



Outcome of HELCOM Workshop on Seal-Fisheries Interactions (SFI WS 1-2019)

Introduction

The HELCOM Workshop on Seal-Fisheries Interactions (SFI WS 1-2019) was hosted by the Ministry of Foreign Affairs of Denmark at the premises of Eigtveds Pakhus in Copenhagen on 27 June 2019.

The Workshop was opened at 9:00 on Thursday, 27 June 2019 and it terminated at 16:00 on the same day.

The objective of the Workshop was to build on current knowledge and previous discussions on how to deal with seal-fisheries interactions within HELCOM, BALTFISH, BSAC and to develop proposals for how the issue could be brought forward within the HELCOM context.

Ms. Katarzyna Kaminska (Poland) acted as moderator of the Workshop. Mr. Markus Helavuori, HELCOM Professional Secretary, acted as secretary of the Meeting.

At the start of the Meeting, a *tour de table* of introductions was conducted. The list of participants is set out in the **Annex**.

Mr. Markus Helavuori, HELCOM Secretariat, introduced the work of the HELCOM Fish Group related to seal-fisheries interactions and the background of the Workshop. The process of updating the HELCOM Baltic Sea Action Plan by 2021, which currently also includes actions on safeguarding the seal populations in the Baltic Sea and implementation of non-lethal mitigation measures for seals-fisheries interactions, was also presented.

Theme 1: Presentation of the issue and current HELCOM activities on the matter

Ms. Jannica Haldin, HELCOM Secretariat informed about the activities of the HELCOM Expert Group on Marine Mammals (EG MAMA) and made an introduction to HELCOM Recommendation 27-28/2 on Conservation of Seals in the Baltic Sea Area (**Presentation 1**). The Meeting took note of the background behind and content of the Recommendation. The Meeting further noted that the Recommendation provides actions for the Contracting Parties to the Helsinki Convention but also specifically guides the work of EG MAMA, as the EG has been set up to assist in the implementation of the Recommendation. The Meeting took note of the current status of the implementation of the Recommendation, both as regards actions relevant for the Contracting Parties and for EG MAMA.

Mr. Anders Galatius, Chair of EG MAMA and Mr. Mart Jüssi (Estonia) provided information, *inter alia*, on seal population growth in the Baltic Sea. **Presentation 2** focused on information on the growing populations of grey seals. **Presentation 3** addressed harbor seals and described target setting for Good Environmental Status (GES), the Precautionary Approach Level (PAL) and the Target Reference Level (TRL). The Limit Reference Level i.e. the minimum viable population size was also discussed. The Workshop further noted how these Levels are used within the HELCOM context for seal management

The Workshop also noted information in Presentation 3, regarding the HELCOM HOLAS II assessment related to distribution and abundance of seals in the Baltic Sea.

The Workshop noted that it is unclear whether the ringed seal populations are affected by the growth of the grey seal populations. It was noted, however, that historically there have been large populations of both species in the Baltic Sea, and that climate change and the associated reduction in ice coverage is a serious concern when it comes to ringed seal population growth.

The Workshop also discussed the impacts of fisheries and possible impacts of human occupation of beaches, shipping and other factors affecting the distribution of seal haul-outs in the Baltic Sea.

Theme 2: Views and presentations from other fora and initiatives on how to deal with issues related to seal-fisheries interactions

In **Presentation 4** Mr. Sven-Gunnar Lunneryd presented experiences from the Swedish seal-fisheries programmes and general information on problems caused by seals to fishermen. The presentation addressed both salmon and cod fisheries. The Meeting noted that the problems caused by seals to fisheries, are typically caused by a rather low number of individuals (mainly males) that have learned to target fishing gears of various kinds. Mr. Lunneryd commented that targeting those rogue seals could decrease seal-fisheries interactions, but would be difficult to do in practice. The importance of developing seal safe fishing gears was noted, as well as examples of such gears which are particularly suitable for small scale fisheries.

Presentation 5 by Mr. Michael Dähne introduced the status of seals in Germany with implications for management. The grey seal has only been re-established to German Baltic Sea waters after 2005 and the population is small but growing. The Workshop noted the information on experiences from a German case of multiple bycatches. Mr. Dähne also mentioned, that if fishermen have repeated bycatch and do not report it to authorities, this can be legally seen as a crime in Germany and therefore fishermen in Greifswald Bay have to use fish traps starting from September 2019, that prevent seals from entering the trap.

The Workshop discussed feeding habits and noted that grey seals are opportunistic feeders and that food items can change seasonally and regionally. Regarding known diet studies, herring seems to be one main food species for grey seals, but especially in the southern Baltic Sea cod is seasonally significant. The Workshop further noted, however, that seals are opportunistic and feed on species that are available.

Mr. Esko Taanila and Mr. Robert Cederlund presented preliminary results from the Baltic Sea Seal and Cormorant TNC Project and possible future solutions (Document 4 and **Presentation 6**). Results from studies including questionnaires and interviews with fishermen around the Baltic Sea indicate that coastal fisheries are widely affected by seals and that seals consume significant amounts of high-value fish such as salmon.

Ms. Gry Sagebakken, representing the Swedish BALTFISH Presidency, presented the outcome of the BALTFISH Symposium on interactions between seals, fish and fisheries in the Baltic Sea, held in Gothenburg, Sweden 19-20 March 2019 (**Presentation 7**). A need for an ecosystem approach in the management of seals and fisheries was highlighted, as well as a need for a regional platform to consider the issue. Regional cooperation between fisheries management bodies, nature conservation authorities, fishermen and scientists was also considered important in addressing interactions between seals, fish and fisheries in the Baltic Sea.

The Workshop noted that there are still gaps in the knowledge with regard to the spread of parasites in seals and fish.

Mr. Nils Höglund, CCB and Chair of BSAC EBM group provided a presentation on options for addressing the seal-fisheries interactions (**Presentation 8**). The presentation also noted the importance of an ecosystem approach and stressed the need for making difficult choices to find a balance. This should be based on science and requires commitment by the Contracting Parties and relevant fisheries management organizations and EU bodies. The Workshop noted that key questions are, *inter alia*, what fisheries managers really want to achieve and what HELCOM should address. In this context, Document 1 on the UNEP Protocol for the scientific evaluation of proposals to cull marine mammals was also introduced. The potentially high costs of culling programmes were also noted by the Workshop.

Other general points of discussion were e.g. whether seals interact with coastal fisheries because there is not enough fish for them to eat in general, noting however that the intention of this Workshop is to focus specifically on seals and fisheries rather than other pressures on fish in the Baltic Sea. Seal-fisheries interactions and solutions thereto were noted to be not only a scientific, technical or economical issue, but also a socio-psychological one.

Theme 3: Group discussions

The Moderator provided an introduction to the group discussion (Document 3 and **Presentation 9**) and the Workshop was divided into four groups. Groups 1 and 2 (coordinated by Anders Galatius and Mart Jüssi, respectively) focused on biodiversity and seal populations. Groups 3 and 4 (coordinated by Nils Höglund and Sven-Gunnar Lunneryd, respectively) focused on fisheries. All four groups were also requested to consider next steps do address seal-fisheries interactions and the update of the Baltic Sea Action Plan, as detailed in Document 3.

Summary of group discussions

Presentations of the outcome from the group discussions were provided as follows for biodiversity and seal populations:

- **Group 1:** It was noted that seal-fisheries interactions present a three-pronged problem: ecology (competition), depredation and parasites, which can, to some degree, be analysed in isolation. In terms of competition one discussed solution was to manage fisheries spatially to let ecosystems recover. With regard to seal abundance, it was noted that there is comparatively high-quality monitoring, but distribution monitoring is limited in scope, meaning that it is not possible to assess the impact of management actions for several years. Monitoring of parasites and integration of data on an ecosystem basis is also lacking. Management of seals on a Baltic wide level is a good approach as seals move over vast areas, but local management is also needed, e.g. when considering, e.g. breeding colonies.
- The target reference, limit reference and precautionary approach levels in accordance with HELCOM Recommendation 27-28/2 on conservation of seals in the Baltic Sea area were seen to be relevant and appropriate in terms of maintaining viable seal populations.
- **Group 2:** It was noted that abundance monitoring is robust, as is the coordination of monitoring. However, the Group noted that there is lack of knowledge on how the seals counted in different countries interrelate outside the monitoring period. There is evidence from DNA, Photo ID and telemetry that there are spatiotemporal, regular movements. An international telemetry study could assess the monitoring results and population status more adequately.
- Group 2 also agreed that the established limits of Recommendation 27-28/2 were found to be sufficient, changes to the levels are political and need scientific justification as any proposal. As far as there are no new scientific findings saying the agreed levels are inadequate, they should be maintained in the context of Baltic environment health.
- It was concluded that bycatch of seals does not seem to inhibit population growth but could affect growth (current levelling off of growth rates could be due to bycatch in combination with other main pressures). Ghost nets entangled between wreck structures were seen as particularly serious issues in this regard. With regard to culling, it was noted that there is not enough information on seal behaviour to know whether their distribution will be affected by local culling, they may vacate sea areas and turn up in places where they are not expected to go.
- With regard to next steps, Group 2 agreed that workshops such as this are useful in kicking off discussions and involving various stakeholders, but more regular meetings would be needed in order to make progress in addressing the issue. HELCOM could coordinate the further efforts and ensure that the involvement of stakeholders is sufficiently diverse.

With regard to fisheries, the group discussions summarized as follows:

- **Group 3** discussed that little is known about the relationship between seal abundance and parasite prevalence in fish. The lack of knowledge on anisakid parasite life cycles, prevalence of intermediate hosts and the influence of hypoxia, salinity, contaminant exposure on their distribution and the immune system and susceptibility of infectious diseases of cod was highlighted and the need of

dedicated studies was stressed (Complete post mortem investigations on fish (histology, parasitology, toxicology, chemical biomarkers); parallel parasitological survey on seals and fish in certain areas).

- Group 3 also discussed innovation of new bycatch and seal damage avoiding fishing gears and noted that their usage is to a large extent a financial question. Financial support, eco labelling of seal safe fish etc. were seen as potential options. Compensation schemes for fishermen were only seen as a temporal solution, until final solutions have been found and it also depends on the regional status of the seal population. Options such as additional TACs for fisheries using alternative fishing gears, lifting of bans for all experimental gear, financial support for gears were also discussed.
- Pingers or seal scarers were not seen as a long-term or large-scale solution to scare seals as get used to them and they also affect other marine organisms negatively.
- Group 3 further discussed the prescriptive EU Habitats Directive and one participant expressed the view that grey seals should be removed from the Annex and that the Directive might take a regional approach as seals are a problem in some areas only.
- With regard to hunting and culling the Group discussed the need for a wider biodiversity view about protection, recognizing also the protection success story of increasing seal populations. It was also noted that experience from e.g. Canada and Norway should be considered.
- **Group 4** noted that better knowledge is needed on the food web dynamics, the links between open sea and coastal fish stocks and potential implications for seal foraging behaviour and distribution, questions to raise both with mammal and fisheries experts. It was also noted that climate change impacts and such considerations should be fed into Recommendation 27-28/2 on expected reference levels or increased/decreased range etc.
- Potential involvement of other HELCOM processes and groups was discussed. Maritime Spatial Planning (MSP) Working Group could consider areas that are suitable or not for using coastal seines which are considered seal safe, taking damage to benthic habitats into account. It was noted that the introduction of seal scaring devices (SSD) should be considered by the HELCOM Expert Network on Underwater Noise (EN-Noise), noting also that more information is needed regarding their effect, as well as impacts on harbor porpoises and other organisms.
- The Group discussed that the above matters could feed into considering an update HELCOM Recommendation 27-28/2 and potential further research. The Group also discussed the need for setting aside a part of EMFF funding specifically for gear development and cooperation (although outside the remit of HELCOM).
- General discussions of the Group concluded, *inter alia*, that the ecosystem status is poor, lack of fish and reducing stocks drives the situation with seals. Open sea fishing may have a big impact. Compensation schemes should only apply when using seal safe gears and compensation cannot be a long-term solution unless linked to mitigation. Deeper involvement of fishermen directly into the gear development, new structures are potentially needed to help innovation. Culling is costly, but on a local scale it could be an option, although debatable.

Outcome and next steps

Considering the information provided in the presentations as well as the summaries of the group discussions, the Workshop recognized that seal populations in general have been increasing in the Baltic Sea, but the situation varies between sub-regions. Abundance data is available, but spatial and temporal distribution at sea is not as well known. It was also noted that the ecosystem approach needs to be considered, it is not viable to only focus on seals. Seal-fisheries interactions were noted to be a serious issue, although the reasons and solutions thereto were challenging to identify objectively. The possible need to revise HELCOM Recommendation 27-28/2 on conservation of seals in the Baltic Sea was also raised.

Concrete steps are needed to make the ecosystem approach operational. The BSAP calls for the ecosystem based management approach, but this has not yet been accomplished. Involvement from all stakeholders would be needed, including fishermen and nature conservation. It was also noted that the issue may need to be divided into tangible portions (e.g. ecology, fisheries management, depredation and technical options) and to involve the relevant experts to consider each portion.

The Workshop was seen as a useful start to the discussions in addressing seal-fisheries interactions in the Baltic Sea, but more work, including involvement of, e.g. the HELCOM Fish Group, State & Conservation, EG MAMA, EN-Noise, the HELCOM-VASAB Working Group on MSP is evident. The process of updating the BSAP was agreed to provide a good opportunity in ensuring commitment for a way forward in this regard, both on a regional and national level.

The Workshop thanked Ms. Katarzyna Kaminska for the excellent moderation and the hosts for the meeting facilities.

The participants agreed to this outcome by correspondence after the Workshop.

Annex List of Participants

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