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Reports of the Scientific, Technical and Economic Committee for Fisheries (STECF) - Evaluation of the landing obligation joint recommendations (STECF-16-10)

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This report was reviewed by the STECF during its 52nd plenary meeting held from 4 to 8 July 2016 in Brussels

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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 2017.

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SCIENTIFIC, TECHNICAL AND ECONOMIC COMMITTEE FOR FISHERIES (STECF)

Evaluation of the landing obligation joint recommendations (STECF-16-10)

THE EWG-16-06 REPORT AND ADDITIONAL INFORMATION WAS REVIEWED DURING THE PLENARY MEETING HELD IN Brussels, 04-08 July 2016

Request to the STECF – review of EWG-16-05 report (NWW, SWW, NS, MED)

STECF is requested to review the report of the STECF Expert Working Group 16-06 and the additional information received from the Regional Groups after the EWG, and make appropriate comments and recommendations.

Observations of the STECF

The report of the STECF EWG 16-06 represents the findings of the seventh Expert Working Group meeting convened to address the implications associated with the implementation of the Landing Obligation, the provisions of which are prescribed primarily in Article 15 of the 2013 Reform of the Common Fisheries Policy (Regulation (EU) No 1380/2013 of the European Parliament and of the Council of 11 December 2013).

STECF EWG-16-06 was requested to:

- Screen any changes in the defined fisheries to be subject to the landing obligation
- Review the supporting documentation for exemptions on the basis of high survivability
- Review the supporting documentation for de minimis exemptions
- Review whether there is sufficient information to support proposed changes to mcrs
- Review the supporting documentation provided for technical measures aimed at increasing gear selectivity
- Where Joint recommendations have not been put forward by the Member States, STECF to provide input on the preparation of discard plans

STECF notes that for the Mediterranean Sea, joint recommendations from the Mediterranean Advisory Council (MEDAC) on discards plans for species defining the fisheries in the Adriatic (HR, IT, SL), Western Mediterranean (FR, IT, SP) and South/East Mediterranean (CY, GR, IT, MT) was provided to EWG 16-06. EWG 16-06 noted that this document was not yet approved by the relevant Member States. Therefore it was treated as a working document and not considered as formal joint recommendation for demersal fisheries in the Mediterranean as it did not emanate from the Member States in the region.

STECF observes that following EWG 16-06 formal joint recommendations were received from the Member State regional groups in the Mediterranean for the Adriatic Sea (ADRIATICA), South Eastern Mediterranean Sea (SUDESTMED) and the Western Mediterranean (PESCAMED).

STECF notes that EWG-16-06 identified a number of general issues and limitations in the JRs that the Commission may wish to note. These broadly related to inconsistencies in the definition of the fleets to which proposed exemptions relate and also in several cases, there were gaps in the supporting documentation provide to underpin the exemptions.

STECF notes that EWG 16-06 has developed two templates for the provision of this information for de minimis and high survivability exemptions (Tables 4.1a & 4.1b in the EWG 16-06 report) (Table 4.1b in the EWG 16-06 report).

STECF notes that in relation to these points, The Commission has requested additional information from the Member States regional groups. In most cases this information has been provided to the Commission, although not always following the templates. This information is summarised in Table 5.4-1, Table 5.4-2 and Table 5.4-3 for North-western waters, North Sea, and South-western waters, respectively.
The STECF observations associated with such additional information are provided in Table 5.4-1, Table 5.4-2 and Table 5.4-3 for North-western waters, North Sea, and South-western waters, respectively.

For the Mediterranean Sea STECF has evaluated the three JRs (ADRIATICA, SUDESTMED and PESCAMED). STECF observes that in the case of the SUDESTMED, the flexibilities requested do not differ from those contained in the MEDAC proposal that was evaluated by the EWG 16-06.

STECF notes that for the case of ADRIATICA apart from the flexibilities (de minimis) assessed by the EWG 16-06, an additional high survivability exemption is requested for sole caught in GFCM/GSAs 17 and 18 with rapido (beam trawl-TBB).

STECF notes for the case of PESCAMED apart from the de minimis exemption proposed by MEDAC, an additional high survivability exemption is requested for bivalves (i.e *Pecten jacobaeus, Venerupis spp* and *Venus spp*.) in GSA 1,2,5,6 caught with mechanised dredges.

STECF reiterates its previous conclusion that without clear definitions of the terms, "disproportionate costs", "very difficult to improve selectivity" or "high survival", there are no objective scientific criteria to judge whether any proposed exemptions from the landing obligation are merited. Therefore STECF has focused on two elements:

1. Are the exemptions 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. Are the exemptions underpinned by robust scientific information that justifies the exemption?

On the basis of this evaluation, managers will need to judge whether such proposals are merited using relevant subjective criteria. STECF notes that in order to help managers on the implications of adopting a particular high survivability case in the context of the fishery to which it applies, a simple illustrative methodology can be followed to show what the continuing rates of dead discarding are likely to be (see STECF conclusions).

STECF reiterates its conclusion that improving selectivity is basically an economic consideration. In addition, STECF also stated several times before that the question of

disproportionate costs is a subjective judgement. However, STECF also notes that providing economic information on the expected costs of not allowing an exemption is preferable and can strengthen the case for the exemptions.

STECF notes that EWG 16-06 developed a Multi-criteria Performance Matrix for providing information on the consequences of not allowing an exemption. This method consists on a comparative assessment of the different consequences of different scenarios (i.e., a base line scenario, a "doing nothing scenario", selectivity changes scenario, and the de minimis scenario).

Table 1 presents the main conclusions from EWG 16-06 on the MEDAC proposal and the STECF observations on the three joint recommendations received

Table 1 Summary of additional information received relating to exemptions presented for North Western Waters

De minimis	
Fishery	**Whiting caught with bottom trawls and seines <100mm and pelagic trawls to catch whiting in the Channel**
Main Findings of EWG 16-06	Existing in 2015, detail on fleets affected and potential de minimis volumes was requested. In 2016, additional information was provided by several MS but this was in different formats and grouped gears or areas in different ways. EWG not able to evaluate material and provided a template for Regional Group completion.
COM comments to Regional Groups	The MS which provide additional information were provided with specific comments on shortfalls in their submissions. A template to clearly separate the data for the 3 exemptions was provided. Commission drew attention to EWG suggestion that the exemptions could be *streamlined* into one exemption.
Response by Regional Groups	Response from UK only. Narrative discussing the difficulty of estimating discard amounts for the fleet segments concerned. No completed templates were provided. UK wished to see what a streamlined request would look like before commenting further.
Comments STECF PLEN 16-02	Information insufficient. STECF unable to complete an evaluation until the requested information is provided.
Fishery	**Whiting caught with bottom trawls and seines ≥100mm and pelagic trawls to catch whiting in the Celtic Sea and the Channel**
Main Findings of EWG 16-06	Existing in 2015, detail on fleets affected and potential de minimis volumes was requested. In 2016, additional information was provided by several MS but this was in different formats and grouped gears or areas in different ways. EWG not able to evaluate material and provided a template for Regional Group completion.

COM comments to Regional Groups	The MS which provide additional information were provided with specific comments on shortfalls in their submissions. A template to clearly separate the data for the 3 exemptions was provided. Commission drew attention to EWG suggestion that the exemptions could be *streamlined* into one exemption.
Response by Regional Groups	Response from UK only. Narrative discussing the difficulty of estimating discard amounts for the fleet segments concerned. No completed templates were provided. UK wished to see what a streamlined request would look like before commenting further.
Comments STECF PLEN 16-02	Information insufficient. STECF unable to complete an evaluation until the requested information is provided.
Fishery	**Whiting caught with bottom trawls and seines <100mm and pelagic trawls to catch whiting in the Celtic Sea**
Main Findings of EWG 16-06	Existing in 2015, detail on fleets affected, potential de minimis volumes and selectivity was requested. In 2016, additional information was provided by several MS but this was in different formats and grouped gears or areas in different ways. EWG not able to evaluate material and provided a template for Regional Group completion Extensive review of selectivity data provided by Ireland and difficulty of improving selectivity discussed.
COM comments to Regional Groups	The MS which provide additional information were provided with specific comments on shortfalls in their submissions. A template to clearly separate the data for the 3 exemptions was provided. Commission drew attention to EWG suggestion that the exemptions could be *streamlined* into one exemption.
Response by Regional Groups	Response from UK only. Narrative discussing the difficulty of estimating discard amounts for the fleet segments concerned. No completed templates were provided. UK wished to see what a streamlined request would look like before commenting further.
Comments STECF PLEN 16-02	Information insufficient. STECF unable to complete an evaluation until the requested information is provided.
Fishery	**Megrims caught with bottom trawls and seines <100mm in ICES subareas VI and VII and Union/international waters of ICES divisions Vb**
Main Findings of EWG 16-06	New. Basis unclear; Fleet not fully described; Does DM apply to all MS, or one MS. Information given for only a part of the area. Scale of expected discards unclear so can't determine the DM volume. Selectivity difficulties not detailed enough.

	Disproportionate costs not well described. Paper suggested only small cost reduction from DM cf overall cost. Potential high grading due to market size rule but unable to quantify from length graphs – tabular data by number and wt. would be better.
COM comments to Regional Groups	Clarify fleets involved. Clarify basis for DM and present selectivity impact. Provide data in tabular form. Quantify the amounts currently discarded in the 20-25cm range Anticipated outcome: Not currently acceptable, additional information will be needed. To do: Complete template, provide tabular data.
Response by Regional Groups	Document from Spain: Some additional fleet data (FR and SP) and description of Spanish fishery; Discard weights by size groups; Further discussion for reasons for discarding; Selectivity information expanded. Extensive discussion of disproportionate costs. Argues that de minimis may alleviate costs while further selectivity trials are carried out. Comment from UK: unable to produce all the information within the time. Suggested more work required and proposed later submission date. No response from any other MS.
Comments STECF PLEN 16-02	The basis of the request has been clarified but the justifying information is incomplete and there are concerns on the background of the request Basis clarified by Spain – selectivity improvement currently difficult and costs disproportionate. Case is made with respect only to Spain. Detailed information on fleets to be included is still incomplete, de minimis quantities not provided and template not completed. No detail for area VIa. Data suggest selectivity changes are difficult so far but plans for further work imply some improvement may be possible. Disproportionate cost arguments are based on study of overall LO impacts and not megrim specific. Arguments are general and apply in many areas. The information on discard amounts by size indicates that significant >mcrs discards (sizes 20-25cm) will continue until the market size rule is removed. This rule is contrary to LO principles and no indication is given for a date for removal.

High Survivability

Fishery	**Common sole (undersized only) caught with trawl gears in area VIId**
Main Findings of EWG 16-06	New. Trial carried out in North Sea in Oct-Nov whereas the peak season is Jul-Sept. Unclear how representative trial was (one vessel) or if trial conditions match those found in the NWW. Information only from UK - should not extrapolate from this study to justify sole exemptions for other fleets.
COM comments to Regional Groups	Full description of the MS fleets that are to benefit is needed to verify if experimental conditions are representative. Survival levels determined in trial are dependent on a number of factors-application of de minimis in other fleets (eg FR and BE) would need demonstration that the conditions of the trial (gear type, vessel power/size, fishing depth, tow times, handling) were similar.

	Noted that UK tow times short, but similar information from other MS needed. Trials need to be undertaken during key fishery period.
Response by Regional Groups	Response from UK. Indicated some dialogue with Commission and acceptance of certain conditions for use of exemption. New information on fleet meeting those conditions. Commitment to conduct further trials across SE England sole fishery (different times and areas). Welcomed input from other MS and working in collaboration. Response from FR. Report detailing features of the French fleet targeting sole. Suggests short tow length and use of low headline gears (as in UK). Vessel details, areas of operation and fishing practises provided. Indicates an HS request for undersized sole in waters<20m – considered preferable to 6nm limit No response from any other MS
Comments STECF PLEN 16-02	Information still lacking on some fleets likely to make use of exemption. Incomplete information on overall discard amounts. Commitments to further survival trials noted but results not yet available for fishery periods when temperatures are higher or for wider range of areas where sole fishery occurs.

Table 2. Summary of additional information received relating to exemptions presented for the North Sea and Kattegat/Skagerrak

De minimis	
Fishery	**Undersized Nephrops caught by bottom trawl with a mesh size of 80-99mm**
Main Findings of EWG 16-06	This is an existing provision and was therefore not evaluated by EWG 16-06.
COM comments to Regional Groups	None
Response by Regional Groups	No action required
Comments STECF PLEN 16-02	No additional comments
Fishery	**Fish bycatch caught in Nephrops targeted trawl fisheries**
Main Findings of EWG 16-06	This is an existing provision and was therefore not evaluated by EWG 16-06.
COM comments to Regional Groups	None
Response by Regional Groups	No action required
Comments STECF PLEN 16-02	No additional comments

Fishery	**Common Sole caught in nets (gillnets-trammel nets) in the North Sea (ICES areas IVa, b and c)**
Main Findings of EWG 16-06	This is an existing provision and was therefore not evaluated by EWG 16-06.
COM comments to Regional Groups	None
Response by Regional Groups	No action required
Comments STECF PLEN 16-02	No additional comments
Fishery	**Common sole caught by beam trawls with a mesh size of 90-119mm or similar selective gears**
Main Findings of EWG 16-06	This is an existing provision and was therefore not evaluated by EWG 16-06.
COM comments to Regional Groups	None
Response by Regional Groups	No action required
Comments STECF PLEN 16-02	No additional comments
Fishery	**Whiting caught using bottom trawls < 100mm (TR2)**
Main Findings of EWG 16-06	New. It is not clear from the JR whether the intention is to apply this de minimis to other fleets with whiting bycatch. If this is the intention then information on these fleets including catches, discard rates and reports of any relevant selectivity trials need to be supplied.
COM comments to Regional Groups	Clarify whether the exemption should also apply in other fisheries and provide appropriate data.
Response by Regional Groups	Table 3.1a (as proposed by the EWG 16-06) is provided with all the fisheries affected by this exemption
Comments STECF PLEN 16-02	STECF considers that the clarifications provided address issues raised by EWG. Information has been provided as required by the EWG 16-06. This exemption is to apply only from 2018 STECF notes that according to the supplementary information provided the exemption applies to: Whiting in TR2 (90-99mm) in IIIaN (SWE). Whiting, North Sea, TR2 <100mm (NL). Whiting, IIIa + IV, TR2 <100mm (DK). Whiting TR2 North Sea NON-NEP fishery (BEL). Whiting TR2 North Sea NEP fishery (BEL).

	Whiting TR2 de minimis area IV (UK). According to the information provided, in these fisheries even with a de minimis exemption there will still be a necessity to reduce discards further and the costs incurred by the rest of the unwanted catch that will be landed and counted against quota may provide an incentive to increase selectivity in the short-term.
Fishery	**Northern prawn trawl fishery with sorting grid with unblocked fish outlet in ICES Area IIIa**
Main Findings of EWG 16-06	New. The supporting documentation provides information on the Swedish fishery. It should be clarified whether vessels from other Member States are involved.
COM comments to Regional Groups	Clarification on whether vessels from other Member States are involved
Response by Regional Groups	Sweden is the only country with a Pandalus grid fishery with unblocked fish outlet in the Skagerrak/Kattegat (area IIIa). Denmark also fish for Pandalus in the area, but not with an unblocked fish outlet. DK does not expect this de minimis to be used, but it cannot be ruled out that if the quota situation so demands some will use it, in which case the fish outlet will be opened and the de minimis may be used.
Comments STECF PLEN 16-02	Information on this fishery from DK is missing.
Fishery	**Fish bycatch caught in Nephrops targeted creel fishery in ICES area IIIa**
Main Findings of EWG 16-06	New. It is not clear whether the proposed exemption is to apply for the year 2017 only or to 2017 and subsequent years. Indicate the numbers of individuals caught and discarded, which will vary according to the size of such individuals.
COM comments to Regional Groups	Specify to which fishery the exemption would apply – Swedish fishery only or other fisheries? Please specify whether the proposed exemption relates to 2017 only or to 2017 and subsequent years. Please provide information on the numbers of individuals discarded.
Response by Regional Groups	The exemption is not limited to 2017. However, the Scheveningen Group will, as stated in the Joint Recommendation, examine and review de minimis exemptions for 2018. The estimated weight per species corresponds to 350 individual haddocks, 740 soles and 21200 whiting.
Comments STECF PLEN 16-02	Clarifications provided address issues raised by EWG 16-06. Only information from SWE is provided.
High Survivability	
Fishery	**Nephrops caught using pots in ICES divisions IIIa, IV and EU waters of IIa**
Main Findings of EWG 16-06	This is an existing provision and was therefore not evaluated by EWG 16-06.

COM comments to Regional Groups	None
Response by Regional Groups	No action required
Comments STECF PLEN 16-02	No additional comments
Fishery	**Nephrops caught with trawl gears (Netgrid) in ICES area IV**
Main Findings of EWG 16-06	New. Further work would be necessary to assess whether such survival rates are typical of other periods in the year.
COM comments to Regional Groups	Additional scientific background on the survival rate during warmer summer months needed.
Response by Regional Groups	The additional information submitted acknowledges that there is no evidence on how the temperature affects the survival of Nephrops.
Comments STECF PLEN 16-02	STECF notes that the results of the summer experiments may provide valuable information on the survivability of Nephrops.
Fishery	**Nephrops caught with trawl gears in area IIIa – Grids and SELTRA trawl**
Main Findings of EWG 16-06	New. The results from the two experiments indicate a captive survival rate for Nephrops of average 55% for the GRID and 46% for the SELTRA trawl.
COM comments to Regional Groups	Please specify to which fisheries defined in the Tables A and B of JR and fleets the requested derogations applies. How many vessels/catch proportions are likely to be affected by the requested derogation?
Response by Regional Groups	The derogations apply to fisheries that are covered in TAB A and B: Trawls 70-99 mm. SWE: In 2015 105 vessels used Nephrops grid or SELTRA (or both gears on different trips). They account for app. 70% of Swedish Nephrops landings in IIIa. For DK 115 vessels in Skagerrak and 138 in Kattegat
Comments STECF PLEN 16-02	Clarifications provided address issues raised by EWG 16-06.
Fishery	**Common sole under mcrs caught by trawls with a mesh size of 80-89mm in ICES division IVc**
Main Findings of EWG 16-06	no "real" controls were used in the study and survival rates could have actually been higher than observed. further research during the peak season in July-September and also in fishing depths, conditions, and fishing areas

COM comments to Regional Groups	Provide clear cut criteria allowing identifying which vessels/fleets can apply this exemption. Needed to verify whether the conditions in the experiment were representative.
Response by Regional Groups	10m and under vessels with engine power below 180kW, when fishing in depths less than 25m are eligible for this exemption. The number of vessels would be 111 vessels, which landed 109.4 (t) in 2014 and 106.2 (t) in 2015. However the tonnage listed above represents an over estimate as we (the UK) are unable to isolate only those catches which are taken within 0- 6nm. Information on future survivability trials is given. Further studies are planned for autumn 2017
Comments STECF PLEN 16-02	Results of further experiments may provide valuable information on the survivability of sole.
MCRS	
Fishery	**Nephrops in the Skagerrak from 130mm total length to 105mm total length**
Main Findings of EWG 16-06	STECF (PLEN-15-02) concluded that given the new mcrs was above the L50 maturity sizes, the risk to the population is small although any increase in mortality of smaller individuals (>50% maturity) from current levels will likely result in lower FMSY values and therefore reduced yields.
COM comments to Regional Groups	None
Response by Regional Groups	No action required
Comments STECF PLEN 16-02	No additional comments

Table 3. Summary of additional information received relating to exemptions presented for the South Western Waters

De minimis	
Fishery	**Hake caught by bottom trawlers in directed fisheries in ICES subareas VIII and IX**
Main Findings of EWG 16-06	Highly complex de minimis exemption and unclear to which fisheries the exemption applies. Catch information supplied is unclear and no estimate of the level of de minimis is provided. New selectivity experiments were conducted for the directed hake fleet using pair trawls with mesh sizes > 100 mm which currently have the lowest estimated discard levels (6-7%).

	The study on disproportionate costs would be strengthened if populated with empirical data due to the limited and not fully-quantitative information presented in relation to the defined management units,
COM comments to Regional Groups	Additional information on the fleets inside and outside of the LO is needed. Provide additional selectivity studies on the mixed fleets with the higher discard rates. Focusing of disproportionate cost studies on the part of the fleet subject to the LO.
Response by Regional Groups	Spain - 27:79 (trawlers in:out) Portugal – 4:59 (trawlers in:out) and 93:648 (trawled tonnes in:out); 54:738 (non-trawlers) and 1336:355 (non-trawl tonnes)– 1429:1139 (tonnes in:out) * further details on the quantities landed and characteristics of the Spanish fleets (more diverse) and PT fleets, in the attached documents. Former studies (conducted between 2011 and 2012) on the selectivity of SMPs in OTB gear showed on average only a marginal benefit for hake (~1%). Two different positions were tested, one of which is promising as up to 4% escapement seem possible, and will be further tested during 2016. Additional comments on disproportionate costs regarding the specific handling of hake catches by vessels under the LO are provided. However, the need to reassess the impact of the threshold changes proposed for 2017 is evident. The group will therefore reassess the impact of the costs onto the new universe of vessels subject to the LO during 2016.
Comments STECF PLEN 16-02	Clarifications provide some additional information on the ES metiers involved and the number of vessels under the landing obligation and not under the landing obligation. However, little additional information is provided on catches and discard rates for the different metiers. No estimation of the volume of de minimis is provided. PT has only provided information on landings by these vessels (2013-2014). No information on catches or discard rates is provided and there is no estimation of the de minimis volume. The additional selectivity information provided does not contain any additional evidence to demonstrate that selectivity is very difficult to achieve for the metiers involved. STECF notes that further selectivity studies are planned which may provide some useful information. The additional information supplied on disproportionate costs provides argumentation that the landing obligation will increase the workload on crews significantly and will force vessel owners to employ extra crew. This is not thought to be unique to these fleets and could be equally applied to many other fleet segments coming under the landing obligation. Furthermore the de minimis exemption requested will only account for a small proportion of the discards in the relevant fisheries given the discard rates are estimated at between 20-70% so regardless of whether the exemption s granted or not these costs for the handling of undersize hake will remain.

High Survivability

Fishery	**Nephrops caught with trawls in ICES subareas VIII and IX**
Main Findings of EWG 16-06	The new information provided does not include any new results on survival experiments with longer observation period of captive animals. Until the results of the latest survival experiments are available no further evaluation can be made by STECF.

	The improvement of catch handling facilities is likely to increase the survival probability of discarded *Nephrops* but many other factors are known to affect discard survival that are not addressed by this improvement.
COM comments to Regional Groups	Continuation of last year- provisionally accepted with the requirement of providing relevant additional information on ongoing studies.
Response by Regional Groups	France continue to develop project "SURTINE" ("Evaluation du taux de survie des captures indésirées de langoustines Nephrops norvegicus capturées au chalut de fond dans le golfe de Gascogne"), which is expected to yield additional results during 2016, to be forwarded to COM as requested.
Comments STECF PLEN 16-02	Information has been provided that largely addresses the issues raised by EWG 15-10 and 16-06. Results from survival experiments carried out in April 2016 have been provided. These latest experiments show survival rates of 41% if handled and sorted as per normal practises and 46% if the improved catch handling equipment is used. These are in the range of the 51% survival rate observed in the previous work. Longer observation periods of up to 14 days were used in these trials and show mortality rates plateauing around day 6 or 7. The methodology used seems robust. STECF notes this is slightly quicker than observed in experiments in the North Sea and Skagerrak where mortality was observe to plateau after 11 days. Further studies are planned and should provide further information on likely survival rates in this fishery.
MCRS	
Fishery	**MCRS for horse mackerel in divisions VIIIc and IXa**
Main Findings of EWG 16-06	Spanish size class data is missing. It is not possible to assess whether the targeting of juveniles at the proposed levels of exploitation will have any detrimental effect on the dynamics of the stock but based on the fact that the fisheries have operated for a long time without any noticeable decline in the stock then the risk is likely to be low. Both the current and proposed mcrs is below length at maturity for the stocks, and there is a risk to the population if there is any increase in mortality of smaller individuals (<15 cm) from current levels will result in lower FMSY values and therefore reduced yields. If the different mcrs are not controlled properly, then the mortality of immature fish could be underestimated and therefore future yields reduced.
COM comments to Regional Groups	Additional data on ES catches by size class is needed. Control issues for ensuring the minimum conservation reference size in PT.
Response by Regional Groups	Spanish catches of Horse Mackerel in area VIIIc in 2015 amount to 13600 tonnes, of which catches in the classes >=13<15 amount to 4,59% (~623,7t). In area IXa, ES catches only amount to 188 tonnes, of which approximately 11t in the classes >=13<15 Total catches of each size category will be closely monitored by attributing sub-quota to each. A new commercial category for the lowest new MCRS will be created, independent of the other commercial categories in existence (the 13-15cm commercial category already exists). Traceability is already possible for all fish landed at auction and the system implemented will be able to attribute sales to landings at any step in the commercial chain.
Comments STECF PLEN 16-02	Clarification on size classes for Spanish catches has been provided.

	Control measures have been suggested but STECF cannot evaluate whether these will be adequate or not to control the mortality of juvenile horse mackerel.

Table 4. Summary of the evaluation of the ADRIATICA, PESCAMED and SUDESTMED JRs for the Mediterranean

De minimis	
Fishery	**Demersal fisheries (trawl and set nets) in the western Mediterranean (GSAs 1, 2, 5-11)**
Main Findings of EWG 16-06	Minimum and maximum discards rates are provided for *Merluccius merluccius, Mullus barbatus* and *Mullus surmuletus* Maximum discard rates for these three species are higher than the de minimis requested
Comments STECF PLEN 16-02	STECF notes that even with a de minimis exemption there will still be a necessity to reduce discards further. STECF also notes that no justification was provided for de minimis on the grounds of: selectivity difficult to achieve (although pilot projects on improving selectivity within 2 years are planned); apart from GSA7, insufficient justification was given on the grounds of disproportionate costs. STECF notes that spatial-temporal closures are proposed.
Fishery	**Demersal fisheries (trawl and set nets) in the Central-Eastern Mediterranean (GSAs 15, 16, 19, 20, 22, 23, 25)**
Main Findings of EWG 16-06	Minimum and maximum discards rates are provided for *Merluccius merluccius, Mullus barbatus* Maximum discard rates for these three species are higher than the de minimis requested
Comments STECF PLEN 16-02	STECF notes that even with a de minimis exemption there will still be a necessity to reduce discards further. STECF also notes that no justification was provided for de minimis on the grounds of: i) selectivity difficult to achieve (although pilot projects on improving selectivity within 2 years are planned); ii) disproportionate costs. STECF notes that spatial-temporal closures are proposed.
Fishery	**Demersal fisheries (trawl and set nets) in the Adriatic Sea (GSAs 17, 18)**
Main Findings of EWG 16-06	Minimum and maximum discards rates are provided for *Merluccius merluccius, Mullus barbatus* and *Mullus surmuletus and Solea Solea.* Maximum discard rates for these three species are higher than the de minimis requested.
Comments STECF PLEN 16-02	STECF notes that even with a de minimis exemption there will still be a necessity to reduce discards further. STECF also notes that no justification was provided for de minimis on the grounds of: i) selectivity difficult to achieve (although pilot projects on improving selectivity within 2 years are planned); ii) disproportionate costs. STECF notes that spatial-temporal closures are proposed.

High Survivability	
Fishery	**Demersal fishery in the Adriatic Sea.** **Sole caught in GFCM/GSAs 17 and 18 with rapido (beam trawl- TBB)**
Main Findings of EWG 16-06	The survivability exemption request for sole has been included in the Joint Recommendation of the Adriatic Sea EU Member States (ADRIATICA) and was not evaluated by EWG 16-06.
Comments STECF PLEN 16-02	STECF considers that there is not enough information provided to assess whether the trials are representative of the fishery. STECF also cannot make any comment on the robustness of the methodology used as few details are provided on how the experiments were conducted. Therefore STECF cannot make any evaluation of this requested exemption or determine whether the survival rates observed can be considered high.
Fishery	**Mechanised dredge fishery for *Pecten jacobeus*, *Venerupis* spp., *Venus* spp. caught in GFCM/GSAs 1-5-6**
Main Findings of EWG 16-06	The survivability exemption request for shellfish has been included in the Joint Recommendation of the Western Mediterranean Sea EU Member States (PESCAMED) and was not evaluated by EWG 16-06.
Comments STECF PLEN 16-02	The JR concludes bivalves usually survive during catching and handling processes, as that they are sold alive (as foreseen by relevant food safety legislation), this implies high survivability in bivalves by the time they are discarded back to sea. STECF notes though that a range of factors may affect discarded bivalvesefterwards, and that high post-release survival cannot necessarily be assumed. STECF notes that it has previously provided advice on high survivability in Venus clams in the hydraulic dredge fisheries of the Adriatic (STECF Plenary 16_01). In the case of the Western Mediterranean, however, STECF is aware of the use of various types of mechanised dredge which may result in different survival rates of discarded bivalves. STECF considers that specific studies directed at estimating discard survival rates of bivalves in this fishery are required. It is unclear for STECF why *Pecten jacobeus* has been included in this request since it does not seem to be caught by these fisheries.

STECF conclusions

STECF concludes that the regional groups of Member States have addressed some of the issues identified by EWG 16-06 and communicated to them by the Commission following EWG 16-06. Regional groups have generally clarified the fleet segments to which the exemptions would apply and also how the de minimis will be calculated. The regional groups have also provided some additional information in support of several specific exemption proposals where inconsistencies or gaps were identified by EWG 16-06.

STECF notes that some of the exemptions submitted by the regional groups are very much presented as ″national″ rather than regional exemptions. In many cases the definition of the fishery and the justification originates from one single Member State. This seems somewhat contrary to the principle of regionalisation. 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. An example of this is the three separate de minimis exemptions requested for whiting in the North Western Waters which are very much presented with an individual Member State focus but are essentially overlapping and applicable to fleets from all Member States operating in the region. In this particular case, EWG 16-06 suggested these exemptions would be presented as one single exemption for whiting identifying the different fleets to which it should apply. STECF considers that information provided by some countries and fleet segments do not necessarily apply to other segments for which information is not provided.

STECF notes that the de minimis exemptions for megrim in the NWW and for hake in the SWW are not well supported by the information provided. Information on the fisheries is missing and there are still gaps and inconsistencies in the supporting documentation supplied. For the whiting de minimis exemptions in NWW information on the fisheries is missing. For the rest of the proposed exemptions, most of the information requested has been supplied.

STECF concludes that for the Mediterranean, de minimis applications were either not supported by documentation or the documentation was insufficient to justify the cases. An exception was the material provided for GSA7, the Gulf of Lion, where relevant and detailed information on the costs associated with handling unwanted catch was made available. STECF concludes that the applications for high survivability exemptions were not well supported by the documentation provided and that some specific survival rate experiments are required.

STECF notes that none of the JR received contain any concrete measures for the documentation of catches. Most of them simply indicate that "*documentation should be sufficiently rigorous to enable robust scientific assessments to be undertaken and to allow the application of control methods*". STECF understands that the regional groups of Member States have set up control expert working groups working with the European Fisheries Control Agency (EFCA) to consider this element and they have put forward a number of proposals for appropriate measures to the regional groups. STECF urges the regional Member States to consider their findings and implement the measures proposed by these groups where relevant and appropriate.

STECF notes that the regional groups in the NWW, SWW and North Sea have adopted different approaches in formulating their joint recommendations in respect of the species and fisheries subject to the landing obligation. As identified by EWG 16-06 this will create trans-boundary issues where fisheries straddle different regions. These may create difficulties for managers and fishermen. For example megrim is proposed to be introduced under the landing obligation in NWW in ICES Areas VI and VII but not in the North Sea or in south western waters.

STECF also notes there is a difference in the speed of implementation between regions. In the North Sea the regional group of Member States have adopted a gradual approach to the phasing in of fisheries and species under the landing obligation. They have also largely avoided the use of thresholds to define parts of fleets to which the landing obligation would apply. This should make control and monitoring easier. In the NWW and SWW only a few new species have been included in 2017 and minor amendments have been made to the thresholds so that more vessels are brought under the landing obligation.

STECF notes that taking into account both the survival rate estimate and the observed discard rate indicates the relative magnitude of the continuing 'dead-discard' fraction, which may help managers on judging whether the observed survival rate represents high survival. The figures below illustrate three examples using discard and survival rates typical of those observed by STECF to date in its evaluations of joint recommendations.

In Figure 1 a discard rate of 15% is shown in red in the bottom bar –'before LO' (the remainder of the catch is landed). In the top bar, 'LO with High survivability', assuming a discard survival rate of 51%, the surviving fraction of the discards are shown in green with the remainder of the continuing (dead) discards shown in red. In this example, despite some fish surviving, over 7% of the catch continues to be discarded dead.

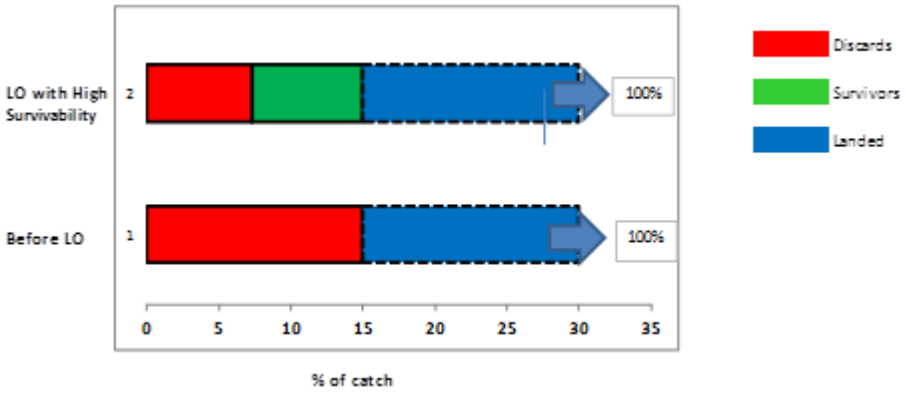

Figure 1. Discards, survivors and landed proportion using a discard rate = 15% and a survival rate = 51%

In the second example (Figure 2), at the same survival rate of 51% but a discard rate of 25%, over 12% of the catch continues to be discarded dead.

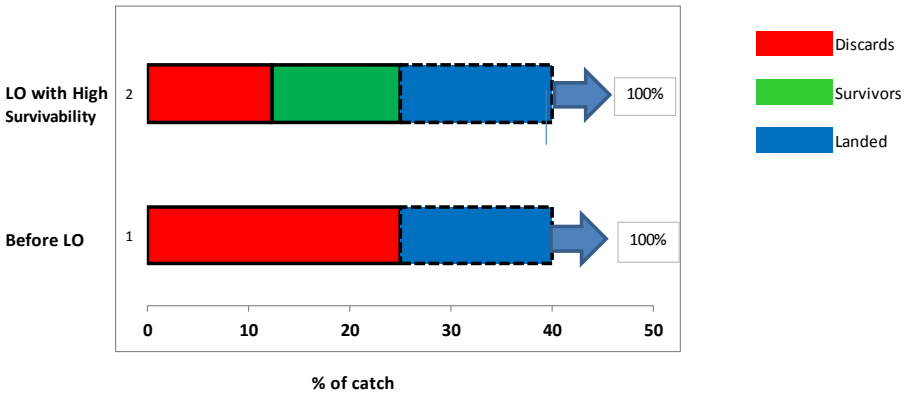

Figure 2. Discards, survivors and landed proportion using a discard rate =25%, survival rate =51%

The third example (Figure 3), more typical of some of the low discard rate, high survival crustacean pot fisheries, has a survival rate of 90% and a discard rate of 6%. In this case, the remaining dead discards are less than 1%.

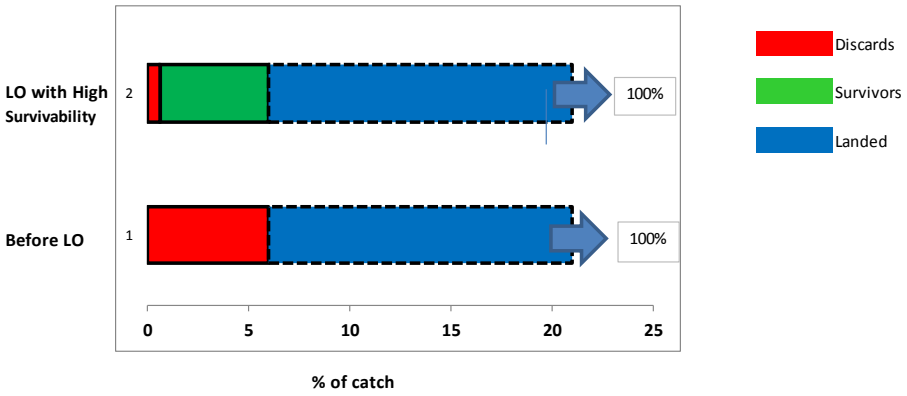

Figure 3. Discards, survivors and landed proportion using a discard rate = 6%, survival rate =90%

STECF notes that this approach provides a simple illustrative tool for use alongside other information taken into account when evaluating and deciding on high survivability exemption cases.

STECF concludes that the Multi-criteria Performance Matrix proposed by EWG 16-06 is a useful instrument to improve the analysis of economic effects of de-minimis exemptions in the Landing obligation. STECF notes that it would give a more thorough picture of the derogation request.

However STECF concludes that filling in the Matrix requires a substantial effort. Therefore, STECF proposes to leave it as supporting information, but not as a requirement for justification of a request.

Request to the STECF – Review of Joint Recommendation for a discard plan in turbot fisheries in the Black Sea

Background

In accordance with Article 15 of the CFP (Regulation (EU) 1380/2013), the species that define the fisheries and subject to catch limits will fall under the landing obligation as from 1 January 2017. For the Black Sea, this will apply to the turbot (*Psetta maxima*) fishery.

Turbot in the Black Sea has been fished by all coastal states, using both stationary and mobile fishing gears (gillnets and bottom trawls). The species is also caught as a by-catch of otter trawls, long lines and purse seiners fishery. Official landings of turbot from Bulgaria and Romania oscillate around 40-43 tons. Even though data is scarce, discards of the

gillnet fishery are considered to be negligible for turbot due to the selectivity of the gear (STECF 15-16)[1].

In June 2016, Bulgaria and Romania submitted a joint recommendation for a discard plan in turbot fisheries in the Black Sea.

Request to the STECF

The STECF is requested to:

1. Indicate whether the fisheries subject to the landing obligation have been properly identified in the Joint Recommendation;

2. Review the supporting documentation for an exemption of the landing obligation on the basis of high survivability of turbot in the gillnet fisheries.

3. On the basis of review literature and/or experts' judgment, provide the average soaking time for the gillnet fisheries and specify additional parameters that could affect the survivability of turbot (e.g. depths, currents, weather conditions, etc.).

STECF observations

The STECF examined two background documents:

(1) Joint Recommendation (JR) for a discard plan in turbot fisheries in the Black Sea
(2) Draft final report of a study on the implementation of the landing obligation in the Black Sea

Fisheries subject to the landing obligation

According to background document 1, the JR shall apply to turbot (*Psetta maxima*) caught in the bottom-set gillnet fishery (minimum mesh size: 400 mm stretched). Turbot is the only demersal species subject to catch limits in Bulgaria and Romania and is considered to define the 400-mm gillnet fisheries. Existing landings data from the DCF (background document 2) support this consideration, although the quality of available data by fleet segment is poor.

According to the JR document, small quantities of turbot are also taken by trawls and trap nets, but turbot is not the target species of these fisheries. For this reason, "the landing obligation for turbot in fisheries other than the bottom set gillnet fishery in Black Sea shall only apply from 1st January 2019".

[1] Scientific, Technical and Economic Committee for Fisheries (STECF) – Black Sea assessments (STECF-15-16). 2015. Publications Office of the European Union, Luxembourg, EUR 27517 EN, JRC 98095, 284 pp.

Also according to background document (2), the main Bulgarian and Romanian fleet segments (by gear type) landing turbot in the Black Sea are set gillnets (GNS), with small volumes of landings coming from mid-water otter trawlers (OTM) and stationary uncovered (fixed) pound nets (FPN). The majority (97%, average 2008-2013) of official turbot landings in Bulgaria and Romania are taken by vessels operating set gillnets (GNS) to target turbot and other mixed fish. According to document (2), no official discard data are available for the turbot gillnet fisheries of Bulgaria and Romania.

STECF notes that turbot is also taken as bycatch by beam trawls (TBB) in Bulgaria and Romania. The levels of TBB turbot bycatches are unknown. They are almost generally discarded as they cannot be landed due to technical rules prohibiting the targeting of turbot by bottom trawls/dredges. According to information presented in background document (2), observers placed on board TBB vessels targeting rapana whelk reported a bycatch of turbot of ~1-14 fish per haul.

STECF notes that information on turbot TBB discards might be useful to be collected in order to have the relevant information for the transition to the LO in 2019

Exemption of the landing obligation on the basis of high survivability of turbot in the gillnet fisheries

The JR states that "the Bulgarian Institute for Fish Resources (IFR) in Varna and the National Institute for Marine Research and Development "Grigore Antipa" from Constantza submitted a statement proving the high survivability in bottom-set gillnets fisheries" of turbot and several other species. According to the JR, "the discarded turbot individuals, caught with gillnets, have 90% survivability, after their release back in the water".

The JR provides the following justification for the high survivability of undersized turbot in the gillnet fisheries: "The usual practice is to check the net at each 2-4 days, to collect the fish and to deploy the net again in the water. The scientific opinion is that during this period, the turbot is still alive and undamaged, and in case of discarding, the chances for its survival are very high (around 90%)."

According to the background document (2), on-board observer monitoring took place on three GNS vessels targeting turbot in Romania during summer 2015. The total soaking time was reported to be 336 hours (14 days), 696 hours (29 days) and 528 hours (22 days) for each of the three vessels. STECF notes that it is not clear if these values correspond to one or more fishing operations. The observer recorded discards of turbot between 0 and 5% of the catch of turbot. Fish discarded were undersized (<MLS) and it was noted that fish returned to the sea were alive. Apart from this anecdotal observation, STECF was not provided with any supporting scientific report to justify the survivability figure quoted.

STECF notes that according to the latest stock assessment (STECF 15-16) the current fishing effort of turbot in the Black Sea is above $F_{MSY,}$ Hence, there is a need to protect the juvenile fish.

Average soaking time for the gillnet fisheries and additional parameters that could affect the survivability of turbot

STECF consulted available published literature and previous STECF reports (e.g. STECF 14-19) concerning the issue of survivability of discarded fish from gillnets. Post-release mortality caused by gillnet injuries is variable, and is species- and fishery-dependent. Related studies on flatfishes are scant. However, there is a specific study made in the Sinop region (Black Sea, Turkey) showing that survival rates of turbot (here defined as whether the fish is alive during net retrieval) from bottom turbot gillnets are not related to fishing soak time (range of soaking times: 7-25 days) or season but are strongly related to fishing depth, with higher survivability for individuals caught deeper than 50 m. The average survival rates were between 76 and 79%, with 93% survivability for turbot caught deeper than 50 m (Samsun and Kalaycı 2005). The lower survivability of turbot in shallow waters was attributed to "water cleanness" which is reduced in shallow waters due to waves and currents.

STECF notes that although the survival of turbot, as recorded immediately after net retrieval, can be high, post-release mortality does not always occur immediately, so that initial post-release observations made by fishermen or observers may not be indicative of survivability rate. As a consequence of injury (e.g. gill net trauma, scale loss), physiological stress from the capture and handling experience, increased post-release predation risk, and various other sub-lethal impacts, mortality can result shortly after a fish is discarded, or in the longer term. Finally, mortality may also be affected by how the fish are handled (e.g., time on deck, expertise of handlers), the habitat from which the fish are caught (e.g., water temperature and depth); and the characteristics of the fish themselves (e.g., size, condition, reproductive state). STECF notes that the post-release mortality of turbot when discarded from the gillnets is unknown.

STECF conclusions

The demersal fisheries subject, from 1 January 2017, to the landing obligation have been identified in the JR (bottom-set gillnets targeting turbot). All other turbot catches will be subject to the landing obligation from 1 January 2019.

Given the information available, STECF concludes that the immediate (after gillnet retrieval) survival of turbot can be high despite prolonged soaking times. However, the post-release survivability of discarded (undersized) fish is unknown for the Black Sea turbot fisheries. STECF and ICES has previously established guidelines for how to evaluate high survivability, which have been used to evaluate JRs in other areas. STECF notes that the information provided here do not align with the required information, and it can therefore not be fully concluded whether survivability is high.

Reference

Samsun N., Kalaycı F. (2005) Survival Rates of Black Sea Turbot (*Scophthalmus maeoticus* Pallas, 1811) Captured by Bottom Turbot Gillnets in Different Depths and Fishing

Seasons Between 1999 and 2004. Turkish Journal of Fisheries and Aquatic Sciences 5: 57-62

REPORT TO THE STECF

EXPERT WORKING GROUP ON
Evaluation of the landing obligation joint recommendations
(EWG-16-06)

Brussels, Belgium, 6-10 June 2016

1 EXECUTIVE SUMMARY

EWG 16-06 reviewed the joint recommendations from Member States regional groups for the implementation of the landing obligation in 2017. 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 16-06 has reviewed the joint recommendations from the North Sea, North western waters (NWW) and South western waters (SWW). In addition EWG 16-06 has considered a proposal from the Mediterranean Advisory Council (MEDAC) on discard plans for species defining the fisheries in the Adriatic, Western Mediterranean and South/East Mediterranean. This document was treated as a working document as it had not been approved by the relevant Member States in the Mediterranean.

General Observations

In reviewing the joint recommendations and MEDAC proposal, EWG 16-06 re-iterated a number of general observations made in previous STECF evaluations of joint recommendations in 2014 and 2015. EWG 16-06 noted that it remains difficult to provide conclusive advice on whether the supporting information presented for the different exemptions is sufficient to accept or reject any individual application. 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 16-06 has therefore provided a series of observations relating to each of the submissions in the Joint Recommendations from the different regional groups.

In addition some of the exemptions submitted by the regional groups are very much presented as ″national″ rather than regional exemptions. In many cases the definition of the fishery and the justification originates from one single Member State. This seems somewhat contrary to the principle of regionalisation. 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 16-06 also re-iterated 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. Quantification of this information is difficult due to the relatively limited species specific information and differences between experiments including timing, season, gear handling and observation periods. This means that assessing 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. Therefore the decision to accept or reject an exemption proposal based on a measured survival value is largely one for managers.

With regard to de minimis exemptions, STECF have consistently stated that the justification for de minimis exemptions is largely economic. However, in the proposals for de minimis exemptions received to date the information provided by Member States regional groups have provided varying degrees of economic evidence to underpin their requests. Evaluating such exemptions has continued to be difficult and EWG 16-06 has only considered the validity of the supporting information underpinning the exemptions provided without carrying out any meaningful analysis of the economic impacts. If a deeper

analysis is required then, this needs to be discussed with the Member States and the Advisory Councils so that they are clear what information is provided. This also needs to be discussed with STECF to establish what they should evaluate. To help this discussion EWG 16-06 has provided further guidance to Member States and Advisory Councils to help them underpin de minimis exemptions in the form of an option appraisal methodology. The framework proposed applies a relatively simple multi-criteria performance matrix to structure the analysis and present the results. The purpose of the economic analysis is to understand the scale, or proportionality, of the challenges faced by the group of vessels to which an exemption would apply and the relative volume of de minimis compared to other reasonable options. Therefore, estimates of impact which are used with reasonable justification can be sufficient to inform the analyses. STECF are requested to review the approach proposed.

Evaluation of regional joint recommendations

EWG 16-06 has screened the fishery definitions included in the JRs for the North Sea, NWW and SWW for potential anomalies. Based on this analysis a number of trans-boundary issues and inconsistencies where fisheries straddle different areas have been identified. These may create control, monitoring and compliances issues for managers and fishermen.

North Sea

For the North Sea, EWG 16-06 has evaluated three new de minimis exemptions relating to fish bycatch in *Nephrops* pot fisheries in the Skagerrak; for whiting caught using bottom trawls of less than 100mm mesh size; and fish bycatch in the Northern prawn trawl fishery. EWG 16-06 has also evaluated two new survival exemptions for *Nephrops* trawl fisheries in the North Sea using selective gears and for undersized sole caught with trawl gears inside six nautical miles in the southern North Sea. Additionally EWG 16-06 has considered additional information supplied for an existing survival exemption for *Nephrops* trawl fisheries deploying selective gears in the Skagerrak. EWG 16-06 also considered an amended version of a proposal to harmonise the mcrs for *Nephrops* in the Skagerrak.

For the whiting de minimis, EWG 16-06 considers that the assertion that it is difficult to improve selectivity in the short term without incurring loss of marketable catch is supported by the information provided but only for the French fleet. It is not clear from the JR whether the intention is to apply this de minimis to other fleets with whiting bycatch. If this is the intention then EWG 16-06 suggests that information on these fleets including catches, discard rates and reports of any relevant selectivity trials needs to be supplied.

For the de minimis exemptions for sole, haddock and whiting below mcrs in the Northern prawn trawl fishery and the *Nephrops* pot fishery in the Skagerrak, the assertion that it is difficult to improve selectivity in the short term without incurring loss of marketable catch is supported by the information provided, accepting that no new information is presented. The volume of de minimis requested is small and therefore provided discarding under the exemption is monitored the impact is likely to be minimal. EWG 16-06 notes that any future proposals for exemptions for finfish bycatch in creel fisheries in other sea areas should be assessed on a case-by-case basis.

For the high survivability exemption for *Nephrops* caught with trawls fitted with a selective grids in the North Sea, further work is suggested to evidence whether the observed survival rates are typical of other periods in the year (e.g. conducted during a period of warmer weather in the late summer), where there is a greater difference in ambient air and water temperature. It may be appropriate to await the outcome of these experiments so that the results can be taken into account by managers in deciding whether survivability of *Nephrops* is to be considered sufficiently high relative to the discard rate to grant the proposed high survivability exemption on such grounds.

For the high survivability exemption for *Nephrops* caught with trawls fitted with a sorting grid or a SELTRA panel in the Skagerrak, results from new trials carried out in the summer months has been supplied. On the basis of these latest trials the survival estimates have been revised downwards to 55% for the grid trawl and 46% for the SELTRA trawl. These results are more in line with observed survival rates for *Nephrops* in other captive survivability studies. In the absence of any objective criteria, EWG 16-06 cannot determine whether the revised survival rates can still be considered as high, and the decision of whether to continue to grant the exemption should be taken by DGMARE.

For the high survivability exemption for sole for inshore trawlers operating within 6 nautical miles of the coast, further research during the peak season in July-September would be desirable. This should also focus on the fishing depths, conditions, and fishing areas that are representative of the fishery for which the exemption is requested. Along with the currently provided study, this would provide a more complete picture of sole survivability caught in this fishery. EWG 16-06 observes that it may be appropriate to await the outcome of this further research before deciding to grant the proposed high survivability exemption in this specific fishery. EWG 16-06 also observes that it is important not to extrapolate from this study to justify similar exemptions for sole by other fleets. This exemption is based around a specific inshore fishery and any vessels that wish to avail of this exemption should ideally have similar characteristic in relation to size, engine power, gear used, operational parameters and catch volume per haul.

Based on a study of the relationship between carapace length and tail length, the proposed tail length of 59mm for *Nephrops* proposed for the Skagerrak would seem appropriate to EWG 16-06.

NWW

For the NWW, EWG 16-06 has evaluated three de minimis exemptions relating to whiting caught in trawls in the Celtic Sea and English Channel. These exemptions were evaluated by STECF in 2015 and found to be unclear and incomplete. They were subsequently included in the discard plan for the NWW on the condition that Member States submitted additional scientific information to justify them. EWG 16-06 also evaluated an additional de minimis exemption for megrim caught with bottom trawls of a mesh size less than 100mm in NWW. Additionally EWG 16-06 considered a proposal for an exemption for common sole caught by inshore trawlers fishing within six nautical miles of the coast. This request was underpinned by the same information as for an exemption for sole in the North Sea.

For the three de minimis relating to whiting caught with trawls in the Celtic Sea and English Channel, overall a significant amount of additional information was provided which addressed most of the outstanding issues. EWG 16-06 noted that some gaps remain in the data provided. In some cases data sources were unclear and whether discard volumes were from entire Member State fleets or just those fleet segments subject to the landing obligation was not well specified. Also some documents have aggregated discard data between TR1 and TR2 or across all regions which made it difficult for EWG 16-06 to define the discard rates specifically relevant to each of the three exemptions.

For the de minimis exemption for megrim, EWG 16-06 observed that little relevant information was presented to demonstrate that increases in selectivity to reduce catches of megrim below 24cm are in fact difficult to achieve or that the costs of handling and sorting such catches are disproportionate. EWG 16-06 concluded that it was not possible to evaluate whether the arguments on either conditionality is well founded due to the lack of information.

For the high survivability exemption for sole for inshore trawlers operating within 6 nautical miles of the coast, the EWG made the same conclusions as the exemption in the North Sea.

SWW

The joint recommendations submitted for the SWW did not contain any new proposals for exemptions. EWG 16-06 was asked to evaluate additional information supplied for a de minimis exemption applying to hake below mcrs caught in trawl fisheries and an exemption based on high survivability for *Nephrops* trawl fisheries in SWW. Both of these exemptions had been granted for 2016 on the basis that additional information would be supplied.

For the de minimis exemption for hake in various trawl fisheries in the Bay of Biscay and Iberian coast, while some selectivity information has been presented, EWG 16-06 does not consider that this demonstrates that increases in selectivity to reduce catches of hake below the 27 cm are in fact difficult to achieve. However, this information does not appear to relate to all of the fleet segments covered by the exemption or applies to fleets where reported discard rates are the lowest for hake. On this basis EWG 16-06 observed that it is still not possible to evaluate whether the arguments of disproportionate costs are well founded or that selectivity is very difficult to achieve. Further clarification on the fleets to which the de minimis applies would also be desirable as this is not clear in the JR.

For the high survivability exemption for *Nephrops* in trawl fisheries in the Bay of Biscay, while a considerable amount of additional information has been provided, the main issue raised by EWG 15-10 relating to the captive period has not been addressed. The JR indicates that the results of these experiments will be available soon but without them it is not possible for EWG 16-06 to carry out any meaningful evaluation.

A proposal was also received from the SWW regional group to adjust the minimum conservation reference size (mcrs) for horse mackerel in pelagic fisheries in ICES VIIIc and IXa and in the traditional Xàvega fishery in the southern SWW. For the Xàvega fishery a detailed description is provided but for the other pelagic fisheries less information is supplied. ICES advice suggests that continuing to target a proportion of individuals between 12 and 15 cm (limited to 5% of the TAC currently) would not modify the historical exploitation pattern of the stock. On this basis EWG 16-06 observes the risks associated with the proposal are limited. However, issues relating to the control and monitoring of three different size limits (greater than 15 cm; 12-15 cm and <12 cm) seem challenging. EWG 16-06 notes that the additional control burden created by having three different size limits (>15 cm; 12-15 cm and <12 cm) appears challenging. The creation of legal markets for juveniles may create an incentive for illegal landings of fish smaller than the mcrs for human consumption over and above the proposed limits. If all these levels of mcrs are not controlled properly, then the mortality of immature fish could be underestimated and therefore future yields reduced. Also the proposal will reduce the mcrs for horse mackerel below the size of first maturity, which may be considered contrary to the objectives of setting mcrs contained in the CFP even if the risk to overexploitation is relatively low.

Mediterranean

A proposal from the MEDAC defining measures to implement the landing obligation for species defining the fisheries in the Adriatic, Western Mediterranean and South/East Mediterranean was reviewed by EWG 16-06. This covered hake and red mullet in all areas with the addition of sole in GSAs 17 and 18 and the addition of deepwater rose shrimp in GSAs 15, 16, 19, 20, 22, 23, 25. As a general comment EWG 16-06 noted 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 16-06 has made a number of specific comments relating to the MEDAC proposal. Firstly, although hake and red mullet are unambiguously the most important target species for most demersal fisheries in the Mediterranean, other taxa/species such as *Nephrops norvegicus, Pagellus spp. Diplodus spp. and Sparus aurata* also defined fisheries in some

GSAs, especially in the Western Mediterranean. It is not clear why these species were not considered by MEDAC.

STECF 15-19 reported that red mullet are grouped at genus level as *Mullus spp*. due to the common mcrs in Annex 3 of EC 1967/2006, and the MEDAC proposal also uses "red mullet" to describe two distinct species, namely *Mullus barbatus* and *M. surmuletus*, for which joint de minimis exemptions have been requested. However, EWG 16-06 points out that these two species have different morphology (*M. surmuletus* grows bigger than *M. barbatus*) and behaviour, and they also have different contributions to the catches of different gears (*M. barbatus* is more dominant in trawl catches while *M. surmuletus* in gillnet/trammel net catches). Due to these differences, changes in gear selectivity and/or changes in the spatial/temporal allocation of fishing effort would affect the two species differently. In the opinion of EWG 16-06, the two species should be treated separately in discard plans since they are usually exploited by different fisheries

The MEDAC proposal defines de minimis levels for the different fisheries and in the different GSAs within the Mediterranean. EWG 16-06 notes that some of the de minimis levels proposed exceeds the observed discard rates. This should be seen in the context that the information presented on discard rates may not in fact represent the true situation in the Western, Central and Eastern Mediterranean and the Adriatic Sea given the low level of sampling under the Data Collection Framework (DCF).

The MEDAC proposal states that Member States have committed themselves to conduct pilot studies to increase selectivity of all fishing gears within 2 years of the approval of the discard plan. While the Expert Group agrees that for some species and fisheries such studies may be required, the commitment to undertake such studies does not seem sufficient justification for a de minimis exemption at present. Article 15.5.c.i.of the CFP indicates that a de minimis exemption shall apply where scientific evidence indicates that increases in selectivity are very difficult to achieve. Hence, because at present, no such evidence is presented in support of the proposed exemptions, the justification needs to be based on the provisions of Article 15.5.c.ii, which relates to disproportionate costs of handling.

In the framework of the MEDISEH project, EWG 16-06 notes that hake and deepwater rose shrimp nursery areas have already been identified for the whole EU-Mediterranean, and nursery areas for sole and red mullet have been identified in the Adriatic Sea. Member States should thus focus on identifying nursery areas for red mullet in the Western, Central and Eastern Mediterranean, and striped red mullet for all three areas (i.e. including the Adriatic Sea). Fishery-dependent information on the size compositions of catches from different areas of the Mediterranean at different times of the year will provide valuable information on the areas where undersized/juvenile individuals are distributed. Such information is already available for some Member States' fleets.

The rationale presented regarding disproportionate costs of handling, storage and transport in support of the proposed de minimis is valid for certain fisheries and Member States only. However, it is difficult to judge whether the costs estimates presented in the MEDAC proposal are realistic and if they are representative of the true costs for the respective fisheries. The Expert Group considers that given the above arguments, and the fact that other taxa/species also define fisheries in some GSAs, especially in the Western Mediterranean more detailed justifications for disproportionate costs should have been presented in the MEDAC proposal. As a minimum the justifications should have made reference to (i) all the relevant species defining fisheries, (ii) information on catch composition of the relevant fisheries, and (iii) a more detailed overview of applicable costs in different regions of the Member States based on more comprehensive studies.

The MEDAC proposal outlines for each relevant Member State the monitoring and control measures that they propose to put in place. However, 16-06 observes there is no basis to judge whether the proposed monitoring and control measures would be sufficient or

effective given the concerns regarding the commercialisation of undersized, juvenile fish is of particular concern in the Mediterranean. It is not clear to EWG 16-06 how the monitoring and control measures outlined in the MEDAC proposal will address this particular issue.

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 two 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[2];
- In 2015 - Discard plans for demersal species in the NWW, SWW and the North Sea[3]

In addition 6 STECF Expert Working Groups (EWG)[4] have been convened. These have consider 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 16-06 was convened to review the joint recommendations from the Member States regional groups for the implementation of the landing obligation in 2017.

2.2 Terms of reference

Based on the previous evaluations, STCF EWG 16-06 is requested to:

1. *Screen any changes in the defined fisheries to be subject to the landing obligation in 2017 for potential anomalies which may create difficulties for managers and fishermen.*

[2] Scientific, Technical and Economic Committee for Fisheries (STECF) – 46th Plenary Meeting Report (PLEN-14-02). 2014. Publications Office of the European Union, Luxembourg, EUR 26810 EN, JRC 91540, 117 pp.
[3] Scientific, Technical and Economic Committee for Fisheries (STECF) – Landing Obligation - Part 5 (demersal species for NWW, SWW and North Sea) (STECF-15-10) 2015. Publications Office of the European Union, Luxembourg, EUR 27407 EN, JRC 96949, 62 pp.
[4] STECF 13-23, STECF 14-01, STECF 14-06, STECF 14-19, STECF 15-14, STECF 15-19

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

    - *Exemptions agreed for 2016 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 2016 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).*

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.*

6. *Where Joint recommendations have not been put forward by the Member States for relevant sea basins, STECF will need to provide input on the preparation of discard plans.*

2.3. Main elements of discard plans to be considered by STECF

Based on the terms of reference, EWG 16-06 adopted the following approach in considering the elements of discard plans.

Definition of Fisheries

STECF have commented in only a limited way on the definition of fisheries included in the different joint recommendations or on the timetable for inclusion of the different demersal fisheries that were brought under the landing obligation in the 2015 joint recommendations. These were discussed and agreed by the regional groups of Member States and the Advisory Councils with the Commission prior to submission of the joint recommendations and so there was no need for STECF to comment further on these.

EWG 16-06 understands that adjustments made to the fisheries to be covered and additional fisheries to be added in 2017 to the demersal discard plans have been subject to the same level of discussion leading to agreement between the Commission and the Member States. Therefore EWG 16-06 has screened the fishery definitions included in the

Joint Recommendations for potential anomalies which may create difficulties for managers and fishermen without carrying out any detailed evaluation.

De Minimis, High Survivability and mcrs

The main elements that EWG 16-06 have evaluated are additional exemptions for de minimis or exemptions on the basis of high survivability. EWG 16-06 has also evaluated proposed changes to mcrs of species subject to the landing obligation.

In addition to any new elements, EWG 16-06 has also reviewed additional information supplied to support several of the exemptions granted for 2016 but, on which, the Commission has agreed with the provision that the Member States concerned should submit further data to the Commission to allow STECF to further assess these particular exemptions. By region the exemptions concerned are:

North Western Waters (Commission Delegated Regulation (EU) 2015/2438)

1. The de minimis exemption for whiting by vessels using bottom trawls of less than 100 mm to catch whiting in ICES divisions VIId and VIIe.

2. The de minimis exemption for whiting by vessels using bottom trawls of not less than 100 mm to catch whiting in ICES divisions VIIb-VIIj.

3. The de minimis exemption for whiting by vessels using bottom trawls of less than 100 mm to catch whiting in ICES divisions VII (excluding VIIa, VIId and VIIe).

South Western Waters (Commission Delegated Regulation (EU) 2015/2439)

1. The high survivability exemption for Norway lobster caught by trawls in ICES subareas VIII and IX.

2. The de minimis exemption for hake by vessels targeting this species in ICES subareas VIII and IX with trawls.

North Sea (Commission Delegated Regulation (EU) 2015/2440)

1. The high survivability exemption for Norway lobster caught with certain bottom trawls (OTB, TBN) in ICES Division IIIa.

Technical Measures

Regulation (EU) 2015/812 introduced an amendment to the CFP Basic Regulation to expressly allow discard plans to include technical measures which are strictly linked to the implementation of the landing obligation and which aim to increase selectivity and reduce unwanted catches as much as possible. However, EWG 16-06 notes that no such proposals have been proposed by Member States regional groups for 2017.

Documentation of catches

EWG 16-06 has not commented on documentation of catches given that none of the regional groups provided any concrete measures that could be evaluated.

3. GENERAL OBSERVATIONS

EWG 16-06 highlights a number of general observations. Some of these re-iterate those made in the previous 2014 and 2015 reports relating to the evaluation of joint recommendations, several others are new observations.

1. The role of EWG 16-06 and any future STECF EWGs set up to evaluate joint recoommendations should continue to be the evaluation of the scientific rigour and robustness of the underpinning information supplied by Member States. STECF should

not be asked to adjudicate on whether exemptions should be accepted or not. This remains the remit of DG MARE.

2. EWG 16-06 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.
3. EWG 16-06 notes that some of the exemptions submitted by the regional groups are very much presented as ″national″ rather than regional exemptions. In many cases the definition of the fishery and the justification originates from one single Member State. This seems somewhat contrary to the principle of regionalisation. 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. An example of this is the three separate de minimis exemptions requested for whiting in the North Western Waters which are very much presented with an individual Member State focus but are essentially overlapping and applicable to fleets from all Member States operating in the region. In this particular case, EWG 16-06 suggests these exemptions would be presented as one single exemption for whiting identifying the different fleets to which it should apply.
4. EWG 16-06 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 16-06 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 thought. This not always the case in the exemptions submitted by the Member States regional groups.
5. EWG 16-06 has identified areas where there are limitations in the information presented or the methodologies used and in some cases where there are clear 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.
6. STECF have consistently proposed that the justification for de minimis exemptions is largely economic. In this respect, STECF has advised that the 'current revenue to break even revenue ratio economic balance indicator', as used under the Balance and Capacity reporting requirements, could be used as an appropriate method to quantifiably demonstrate the economic consequences of changing selectivity in respect of the first conditionality for de minimis exemptions. However, to date none of the MS groups have used this method in the information supplied to underpin their requests for de minimis exemptions. It is unlikely that this will change because in practice it seems difficult due to a scarcity of fleet specific data. Assessing such exemptions will continue to be difficult and STECF will only be able to consider the validity of the

supporting information underpinning the exemptions provided without carrying 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.

7. STECF previously have pointed out that the introduction of the landing obligation will by design result in the increased retention of unwanted catches which will increase for example onboard sorting and stowage times as well as necessitate expansion of onshore handling, processing or disposal provisions. There are no obvious ways to define when this issue becomes "disproportionate" in a fishery compared to another one. Therefore EWG 16-06 has re-visited this and provide further guidance to MS on an alternative approach. This is detailed in Section 5.
8. EWG 16-06 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 16-06 re-iterates that no specific provisions have been included in the JR's to address this.
9. EWG 16-06 re-iterates that assessing what constiutes 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 etc, etc. 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.
10. EWG 16-06 re-iterates 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 and a portion of which are known to survive, this in effect increases 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.
11. EWG 16-06 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 16-06 considers that the decision to accept or reject an exemption proposal based on the survival value presented is largely one for managers.
12. There have been relatively few proposed changes to mcrs included in the joint recommendations received for 2017. EWG 16-06 have considered any such proposals in the context of whether there is a risk that juveniles will no longer be protected and that reproductive capacity will be impaired.

4. STRUCTURE OF ADVICE – DE MINIMIS AND SURVIVABILITY EXEMPTIONS

In assessing each of the de minimis and high survivability exemptions requested, EWG 16-06 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?

Related to the first element, the NWW Member States group in their cover letter which accompanied the JR requested that the Commission provide clarity on the additional information required to facilitate improved data collection by Member States. EWG 16-06 has provided a template as outlined in table 4.1a for de minimis exemptions and table 4.1b for survivability exemptions that could assist in this. This would also provide a more efficient process for data capture, JR development and STECF evaluation in terms of circumscribing the exemptions. This template will also help in cases where only partial information or anecdotal references to studies conducted are provided. It has been developed primarily following assessment of the de minimis for whiting included in the NWW joint recommendations but could equally be applied to all request for de minimis exemptions. Where appropriate this is indicated in the sections dealing with the individual JRs.

On the second element, regarding the underpinning information EWG 16-06 has based their observations on the two previous evaluations of the JRs.

Table 4.1a 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 4.1b 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.

5. ECONOMIC ANALYSIS IN SUPPORT OF DE MINIMIS SUBMISSIONS

One area where STECF has found difficulty in providing guidance to Member States and Advisory Councils and also in evaluating joint recommendations is in the area of disproportionate costs relating to de minimis exemptions. The following methodology is put forward as a possible approach that Member States could follow in underpinning de minimis requests in the future.

The objective of the de minimis exemption is to mitigate negative economic impacts on a group of vessels as a result of the landing obligation. In the joint recommendations specific to de minimis, EWG 16-06 has observed that the ability to demonstrate the expected economic impacts of the landing obligation on a group of vessels, and the economic value of a de minimis exemption in mitigating those impacts, has been variable.

This to some degree is understandable as there are challenges in undertaking an economic analysis for de minimis. At this early stage in the implementation of the landing obligation, challenges for, include, but are not limited to, availability of information, uncertainty around the rules for the exemption and the complexity and dynamic nature of fisheries. There is also currently no widely used template to guide the development of a de minimis submission.

EWG 16-06 therefore submits a proposal to create a methodological framework to improve consistency in the economic analysis provided in support of de minimis submissions. While strictly outside the terms of reference set for EWG 16-06, it would seem relevant to the EWG to prompt further discussion on this particularly issue.

5.1 Landing Obligation and its Impact on Business Performance

For EWG 16-06 to propose an appropriate methodology for economic analysis to support de minimis exemptions, it is first necessary to understand how the landing obligation might affect business operation and impact upon business performance.

The principal effect of the landing obligation on vessels is that unwanted catch, that was previously discarded, now has to be retained, landed and deducted from quota. For a vessel that has unwanted catch this can be expected to affect operational procedures and decision-making. Operational changes that are driven by regulatory rather than commercial reasons can have at least a short-term negative impact upon the performance of a business. Figure 5.1 provides a summary of:

- the types of unwanted catch that a vessel business will generally wish to avoid;
- the effects that retaining unwanted catch might have on the operation of a vessel; and
- the potential impact that such changes in vessel operation might have on business performance.

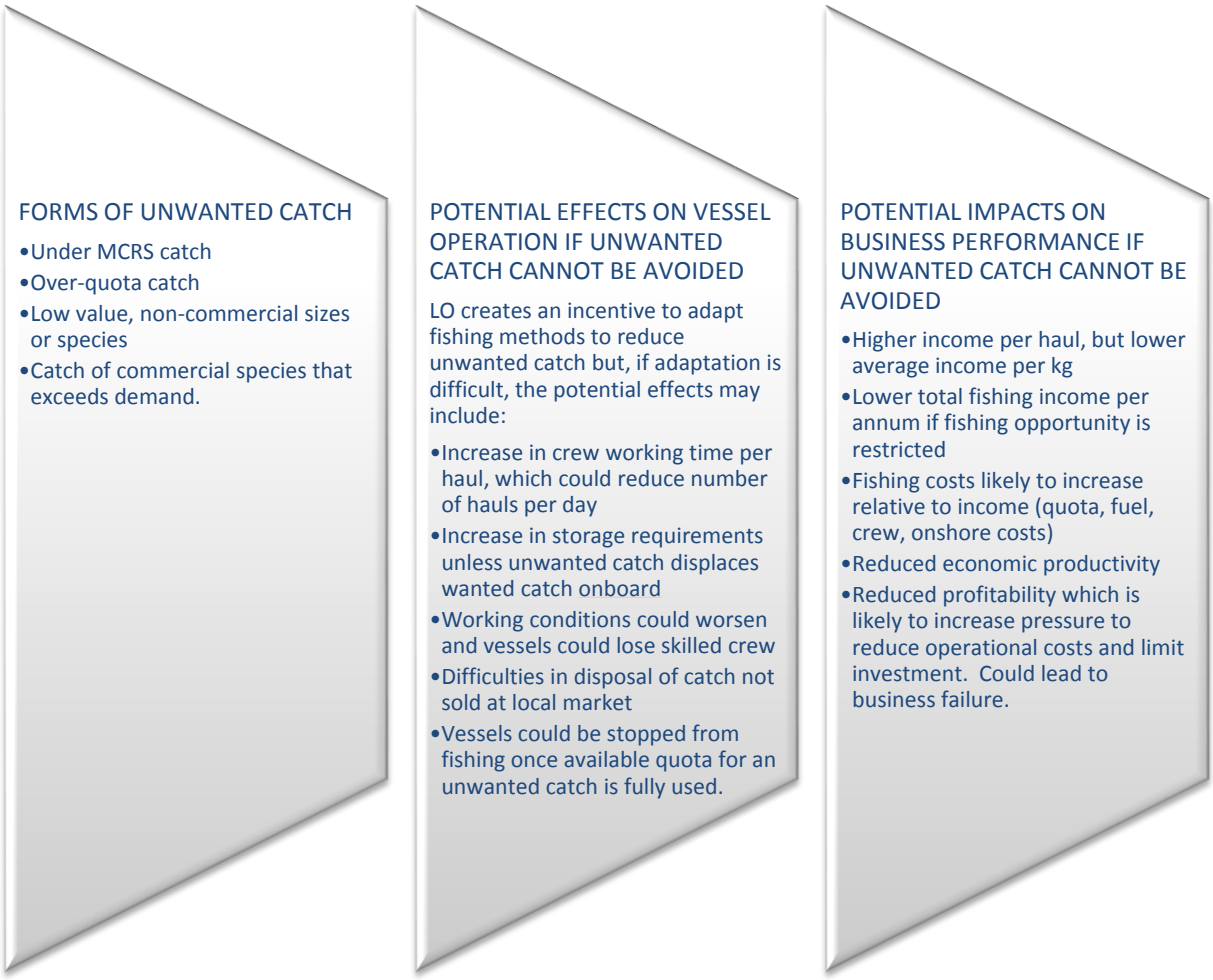

Figure 5.1 The impact of the retention of unwanted catch on business performance

5.2. The Scope of the De Minimis Exemption

In addition to understanding the objective of de minimis, and the type of effects and impacts it is designed to mitigate, it is also necessary to understand the intended scope of the exemption. De minimis, as proposed in Article 15, allows some catch to be exempt from the landing obligation.

Article 15, paragraph 5(c) states that:

De minimis can be up to 5% of total annual catches of all species subject of the landing obligation and can be applied for in the following cases:

- *'where scientific evidence indicates that increases in selectivity are very difficult to achieve; or*
- *to avoid disproportionate costs of handing unwanted catch, for those fishing gears where unwanted catches per fishing gear do not represent more than a certain percentage, to be established in a plan, of total annual catch of that gear.'*

Based on the description set out in Article 15, the scope of the de minimis exemption could be broadly interpreted but it is recognised that further definition would help to ensure fair

and consistent application. The interpretation and application of de minimis can be observed in the design of exemptions brought forward by the regional groups of Member States.

De minimis exemptions brought forward by regional groups currently share similar characteristics and tend to be:

- for individual stocks;
- for vessels using specific gears in a fishery or vessels that meet certain catch thresholds;
- quantified and deducted from the TAC of the stock;
- expected to have limited duration;
- focused on the challenge created by under mcrs catch that is difficult to select out; and
- limited in application, (i.e. a small number of exemptions in each region appears to be considered desirable).

5.3. Demonstrating the Value of De Minimis

With increasing clarity on the scope of de minimis, and challenges evident in the presentation of appropriate economic analysis, it is considered reasonable to propose the development of an analytical framework that can assist in the submission of an economic case for de minimis. It is considered by EWG 16-06 that the framework must:

- respond to the need to measure the impact created by a single stock de minimis exemption;
- respond to the need to gauge the proportionality, or disproportionality, of the problem to be addressed through de minimis;
- consider the relative value of alternative solutions that could avoid the use of de minimis, and subsequent reduction in TAC, for example more selective gear;
- be straightforward to use;
- use existing information as much as possible to minimise the resources required to undertake the analysis;
- produce outputs that can be easily understood; and
- be capable of being applied in a consistent manner to support understanding of the issues across different fleets and regions.

The framework proposed by EWG 16-06 is based on an option appraisal methodology. The framework applies a relatively simple multi-criteria performance matrix to structure the analysis and present the results.

To provide a good quality option appraisal framework to support economic analysis of de minimis exemptions it is necessary to:

- create a framework structure which is sufficiently structured to support consistency of use; and sufficiently flexible so that it can support diverse de minimis submissions;
- test the framework and review it as necessary to ensure it is fit for purpose prior to circulation;
- develop clear and helpful guidance on the use of the framework, in particular the specification of options and use of assumptions.

A proposed framework structure is presented in the following sections. Testing of the framework and the development of guidance would be required if STECF considers this approach to have merit. The proposed structure for the option appraisal framework is thought to strike a good balance between structure, flexibility and utility.

5.4. Reference Case and Options

A reference case and three options is the minimum recommendation for the analysis. Each option should fit the broad description provided below but would have to be defined in more detail in each de minimis submission to fit the circumstances of the fishery and stock in question.

- **Reference Case** – catch, landings, costs, income and profit in the most recent year for which data is available, prior to the requirement to land the stock in question under the landing obligation.
- **Option 1 – Do nothing** - landing obligation is introduced for stock and fishing continues as before. The consequences for the group of vessels from retaining unwanted catch of the stock would be shown in this option.
- **Option 2 – More selectivity** – landing obligation is introduced for stock and fishing businesses adopt more selective gear to avoid stock (ideally informed by existing evidence but assumptions may be required). The consequences for the group of vessels from using fishing gear that would select out unwanted catch would be shown in this option.
- **Option 3 – De minimis** – landing obligation is introduced for stock and a de minimis exemption is available as proposed in the submission. The consequences for the group of vessels from use of the proposed de minims would be shown in this option.

Further options could be added (e.g. an option that is dependent on avoidance measures or a combined option which adopts the successful aspects from the options tested).

Criteria in the Performance Matrix

In an option appraisal, each option is tested against the same set of criteria to compare the impact of each option.

There are four broad areas of economic criteria in relation to the performance of a vessel business:

- catch and landings;
- fishing costs;
- fishing revenues; and
- profitability.

These can be broken down further to explore the cause of observed impacts.

It is important to understand when estimating the impact of each option on each criterion that the purpose of the analysis is not to accurately predict the costs, income and profitability of vessel businesses. The purpose of the economic analysis is to understand the scale, or proportionality, of the challenges faced by the group of vessels in question and the relative value of de minimis compared to other reasonable options. Therefore, estimates of impact which are used with reasonable justification can be sufficient to inform the analysis.

The criteria proposed for the economic analysis of de minimis exemptions are shown in the performance matrix in Table 5.4.1 below. It is understood that the information required should be available at some level for all Member States. If challenges are encountered the minimum aim would be to provide analysis for criteria 3, 5, 7, 10 and 11 (see Table 5.4.1).

Table 5.4.1: Proposed Multi-criteria Performance Matrix for the Economic Analysis of De Minimis Proposals

	Catch and Landings					Fishing Costs		Fishing Revenues			Profit
	1. Catch per day at sea of <stock> (kg)	2. Landings per day at sea <stock> (kg)	3. Total landings per annum <stock> (kg)	4. Landings per day at sea (all stocks, kg)	5. Total landings per annum (all stocks, kg)	6. Total fishing costs per day at sea (fuel, quota, crew, onshore costs, other)	7. Total fishing costs per annum	8. Income per day at sea for <stock>	9. Income per day at sea (all stocks)	10. Total fishing income per annum	11. Operating profit
REFERENCE CASE											
OPTION 1 – DO NOTHING											
OPTION 2 – MORE SELECTIVE GEAR											
OPTION 3 – DE MINIMIS											
ADDITIONAL OPTION(S)											

5.5. Using the Framework

To use the framework, those engaged in developing a case for a de minimis submission would be required to:

- clearly define the group of vessels expected to utilise the exemption, including the number of vessels and their defining characteristics;
- for the defined group of vessels, source the information necessary to inform the reference case, or at least source the information for a group of vessels that can be considered a reasonable proxy for the vessels that will benefit from the exemption;
- clearly define options and describe them;
- clearly state assumptions used in the analysis and provide the reasoning behind each assumption;
- utilise available information for the stock in question and on the likely effect of more selective gears;
- recognise where information gaps exist and, where possible, address the gaps through assumptions or further research;
- apply the available information and assumptions to the reference case to estimate the impact of each option; and
- consider the value of adding further options and criteria to tailor the analysis to fleet conditions.

5.6. Benefit of the Option Appraisal Approach in De Minimis Submissions

It is considered by the EWG 16-06 that the use of an option appraisal and the performance matrix structure to present the economic case for de minimis could uniquely respond to the challenges, needs and circumstances outlined in this report because:

- the reference case enables comparisons to be made and provides a benchmark against which proportionality, or disproportionality, of impact can be judged;
- the outputs demonstrate the value of de minimis to a group of vessels and compares the potential value of de minimis to alternative options;
- if accompanied by good quality guidance, the approach can be applied relatively consistently in wide ranging circumstances, and without the need for a high level of knowledge and experience in economic analysis;
- the process of populating the matrix could support understanding and communication of the economic issues around the implementation of the landing obligation and potential responses to mitigate negative economic impacts; and
- the matrix itself provides an easy to read summary of the analysis.

5.7. Anticipated Challenges

The availability of appropriate information may be a challenge and restrict the ability to present relevant findings. However, this challenge would not be unique to the approach proposed.

There may be weaknesses in the consistency of information available from all Member States that would have vessels eligible for the exemption. Again, this would not be a challenge unique to the approach proposed.

It may not be possible for each de minimis application to provide all of the information requested in the framework. It may be necessary to accept gaps and that this may affect the value attributed to the economic analysis.

5.8. Next Steps

If STECF considers the approach proposed to have some merit the following steps are suggested:

- Undertake an example economic analysis for a de minimis exemption at a Member State level to:
  - test the utility of the framework and assess if it is fit for purpose; and
  - identify issues that need to be addressed in guidance materials.
- If findings from the test are broadly positive, consider whether amendments need to be made to improve the value of the approach.
- Identify potential challenges and see if they can be overcome, perhaps through the provision of more detailed guidance.
- Consider the development of two different forms of guidance: '*Introduction to building an economic case for de minimis'* which can be understood by all stakeholders engaged in the de minimis submission and '*Technical guidance'* targeted more specifically at those who will be undertaking the analysis.
- Consider whether the same option appraisal with findings presented in a performance matrix could be used more widely in de minimis submissions, specifically the estimation of impact upon stocks.
- If a broader de minimis framework is of interest, consider whether a third element may be of value in addition to economic and stock analyses, for example safety.

6. EVALUATION OF REGIONAL DRAFT JOINT RECOMMENDATIONS

6.1. General Observations on the Joint Recommendations

EWG 16-06 was asked by the Commission to comment on the definition of fisheries included in the different JRs or on the timetable for inclusion of the different fisheries (ToR a). The EWG understands these have been discussed at length by the regional groups and the Advisory Councils with the Commission. EWG 16-06 has screened the fishery definitions included in the JRs for potential anomalies and has identified several trans-boundary issues where fisheries straddle different areas and some inconsistencies between the approach taken in the different sea basins. These may create difficulties for managers and fishermen.

- As pointed out by EWG 15-10, directed fisheries for saithe straddle the Northern North Sea and the West of Scotland but are only covered in the JR for the North Sea. This has not been addressed in the JR's for 2017.
- Megrim has been introduced under the landing obligation in NWW in ICES Areas VI and VII but not in Area IV. ICES considers that megrim in IV and VI are the same stock. Similarly Megrim in Area VIII have not been included under the landing obligation.
- Hake caught in gillnet, longline and trawl fisheries (subject to a catch threshold) in Areas VI and VII are covered under the landing obligation in NWW but only hake caught in longline fisheries in Area IV are covered in the North Sea plan. ICES assess this as a single stock that starddles both regions.
- Whiting caught with trawls and seines (subject to a catch threshold) are included under the landing obligation in the English Channel (ICES divisions VIId and e) under the NWW JR but not in the southern North Sea (ICES division IVc) untiil 2018. EWG 16-06 understands this stock is fished by largely the same vessels in both areas and with similar gears.

- Anglerfish caught with gillnets ihave been included under the south western waters but are no subject to the landing obligation in North western waters. EWG 16-06 understands gillnet vessels quite often fish in both regions in a single fishing trip.
- In the North Western waters beam trawl fisheries in the Irish Sea are not included but are under the landing obligation in the rest of Area VII.
- As pointed out by EWG 15-10 if a vessel fishes for hake in both North western waters and south western waters in a fishing trip then it is subject to different catch thresholds.
- Vessels fishing in the Celtic Sea and Irish Sea on the same fishing trip will still be subject to different provisions. (Haddock in VIIa, Whiting in VIIb-k, Sole in the Celtic Sea but not in the Irish Sea or West of Scotland).
- Hake in VIIabde and VIIIc are subject to different catch thresholds.

7. 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. This discard plan is valid until 31 December 2016. A new set of Joint Recommendations for the North Sea have been submitted by the regional group of Member States that updates this existing discard plan. It covers species which define the fisheries for cod, haddock, whiting and saithe; *Nephrops*, common sole and plaice; hake and Northern prawn in Union waters of ICES Areas IIa, IIIa and IV. The main elements of the JR and which of these have been assessed by EWG 16-06 are summarised in table 7.1.

Table 7.1 Main elements of the Joint Recommendations submitted for the North Sea

Elements	Status (i.e. Existing, Existing but re-assessed on basis of new information, New)
De Minimis	
Fish bycaught in *Nephrops* targeted trawl fishery	Existing
Common sole caught in gillnets and trammel nets	Existing
Common sole caught by beam trawls with a mesh size of 80-119mm with increased mesh sizes in the extension of the beam trawl0	Existing
Nephrops caught by bottom trawls with a mesh size of 80-99mm	Existing
Whiting caught using bottom trawls < 100mm (TR2) – From 2018	New*
Fish bycaught in Northern prawn trawl fishery with a sorting grid, with unblocked fish outlet	New*
Fish bycaught in *Nephrops* targeted creel fishery	New*
High Survivability	
Nephrops caught using pots	Existing
Nephrops caught with trawl gears in area IIIa	Existing but re-assessed on basis of new information*
Nephrops caught with trawl gears in area IV	New*
Common sole (undersized only) caught with trawl gears in area IVc	New*
Minimum conservation reference size	

Nephrops in the Skagerrak/Kattegat	Existing but re-assessed on basis of new information*
Technical Conservation Measures	
Technical rules in the Skagerrak and Kattegat	Existing

* Indicates elements assessed by EWG 16-06

7.1. North Sea – Proposals for de minimis exemptions

A summary of the de minimis applications are given in Table 7.1.1.

Table 7.1.1 Summary of de minimis exemptions submitted as part of the North Sea Joint Recommendations (restricted to new or re-assessed exemptions)

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****	***Estimated catch***	***Discard rate***	***Estimated de minimis volumes***
France *(no information for other countries)*	*Whiting- bottom trawls < 100mm in the North Sea (IVa, IVb and IVc)*	*Bycatch*	*120 French vessels* *No information for other MS*	*1130 tonnes (French data only)*	*520 tonnes (French data only)*	*1650 tonnes (French data only)*	*46% (French fleet only)*	*195 tonnes (French data only)*
Sweden *(no information for other countries)*	*Sole, haddock and whiting below mcrs – bottom trawls with sorting grid and unblocked fish outlet in Northern prawn trawl fishery in Skagerrak and Kattegat (IIIa)*	*Bycatch*	*No information*	*Sole, haddock and whiting – 0 tonnes*	*Sole – 0.3 tonnes* *Haddock – 1 tonne* *Whiting – 3.5 tonnes*	*Sole – 0.3 tonnes* *Haddock – 1 tonne* *Whiting – 3.5 tonnes*	*100%*	*Sole – 0.3 tonnes* *Haddock -1 tonne* *Whiting – 3.8 tonnes*
Sweden *(only Swedish vessels involved)*	*Sole, haddock and whiting below mcrs – creels in Nephrops fishery in Skagerrak and Kattegat (IIIa)*	*Bycatch*	*110 Swedish vessels*	*Sole, haddock and whiting – 0 tonnes*	*Sole – 0.3 tonnes* *Haddock – 0 tonnes* *Whiting – 1.2 tonnes*	*Sole – 0.3 tonnes* *Haddock – 0 tonnes* *Whiting – 1.2 tonnes*	*100%*	*Sole – 0.3 tonnes* *Haddock – 0 tonnes* *Whiting – 1.2 tonnes* *0.4% of the total catches*

7.1.1.De minimis exemption for whiting caught using bottom trawls < 100mm (TR2)

Background

The JR states that a de minimis exemption is requested for whiting (*Merlangius merlangus*) up to a maximum of 7 % (and 6% in 2018) of the total annual catches of species that would fall under landing obligation, for the trawl fishery using TR2 (trawls with a mesh size < 100mm) in ICES area IVa, IVb and IVc. The JR states that this exemption should only apply from 2018 and could be modified and completed by new elements in the near future according to the species subject to the landing obligation in this fishery in 2017 and 2018.

The request for an exemption is based on difficulties to improve selectivity but also on disproportionate cost grounds.

EWG 16-06 Observations

This de minimis exemption relates to TR2 fisheries in the North Sea and the Skagerrak where whiting are a bycatch of varying importance. The JR refers to three separate fisheries as follows:

1. A targeted *Nephrops* fishery in the North Sea and the Skagerrak.
2. A mixed demersal fishery in the Skagerrak using 90-99mm mesh size.
3. A mixed demersal fishery in the southern North Sea and eastern Channel using 70-99mm mesh size.

The JR includes information for the third fishery only. This is predominantly a French fishery involving some 120 vessels that targets anglerfish, gadoid species, non-quota species (cephalopods, red mullet, sea bass and gurnards) and also sometimes pelagic species such as mackerel and horse mackerel. This fishery has high discards for whiting (46%), cod (25%) and plaice (73%). The same fleet already has a de minimis for whiting in the eastern Channel under the current NWW discard plan. The justification for this de minimis is largely the same as for the Channel fishery. There is no information on the uptake of the de minimis in the Channel fishery.

According to the North Sea discard atlas, whiting represent 20% of the 6 main species landed by the TR2 fleet and 7% of the total discards in the North Sea. Mean discards in the period 2010-2012 of whiting were 6,655 tonnes (2010-2012). STECF reports a discard rate of 77% (10,263 tonnes) for 2014 for the entire TR2 fleet in the North Sea. The French TR2 in the North Sea fisheries have high discard rates for whiting of around 46%, much higher than the 7% requested although it should be noted in the JR the 7% is based on the catches of haddock, whiting, cod and plaice combined (species under the landing obligation in 2018). Over 90% of the whiting discards are undersized.

The JR includes an estimate of the level of de minimis for the French fleet. Based on 2015 landings of haddock, whiting, cod and plaice combined this would represent a de minimis of 195 tonnes for the French fleet in 2018. This will vary of course depending on catches in 2017 but assuming a stable TAC would amount to 1.4% of the total whiting TAC for the North Sea.

Most vessels operating in this fishery use codends with a mesh size of 80 mm mesh. The justification for the de minimis is on the basis of improvements in selectivity being difficult to achieve refers to the fact that an increase of mesh-size ≥ 100mm or use of selective gears is difficult. The JR cites the results of several studies testing a variety of selectivity devices carried out by France (e.g. SELECAB, SELECFISH, SELECMER, FMC-NS and SAUPLIMOR) which showed the following

- square mesh cylinder would be efficient to reduce unwanted catch (-59% to -22% whiting) but would also lead to a loss of revenue up to 16%
- semi rigid grid + square mesh panel would reduce unwanted catch by 21% to 56% and revenue by 31% to 36%

- articulated rigid grid + square mesh panel would reduce unwanted catch by 78% and revenue by 35%
- articulated rigid grid reduce unwanted catch (-67% whiting) but would also lead to a loss of commercial size whiting of 49%

Additional selectivity devices (T90, grids, 90mm and 100mm codend mesh sizes) have been tested in the EODE (Expérimentation de l'Obligation de DEbarquement) project (Balazuc et al., 2016). The results of these trials are not presented.

Additional costs associated with the handling, sorting and limited storage space on board are also identified as issues in the JR and qualitative and quantitative assessments of the potential scale of the impacts are included. The JR reports that the vessels operating in this fishery make long fishing trips (~3 days in average) at considerable distance from home harbours (more than 1000 km return trip). Without a *de minimis* exemption, the JR concludes that vessels catching whiting would need to return to port more frequently to land their catches and this would generate high costs for the vessel. This would imply to come back often to home harbours, generating high costs for the vessel.

EWG 16-06 notes that even with a 7% exemption, at the current discard rate of 46%, 39% of the catch will still be unwanted and will have to be sorted, handled and stored on board. The EODE project estimated that crew on board 12 meters trawlers would spend an additional 2 hours and 45 minutes per fishing trip (23 hours on average) to sort unwanted catches. EWG 16-06 is unable to assess whether this additional time represents a disproportionate cost. Additional costs are also likely to occur for disposing of fish at land when the unwanted catches are to be stored, collected and used in dedicated outlets, but EWG 16-06 notes that this issue is generic to all types of species and fleets. Therefore, such additional costs should not be considered in isolation for a specific fishery, but considered at the scale of the entire harbour or coastal area.

EWG 16-06 notes that the transition from the current discard rate (46%) to the 7% (de minimis level) will be challenging without significant improvements in selectivity. EWG 16-06 notes that selectivity trials are currently ongoing and that the results from these should be considered as a means to reduce discards.

EWG 16-06 notes that even with a de-minimis exemption there will still be a requirement to reduce discards further and the costs incurred by the rest of the unwanted catch that will be landed and counted against quota may provide an incentive to increase selectivity in the short-term.

EWG 16-06 considers that the assertion that it is difficult to improve selectivity in the short term without incurring loss of marketable catch is supported by the information provided but only for the French fleet. It is not clear from the JR whether the intention is to apply this de minimis to other fleets with whiting bycatch. If this is the intention then information on these fleets including catches, discard rates and reports of any relevant selectivity trials need to be supplied. EWG 16-06 suggest that the Member States involved in this fishery and wishing to avail of this exemption should complete the template provided in Section 4.

7.1.2.De minimis exemption for fish bycatch in Northern prawn trawl fishery with sorting grid with unblocked fish outlet in ICES Area IIIa

Background

The JR states that a de minimis exemption is requested for common sole, haddock and whiting below mcrs combined, up to a maximum of 1 % of the total annual catches of species under the landing obligation (*Nephrops*, common sole, haddock, whiting and Northern prawn) in the fishery for Northern prawn conducted with bottom trawls (OTB) with a mesh size of at least 35 mm and equipped with a species selective grid with bar spacing of maximum 19 mm and an unblocked fish outlet. This fishery operates in the Skagerrak and Kattegat in ICES area IIIa.

The request for an exemption for de minimis is due to difficulties to further increase the highly selective properties of the gear concerned. As Northern prawn is the only income for users of this gear, they are particularly vulnerable for the potential loss an increase in selectivity would cause.

EWG 16-06 assumes that the proposed de minimis exemption is for 2017 only, although that is not explicitly stated in the Joint recommendation.

EWG 16-06 observations

The supporting documentation (Annexes K and Ki) provides information on the Swedish fishery and while it appears that the de minimis exemption as proposed would apply only to these vessels it should be clarified whether vessels from other Member States are involved.

Over the period 2010 to 2014, Swedish vessels deploying the specified gear on average, accounted for 45% of the total Swedish landings of *Pandalus* from IIIa. EWG 16-06 notes that the Swedish quota for *Pandalus* in IIIa for 2016 (2282 t) represents about 19% of the agreed TAC. The catches of whiting, haddock and sole from the Swedish fishery using the specified gear averaged 4.8 t over the period 2010-2014, 4.7 t of which was discarded.

According to Annex Ki, such discards are mainly composed of individuals below the minimum conservation reference size. There is no information in the supporting documentation on the numbers of individuals discarded using the specified gear. Similarly there is no information to estimate what proportion of the International catch of *Pandalus* has on average been taken by vessels using the specified gear. While the absolute volumes taken by the Swedish fleet using the specified gear are small, it is not possible to estimate the potential volume of discards of whiting, haddock and sole discards corresponding to a de minimis exemption of 1%. Note, however, that for 2018 and beyond, if the 1% de minimis exemption is to apply to the total catch of all species subject to the landing obligation, the potential catch of haddock, whiting and sole that may be discarded could increase, as more species that are caught in the *Pandalus* fishery notably cod, saithe and plaice become subject to the landing obligation.

There is no information in the supporting documentation on the likely survival rates of discarded whiting, haddock or sole, but given that most individuals will be small and trawl-caught, survival is anticipated to be close to zero.

The JR does not report on any new selectivity studies to justify the assertion that "*increasing selectivity would be very difficult to achieve, or to avoid handling unwanted catches would create disproportionate cost."* However, the supporting information indicates that the use of species selective grids in the Northern prawn fishery is mandatory for Swedish vessels. EWG 16-06 is aware of the use of such grids and understand that they have largely solved many of the problems of unwanted fish bycatch in this fishery. EWG 16-06 also notes that the JR reports several studies have looked into possibilities to further improve selectivity in *Pandalus* trawls through the use of codends with increased mesh size or square mesh codends. These studies have shown adopting either of these options leads to the loss of large shrimp rendering the fishery uneconomic (Valdermarsen 1989, Valdermarsen et al. 1996, Lehman et al, 1993, Hickey et al, 1993). EWG 16-06 notes that new studies are currently underway to explore the possibilities for increased selectivity by modifying the design of the grid.

EWG 16-06 considers that the assertion that it is difficult to improve selectivity in the short term without incurring loss of marketable catch is supported by the information provided, accepting that no new information is presented. No information on disproportionate costs is presented in the JR. EWG 16-06 notes that the volume of de minimis requested is small and therefore provided discarding under the exemption is monitored the impact is likely to be minimal.

7.1.3.De minimis exemption for fish bycatch caught in Nephrops targeted creel fishery in ICES area IIIa

Background

The JR states that a de minimis exemption is requested for common sole, haddock and whiting combined, up to a maximum of 0,5 % of the total annual catches of species under the landing obligation (*Nephrops*, common sole, haddock, whiting and Northern prawn) in the fishery for *Nephrops* conducted with creels in ICES area IIIa.

The request for an exemption is based on difficulties to increase the selectivity further of the gear concerned. As *Nephrops* is the only income for users of this gear, they are particularly vulnerable for the potential loss an increase in selectivity would risk to cause.

EWG16-06 Observations

The supporting documentation (Annexes L and Li) indicates that about 110 Swedish vessels are involved in the creel fishery for *Nephrops* in Division IIIa. Such vessels are typically <12 m in length are crewed by one to two and normally fish between 300 and 1000 creels per day. Creels are baited with salted herring or mackerel, are fished in fleets of 25-75 and are attached at intervals of approximately 15 m. The creels are normally emptied and rebaited at two to three days' intervals. 2.5 to 3 million creels are hauled per year and *Nephrops* landings from the Swedish creel fishery account for about 25% of the Swedish *Nephrops* quota.

The supporting documentation relates to the Swedish fishery for creels. The observer from the North Sea regional group confirmed that only Swedish vessels are involved in this fishery. It is not clear whether the proposed exemption is to apply for the year 2017 only or to 2017 and subsequent years.

Using the observed catches and discards in the IIIa creel fishery over the period 2012 – 2014, the average quantities of haddock, whiting and sole discarded were 0 tonnes, 1.4 tonnes and 0.4 tonnes respectively. Collectively they represented 0.4% of the total catch of *Nephrops*, haddock, whiting, sole and *Pandalus*). Note however, that for 2018 and beyond, if the 0.5% deminimis exemption is to apply to the total catch of all species subject to the landing obligation, the potential catch of haddock, whiting and sole that may be discarded will increase, as more species that are caught in the IIIa creel fishery notably cod, become subject to the landing obligation.

Although the absolute average quantities in weight of haddock, whiting and sole caught and discarded in the creel fishery are relatively small, there is no indication in the supporting documentation (Annexes L and Li) to indicate the numbers of individuals caught and discarded, which will vary according to the size of such individuals. There is also no indication whether the fish caught in the creel fishery are discarded alive or dead, although it seems reasonable to assume that the majority of fish are live discards. Furthermore, most of the discards are likely to survive provided that they are immediately returned to the sea and are not eaten by scavenging seabirds as they enter the water. Hence the obligation to land all catches of haddock, whiting and sole, would represent an increase in the fishing mortality on each of these species over and above that expected if the de minimis exemption were to be granted.

There are no specific studies presented in the JR to demonstrate that selectivity would be very difficult to achieve. However, EWG 16-06 considers pot fisheries by their nature to be selective so do not see the need for any such studies to be presented.

EWG 16-06 considers that the assertion that it is difficult to improve selectivity in the short term without incurring loss of marketable catch is supported by the information provided, accepting that no new information is presented. EWG 16-06 notes that the volume of de minimis requested is small and therefore provided discarding under the exemption is monitored the impact is likely to be minimal. However, EWG 16-06 notes that the incidental bycatch rates of haddock whiting and sole in the creel fishery targeting *Nephrops* in Division IIIa are likely to be fishery-specific. Hence appropriate de minimis percentages for any future proposals for exemptions from the landing obligation for finfish in creel fisheries in other sea areas will need to be assessed on a case by case basis.

7.2. North Sea - Proposals for survivability exemptions

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

Table 7.2.1 Summary of high survivability submitted as part of the North Sea Joint Recommendations (restricted to new or re-assessed exemptions)

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***
UK (only UK vessels involved)	*Nephrops – ottertrawls with a mesh of at least 80mm equipped with a selective Netgrid in the Nephrops fishery in area IV*	*Target*	*No information provided*	*No information provided*	*No information provided*	*No information provided*	*9.6% (not clear whether this applies to all trawl vessels or only those fitted with a Netgrid)*	*62%*
Sweden and Denmark	*Nephrops – otter trawls with a mesh size of at least 70mm equipped with a species selective grid or with a mesh size of at leats 90mm equipped with a SELTRA escape panel in the Nephrops and mixed demersal fisheries in area IIIa*	*Target*	*No information provided*	*930 tonnes Grid and SELTRA combined (Swedish data only)*	*623 tonnes Grid and SELTRA combined (Swedish data only)*	*1553 tonnes Grid and SELTRA combined (Swedish data only)*	*46% Grid and SELTRA combined*	*55% for the grid 46% for the SELTRA trawl*
UK (only UK vessels involved)	*Sole below mcrs – otter trawls with a mesh size of 80-99mm in the South Eastern trawl fishery within 6 nautical miles of the English coast in ICES Area IVc*	*Target*	*72 vessels and 19 vessels in both IVc and VIId*	*121 tonnes*	*5.1 tonnes*	*126 tonnes*	*1% of the total catch; 4% of the total sole catch*	*51%*

7.2.1.High Survivability exemption for Nephrops caught with trawl gears (Netgrid) in ICES area IV

Background

The JR includes an exemption to the landing obligation on the basis of high survivability for *Nephrops* in ICES area IV caught with bottom trawls with a mesh size of at least 80mm and equipped with a Netgrid selectivity device comprising a four panel box section inserted into a two panel trawl with an inclined sheet of netting.

This exemption had been included in the JR submitted in 2015. However, it was subsequently withdrawn following assessment by STECF EWG 15-05 that highlighted the lack of supporting information. It has been re-submitted in the 2016 JRs with additional information underpinning the exemption.

EWG 16-06 observations

The description of the fishery for which the exemption is being sought is clear (bottom trawls – mesh size >= 80 mm equipped with a Netgrid selectivity device, area IV), but there is no information presented regarding the number of vessels that would be affected by the exemption or what catch amount is represented by the fishery for which the exemption is requested. EWG 16-06 suggest that the Member States involved in this fishery and wishing to avail of this exemption should complete the template provided in Section 4.

The justification for high survivability is based on the results of two studies. A study conducted by CEFAS in fishing grounds of the North East of England (area IVb) and a study conducted by Sweden in area IIIa. The CEFAS study conducted in fishing grounds off the North East of England (area IVb) reported a survival rate of 62%. This is higher than results from other survival studies.

EWG 16-06 notes that the study conducted by Sweden in area IIIa adds limited value in the justification for a high survivability exemption for a fishery in area IV because it would not be advisable to assume that survival rates are the same in different regions. As pointed out by EWG 15-10 these fisheries are very different in their characteristics, in terms of gears used, prevailing environmental conditions and indicative catch rates.

In general, EWG 16-06 considers the methodological approach used in the CEFAS study to be appropriate for estimating the survival rate of discarded *Nephrops*. Although it may not be advisable, it seems reasonable to use only one vessel in a survival study considering the high costs associated with survival experiments and the fact that the vessels' characteristics and fishing activity seem to be representative for the fleet. However, the EWG 16-06 notes that the CEFAS study was conducted during a period of relatively cold weather (3rd February – 11th March 2016) with sea temperatures that were close to the ambient air temperature. Anecdotal evidence has shown that exposure to warm air temperature on deck and subsequent discarding into cool water may induce a thermal shock and therefore have a negative impact on *Nephrops* survival. Furthermore, the work presented by Castro et al (2003) shows a significant difference in discard survival between seasons (increased mortality in warm months). For that reason, the study presented by CEFAS may in fact overestimate discard survival.

EWG 16-06 therefore considers that further work would be necessary to assess whether the observed survival rates are typical of other periods in the year (e.g. conducted during a period of warmer weather, during the late summer), where there is a greater difference in ambient air and water temperature. EWG 16-06 considers it appropriate to await the outcome of late summer experiments so that the results can be taken into account in deciding whether survivability of *Nephrops* is to be considered sufficiently high relative to the discard rate and whether to grant the proposed high survivability exemption on such grounds.

EWG 16-06 also notes that in the CEFAS study, the mean carapace length of control *Nephrops* was greater (40 mm) than the mean carapace length of the *Nephrops* used in the experiment (33 mm). Because of the positive correlation between the length of *Nephrops* and their survival probability,

EWG 16-06 recommends using similar length frequency distribution for the control *Nephrops* and the *Nephrops* in future experimentation.

7.2.2.High survivability exemption for Nephrops caught with trawl gears in area IIIa – Grids and SELTRA trawl

Background

The JR includes an exemption to the landing obligation om the basis of high surviability in the following fisheries:

- in ICES area IIIa caught 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,
- or caught with bottom trawls (OTB, TBN) with a mesh size of at least 90 mm equipped with a top panel of at least 270 mm mesh size (diamond mesh) or at least 140 mm mesh size (square mesh).

This exemption was included in the original discard plan for the North Sea for 2016 (Commission Delegated Regulation (EU) 2015/2440) with the condition that by 30 April 2016, Member States should submit to the Commission additional scientific information supporting this exemption. EWG 16-06 has evaluated the additional information supplied in combination with the results from the previous studies submitted in 2015.

EWG 16-06 observations

The justification for high survivability is based on the results of two studies conducted by the Swedish University of Agricultural Sciences (SLU) where survival of discards associated with a *Nephrops* otter trawl fitted with a selection grid and SELTRA panels were estimated by captive experiments. Separate studies were carried out in the winter and summer to determine whether there are seasonal differences in survival rates. STECF EWG 15-10 had identified that the results presented in 2015 from the first set of trials gave higher than expected survival rates and it should be noted that the researchers have fully taken on board the comments of STECF in this regard. The average cumulative proportion survivals at the end (day 15) of the winter experiment carried out in 2015 were 75% for GRID and 59% for SELTRA. Corresponding figures for the summer experiments were 42% and 38%.

It is not clear from the JR to which fisheries defined in the Tables A and B of the JR and fleets the requested derogations apply and how many vessels/catch proportion are likely to be affected by the requested derogation. Most information supplied relates to the Swedish fishery only. No information in relation to the Danish fleet is supplied and no breakdown is supplied for the catch or discard rates for the grid and SELTRA gears are provided. Any information supplied is for both gears combined. EWG 16-06 suggest that the Member States involved in this fishery and wishign to avail of this exemption should complete the template provided in Section 4.

A mismatch between mesh size in trawl fisheries and minimum landing size (carapace length 40 mm, which is higher than most North Sea FUs) has historically resulted in a high discard rate for this stock. However, since 1st January 2016 the mcrs was lowered from 40 to 32 mm carapace length for EU countries. This is expected to reduce the proportion of the catch discarded considerably. Discard rates for *Nephrops* in the trawl fisheries were estimated at around 50% (with the former mcrs at 130 mm; carapace length 40 mm). The most recent (2016) discard proportion estimate for 2013-2015 was 12.5% (simulated estimate for mcrs 32 mm carapace length; ICES 2016).

EWG 16-06 considers that the methodological approach used in the SLU study is appropriate for the estimation of captive discard mortality at the time of the study period – the sample size and replication of the experiments provide reliable statistical information and the sampling methods adequately replicated commercial fishing conditions.

EWG 16-06 notes that the results from the two experiments indicate an average captive survival rate for *Nephrops* of 55% for the GRID and 46% for the SELTRA trawl. It is still not possible to reliably quantify the extent of any potential post-discard predation mortality which would result in

a medium-longer term survival rate less than those observed in the study. EWG 15-10 identified this as a general weakness of all survival experiments. The Expert Group also notes that the observed survival rates of 55% for the grid trawl and 46% for the SELTRA trawl in these experimental trials are similar to the observed survival rates for *Nephrops* in other captive survivability studies. However, in the absence of any objective criteria, the Expert Group is unable to determine whether the survival rates can be considered as high, and such a decision will need to be taken by managers DGMARE. EWG 16-06 recognises that the JR will review exemptions for the reason of high survivability in 2018, taking into account experience in the respective fisheries and the most recent scientific advice.

7.2.3.High survivability exemption for common sole under mcrs caught by trawls with a mesh size of 80-89mm in ICES division IVc

Background

In the context of the landing obligation for the demersal fisheries, an exemption on the basis of high survivability is requested for sole under mcrs caught by 80-89 mm otter trawl gears (in ICES area IVc.

The basis for this exemption is a CEFAS study (Santos el al., 2016) on the survival of discarded sole in the English east coast inshore otter trawl fishery. EWG 16-06 notes this is a draft report.

EWG 16-06 notes that the information on the fishery is provided in both the JRs for the North Sea and also for the NWW. EWG 16-06 assumes this is essentially the same fishery and has therefore combined the information from both JRs for its evaluation of the exemption request.

EWG 16-06 observations

The South East England inshore sole trawl fishery is defined by a common métier and target species. Fishing activity and marine conditions are similar. There are 143 UK vessels across IVc and VIId that would be exempt of landing all catches of sole if the exemption is granted. In 2015 this fishery was responsible for 122 tonnes landing of sole from area IVc and 38 tonnes from area VIId. In area IVc and VIId, respectively 72 and 52 vessels operated, 19 vessels were fishing in both areas.

A length restriction introduced by the Southern Inshore Fisheries CA, as well as the shallow depth of the fishery (typically around 15m), prevent vessels larger than around 12m in length from trawling within 6 nautical miles of the coast. Of the vessels which landed sole in this fishery in 2015, 79% are 10 metres or under in length. The sole fishery season is March-November with the peak season of the fishery is is between July and September. The vessels use an 80–99mm mesh trawl with a very low between July and September. The vessels use an 80–99mm mesh trawl with a very low headline height (usually less than 750mm) and the trawl doors and centre skids are small and lightweight. Haul duration in the shallower waters are typically limited to 1–1.5 hours.

CEFAS observer programmes between 2013 and 2015 estimated discard rates of undersized sole in this fishery at 1% of total catches and 4% of sole catches. The total annual biomass of undersized sole caught in this fishery in 2015 was estimated at around 6.7 tonnes (of which 5.1 tonnes is caught in IVc and 1.6 tonnes in VIId). If granted, this survivability exemption is estimated to result in a maximum annual discard biomass of undersized sole of approximately 6.7 tonnes for both areas together, of which 3.3 tonnes could possibly survive.

The approach and methodology selected to assess the discard survival during the sampled trips was conducted according to ICES guidelines (ICES, 2014). Fish vitality scores are combined with the likelihood of survival for each vitality category. The study followed the same procedures as in recent CEFAS survival studies (Catchpole et al., 2015, and Smith et al., 2015). The estimated survival rate for all vitality categories of undersized sole was 51% after an observation period of 15 days. The extension models show 42-43% and 47-48% discards survival of undersized sole beyond the time period.

The study was undertaken in area IVc, rectangle 33F1, but the exemption was also requested for area VIId. Based on information provided to the EWG 16-06 it is expected that the fishing activity and marine conditions are similar in both areas but no evidence of this was provided in the study.

EWG 16-06 suggests that a more detailed description of the English east coast inshore otter trawl fishery and the environment along the coast could be provided to allow easier extrapolation of the results of this study to the fishery can be made. It is not altogether clear whether the vessel used, the time of year when the study was conducted and the study areas are entirely representative of the fishery.

The study was conducted with a vessel that operates out of Lowestoft. Considering the fishery and the presented operational area around the southeast coast, there are probably other harbours where this fishery is based. It would be informative to identify these ports and give the number of vessels from this metier per port. Also the number of trips that are executed during the fishing season and how many sole is caught on average per year in total and per vessel would be more informative to determine whether the vessel in the study is representative for the fishery.

The study was conducted in October and November. However, the fishing season is described as a period running from March to November with a peak in effort between July and September. Considering the seasonality around the Southeast coast it is expected that conditions (such as difference between water and air temperature) are significantly different and thus making it difficult to extrapolate the results from the study period to the whole fishing season.

EWG 16-06 notes that survivability may significantly differ between fishing seasons but cannot quantify that. From the other hand the South East England inshore common sole fishery described in the JR is expected to cause less stress to the fish caught, due to its fishing operations in shallower waters depths (10–15m, rather than 25m in the study), shorter tow times (typically 1:00–1:30 hours, rather than the described 1:30–2:00 hours in the study and the higher range of the 1:07-2:25 hours that is actually observed in the data adjoined to the study).

EWG 16-06 found it unclear what the common practice is in terms of handling and processing the catch on board of the fishery described in the study. During the sampled trips, landings and discards were sorted simultaneously and collected in baskets for vitality assessments. It is not clear whether landings and discards are also sorted simultaneously as a common practice in the English east coast inshore otter trawl fishery. If this is not a common practice then the survival rates resulting from this study can only be seen in light of the sorting process that was practiced during the survival study. Since the multinomial model in the study shows that maximum deck time is an important factor that affects survival rates it is important to clearly describe the common fishing practice and how it is related to the practice conducted during the study.

EWG 16-06 notes that no "real" controls were used in the study thus meaning that survival rates could have actually been higher than observed. The Kaplan-Meier plots show a slight decrease in survival probability towards the end. It is thus not clear whether the asymptotical probability of survival was reached after 15 days of monitoring. Without controls it is not possible to determine whether captivity affected the estimated discard survival rates of the sole kept in the tanks during the observation period.

EWG 16-06 concludes that further research during the peak season in July-September and also in fishing depths, conditions, and fishing areas (all sampled hauls were taken in area IVc, rectangle 33F1) that meet those of the fishery for which the exemption is requested (the South East England inshore sole trawl fishery) would be desirable. Along with the currently provided study, it will provide a more complete picture of sole survivability caught in this fishery. EWG 16-06 considers it appropriate to await the outcome of the further research results so that new results can be taken into account by managers when deciding to grant the proposed high survivability exemption in this specific fishery.

EWG 16-06 also notes that it is important not to extrapolate from this study to justify similar exemptions for sole by other fleets. This exemption is based around a specific inshore fishery and therefore any vessels that wish to avail of this exemption should ideally have similar characteristic in relation to size, engine power, gear used, operational parameters and catch volume per haul. Table 7.2.3.1 sets out the specifications of the typical vessel characteristics, gears used and operational parameters in this fishery based on the vessel used for the survival experiments.

Table 7.2.3.1 Typical vessel characteristics, gears used and operational parameters in the sole fishery

Parameters	Specifications
Vessel length overall	9.82m
Engine power	179kW
Gear used	Single otter-trawl
Mesh size	80mm
Average haul duration	1:56hrs
Fishing depth	8.3 - 21m
Fishing speed	2-2.5 knots
Catch volume per haul	2.3 – 156.2kg
Average catch volume	79.37kg

7.3. Minimum Conservation reference size for *Nephrops*

Article 4 of Regulation 2015/2044 that enacts the discard plan for the North Sea contained an amendment to the minimum conservation reference size for *Nephrops* in the Skagerrak from 130mm total length (equivalent to 40mm carapace length) to 105mm total length and 32mm carapace length. In their assessment of the joint recommendations, STECF concluded that given the new mcrs was above the L50 maturity sizes, the risk to the population is small although any increase in mortality of smaller individuals (>50% maturity) from current levels will likely result in lower FMSY values and therefore reduced yields.

In the submitted JR a tail length of 59mm corresponding to the 105mm full length and 32mm carapace length for *Nephrops* is included. Based on a study of the relationship between carapace length and tail length by Bennett (1983), the proposed tail length of 59mm would seem appropriate.

8. 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). This discard plan is valid until 31 December 2018. A new set of Joint Recommendations for the North Western Waters have been submitted by the regional group of Member States that updates the existing discard plan. It covers species which define the highly fisheries for cod, haddock, whiting and saithe, *Nephrops*, mixed common sole and plaice, hake, megrim and pollack fisheries. Bycatch species have also been added to some of the existing rules from 2016. The main elements of the JR and which of these have been assessed by EWG 16-06 are summarised in table 8.1.

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

Elements	Status (i.e. Existing, Existing but re-assessed on basis of new information, New)
De Minimis	
Common sole caught in gillnets and trammel nets in the Channel and the Celtic Sea	Existing
Common sole caught with beam trawls with a mesh size of 80-119mm with	Existing

increased mesh sizes in the extension of the beam trawl	
Nephrops caught with bottom trawls with a mesh size of 80-99mm in ICES subareas VI and VII	Existing
Whiting caught with bottom trawls and seines <100mm and pelagic trawls to catch whiting in the Channel	Existing but re-assessed on basis of new information*
Whiting caught with bottom trawls and seines ≥100mm and pelagic trawls to catch whiting in the Celtic Sea and the Channel	Existing but re-assessed on basis of new information*
Whiting caught with bottom trawls and seines <100mm and pelagic trawls to catch whiting in the Celtic Sea	Existing but re-assessed on basis of new information*
Megrims caught with bottom trawls and seines <100mm in ICES subareas VI and VII and Union/international waters of ICES divisions Vb	New*
High Survivability	
Nephrops caught with Pots, Traps or Creels in ICES subareas VI and VII	Existing
Common sole (undersized only) caught with trawl gears in area VIId	New*
Minimum conservation reference size	
None	NA
Technical Conservation Measures	
None	NA

* Indicates elements assessed by EWG 16-06

The JR also includes a recommendation that STECF to consider the effect of removing sole VII hjk from the TAC regime, with specific reference to:

a) Fishing mortality on sole;

b) Fishing mortality of other species in the fisheries;

c) What other management measures might be appropriate.

EWG 16-06 has not addressed this request as it is outside the terms of reference set by the Commission. The EWG suggest this should be reverted to the STECF plenary for comment.

8.1. NWW – Proposals for de minimis exemptions

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

Table 8.1.1 Summary of de minimis exemptions as submitted for the NWW (restricted to new or re-assessed exemptions)

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****	***Estimated catch***	***Discard rate***	***Estimated de minimis volumes***
Spain *(no information for other countries)*	*Megrim- bottom trawls with a mesh size of < 100mm in the in ICES subareas VI and VII*	*Target (vessel with total landings in 2014 and 2015 consist of more than 20/% of megrim)*	*15-30 Spanish vessels* *No information for other MS*	*2358 tonnes (Total Spanish landings Area VII)* *No information supplied for other countries)*	*507 tonnes* *(Total Spanish landings Area VII)* *No information supplied for other countries)*	*2865 tonnes* *(Total Spanish landings Area VII)* *No information supplied for other countries)*	*18% (Spanish data only Area VII)*	*No estimate supplied*
France	*Whiting – bottom trawls and seines with a mesh size of less 100mm (TR2) in the English Channel (ICES sub-areas VIId,e)*	*Target/Bycatch*	*97 French vessels (Celtic Sea and Channel)*	*3474 tonnes (Total French landings of whiting in VIId)*	*1082 tonnes (Total French discards of whiting in VIId)*	*4556 tonnes (Total French catches of whiting in VIId)*	*30% in Area VIId*	*321 tonnes - (French data for all of NWW covering the 3 de minimis exemptions)*
UK			*No information supplied for number of UK vessels*	*13 tonnes and 265 tonnes (Total UK landings of whiting in VIId and VIIe respectively)*	*13 tonnes and 272 tonnes ((Total UK discards of whiting in VIId and VIIe respectively)*	*26 tonnes and 537 tonnes (Total UK catches of whiting in VIId and VIIe respectively)*	*50% in Area VIId and 51% for VIIe (not clear if this applies to the whole UK fleet)*	*No estimate provided for UK fleet*

Netherlands			*22 vessels (of which 15 operate at any one time)*	*639 tonnes (Total Dutch landings of whiting in VIId,e)*	*2365 tonnes (Total Dutch discards of whiting in VIId,e)*	*3004 tonnes (Total Dutch catches of whiting in VIId,e)*	*79% in Area VIId,e (not clear if this applies to the whole fleet)*	*No estimate provided for Dutch fleets*
France	*Whiting – bottom trawls and seines with a mesh size greater than equal to 100mmm (TR1) in the Celtic Sea and English Channel (ICES Areas VIIb-j)*	*Target/ Bycatch*	*97 French vessels (Celtic Sea and Channel)*	*Information not supplied*	*Information not supplied*	*Information not supplied*	*20% (All French TR1 vessels)*	*321 tonnes - (French data for all of NWW covering the 3 de minimis exemptions)*
UK			*No information supplied for number of UK vessels*	*91 tonnes (Total UK landings of whiting by TR1 vessels) in VIIb-j)*	*3 tonnes (Total UK discards of whiting by TR1 vessels) in VIIb-j)*	*94 tonnes (Total UK catches of whiting by TR1 vessels) in VIIb-j)*	*4%*	*No estimate supplied*
Ireland	*Whiting – bottom trawl and seines with a mesh size less than 100m (TR2) in the Celtic Sea (ICES Areas VII excluding VIIa,d,e)*	*Target/Bycatch*	*145 vessels (73 vessels in Nephrops TR2 and 72 vessels in mixed demersal TR2)*	*4323 tonnes (Total Irish landings of whiting by TR2 vessels in VIIb-k)*	*2029 tonnes (Total Irish discards of whiting by TR2 vessels in VIIb-k)*	*6352 tonnes (Total Irish catches of whiting by TR2 vessels in VIIb-k)*	*34%*	*No estimate supplied*
UK			*No information supplied for number of UK vessels*	*4 tonnes (All UK landings for whiting by UK TR2 vessels in VII excluding VIIa ,d,e)*	*0.6 tonnes (All UK discards for whiting by UK TR2 vessels in VII excluding VIIa ,d,e)*	*4.6 tonnes (All UK catches for whiting by UK TR2 vessels in VII excluding VIIa ,d,e)*	*14% (All UK TR2 vessels)*	*No estimate provided*

France			*97 French vessels (Celtic Sea and Channel)*	*Information not supplied*	*Information not supplied*	*Information not supplied*	*32% (All French TR2 vessels)*	*321 tonnes - (French data for all of NWW covering the 3 de minimis exemptions)*

8.1.1.De minimis exemption request for the vessels, obliged to land megrim, using bottom trawls and seines <100mm to catch megrims in ICES subareas VI and VII and Union/international waters of ICES divisions Vb

Background

The JR states that a de minimis exemption of 7% is requested for megrim of the total annual catches of this species by vessels using bottom trawls and seines <100mm in ICES subareas VI and VII. It applies only to vessels obliged to land megrims in those areas.

According to Annex 0 of the NWW Joint Recommendation, vessels obliged to land megrim in 2017 will include:

a) vessels defined as gadoid trawl seine fishery where megrim is bycatch (all mesh sizes) - Vb and VI.
b) vessels defined as megrim fishery (trawls seine <100m) where megrim >20% total landing all species - Vb, VI, VII

EWG16-06 Observations

Annex IV of the JR contains some supporting documentation on the main fleet targeting megrim (Spanish OTB_DEF_70-99mm) indicating that megrim account for about 36% of the landings with a megrim discard rate between 18% and 44% in recent years. Some additional detail is provided on the main gear types operating in the areas concerned and on the characteristics of the main Spanish fishery targeting megrim (15-30 vessels in recent years). Length compositions of megrim catch are provided in histogram form and these are discussed in the context of reasons for discarding and size related marketing arrangements. Some general observations on previous selectivity work is included although detail, particularly on megrim, is lacking. Plans for future selectivity work are outlined. A comprehensive modelling study investigating the impact of the landing obligation is provided which makes reference to the proposed de minimis and a few other observations are made about practical difficulties and potential costs associated with the landing obligation. Overall, the documentation provides some helpful information, but is rather incomplete and mostly relates only to the Spanish fleet.

The proposal is not clear about whether this is being requested on the grounds of difficulty with selectivity or disproportionate costs. The background information suggests that both factors may have been considered in seeking the de minimis. Although difficulties with selectivity are discussed and previous Spanish selectivity work is cited, there is a lack of information on the level of difficulty or the quantitative reductions in wanted catch of megrim or other species in the mixed fishery. The background documentation includes a schedule for future selectivity work suggesting that some improvements might be expected in future and argues for the de minimis to be available while this work takes place.

Practical issues associated with dealing with unwanted catch of megrim (for example increased sorting times and onboard storage of material) potentially generate disproportionate costs, however quantitative evidence to support this was not provided. The extensive economic analysis, while predicting a large scale negative financial impact of the overall landing obligation, also suggests that this particular de minimis does not contribute much towards alleviating the problem.

Although fleet and catch information is provided for Spain, there is very little information provided for other fleets operating in the same areas that would be above the threshold and therefore affected by the inclusion of megrim in the landing obligation. EWG 16-06 is unclear who would be able to utilise this de minimis provision. Furthermore, the absence of the fleet information makes it difficult to judge the overall scale of the discards, the scale of expected catches and therefore the quantity of de minimis which would be available. The completion of the template table (See section 4) detailing the catch and discard information for all affected vessels would provide the relevant information and enable STECF to fully evaluate the proposal.

EWG 16-06 notes that the Celtic Sea megrim discard rates for Spain (18-44%) and the Celtic Sea megrim discard rates for other countries (15-18% average 2010-2012, all gears) are much higher than the 7% de minimis provision that would be available. This implies that relatively large quantities of previously discarded megrim will still have to be landed and disposed of, despite the de minimis provision. Early progress in developing improved selectivity or the adoption of spatial avoidance measures could mitigate the problem to some extent. Until then, Member States will need to provision for the handling and disposal of the previously discarded fish.

The background documentation indicates several reasons for the observed discarding. Some of the discards are undersized and some of the discards are damaged fish, unsuitable for human consumption – unfortunately, there is no indication of the proportion of fish that are damaged. It is also clear, from the Spanish length compositions provided, that a relatively high proportion of the megrim discards are above the mcrs length (20cm) and that these arise from a local management agreement not to land fish below 25cm. EWG 16-06 notes that the histograms presented show numbers at length. If, however, the numbers were converted to weights, then the proportion of the overall weight of discards present in the 20-25cm size range would be higher than implied by length composition information. Without tabular information, EWG 16-06 is unable to quantify the amounts of fish currently discarded in the 20-25cm size range but notes that this is likely to be significant. EWG 16-06 also notes that any de minimis provision is likely to imply the continued discarding of quantities of fish above mcrs.

In conclusion EWG 16-06 notes that little relevant information has been presented to demonstrate that increases in selectivity to reduce catches of megrim below 24cm are in fact difficult to achieve or that the costs of handling and sorting such catches are disproportionate. EWG 16-06 considers that due to the limited information presented, it is not currently possible to evaluate whether the arguments on either conditionality is well founded.

8.1.2.De minimis exemptions for Whiting in ICES Area VII

General comments

The three exemptions covered were included in the delegated Regulation establishing a discard plan for NWW demersal fisheries (Commission Delegated Regulation (EU) 2015/2438) but in each case some additional information was requested. This section deals only with the additional information and does not revisit the elements of the 2015 requests where sufficient supporting information has already been provided. The principal issues raised by STECF in 2015 and additional information sought are summarised in table 8.1.2.1.

Table 8.1.2.1 Principle issues raised by STECF on the three whiting de minimis exemptions in 2015

Fishery	Main Findings of EWG 15-05	COM comments to Regional Groups	Response by Regional Groups	Comments STECF PLEN 15-02
		De Minimis		
Whiting in bottom trawls less than 100 mm (TR2) in the Channel (ICES area VIIde)	Not clear to which fleets the exemption will apply. The basis for calculating de minimis is unclear and not possible to estimate the de minimis volume Sufficient evidence is provided to support the exemption on the basis that further selectivity in the fishery is difficult to achieve. Current discard rates far exceed de minimis request so incentive to further improve selectivity remains.	Provide clarification on the areas, fleets to be covered by the exemption. Clarify on how the de-minimis should be calculated. The volume of catch would also aid the examination of disproportionate handling costs.	Partial clarification (NL have provided data) regarding the fleet segments to which the exemption will apply. No further supporting information supplied because discard data is not available.	Clarifications provided partially address the issues raised by the EWG. No further data supplied from UK or FR –Cannot assess current discard level compared to the volume of the de minimis requested.

Whiting in bottom trawls greater than or equal to 100 mm (TR1) in the	Not clear to which fleets the exemption will apply. The basis for calculating de minimis is unclear and not possible to estimate the de	Provide clarification on the areas, fleets to be covered by the exemption. Clarify on how the de-	Partial clarification has been provided on the fleet segments to which the exemption will apply.	Clarifications provided partially address issues raised by EWG.
Celtic Sea and the Channel (ICES areas VIIb-j)	minimis volume Sufficient evidence is provided to support the exemption on the basis that further selectivity in the fishery is difficult to achieve. Further selectivity studies are ongoing with promising results and these measures should be implemented as quickly as practically possible. Current discard rates far exceed de minimis request so incentive to further improve selectivity remains.	minimis should be calculated. The volume of catch would also aid the examination of disproportionate handling costs.	No further supporting information is available on discard rates in the fisheries.	
Whiting in bottom trawl fisheries targeting mixed demersal finfish in the Celtic Sea (ICES Area VII excluding VIIa, d and e) with less than 100mm	Not clear to which fleets the exemption will apply. The basis for calculating de minimis is unclear and not possible to estimate the de minimis volume. No quantitative information on selectivity analyses is provided. Request is based on information on the economic performance of the fleet involved. Current discard rates far exceed de minimis request so incentive to further improve selectivity remains.	Provide clarification on the areas, fleets to be covered by the exemption. Clarify on how the de-minimis should be calculated. Further supporting information is required.	Clarification has been supplied on the fleet segments to which the exemption will apply. Further supporting information has been provided to strengthen the justification for the exemption on the basis that selectivity is very difficult to achieve but there is a paucity of relevant selectivity data.	The clarifications provided better define the fleet segments to which the exemption will apply. The additional supporting information does provide some level of justification for the exemption but basis is generic across all fisheries of this type.

8.1.2.1. De minimis exemption request for the vessels using bottom trawls < 100 mm (TR2) in the Channel (ICES area VIIde)

Background

The de minimis exemption for this fishery was requested in 2015 on the basis that selectivity is very difficult to improve without losing large parts of commercial landings and on the disproportionate costs of handling and sorting. The justification for this exemption was assessed by EWG 15-10 in 2015 and sufficient evidence was provided to support it on the basis that further selectivity in the fishery was difficult to achieve. However, additional information was sought on a number of issues related to a lack of clarity on which fleets the exemption would apply to and the basis for calculating de minimis. Some additional information was provided in 2015 which partially addressed the issues raised by the EWG 15-10 but it was not possible to assess current discard levels compared to the volume of the de minimis requested.

EWG 16-06 observations

Additional information has been provided with the 2017 JR in support of this exemption by France, the UK and Netherlands.

The French supporting document provides additional information on the French fleet but it covers all three whiting exemptions in Area VII together, is not broken down by each specific exemption and aggregates TR1 and TR2 data together. The document provides discard rate estimates, derived from the French observer programmes for the French fleet targeting demersal species in Area VII. The average discard rates from 2012 to 2014 were 30% in VIId and the southern North Sea and 22.3% in VII (excluding VIId). The document gives an indication of the number of vessels which were subject to the landing obligation for whiting in Area VII in 2016 and the likely increase in this number due to a change in the gadoid catch threshold from 25% to 20%. The document also includes a calculation of whiting discards by these vessels and the likely maximum volume of

whiting discards allowable under the 7% de minimis exemption. Based on calculations of whiting landings by the vessels subject to the landing obligation (average of their 2013 and 2014 landings) the document calculates that there would have been a maximum de minimis discard volume by the French fleets under all three whiting exemptions in NWW of 305 tonnes. STECF notes that calculations based on a standard formula for calculating discard rates would produce a slightly higher maximum de minimis figure of 321 tonnes.

The French document also provides links to a recent report on relevant IFREMER selectivity trials and projects (Vogel et al., 2015) which examine the likely operational and economic impacts of the landing obligation on the relevant French fleets. The EODE project ran from 2014 to 2015 and found that selectivity improvements incurred high economic losses. EODE (Balazuc et al., 2016) also found that operating under a full landing obligation scenario resulted in shorter trips due to the hold filling more rapidly with mainly undersized fish with associated impacts on crew working conditions and earnings. A number of new selectivity projects have started in the past year, which will also assess commercial impacts, but no results from these projects are available as yet.

The UK supporting document provides estimated discard volumes and rates derived from their discard observer programme. In the <100mm fishery the average discard rates from 2013 to 2015 were 45% in VIId and 36% in VIIe. Estimated discard rates were higher in 2015 at 50% and 51% for VIId and VIIe respectively. While this information is useful it is not clear whether the discard quantities estimated are for vessels subject to the landing obligation or for the overall UK fleet. An assessment of de minimis volumes has not been made.

The UK document also briefly mentions relevant selectivity work in the Channel. Trials already reported on in CEFAS publications have highlighted difficulties in separating whiting from other important commercial species. The document commits to reporting to STECF on results from those trials which are still ongoing. This section of the document does not specify whether these trials were conducted on TR1 or TR2 vessels.

The Netherlands supporting document contains additional information on the Dutch flyshooter fleet which mainly takes whiting as a bycatch. The majority of the fleet uses mesh sizes of less than 100mm with "only a few" vessels using mesh sizes >100mm. All of the subsequent information on catches and discard rates is given for TR2 and TR1 vessels combined. A request to exempt this fleet from the landing obligation for whiting until 2019 on the economic basis that whiting is only a bycatch species was denied based on the argument that the volume of whitefish in the total catches was greater than 25%. The document outlines high discard rates for whiting in this fleet of 39% in 2013 and 79% in 2014. However, it appears that this data is for the entire Dutch fleet in the Channel and there is no indication of what proportion of the fleet is subject to the landing obligation for whiting on the basis of the 25% threshold. Accordingly an indication of discard rates or volumes for the vessels subject to the landing obligation is not given nor is there an indication of de minimis volumes.

The Netherlands supporting document also provides some information on recent selectivity work (based on only 4 tows with a 90mm mesh size codend) which indicates that increasing cod-end mesh size from 80 to 90mm can reduce catches of mullet by an average of 72%. No indications of associated changes in whiting selectivity are given.

EWG 16-06 consider that the information presented in these documents partially address the request for additional data. Data estimating discards and potential de minimis volumes by those vessels subject to the landing obligation in the UK and Netherlands fleets should be provided. This could be provided using the template set out in Section 4.

8.1.2.2. De minimis exemption request for the vessels using bottom trawls ≥ 100 mm in the Celtic Sea and the Channel (ICES areas VIIb-j)

Background

The de minimis exemption for this fishery was requested in 2015 on the basis that selectivity is very difficult to improve without losing large parts of commercial landings and on the disproportionate costs of handling and sorting. The justification for this exemption was assessed by EWG 15-10 in 2015 and sufficient evidence was subsequently provided to support the exemption on the basis that further selectivity in the fishery was difficult to achieve. However, additional information was sought on a number of issues related to a lack of clarity on which fleets the exemption would apply to and the basis for calculating de minimis. Some additional information was provided in 2015 which partially addressed the issues raised by the EWG 15-10 but it was not possible to assess current discard levels compared to the volume of the de minimis requested.

EWG 15-10 also noted that in this fishery the difficulties in achieving selectivity improvements appeared to be more short term than absolute. Further information from projects such as the French SELSELEC study was expected to be available in early 2016. Preliminary results from this project indicated that a T90 mesh could reduce discards by 65%. EWG 15-10 noted that promising technical improvements should be incorporated into the fishery as quickly as possible in order to reduce the 20% discard rate for whiting.

EWG 16-06 observations

Additional information has been provided with the 2017 JR in support of this exemption by France and the UK.

The French supporting document provides additional information on the French fleet but it covers all three whiting exemptions in Area VII together and is not broken down by each specific exemption and aggregates TR1 and TR2 data together. The document provides discard rate estimates, derived from the French observer program) for the French fleet targeting demersal species in Area VII. The average discard rates from 2012 to 2014 were 30% in VIId and the southern North Sea and 22.3% in VII (excluding VIId). The document gives an indication of the number of vessels which were subject to the landing obligation for whiting in Area VII in 2016 and the likely increase in this number due to a change in the gadoid catch threshold from 25% to 20%. The document also includes a calculation of whiting discards by these vessels and the likely maximum volume of whiting discards allowable under the 7% de minimis exemption. Based on calculations of whiting landings by the vessels subject to the landing obligation (average of their 2013 and 2014 landings) the document calculates that there would have been a maximum de minimis discard volume by the French fleets under all three whiting exemptions in NWW of 305 tonnes. EWG 16-06 notes that calculations based on a standard formula for calculating discard rates would produce a slightly higher maximum de minimis figure of 321 tonnes.

The French document mentions a number of studies relevant to the TR1 exemption. One of these projects, conducted by a French Producers Organisation, concluded that a de minimis exemption for whiting would help to restrict commercial losses to only 1% in the TR1 fleet in VIIe,f,g,h. Detailed information on this project is not supplied. The SELSELEC project, which was expected to provide results in early 2016, has been extended and results have not been published yet. In contrast to the optimistic indications in 2015 the French supporting document notes that preliminary results from the project are variable and that selectivity improvements are associated with high economic losses. The document also provides information on a new French study, REJEMCELEC, conducted by a Producer Organisation in conjunction with IFREMER and other partners. REJEMCELEC has as one of its main goals the reduction of undersized whiting catches in the TR1 and TR2 fisheries and preliminary results are expected from it in early 2017.

The UK supporting document estimates discard rates for whiting in this fishery to be 3% in 2013, 13% in 2014 and 4% in 2015. While this information is useful it is not clear whether the discard quantities estimated are for vessels subject to the landing obligation or for the overall UK fleet. An assessment of de minimis volumes has not been made.

The UK document also briefly mentions ongoing and concluded selectivity work in the Channel. Trials already reported on in CEFAS publications have highlighted difficulties in separating whiting from other important commercial species. The document commits to reporting to STECF on results

from the trials which are still ongoing. This section of the document does not specify whether these trials were conducted on TR1 or TR2 vessels.

EWG 16-06 consider that the information presented in these documents partially address the request for additional data in support of this exemption. Data estimating discards and potential de minimis volumes by those vessels subject to the LO in the UK fleet would more fully address this issue. This information could be provided using the template in Section 4. More comprehensive information on selectivity projects such as SELSELEC, REJEMCELEC and UK studies should be provided when they become available.

8.1.2.3. De minimis exemption request for whiting for TR2 vessels targeting mixed demersal finfish in the Celtic Sea

Background

The de minimis exemption for this fishery was requested in 2015 on the basis of technical difficulties in improving selectivity of whiting below the mcrs. This is due to potential losses on other target species in a highly complex multi-species fishery. The relevant fleets in addition to targeting a mixed demersal fishery also target *Nephrops.* Some vessels will be subject to a landing obligation for both whiting and *Nephrops*.

EWG 15-10 2015 noted that the ICES InterCatch database has estimated whiting discards rates to be around 26-28% both for the *Nephrops* and the finfish metier in 2014. EWG 15-10 noted that some selectivity devices could be applied in the *Nephrops* fishery but that there is no indication that those selective devices are currently being tested or will be adopted in the fishery. Quantification of losses due to selectivity improvements were lacking in the JR for 2016. Further supporting information has been provided to strengthen the justification for the exemption on the basis that selectivity is very difficult to achieve but there is a paucity of relevant selectivity data. The additional supporting information does provide some level of justification for the exemption but the basis is generic across all fisheries of this type.

EWG observations

Additional information has been provided with the 2017 JR in support of this exemption by France, the UK and Ireland.

The French supporting document provides additional information on the French fleet but it covers all three whiting exemptions in Area VII together and is not broken down by each specific exemption and aggregates TR1 and TR2 data together. The document provides discard rate estimates, derived from the French observer program) for the French fleet targeting demersal species in Area VII. The average discard rates from 2012 to 2014 were 30% in VIId and the southern North Sea and 22.3% in VII (excluding VIId). The document gives an indication of the number of vessels which were subject to the landing obligation for whiting in Area VII in 2016 and the likely increase in this number due to a change in the gadoid catch threshold from 25% to 20%. The document also includes a calculation of whiting discards by these vessels and the likely maximum volume of whiting discards allowable under the 7% de minimis exemption. Based on calculations of whiting landings by the vessels subject to the landing obligation (average of their 2013 and 2014 landings) the document calculates that there would have been a maximum de minimis discard volume by the French fleets under all three whiting exemptions in NWW of 305 tonnes. EWG 16-06 notes that calculations based on a standard formula for calculating discard rates would produce a slightly higher maximum de minimis figure of 321 tonnes.

The French document also provides links to relevant IFREMER selectivity reports and projects which examine the likely operational and economic impacts of the landing obligation on the relevant French fleets. The EODE project ran from 2014 to 2015 and found that selectivity improvements incurred high economic losses. EODE also found that operating under a full landing obligation scenario resulted in shorter trips due to the hold filling more rapidly with mainly undersized fish with associated impacts on crew working conditions and earnings. The document also provides information on a new French study, REJEMCELEC, conducted by a Producer Organisation in conjunction with IFREMER and other partners. REJEMCELEC has as one of its main goals the

reduction of undersized Whiting catches in the TR1 and TR2 fisheries and preliminary results are expected from it in early 2017.

In the UK supporting document in the table for TR2 in VII (excluding VIIa, d and e) there is an error in the legend accompanying Table 4 which describes the fishery as otter trawls with mesh size >=100mm. Also this table is based on only three sample trips and the associated discard rate estimate of 14% for 2013 must therefore be treated with caution. No discard rate estimate is available for 2014 or 2015 for UK vessels in this fishery.

The Irish supporting document quantifies the number of Irish and UK vessels in the TR2 mixed whitefish fleet (72 vessels from Ireland and 34 from the UK). Although information on the total number of Irish vessels which are subject to the landing obligation for whiting is given (82 vessels) this figure includes both TR1 and TR2 vessels and thus an exact figure for Irish vessels to which this exemption applies is not evident. Discard rates for the Irish TR2 fleet over the period 2012-2014 are estimated to be 32%. Preliminary 2015 Irish catch data shows a discard rate of 27% for TR1 and TR2 vessels combined but discard sampling trip data indicates that the discard per unit effort (dpue) for these two fleets are significantly different at 1.6 kg/hr for TR1 and 17.4 kg/hr for TR2 vessels respectively.

The Irish supporting document also provides additional quantified information on selectivity. It describes Irish selectivity trials carried out on TR1 and TR2 vessels in the Celtic Sea between 2010 and 2015. This section of the document carries an overall conclusion that selectivity improvements by whatever means create high losses of marketable whiting and other species. The first trials from 2010 analysed the effect of increasing cod-end mesh size from 80mm to 120mm (in 10mm steps) and showed that increases in mesh sizes resulted in significant losses of marketable fish (above mcrs). Trials using a combination of square mesh panels and cod end mesh size increases illustrate that the current 80mm+120mm SMP used in the fishery is a reasonable compromise in terms of levels of discards and losses of marketable fish, particularly whiting. Increasing the mesh size to 90mm and above will lead to reductions of marketable catches of whiting of approximately 80%. The use of the 80mm + 120mm SMP gear combination has only been mandatory since May 2015 so it is too early to assess actual impacts on whiting and associated stocks. Based on trials of selectivity devices such as separator grids and panels in other fisheries the document concludes that these are suitable for the *Nephrops* fishery but not for improving selectivity in mixed demersal fisheries.

EWG 16-06 consider that the information presented address the request for additional quantified selectivity data with respect to whiting and provides supporting evidence for the assertion that selectivity improvements in the fishery are difficult to achieve. More comprehensive information on ongoing selectivity projects should be provided when they become available. EWG 15-10 noted the challenging transition required from a discard rate of 28% to the 7% de minimis level without significant selectivity improvements. Based on discard rates reported here (32% for Irish vessels and 22.3% for French vessels which is likely to be an underestimate as it is an average of TR1 and TR2 vessels) that observation remains valid.

Data estimating discards and potential de minimis volumes by those vessels subject to the landing obligation in the UK and Irish fleets should be provided. This could be supplied using the template in Section 4.

EWG 16-06 reiterates its note from 2015 that the issues identified in this proposal for a de minimis exemption are to a large extent similar to the TR2 exemption in the Channel so these two exemptions could be considered together.

Overall a significant amount of additional information was provided which addressed most of the outstanding issues. However, it is difficult to analyse and compare the data provided in the four supporting documents. In some cases data sources were unclear and whether discard volumes were from entire Member State fleets or just those fleet segments subject to the landing obligation was not well specified. Also some documents have aggregated discard data between TR1 and TR2 or across all regions which makes it difficult to extrapolate discard rates specifically relevant to

each of the three exemptions. The proposed template for additional information outlined in Section 4 should help in addressing these issues.

8.2. NWW – 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 NWW Joint Recommendations (restricted to new or re-assessed exemptions)

Country	*Exemption applied for (species, area, gear type)**	*Fishery Description (mesh size + area)*	*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 (only UK vessels involved)	*Sole below mcrs – bottom trawls with a mesh size of 80-99mm in the South Eastern trawl fishery within 6 nautical miles of the English coast in ICES Area VIId*	*Target*	*52 vessels and 19 vessels fishing in both VIId and IVc*	*38 tonnes*	*1.6 tonnes*	*40 tonnes*	*1% of the total catch; 4% of the total sole catch*	*51%*

8.2.1.High survivability exemption for common sole under mcrs caught by trawls with a 80-89mm mesh size in ICES division VIId

Background

In the context of the landing obligation for the demersal fisheries, an exemption on the basis of high survivability is requested for sole under mcrs caught by 80-89mm otter trawl gears (in ICES area VIId.

The basis for this exemption is a CEFAS study (Santos el al., 2016) on the survival of discarded sole in the English east coast inshore otter trawl fishery was provided. EWG 16-06 notes this is a draft report.

EWG 16-06 notes that the information on the fishery is provided in both the JRs for the NWW and also for the North Sea. EWG 16-06 assumes this is essentially the same fishery and has therefore combined the information from both JRs for its evaluation of the exemption request.

EWG 16-06 observations

This exemption is based on the same survival studies as for the exemption for sole in the North Sea. The same comments apply as under section 7.2.3.

9. 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). This discard plan is valid until 31 December 2018. A new set of joint recommendations for the South Western Waters have been submitted by the regional group of Member States that updates the existing discard plan. It covers demersal fisheries for sole, hake and *Nephrops*. The JR for SWW also proposes to include several more species/fisheries under the landing obligation for 2017. The targeted gillnet fishery (>200 mm mesh size) for anglerfish in all areas in SWW is included while the threshold for hake caught by trawlers (>70 mm in areas VIIIc and IXa) is lowered from 10% and 10 tonnes to 5% and 5 tonnes annually. The 2016 thresholds for gillnetters (10% and 10 tonnes) and hook and line fisheries catching hake are discontinued so all vessels are included 2017. The main elements of the JR and which of these have been assessed by EWG 16-06 are summarised in table 9.1.

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

Elements	Status (i.e. Existing, Existing but re-assessed on basis of new information, New)
De Minimis	
Common sole caught in gillnets and trammel nets in the Channel and the Celtic Sea	Existing
Common sole caught with beam trawls and bottom trawls in directed fishery in ICES subareas VIIIa,b	Existing
Hake caught with trawls in directed fisheries in ICES subareas VIII and IX	Existing but re-assessed on basis of new information*
High Survivability	
Nephrops caught with trawls in ICES subareas VIII and IX	Existing but re-assessed on basis of new information*
Minimum conservation reference size	
Horse mackerel in ICES VIIIc and IXa	New**
Technical Conservation Measures	
None	NA

* Indicates elements assessed by EWG 16-06

** Included under as a revision to the Discard Plan for Pelagic Fisheries in the South Western Waters (See section 8.3)

9.1. SWW – Proposals for de minimis exemptions

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

Table 9.1.1 Summary of de minimis exemptions as submitted for the SWW (restricted to new or re-assessed exemptions)

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****	***Estimated catch***	***Discard rate***	***Estimated de minimis volumes***
Spain *(no information for other countries)*	*Hake - pair bottom trawls with a mesh size of greater than 100mm in ICES divisions VIIIabde*	*Target*	*4 vessels (unclear as to whether all vessels are under the landing obligation)*	*1770 tonnes (Not clear if this relates only to these vessels)*	*498 tonnes (Not clear if this relates only to these vessels)*	*2268 tonnes (Not clear if this relates only to these vessels)*	*22%*	*No estimate supplied*
	Hake – pair bottom trawlers with a mesh size of at least 55mm targeting pelagic and demersal species in ICES division VIIIc	*Bycatch*	*Number of vessels not supplied*	*No information supplied*	*No information supplied*	*No information supplied*	*7% (when targeting blue whiting)*	*No estimate supplied*
	Hake – bottom trawlers with a mesh size of at least 70mm targeting demersal species in ICES divisions VIIIabde	*Bycatch*	*7 vessels (unclear as to whether all vessels are under the landing obligation)*	*2558 tonnes (Not clear if this relates only to these vessels)*	*3625 tonnes (Not clear if this relates only to these vessels)*	*6183 tonnes (Not clear if this relates only to these vessels)*	*58%*	*No estimate supplied*
	Hake – bottom trawlers with a mesh size of at least 70mm targeting cephalopods and demersal species in ICES divisions VIIIabd	*Bycatch*	*7 vessels*	*938 tonnes (Not clear if this relates only to these vessels)*	*1386 tonnes (Not clear if this relates only to these vessels)*	*2324 tonnes (Not clear if this relates only to these vessels)*	*58%*	*No estimate supplied*

9.1.1.De minimis exemption of the landing obligation for hake caught by bottom trawlers in directed fisheries in ICES subareas VIII and IX

Background

The JR states that a de minimis exemption of 7% is requested for hake (*Merluccius merluccius*) of the total annual catches made by bottom trawlers in directed fisheries in ICES subareas VIII and IX for 2016 and 2017, and 6% for 2018 and by 5% thereafter.

The formal basis for the proposal is difficulties to improve selectivity as well as disproportionate costs of, and the de minimis applies to all of the fishing segments identified in the landing obligation.

The current discard plan states that, Member States having a direct management interest in south-western waters shall submit, by 1 May 2016, additional scientific information supporting the exemption. This information should include additional discard data and any other relevant scientific information supporting the exemption. The Scientific, Technical and Economic Committee for Fisheries (STECF) shall assess the provided scientific information by 1 September 2016.

The review focuses on the additional information provided to EWG 16-06 relating to the following fleet segments (more detailed information can be found in the EWG 15-10 report):

1. Pair bottom trawl (PTB_DEF≥100) targeting hake in the Bay of Biscay in VIIIabde
2. Pair bottom trawl targeting pelagic and demersal species (PTB_MPD_≥70) in VIIIc
3. Bottom otter trawler targeting demersal species in the Iberian wasters (VIIbde) (OTB_DEF_≥70)
4. Bottom otter trawlers targeting cephalopods and demersal species (OTB_MCF_>=70) in the Bay of Biscay (VIIIabde)

The additional information submitted with the joint recommendation consisted of five annexes. Annex I describes definitions for some of the involved stocks, II definitions of management units, III a new selectivity study, IV disproportionate costs and annex V handles safety on board. The annexes generally seem to be based on representative data and sound scientific studies.

EWG 16-06 Observations

This is a highly complex de minimis exemption and it is still unclear to EWG 16-06 to which fisheries the exemption applies. The information supplied relating only to the Spanish fleet is provided. However, the Member States argue that this information is representative of the operational conditions of the vessels in the SWW area. It is also pointed out that the SWW group decided to divide the burden of researching specific issues relating to the exemptions sought for the region. There is no specific information for other fleets from France and Portugal that may avail of this exemption for this reason. The catch information supplied is unclear and no estimate of the level of de minimis is provided. EWG 16-06 suggest that the Member States involved in this fishery and wishing to avail of this exemption should complete the template provided in Section 4.

New selectivity experiments were reported for the fleet using pair bottom trawls >100 mm. In these experiments, 86 and 100 mm square mesh panels (SMP) where used. Results and observations indicated that hake escapement through the panels is relatively low. This result is attributed to a sluggish swimming behaviour of the species inside the trawl (revealed in video recordings), thus preventing the fish from reaching up to the panels (installed on the dorsal side of the net, just before the codend). Catch comparisons, however, indicated a slight improvement in hake selectivity, as escapement of fish below mcrs (unwanted catch) was found to be 11.2%, whereas the escapement of fish larger than the mcrs (wanted catch) was estimated to be 7.5%. The loss of hake > 27 cm was reported as problematical in the joint recommendation which also reported that further studies are planned to assess the economic impact of these changes of the

fishery. The information supplied does not demonstrate selectivity is very difficult to achieve in these fisheries.

To further investigate technical alternatives to improve selectivity for hake, by increasing the contact level of hake with the SMP, several solutions are proposed:

- physical devices within the net that lead the fish to the SMP
- increase the surface area of the SMP and/or increase their number (side panels and/or a panel in the lower plan)
- mount a "tube section" manufactured in square mesh in the extension piece previous to the codend
- use visual stimuli (contrast and colour of the SMP netting and the surrounding area, luminescent netting material) which have shown to trigger escapement behaviours in some species

EWG-16-06 notes that the new experiments were conducted for the directed hake fleet using pair trawls with mesh sizes > 100 mm which currently have the lowest estimated discard levels (6-7%) according to the supplemented data on involved fleets and their catches and discards. Hake discard rates for the different fleets cover a wide range between 6% and nearly 60% of the annual hake catches. The highest discard rates are obtained with the most multi-specific demersal trawls (<100 mm mesh size), targeting a mixture of fish and invertebrates. These appear to be the most numerous in SWW according to the additional data on fleets and discards and taking into account French and Portuguese vessels. EWG 16-06 notes that a reduction from current discard rates seems reachable for the large mesh trawlers but will be challenging for the mixed demersal fleets without significant improvements in selectivity due to the smaller mesh sizes used. Furthermore, significant information is still missing on number of vessels, catches, discards and de minimis volumes already recorded in relation to the different areas (and stocks) inside and outside the landing obligation (due to the 5-10% catch threshold in effect). This could be provided using the template set out in Section 4.

The study on disproportionate costs analysed the potential change in profitability resulting from increased higher selectivity, which increases quality, but also the cost of the effort increase to achieve the same level of catch as in a status quo situation. The modelled change in selectivity was a result of an increased mesh size from 100 mm to 120 mm. The report concluded that after an initial drop (year one), the increase in income from landings is expected to be 2%, while the cost resulting from the increase in effort will increase on average by 4.5%. The study further suggests that the future workload (for hake only) by the landing obligation given the increased selectivity will be negatively impacted by 4.5% (thus assuming that workload is proportional to fishing effort). The study seems to imply a status quo economic return with an added 4.5% personal workload commitment of the crew. EWG 16-06 notes that the increased selectivity modelled in the economics study is not directly comparable to any of the selectivity studies performed to date. The economic analyses are based on a change in the mesh size from 100 to 120mm, whereas the selectivity studies were conducted with SMP in 100 mm codends. The conditions are therefore not directly comparable. The study on disproportionate costs appears to be a valid approach for evaluating the landing obligation for a particular fleet, but would be strengthened if populated with empirical data. EWG 16-06 is unable to assess whether the increased time (as effort or workload) estimated represents a disproportionate cost.

The safety on board study, analyses the effect of the additional workload implied by the landing obligation (fully implemented and not exclusively related to the de minimis for hake). It does not analyse the effect of possible selectivity measures in the same way as the economic study does. This study concludes that the additional workload for most landing obligation scenarios is unmanageable, and that at *status quo* the workforce matches current workload. As the scenarios evaluated are much broader than the proposed hake de minimis (full implementation of all species), EWG 16-06 consider the study to be largely irrelevant as justification for this exemption.

EWG 16-06 notes that while some relevant information has been presented to demonstrate that increases in selectivity to reduce catches of hake below the 27 cm are in fact difficult to achieve, this information does not appear to relate to all of the fleet segments covered by the exemption. EWG 16-06 also concludes that due to the limited and largely qualitative information presented in relation to the defined management units, it is still not currently possible to evaluate whether the arguments of disproportionate costs are well founded.

9.2. SWW- Proposals for survivability exemptions

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

Table 9.2.1 Summary of high survivability exemptions submitted as part of the SWW Joint Recommendations (restricted to new or re-assessed exemptions)

Country	*Exemption applied for (species, area, gear type)**	*Fishery Description (mesh size + area)*	*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*
France (No information supplied for other Member States)	*Nephrops – trawls with a mesh size greater than 70mm in ICES subareas VII and IX*	*Target*	*No information supplied*	*No information supplied*	*No information supplied*	*No information supplied*	*No information supplied*	*51%*

9.2.1.High survivability exemption for Nephrops caught with trawls in ICES subareas VIII and IX

Background

The first phase of the discard plan implemented by Commission Delegated Regulation (EU) No 2015/2439 included an exemption from the landing obligation for *Nephrops* caught in ICES subareas VIII and IX with trawls on the basis of demonstrated high survivability.

This regulation states that, Member States having a direct management interest in southwestern waters shall submit, by 1 May 2016, additional scientific information supporting the survival exemption. This information should include further studies to demonstrate the survival of *Nephrops* until a few days for a longer period after release. The Scientific, Technical and Economic Committee for Fisheries (STECF) shall assess the provided scientific information by 1 September 2016.

In the discard plan for 2017 prepared by the Member States, there is a new joint recommendation that includes supporting evidence for this high survivability exemption. EWG 15-10 considered that further experiments with extended observation periods (10-15 days) would be required to provide a more robust estimate of captive discard survival. Additional data have been submitted and is assessed by EG 16-06 below.

EWG 16-06 focused on the additional information provided with the joint recommendation, more detailed information can be found in the EWG 15-10 report.

EWG 16-06 Observations

The additional information submitted to EWG 16-06 consisted of four scientific annexes; two of them on survival experiments, one on a tagging programme and a paper dealing with simulations of the landing obligation effect on *Nephrops* stock biomass. Additional information is also provided on Portuguese *Nephrops* fisheries and a new French national legislation text for the *Nephrops* fleet relating to the handling of *Nephrops* on board vessels.

EWG 16-06 notes that the new information provided by the SWW Member States does not include any new results on survival experiments with longer observation period of captive animals (one of the annexed papers presents the same data that was evaluated by EWG 15-10). EWG-16-06, however, notes that experiments with longer captive periods (14-15 days) are currently ongoing. A first experiment was performed during April and results will be available by late June 2016. The planned survival experiments during 2016 include two more experimental phases in July and September. In addition, the outline and some initial qualitative results from a tagging programme with 6000 tagged *Nephrops* was enclosed in a report. EWG 16-06 considers the tagging study to be relevant but will likely not produce valuable survival estimates for some years to come.

The supporting information also includes a study conducted by IFREMER based on a theoretical assessment method presented by EWG 13-23 on the impact of landing surviving discards on stock biomass was included. The study concluded that the landing obligation for *Nephrops* in the Bay of Biscay will lead to an increase of fishing mortality of around 8 to 10% and decrease the spawning biomass and landings by around 12 to 14% based on a survival rate of 30-55%. The statement underpinning this conclusion is that applying the landing obligation to a species for which the survival rate is above zero will lead to an increase in the fishing mortality for this species. Moreover, if the dead catches first increase (because the discards which would have survived no longer do) then the landings ("wanted bycatch ") and the spawning biomass decrease. EWG 16-06 notes that the choice of discard survival rates used in the modeling exercise is central for the outcomes of fishing mortality, future stock size and landings. As the survival rate for the fisheries in the area is currently uncertain the effects on the stock need to be interpreted cautiously.

In a letter dated 5th of august 2015, the Commission encouraged SWW Member States to improve onboard equipment that would increase the survivability of *Nephrops* discards and that "such arrangements may be an important element in the process of reviewing the exemption". In this context, a French national regulation published on the 7th May 2016 (JORF nº0106) makes it mandatory for vessels owning a national *Nephrops* license to implement arrangements in order to improve the sorting and releasing of unwanted catches (sorting tables and chute system equipment). The aims of that equipment are to:

- reduce physical damage due to compression during the sorting process;

- permit the rapid release of unwanted animals during the sorting process.

Some vessels have already introduced this equipment and other vessels will be progressively equipped from the 1st of June 2017.

EWG 16-06 notes that the improvement of catch handling facilities is likely to increase the survival probability of discarded *Nephrops* but also stress that many other factors are known to affect discard survival. New discard survival estimates based on representative conditions and observations to asymptote survival rate are still needed in order to evaluate survival potential for *Nephrops* in the fisheries involved.

Additional information on historical and current research on *Nephrops* selectivity was also reported. Two initiatives with the participation of the fishermen and scientist are presented in the JR, the "Norway Lobster selectivity" program (2006-2009) and the REDRESSE project (2014-2016). The aim in both initiatives has been to reduce the catch of unwanted *Nephrops* and with that purpose several potential solutions were tested at sea. As a results of one of these initiatives all vessels holding a French *Nephrops* license now have to use one "Norway Lobster device" from the 5 devices tested at sea (semi-rigid bar grid in high position, semi-rigid bar grid in low position, ventral SMP, increased mesh size in the codend (70 mm to 80 mm) or a square mesh cylinder). EWG 16-06 take note of the information provided.

While EWG 16-06 acknowledges that a considerable amount of additional information has been provided, it has not yet been possible to address the main issue raised by EWG 15-10. Until the results of the latest survival experiments are available EWG 16-06 cannot carry out any further evaluation.

9.3. SWW Pelagic discard plan - Proposal for changes in the minimum conservation reference size (mcrs) of horse mackerel

Background

The joint recommendation of the South Western Waters group for pelagic fisheries includes a proposal for an adjustment to the minimum conservation reference size (mcrs) for horse mackerel in pelagic fisheries in ICES VIIIc and IXa and the traditional Xávega beach seine fisheries in Portugal which have ethnographical value. This JR amends the current discard plan contained in (Commission Delegated Regulation (EU) 1394/2014). The current mcrs is 15 cm length and the proposal is for a (restricted) reduction to an MCRS of 12 cm length in ICES VIIIc and IXa and the abolishment of the mcrs for the Xávega beach seine fisheries in Portugal. The JR proposes to restrict the catches of horse mackerel between 12 and 15 cm to a maximum of 5 % of the total Spanish and Portuguese quota, in ICES VIIIc and IXa respectively. From that 5 %, 1% would be deducted from the Portuguese quota to limit catches below 12 cm in the Xávega fishery.

The formal basis for the proposal is that until now these specifications have been annually included in the TAC and quotas regulations according to the following footnote: *"Of which, notwithstanding Article 19(3) of Regulation (EC) Nº 850/98 (1), no more than 5 % may consist of horse mackerel between 12 and 15 cm. For the purposes of the control of that quantity, the conversion factor to be applied to the weight of the catches shall be 1,20".*

EWG 16-06 Observations

The JR takes into consideration the particularities of the horse mackerel pelagic fisheries in ICES VIIIc and IXa and aims to adapt the pelagic discard plan in order to allow the commercialization of horse-mackerel with less than 15 cm, caught by this fishery. EWG 16-06 notes that the JR has only provided the stock assessment data without the definition of this pelagic fishery. There is no information on the number of vessels involved in this fishery.

The Xávega fishery, is a small artisanal fishery with beach-seiners, involving 49 vessels smaller than 12 m. Horse mackerel catches by Xávega represented 5,5% of Portuguese horse mackerel catches in 2015. Annex B of the JR shows the size frequency distribution of catches in numbers and weight. As the fishery operates near-shore, the catches reflect the size-frequency distribution of the species in the area. The full size-range of horse mackerel from 2 to 45 cm is generally impacted, with a modal length of 15cm. About 47% of the individuals caught are below 15cm and 24% below 12cm. The relative catch weight of the individuals below 15cm is 16%, and of those below 12cm is

3%. EWG 16-06 notes that this fishery would appear to be contrary to the technical conservation measures regulations contained in Regulation (EC) 850/98 which prohibits the landing of fish below the mcrs.

In ICES division VIII (Western stock) the stock is currently above MSY and fishing mortality is below FMSY, according to ICES advice in 2015. In the same year, of the Northeast Atlantic stock for which a 97kT TAC was defined by ICES, only 13,6 kT (less than 15% of the TAC) were allocated to VIIIc. In ICES sub-division IXa (Atlantic Iberian Waters) ICES (2015) considered that the *Trachurus trachurus* stock is inside safe biological limits and since 2012 there has been a significant increase in biomass since 2012 and is slightly above the long-term average. This has led to substantial increases in TAC in the last two years, as a result of the biomass growth. Catches of this stock have been around 60% of the allocated TAC.

In ICES advice 2015, it is further stated, "*the traditional fishery across several fleets has for a long time targeted juvenile age classes. This exploitation pattern combined with a moderate exploitation rate does not seem to have been detrimental to the dynamics of the stock*". The JR reports that the possibility of catching a small proportion of the TAC below 15 cm (5 % has been included since the 90's in the fishing opportunities regulation for ICES divisions VIIIc and IXa), has no impact on the stock. On this basis EWG 16-06 understands that limiting the individuals between 12 and 15 cm to 5 % of Portuguese and Spanish quotas would not necessarily modify the historical exploitation pattern of the stocks.

The JR, in Annex A, contains some documentation on proportions of each length class of horse mackerel in commercial categories but only for the Portuguese fleets. The background documentation indicates that the cohort or school of horse mackerel varies between 11 and 19 cm (CI 95 %), with a mode of 15 cm. The proportion of individuals below 15 cm in that length group exceeds 40 %, with most individuals between 12 and 14 cm. EWG 16-06 notes that it is not possible to estimate the proportion of the smallest commercial category compared to the rest of the size categories. EWG 16-06 also notes that Spanish length class data is lacking.

An important consideration when proposing reductions or abolishment of mcrs is whether there is a risk that juveniles will no longer be protected and that reproductive capacity will be impaired. Length at first maturity for horse mackerel in the Bay of Biscay is reported to be between 16 and 25 cm, most commonly around 21 cm (Fishbase[5]). Males mature at smaller lengths than females. Given that the proposed reduction in mcrs would make it below the L50 maturity sizes, EWG 16-06 considers that the risk to the population could be noticeable if any increase in mortality of smaller individuals (<15 cm) from current levels would result in lower FMSY values and therefore reduced yields. However, the JR from the SWW Group considers establishing a limit of 5% of Portuguese and Spanish quotas for individuals between 12 cm and 15 cm in order to prevent any change to the exploitation pattern which has been stable for at least 20 years. EWG 16-06 therefore assess the the risks associated with the proposal are limited.

The JR considers the abolishment of the mcrs for the Xávega fishery in Portugal under the basis that this fishery takes approximately between the 5 and 6 % of the horse mackerel catches of the country. Out of this, 3 % (60 tonnes in 2015) correspond to individuals <12 cm. EWG 16-06 understands from the JR that the SWW Group considers establishing a limit of a maximum of 1 % of the total Portuguese quota for catches below 12 cm. tis would equate to 508 tonnes in 2016. EWG 16-06 is unable to assess whether targeting juveniles at this level of exploitation will have any detrimental effect on the dynamics of the stock, but notes that this is a fishery that has been operating during a long time. The proposal is not likely to change the historical exploitation pattern of the stock.

The JR notes that all these fisheries are obliged to sell catches through auctions. Information on the gear used, species and catch sizes are recorded routinely, which allows monitoring of compliance by the authorities and decreases the likelihood of overshooting the quota. EWG 16-06 notes that the additional control burden created by having three different size limits (>15 cm; 12-15 cm and <12 cm) appears challenging. The creation of legal markets for juveniles may create an incentive for illegal landings of fish smaller than the mcrs for human consumption over and above

[5] http://www.fishbase.org/Summary/SpeciesSummary.php?ID=1365&AT=horse+mackerel

the proposed limits. If all these levels of mcrs are not controlled properly, then the mortality of immature fish could be underestimated and therefore future yields reduced.

10. MEDITERRANEAN

Background

Joint recommendation from the Mediterranean Advisory Council (MEDAC) on discards plans for species defining the fisheries in the Adriatic (HR, IT, SL), Western Mediterranean (FR, IT, SP) and South/East Mediterranean (CY, GR, IT, MT) was provided to EWG 16-06. EWG 16-06 notes that this document (hereafter referred to as 'MEDAC proposal') was not yet approved by the relevant Member States. Therefore it was treated as a working document and not considered as formal joint recommendation for demersal fisheries in the Mediterranean as it did not emanate from the Member States in the region.

The main scope of the MEDAC proposal is to request de minimis exemptions from the landing obligation as follows:

- All geographical areas: hake (*Merluccius merluccius*) - red mullet (*Mullus* spp.)
- GSA 17- GSA 18: hake (*Merluccius merluccius*) - red mullet (*Mullus* spp.) - common sole (*Solea solea*)
- GSAs 15, 16, 19, 20, 22, 23, 25: hake (*Merluccius merluccius*) - red mullet (*Mullus* spp.) - deepwater rose shrimp (*Parapenaeus longirostris*)

EWG 16-06 Observations

The MEDAC proposal consists of a number of elements which the Expert group addressed in turn.

10.1. General Description

10.1.1. Geographical scope

The MEDAC proposal has adopted a sub-regional approach, whereby three distinct areas have been identified, namely western Mediterranean (GSAs 1, 2, 5-12), Adriatic Sea (GSAs 17, 18), and Central-Eastern Mediterranean (GSAs 15, 16, 19, 20, 22, 23, 25). EWG 16-06 notes that this categorisation excludes other Mediterranean GSAs where the EU fleet is also known to operate. For example, according to information provided within the proposal, the Cypriot fishing fleet operates also in GSAs 13, 14, 21 and 26 which are not mentioned in the "Geographical Scope" section of the MEDAC proposal. Other EU fishing fleets are also known to operate in both these four GSAs and in other southern Mediterranean GSAs (e.g. GSAs 3 and 4), which are also not mentioned in the MEDAC proposal.

10.1.2. Species identification, statistical data and MS involved

The de minimis exemption put forward for the 3 Mediterranean areas in the MEDAC proposal are (i) hake and red mullet in the Western Mediterranean Sea, (ii) hake, red mullet and sole in the Adriatic Sea, and (iii) hake, red mullet and deepwater rose shrimp in the Central-Eastern Mediterranean Sea (see Tables 23-25 from the MEDAC proposal below).

TABLE 23: DE MINIMIS EXEMPTION - WESTERN MEDITERRANEAN SEA (FR, IT, SP)

	2017		2018		2019	
	Trawlers	Gillnets	Trawlers	Gillnets	Trawlers	Gillnets
Hake**	5+2	1	5+2	1	5+1	1
Red Mullet	5+2	1	5+2	1	5+1	1

**Longlines 0 de minimis

TABLE 24: DE MINIMIS EXEMPTION – ADRIATIC SEA (HR, IT, SI)

	2017			2018			2019		
	Trawlers	Gillnets	Rapido	Trawlers	Gillnets	Rapido	Trawlers	Gillnets	Rapido
Hake**	5+2	1	1	5+2	1	1	5+1	1	1
Red Mullet	5+2	1	1	5+2	1	1	5+1	1	1
Sole	3	0	5	3	0	4	2	0	3

**Longlines 0 de minimis

TABLE 25: DE MINIMIS EXEMPTION – CENTRAL-EASTERN MEDITERRANEAN SEA (CY,GR,IT,MT)

	2017		2018		2019	
	Trawlers	Gillnets	Trawlers	Gillnets	Trawlers	Gillnets
Hake**	5+2	1	5+2	1	5+1	1
Red Mullet	5+2	1	5+2	1	5+1	1
Rose shrimp	5+2	NA	5+2	NA	5+1	NA

**Longlines 0 de minimis

*Members States will proceed to define the level of their respective de minimis percentage according to their national level of reported discards

With regards to the species covered, EWG 16-06 notes that the MEDAC proposal states that:

"*The species with a minimum landing size in the Mediterranean that are subject to the landing obligation from January 1, 2017, pursuant to art. 15 point 1b, proved especially difficult: several attempts, also using the STECF document (Landing Obligation - Part 6 (Fisheries targeting demersal species in the Mediterranean Sea) (STECF-15-19), did not produce adequate results for the drafting of a plan. These issues were discussed in two MEDAC sessions, precisely at Almeria and Split. The solution was found, thanks to the Member States involved according to the geographical division described under chapter 3. The target species that define the fisheries have been identified following their commercial value and amount of landings registered in the DCF.*"

EWG 16-06 notes that no details on the reasons why the STECF 15-19 report "did not produce adequate results" for drafting the discard plan are provided in the MEDAC proposal. Based on information available on the MEDAC website (coordinator presentation given at WG1: Discards (demersal fisheries) - Split 2016), it appears that MEDAC considered the approach taken by STECF 15-19 to be too specific: "*STECF in the report define fisheries in a very specific way, i.e. as an aggregation based on combination of area (GSA and Country); fisheries or métier (species complex, gear and vessel characteristics); and gear*". The same presentation includes a "Descriptive fiche to help with the identification of the species and the fisheries subject to the landing obligation as from 2017", which proposes to focus on (1) Definition of the geographical scope by sub-regional approach rather than the single GSA approach, (2) Identification of the main fisheries in terms of target species: "*For example, demersal fisheries of the shelf and upper slope (i.e. fisheries for hake, red mullet and Norway lobster)",* (3) Identification of the main gears for each fishery, and (4) Quantification of the discard ratio. EWG 16-06 notes that the MEDAC proposal states that the "*solution was found, thanks to the Member States involved according to the geographical division described under chapter 3*" and that "*the target species that define the fisheries have been identified following their commercial value and amount of landings registered in the DCF*".

Since STECF 15-19 also identified target species that define the fisheries based on commercial value and amount of landings registered in the DCF, EWG 16-06 revisited the work done during EWG 15-19 in order to identify the main species defining fisheries at the spatial aggregation level used by MEDAC (i.e. the Western Mediterranean Sea, (ii) the Adriatic Sea, and (iii) the Central-Eastern Mediterranean Sea). Table 10.1.2.1 lists the species that are driving trawl and set gear fisheries in the three areas considered in the MEDAC proposal, both in terms of landing value and landing weight. Although hake and red mullet are unambiguously the most important target species

for most fisheries, other taxa/species such as for example *Nephrops norvegicus*, *Pagellus* spp. *Diplodus* spp. and *Sparus aurata* also define fisheries in some GSAs, especially in Western Mediterranean. It is not clear why these species were not considered by MEDAC.

Table 10.1.2.1 Occurrence of the main species defining the Mediterranean fisheries

	VALUE OF LANDINGS						BIOMASS OF LANDINGS					
	Adriatic		South/east Med		West Med		Adriatic		South/east Med		Western Med	
SPECIES	SET GEARS	TRAWL	SET GEARS	TRAWL	SET GEARS	TRAWL	SET GEARS	TRAWL	SET GEARS	TRAWL	SET GEARS	TRAWL
Chamelea gallina	0	1	0	0	0	0	0	2	0	0	0	3
Dicentrarchus labrax	1	0	0	0	4	0	0	0	0	0	3	0
Diplodus spp	1	0	2	0	7	0	1	0	3	0	7	0
Merluccius merluccius	**1**	**5**	**7**	**6**	**11**	**14**	**0**	**0**	**0**	**1**	**0**	**2**
***Mullus* spp**	**2**	**3**	**10**	**7**	**13**	**13**	**1**	**5**	**10**	**9**	**12**	**21**
Nephrops norvegicus	0	4	1	0	0	12	2	4	11	8	11	12
Pagellus spp	2	0	7	0	9	3	0	3	0	1	0	3
Pagrus pagrus	0	0	3	0	3	0	1	0	8	3	13	4
Parapenaues longirostris	0	3	**0**	**7**	0	5	0	0	**3**	**0**	4	0
Pectinidae	0	1	0	0	0	0	0	3	0	9	0	8
Sardina pilchardus	0	0	1	0	0	0	0	0	1	0	0	0
Scomber spp	1	0	2	0	0	0	1	0	2	0	0	1
Solea solea	**4**	**1**	2	0	7	1	**4**	**0**	2	0	3	1
Sparus aurata	3	0	4	1	8	1	3	0	4	1	8	0
Trachurus spp	0	0	1	0	0	1	1	1	5	1	5	10

The species selected are subject to mcrs as defined in Annex III of Regulation (EU) 1967/2006 (the MEDREG) and fall within the 75% cumulative percentage of landing value or biomass. Species considered in the MEDAC proposal are highlighted in bold. Values in the cells relate to the number of fisheries identified according to gear type and area as described in STECF 15-19.

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'*.

10.1.3. Biological data of the species involved

The proposal contains a brief overview of the biology and distribution of each of the species in the proposed discard plan.

The Expert Group notes that the MEDAC proposal lists "red mullet" as one of the species that define the fisheries in all areas (western Mediterranean, Adriatic Sea, central-eastern Mediterranean) and gears (trawlers, gillnets, Rapido) examined. Also, a de minimis exemption has been requested for "red mullet" for all Mediterranean sub-regions and gears.

EWG 16-06 notes that STECF 15-19 report grouped red mullets at genus level as *Mullus* spp. due to the common mcrs in Annex III of Regulation (EC) 1967/2006, and that the MEDAC proposal also uses "red mullet" to describe two distinct species, namely *Mullus barbatus* and *M. surmuletus*, for which joint de minimis exemptions have been requested. However these two species have different morphology (*M. surmuletus* grows bigger than *M. barbatus*) and behaviour, and they also have different contributions to the catches of different gears (*M. barbatus* is more dominant in trawl catches while *M. surmuletus* in gillnet/trammel net catches). Due to these differences, changes in gear selectivity and/or changes in the spatiotemporal allocation of fishing effort would affect the

two species differently. EWG 16-06 considers that the two species should be treated separately in discard plans since they are usually exploited by different fisheries.

10.1.4. Composition of catches, landings and discards – Country by Country overview

The MEDAC proposal presents an overview of the fleets from each Member State operating in each of the geographical regions identified in the plan together with recent information on fleet composition and capacity, landings and discards of the species included in the plan. Discards data are summarized in table 10.1.4.1 for each of the three areas identified by the MEDAC proposal.

Table 10.1.4.1 Minimum and maximum discard rates (%) for the species defining the fisheries proposed in the draft joint recommendation on discard management for the Mediterranean Sea, for which a de minimis exemption has been asked by MEDAC.

In bold are the discard values higher that the de minimis exemptions asked by MEDAC

	WESTERN		CENTRAL-EASTERN		ADRIATIC SEA	
	Trawl	Set gears	Trawl	Set gears	Trawl	Set gears
Merluccius merluccius	3.6-**20.8**	0-**4.9**	3.0-5.7	**5.5**	3.8-**15.7**	0
Mullus barbatus	2.2-**14.7**	**1.4-1.8**	0.1-2.2	**3.1**	1.6-**13.1**	**3**
Mullus surmuletus	1.0-**10.3**	1.0-**3.0**	0	0	0	**4.5**
Parapenaeus longirostris			6.1	0		
Solea solea					1.3	**0.5-2.4**

Area-specific observations based on Table 10.1.4.1 are as follows:

In the Western Mediterranean, discard rates show a high variability among GSAs, in particular for trawls, for which the highest values far exceed the de minimis exemption asked by MEDAC. Similarly, catches of set gears include discard rates slightly higher than the de minimis exemption asked by MEDAC.

In the Central and Eastern Mediterranean discard rates are generally low for all the target species, and lower than the de minimis exemptions proposed by MEDAC for all species caught with trawl, but slightly higher for hake and red mullet caught with set nets.

In the Adriatic Sea, discard rates show high variability, especially for trawl catches, with the highest values of hake and red mullet exceeding the de minimis exemption asked by MEDAC for these species. Catches of set gears also show discard rates higher than de minimis exemption asked by MEDAC for red mullet, striped red mullet and common sole.

EWG 16-06 notes that discards data in the Mediterranean is only collected for a very limited number of fisheries, and that the number of fishing trips for which discards are monitored in line with DCF requirements is generally low. As such the information presented on discard rates may not in fact represent the true situation in the Western, Central and Eastern Mediterranean and the Adriatic Sea.

10.2. Justification for de minimis exemptions

The discard plan proposed by MEDAC consists of four main elements as identified below.

10.2.1. Technical measures to increase selectivity

The Expert Group notes that the MEDAC proposal states that Member States commit themselves to conduct pilot studies to increase selectivity of all fishing gears with the involvement of the fishermen within 2 years of the approval of the discard plan. While the Expert group agrees that for some species and fisheries such studies may be required, the commitment to undertake such studies does not seem to provide sufficient justification for a de minimis exemption at present. Article 15.5.c.i.of the CFP (Regulation 1380/2013) indicates that a de minimis exemption shall apply where scientific evidence indicates that increases in selectivity are very difficult to achieve. Hence, because at present, no such evidence is presented in support of the proposed exemptions, the justification needs to be based on the provisions of Article 15.5.c.ii, which relates to disproportionate costs of handling.

The Expert Group does note that two recently-funded EU H2020 research projects are examining improvements in selectivity in several EU Mediterranean Member States. These projects are:

- MINOUW (Grant Agreement 634495, REA, duration 2015-2019)
- DISCARDLESS (Grant Agreement 633680, REA, duration 2015-2019)

The Mediterranean EU Member States involved are France, Spain, Italy and Greece. Both projects are being carried out in collaboration with the fishing industry and/or stakeholders and aim to develop user-based innovative tools and strategies to avoid unwanted catches and hence improve selectivity.

Firstly, a range of simple to complex technologies available for real-time video imaging of fish entering the gear is trialled and operationalized. The objective is to support real-time decision making based on information on the presence of unwanted catches before hauling on-board. Specific selectivity experiments in various gears (e.g. trawlers, longliners, purse seiners) have also been planned and are underway.

Secondly, adaptations of strategic and tactical practices as a means to avoid unwanted catches being caught is also been investigated and trialled. Three domains for this work are examined, encompassing bottom-up, collaborative and top-down arenas, where such changes can be made. The bottom-up approach mobilises the vast knowledge of fishermen on how to change their fishing behaviour to modify catches. The approach includes real-time at sea experiments where a number of fishermen are challenged to reduce discard and optimise their catch profiles by their own means. In the collaborative domain, this is combined with available scientific spatiotemporal information on fish distributions, nursery areas and discarding hot spots. This is envisaged to provide additional support to the bottom up domain. Lastly, management options that positively incentivise strategies and tactics to reduce discarding and improve compliance under the top-down domain are planned.

The Expert Group notes that the results from both projects should be able to inform on the ability of the gears under trial to reduce unwanted catches of species subject to the landing obligation.

10.2.2. Spatial-temporal closures

The MEDAC proposal indicates that Member States will commit themselves to identify nursery areas in addition to those already identified within the GFCM, related to the four target species included in the discard management plan. EWG 16-06 notes that in the framework of the MEDISEH project (MEDISEH, 2013) hake and deep water rose shrimp nursery areas have been already identified for the whole EU-Mediterranean, and nursery areas for sole and red mullet have been identified in the Adriatic Sea. Member States should thus focus on identifying nursery areas for red mullet in the Western and Central Eastern Mediterranean, and for striped red mullet in all three areas (i.e. including the Adriatic Sea). The Expert Group notes that fishery-dependent information on the size compositions of catches from different areas of the Mediterranean at different times of the year will provide valuable information on the areas where undersized/juvenile individuals are distributed. Such information is already available for some Member States' fleets.

Some of the identified nurseries are already protected from trawling by the 3nm fishing ban and for hake temporary protection is afforded in the Adriatic by the current closure of Pomo Pit in GSA17. Similarly the three Fisheries Restricted Areas (FRAs) in the northern sector of the Strait of Sicily which were approved by the 40th session of the GFCM Commission, concluded on the 3rd of June 2016, will in future provide protection to important nursery areas for hake and deepwater rose shrimp in GSAs 15 and 16.

EWG 16-06 notes that under Article 15.5.a of the CFP provision is made for Member States to include technical measures such as regulated areas to protect juveniles as part of discard management plans. Sufficient information may already be available to protect additional nursery areas in other parts of the Mediterranean Sea without the need for additional lengthy studies.

10.2.3. Handling costs

EWG 16-06 considers that the rationale presented regarding disproportionate costs of handling storage and transport, in support of the proposed de minimis are valid for certain fisheries and Member States only. However, the Expert Group has no basis to judge whether the costs estimates presented in the MEDAC proposal are realistic and are likely to be representative of the true costs for the respective fisheries.

For many fisheries in the Mediterranean, especially small-scale artisanal fisheries, the volumes of unwanted catches that are taken on individual fishing trips are small. Hence the cost associated with on-board sorting and storage is also likely to be small. However, if unwanted catches are to be stored and transported to central processing facilities for purposes other than human consumption (e.g. fishmeal/pet food plants, on-shore handling, storage and processing cost) from such fisheries are likely to remain disproportionate to any potential revenue that may be gained from such catches. This is especially the case for certain areas of the Mediterranean where there are hundreds of landing sites and thousands of vessels landing only small quantities of unwanted catch on a daily basis. If practical solutions to disposal of such catches at the point of landing on a daily basis can be found, then the associated costs will inevitably be small and the case for a de minimis exemption for small-scale artisanal fisheries on the grounds of disproportionate costs would be weakened.

On the other hand, on-board handling and storage of unwanted catches on larger vessels that undertake fishing trips for several days may incur additional costs and the associated onshore costs of storage and disposal may also be considerable and disproportionate to the revenue that they are likely to receive from such catches.

The Expert Group considers that given the above arguments, and the fact that other taxa/species also define fisheries in some GSAs, especially in Western Mediterranean (see section 10.1.2), a more detailed justification for disproportionate costs should have been presented in the MEDAC proposal. As a minimum the justifications should have made reference to (i) all the relevant species defining fisheries, (ii) information on catch composition of the relevant fisheries, and (iii) a detailed overview of applicable costs in different regions of the Member States based on more comprehensive studies.

In addition, given that the rational for the landing obligation is to encourage changes in fishing behaviour in order to avoid unwanted catches, a common species and area-specific de minimis percentage could remove the incentive to avoid unwanted catches in fisheries that historically have had a discard rate lower than the agreed de minimis.

10.2.4. Monitoring and control

The MEDAC proposal outlines for each relevant Member State, the monitoring and control measures that they propose to put in place. However, EWG 16-06 has no basis to judge whether the proposed monitoring and control measures will be sufficient or effective.

EWG 16-06 notes that the commercialisation of undersized, juvenile fish is of particular concern in the Mediterranean; juvenile fish are traditionally targeted by Mediterranean fishermen since they are popular with consumers and have considerable market value. It is not clear how the monitoring and control measures outlined in the MEDAC proposal will address this particular issue.

11. CONCLUSIONS

The following are the main conclusions of EWG 16-06:

General Observations

1. It remains 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.
2. Some of the exemptions submitted by the regional groups are very much presented as ″national″ rather than regional exemptions. In many cases the definition of the fishery and the justification emanates from one single Member State. EWG 16-06 would encourage regional groups to avoid developing cases for exemptions in isolation in the future. This will help to avoid the Commission having to request addditional information and clarifications on which fleets the exemptions should apply. It will also make it much easier for STECF to evaluate these proposals.
3. STECF have consitently proposed that the justification for de minimis exemptions is largely economic. In this respect, STECF has advised that the 'current revenue to break even revenue ratio economic balance indicator', as used under the Balance and Capacity reporting requirements, could be used as an appropriate method to quantifiably demonstrate the economic consequences of changing selectivity in respect of de minimis exemptions. However, to date none of the Member States groups have used this method in the information supplied to underpin their requests for de minimis exemptions. It is unlikely that this will change because in practice it seems difficult due to a scarcity of fleet specific data. Thus assessing such exemptions will continue to be difficult and STECF will only be able to consider the validity of the supporting information underpinning the exemptions provided without carrying 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.
4. STECF previously have pointed out that the introduction of the landing obligation will by design result in the increased retention of unwanted catches which will increase for example onboard sorting and stowage times as well as necessitate expansion of onshore handling, processing or disposal provisions. There are no obvious ways to define when this issue becomes "disproportionate" in a specific fishery compared to another one. Therefore EWG 16-06 has re-visited this and provided further guidance to Member States on an approach based on an option appraisal methodology to assess this. STECF are requsted to review the approach proposed.
5. Assessing what constiutes high survivability is problematic, which is made more complex by the limited information available and the high variability in the available survival estimates. 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. STECF can continue to assess whether the methodologies employed in carrying out survival experiments are appropriate and the limitations of the results are fully explored, but the decision to accept or reject an exemption proposal based on the survival value presented is for managers to decide.

North Sea

1. For the de minimis exemption for whiting in the JR for the North Sea, EWG 16-06 considers that the assertion that it is difficult to improve selectivity in the short term without incurring loss of marketable catch is supported by the information provided but only for the French fleet. It is not clear from the JR whether the intention is to apply this de minimis to other fleets with whiting bycatch. If this is the intention then information on these fleets including catches, discard rates and reports of any relevant selectivity trials need to be supplied.
2. For the de minimis exemption for sole, haddock and whiting below mcrs in the Northern prawn trawl fishery in the Skagerrak, the assertion that it is difficult to improve selectivity in the short

term without incurring loss of marketable catch is supported by the information provided, accepting that no new information is presented. The volume of de minimis requested is small and therefore provided discarding under the exemption is monitored the impact is likely to be minimal.

3. For the de minimis exmeption for sole, haddock and whiting below mcrs in the *Nephrops* pot fishery in the Skagerrak, the assertion that it is difficult to improve selectivity in the short term without incurring loss of marketable catch is supported by the information provided, accepting that no new information is presented. The volume of de minimis requested is small and therefore provided discarding under the exemption is monitored the impact is likely to be minimal. However, the incidental bycatch rates of haddock whiting and sole in the creel fishery targeting *Nephrops* in Division IIIa are likely to be fishery-specific. Hence appropriate de minimis percentages for any future proposals for exemptions from the landing obligation for finfish in creel fisheries in other sea areas will need to be assessed on a case by case basis.
4. For the high survivability exemption for *Nephrops* caught with trawls fitted with selective grids in the North Sea, further work is suggested to allow assessment of whether the observed survival rates are typical of other periods in the year (e.g. conducted during a period of warmer weather, during the late summer), where there is a greater difference in ambient air and water temperature. It may be appropriate to await the outcome of late summer experiments so that the results can be taken into account in deciding whether survivability of *Nephrops* is to be considered sufficiently high relative to the discard rate and whether to grant the proposed high survivability exemption on such grounds.
5. For the high survivability exemption for *Nephrops* caught with trawls fitted with a sorting grid or a SELTRA panel in the Skagerrak, the observed average survival rates of 55% for the grid trawl and 46% (from the two studies) for the SELTRA trawl are similar to the observed survival rates for *Nephrops* in other captive survivability studies. The Expert Group is unable to determine whether the survival rates can be considered as high.
6. For the high survivability exemption for sole for inshore trawlers operating within 6 nautical miles of the coast further research during the peak season in July-September and also in fishing depths, conditions, and fishing areas that meet those of the fishery for which the exemption is requested would be desirable. Along with the currently provided study, it will provide a more complete picture of sole survivability caught in this fishery. It may be appropriate to await the outcome of the further research results so that new results can be taken into account when deciding to grant the proposed high survivability exemption in this specific fishery. It is also important not to extrapolate from this study to justify similar exemptions for sole by other fleets. This exemption is based around a specific inshore fishery and therefore any vessels that wish to avail of this exemption should ideally have similar characteristic in relation to size, engine power, gear used, operational parameters and catch volume per haul.
7. Based on a study of the relationship between carapace length and tail length, the proposed tail length of 59mm for *Nephrops* proposed for the Skagerrak would seem appropriate.

NWW

1. For the de minimis exemption for megrim with trawls in Areas VI and VII, little relevant information has been presented to demonstrate that increases in selectivity to reduce catches of megrim below 24cm are in fact difficult to achieve or that the costs of handling and sorting such catches are disproportionate. Due to the limited information presented, it is not currently possible to evaluate whether the arguments on either conditionality is well founded.
2. For the three de minimis relating to whiting caught with trawls in the Celtic Sea and English Channel, overall a significant amount of additional information was provided which addressed most of the outstanding issues. However, difficulties remain in analysing and comparing the data provided in the four supporting documents. In some cases data sources are unclear and it not specified in all cases if discard volumes provided are from entire Member State fleets or just those fleet segments subject to the landing obligation. Also some documents have aggregated discard data between TR1 and TR2 or across all regions which again makes it difficult to extrapolate discard rates specifically relevant to each of the three exemptions.
3. For the high survivability exemption for sole for inshore trawlers operating within 6 nautical miles of the coast further research during the peak season in July-September and also in fishing depths, conditions, and fishing areas that meet those of the fishery for which the exemption is requested would be desirable. Along with the currently provided study, it will provide a more complete picture of sole survivability caught in this fishery. It may be appropriate to await the

outcome of the further research results so that new results can be taken into account by managers when deciding to grant the proposed high survivability exemption in this specific fishery. It is also important not to extrapolate from this study to justify similar exemptions for sole by other fleets. This exemption is based around a specific inshore fishery and therefore any vessels that wish to avail of this exemption should ideally have similar characteristic in relation to size, engine power, gear used, operational parameters and catch volume per haul.

SWW

1. For the de minimis exemption for hake in various trawl fisheries in the Bay of Biscay and Iberian coast, while some selectivity information has been presented, EWG 16-06 does not consider that this demonstrates that increases in selectivity to reduce catches of hake below the 27 cm are in fact difficult to achieve. In addition this information does not appear to relate to all of the fleet segments covered by the exemption. Due to the limited and non-quantitative information presented in relation to the defined management units, it is still not currently possible to evaluate whether the arguments of disproportionate costs are well founded.
2. For the high survivability exemption for *Nephrops* in trawl fisheries in the Bay of Biscay, while a considerable amount of additional information has been provided, the main issue raised by EWG 15-10 realting to the experimental period has not been addressed. Until the results of the latest survival experiments are available it is not possible to carry out any evaluation.
3. The proposal to adjust the minimum conservation reference size (mcrs) for 5% of the horse mackerel catch in pelagic fisheries in ICES VIIIc and IXa and the traditional Xàvega fishery in southern waters is quite complex. For the Xàvega fishery a detailed description is provided for the other pelagic fisheries less information is provided. ICES advice suggests that limiting the individuals between 12 and 15 cm to 5 % of Portuguese and Spanish quotas would not modify the historical exploitation pattern of the stocks. The risks associated with the proposal are limited. EWG 16-06 notes that the additional control burden created by having three different size limits (>15 cm; 12-15 cm and <12 cm) appears challenging. The creation of legal markets for juveniles may create an incentive for illegal landings of fish smaller than the mcrs for human consumption over and above the proposed limits. If all these levels of mcrs are not controlled properly, then the mortality of immature fish could be underestimated and therefore future yields reduced.

Mediterranean

1. 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'.
2. Although hake and red mullet are unambiguously the most important target species for most demersal fisheries in the Mediterranena, other taxa/species such as for example *Nephrops norvegicus, Pagellus spp. Diplodus spp. and Sparus aurata* also define fisheries in some GSAs, especially in the Western Mediterranean. It is not clear why these species were not considered by MEDAC.
3. STECF 15-19 report grouped red mullets at genus level as Mullus spp. due to the common mcrs in Annex 3 of EC 1967/2006, and the MEDAC proposal also uses "red mullet" to describe two distinct species, namely *Mullus barbatus* and *M. surmuletus*, for which joint de minimis exemptions have been requested. However, these two species have different morphology (*M. surmuletus* grows bigger than *M. barbatus*) and behaviour, and they also have different contributions to the catches of different gears (M. barbatus is more dominant in trawl catches while *M. surmuletus* in gillnet/trammel net catches). Due to these differences, changes in gear selectivity and/or changes in the spatiotemporal allocation of fishing effort would affect the two species differently. The two species should be treated separately in discard management plans since they are usually exploited by different fisheries
4. The MEDAC proposal defines de minimis levels for the different fisheries and in the different GSAs within the Mediterranean. EWG 16-06 notes that some of the de minimis levels proposed exceeds the observed discard rates accepting that the discard rates may not in fact represent the true situation in the Western, Central and Eastern Mediterranean and the Adriatic Sea due to data quality.
5. The MEDAC proposal states that Member States commit themselves to conduct pilot studies to increase selectivity of all fishing gears with the involvement of the fishermen within 2 years of

the approval of the management plan. While the Expert Group agrees that for some species and fisheries such studies may be required, the commitment to undertake such studies does not seem sufficient justification for a de minimis exemption at present. Article 15.5.c.i.of the CFP (Regulation 1380/2013) indicates that a de minimis exemption shall apply where scientific evidence indicates that increases in selectivity are very difficult to achieve. Hence, because at present, no such evidence is presented in support of the proposed exemptions, the justification needs to be based on the provisions of Article 15.5.c.ii, which relates to disproportionate costs of handling.

6. In the framework of MEDISEH project hake and deepwater rose shrimp nursery areas have been already identified for the whole EU-Mediterranean, and nursery areas for sole and red mullet have been identified in the Adriatic Sea. Member States should thus focus on identifying nursery areas for red mullet in the Western, Central and Eastern Mediterranean, and striped red mullet for all three areas (i.e. including the Adriatic Sea). Fishery-dependent information on the size compositions of catches from different areas of the Mediterranean at different times of the year will provide valuable information on the areas where undersized/juvenile individuals are distributed. Such information is already available for some Member States' fleets.
7. The rationale presented regarding disproportionate costs of handling, storage and transport in support of the proposed de minimis is valid for certain fisheries and Member States only. However, it is difficult to judge whether the costs estimates presented in the MEDAC proposal are realistic and if they are representative of the true costs for the respective fisheries. The Expert Group considers that given the above arguments, and the fact that other taxa/species also define fisheries in some GSAs, especially in Western Mediterranean, more detailed justifications for disproportionate costs should have been presented in the MEDAC proposal. As a minimum the justifications should have made reference to (i) all the relevant species defining fisheries, (ii) information on catch composition of the relevant fisheries, and (iii) a more detailed overview of applicable costs in different regions of the Member States based on more comprehensive studies.
8. The MEDAC proposal outlines for each relevant Member State the monitoring and control measures that they propose to put in place. However, there is no basis to judge whether the proposed monitoring and control measures will be sufficient or effective. The commercialisation of undersized, juvenile fish is of particular concern in the Mediterranean; juvenile fish are traditionally targeted by Mediterranean fishermen since they are popular with consumers and have considerable market value. It is not clear how the monitoring and control measures outlined in the MEDAC proposal will address this particular issue.

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14 LIST OF BACKGROUND DOCUMENTS

Background documents are published on the meeting's web site on:
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