

Agenda Item 14.4

Relations with Other Bodies

Cooperation with Other Stakeholders

Document 14.4

**Report from the SAMBAH
Stakeholder Workshop**

Action Requested

- Take note
- Comment

Submitted by

Secretariat



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TO THE MEETING**



Report from the SAMBAH stakeholder workshop

How can the fishing, shipping and offshore construction industries and politics help to protect the Baltic Sea harbour porpoise?

A stakeholder workshop to discuss possibilities based on future results from the SAMBAH project

Introduction

This report is a summary of key issues raised during the first SAMBAH stakeholder workshop in Gothenburg, 15 April 2013. The workshop was organized by the SAMBAH team, ASCOBANS and its Jastarnia Group and the Swedish Agency for Marine and Water Management. The goal of this workshop was to provide a forum for discussion of the conservation of the Baltic Sea harbour porpoise in the context of the upcoming results from the SAMBAH LIFE+ project. The intention was to involve managers and stakeholders at an early stage in order to achieve the best possible use of the output of the SAMBAH project. This aim was facilitated through discussions on the use of SAMBAH results for decision-makers and managers as well as on the possibilities for stakeholders to help minimize adverse effects on the fragile Baltic harbour porpoise population. Last but not least, possible future international cooperation was to be investigated with a view to regularly monitoring the population using the SAMBAH methodology.

The workshop had 39 participants representing the SAMBAH project, marine management and other national authorities, international Baltic Sea agreements, NGOs, the offshore construction industry, fisheries interests and the European Commission (DG Mare). All participants were given the possibility to take part in the discussions and to comment on talks.

This report captures the most important discussion points raised during the meeting. It is intended to reflect the participants' comments.

Administration of the meeting

The workshop started with three presentations giving some background on the subject of the workshop. The first was a presentation on the SAMBAH project in general, given by project coordinator Mats Amundin, Kolmården Wildlife Park, Sweden. The second was on expected results from the project and how they can be used in the management of the Baltic Sea harbour porpoise population, given by project managers Ida Carlén and Julia Carlström from AquaBiota Water Research, Sweden. The third addressed the role of the Habitats Directive in cetacean conservation and was given by Peter Evans from Bangor University, UK. After this general introduction, Torbjörn Johansson from the Swedish Defence Research Agency introduced the issue of underwater noise and its impact on marine mammals, and there was an hour's discussion on this subject. After the lunch break, Finn Larsen from DTU Aqua, Denmark, introduced the issue of porpoises and fisheries, followed by an hour of discussion on the subject. Discussions were moderated by Stefan Bräger from the German Oceanographic Museum in Stralsund. The workshop ended with a short summary by the moderator and a short discussion on how the workshop results can feed into future national and international plans of harbour porpoise management and the relevant activities of other organizations.



Havs
och Vatten
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Points of discussion

Discussion was divided into two sessions. The first one was on porpoise conservation and underwater noise, and the second one was on porpoise conservation and fisheries.

During the discussion on **underwater noise**, following Torbjörn Johansson's introduction, numerous comments were made by the participants. Some of the key points made are summarized below:

- Since noise is everywhere, and carries over long distances in the sea, can MPAs work to mitigate negative noise effects on porpoises? How do we manage noise within MPAs? There are appropriate measures for different types of threats, and MPAs are effective against certain threats but not for others. It appears that no country represented at the workshop has a management plan for a porpoise SAC ready. Concerning noise, mitigation is probably needed everywhere (not only in MPAs), both because the porpoise is a mobile species and because sound travels far underwater. Possible noise mitigation measures in porpoise MPAs are, for example:
 1. Limit the use of echo-sounders transmitting within porpoise hearing range
 2. Limit the speed and the general use of leisure craft, speed boats, jet skis
 3. MPAs should be large areas with zoning providing a quieter core area
- There are basically two types of exposure of harbour porpoises to underwater noise; the chronic exposure to sounds from ship machinery and echo-sounders, and the acute exposure to airguns, ramming noise in connection with wind mill construction, military sonars and explosions of ordnance. The latter type of exposure can, in case e.g. of larger construction or exploration projects, also occur over extended time spans. Population-level effects as well as individual responses of porpoises to these types of exposure to underwater noise need to be prioritized in further research.
- A few studies of effects of underwater noise came up during discussions (please note that these are only examples). For example, ferry routes in Denmark do not displace porpoises, while on the other hand avoidance of ships has been proven during the cetacean surveys such as SCANS and SCANS II. Also, it has been shown that there is a negative response of porpoises to speed boats in the Shetland Islands (Peter Evans, pers. comm.). These results, however, are probably dependent on how porpoises use the areas studied.
- Animals are likely to tolerate negative pressures to a certain point – e.g., if habitat is important, they will probably tolerate such impacts longer than in a less important area where they have less to lose by avoiding the area. Furthermore, it is likely that prey distribution is also affected by noise (but most likely not the same noise as that affecting porpoises), which would in turn affect the distribution of porpoises.
- Porpoises can get a temporary threshold shift (TTS; a reversible decrease in hearing sensitivity caused by noise) from low frequency impulsive sounds (Lucke et al. JASA 2009).
- The Marine Strategy Framework Directive is gaining momentum and also provides a framework for issues concerning underwater noise. Echo-sounders and high frequency sonars that were included as an indicator in the original Task Group 11 report, but removed by the Commission, may be included as indicators for MSFD descriptor 11 on underwater noise in the future.

- At least in some countries, the armed forces provide open access to information on frequencies and duration of military sonar pulses. Some armed forces have initiated a dialogue with conservationists in order to control the potential negative effects of sonar use and the clearance of ordnance from WW2. The Swedish armed forces have produced a draft “Marine Geographical Biology Calendar” a GIS-based tool aimed at optimizing the use of marine military activity in areas and time periods where the risk of damaging sensitive biology is small.
- It was suggested that gear boxes of wind turbines should be made less noisy in the marine environment as done on land already. Today gear boxes are the main source of underwater noise from sea-based wind turbines (Andersson 2011), although behavioural reactions to the noise are unlikely if the porpoise is not very close to the foundation (Tougaard et al. 2009. Underwater noise from three types of offshore wind turbines: Estimation of impact zones for harbour porpoises and harbour seals. JASA 125: 3766-3773).

During the discussion on **fisheries**, following Finn Larsen’s introduction, participants provided a variety of comments. Key points are summarized below:

- Fishermen do not want harbour porpoise bycatch. It takes time to remove bycaught animals from the nets, and makes costly net repair necessary. However, mitigation measures should preferably result in measurable effects, which may be difficult in low density areas such as the Baltic Sea. It was stated that introducing non-measurable mitigation measures would not get the support of fishermen, but would have to be a purely political decision. The pivotal question is what degree of uncertainty one is willing to accept. After all, the precautionary principle is enshrined in EU law.
- Alternative, porpoise-safe types of fishing gear or fishing methods are, for example
 1. Longlines
 2. Jigging
 3. Pots (for example for cod)

Longlines can be very selective and may be an option to avoid porpoise bycatch. However, sea bird bycatch may still be a problem. Pots can also be very selective. But according to the fishermen’s representative attending the workshop, they are not a commercially viable alternative to currently used commercial gear (gillnets), and economic revenue has to be the same or higher as for the original gear for fishermen to consider using new types of gear.
- Pingers (porpoise deterrent devices) have been shown to be effective in preventing bycatch in gillnets. There are some problems, however, with pingers:
 1. They do not completely eliminate bycatch
 2. Reliability problems
 3. High cost.
 4. In the Baltic, may act as “dinner bells” for seals, which create big problems for fisheries
 5. Pingers may displace porpoises from important habitat (habitat exclusion hypothesis)

However, there appear to be answers to most of these issues:

 1. For example, Fishtek and Chelonia Ltd. have been developing a pinger (the banana pinger: <http://www.fishtekmarine.com/acousticPinger.php>, now available on the market) that is reliable,
 2. and cheaper (£ 20 per unit plus batteries)

3. It may be possible to raise the frequency of pingers above the hearing threshold for seals, without losing the deterrent effect for porpoises (Kastelein et al. 2008, Marine Environmental Research 66 (2008) 319–326)¹.
4. A potential solution to extensive ensoufication of porpoise habitat is the development of an alerting pinger. The idea with an alerting pinger is that it emits sound similar to porpoise warning click trains, thereby stimulating wild porpoises to echolocate towards the net and increasing their chances of detecting it in time to avoid entangling. Such an alerting pinger may be a promising concept (Culik et al. 2013), although it has not yet been shown to work to prevent bycatch. Such studies are in progress.
 - There is also the interactive pinger, which is triggered to emit its porpoise deterring sound by the echolocation signals of porpoises. Like the alerting pinger, the interactive pinger emits enticing sounds in a “beacon” mode, to prompt porpoises to echolocate towards the device before they come close enough to risk entanglement. This concept needs further development.
 - The advisability of deterrent pinger use inside MPAs depends on the management aim of the area, the size of the area, the density and type of the fishing effort, and the harbour porpoise behaviour in the area. This is true for all bycatch mitigation measures, not only pinger use.
 - Another option discussed was to set a total quota for bycatch – once a certain number of porpoises had been caught in the Baltic, all fishing with that type of fishing gear would have to stop. However, this requires bycatch to be monitored closely.

Wrap-up and next steps

In the wrap-up session, it was concluded that the results of this workshop may be very relevant, for example, for the HELCOM ministerial meeting in October 2013 as well as for several HELCOM working groups, for the development of MSFD indicators and for the work of ASCOBANS and its Jastarnia Group. There was consensus that this workshop should be followed by more stakeholder meetings, provided that funding can be found, and that efforts should be made to involve additional stakeholders, e.g. from ferry companies, offshore construction companies, fisheries and the European Commission (especially from DG Environment and DG Mare).

A list of participants with their email addresses has been approved and distributed to all participants, together with copies of the presentations provided during the day.

¹ A 70kHz pinger is already on the market, which is supposedly inaudible to seals (<http://www.futureoceans.com/products/future-oceans-70-khz-dolphin-pinger>). However, it has not yet been tested on porpoises.