

North Sea Advisory Council



NSAC Advice Ref.10-1617

Introduction of Plaice into the Landing Obligation

This consensus paper was approved by the NSAC Executive Committee via a written procedure on the 10th May 2017.

1.0 Introduction

- 1.1 Plaice stocks are in general in a good condition. In the North Sea and the Skagerrak Plaice is doing extremely well, with a stock size at an all-time high since 1957 when ICES started giving advice on the stock. ICES estimates that the plaice stock is at an estimated SSB of 950.000 tonnes. Well above MSY $B_{trigger}$ of 570.000 tonnes¹. F is estimated at 0.19, which is well below F_{msy} .
- 1.2 The landing obligation for plaice in the North Sea, the Skagerrak and the Kattegat is, according to the Joint Recommendation by the Scheveningen Group, to be introduced on a fishery by fishery approach. The landing obligation was introduced for the TR1 and BT1 fisheries in 2016 and is scheduled to be introduced for all other fisheries from 1st January 2018.
- 1.3 The members of the NSAC are committed to change but propose that change is best implemented when information and techniques are available to plan and deliver change as effectively as possible. The NSAC is therefore proposing that the introduction of the remaining fisheries to the landing obligation is rescheduled to January 2019. The reason for this is to give additional time to complete research, trials and testing of gear and other measures that will contribute to improve selectivity and reduce discarding, and to finalise an additional group of projects which aim to establish the survival rates of discarded plaice.

¹ ICES Benchmark to be confirmed by WGNSSK
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2.0 Background Information

2.1 Article 15 of Regulation no.1380/2013 states that the landing obligation will apply to plaice. This gives two major challenges for the fishing industry:

- for some fisheries with by-catches of plaice (especially the BT2 gear category sole fishery in the southern part of the North Sea) there is a high potential that plaice will be a choke species, and
- there is an opinion and experience suggests that discarded plaice have a high survival rate.

It is therefore a concern that a landing obligation of plaice in all fisheries will lead to an overall increase in fishing mortality.

Plaice as a major choke species, economic and capacity issues

2.2 For the sole fishery in the southern North Sea (gear code BT2), it is expected that plaice will be a choke species that in the worst case would force the BT2 sole fisheries to stop. This would be caused by a lack of sufficient quota and is also related to the high costs of landing all catches.

2.3 Ultimately the best solution is to reduce the levels of unwanted catch and subsequently reduce the present levels of discarding of plaice in this fishery, in view of the fact that the previously discarded catch must be retained under the landing obligation. With an aim to achieving this, selectivity trials are ongoing. The objective of these selectivity trials, should be to find ways of reducing the amount of the plaice catch that is under the minimum conservation reference size, alongside continuing work on the avoidance of such catch. However, recognising that it may not be possible to avoid such undersized catch entirely, and that this cannot be discarded under the landing obligation, work is ongoing to develop new markets for undersized plaice.

2.4 The fishery in the Netherlands is currently engaged in projects related to the implementation of the LO for Plaice (among other species). These projects titled “Best Practices” and “Best Practices II” have produced results giving figures for expected quantities. The projects have also completed technical and financial feasibility studies of handling and storing on board, and the costs of processing and handling onshore. These projects have also investigated the potential to develop new market opportunities.

2.5 Under present circumstances, storing and handling on board is technically difficult due to increased health and safety risks caused by higher stacking of boxes necessary to store the increased levels of fish to be landed. It also seems to be financially impossible; recent results from the Best Practice Project show costs of handling and storing on board are about € 170.00 per tonne per vessel per annum and estimated costs of onshore processing are about € 350.00 per tonne. Market prices for plaice will not sustain these costs for plaice products.



- 2.6 At this stage of the research it is difficult to obtain accurate costs for onshore processing. Shore facilities for handling, storing and processing Plaice are lacking at present and substantial investment would be required to manage the expected increase in volumes. It is highly unlikely that the private sector will invest in additional processing facilities as given the current and future market conditions a viable business case cannot be made and the risk of the return on the investment is too high. There is no planned investment from the public sector. Fish Auctions have indicated that they have capacity issues. They are currently handling small quantities of sole discards, but have stated that they will be unable to handle large volumes of product.
- 2.7 The outcome of both the Best Practice Projects and the Survival Project in which Dutch Fisheries was engaged in during 2013-2015 were not conclusive. Therefore, new projects were initiated to gather further information and achieve more accurate results. A list of projects is given in Annex 1. These projects were subject to delays due to the lead time for the EMFF funding procedures and the time required to secure licences to comply with animal welfare regulations. As a result of these delays the projects did not start until the winter of 2016-2017 and will not lead to any tangible results before late autumn 2017.
- 2.8 In addition to the technical projects, market research has identified options to develop markets for undersized plaice, of which currently the catch cannot be avoided and which accordingly not avoidable, will have to be retained under the landing obligation. These markets must be additional to existing markets, to prevent market distortion or displacement. To prove the economic viability of these new markets (including costs of storage and processing on board) further detailed investigation is required. The first preliminary results of these studies are expected in Q3 of 2017.
- 2.9 To help understand and inform potential market development for fish landed below the MCRS, it would be useful for trials to be undertaken where vessels are granted permits to retain fish below the MCRS.

Survivability of Plaice

- 2.10 There is a general concern among fishermen that a landing obligation in all fisheries will increase the fishing mortality for plaice as it is their view that many fish survive on being returned to the sea. As a result, the fishing industry has recommended that plaice should have a survivability exemption for most fisheries. However, scientific evidence is limited given only a limited number of research projects on survivability have been conducted. Earlier trials in Belgium, Denmark, Netherlands and the UK suggest that there is relatively high survivability of plaice, but the level is dependent on fishing practices in the water and handling techniques on the deck of vessels. Further trials in the Netherlands, Denmark, Belgium and the UK are under way and some conclusions are expected late 2017.

3.0 Proposal and Rationale

- 3.1 NSAC proposes to postpone applying the Landing Obligation for plaice for the remaining fisheries until January 2019, in order to give time to get results from the



projects aiming at increased selectivity, demonstrating survival and identifying best practices, as well as to find markets for otherwise discarded plaice. Interim outcomes, quantitative reports of these projects and prognosis for future development will be submitted to members of the Scheveningen Group and presented at NSAC working group meetings during 2017-18. The aims and measures of these projects include but are not limited to:

Increased avoidance and selectivity

- Further development of technical innovations to reduce bycatch. Both by preventing bycatch to enter the net and to increase bycatch escaping the net. Separator panels, selectivity grids, alternative mesh sizes will be tested.
- Analysis of spatial and temporal distribution of discards

Market development possibilities for otherwise discarded fish

- Identifying and developing new market opportunities / new products for plaice
- Identify possible markets for plaice below MCRS
- Identify the factors needed to ensure a stable supply to maintain markets

Survivability

- Identify the main factors for survival and develop best practice in how to minimize mortality
- Further development of innovations to increase survivability

3.2 All projects will be subject to quarterly monitoring and reporting on findings to monitor progress. Results will be shared with all stakeholders including the NSAC. Final results, including independent, quantified information on survivability, discard percentages and discard reduction levels, for projects will be reported from Quarter 2 2017 to Quarter 1 2018.

3.3 It should be noted that projects will be ongoing beyond 2017. EMFF funding is being sought to continue developing innovation to increase selectivity and increase survivability.

4.0 Recommendations

4.1 The plaice stock in the North Sea is in a healthy state, progress has already been made in selectivity projects and handling practices to increase survivability. Considering the practical situation and capacity constraints where implementing the Landing Obligation for plaice in 2018 seems unworkable from an onshore processing perspective we feel that postponement, awaiting further information, is the best option for the coming year.

4.2 NSAC recommends that the Scheveningen Group includes the conditional rescheduling of plaice in the joint recommendation for the Discard Plan for 2018 to



allow time to research, develop and where possible implement measures that will increase selectivity, allow discarded fish to survive and create new markets for small fish.

- 4.3 The year 2019 will likely be a very difficult year as from this year all regulated species under a management principle will need to be included under the landing obligation. Postponing plaice to 2019 will not necessarily make this task any easier. However, the NSAC are committed to the successful implementation of the objectives of the CFP, and will actively collaborate with the Scheveningen group and the European Commission to identify and implement practical approaches that will help meet the provisions of Article 15 of the CFP.



Annex 1 – List of Research Projects

Completed Projects
Belgium
<p>Plaice Survivability Focused on survivability of plaice through the RAMP-method (Reflex Action Mortality Predictor method) ILVO http://pure.ilvo.vlaanderen.be/portal/en/publications/interobserver-reliability-of-fish-vitality-assessments-does-the-use-of-categorical-or-continuous-scoring-scales-affect-the-reflex-action-mortality-predictor-ramp(b7efc069-58e7-446f-b700-32a913e4bbf8).html</p>
<p>TECHVIS. Technical innovations for the transition to a sustainable fisheries sector Focused on the needs of the CFP by improving the selectivity of the fishing gear through adaptations. Examples are the electric benthic release panel (eBRP) and the sorting grid for plaice and sole. http://pure.ilvo.vlaanderen.be/portal/en/publications/vistraject--duurzaamheidstraject-voor-de-belgische-visserijsector(745b636a-8676-474b-a814-0d6744800c44).html</p>
Denmark
<p>DISCO - Discard survival. Developing methods to estimate discard survival and factors that affect survival. DTU Aqua http://orbit.dtu.dk/en/projects/discard-survival-disco-39152(bbfcd89-ba5b-4662-918d-18e04b95a017).html</p>
Netherlands
<p>Trawl Innovation. Improvement of selectivity in a range of demersal fisheries. IMARES http://cvo-visserij.nl/wp-content/uploads/2016/05/Eindverslag-Netinnovatie-Kottervisserij-deel-2.pdf</p>
<p>Discard Survivability: quantification. Quantification of survival of undersize sole, plaice, and dab on pulse and twin rig fishing vessels using captive observation. Wageningen Marine Research http://www.vissersbond.nl/wp-content/uploads/2014/04/C180.15-VIP-rapport-Overleving-van-discard-platvis-vaststellen-en-verhogen.pdf</p>
<p>Discard survivability: improvements. Development of technical improvements for survival of undersize sole, plaice, and dab on pulse and twin rig fishing vessels using captive observation. IMARES http://cvo-visserij.nl/projecten-2/verbeteren-verwerkingslijn/ Report combined with Discard Survivability project, see above</p>
<p>Sectoral and chain integrated approach for Nephrops. Gear modifications aimed at reducing bycatch in the <i>Nephrops</i> fishery. IMARES http://cvo-visserij.nl/wp-content/uploads/2015/07/Langoustines-EINDRAPPORT-netinnovatie-nk-IMARES.pdf</p>
<p>CCTV. Options for monitoring implementation of the LO using on-board cameras. IMARES http://www.vissersbond.nl/wp-content/uploads/2014/04/16.IMA0272-Eindrapporten-Fully-Documented-Fisheries-deel-III-IMARES-11-22.pdf http://www.vissersbond.nl/wp-content/uploads/2014/04/16.IMA0272-Eindrapporten-Fully-Documented-Fisheries-deel-III-IMARES-23-31.pdf</p>



https://doi.org/10.1093/icesims/fsw241
<p>Processing and valorisation of demersal discards. Analysis of supply chain including exploration of options for commercial valorisation. IMARES http://www.vissersbond.nl/wp-content/uploads/2014/04/Eindverslag-Demersale-discardsverwerking-deel-1.pdf</p>
<p>Best Practices. Integration study, combining findings from the other projects in this tranche and analysing the economic impact of the LO. Wageningen Marine Research http://www.vissersbond.nl/wp-content/uploads/2014/04/Eindrapportage-Flynth-LEI-Verkenning-economische-impact-aanlandplicht-op-de-Nederlandse-kottervloot.pdf Socio-economic analysis file:///C:/Users/User/AppData/Local/Microsoft/Windows/INetCache/Content.Outlook/Q10NFNJQ/6%20Best-practices%20-%20Socioeconomic%20implications.pdf</p>
United Kingdom
<p>Collated Estimates of plaice discard survival for UK Fisheries. CEFAS</p>

Projects Ongoing	Expected Completion Date
Belgium	
<p>Combituig The development and fine tuning of technical innovations to reduce the catch of choke species and other bycatch in the beam trawling and to improve survivability. The project has two approaches. The first approach will test several innovations to prevent choke species and other bycatch entering the fishing net. The second approach focuses on the improvement of the selectivity of the net to allow choke species and other bycatch escaping the net. ILVO</p>	December 2019
<p>Adaption plan for the landing obligation Aims at ensuring a stable market supply of fishery products after the implementation of the LO. This project has the goal to underpin the requests for European derogations from the LO such as survivability and de-minimis through scenario analyses developed during the project. More specifically, through the RAMP-method the survivability of plaice will be further monitored regarding a derogation of plaice from the LO. ILVO</p>	January 2019
Denmark	
<p>COPE – Caught and Released. An overview of fish sensitivity to being discarded as a tool to aid pursuing ecosystem-based management. DTU Aqua</p>	December 2017
Survival in gill net and Danish seine fisheries.	



<p>To estimate the discard survival for plaice and cod: To identify the main factors for high survival and to develop guidelines for how discard of these fish should take place to minimize mortality. University of Aalborg and University of Copenhagen.</p>	
Netherlands	
<p>Best Practices II</p> <ol style="list-style-type: none"> 1. A series of 13 commercial fishing trips during which all discards are collected on board and analysed in detail on shore. 2. Analysis of the relation between survivability and stock size for plaice and sole, to inform the consequences of discarding versus landing undersize fish. 3. Analysis of spatial and temporal distribution of discards, combining information from part 1 and existing monitoring data. 4. Two fishing trips during which catches and discards of 80 and 90 mm mesh size will be compared. 5. Analysis of the consequences of a theoretical reduction of the Minimum Conservation Reference Size of plaice. <p>Wageningen Marine Research http://www.visned.nl/nl/best-practices-ii</p>	Q4 2017
<p>'Increase of selectivity 2 Will provide a concise overview of current results and hypotheses of ongoing selectivity projects, including separator panels, selectivity grids, use of so called 'Flemish panel' etc.</p>	Interim results Q4 2017
<p>Discard Survivability II</p> <ul style="list-style-type: none"> • Further quantification of survivability of discards of sole and plaice. • Quantification of survivability of discards of additional species ray, turbot, and brill. • Literature study investigating the applicability of survivability estimates obtained in other European waters to the Dutch <i>Nephrops</i> fishery. • Further development of innovations for improvement of survivability. A combination of self-sampling for rapid optimization of innovations on board during commercial trips, and research trips for captive observation will be used. The research trips are due to commence in May 2017. <p>Wageningen Marine Research http://www.visned.nl/nl/overleving-ii</p>	Q1 2018
<p>Use of SEP net with grids in TR 2 fishery</p>	Q2 2017



Trawl innovation cutter fisheries II. Aim to reduce discards through trawl innovations. Wageningen Marine Research and ILVO	
Exploring alternative markets for below mls Plaice (H&G deep frozen) Pilot testing markets	Q3 2017 Q4-2017

