "Discoteca" (latitude 35-36º 55-56 ', longitude 05º 50-51') of the Strait of Gibraltar. The range of depths was from 128 to 247 m. The soaking time varied between 20 and 35 minutes, with an average of 10 minutes from when the concrete block reached the bottom to the time the gear were

raised to the surface. On the ship there were 4 tanks of more than 2000 L, which were pumped continuously with water from the surface of the sea. 12 valid hauls were made, in which a total of 102 red sea bream specimens with a size below the commercial minimum (29.4 ± 0.2 cm total length, mean ± SEM, and a calculated weight of 378 ± 7 g). Of the 102 red sea bream specimens captured, 66 were used for the survival experiment on-board. An average time of 10 minutes was calculated between the gear setting on the bottom and the fish were hoisted on board. Once they were embarked, the animals were immediately marked individually with a rubber label placed on the caudal peduncle and they were released into the recovery tanks. The whole process lasted less than 30 seconds per animal, between hoisting into the air and release in the tanks. A single tank was used per haul, and the number of animals varied between 1 and 24, with an average of 7 animals per haul. To evaluate the survival capacity of a species, an approach to its capacity of recovery from the fishing process is needed. The animals were kept in tanks for 5 hours, and the individuals deceased after that time were counted. The survival percentage was calculated for each set. The tanks were numbered randomly and divided into two groups: one control, and another experimental. The experimental treatment consisted in emulating the fishing process of the "voracera". For this purpose, a chase of the animals was carried out inside the tanks with hand nets for 10 minutes, the estimated time of attachment on the hook during commercial fishing. This procedure has been previously tested by other research groups and is useful for assessing the level of stress and exhaustion in bony fish. The samples were taken at 0h, 5h and 24h after the stress process. Therefore, to know the animals state after capture, and after recovery time is essential to be able to support the hypothesis that the red sea bream which remains alive after the capture would survive if they were released to the environment.

It was concluded that according to the survivability study individuals under 33 cm total length captured in the Strait of Gibraltar using voracera as fishing gear present survivability rates of 90.6 ± 6.2% and the surviving animals manage to recover their basal homeostatic levels, an effective physiological recovery between 5 and 24 hours after the capture.

According to the authors of the study, regarding recaptured individuals' data, it can be concluded that survivability is higher at smaller sizes. It seems that they are better able to bear the stress associated with both fishing manoeuvres and handling: post-release behaviour showed obvious signs of rapid recovery, heading towards to the bottom.

EWG 18-06 observations

EWG 18-06 notes that the requested exemptions are for hooks and lines (gear codes: LHP, LHM, LLS, LLD, LL, LTL, LX) but studies were carried out operating with voracera fishing gear only.

EWG 18-06 notes that the supporting documentation does not provide information on fleet size, catches, estimated discards, or discard rates, other than a negligible landing of about 1 ton in the South Eastern Mediterranean, to which is associated an 8,5% discard rate (MEDAC annex).

The voracera's setting time is relatively short compared to other hooks and lines gears, because the complete operation of starting, fishing and hauling of the rigging, is around only 30-45 minutes. For other fishing gears - LHP, LHM, LLS, LLD, LL, LTL, LX fishing time is longer and survivability rates can be different and might be expected be smaller than for voracera because of the higher stress level. EWG 16-10 raised concerns about the difficulty of extrapolating results from this study to other types of fishing gears because of different fishing and handling times on board.

This study was carried out during the month of November of the year 2017, in certain environmental conditions (temperature, salinity, etc.), so that the conclusions have to take into account this limitation. However the Strait of Gibraltar does not have a great variation in these conditions throughout the year, so similar survival and recovery rates are expected during other periods, although complementary studies should be carried out to support this hypothesis. EWG 18-06 notes that the study period is short and may not be representative of the whole fishing season. Furthermore, the range of conditions experienced throughout the Mediterranean are much more diverse, notably in terms of air temperature (see e.g. the studies on the survivability of *Nephrops norvegicus*). EWG 18-06 therefore identifies the need for further trials

to be conducted, to determine whether survival rates differ across other gear types, other seasons and other geographic areas.

Notably, environmental conditions such as temperature and depth are two important factors for survivability, so EWG 18-06 recommends the inclusion of temperature measurements for the farther investigation of red bream survival. It is important to know what survival rates are obtained when bottom temperature, surface water temperature, air temperature are mostly homogenous, and what survival rates will be obtained when temperatures differ more markedly.

EWG-18-06 considers that additional studies on catch compositions and environmental conditions are relevant and would increase the knowledge regarding the representativeness of the underpinning survival study for the exemption requested.

9.2.4 High Survivability exemption for Lobster (Homarus gammarus) and crawfish (Palinuridae) caught by nets (gear codes: GNS, GN, GND, GNC, GTN, GTR, GEN), pots and traps (gear codes: FPO, FIX)

Background

Species covered by Annex III of REGMED. New request.

Basis for exemption

None provided other than "The Pescamed Group recommends the introduction", "Croatia and Italy recommend the introduction", and "The SUDESTMED HLG recommend the introduction" of this high survivability exemption. No supporting data were provided, other than an unclear statement about applicability of results from the Atlantic to the Mediterranean, which was not accompanied by the appropriate reference material.

EWG 18-06 observations

Survivability for these species is expected to be high in pots and traps (as indeed in the northern Atlantic). It is an interesting case of almost common knowledge and at least frequent practice in the fisheries conducted in Europe for centuries, to return the undersized specimens to sea due to their high expected survival.

For a full assessment of this request, EWG 18-06 suggests that additional studies are required in order to fully understand the fishery (vessels, characteristics, areas of operation, volume of catches, across the areas and seasons) but recognises some results of studies already performed on survival in the area of the Western Mediterranean may be available but were not provided. Work on these species has been conducted by Raquel Goñi from IEO, based in Palma, and this work may be a possible source of reference material to be provided as partial supporting documentation.

The situation is not expected to be the same for nets, so in that case, the requirement for dedicated studies is a necessity.

EWG 18-06 consider that there may be a danger of producing unnecessary mortality in the stock if the derogation is not granted for pots and traps, so a temporary derogation may be usefully considered, together with a request for dedicated studies or the presentation of adequate evidence from existing studies.

EWG 18-06 is not, however, able consider an exemption for net caught lobsters and crawfish without considerable supporting evidence being presented.

9.2.5 High Survivability exemption for Norway lobster (Nephrops norvegicus) caught by pots and traps (gear codes: FPO, FIX)

Background

This is a species covered by Annex III of REGMED. This request was included with the previous request (9.2.4) in all of the JRs, but cannot be accepted as a combined request, since there is no possible argument to consider these taxa could be affected in similar ways by the fisheries exploiting them, or present similar survivability results, other than by complete chance. EWG 18-06 considered them to be different requests.

Basis for exemption

The JRs state that the results of the studies performed in the Atlantic may be extrapolated to the Mediterranean Sea. Additionally, it is argued that species caught by certain gears and taking into account the ecosystem and fishing practices aiming to sell alive shellfish and crustaceans, should be exempted from the landing obligation based on scientific evidence of high survival associated with good release practices as described, for example, in MINOUW project (cf. http://minouw-project.eu/resources/).

EWG 18-06 observations

EWG 17-08 did not consider that "fishing practices aiming to sell alive shellfishes and crustaceans" is a sufficiently acceptable argument to demonstrate high survivability in the fishery, and EWG 18-06 abides by the same conclusion.

EWG 18-06 notes that the requested exemption for Norway lobster caught by pots and traps (gear codes: FPO, FIX) was not accompanied by data on fisheries or on discards. Thus, additional data should be provided indicating the scale of the fishery and the reason for the occurrence of discards. Supporting documentation was provided of studies in the NW Atlantic, but no data for the Mediterranean. A statement about applicability of results from the Atlantic to the Mediterranean is offered. Survival rates of *Nephrops* norvegicus caught by traps are known to be high. In the Atlantic they appear to decrease with decreasing latitude but remain above 80% as far south as Portugal. Several derogations on survivability of *Nephrops* caught with traps have been previously granted by the Commission in Delegated acts of the NWW, Scheveningen and NS areas.

EWG 18-06 can however make no direct inference as to the applicability of the results obtained in other areas, in relation to the Mediterranean, particularly since it is clear that the Mediterranean is in general warmer than the Atlantic, even at the same latitudes, and that the easternmost ranges of the Mediterranean are considerably warmer than the western region.

9.2.6 High Survivability exemption for Scallop (Pecten jacobeus), Carpet clams (Venerupis spp.), Venus shells (Venus spp.) caught by mechanized dregdes

Background

This exemption has been rolled over twice in Delegated Acts without ever being supported by adequate scientific evidence on survival, or even data on fisheries, catches and discards, size composition of the catches and fraction below MCRS. Article 15.4(b) of Regulation (EU) No 1380/2013 states that "species for which scientific evidence demonstrates high survival rates, taking into account the characteristics of the gear, of the fishing practices and of the ecosystem" can be exempted from the landing obligation. In this case, only promised trials have, so far, been offered to support the derogation, and no new evidence has been provided in spite of continuous requests from the Commission.

Basis for exemption

None was considered necessary, since it is a roll-over of a previous derogation. The PESCAMED JR states: "The PESCAMED Group recommends the continuation of the following exemptions already granted in amended Commission delegated Regulation (EU) 2017/86".

EWG 18-06 observations

Published evidence suggests survival may be high (reference material was suggested within the report of EWG 17-03 to that effect). Some criticism was made by EWG 17-03 on the arguments previously used to support the request. No additional arguments have been provided this time.

EWG 18-06 considers there is no scientific basis for this derogation. Member states should abide by their promises and provide details by which this derogation may be assessed. EWG-18-06 considers that studies on catch compositions and environmental conditions are needed, as well as dedicated survival studies, for the exemption requested to be supported.

10 CONCLUSIONS

The following are the main conclusions of EWG 18-06:

General Observations

In reviewing the joint recommendations received, EWG 18-06 highlights a number of general observations. Some of these re-iterate those made in the previous reports (2014-2017) relating to the evaluation of joint recommendations. Several are new observations:

- The role of EWG 18-06 and any future STECF EWGs set up to evaluate joint recommendations remains to evaluate the scientific rigour and robustness of the underpinning information supplied by Member States to support the main elements of joint recommendations. STECF cannot adjudicate on whether exemptions should be accepted or not.
- EWG 18-06 re-iterates that 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 there is a large element of judgement required in deciding on whether to permit or reject a proposal that cannot be based solely on scientific option of the evidence presented.
- Anomalies between sea basins (see for example EWG 17-03) such as fleets fishing a TAC species in two adjacent areas, one covered by the LO and one not covered, should no longer occur. As a consequence, EWG 18-06 has not spent time on this TOR. EWG-06 does, however, note that with the increasing number of exemptions in all areas, there is increasing scope for different exemptions (and associated conditions) to be in place in adjacent areas and for trans boundary fishing operations to have to deal with growing complexity in this aspect of the LO.
- EWG 18-06 notes that the quality of submissions to support the exemptions has, in many cases, improved since the first JR's were submitted in 2014. In particular EWG 18-06 recognises the progress made in the carrying out of survival experiments which in a number of cases closely follows the recommendations made by STECF and also ICES. EWG 18-06 has noticed, however, that there are quite a few cases where the quality of submission has fallen making it very diffuclkt to conduct an analysis at all. EWG-06 also notes that whereas last year Member State Regional Groups generally used the templates developed by STECF in 2016 to supply fisheries and fleet descriptors, this year fewer had done so. EWG 18-06 continues to point out that some of the exemptions submitted by the regional groups are very much presented as ″national″ rather than regional exemptions. In many cases the information provided originates from one single Member State and while other Member States may be included frequently the information on the respective fleets are not provided. In developing future cases it would be better if exemptions were regionally focused and covering all relevant fleets. This would help the Commission avoid having to request additional information and clarifications from Member States on which fleets the exemptions should apply and also make it much easier for STECF to evaluate them.
- EWG 18-06 reiterates that when using the provisions of *de minimis* under Article 15, the requirements of Article 2 of the Common Fisheries Policy CFP) to fish at FMSY can only be met if the *de minimis* discard quantities are deducted from the agreed catch opportunity (TAC) arising from FMSY based advice. If *de minimis* were operated as an addition to the FMSY-advised catch, then mortality rates would be predicted to exceed the FMSY target. Furthermore, depending on the way in which the *de minimis* quantity is calculated and

applied (for example 5% of an aggregate catch of several stocks applied as a *de minimis* on one stock) the departure from FMSY could be substantial. EWG 18-06 considers that the only relevant way is to apply the *de minimis* % to the total catch of the given species in the given fishery where the exemption is sought. This is not always the case in the exemptions submitted by the Member States regional group.

- EWG 18-06 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.
- STECF has consistently proposed that the justification for *de minimis* exemptions is largely economic. However, EWG 18-06 acknowledges that providing detailed information for individual fisheries is challenging. Therefore, it is apparent that STECF will only be able to consider the validity of the supporting information underpinning the exemptions provided and due to the lack of economic data in many cases will not be able to carry out any meaningful analysis of the economic impacts. If a deeper analysis is required by DGMARE, then, this needs to be discussed with the Member States and Advisory Councils so that they are clear what information should be provided and also with STECF to establish what they should evaluate. In this regard EWG 18-06 highlights the alternative option appraisal approach in *de minimis* submissions developed by EWG 16-06.
- EWG 18-06 re-iterates that assessing what constitutes high survivability is problematic, which is made more complex by the limited information available and the high 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 18-06 notes that obliging fishermen to land catches of fish that would otherwise have survived the discarding process could, in some specific cases, result in negative consequences for the stock. This is because any surviving discarded fish contribute positively to the stock and landing those individuals therefore removes that benefit. Where discards are included in the stock assessment but the (known) survival is not accounted for, this in effect elevates fishing mortality and changes in exploitation pattern which may lead to reductions in fishing opportunities to maintain fishing mortality levels consistent with management objectives (e.g. FMSY). Conversely, if they are not included in the assessment, then the mortality is higher than estimated, even if part of the discards survive, and in this case, bringing everything to land would provide better control of fishing mortality. For some stocks (eg *Nephrops*) ICES takes account of discard survival rate – in future this is something which should be discussed in the assessment forums for other species also.
- EWG 18-06 considers that avoidance of unwanted catch through improved selectivity or other means should be the primary focus implementing the landing obligation and should also consider the potential benefits for other stocks and the broader ecosystem that would arise from changes in exploitation patterns. Therefore, the choice of survival levels/value(s) in the context of article 15.2(b) will depend on which objective (e.g. avoidance of waste; improve stock sustainability; improve financial viability) is set as a priority. Nevertheless, provided the methodologies employed in carrying out survival experiments are appropriate, and the limitations of the results are fully explored, EWG 18-06 considers that the decision to accept or reject an exemption proposal based on the survival value presented is largely one for managers.

- EWG 18-06 notes that article 15.5(c)(ii) states that where continued discarding is permitted through the application of *de minimis* provisions, whilst these catches "shall not be counted against the relevant quotas; however, all such catches shall be fully recorded". EWG 18-06 re-iterates that no specific provisions have been included in the JR's to address this. In this regard EWG 18-06 stresses the need to improve the collection of catch documentation data. As highlighted in by STECF PLEN 17-01 and 18-01, there would appear a lack of "lack of reporting by vessel operators of fish discarded under exemptions, discards of fish currently not subject to the landing obligation and catches of fish below MCRS". The joint recommendations evaluated by EWG 18-06 would strongly benefit from containing provisions that strengthen data collection in this respect. As STECF PLEN 17-01 pointed out, innovative monitoring measures such as CCTV and Remote Electronic Monitoring (REM) have been applied only in pilot studies but would be a more effective way to enforce the landing obligation if applied in a commercial setting (STECF EWG 13-17). If the data situation does not improve and the true quantities being caught as reported do not reflect the actual removals, they may have a significant impact on the quality of scientific advice for next year's fishing opportunities, as additional quota top-ups allocated in combination with continued discarding may also compromise the achievement of the MSY objective.
- EWG 18-06 notes that some exemptions have been in place for some time now but have not taken account of new data, information or circumstances which may render a necessary change to the exemption. EWG 18-06 considers that some updating procedure is required to ensure that exemptions only remain in place if required and still justified by the available information.
- EWG 18-06 notes the marked increase in the number of combined *de minimis* cases which were requested for 2019. These cases allow for potentially large quantities of fish to continue to be discarded. *De minimis* cases of any kind require careful monitoring of catches and the quantities of fish being discarded, the need for enhanced monitoring to ensure the combined *de minimis* cases operate appropriately is imperative.
- The increasing numbers of exemptions in some areas raises the question of whether in fact all fisheries in some areas have exemptions and thereby diminish the overall objectives of the Landing Obligation. EWG 18-06 has considered this for the SWW and has summarised this in Table 10.1

Table 10.1

Stocks	Area	Gears	Rate of *de minimis*
Sole	VIIIa,b	Beam trawls and bottom trawls	5%
Sole	VIIIa,b	Gill nets and Trammel nets	3%
Hake	VIII, IX	Bottom trawls	6%
Horse mackerel, mackerel, anchovy, boarfish	VIII,IX	Trawlers (includes pelagic trawls?)	7%
Anglerfish, sole, turbot, red sea bream, greater forkbeard	IXa	Trawlers (includes pelagic trawls?)	7%
Megrim, anglerfish, plaice, pollack	VIII, IX	Trawlers (includes pelagic trawls?)	5%

Megrim, anglerfish, plaice, pollack	VIII, IX	Gillnets	4%
Horse mackerel, mackerel, anchovy, boarfish	VIII and IX, X and CECAF areas 34.1.1, 34.1.2, 34.2.0.	Gillnets	3%
Horse mackerel, mackerel, anchovy, boarfish	VIII and IX, X and CECAF areas 34.1.1, 34.1.2, 34.2.0.	Longlines	1%
All species	VIII and IX, X and CECAF areas 34.1.1, 34.1.2, 34.2.0.	Artisanal vessels/All gears	1%
Alfonsino	X	Hooks and lines	5%
Greater Forkbeard	X	Hooks and lines	3%

Evaluation of Regional Draft Joint Recommendations

EWG 18-06 have carried out an analysis of the progression in implementing the landing obligation. This analysis provides an overview of the percentage of TAC species from 2015 to 2018 now subject to the LO (partial or fully) compared to the percentage of TACs species not yet included. EWG 18-06 agrees with EWG 17-03 that this to be a simplified indicator of progress so far with implementation of the landing obligation and of what is still left to fall under the landing obligation. It does not attempt to quantify landing obligation coverage in terms of actual catches, but focuses solely on the proportion of TACs. EWG-06 notes that there will be a marked increase in the number of stocks covered by the LO as we enter 2019 and all TAC species come under the Regulation.

EWG 18-06 has evaluated the exemptions and other requested contained in the JR's submitted by the Regional Groups of Member States. The following is a summary of the main observations for each of these exemptions by region.

North Sea

1. The *de minimis* exemption for whiting and cod caught using bottom trawls (OTB, < 100mm (TR2) in the North Sea is an existing exemption that has been revised by increasing the scope to cover the whole of area IV. The original exemption only applied in area IVc. The justification for this exemption is largely the same as in 2017 with no new information to support widening the scope presented. On this basis EWG 18-06 cannot evaluate whether it is appropriate or not to extend this exemption. Information is only supplied for the FR fleet although the JR indicates NL vessels are also involved.
2. The *de minimis* exemption for fish bycatch in the Northern prawn trawl fishery with a sorting grid and unblocked fish outlet in area IIIa is an existing combined species exemption that has been revised by increasing the number of species included under the exemption reflecting species previously not under the landing obligation. The basis for the exemption is the same as in 2017 but additional catch data has been provided for the species added. As in 2017 even with the additional species, volumes of *de minimis* are quite low reflecting the relatively low levels of unwanted catches in this fishery.
3. The *de minimis* exemption for fish bycatch in a *Nephrops* targeted trawl fishery in area IIIa is an existing combined species exemption that has been revised through the inclusion of hake to the list of species covered by this exemption reflecting the phasing in of additional species under the Landing Obligation. The basis for the exemption is the same as in 2017 with

additional catch data provided for hake. As with 2017 the volumes of *de minimis* are quite low reflecting the relatively low levels of unwanted catches in this fishery.

4. For the *de minimis* exemption for fish bycatch in the brown shrimp fishery in the North Sea the justification is based on major increases in selectivity being difficult to achieve over and above measures already introduced into the fishery. In addition, the handling of unwanted catches are regarded as uneconomically disproportionate given the difficulties in sorting very small undersized individuals being difficult to sort from the target species. No supporting documentation is provided to support either of these assertions although EWG 18-06 concludes it is safe to assume both are valid assertions for this fishery. A reasonably detailed description of the fishery and fleets is provided but there is no breakdown of the fleets by Member State and the catch data is only provided as a percentage of the overall catches and not by volume.
5. The *de minimis* exemption for pelagic species under landing obligation for demersal vessels using bottom trawls or beam trawls of mesh size 70-99mm in the North Sea (area IV) is justified on the basis that improvement in selectivity being difficult to achieve and also on disproportionate costs of handling unwanted catches of pelagic species on board. No supporting information is provided regarding either of these conditions other than reference to some French selectivity studies. These studies consider selectivity measures tested in the relevant fisheries although they do not relate directly to the selectivity of pelagic species. There is also a reference to a French study (EODE study) which deals with disproportionate costs but not specifically with handling catches of pelagic species. A detailed description of the relevant French fisheries and fleets is provided. However, there is no information provided on other fleets who may wish to avail of this exemption. In addition, the JR indicates beam trawls are to be included in the exemption but no catch or fleet information is provided.
6. The *de minimis* exemption for ling (*Molva molva*) for vessels using bottom trawls > 100mm in the North Sea (area IV) is justified on the basis that improvements in selectivity are difficult to achieve. The JR makes the assertion that this fishery is already selective but no supporting information is provided other than referring to the morphology of ling, which makes reducing unwanted catches of ling difficult. The JR does refer to a number of French studies which consider selectivity measures tested in the relevant fisheries although they do not relate directly to the selectivity of ling. A detailed description of the relevant French fishery and fleet is provided. However, there is no information on other fleets which may wish to avail of this exemption.
7. The combined species *de minimis*e exemption for bycatch of industrial species for demersal vessels using bottom and beam trawls in areas IIIa and IV is justified on the basis that handling of unwanted catches are regarded as uneconomically disproportionate given the difficulties in sorting very small undersized individuals from the target species. No supporting documentation is provided to support this assertion other than that the catches are insignificant in the demersal fisheries. The JR concludes that this satisfies the conditions set out in Article 15. The JR also indicates that there are no methods available to reduce bycatch of industrial species in these fisheries, but no supporting information is provided. There is very limited information on the fleets and fisheries to which this exemption is to be applied. There is also a reference to beam trawl fisheries in the JR, but no information is provided on the catches or fleets involved.
8. The *de minimis* exemption for whiting caught by beam trawls 80-119mm in the North Sea (area IV) is justified based on major increases in selectivity being difficult to achieve over and above measures already introduced into the fishery. In addition, the handling of unwanted catches are regarded as uneconomically disproportionate given the difficulties in sorting very small undersized individuals being difficult to sort from the target species. There is only limited evidence to support both of these assertions, other than reference to a number of Dutch studies. Similarly, on disproportionate costs, limited information is provided. There is reference to several studies that have looked at the economic impacts of the landing obligation, which in a general sense show that additional handling on board of unwanted catches due to the landing obligation generates extra costs and sorting time for crews. An example referring specifically to whiting is provided although little detail is provided, and the claims made are unsubstantiated. Catch data is provided for only the NL BT2 fleet. There is no indication on the numbers of vessels involved and only limited catch data is provided. It is not clear whether fleets from other Member States intend to avail of this exemption.

9. For the high survivability exemption for common sole under mcrs caught by trawls with a mesh size of 80-89mm in ICES division IVc, a clear description of the location of the nursery areas referred to in the exemption is not provided
10. For the high survival exemption for *Nephrops* caught by demersal trawls with a codend larger than 80mm (70mm/35mm), EWG 18-06 identified inconsistencies in the catch data provided which need to be checked. Only information on the UK fleet is provided. The exemption is based on the assumption that the fishing practices on the west coast of Scotland resulting in survival rates of 53% are representative of general fishing practices by the smaller vessels fishing for *Nephrops* anywhere within 12 miles of coastlines using gear 80-110mm in all areas. Given only limited information is provided, EWG 18-06 is unable to assess fully whether this is a reasonable assumption. No information is provided to support extending the exemption to the Pandalus fishery using demersal trawls with a codend of at least 35 mm equipped with a species selective grid with bar spacing of maximum 19 mm. Given this fishery has very different characteristics to the targeted *Nephrops* fisheries, in terms of gears used, prevailing environmental conditions and indicative catch rates, EWG 18-06 is unable to assess whether the survival rates observed are applicable to the Pandalus fishery.
11. For the high survivability exemption for bycatch of plaice (*Pleuronectes platessa*) by vessels using gillnets, set gillnets, combined gillnets-trammel nets and gillnets and entangling nets in the North Sea and Skagerrak, no catch or fleet information is provided for any Member State so the extent of the exemption and the fleets to which it would apply is unknown. Although the methodological approach of the study is limited in scope, it provides some initial and basic evidence of the survivability of plaice caught with trammel nets. The justification is based on a small sample size and short observation period, was carried out in a fishery outside the North Sea, covers only one season with no investigation of impact of environmental conditions or effects of time out of water on the plaice observed. EWG 18-06 suggests that the studies should be repeated in the North Sea to ensure the survival rates obtained in the Baltic Sea are representative. These studies should address the issues identified with the original studies with respect to sample size; prevailing environmental conditions, on board handling practices, long term mortality, air exposure, etc. No data is provided for other types of static nets (set gillnets, combined gillnets-trammel nets and gillnets and entangling nets) and it is not possible to assess whether trammel net are representatives of the other types of set nets. This is only relevant if other types of set-nets are used in the North Sea. The handling procedures related to the discard of plaice should be well specified, particularly to minimize air exposure which according to studies carried out with other gears such as Danish Seine, as this seems a key factor affecting the survivability of this species.
12. For the high survivability exemption for plaice caught in the North Sea and Skagerrak by vessels using Danish seines fleet information is supplied only for the Denmark. Plaice caught with these gears should be discarded swiftly in order to minimise air exposure. No detailed catch information is presented but the supporting provides basic evidence of the survivability of plaice caught with Danish seines. The study only covers the Skagerrak and for this reason EWG 18-06 is unable to assess definitively whether the results are representative of the fishery in the North Sea. However, it is reasonable to assume that the results are broadly representative given the proximity of the areas, the similar catch compositions and the identical gears. The survival rates provided in this study represent the lowest survival rates expected during the year. The large differences in survival rates with increasing air exposure (before and after 30 minutes) show this is an important factor that should be incorporated in framing the exemption in the subsequent discard plan.
13. For the high survivability exemption for plaice below MCRS (i.e. 27cm) caught in beam trawl gears with a mesh size of 80-119mm in the North Sea, no data on the fleets or fisheries is provided. It is unclear as to whether the exemption applies to all beam trawl fisheries or just to vessels using pulse trawls. The results of all the studies provided do not corroborate the claim in the JR that mean survival rates for plaice are high as the survival rates presented are in all cases lower than 20%. The survival studies presented were all carried out with pulse trawls but it is not known whether the results presented are representative of standard beam trawl gears used. Based on the differences in operation of the two gear types it is likely that the survival rates would be lower with standard beam trawls. If the intention is for this exemption to cover standard beam trawl gear as well as pulse trawls then repeat studies with beam trawl gear should be carried out. This exemption is conditional on a package of

measures and incentives which affect two different components of the fleet in various ways but the reasoning for considering these two fleet segments is not justified.

14. For the high survivability exemption for plaice caught using trawls with a mesh size of ≥ 120 mm targeting flatfish or roundfish in the winter months (1st November to 30th April in the North Sea and Skagerrak, only catch and fleet information is provided for the Danish fleet. No information is provided for other Member States who may wish to avail of this exemption. There are inconsistencies in the number of Danish vessels reported in the supporting study. The supporting study only covers the Skagerrak, but it is reasonable to assume that given the proximity of the areas, the catch compositions are similar and the gears used are identical that the results are broadly representative. The low observed survival rates in summer justifies the request in the JR to restrict the exemption to the winter months noting that during the summer months increased air exposure reduces survival rates significantly.
15. For the high survivability exemption for skates and rays caught by all fishing gears in the North Sea and Skagerrak, provides a review of discard rates and survivability estimates depend greatly on the species, area and métiers considered. The current data outlined in support of the requested exemption is limited because the high variability in survivability estimates and the existent data gaps. More work is needed to fill the gaps and to provide a more complete picture of survival across different skate and ray species in different fisheries/areas/métiers. It is the decision of managers whether enough evidence has been supplied to support the exemption proposed for all species and all gears in the North Sea. Studies are ongoing, and Member States will implement new studies during the three years of the requested exemption but there is still little information on how the data collection will be pursued and which further research will be conducted to investigate the impact of environmental conditions (sea-bed type, temperature etc.), handling conditions (fishing gear, time outside water etc.) and fishing area on survival rates. During the period of the requested temporary exemption (3 years), the North Sea Member States aim to promote good practice by fishermen making use of the potential exemption. Such practices potentially would maximise the chance of survival of skate and ray species, and to promote avoidance and selectivity measures to minimise the chance of skate and ray species being caught. It is not possible to evaluate which of these measures will be implemented by each fishery or provide any assessment of the effectiveness of these measures.
16. For the high survivability exemption for turbot (*Scophthalmus maximus*) caught in towed gears with a codend larger than 80mm in the North Sea, no data on the fleets or fisheries (e.g. fleet, landings, discard rates) involved is provided. It is unclear as to whether the exemption is to apply to all trawl fisheries or just to vessels using pulse trawls. The preliminary estimate of survival of 30% is somewhat low. It is a decision for managers to decide whether the survival rate coupled with the proposed additional measures is sufficient to justify the exemption. The survival rates in summer were higher than in winter which is unusual based on results of previous survival studies with different species. It may be appropriate to repeat the survival studies to confirm this is the case. It is not possible to assess whether the results presented for pulse trawls are representative of standard beam trawl gears or other trawl gears. If the intention is for this exemption to cover demersal trawls and standard beam trawl gear as well as pulse trawls then it may be appropriate to repeat these studies with these gears.

NWW

1. For the extension to the *de minimis* exemption for whiting caught with bottom trawls and seines >80mm, pelagic trawls and beam trawls (80-119mm) to catch whiting in the Eastern Channel (VIId), no supporting information has been provided to substantiate the extension of this exemption to include beam trawls.
2. For the combined *de minimis* covering cod, haddock and whiting caught using bottom trawls, seines and beam trawls of greater than or equal to 80mm mesh size in the Celtic Sea and the Channel, the supporting information provided is limited. To be in line with CFP objectives, the maximum possible amount of *de minimis* (i.e. the maximum safeguard amount) for each species that could potentially be discarded must be deducted from the TAC. Only detailed information for the French and Irish fleets is provided. Information from other fleets availing of this exemption is needed. Only general information on ongoing selectivity trials in France is provided. The 5% *de minimis* level requested provides only partial solution to sorting and

handling challenges given the discard rates in the respective fisheries are 27% to 53%, indicating significant selectivity improvements are still required.

3. For the *de minimis* exemption for undersized whiting in the *Nephrops* trawl fishery in the Irish Sea that the *de minimis* level provides only a partial solution when discard rates are 99%, indicating significant selectivity improvements are still required. Discarding at requested *de minimis* levels will not remove all unwanted catches, but only a very small fraction.
4. For the *de minimis* for undersized bycatch of haddock in the demersal trawl fisheries in Irish Sea based on the information provided, increasing selectivity will remove most of the under sized catch. The argument of handling costs of all haddock would have a disproportionate negative economic impact, is ambiguous for UK fleet, since the amount of haddock discards is low. Based on the observed discard rate of only 0.6% the *de minimis* request seems excessive.
5. For the combined species *de minimis* exemption for bycatch of pelagic species (mackerel, horse mackerel, herring, boarfish, greater silver smelt) caught by vessels using bottom trawls and seines, and beam trawls in ICES subarea VI and VIIb-k, no scientific information is presented for beam trawl and seine fisheries. There are also concerns on how the *de minimis* volume would be deducted from TACs in the North Western Waters. Due to the lack of supporting information supplied, no assessment can be made as to whether selectivity is difficult to improve in this fishery or whether cost of handling unwanted catches are disproportionate.
6. For the high survivability exemption for common sole under mcrs caught by trawls with a mesh size of 80-89mm in ICES division VIId, a clear description of the location of the nursery areas referred to in the exemption is not provided.
7. For the high survivability exemption for *Nephrops* in the TRI fisheries in Area VII and in the TR2 fisheries in Area VII in combination with highly selective gears the supporting study is scientifically robust and was undertaken in line with the ICES WKMEDS-guidelines. However, it is noted that all of the e gear options proposed under the exemption (TR1 and some different TR2 trawls) most likely have very different selective properties. Since catch volume and catch composition are important factors affecting *Nephrops* discard survival, other proposed gears may lead to different survival rates than the 64% in the supporting study. The survival estimate is however similar to earlier studies on selective *Nephrops* trawls from the North Sea and Skagerrak (Swedish grid, SELTRA-panel and Netgrid). These studies that have previously been evaluated by STECF. It is questionable how representative the survival estimates are for other gears in the wider fishery, which have not been previously assessed (i.e. TR1 gears). To complete a more comprehensive assessment, a more, in depth, study to cover the data gaps is required. The supporting tabulated information (fleet size, targeted species, catches, discards) only covers Ireland. Similar information for other countries is missing and it is therefore impossible to assess the impact of this proposed survivability exemption.
8. For the high survivability exemption for *Nephrops* caught by 80-110mm otter trawl gears in ICES subarea VIa, within 12 miles of coasts, the supporting scientific information is of good scientific quality and is based on the methodology recommended by ICES WKMEDS. Furthermore, the approach chosen to try to validate how representative the captive survival estimates were of the wider fleets is commendable. Based on the scientific studies underpinning the exemption is somewhat better substantiated in area VIa than in the North Sea. This is because the supporting study showed that the estimated annual survival rate (53%), based on the wider fleet survey, indicated that the conditions during the survival trials were within the range of the conditions of the wider fleet in VIa (which was not the case for the North Sea fleet). Also, the fact that the fisheries in area VIa are strongly dominated by Scottish vessels, while in the North Sea region a number of other countries participate in the *Nephrops* trawl fisheries. Regarding the reported survival estimates in the area VIa study, the summer estimate (46%) should be treated with caution due to the skewed sampling of individuals for the captive observation experiment. A more representative sampling would likely have resulted in a lower annual survival estimate than the 53% reported. However, as the method used for weighing the winter and summer estimates is unclear, it is not possible to assess the potential effect on the annual survival estimate. It is noted that the referenced study included very similar gears (TR1-TR2 twin trawl) and took place in the same area (Minches) as another important *Nephrops* survival study from the 1990's (Wileman et al. 1999). This study showed a much lower summer survival rate (≈25%). It is suggested that the various findings of this study be better incorporated in the discussion in order to better

understand *Nephrops* discard survival. At the same time, it is noted the discard rates are rather low (7%) in the area meaning that the risk of unaccounted mortality due to a survival exemption is probably small. The supporting tabled information provides detailed information (fleet size, targeted species, catches, discards) for UK-Scotland, which is probably sufficient as this fleet accounts for a large majority of the landings.

9. For the high survivability exemption for skates and ray species caught by any gear in the North Western Waters (areas VI and VII), the conclusions from the North Sea for the similar exemption are valid for North Western Waters.
10. For the four high survival exemptions for plaice caught with otter trawls and trammel nets in ICES Areas VIId,e and VIIf,g the supplementary material provided as scientific evidence and the information on fishing practice is too limited to be reviewed. Experimental details about a large part of the studies are missing (e.g. analysis, control group, vitality assessment and animal observations). Fleet and fishery descriptions are provided for the United Kingdom, but the source related to the numbers supplied is unknown. There are other countries associated with the proposed exemption that have not been described.
11. For the high survivability exemption for plaice caught with beam trawls in ICES subareas VIIa to VIIk the methods used are scientifically robust and undertaken in line with the ICES WKMEDS-guidelines. However, the estimated survival rates are highly variable which perhaps is not surprising when considering the broad approach of the study, the large range of gears and vessels used, different conditions on board and varying conditions at sea. The scientific underpinning of these conclusions is considered robust and gives an indication of the combined situation for the Belgian fleet and which factors could potentially improve survivability for plaice in this fishery. However, the study was unable to give an indication to what extent the survivability could realistically be improved through the identified gear modifications. It is considered appropriate that this should be the subject of further studies. Fleet and fishery descriptions are only provided for Ireland.
12. For the high survivability exemption for fish caught in pots, traps and creels in North Western Waters, the supporting information is identical to the information that supported thean existing exemption in the North Sea. This was evaluated by STECF last year. The description of fleets and fisheries only covers the Scottish fleets. No information is provided for other Member States who have similar fisheries. The overall quantities of fish associated with the proposed exemption are negligible. Therefore, given that the gear types are relatively benign and provided discarding under the exemption is monitored, the impact is likely to be minimal. The risk of substantial avian predation of discarded fish needs to be considered in such an exemption (see EWG 17-08 report). In the 2018 discard plan for the North Sea (COM 2018/45) the use of this survival exemption is conditioned on that the fish shall be released immediately and below the sea surface.
13. The NWW JR contains a series of proposals for the use of selective gears. While the majority of these represent improvements in selectivity, there is one case where the proposal is likely to reduce selectivity. This case is the proposed derogation for vessels with <10% gadoids to use and 80mm cod end + 100mm SMP in a part of area VIIf, which represents a reduction in selectivity from the current Regulations in place. Other gear options for vessels with >55% whiting or anglerfish, hake and megrim combined will almost most likely not increase selectivity from the current minimum requirements. Notwithstanding this, the proposed changes to increase selectivity in North Western Waters is one of very few attempts from regional groups to mitigate issues with unwanted catches in relation to the phasing-in of the Landing Obligation.

SWW

1. For the existing *de minimis* exemption for hake caught by bottom trawlers in directed fisheries in ICES subareas VIII and IX clarification is needed regarding the fleet and fishery information provided. Specifically, clarification is required for the 'non-Spanish data' (i.e. for French, Belgian and Portuguese métiers) and for the two of Spanish metiers in the Bay of Biscay - bottom otter trawl (OTB_MCF>70) targeting mixed cephalopod and demersal species in Div. 8a,b,d and bottom otter trawl (OTB_MPD>70) targeting mixed pelagic and demersal species in Div. 8a,b,d. It is also unclear how the métier-specific discard rates provided are calculated. Additionally, it is noted that the selectivity data and studies only cover the Spanish métiers. Further studies with different gear and mesh configurations to improve the selectivity of hake in bottom trawl gears are encouraged. Similarly, the information on the socio-economic

impacts of increasing selectivity and/or of the implementation of the landing obligation are only provided for certain Spanish métiers. It is not clear how representative the results from these studies are to other métiers. It is therefore not possible to assess fully whether the supporting information demonstrates selectivity is difficult to improve in this fishery or whether the costs of handling unwanted catches are disproportionate.

2. For the *de minimis* exemption for pelagic species for horse mackerel, mackerel, anchovy and boarfish caught by trawlers in ICES divisions VIII and IX fleet and fishery information is only provided for two French fisheries (TR2 and TR1) operating in ICES subarea 8. No information is provided for the Spanish or Portuguese fleets. It is also noted that the volume of *de minimis* cannot be estimated from the very limited catch information provided. In addition, due to the total lack of supporting information, it is impossible to make any assessment as to whether selectivity is difficult to improve or whether the costs of handling unwanted catches are disproportionate.
3. For the *de minimis* exemption anglerfish, sole, turbot, red seabream and greater forkbeard caught by trawlers in the Gulf of Cadiz (part of ICES subarea IXa) no supporting information has been provided. The basis for the exemption is that unwanted catches will lead to overloading of vessels and also and increase sorting times. However, this seems inconsistent as the actual catches are small. Due to the total lack of supporting information, it is impossible to make any assessment of whether the costs of handling unwanted catches are disproportionate. Fleet and fishery data are provided.
4. For the *de minimis* exemptions for megrim, anglerfish, plaice, whiting and pollack caught by trawlers and gillnetters in divisions VIII and IX quantitative descriptions of the composition of catches, landings and discards are provided. However, due to a lack of information, particularly relating to selectivity, no assessment can be made of whether improvements in selectivity are very difficult to achieve or whether the costs of handling unwanted catches are actually disproportionate.
5. For the *de minimis* exemption for horse mackerel, mackerel, anchovy and boarfish, caught by gillnetters in ICES divisions VIII and IX, X and CECAF areas 34.1.1, 34.1.2, 34.2.0 due to a lack of information, particularly relating to selectivity, no assessment can be made of whether improvements in selectivity are very difficult to achieve or whether the costs of handling unwanted catches are actually disproportionate.
6. For the *de minimis* exemption for horse mackerel, mackerel, anchovy and boarfish, caught by longliners in ICES divisions VIII and IX, X and CECAF areas 34.1.1, 34.1.2, 34.2.0 the inclusion of anchovy and boarfish is probably an error as it is highly unlikely such species would be caught on longlines. The Commission may wish to confirm this with the Regional Group. Catch and discard profiles are not provided. Furthermore, it is not possible to identify the fleets of the Member States concerned or if the information presented represent catches, landings or discards – this needs clarification. Due to a lack of information, particularly relating to selectivity, no assessment can be made of whether improvements in selectivity are very difficult to achieve or whether the costs of handling unwanted catches are actually disproportionate.
7. For the *de minimis* exemption covering bycatch of all species regulated with TAC and quota, caught by the artisanal fleet in ICES divisions VIII, IX, X and CECAF areas 34.1.1, 34.1.2, 34.2.0. no supporting information has been provided nor are catch and discard profiles were not provided. Due to lack of information, EWG 18-06 is unable to assess fully whether this demonstrates that selectivity is difficult to improve in this fishery or whether the costs of handling unwanted catches are actually disproportionate. Due to the total lack of information, particularly relating to selectivity, no assessment can be made of whether improvements in selectivity are very difficult to achieve or whether the costs of handling unwanted catches are actually disproportionate. It is also important to note that this exemption would seem to overlap many of the other *de minimis* exemptions given it covers all species regulated with TAC and quotas.
8. The *de minimis* exemptions covering bycatch of alfonsinos and greater forkbeard caught by hooks and lines in division X are well described. The supporting information provides credible evidence to support the exemptions.
9. For the high survivability exemption for skates and rays caught with all gears in ICES subareas VIII and IX the estimated survival rates appear to be very much species and gear dependent. It is difficult to evaluate whether the estimates are fit for purpose in the context of the fisheries concerned or in terms of long term vs short term mortality. A detailed description

of the fleets and fisheries covered by 'all gears' is not provided and there is no fishery data included to allow assessment of the scale of the problem. Extrapolating the results from the DESCARSEL study to all skates and rays caught with all gears in subareas VIII and IX (as requested in the JR) is difficult to justify without additional information. Given the uncertainty surrounding the representativeness of the estimates and the likelihood that new material will emerge during the course of the DESCAREL project which might lead to adjustments in survival rate estimates, shorter trial periods (for example, one year at a time) would be preferable.

10. For the high survivability exemption for red seabream caught with artisanal gear called "voracera" used in the south of Spain in ICES subareas IXa, the studies provide reasonably sound scientific evidence for the survival of red sea bream following discarding. Provision of quantitative fishery data would help in the assessment of the scale of the problem and the likely quantities of fish involved. The supporting study was carried out during the month of November 2017, under favourable environmental conditions (temperature, salinity, etc.) associated with that time of year. This should be taken into account if this exemption is granted in a discard plan.
11. For the high survivability exemption for red seabream caught in ICES subareas X with hooks and lines, the studies provide reasonably sound scientific evidence for the survival of red sea bream following discarding. However, it is not clear how representative are the experimental conditions prevailing in the telemetry tagging programme. Provision of quantitative fishery data would help in the assessment of the scale of the problem and the likely quantities of fish involved.

Mediterranean

1. The *de minimis* exemption for hake and mullets caught by trammel and gill nets replaces an existing exemption by increasing the volume of *de minimis* from 1% to 6%. This request was included in the PESCAMED, ADRIATICA and SUDESTMED JRs. Limited supporting information is provided and the justification is based on the same supporting evidence provided for the existing exemption, even though this new exemption represents a six-fold increase in the *de minimis* volume. Furthermore, the characteristics of the gear for the variety of fleets and Member States are unknown and may vary across the different regions of the Mediterranean. The catch data available suggests that the percentage of *de minimis* sought is unnecessarily high and may only be needed as a complement of the *de minimis* obtained for other gears. A partial description of the fleet, fisheries, and countries involved is provided. Due to the lack of information, no assessment can be made as to whether selectivity is difficult to improve in this fishery or whether the costs of handling unwanted catches are actually disproportionate. However, it is important to recognise the suggestions for spatial measure provided in the supported annex provided by MEDAC. These seem reasonable but there is no indication in the JR as to whether these would be implemented. No indication was provided on the operational introduction of these measures.
2. The *de minimis* exemption in for Norway lobster caught by bottom trawls during July, August and September is justified by disproportionate costs of landing in general (not for *Nephrops* in particular). There are a number of inconsistencies and gaps in the catch and fleet information provided. The catch data available suggests that the percentage of *de minimis* sought is unnecessarily high and may only be needed as a complement of the *de minimis* obtained for other gears. Neither ADRIATICA nor SUDESTMED have presented supporting information. Due to the lack of information, no assessment can be made as to whether selectivity is difficult to improve in this fishery or whether the costs of handling unwanted catches are actually disproportionate.
3. The *de minimis* exemption for hake and mullets caught by rapido replaces an existing exemption by increasing the volume of *de minimis* from 1% to 6%. Only limited catch data is provided for hake or mullets although there is a reference to bycatch discard rates indicating that they may in general not exceed 5%. The limited catch data available suggests that the percentage of *de minimis* sought is unnecessarily high and may only be needed as a complement of the *de minimis* obtained for other gears. A partial description of the fleet, fisheries, and countries involved is provided. Due to the lack of information, no assessment can be made as to whether selectivity is difficult to improve in this fishery or whether the costs of handling unwanted catches are actually disproportionate.

4. The *de minimis* exemption for common sole caught by trawl nets replaces an existing exemption by increasing the volume of *de minimis* from 1% to 6%. There seems to be no justification to change the current derogation, particularly by increasing the level of the *de minimis*. No new supporting information has been provided.
5. The combined *de minimis* exemption for demersal finfishes under landing obligation for under MCRS specimens excluding hake, mullets and pelagic species the catch data provided show different combinations of species relevant to multiple exemptions. This makes interpretation and analysis of specific exemptions difficult without significant clarification and reworking of the data. Estimating total *de minimis* volumes is very difficult because data are presented in different formats both within and across the two annexes. The assessment is further complicated by the fact that the exemption is to allow the discarding of fish under MCRS but only partial data on the proportion of discards below MCRS is provided. The proposed *de minimis* rate of 7% is significantly higher than discard rates averaged across fleets for many of the demersal species although some species show have very high discard rates. The transition from these currently high discard rates to the *de minimis* level will be challenging without significant changes in the fishing pattern, either through improvements in selectivity or by avoiding areas of higher unwanted catches. Additionally, quantifying discards permitted under such a complex exemption will be particularly challenging. Due to the lack of information, no assessment can be made as to whether selectivity is difficult to improve in this fishery or whether the costs of handling unwanted catches are actually disproportionate.
6. For the *de minimis* exemption for demersal finfishes under landing obligation for under MCRS specimens, excluding hake, mullets and pelagic species caught by trammel and gill nets very limited actch and fleet information has been provided. Indications are that no discards in trammel and gillnets, but rather that discards are usually low generally below 5% in the western Mediterranean, below 1% in the Adriatic but frequently between 5% and 20% in the central eastern Mediterranean (not south eastern Mediterranean). Discard rates for gill and trammel nets for four demersal finfish species in the western Mediterranean for which data are provided are also low, ranging from 0 to 2,3%. Estimating total *de minimis* volumes is very difficult because data are presented in different formats both within and across the two annexes. The assessment is further complicated by the fact that the exemption is to allow the discarding of fish under MCRS but only partial data on the proportion of discards below MCRS is provided. The proposed *de minimis* rate of 7% is significantly higher than discard rates averaged across fleets for many of the demersal species although some species show have very high discard rates. The transition from these currently high discard rates to the *de minimis* level will be challenging without significant changes in the fishing pattern, either through improvements in selectivity or by avoiding areas of higher unwanted catches. Additionally, quantifying discards permitted under such a complex exemption will be particularly challenging. Due to the lack of information, no assessment can be made as to whether selectivity is difficult to improve in this fishery or whether the costs of handling unwanted catches are actually disproportionate.
7. For the *de minimis* exemption for demersal finfishes under landing obligation for under MCRS specimens excluding hake, mullets and pelagic species caught by hooks and lines there are a number of inconsistencies and gaps in the catch and fleet information provided. The proposed *de minimis* rate of 7% is likely to be significantly higher than the discard rate as the PESCAMED annex indicates that discards are low in longline fisheries. Due to the lack of information, no assessment can be made as to whether selectivity is difficult to improve in this fishery or whether the costs of handling unwanted catches are actually disproportionate.
8. For the *de minimis* exemption for bycatches of pelagic species (Anchovy, Sardine, Mackerel, Horse mackerel) under landing obligation using bottom trawls the catch data provided is limited. The variability in the assemblage of species in each data set suggesting that the data tables presented are subsets of the total. However, all discard proportions presented are characteristically high, far exceeding the *de minimis* requested, which raises questions as to how the member states would resolve the issue of the remaining unwanted catch. Due to incomplete information and a lack of clarity in the available material, EWG 18-06 is unable to further assess whether this demonstrates that selectivity is difficult to improve in this fishery or whether the costs of handling unwanted catches are actually disproportionate. Due to the lack of information, no assessment can be made as to whether selectivity is difficult to improve in this fishery or whether the costs of handling unwanted catches are actually disproportionate.

9. For the existing high survivability exemption for Norway lobster (*Nephrops norvegicus*) caught by bottom trawls excepted during the months of July, August and September it is proposed to limit the exempotion to the periods of January to June and October to December. a *de minimis* request has been made to cover unwanted catches in the summer months.
10. For the high survivability exemption for Deep water rose shrimp caught by bottom trawls in the Western Mediterranean and Adriatic only limited catch and fleet information has been provided and it is not clearly associated to specific gear. In fact, it is not apparent if the species is mainly caught by the general demersal trawl fisheries or whether there may be specific gears used. No data on survivability has been provided so no assessment can be made.
11. For the high Survivability exemption for Red sea bream caught by hooks and lines is based on a survival study using "voracera" gear. It is not clear how representative the results from this study for other hook and line gears given differences in operation and handling times on board. The study period was relatively short and may not be representative of the whole fishing season. It seems appropriate to carry out further trials, to determine whether survival rates differ across other gear types, other seasons and other geographic areas. Notably, environmental conditions such as temperature and depth. Only limited catch and fleet information is provided which indicates landings to be negligible and with an associated discard rate of 8.5%.
12. For the high Survivability exemption for Lobster and crawfish caught by nets, pots and traps no supporting information has been provided. Survivability for these species is expected to be high in pots and traps (as indeed in the northern Atlantic). However, for nets, survival is likely to be lower. However, there may be a danger of producing unnecessary mortality in the stock if the derogation is not granted for pots and traps, so a temporary derogation may be usefully considered, together with a request for dedicated studies or the presentation of evidence from existing studies to estimate survival rates.
13. For the high survivability exemption for Norway lobster caught by pots and traps limited supporting information has been provided other than a general statement that the catch is landed alive. Additional data should be provided indicating the scale of the fishery and the reason for the occurrence of discards. Supporting documentation was provided of studies in the NW Atlantic, but no data for the Mediterranean. A statement about applicability of results from the Atlantic to the Mediterranean is offered. Survival rates of *Nephrops norvegicus* caught by traps are known to be high. In the Atlantic they appear to decrease with decreasing latitude but remain above 80% as far south as Portugal. Several derogations on survivability of *Nephrops* caught with traps have been previously granted by the Commission in Delegated acts of the NWW, Scheveningen and NS areas. However, it not clear how representative survival estimates form the NE Atlantic are to the Mediterranean since it is clear that the Mediterranean is generally warmer.

For the existing high survivability exemption for Scallop, Carpet clams, Venus shells caught by mechanized dredges no supporting information has been provided so no assessment can be made.

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12 Annexes

12.1. 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**

Table 12.1b Template for the provision of information that defines the fisheries to which high survivability exemptions should apply

Country	Exemption applied for (species, area, gear type)*	Species as bycatch or target	Number of vessels subject to the LO	Landings (by LO subject Vessels)	Estimated Discards*	Estimated Catch	Discard Rate	Estimated discard survival rate from provided studies

* The information given here should be disaggregated by exemption applied (e.g. in the case of Whiting in Area VII there should be a separate row for each of the three relevant exemptions).

** Note on discard rates and *de minimis* volumes – For those vessels subject to the LO an estimated discard rate should be applied to their landings of the relevant species in the relevant areas in the most recent year for which there is data available. The discard rate used should be as specific as possible (e.g. in the case of the whiting *de minimis* exemptions in the NWW, an average discard rate of TR1 and TR2 vessels should be avoided as discard rates, for Whiting for example, may be very different between TR1 and TR2 fleets). It may not be possible to calculate a discard rate for the specific vessels which are subject to the LO but a discard rate for the fleet overall should be available and could be used in that case.

12.2. *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
[illegible]	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?

12.3. Table of shortfalls

Data and information shortfalls in the Regional Group Joint Recommendations as evaluated by STECF EWG18-06

Note the tables contain only those exemptions where EWG18-06 considered there were information or data shortfalls that might be corrected by provision of information from the respective Regional Groups in the short term (ie before the STECF July Plenary meeting.

North Sea *De minimis*

Exemption	Shortfalls
Bycatches in the brown shrimp fishery in the North Sea	a) No supporting documentation on disproportionate costs of i) separating out small fish and ii) need for extra crew. b)) No breakdown of the fleets by Member State and the catch data is only provided as a percentage of the overall catches and not by volume.
Pelagic species under landing obligation for demersal vessels using bottom trawls (OTB, OTT, PTB, TBB) of mesh size 70-99mm (TR2, BT2) in the North Sea (area IV)	a) No supporting information is provided regarding either i) improvements in selectivity being difficult to achieve or ii) on disproportionate costs of handling unwanted catches of pelagic species onboard. b) No catch or fleet information on i) other fisheries involving UK, NL, SE and DK vessels or on ii) beam trawls
Ling (*Molva molva*) for vessels using	a) No supporting information is provided

bottom trawls (OTB, OTT and PTB) > 100mm in the North Sea (area IV)	on selectivity being difficult to achieve.other than referring to the morphology of ling. b) Not clear whether the intention is that this exemption would apply to similar fleets from other MS (see reference to the *de minimis* volume above). There is reference to DE vessels operating in the fishery, but no details are provided.
Bycatch of industrial species for demersal vessels using TR1, TR2 or BT2 in areas IIIa and IV)	a) No supporting documentation other than that the catches are insignificant in the demersal fisheries. b) There is very limited information on the fleets and fisheries to which this exemption is to be applied. Catch data is provided for various DK trawl fleets but there is no indication on the numbers of vessels involved. It is not clear whether this exemption is to apply to the fleets of other MS. There is also a reference to BT2 fisheries but no information is provided on catches or fleets involved.
Whiting caught by beam trawls 80-119mm in the North Sea (area IV)	a) There is only limited evidence to support the assertions that selectivity difficult to achieve and handling small undersized fish involves disproportionate costs b) There is very limited information on the fleets and fisheries to which this exemption is to be applied. Catch data is provided for only the NL BT2 fleet. There is no indication on the numbers of vessels involved and only limited catch data is provided. It is not clear whether this exemption is to apply to the fleets of other MS.
Whiting and cod caught using bottom trawls (OTB, < 100mm (TR2) in the North Sea	There is no new information to support widening the scope of the exemption

North Sea High Survivability

Exemption	Shortfalls
High survival exemption for *Nephrops* caught by demersal trawls with a cod end larger than 80mm (70mm/35mm)	Lack of clarity in the catch and discard figures used in the request. Regional Group requested to check these figures with UK
High survival exemption for 'undersized' common sole (sole less than MCRS of 24cm) caught by 80-99mm otter trawl gears in ICES area 4c within 6 nautical	Location of sole nursery grounds has again not been provided. Provision of this material is a condition in the Delegated Act and should be supplied.

miles of coasts, albeit outside identified nursery areas	
By-catch of plaice by vessels using nets in ICES areas 3a and 4	No fishery data provided for the static 'net' categories. Data required to complete the evaluation
High survival exemption for skates and rays caught by all fishing gears in the North Sea (areas 4, 3a and EU waters of 2a)	Very few landings and discards data provided. EWG18-06 recognises these data are sparse and that there are quite a lot of species, however, Regional Group should provide whatever they do have to assist inform the evaluations.
By-catch of plaice by vessels using Danish seine in ICES areas 3a and 4	Lack of information on the air exposure times in the commercial fleet. EWG 18-06 considers this is vital for completing the evaluation
Temporary high survival exemption for plaice below MCRS caught by 80-119mm beam trawl gears (BT2) in ICES area 4	No reasoning for why a three-year period is requested for the 'tempoarary exemption.
By-catch of plaice by vessels using trawl (OTB, PTB) of mesh sizes ≥ 120 mm in ICES areas 3a and 4 in winter	a) Data on catch and discard quantities inadequate. Regional Group should try to supply catch and discard data for the fleets concerned. b) No information on air exposure times in commercial fleet.
Temporary high survival exemption (2019-2021) for turbot caught by towed gears with a cod end larger than 80mm in ICES area 4	No information on the fishery data for the fleets affected by this request. Regional Group should provide this information

North Western Waters *De minimis*

Exemption	Shortfalls
Whiting caught with bottom trawls and seines >80mm and pelagic trawls and beam trawls (80-119mm) to catch whiting in the Eastern Channel (VIId)	No supporting evidence relating to request to include BT2. Regional Group should provide fishery information (landing discards etc)
Combined *de minimis* for Gadoids (cod, haddock, whiting) caught using bottom trawls, seines and beam trawls of greater than or equal to 80mm mesh size in the Celtic Sea and the Channel (ICES VIIb-c, e-k)	a) No information provided for fleets other than France and Ireland. Regional Group should provide fishery information (landing discards etc) b) EWG 18-06 notices that in the "Template for the provision of information that defines the fisheries to which *de minimis* exemptions should apply (Annex IV)" the estimated landings and the estimated discards for gadoids report the

	same value (9097.84 tons), and this is not consistent with the reported discard rate (53%). Can this be corrected.
By-catches of pelagic species (mackerel, horse mackerel, herring, boarfish, greater silver smelt) caught by vessels using bottom trawls and seines, and beam trawls in ICES subarea VI and VIIb-k	a) No information provided for beam trawl and seine net fisheries. b) Information related to safeguards only provided for France. Discard profiles for other MS are required.

North Western Waters High Survivability

Exemption	Shortfalls
Common sole (undersized only) caught with trawl gears in area VIId	Location of sole nursery grounds has not been provided. Provision of this material is a condition in the Delegated Act (COM 2018/46) and should be supplied.
Nephrops in the TRI fisheries in Area VII and in the TR2 fisheries in Area VII in combination with highly selective gears	Apart from Ireland, fisheries descriptions of other countries fleets are lacking which makes the magnitude and effects of this exemption difficult to assess
Skates and ray species caught by any gear in the North Western Waters (areas VI and VII)	Very few landings and discards data provided. EWG18-06 recognises these data are sparse and that there are quite a lot of species, however, Regional Group should provide whatever they do have to assist in the evaluations.
Plaice caught by trammel nets in ICES divisions VIId and VIIe	a) The supplementary material provided as scientific evidence of the high survivability of Plaice is too limited to be reviewed. Experimental details about a large extent of the study are missing (e.g. analysis, control group, vitality assessment and animal observations) Fleet and fishery descriptions are provided for the United Kingdom, but there are other countries associated with the proposed exemption that have not been described.
Plaice caught by trammel nets in ICES divisions VIIf and VIIg	As above
Plaice caught by Otter Trawls in ICES divisions VIId and VIIe	As above
Plaice caught by otter trawl gears in ICES subarea VIIf and VIIg	As above
Plaice caught with beam trawls in ICES subareas VIIa to VIIk	Fleet and fishery descriptions are provided for Ireland, but the source related to numbers supplied is unknown. There are other countries associated with the

	proposed exemption that have not been described.
Fish caught in pots, traps and creels in North Western Waters	Fleet and fishery descriptions are detailed for Scotland, but data from other countries associated with the proposed exemption were not submitted. Regional Group should provide this

South Western Waters *De minimis*

Exemption	Shortfalls
Hake caught with trawls in directed fisheries in ICES subareas VIII and IX	a) It is stated that "There is no way to calculate the number of vessels practicing one métier at any time of the year. Thus, it is not possible to calculate a discard rate for the specific vessels practicing each métiers which are subject to the LO but a discard rate for the overall otter trawl fleet is available". STECF is unable to evaluate, given the information provided, how the métier-specific discard rates were calculated. b) More clarifications are needed for the 'non-Spanish data' in Table 1 (data for French, Belgian and Portuguese métiers). It is unclear to which year(s) they refer and how the respective calculations of discards have been made. c) More clarifications are needed for two of Spanish metiers in the Bay of Biscay, namely "Bottom otter trawl (OTB_MCF>70) targeting mixed cephalopod and demersal species in Div. 8abd" and "Bottom otter trawl (OTB_MPD>70) targeting mixed pelagic and demersal species in Div. 8abd". These métiers are not included in Table 1 and it is stated in the text that "In 2018, trips deployed by these gears "are not currently under landing obligation". d) The Regional Group should supply, if available, additional information on selectivity and socio -economics relavant to this exemption for countries other than Spain.
By catches pelagic species: horse mackerel (Trachurus spp.), mackerel (Scomber scombrus), anchovy (Engraulis encrasicolus) and boarfish (Caproidae). Combined *de minimis* for the species up to a maximum of 7% in 2019 and 2020, and up to a 6% in 2021 of the total annual catches of these species made by **trawlers** (gear codes: OTT, OTB, PTB, OT, PT, TBN, TBS, TX, SSC, SPR, TB,TBB, SDN, SX, SV) in fisheries in ICES divisions VIII and IX.	a) no information on economics or selectivity studies were reported to support the case. b) No information on number of vessels involved and no information on Spanish and Portuguese fleets. c) No information on observer trip numbers compared to total fishing trips. d) Lack of information on discard rates except for France.
by-catches of anglerfish (Lophiidae), sole (Solea spp.), turbot (Psetta maxima), red	a) no information on economics or selectivity studies were reported to

seabream (Pagellus bogaraveo), great forkbeard (Phycis blennoides), a combined *de minimis* up to a maximum of 7% in 2019 and 2020, and up to a 6% in 2021 of the total annual catches of these species made by **trawlers** (gear codes : OTT, OTB, PTB, OT, PT, TBN, TBS, TX, SSC, SPR, TB, SDN, SX, SV) in the Gulf of Cadiz part of ICES subarea IXa.	support the case. b) No information on observer trip numbers compared to total fishing trips.
by-catches of the species megrim (Lepidorhombus spp.), anglerfish (Lophiidae), plaice (Pleuronectes platessa), whiting (Merlangius merlangus) and pollack (Pollachius pollachius), a combined *de minimis* up to a maximum of 5% of the total annual catches of these species made by **trawlers** (gear codes: OTT, OTB, PTB, OT, PT, TBN, TBS, TX, SSC, SPR, TB,TBB, SDN, SX, SV) in divisions VIII and IX.	a) No information on numbers of vessels involved
by-catches of the species megrim (Lepidorhombus spp.), anglerfish (Lophiidae), plaice (Pleuronectes platessa), whiting (Merlangius merlangus) and pollack (Pollachius pollachius), a combined *de minimis* up to a maximum of 4% of the total annual catches of these species made **by gillnetters** (gear codes: GNS, GND, GNC, GTR, GTN) in divisions VIII and IX**.**	a) According to the request, the fleet is particularly vulnerable to the risk of commercial catch losses an improvement in selectivity would cause. However, no references on economic/selective studies were reported. b) The request based on disproportionate costs is from the the risk of presence of choke species that may generate hold overloading and increase the sorting time on board for the crew management but no supporting information is provided. Regional group should be asked to supply this information if available. c)Number of vessels involved is not provided.
by-catches of the following pelagic species: horse mackerel (Trachurus spp.), mackerel (Scomber scombrus), anchovy (Engraulis encrasicolus) and boarfish (Caproidae), a combined *de minimis* for the species up to a maximum of 3% in 2019 ,2020 and 2021, of the total annual catches of these species made **by gillnetters** (gear codes: GNS, GND, GNC, GTR, GTN) in fisheries in ICES divisions VIII and IX, X and CECAF areas 34.1.1, 34.1.2, 34.2.0.	a) According to the request, the fleet is particularly vulnerable to the risk of commercial catch losses an improvement in selectivity would cause. However, no infoarmation on economic/selective studies were reported. b) Request based on disproportionate costs is from the risk of presence of choke species that may generate hold overloading and increase the sorting time on board for the crew management. No references were reported. c)No information on number of vessels d) Catch and discard profile only provided for Spain – Regional Group shopuild be asked to supply the material for other

	MSs e) No information regarding number of observer trips compared to total number of fishing trips.
for by-catches of the following pelagic species: horse mackerel (Trachurus spp.), mackerel (Scomber scombrus), anchovy (Engraulis encrasicolus) and boarfish (Caproidae), a combined *de minimis* for the species up to a maximum of 1% in 2019 ,2020 and 2021, of the total annual catches of these species made by for **longliners** (codes: LHP, LHM, LLS, LLD) in fisheries in ICES divisions VIII and IX, X and CECAF areas 34.1.1, 34.1.2, 34.2.0.	a) Request based on disproportionate costs from the risk of presence of choke species that may generate hold overloading and increase the sorting time on board for the crew management. No references were reported. b) Are anchovy and boarfish required here? c) Number of vessels involved is not provided. d)catch and discard profile not supplied. Regional group should supply the above information.
by-catches of all species regulated with TAC and cuota, a combined *de minimis* up to a maximum of 1% in 2019, 2020 and 2021 of the total annual catches made by the artisanal fleet in ICES divisions VIII, IX, X and CECAF areas 34.1.1, 34.1.2, 34.2.0.	a) No information provided by France and Portugal. b) Annex I, cited in the text is not provided.

South Western Waters High Survivability

Exemption	Shortfalls
Skates and rays (*Rajiformes*) caught with all gears in ICES subareas VIII and IX.	a)A detailed description of the fleets and fisheries covered by 'all gears' is missing. b)Numerical table of fishery information is not provided c)Power point presentation (with main points from the DESCARSEL project and next work planned) is used as supporting evidence to justify the exemption but the presentation is not in English. Could the Regional Group please address these points
Red seabream (*Pagellus bogaraveo*) caught with artisanal gear called "voracera" used in the south of Spain in ICES subareas IXa.	a)Numerical table of fishery information is not provided.
Red seabream (*Pagellus bogaraveo*) caught in ICES subareas X with hooks and lines.	The information to compile the numerical table is more or less provided in the text, but the numerical table as such is missing – It would help if the Regional Group

	could complete this.

Western Mediterranean *De minimis*

Exemption	Shortfalls
6% in 2019 and 2020, 5% in 2021 of total annual catches of Hake and Mullets caught by trammel and gill nets	a)Modification of existing *De minimis* (from 1% to 6%) but no information provided to support claim of disproportionate costs. b)Data not disaggregated and do not represent whole of western Mediterranean. c)Additional discrimination of the data needs to be provided to support the request
In July, August and September - 6% in 2019 and 2020, 5% in 2021 of total catches of Norway lobster caught by bottom trawls during these months	a)Justification for disproportionate costs not specific enough to the case for *Nephrops*. b) Could Regional Group clarify if the French trawling fleet targeting *Nephrops* is the same as the multispecies fleets presented in the JR.
% in 2019 and 2020, 6% in 2021 of total annual catches of demersal finfishes under landing obligation for under MCRS specimens - **Hake, Mullets and pelagic species excepted** - caught by bottom trawls	Lack of clarity in the data presented in the two accompanying annexes (PESCAMED and MEDAC). a) not clear which fleets the exemptions apply to b)Tables of data show different combinations of species making the evaluation of *De minimis* amounts very difficult. Please provide supporting studies on cost etc – couldn't be found online.
7% in 2019 and 2020, 6% in 2021 of total annual catches of demersal finfishes under landing obligation for under MCRS specimens - **Hake, Mullets and pelagic species excepted** - caught by trammel and gill nets	Only limited information available on disproportionate cost (the basis of the request). Could PESCAMED provide this information.
7% in 2019 and 2020, 6% in 2021 of total annual catches of demersal finfishes under landing obligation for under MCRS specimens - Hake, Mullets and pelagic species excepted - caught by hooks and lines	As above
7% in 2019 and 2020, 6% in 2021 of total annual by-catches of pelagic species (Anchovy, Sardine, Mackerel, Horse mackerel) under landing obligation	No gear specifications are provided – assumption is that this refers to demersal gears. Could PESCAMED confirm

Western Mediterranean High Survivability

Exemption	Shortfalls
Scallop (*Pecten jacobeus*), Carpet clams (*Venerupis* spp.), Venus shells (*Venus* spp.) caught by mechanized dregdes	Existing exemption but Regional Group has not provided evidence to support the original request despite regular communication from Commission.
Deep water rose shrimp (*Parapanaeus longirostris*) caught by bottom trawls	No information provided on survivability specific to this fishery. Regional Group should supply data if available.
Red sea bream (*Pagellus bogaraveo*) caught by hooks and lines	a) Description of countries and associated fisheries not provided b) Catches, discards and discard rates not provided c) If possible, Regional Group should also provide details on seasonal and area changes in fishery composition and environmental conditions.
Lobster (*Homarus gammarus*) and crawfish (Palinuridae) caught by nets	No supporting data provided. Some indication of scale of fisheries would be helpful.
Lobster (*Homarus gammarus*) and crawfish (Palinuridae) caught by pots and traps	As above
Norway lobster (*Nephrops norvegicus*) caught by pots and traps	No data provided on fisheries or discards

15 CONTACT DETAILS OF EWG-18-06 PARTICIPANTS

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

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LIST OF BACKGROUND DOCUMENTS

Background documents are published on the meeting's web site on:
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