



Document title	Draft Roadmap on collection of fisheries data in order to assess incidental bycatches and fisheries impact on benthic biotopes in the Baltic Sea
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Background

As further detailed in document 6-1, the HELCOM FISH Correspondence Group on fisheries data for operationalizing indicators used for the purposes of MSFD implementation for the CPs which are also EU members (CG Fishdata) has been developing a Roadmap on collection of fisheries data in order to assess incidental bycatches and fisheries impact on benthic biotopes in the Baltic Sea. CG FISHDATA 3-2018 agreed in November 2018 that while the draft Roadmap (set out in [document 5 + attachments of CG FISHDATA 3-2018](#)) contains much of the information needed, its current structure was not fit for purpose. The Workshop consequently developed a new structure for the Roadmap, as set out in Annex 2 of the [Outcome](#).

As agreed by the CG FISHDATA 3-2018, the Chair has developed a first draft Roadmap using the new structure, utilizing as much as possible text from the current draft, as well as the outcome of the Workshop. The draft is set out in the attachment to this document, for consideration by FISH 9.

Action requested

The Meeting is invited to consider the draft Roadmap on collection of fisheries data in order to assess incidental bycatches and fisheries impact on benthic biotopes in the Baltic Sea and decide on the way forward with a view to finalizing the Roadmap.

DRAFT Roadmap on collection of fisheries data in order to assess incidental bycatches and fisheries impact on benthic biotopes in the Baltic Sea

Note to reader

Yellow text indicates the structure agreed upon at CG FISHDATA 3-2018 in Copenhagen.

Sections highlighted in green, are to be drafted jointly by the CG:

- *Section 7 and 8 has not been written – take note that section 7 is the road map for how data needed can be collected. This section is to be developed jointly. All other sections are background to the roadmap.*

1. Introduction – aim and scope

- aim for Roadmap (operationalize the two indicators)
- intelligent / fit for purpose approach for the two indicators (note to us: taking into account population sizes, fishing effort fishing gear, general knowledge level of species concerned etc.)
- guide the reader to and setting the context for the 'Roadmap' section (in the end)

The HELCOM Group on Ecosystem-based Sustainable Fisheries (HELCOM FISH) has been given the task to operationalize the two HELCOM core indicator “Number of drowned mammals and water birds in fishing gear” as well as the pre-core indicator “Cumulative impacts of fisheries on benthic biotopes” as required for assessment of Descriptor 1 and 6 of the Marine Strategy Framework Directive. The work is coordinated in the established Correspondence Group for fisheries data (CG).

Operationalizing the two indicators involves the task of identifying data needs and data gaps. This exercise also involves the assessment of data already being collected through EU legislation such as the EU Fisheries Control Regulation and EU’s data collection regulation and other various data collection schemes. Identifying any additional data needs includes, among others, a discussion of level of ambition, e.g. should bird bycatch be given as bycatch of birds and/or at the number of species. As a starting point, additional data needs could be seen as a variable on the total number of birds, where the requirements to the level of detail change over time? With time, information on bycatch could be given at the level of species id. These questions are important when discussing data needs and additional data collection – especially in relation to bycatch data. Furthermore, any additional data collection must be organized in an intelligent cost effective way, whereby a fit for purpose approach governs which and what data are to be collected.

Data needs are described in section 3. In order to assess data gaps, an inventory of data already being collected and are available for assessing the two indicators, must be made. This task is described in section 4. The assessment of data gaps is given in section 5. Section 6 contains information about possible ways of how this additional data can be made available be collected, e.g. through existing EU-regulation etc.

Therefore, the overall aim of the road map is to describe the different task required in order to operationalize the core and pre-core indicator in terms of data (fishery data and environmental data). The first sections (section 2-6) serve as background to the roadmap on data gaps. The road map itself is given in section 7, which is followed by closing remarks.

2. Background

- MSFD
- related commitments

According to the EU’s Marine Strategy Framework Directive, EU Member States are requested to establish threshold values for by-catch, including sea mammals, birds and non-commercial exploited fish species, and

for sea floor integrity. This document solely focus on bycatch of sea mammals and birds and sea floor integrity in relation to fisheries.

Marine Strategy Framework Directive (text copied from previous document)

Repealing Decision 2010/477/EU, Member States should establish threshold values for biodiversity criterion D1C1 (bycatch) including sea mammals, birds, and non-commercially exploited fish species, as well as for Descriptor D6 (sea floor integrity). Reporting under Art. 8 of the MSFD is currently based on national MSFD indicator assessments (where they exist) and otherwise on evaluation criteria according to other EU Directives, including the Habitats Directive which obliges EU members to monitor bycatch of protected species (Art. 12: Member States shall establish a system to monitor the incidental capture and killing of the animal speices listed in Annex IV.

Baltic Sea Action Plan (text copied from previous document)

- By 2010 develop in co-operation with ASCOBANS, a coordinated reporting system and database on Baltic harbor porpoise sightings, bycatches and mammals.

Ministerial Declaration 2010 (text copied from previous document)

DECIDE

- to establish, for those HELCOM Contracting States being also EU-Member States, the role of HELCOM as the coordinating platform for the regional implementation of the EU Marine Strategy Framework Directive (EU MSFD) in the Baltic Sea including striving for harmonised national marine strategies for achieving good environmental status according to the HELCOM Baltic Sea Action Plan and the EU MSFD; and

ALSO DECIDE

- that core set of indicators with quantitative targets shall be developed for each of the segments of the HELCOM Baltic Sea Action Plan, while ensuring that the indicators can also be used for the other international monitoring and reporting requirements inter alia the EU Marine Strategy Framework Directive, and that a full indicator-based follow-up system for the implementation of the HELCOM Baltic Sea Action Plan be further developed and placed on the HELCOM website by 2013;*
- that the already initiated revision of the HELCOM monitoring programmes be finalized by 2013 and that it results in cost-effective joint monitoring, which fully supports the indicator-based assessment approach and monitoring of the implementation of the HELCOM Baltic Sea Action Plan, and is in line with other international monitoring and reporting requirements;*

ACKNOWLEDGE

- that with the activities and programmes of the HELCOM Baltic Sea Fisheries and Environmental Forum, HELCOM took a step towards the implementation of an ecosystem- based approach allowing for improved coordination and cooperation between fisheries and marine environment protection authorities, and insofar has begun to develop the Baltic Sea as a model of good management of human activities;

Ministerial Declaration 2013 (text copied from previous document)

WE DECIDE *to implement on a regional level the Strategic Plan for Biodiversity for the 2011-2020 period of the UN Convention of Biological Diversity, including the Aichi Biodiversity Targets, taking into account the special characteristics of the Baltic Sea, bearing in mind that the implementation of the Plan in the EU and its Member States is carried out through the EU Biodiversity Strategy, and more specifically* **DECIDE** *to:*

- *take decisive action to work towards a favorable conservation status of the harbor porpoise based on implementation of the CMS ASCOBANS Jastarnia Plan for the harbor porpoise in the Baltic Sea, in particular by addressing the pressing problem of by-catch;*

WE SUPPORT the further development and testing of the HELCOM generic decision-support tool to map possible negative impacts of specific gear types on threatened or declining species and habitats, and which helps to develop and/or recommend measures to address these;

WE DECIDE to take action to reduce the negative impacts of fishing activities on the marine ecosystem and to this end, **SUPPORT** the development of fisheries management and technical measures to minimize unwanted by-catch of fish, birds and mammals in order to achieve the close to zero target for by-catch rates of the Baltic Sea Action Plan and minimize damage to sea bed habitats;

WE AGREE to continue to work to develop common procedures to facilitate the sharing of aggregated data on fisheries activities in the Baltic Sea in an applicable format for the purpose of assessing pressures on marine and coastal ecosystems e.g. to be applied in maritime spatial planning.

RECOGNIZING that recreational fisheries conducted e.g. from boats using commercial gears at a certain scale may contribute to fishing mortality of certain commercially exploited fish stocks and impacts on biodiversity, **WE AGREE** to ask for advice from Regional Coordination Groups within the EU Data Collection Framework and ICES on how to improve data collected on such recreational fisheries, with a view to evaluate the impacts of such recreational fisheries on the marine environment;

WE SUPPORT the first set of core indicators of environmental status and pressures with the intention that they will form the basis of an indicator-based follow-up system for measuring progress towards achieving good environmental status with a full set of operational core indicators, and further **STRESS** that the joint coordinated monitoring by the Contracting Parties should provide the data necessary for regular updating of the HELCOM core indicators and assessments.

3. Data needs

- by-catch indicator
- indicator for impact on benthic biotopes in the Baltic Sea

Data needs for the core indicator on “Number of drowned mammals and water birds in fishing gear” as well as the pre-core indicator “Cumulative impacts of fisheries on benthic biotopes” is given per indicator in Annex A (Annex XX in previous document). The two sections below describe data needs for the two indicators.

Section 3a and 3b describe, which data needs have been identified for the two indicators. Improvement of data quality is also described, since poor data quality can affect the analyses which are to be carried out in the assessments on whether fisheries has an impact not in compliance with the conservation targets.

In general, data is available to deliver on the indicator on cumulative impacts. Work can be done to improve data quality (VMS data for vessels <12 m etc.) as well as data availability to data users. As for the indicator on bycatch, available data will not deliver on the indicator, and a road map to ensure, that data will be collected and made available, is needed.

3a Core indicator on bycatch – Number of drowned mammals and water birds in fishing gear

The indicator on number of drowned mammals and water birds in fishing gear aims at estimating the mortality of mammals and birds due to fisheries bycatch. The indicator is to deliver a bycatch rate, whereby number of drowned animals is seen in relation to population size.

Additional data on bycatch is required in order to assess whether the mortality of mammals and seabirds due to bycatch in fishery is at a level threatening the population status, whereby management actions are required. Data is needed in three main fields:

- regional, temporal and spatial overview of fishing effort within specific métiers, especially but not limited to gillnetters and fleet segments <12 m
- data on actual observed and/ or monitored bycatch

- data on the distribution and population size of the relevant species

Data needs are centered around a hot-spot approach, where current fishing pressure overlaid with information on the spatial distribution of the population etc., defines where to concentrate bycatch monitoring. Such an approach will ensure a cost effective use of available funds and furthermore ensure that marine mammals and sea birds are protected where bycatch takes place.

3b Pre-core indicator on cumulative impacts on benthic biotopes

The indicator on cumulative impacts aims at assessing the impact of fisheries on marine benthic habitat/ biotopes, among the impacts from other human activities.

To operationalize this indicator data and information in the following fields is needed:

- regional, temporal and spatial overview of fishing effort for fisheries with mobile bottom contacting gears
- Habitat maps

Logbook and VMS data is available, see section 4. ICES has for years issued data calls on fishery effort. Hence, data is available at diverse temporal resolutions. Overlaying data layers on fisheries with other anthropogenic data layers may be challenged by 'scale'.

4. Existing data and data sources

4a Available data sources (outcome from meeting in Copenhagen need to be included)

Existing data and data sources contains information on commercial and recreational fishery. For the indicator on cumulative impact, only commercial fishery is relevant. Whereas recreational fishery is also relevant in relation to the indicator on bycatch as marine mammals and seabirds are also bycaught in nets set by recreational fishermen.

Existing data and data sources are therefore given below for both types of fisheries.

Commercial fishery

For commercial fishery, CP has assessed data already being collected through EU legislation, which can be made available through the DCF, see Annex XX (old Appendix 1). Templates were drafted and circulated to CP's with the overall aim to assess if and to which extend, data already being collected is collected, its' quality and whether additional data is being collected.

Denmark, Sweden, Germany and Poland has described data availability in relation to VMS and logbook data, AIS data and its coverage, data on bycatch of marine mammals and water birds as well as recreational fishery. For this exercise to be comprehensive, all CP's are to fill out the two templates on commercial and recreational fishery.

Recreational fishery

In order to assess the effort from recreational fishery, a review on gillnet fishery in CP has been carried out, see Annex XX (old Annex 2) for the template sent out. The review also contains information about number of recreational fishermen using gillnets, type of nets, temporal and spatial extend of the fishery.

4b Data quality (outcome from meeting in Copenhagen need to be included)

In order to review data quality on the data already being collected through EU legislation etc., CP agreed to carry out a quality validation analyses of their national commercial data. For this analysis, the two reporting tables in Annex XX (old Appendix 1), was used.

A comprehensive list of mandatory and optional EU reporting requirements have been drawn, see Annex XX (old annex 4). Improving the data quality of these data, could be a good starting point.

4c GDPR

SECTION TO BE WRITTEN BASED ON INPUT FROM DTU AQUA (as presented in the last meeting in the CG – to be quality checked by GDPR experts).

4d ICES advice and associate data products

ICES has in recent years issued several data calls in relation to the two indicators. Several data calls have been forwarded in relation to effort (VMS, logbook data etc.). Effort maps at various scales have been produced. The official ICES data call from 2018 on fishery data for 2009-2017 is given in Annex XX (previous Annex 3). This data requested in this data call, are the data needed for carrying out the analyses of “Cumulative impact of fisheries on benthic biotopes” for vessels above 12m in length.

In February 2018, ICES issued a data call on bycatch to WGBYC, see Annex XX (old Annex 3). According to the ICES request, Member States/ CP were also requested to provide information on recreational fisheries and how this fishery is monitored.

Since ICES issues the data calls used in relation to MFSD, additional data collection should be coordinated with the relevant working groups, such as WGBYC and the working group on cumulative impacts.

5. Data gaps (fill in the data gaps identified in the CG FISHDATA 1-2018)

In the process of identifying data needs and data availability in order to deliver on the two indicators on incidental bycatches and cumulative impact on benthic biotopes, several data gaps have been identified. The CP has identified the following data gaps as important data sources needed, if Member States are to deliver on the two indicators:

- Lack of VMS for vessels < 12 m and lack of AIS for vessels < 15 m
There is a need for information on fishing effort for the entire commercial fleet. This information is important when assessing fishing effort as well as when identifying hotspot areas for bycatch. To address data gaps for smaller vessels, Contracting Parties have conducted a national analyses on combining logbook information and available AIS data, see table 1 (previous document) in order to assess the potential of AIS-systems to provide high quality data on vessel location. AIS can serve as a good data source for vessel location. For vessels also carrying VMS, AIS can support the information on vessel location and thereby improve the analysis of fishing effort.
- Lack of logbook data for vessels < 8 m
Lack of logbook data challenge the analysis of fishing effort. Logbook data gives information about target species and fishing spots (ICES square), which is important information when assessing fishing effort
- Lack of bycatch data
Bycatch data is, at the moment, not collected in a harmonized way among Member States, nor is bycatch data collected for the entire fleet both in relation to the commercial and recreational fleet. Total number of bycatch is needed as is some information on species, when looking at seals and water birds. Hotspot approach and statistically sound sampling schemes are possible ways to focus data collection in a cost-effective way
- Data gaps in relation populations (e.g. birds)
In relation to water birds, the level of ambition need to be agreed upon. As a starting point, information on number by birds bycaught need to be collected. Once data collection schemes have been designed and implemented, focus can shift to how data and information can be collected at species level
- Access to data and data availability at national level

For some Contracting Parties, access to data at a national level can be a challenge. The focus of this roadmap is to address additional data needs and data gaps. Increased information about which data is available, will hopefully help on data sharing and data availability at a national level.

(outcome from meeting in Copenhagen need to be included in this section)

6. Possible sources to fill the gaps

- revision on control regulation (VMS, AIS, REM, GPS, etc.)
- landing obligations
- data collection framework
- relevant directives (Birds and Habitat directives)

7. Roadmap to deliver and actions fill the data gaps

- taking into account the ICES work
- relevant EU legislative procedures (technical measures, EMFF, control regulation, etc.)
- cooperation with OSPAR

Closing remark/Summary

- how this work can feed into other processes (e.g., update of the State of the Baltic Sea report)
- identifying future needs for updating the Roadmap