

Annex to Roadmap to enhance evidence of discard survival of skates and rays and increase selectivity and survival of skates and rays

Background

The regional groups for the North Sea and Northwestern waters have submitted a joint recommendation on 31st of May requesting a high survival exemption for skates and rays from the landing obligation. This request was analysed by STECF and the Commission and was generally accepted. For cuckoo ray the exemption was limited to one year (until 31 December 2019), for other species the exemption is for three years.

As part of the exemption the Commission has requested a roadmap which includes concrete steps that the regional groups will take to enhance knowledge and data on the state of skate & ray stocks and will also include a programme of measures that industry will take to improve selectivity and survival of skate & ray discards. Annual reporting on progress and advancement of selectivity and survival will be done by regional groups.

Roadmap and responsibilities

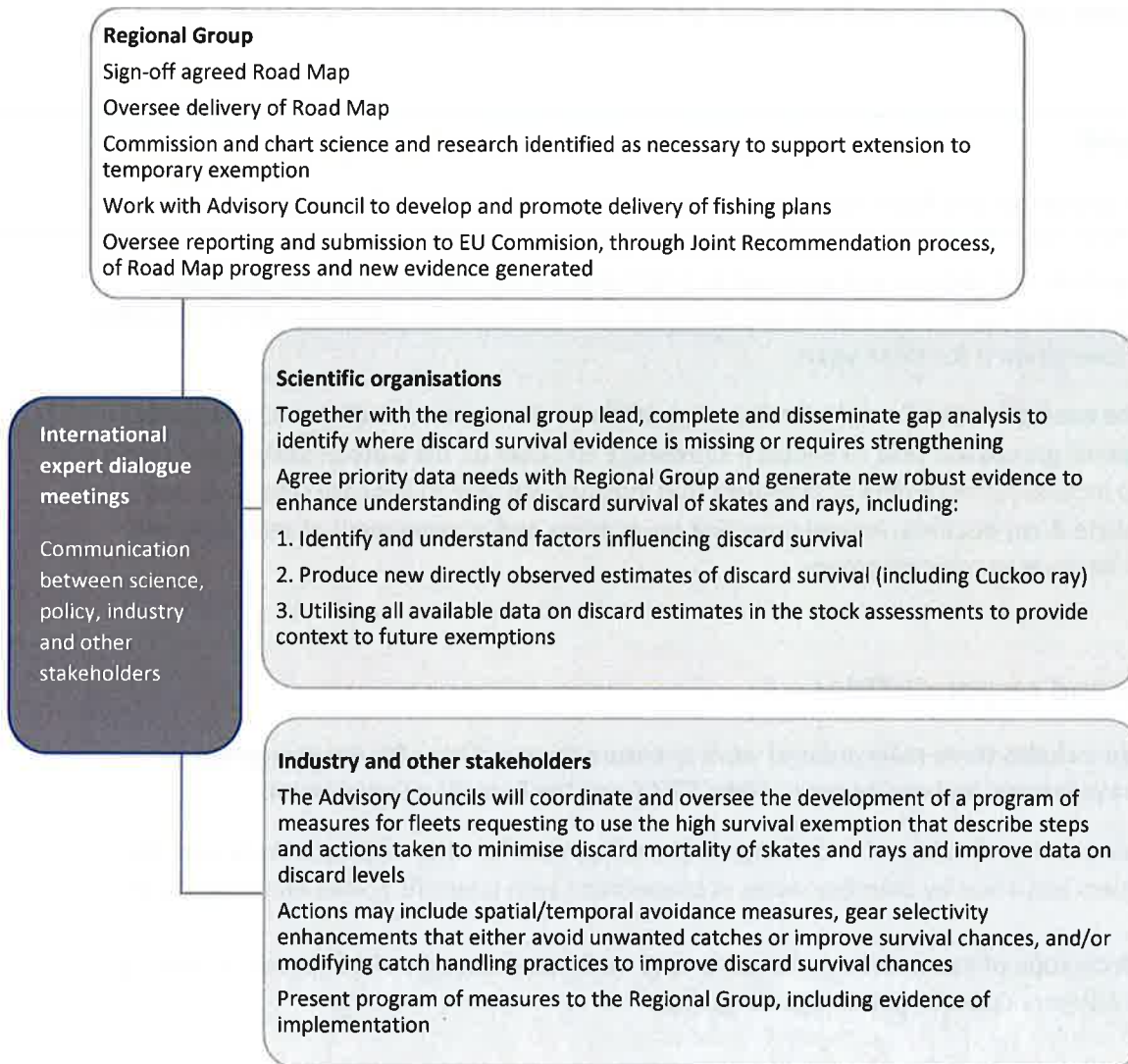
The roadmap includes three main areas of work to ensure the conditions for the exemption for skates and rays are met and can be assessed by STECF and the European Commission.

- 1) Advancement of data and knowledge of discard survival for different ray & skate species, métiers and areas by member states in cooperation with scientific bodies and institutions.
- 2) Coordination of a programme of measures to minimize discards and improve survival by the Advisory Councils of the regional groups.
- 3) Coordination of work and following progress by the chairs of the regional groups, including taking of initiatives to ensure progress and facilitating cooperation and delivering of results.

The main challenge will be to align the areas of work and to ensure close cooperation between member states, advisory councils, scientific institutions and stakeholders to bring together all acquired and required information and practical expertise. Additionally, sufficient commitment must be ensured to implement the roadmap.

In the past, a series of 'International Expert Dialogue Meetings' were held, which included participation from member states, industry, NGO's and scientific institutions. The positive experiences and results that were booked through these meetings suggest this could be a practical and efficient way of involvement of all parties and stakeholders.

Overview



Regional Group

The responsibility for delivering the roadmap lies with the Regional Groups, who will coordinate with the scientific institutes, industry and other stakeholder contributors and present progress updates, including the evidence generated to the Commission annually, as part of the Joint Recommendation process.

The Regional Group will also agree the prioritisation of new evidence proposed by the scientific institutions as part of an evidence gap analysis. This will be used to guide the commissioning of new relevant scientific research by each of the Member States in the Regional Group.

The Regional Group will assist the Advisory Council in their task to coordinate the development of a program of measures.

Specifically for cuckoo ray, in the first year of the temporary exemption, the Regional Groups will describe new evidence on the discard survival rates in accordance with the specific request of the Commission.

An important tool for delivering the roadmaps is making use of the international stakeholder dialogue meetings between representatives from policy, management, industry, science and NGOs. Such dialogue meetings have been carried out in the past three years have been instrumental in the formulation of the Joint Recommendations which have been submitted to the Commission. It is essential that this process continues in the coming years to ensure continuing commitment and engagement from all parties. The organization of regular international expert group meetings to streamline the coordination for the Regional Groups, should form part of the roadmap.

Industry and other stakeholder involvement

The fishing industry contribution will be coordinated by the Advisory Councils. Those fishing fleets that request to use the high survival exemptions will develop an annual program of measures that describe practical steps and actions that will minimise discard mortality of skates and rays and improve data on discard levels. The development of the program of measures will be supported by the Regional Group and relevant science institutes, as well as other stakeholders. International dialogues meetings can form the platform for the development and execution of the plans. These plans will consider the outputs from the gap analysis work and be used to identify preferred mitigation methods for scientific assessment.

The actions described in the program of measures should (mandatory) include best practices for spatial/temporal avoidance measures, gear selectivity enhancements, that either avoid unwanted catches or improve survival chances, and/or modifying catch handling practices to improve discard survival chances. In some cases additional research may be necessary before measure can be implemented. This should be included in the research programme. The Advisory Council will lead in communicating industry issues, ideas and progress to policy and science and present the annual plans to the Regional Group, including evidence of implementation of the agreed actions. This will be done before 1 May of each year.

Scientific institutions

Relevant scientific institutes with the necessary skills, data and experience will coordinate to complete an evidence gap analysis which will identify where discard survival evidence is missing or requires strengthening. This work will build on the progress made previously in collating discard survival evidence, assessing the quality of that evidence and producing a description of the fisheries that catch and discard skates and rays.

Based on the gap analysis, a research programme will be developed and relevant scientific organisations will be commissioned to deliver new research as agreed by each of the Member States in the Regional Groups.

It is anticipated that the science will sit within two main areas:

- 1) Firstly, quantifying discard survival levels, this will include generating new directly observed estimates of discard survival for prioritised fisheries and species. This will also include the exploration of technical, environmental and biological factors that influence survival probability so that estimates can be extrapolated beyond the observed conditions with more confidence, and mitigation measures that increase survival can be identified.

- 2) The second main area is in the quantification of discards associated with all of the species and fisheries. This will require resources to collate discard data and introduce it into the individual stock assessments. The outputs will be used to support the gap analysis and provide context to the exemptions in terms of the quantities of fish to which they will apply. Ultimately, this work will look to include robust estimates of discard survival in to the stock assessments.

The scientific components of the roadmap should be coordinated. It is proposed that ICES could play a role in this and that the relevant ICES working groups might form a focal point for the two main science areas. There are ICES Working Groups such as the Working Group for Methods to Estimate Discard Survival (WGMEDS) and the Working Group for Elasmobranch Fishes (WGEF) which currently have terms of reference dealing with some of the issues proposed here. The potential for a dedicated ICES Workshop which brings all aspects of the science together will also be explored.

The program of measures developed through the Advisory Councils for implementing best practices will also be enhanced through feedback from scientific institutes. In particular, the potential for selectivity to reduce unwanted catches or improve survival will benefit from understanding the key factors that affect survival, similarly for handling practices. A dialogue between the scientists, industry and other stakeholders will ensure that there is evidence to support the ideas of the vessel operators in minimising discard mortality. This close working will also be required in industry data collection programmes designed to improve estimates of skate and ray discards and survival.

The scientific tasks and approach described in this roadmap aim to:

1. Identify and agree data gaps relevant to evidencing an exemption from the Landing Obligation of skates and rays on the basis of high survival
2. Identify potential species-metier combinations for further research
3. Develop a research programme to address the outstanding issues (e.g. quantification of estimates of both short and long-term post-release survival; development of best practices)
4. Enhance and apply knowledge on discard levels of skates and rays in the North Sea/North Western Waters region, so that estimates of total catch can be made, and improved estimates of sustainable fishing levels be produced.
5. Generate robust estimates of the survival of discarded skates and rays in key fisheries where discards quantities are highest, and evidence is currently absent or insufficiently robust.
6. Assess those factors - technical, environmental and biological, that most influence the survival of discard rays, and apply this knowledge to develop measures that enhance discard survival
7. Introduce measures and ways of working developed by the fishing industry that minimise the mortality of discarded rays
8. Use this new evidence to assess for which fisheries it is appropriate to have an exemption for the Landing Obligation on the basis that discarded skate and rays demonstrate high survival.
9. Ensure continued commitment and engagement in the process by organising international expert dialogue meetings.

To this end the following planning for carrying out these tasks are being considered (see Table 1).

Draft planning overview

Task	Yr 1	Yr 2	Yr 3
International stakeholder dialogue sessions for coordination of implementation of the roadmap	*	*	*
Gap analysis and disseminate findings	*		
Update gap analysis		*	*
Develop research programme	*		
Deliver commissioned science on estimating discard quantities and discard survival			
Advisory Council Fishing plans	*	*	*
Regional Group annual report – as part of JR	*	*	
Regional Group final report– as part of JR			*

Table 1: draft planning

Connection with other research programmes

The roadmap aims to ensure that all relevant information and evidence is made available to enhancing knowledge on discard survival of skates and rays. Therefore, the Regional Group, science organisations and other stakeholders will be invited to identify and share information derived from existing projects. Some existing projects are shown below, in Table 2:

Project title/coordination	Project Aims	Relevant evidence produced
ASSIST – Cefas, UK	Assisting the fishing industry in transitioning to the Landing Obligation	Discard survival estimates for specific species and fisheries. Methods developed to analysis electronic tags to estimate discard survival Analysis of factors that influence the health condition of skates at the point of discarding
SUMARIS : Sustainable management of rays and skates	The main aim of the SUMARIS project is to prepare a sustainable and cross-border management strategy for rays and skates stocks.	During the three years of the project SUMARIS (2017-2020) will be carried out in France, Belgium, the United Kingdom and the Netherlands and involves producer organisations, fishermen organisations, scientific institutes and an aquarium. There is a work package on ray survival which will be coordinated by ILVO (Belgium).
Survival of skates and rays in the North Sea sole pulse fisheries	To provide an estimate of discard survival for the thornback (<i>Raja clavata</i>) and spotted (<i>R. montagui</i>) rays	This Dutch project has been carried out since 1 st June 2016 and will carry on until 31 st December 2018. Skates and rays caught as bycatch in the fishery are taken back on land in tanks and observed for at least 18 days, sometimes longer to estimate long-term survival

Table 2: existing projects

References

EU (2013) Regulation 1380/2013 on the Common Fisheries Policy (basic regulation), published 28 December 2013. *Official Journal of the European Union* **L 354/22**.

