

North Sea Advisory Council



NSAC Advice Ref. 02-1516

Implementation of the Landing Obligation

This paper was approved by the NSAC Executive Committee via a written procedure on the 24th February 2016.

1. Summary of the Advice

1.1 In 2015 the Scheveningen Group submitted to the European Commission a joint recommendation for a discard plan for the demersal fisheries in the North Sea to be implemented in 2016. Subsequently, in its Work Programme for the North Sea from October 2015 to August 2016, the Scheveningen Group has sought recommendations in writing from the NSAC on the following topics:

- How to ease phasing in the landing obligation in 2017 and 2018;
- Specific cases for *de minimis* exemption proposals for species that will be brought under the landing obligation in certain fisheries in 2017;
- Specific cases for exemption based on high survivability;
- Specific cases where documentation of catches is hampered;
- Adjusting or introducing minimum conservation reference sizes for certain species;
- Expected 'choke species' and possible solutions to mitigate the effects, taking into account the instruments offered, such as the quota uplift, exemptions, interspecies flexibility, quota swaps and others;
- Possible technical measures, strictly linked to the implementation of the landing obligation, and which aim to increase selectivity and reduce unwanted catches.



1.2 The Scheveningen Group requested advice from the NSAC on easing phasing of the landing obligation by December 2015, and on other points by February 2016. Advice from the NSAC on phasing has been dealt with in a separate paper that has already been made available to the Technical Group. The current paper deals with the main points on which the Scheveningen Group is seeking advice. The paper lists mitigation measures for implementation of the landing obligation in order of their priority as seen by the NSAC:

- Avoidance of unwanted catches;
- High survival exemptions;
- Adjustments to TACs and quotas;
- *De minimis* exemptions;
- Interspecies flexibility;
- Additional technical measures that focus on meeting the requirements of the landing obligation;
- Inter-annual quota flexibilities.

Each of these mitigation measures is considered in greater detail. An illustration of the possible cumulative effects of these measures is also provided in an annexe to this paper (Annexe 2).

1.3 These various exemptions, flexibilities and measures may not be sufficient to enable chokes to be dealt with adequately. Chokes may still occur. Additional measures may therefore need to be considered and industry representatives have put forward a list of possible options. These proposals do not have the full support of all NSAC members. They are simply suggested to start a debate on other provisions that might be considered in order to make the landing obligation work for the mixed fisheries of the North Sea.

1.4 The paper goes on to consider the documentation of catches. It is important to achieve accurate recording of catches, both to ensure compliance with quota uptake and to ensure that information is collected to support the scientific determination of TACs. The shift to monitoring and control at sea increases the risks of misreporting. Fishermen are also concerned about the additional burden the rules may impose upon them. The NSAC has been handicapped in providing advice on specific cases by the lack of dialogue with the Control Group. If this problem of access to the Control Group can be resolved then the NSAC will be better placed to give advice. The NSAC also wishes to engage further with the Scheveningen Group on changes to the Control Regulation.

1.5 The paper considers the proposal that has been put forward for new Minimum Conservation Reference Sizes (MCRS). Fishers within the NSAC suggest that there is a need to examine more closely whether MCRS values need to be set, and on what basis they might be decided. The significance of setting new MCRS values also goes beyond the North Sea. The NSAC has asked the Commission to convene a conference on the setting of MCRS values, to involve all stakeholders, including those involved in



the sale of fish. The NSAC does not make any advance judgment on whether MCRS values need to be increased or reduced. There is a need for deeper understanding of the issues involved.

- 1.6 Finally, individual members of the NSAC have summarised their own separate ideas on those chokes that may arise in specific fisheries. These suggestions are collated in Annexe 1 to this paper.

2. Priorities

- 2.1 The various points raised by the Scheveningen Group are dealt with in this paper in a rather different order of priority than that listed in the Work Programme. The *de minimis* exemption is not the place to start. Measures for mitigation have been considered by the NSAC in terms of the respective contributions each of them can make to the successful implementation of the landing obligation. However, there are major uncertainties about the level at which these different mitigation measures will be applied. Whether they will be applied at the national level, producer organisation level, or individual fisher level will be of great importance. Moreover, the suggestions made in this advice document do not constitute the final position of the NSAC. The NSAC is committed to flagging up issues with the landing obligation as they arise, and will continue to provide information on topics of concern.
- 2.2 A key priority in implementing the landing obligation is to progressively reduce unwanted fishing mortality. Where there is scientific evidence for high survival, the release of unwanted fish into the sea may play an important part in achieving this.
- 2.3 One important aspect of implementing the landing obligation is to mitigate the effects of choke species. Identifying chokes in advance will be an important factor in reducing their impact. There are many different reasons for fishermen having to cease operations before they have caught their main quota allocations:
- A) Economic choking may occur when there is a considerable bycatch of a low value species and the boat is filled with fish that will not deliver a profit. This might happen for example with dab in the plaice and sole fisheries. There may be solutions in some cases, involving marketing initiatives for species for which there is low demand. However, there is limited capacity for carrying low value species on most vessels, and economic chokes may still occur.
 - B) Quota choking occurs when the quota for a stock is limited relative to the abundance and/or catchability of the species. In these circumstances the landing obligation may not allow fishing operations to continue. There are several reasons for quota chokes, listed below (in point 4), each requiring different management actions:
 - 1. Under the landings obligation chokes can occur in mixed fisheries in circumstances where exhaustion of one quota prevents a vessel, fleet, or member state(s) from catching their main economic quotas.



2. Chokes could potentially be caused by every stock in mixed fisheries, including high volume stocks.
3. Chokes will vary over time, although some chokes can be expected to persist unless the underlying causes are addressed.
4. There will be different types of chokes, which will demand different management responses. Examples of how different types of choke might arise will include:
 - Difficulties in balancing exploitation patterns on different species within mixed fisheries;
 - Poor correlation between TACs and fish abundance experienced on the fishing grounds;
 - Quotas are allocated according to relative stability keys which may not reflect current fishing patterns in some areas;
 - Weak correlation between quota uplift and actual catches experienced on the fishing grounds;
 - Because discard data are not comprehensive and because they are allocated according to relative stability keys, quota uplifts may not reflect actual requirements;
 - Unutilised quota is not released by swap or transfer in a sufficiently timely manner (swap liquidity and political obstacles);
 - Finite technical or economic limits to selectivity/avoidance in specific fisheries;
 - Stocks that have a low or zero TAC because they are considered to be genuinely depleted, in poor condition, or in need of special recovery measures;
 - Lack of flexibility in TACs, in some cases created by TAC provisions contained within current management plans.

2.4 Continuous assessments and monitoring of potential chokes will be necessary. Annual variations in the abundance and catchability of quota species are a feature of the North Sea demersal fisheries. Accurately predicting abundance is not always achievable and this in itself is a potential source of chokes in a mixed fishery. However, there may be scope for improving the forecasting of chokes through cooperation between fishermen and scientists. Trying to foresee where chokes may occur in the future will be very important, and assistance from scientists is needed to achieve this.

2.5 The process of reducing the likelihood of chokes starts with the avoidance of unwanted catches and requires continuous work to improve gear selectivity. Setting appropriate ranges for fishing mortality can provide an important means for preventing chokes when setting TACs for mixed fisheries.



- 2.6 When chokes occur, suitable mitigation measures must be put in place to offset the consequences of a premature closure of any fishery. The impact of chokes may be reduced through:
- The avoidance of unwanted catches, by fishing at times and in areas where these will be minimised, and by the adoption of more selective fishing gears;
 - Early definition, based on scientific data, of those species that show high survivability; where releasing fish into the sea may be the best option;
 - Optimal application of existing fisheries management principles to ensure that appropriate and adequate TACs and quotas are available to fishermen;
 - The adoption of de minimis exemptions;
 - Interspecies flexibilities;
 - Additional technical measures that focus on meeting the requirements of the landing obligation.
- 2.7 The potential contributions from each of these mitigating measures (within the “toolbox”) should be considered in a systematic way. There is a need to look at each of them in turn, considering the strengths and limitations of the different measures, and assessing the extent to which each one might contribute to reducing chokes. The landing obligation is not an objective in itself. Essentially it provides a framework aimed at reducing discards and bycatch, in line with the CFP’s objectives. These reductions must be the focus of any mitigating measures.
- 2.8 It is possible that the available toolbox, including the various exemptions and flexibilities currently provided, will not be sufficient to enable chokes to be dealt with adequately. Additional measures may therefore need to be considered.
- 2.9 A full and comprehensive impact assessment of the landing obligation will be necessary; assessing ecological, social and economic impacts. That assessment should be carried out as soon as adequate data become available.

3 Avoidance of Unwanted Catches

- 3.1 The degree to which fisheries will be choked by the introduction of the landing obligation will to a large extent depend on incentives for avoiding unwanted catches. The landing obligation itself provides a strong incentive for fishermen to avoid catching certain sizes and species of fish. Avoiding areas, especially those where unwanted catches would be inevitable, and choosing times to fish when such problems will be minimal, will make a major contribution to this objective. The application of more selective fishing gears and the development of new fishing gears will also be important. Such developments will be informed by innovations from within and beyond the EU.
- 3.2 The success of avoidance/selectivity measures will vary from fishery to fishery. There are commercial sensitivities over where fishermen do their fishing. Additional trust and



confidence will have to be built between fishermen, scientists and administrators in order to develop new approaches to successful avoidance.

- 3.3 It is vital that legislative impediments to the reduction of unwanted catches, including those imposed by the current technical conservation rules, should be removed.
- 3.4 Reductions in income may also prevent fishermen from adopting avoidance/selectivity measures. There is a tipping point where increasing avoidance/selectivity generates an unacceptable loss of income: although the introduction of the discard ban will change this point.
- 3.5 Avoiding unwanted catches is an overarching objective of the CFP. Mechanisms for avoiding unwanted catches, including selective fishing gears and other innovations, are continually evolving. However, there will always be limitations to what can be achieved, and developing avoidance/selectivity measures will not resolve all problems with choke species. It is to be expected that choke species will arise in mixed fisheries, even when the most strenuous efforts on avoidance/selectivity have been made. Avoidance measures have to be considered alongside the various other exemptions and flexibilities that are available.

4 High Survival Exemptions

- 4.1 The CFP basic regulation allows for the possibility of exemptions from the landing obligation for species for which "*scientific evidence demonstrates high survival rates*". In an expert group report¹ STECF pointed out that there is currently no objective means to define 'high survival' rates. The term is subjective and defining it for specific species and fisheries depends on the survival rate at age, the age composition of the overall catch, the relative contribution that discards make to total mortality of the stock, and the handling of fish in the fishing gear and on board the ship.
- 4.2 The application of high survivability exemptions can make a contribution to implementing the landing obligation for some species. Where there is high survival, returning fish to the sea may be the most appropriate option in terms of reducing unwanted fishing mortality. However, there is a lack of information of the effects on fishing mortality of both the landing obligation itself and the continued discarding of species with potentially high survival on fishing mortality. Consideration of these issues would be a useful exercise as part of an impact assessment of the landing obligation.
- 4.3 Scientific evidence must underpin any survivability exemptions and the availability of scientific data may be pivotal for some fish stocks and fisheries. The NSAC supports the need for an evidence-based approach in determining exemptions but has pointed out that because of the short timetable that has been set for implementation of the Landing Obligation there has been insufficient time to gather all the data required.

¹ STECF. 2013: Landing obligation in EU fisheries.
https://stecf.jrc.ec.europa.eu/c/document_library/get_file?uuid=c342bf1d-3cf8-4a36-ac82-83ac8d7c02da&groupId=43805



- 4.4 Fishing industry representatives maintain that an approach based on expert opinion will be required if application of the survivability exemption is to be successful. In their view, to avoid an increase in fishing mortality it will be necessary to accept expert opinion and apply the survival exemption whilst allowing time for scientists to collect data to provide the required evidence.
- 4.5 NGO members emphasise that under Article 15(4)(b) of the CFP basic regulation there is a requirement for scientific evidence demonstrating high survival rates for the species in question before this type of exemption is granted. Expert opinion does not constitute this scientific evidence.
- 4.6 A number of pilot projects are currently under way in the Member States and some of the gaps in knowledge are being filled. However, only a short time is now available for providing advice on survivability exemptions for 2017. Widening the scope of the scientific research to include other species and fisheries will be necessary to ensure that adequate scientific data is available to support the application of the survivability exemption. There is a strong need for coordination of the work on survivability being carried out by different Member States. Results obtained from one region with similar or related species and/or life stages may in some cases be applicable to others.
- 4.7 Exemptions on the basis of high survivability will depend not just on the species being caught but also the means by which it is caught and its subsequent treatment. Estimates of survival can vary considerably even for the same species. A number of research projects are currently underway on the adoption of best practice for catching and handling fish on board. These findings will be important in allowing decisions to be taken for some species and fisheries. In the application of the high survival exemptions it will become important for operators to adhere to best practice in order to maximise the survival of the discarded fish.
- 4.8 The NSAC has previously proposed that the primary guiding principles for deciding on the inclusion of a particular species caught in a fishery should be:
- a) Whether exempting that fishery will remove the incentive to reduce discards;
 - b) Whether the exemption will result in a significant decrease in fishing mortality in both the short-term and long-term.

Currently, decisions are being taken in the absence of full scientific data. The NSAC has previously advanced the following species for preliminary consideration for high survival exemptions. As further scientific evidence emerges the NSAC will review this list of suggested exemptions:

Nephrops

Flatfish, including plaice, dab, sole, lemon sole, turbot, megrim, brill, witch and flounder



Elasmobranchs, including skates and rays

5 Adjustments to TACs and Quotas

- 5.1 It will be particularly important to ensure that quota uplift is applied to the species coming under the landing obligation in the North Sea and that the uplift accurately reflects the levels of discarding that took place before the introduction of the landing obligation. The way that Member States manage their national quotas and how they are allocated to their fishermen will have a bearing on some choke situations.
- 5.2 International and domestic swaps and transfers provide some flexibility for resolving problems with choke species. The NSAC is aware that Member States will be discussing the use of quota swaps and transfers to mitigate the choke problems. The NSAC wishes to be involved fully in those discussions.

6. *De Minimis* Exemptions

- 6.1 Under the CFP basic regulation up to 5% of total annual catches of all species subject to the landing obligation (7% in the first two years, 6% in the third and fourth year of implementation of the landing obligation) may continue to be discarded where scientific evidence indicates that increases in selectivity are very difficult to achieve, or when there are disproportionate costs of handling unwanted catches.
- 6.2 The *de minimis* exemptions provide a tool in the toolbox, alongside other measures. They may have a role in dealing with both target species and choke species. However, they are of variable utility and there is some uncertainty over their application by different Member States and in different fisheries. There are also uncertainties about the level at which the rules will be applied: at the national level, producer organisation level, or individual fisher level. The NSAC is not yet in a position to advise on those species and fisheries to be subject to *de minimis* provisions. Decisions on the fisheries and candidate species to be subject to *de minimis* exemptions will be affected by decisions on other flexibilities and exemptions, and must be considered in the wider context of these. *De minimis* exemptions will have more value in some situations than in others, and must be considered as part of a hierarchy of measures. The cumulative results of all mitigation measures are important, and it must be recognised that the applicability of some of these measures reduces with time.

7 Interspecies flexibility

- 7.1 This provision allows inter-species transfers of quota between donor (target) and recipient (non-target) species. It allows for catches in excess of quotas, or catches of species for which a participating unit in the fishery has no quota. The provision limits the transfer to 9% of the quota of the target species and is conditional on the recipient non-target species being within safe biological limits.



- 7.2 The purpose of inter-species flexibility is to help avoid choke scenarios and it should be seen as an additional instrument in the fishery manager's toolbox – allowing managers to 'convert' quota where applicable. Whether the conversion would be 'tonne for tonne' or based on some other criteria, e.g. a swap currency, will need careful consideration, as will the need to set a limit on the amount of new quota created for the recipient stock.
- 7.3 The CFP stipulates that interspecies flexibility can only be used for stocks within safe biological limits. This excludes interspecies flexibility for data limited stocks. Additionally, the NSAC assumes that Member States will have to agree on conversion factors and possible ceilings. There may also be repercussions for TACs in subsequent years. It will be important to involve the NSAC in any discussions on the use of interspecies flexibility and on the exchange rates to be applied.
- 7.4 Interspecies flexibility may have value in some circumstances but it will not provide a universal panacea and it will be difficult to predict how effectively it can be applied. Whereas in theory interspecies flexibility could provide an effective method of addressing choke situations, it is difficult to understand how its potential can best be achieved whilst still being in line with the MSY objective and relative stability. It is also vital to fully understand potential effects on the quality of stock assessments.

8 Additional Technical Measures that Focus on Meeting the Requirements of the Landing Obligation

- 8.1 It will be important that the new Technical Conservation Measures framework supports delivery of the landing obligation. In March 2015 the NSAC provided advice on the development of the new framework. The NSAC strongly supported the proposed move away from micromanagement and towards a results-based approach with any measures that were necessary to be decided at a regional level.
- 8.2 The landing obligation creates an incentive to reduce unwanted catch and a range of technical measures are evolving to deal with unwanted catches, including spatial and temporal measures and the development of more selective fishing gears. A proposal for a new Technical Measures Framework Regulation is now imminent, and it is to be hoped that once adopted this will provide Member States and fishermen with the means to cope more effectively and flexibly with the need to reduce unwanted catches.
- 8.3 For the time being the NSAC has no specific technical measures to propose that are linked to implementation of the landing obligation. However, this might change in the coming months in the light of the experience gained with initial implementation of the landing obligation.

9 Inter-Annual Quota Flexibilities

- 9.1 The year-to-year flexibility, provided under Article 15.9 of the Regulation, may in some cases provide a useful facility for the individual Member State. However, its relevance to resolving choke situations is limited, as the 10% transferability provided under the



Regulation may not be sufficient to meet all cases. It can also undermine in-year demand for swaps and transfers. There is also potential for year-to-year flexibility resulting in fishing mortality in excess of the MSY level – especially if also applied in addition to interspecies flexibility. Year to year flexibility could usefully be discussed at the meeting on international swaps and transfers planned by the Scheveningen Group. The NSAC wishes to be involved fully in these discussions.

10 Other Measures

- 10.1 The various exemptions, flexibilities and measures available within the current legislation and discussed above may not be sufficient to enable chokes to be dealt with adequately. Chokes may still occur. Additional measures may therefore be necessary. Before considering such measures it will be necessary to establish the limitations of the toolbox that has been provided, including the current flexibilities and exemptions, and to establish the limits to their efficacy.
- 10.2 Should chokes still occur and if the ensuing problems cannot be reduced to a manageable level, despite the application of the measures discussed above, then other solutions may need to be considered. It would be sensible to initiate a debate on those other provisions that might be considered in order to make the landing obligation work for the mixed fisheries of the North Sea. A list of possible options has been provided below to start that debate and initiate the collection of relevant evidence. It will be important to seek STECF and ICES advice on some of these issues to inform future discussion.
- 10.3 Industry representatives have suggested the list of options presented below. It should not be presumed that any of these suggestions have the full support of all NSAC members.

The options suggested by industry members for further consideration include:

1. The grouping of low volume choke species (including non-targeted by-catch species not catered for in Article 15) within an “others” quota. In the context of implementation of the landing obligation, Norwegian officials have recently remarked that they apply far fewer TACs in the North Sea than the EU.
2. The re-evaluation of Precautionary TACs: that is, TACs that have been applied to stocks for which no scientifically-based evaluation of fishing possibilities is available for the year in which the TACs are to be set. Some of these Precautionary TACs may have been imposed in the past for political rather than scientific reasons. These TACs might now be removed, with the proviso that catches would have to be registered and alternative measures put in place to avoid over-exploitation.
3. Reviewing the provisions for a landing obligation as part of the reformed CFP, through reconsideration of the terms of Article 15.



4. Soft stops and post year-end quota transfers might be implemented. That is, if a choke problem prevents a fishing fleet from catching its main quota species then bookkeeping arrangements might be developed to allow fishing to proceed, with adjustments to quotas being made at the end of the year. Limits to quota allocations essentially create the problems that will be experienced with implementation of the landing obligation and will initially be dealt with through swaps and transfers. Some of these may need to be made retrospectively to avoid cessation of fishing.
 5. Grouping of high volume chokes within an “others” quota, or removal of such species altogether from the TAC regime, with management through other provisions. There are of course both national and international aspects to this.
 6. Some Member States may wish to pursue a path of financed fleet reduction under the EMFF, which could in particular help alleviate situations of insufficient quota.
- 10.4 NGO members emphasise that options 1, 2 and 5 must be in line with Article 2.2 of the CFP basic regulation and its requirement to restore and maintain populations of fish stocks above biomass levels capable of producing MSY. They do not support measures that conflict with this requirement. NGO members are also concerned that option 4 with its focus on removing or diminishing controls on quotas could jeopardise the achievement of MSY requirements of the CFP. For this option to be considered they suggest that alternative management controls such as limitations on effort and/or areas might need to be introduced to ensure that fishing mortality is controlled effectively. Whilst the NGOs recognise that some difficulties may arise, particularly in relation to choke stocks, as outlined in this paper, a key element of the landing obligation is to continue to reduce fishing mortality to levels that are in line with the MSY objective and, importantly, to progressively reduce unwanted catches. This obligation is central to the reformed CFP and the achievement of its social, economic and environmental objectives. NGO members cannot therefore support the suggestion in option 3 above that Article 15 be changed or removed.
- 10.5 As previously mentioned Member States might also wish to re-examine how quota allocation is managed nationally in order to better match catches to quota.

11. Documentation of Catches

- 11.1 Unrecorded fishing mortality would have implications for the quality of stock assessments and for the setting of TACs. It is important therefore to obtain accurate recording of all catches of regulated species, both to ensure compliance with quota uptake and to ensure that information is collected to support the scientific determination of TACs. A shift to monitoring and control at sea increases the risks of misreporting. There is a perverse incentive not to record any component that was previously discarded, as this will burn up quota with unwanted catch and there will be additional costs in disposing of that catch. There may be few incentives to ensure that everything



is documented, but many reasons for not recording catches fully, including lack of resources to do so. Solutions to these problems include:

- Minimising the potential for chokes; and
- Achieving a broad understanding amongst fishermen of the importance of recording all catches for setting TACs and providing future fishing opportunities.

11.2 Under the present regulation on fisheries control, catches of all regulated species must be recorded if they exceed a 50kg per species minimum. In addition, under the landing obligation all species covered by *de minimis* will have to be fully recorded before they are returned to sea. Fishermen are concerned about the additional burden the new rules may impose upon them. The Scheveningen Group has asked for advice from the NSAC on specific cases where documentation of catches is likely to be hampered. The NSAC has been handicapped in providing advice on this subject by the lack of dialogue with the Control Group. Moreover, much of control and enforcement policy is also a matter for individual Member States. Such advice may also involve quite technical considerations that require detailed discussion. If the problem of access to the Control Group can be resolved then the NSAC will be better placed to give advice. The NSAC would like to discuss in more detail with the Control Group the practical issues associated with the recording of all catches. There are likely to be technical problems with electronic recording systems, procurement difficulties, and other practical issues that will be different for different vessels and Member States.

11.3 Both the existing Control Regulation and the Technical Conservation Measures Regulation are under review, partly in order to align their provisions with the landing obligation. The NSAC will engage with the development of both of these new regulations. One example of an area where the NSAC wishes to engage with the Scheveningen Group is over the provision of a margin of tolerance when comparing logbook records and landing declarations, which has been diminished by the landing obligation. Resolution of these issues is best achieved by involving the fishing industry in discussion of the problems that will arise. There is a need to keep the requirements for fishermen as simple as possible while ensuring that the required information is provided.

11.4 Sampling of catches on board fishing vessels and recording of discards by scientists is important in terms of providing data for stock assessments and providing scientific advice to aid fisheries management. In order to maintain current levels of on-board sampling by scientists some protocols may be required to ensure that access to fishing vessels for the acquisition of scientific catch data is maintained. The current understanding reached in some Member States is that scientific observers recording catches and discards are not involved in control and enforcement, but are restricted in their role to the collection of scientific data. This understanding may be placed at risk by the landing obligation.

11.5 There have been significant recent advances in remote monitoring technologies, but it cannot be assumed that new technology can solve all the problems. Whilst CCTV has been proven effective in some fisheries, further trialling and improvements are needed in other fisheries. These technologies will undoubtedly play an increasing role, although



they will not provide universal solutions. A recent policy paper to the European Parliament on the landing obligation and its implications for fisheries² recommends that: *Remote electronic monitoring is demonstrating sufficient potential to be pursued more extensively. In the short-term, further trials should be developed and implemented and analysis made of outstanding technical and governance issues. These should continue to be industry-led and reward based. Proposals at the regional level should be developed for other reward-based schemes. Funding in support of these initiatives should be made available through the EMFF.* There is a need to consider this recommendation and develop concrete proposals for the application of remote monitoring technologies, which can then be considered and evaluated by the NSAC. Technological developments for documenting catches will be of greatest utility when they are seen by fishermen as an easier and more cost effective way to demonstrate compliance than the alternatives.

12 Minimum Conservation Reference Sizes

- 12.1 It has been proposed that new lists of Minimum Conservation Reference Sizes (MCRS) should be prepared for different areas and fisheries. Where an MCRS is set it marks the boundary between the sale of fish for direct human consumption; and its sale for purposes other than direct human consumption, including reduction to fishmeal and pet food. Where the MCRS is set may also have a biological rationale, based on the protection of juveniles. Article 15.10 states that “*Minimum conservation reference sizes may be established with the aim of ensuring the protection of juveniles of marine organisms*”. There is support from the eNGOs for MCRS values to be set as close as possible to the length at maturity. One possible starting point is the translation of Minimum Landing Sizes (MLS) into MCRS values. However, this does not necessarily mean that MLS can simply be converted to MCRS. MCRS must also be set in accordance with existing provisions on mesh sizes in different fisheries. There is a need for harmonisation and rationalisation of approach.
- 12.2 However, the regulation goes further. Article 15.11 states that “*the use of catches of species below the minimum conservation reference size shall be restricted to purposes other than direct human consumption, including fish meal, fish oil, pet food, food additives, pharmaceuticals and cosmetics*”. Some fishers have queried whether there is a need to apply the MCRS for marketing purposes, as fish that are landed are effectively dead. Some members of the fishing industry argue that once fish have been landed it should perhaps be a matter of choice whether those fish are sent for human consumption or used for other purposes. They question whether the landing obligation has made the setting of Minimum Landing Sizes redundant. However, the NGOs have argued that in the absence of a marketing MCRS there may be a risk of creating a market for juvenile fish that might subsequently reduce the incentive to avoid catching them.

² Directorate-General for Internal Policies, Policy Department B: Structural and Cohesion Policies, Fisheries. The Landing Obligation and its Implications on the Control of Fisheries.
<http://www.europarl.europa.eu/studies>



- 12.3 There is a need to examine more closely whether MCRS values need to be set, and on what basis they might be decided. The NSAC does not make any advance judgment on whether MCRS values need to be increased or reduced. It simply emphasises that there is a need for deeper understanding of the issues involved. Norway has not set any MCRS values but instead is operating with minimum catch sizes. The significance of setting new MCRS values also goes beyond the North Sea and requires discussion within a wider forum. The NSAC has asked the Commission to convene a conference on the setting of MCRS values, to involve all stakeholders. The conference should include those involved in the sale of fish, and is needed to contribute to a wider discussion on the setting of MCRS values.



Annexe 1: Chokes that may arise in Specific Fisheries

Note: The separate statements in this Annexe have been prepared by particular members of the NSAC and do not reflect a consensus view by all participants.

A. Chokes in English Fisheries (prepared by the NFFO)

UK fisheries in the North Sea could face chokes for many of the reasons stated earlier in this advice. Specific identifiable chokes include:

- Bycatch stocks such as witch/lemon sole, turbot/ brill/lemon sole, dab/flounder
- Stocks for which the UK receives an inadequate relative stability share relative to catches in the mixed fishery (saithe, hake, whiting)
- Data poor stocks for which precautionary TACs have been set (skates and rays)
- Where the current assessment of incoming year classes are out of alignment with actual abundance
- Stocks for which a zero TAC has been applied (spurdog)
- Stocks where selectivity is problematic (monkfish) or the catch is low value bulk (dab)
- Stocks where *de minimis* exemption is inadequate to deal with the scale of the problem (dab and plaice).

B. Chokes in the Belgian Fisheries (prepared by Rederscentrale)

In the typical mixed Belgian fisheries, any species subject to catch limits can become a choke species. The risk factor of becoming a choke depends on the as yet unknown mitigation measures that will or will not apply to the different species liable to end up in the nets of the Belgian fishing vessels. Only survival exemptions remove such risks. With avoidance and minimisation, quota uplifts, *de-minimis* and other mitigation measures, the risk remains of running out of quota for one or more species preventing fishing operations continuing on other species.

C. Chokes in Netherland Fisheries (prepared by VisNed)

The principal chokes in the Dutch fisheries are likely to be:

- Dab
- Turbot



- Brill
- Skates & rays
- Whiting

D. Chokes in Scottish Fisheries (prepared by Scottish Members)

The Scottish demersal fleet fishes mainly in the northern part of the North Sea where the species mix is perhaps at its most extreme. Selectivity in most cases has improved significantly over time and continues to improve as fishers look for innovative ways to both avoid and reduce unwanted catch. However, there are some selectivity issues that pose an almost insurmountable barrier.

The most obvious and acute of choke situations for the Scottish fleet arise therefore not as a result poor selectivity but as a result of limited fishing opportunities or limited shares in those opportunities. The most obvious of these are:

- Hake
- Saithe

Choke species arising from problems related to selectivity include:

- Dab

The following table illustrates the scale of the choke species problem for the Scottish TR1 fleet in the North Sea. Whilst the quota allocations shown are for UK rather than purely Scottish vessels, Scottish producer organisations account for the lion's share of these quotas within the UK total.

	2015 starting allocation	2015 final allocation (a)	Discard rate	2015 estimated catch (b)	Estimated shortfall	Choke point (% of year)
Hake	574t	2,800t	80%	13,500t	10,700t	26%
Saithe	5,249t	9,000t	40%	15,000t	6,000t	60%

The 'choke point' is simply intended to reflect the % of the year that can be fished before the quota for the species in question runs out (and therefore the point under a LO at which the fleet has to stop fishing). It assumes a constant rate of fishing through the year, and is calculated as a/b.

The 26% 'choke point' for hake therefore suggests that without the application of any of the exemptions and 'flexibilities' provided for in the CFP, the Scottish TR1 fleet could not operate beyond the end of the first quarter of the year. While it is clearly no more than a



simple rule of thumb, and assumes a constant fishing effort throughout the year, it clearly highlights the scope for a choke species to bankrupt the industry.

For purposes of comparison, the 2015 EU TAC for hake was 104,675 tonnes, while that for saithe was 47,337 tonnes.

E. Chokes in Danish Fisheries (prepared by the DFPO)

Specific identifiable chokes for Danish fisheries in the North Sea and the Skagerrak and Kattegat include:

- Bycatch stocks such as turbot/ brill/lemon sole
- Stocks for which Denmark receives an inadequate relative stability share relative to catches in the mixed fishery (saithe and cod)
- Data poor stocks for which precautionary TACs have been set (skates and rays, whiting in the Skagerrak)
- Where the current assessment of incoming year classes are out of alignment with actual abundance (cod in the Kattegat)
- Stocks for which a zero TAC has been applied (spurdog)
- Stocks where selectivity is problematic (ling, blue ling) or the catch is of low bulk value (dab)
- Stocks where *de minimis* exemption is inadequate to deal with the scale of the problem (plaice).

F. Chokes in German Fisheries (prepared by the Deutscher Fischerei Verband)

In general it is not possible to predict which species will be choking in the future. In recent years problems have been observed with skates/rays and turbot/brill. Potential additional candidates are whiting, haddock and hake depending on mismatch between TAC and abundance.

Real choke-cases in recent years can be seen in the statistics on official catch stops/landing prohibitions. There are additional cases managed in a precautionary manner by the POs internally giving advice to members to discard before the authorities impose an official catch/landing stop.

G. Chokes in French Fisheries (prepared by CNPMM)

The principal choke species for French fisheries are likely to be hake, dab, rays, eventually whiting and cod.

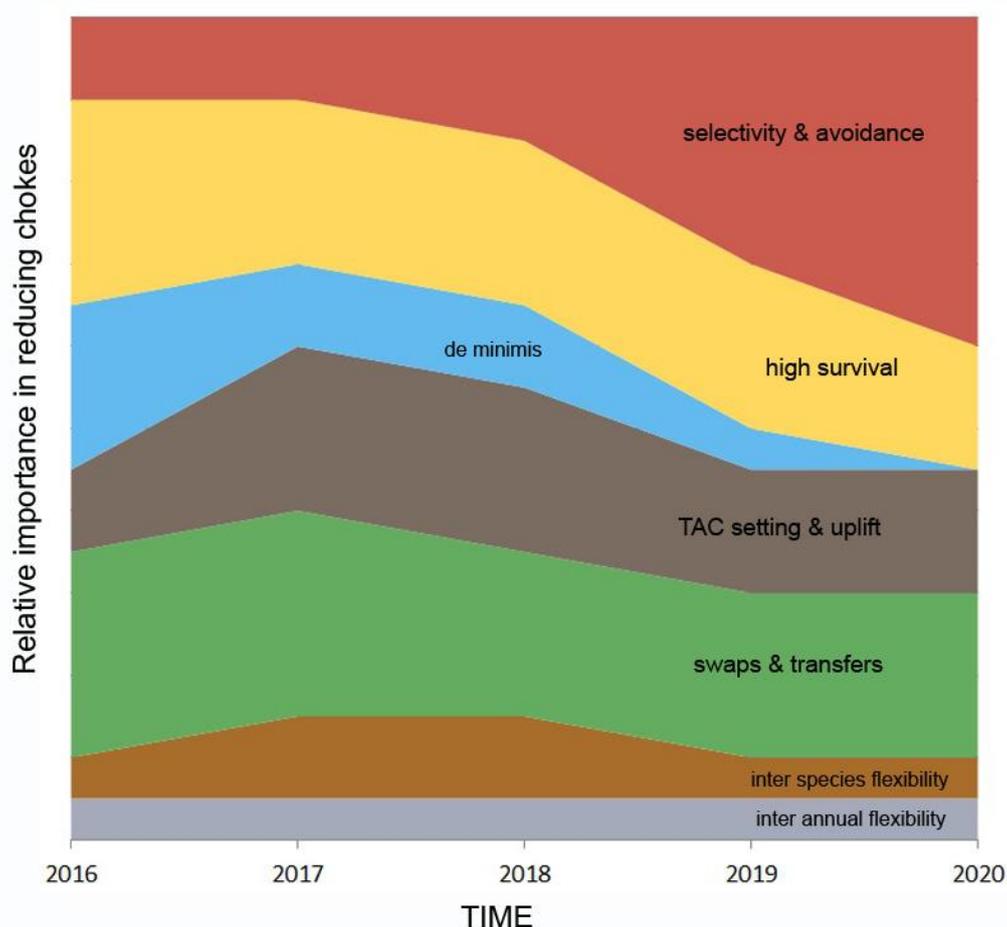


Annexe 2: An Illustration of Possible Cumulative Impacts

An Illustration is provided below of the cumulative application of measures to deal with unwanted catches. The illustration is simply intended to show that some measures will become more important over time, while others will be of use in the first few years but of limited use in the longer term. Some measures will be time limited (*de minimis*). Others will never have more than limited application (interspecies and inter-annual flexibility).

Note that the figure is purely illustrative and should not be interpreted as making any form of prediction from the NSAC. The actual percentages inserted will vary with species, fishery and country. No attempt has been made to illustrate a particular scenario. Percentages have simply been allocated based on discussions within the NSAC. Over time it might be possible to substitute real data for some species within particular fisheries.

The potential importance of different mitigation measures over time; an illustration



Over time, the impact of a choke species may be mitigated by:

- The extent to which gear adaptations or avoidance strategies can be employed;
- Whether high survival or *de minimis* exemptions are in force;
- The extent to which quota flexibilities can be deployed.

