Agenda Item 4.1

Priorities in the Implementation of the Triennium Work Plan (2010-2012)
ASCOBANS Baltic Recovery Plan (Jastarnia Plan)

Document 4-02 Addendum

Report of the 8th Meeting of the ASCOBANS Jastarnia Group

Action Requested

- Take note of the Report
- Comment
- Endorse the Action Points

Submitted by

Jastarnia Group

NOTE:
IN THE INTERESTS OF ECONOMY, DELEGATES ARE KINDLY REMINDED TO BRING THEIR OWN COPIES OF DOCUMENTS TO THE MEETING

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8th Meeting of the ASCOBANS Jastarnia Group

UN Campus, Bonn, Germany, 31 January-2 February 2012

1. Opening of the Meeting

Karl-Hermann Kock (Germany) took the chair, explaining that Rüdiger Strempel (Coalition Clean Baltic) was ill and unable to attend the meeting.

As there were some new faces among the participants, the Chair suggested that everyone introduced themselves. There followed a *tour de table*. A list of participants can be found at Annex 1.

2. Adoption of the Agenda

The Chair introduced the draft agenda. There being no amendments, this was adopted as presented (Annex 2). The Chair then outlined his proposed schedule for the meeting, expressing the hope that the business could be concluded by midday on Thursday, when he would have to leave. Should the meeting require more time, Penina Blankett (Finland, Vice-Chair of the ASCOBANS Advisory Committee) would preside over the last items of business.

3. Presentation by Invited Expert

Dr. Andrew Foote, Centre for Geogenetics, Natural History Museum of Denmark: Genetic Monitoring of Harbour Porpoises from Seawater Samples

Dr. Andrew Foote, Centre for Geo-Genetics, Natural History Museum of Denmark) made a presentation via a *Skype* connection on "Genetic Monitoring of Harbour Porpoises from Seawater Samples".

The exploitation of non-invasive samples had been widely used in genetic monitoring of terrestrial species. In aquatic ecosystems, non-invasive samples such as faeces or shed hair or skin were less accessible. However, the use of environmental DNA (eDNA) had recently been shown to be an effective tool for genetic monitoring of species presence in freshwater ecosystems. Detecting species in the marine environment using eDNA potentially offered a greater challenge due to the greater dilution, amount of mixing and salinity compared with most freshwater ecosystems. To determine the potential use of eDNA for genetic monitoring the researchers used specific primers that amplify short mitochondrial DNA sequences to detect the presence of a marine mammal, the harbour porpoise, *Phocoena phocoena*, in controlled environments and in the natural marine locations. The reliability of the genetic detections was investigated by comparing with detection rates from static acoustic monitoring devices. While the team was able to consistently genetically detect the target species under controlled conditions, the results from natural locations were less consistent and detection by eDNA was less successful than acoustic detection. However, at one site a long-finned pilot whale, *Globicephala melas*, was detected. This was a species rarely sighted in the Baltic, which could not be discriminated from other delphinid species using the acoustic monitoring devices. Therefore, with optimization aimed towards processing larger volumes of seawater this method had the potential to complement current visual and acoustic methods of species detection of marine mammals.

Furthermore, some researchers in the same laboratory had been trying a new filtering method to sample much larger volumes of water and they were able to detect several fish species from their seawater samples. It was believed that this filtration method for genetic monitoring of porpoise using seawater could work well.

Krzysztof Skóra (Poland) asked whether it would be possible to detect DNA samples on fishing nets as an indication of bycatch. Dr Foote thought that theoretically it would be possible to find the DNA but difficult to use this as definitive proof of bycatch. Sara Königson (Sweden) asked if the DNA traces were a good indication of the presence of the animals and the Chair asked whether the results could be calibrated for comparisons with the SAMBAH survey findings. Dr Foote explained that tidal factors affected the distribution of DNA, with negative results found a very short distance away from the pens at the Fjord and Baelt Research Centre where some samples had been taken. The very low density of the porpoise population in some parts of the Baltic might mean that no DNA was present in some of the 15ml samples taken. It would therefore be necessary to employ methods for extracting genetic material from larger quantities of water to have sufficient material for analysis.

The slides accompanying the presentation can be found at Annex 4.

4. Brief Update on Progress Regarding SAMBAH

In the absence of the project coordinator (Mats Amundin), Jonas Teilmann (Denmark) gave a brief account of the latest developments under the SAMBAH project. Mr Teilmann said that it was too early even for preliminary results and explained that data were being collected from the 300 or so C-PODs across the Baltic. Statistical analysis would start later in the year. Considerable public relations and dissemination work was taking place with numerous meetings with local stakeholders (particularly fishermen) being held and exhibitions organized in museums and similar institutions.

Mr Teilmann showed a map illustrating where the survey work was taking place. Waters more than 80 metres deep with oxygen depletion were being excluded as they were considered unsuitable habitat. Two areas with Danish waters were considered to have too high a salinity level. No C-PODs had been set in depths of less than 5 metres because of the higher wave interference, nor were there any in Russian waters, as the Russian Federation as a non-EU country was not eligible for LIFE+ funding and therefore not participating in the project.

The deployment of the click detectors had started in May 2011 after some delays and was due to continue until April 2013 with a possible extension into June. The C-PODs were being serviced regularly when the batteries were replaced and the data extracted, but these activities were dependent on the weather and had been disrupted by sea ice, which had also damaged some surface buoys. Fishermen had proved to be helpful in retrieving the detectors when the surface buoys had become detached. Despite the buoys being clearly marked and fitted with lights, some vessels did not see them and ran them down. A dual anchor system with one anchor weighing 600kg and another 90kg had proved successful.

Work was being carried out to develop an algorithm to analyse the sound recordings and distinguish between Harbour porpoise clicks and other similar sounds, to ensure accurate figures for the number of Harbour porpoises detected. The profile of a Harbour porpoise click train - especially the frenzied clicking when the animals were feeding and hunting - were obvious to the human eye when displayed graphically, but the task of checking all the records would be too time-consuming.

The acoustic system could not determine pod size, so in order to be able to come to an abundance estimate for the study area, auxiliary data was needed. This included information from opportunistic sightings to build up a picture of the distribution of individuals, pairs and small groups. In Denmark, live bycaught animals had been fitted with transmitters to establish how silent or communicative the animals were. Such data would then be used in order to interpret the acoustic data collected by means of the C-PODs

At each C-POD site, environmental data were also being collected regarding the water depth, the nature of the sea bed, salinity, temperature, oxygen levels, the distribution of prey species and the risk of disturbance from shipping. These data would help to calculate the likelihood of Harbour porpoises being present and population densities in relation to habitat type. However, a clear picture would only emerge at the end of the project.

Sara Königson (Sweden) asked whether there were any preliminary results, to which Mr Teilmann replied that the project management team had decided not to issue any at this stage, given the possibility of rogue recordings giving a misleading impression of animal numbers. The algorithm for recognizing porpoise clicks was still being developed and the temporary loss of damaged C-PODs meant that the data were incomplete. The algorithm needed to take account of different physical conditions and any small errors could distort the results. The algorithm when perfected would save hours of human effort in analysing the data. Iwona Pawliczka (Poland) confirmed that this was the agreed approach among the SAMBAH partners to releasing data, given the risk at this stage of misinterpreting the data. At Hel a new classifier for POD data analysis in low density areas had been developed based on a project carried out in the Puck Bay and it remained to be seen if it could be used for SAMBAH final analysis.

Oliver Schall (Germany) asked if it had been determined whether Harbour porpoises from different areas had distinct "dialects". Mr Teilmann explained that the clicks were not like Orca whistles which were articulated sounds. The Chair asked whether any information was available for the Russian Federation despite that country's non-participation in the project. Mr Teilmann said that there had been no contact with the Russian authorities during the project and he had no idea of the percentage of the Baltic population likely to inhabit Russian waters. It was difficult to obtain permission to set C-PODs in Russian waters and in any case EU project funds could not be used there. Ms Pawliczka added that Hel Marine Station had sporadic contact from fisheries scientists in Kaliningrad regarding strandings. The Chair also recalled having seen some Russian strandings data from an NGO. Penina Blankett (Finland) said that the Russian expert could be asked if he attended the next HELCOM Seal Expert Group meeting. Heidrun Frisch (Secretariat) reported that an ASCOBANS-funded project had been completed in the Russian Federation and a report would be presented to the Advisory Committee. The project however did not cover the Kaliningrad enclave.

The slides accompanying this presentation can be found at Annex 5.

ACTION POINT

- *The Secretariat should collaborate with HELCOM SEAL to obtain data on harbour porpoise strandings in the Russian territories of the Baltic Sea.*

5. Implementation of the Jastarnia Plan and the Recommendations of the 7th Meeting of the Jastarnia Group (as endorsed by AC18)

5.a. Bycatch reduction

aa. Reduce Fishing Effort in Certain Fisheries

The Chair reported on an initiative in fisheries east of Rügen, an area with a low incidence of Harbour porpoises. There was little risk of bycatch, but nonetheless the fishermen wanted to make sure that none occurred and recent records indicated no such incidents.

Signe Sveegaard (Denmark) noted that ICES Areas 22 and 24 were not covered by any restrictions, and her recommendation was that areas known to have a higher density of Harbour porpoises and areas designated under the EC Habitats Directive should become no fishing zones or have only limited fishery activity.

Krzysztof Skóra (Poland) gave a presentation showing official data on the activities of gillnetters in Poland. The Polish fleet using gillnets had been reduced, and the remaining boats were mainly cutters operating off the coast and very little effort was happening in open waters. The reduction in effort was not based on environmental concerns but economics, with unviable vessels being decommissioned. There were no part-time professional fishermen in Poland. A hotspot for Harbour porpoises was Puck Bay and sightings and strandings were reported by tourists as well as occasional incidents of bycatch. The absence of a comprehensive monitoring programme meant that it was difficult to ascertain what was actually happening.

The Chair felt that the situation in other countries would be similar as here too most boats were below the threshold size to qualify for monitoring. Katarzyna Kamińska (Poland) said that the EU was promoting smaller-scale coastal fisheries. The Chair described the situation in Germany where there were many part-time fishermen who only went to sea a few times a month and were not subject to any restrictions. Many fishermen operated in one-person or two-person vessels under 10 metres. Studies carried out in 2003-4 showed that such part-time fishermen were just as likely to be responsible for bycatch as full-timers.

Sara Königson (Sweden) said there were no improvements in the design of alternative gear to report, but a new Swedish regulation covering turbot fisheries up to the coast of Gotland restricted the amount of time and the places where fishing could be undertaken. A further regulation covered part-time and recreational fishing.

Penina Blankett (Finland) said that during the last 5-10 years the effort in gillnets fishing had decreased by approximately 20 per cent, while the recreational fishing effort had decreased by 20-25 per cent in the last 10 years, partly due to a decrease in gillnet fishing. This was due to decrease in gillnet fishing. The number of fishermen, both professional and part-time, had declined steadily; the trend was expected to continue. The size of the fishing vessel fleet had also declined, especially among trawling vessels, with a smaller drop for gillnet fishing vessels. The amount of these small vessels used in gillnet fishing on the register had remained relatively constant. However, due to the nature of coastal fishing, a great number of vessels in the register were not very active. Ms Königson also felt that reductions in fisheries effort arose from economic concerns, but it was difficult to quantify.

Oliver Schall (Germany) said that the German Nature Conservation Agency (BfN) had been commissioned to undertake a study of the implementation of the EC Habitats Directive in marine areas. Discussions over the management of marine SACs were taking place, with the BfN advising that fishing should not be allowed in Natura 2000 sites. There was a case for prohibiting gillnets in marine SACs designated for Harbour porpoises.

Ms Sveegaard agreed saying that the burden of proof should be placed on fisheries to show that they posed no threat. Ms Königson did not support the idea of blanket bans, pointing to one site in Sweden where fishermen were collaborating willingly with environmentalists over the use of pingers. Ms Kamińska also opposed banning gillnets in SACs such as Puck Bay, fearing that an extensive and long-established fishery would be jeopardized. Some SACs would be large in area and switching to traps would not be feasible. The environmental gain would be outweighed by the economic loss. The Chairman concluded that Poland was against banning gillnets in marine Natura 2000 sites, and in response, Monika Lesz (Poland) said that it was too early to say what Poland would decide as the discussions were still going on.

Jonas Teilmann (Denmark) said that the Danish Ministry of Fisheries was examining the effect on bycatch rates of using “pingers” and to ascertain whether porpoises were driven away from the areas permanently. If pingers were proved to be effective in eliminating bycatch with minimal detrimental effects, there would be little chance of a general ban on nets. Ms Blankett felt that there was no one solution that fitted all circumstances and each site would be judged on a case-by-case basis.

Borja Heredia (Secretariat) said that the debate over management in sites designated under the Habitats Directives focused on achieving or maintaining a favourable conservation status for the species listed on the Directive's annexes. This might possibly be achieved without banning or restricting fisheries.

Petra Deimer-Schütte (GSM) said the Habitats Directive applied across the Baltic and not just in the area covered by the Jastarnia Plan. She advocated switching from nets to traps.

The Chair commented that most of the marine SACs designated in the Baltic had been proposed for interests other than Harbour porpoises, although some were frequented by the species. Ms Königson confirmed that this was the case in Sweden. Mr Skóra said that two Polish sites did have Harbour porpoises among their criteria (Pomeranian Bay and Puck Bay). He added that for any further discussion about restrictions or banning a clear definition of what was meant by "gillnet" would be necessary. Ms Blankett said that Harbour porpoises were also listed on Annex IV in the Habitats Directive as a species of Community interest in need of strict protection, regardless of whether they were in designated sites.

Ms Königson said that the aim was to prevent bycatch, not to ban fishing which was an extreme option. Promoting alternative gear, using pingers and encouraging green labelling schemes were other tools available. She agreed to work with the Secretariat to produce a new form of words for a revised Recommendation.

ACTION POINT

- *In order to achieve favourable conservation status for harbour porpoises as required under the Habitats Directive, Parties should make concerted efforts to reduce bycatch especially in Natura 2000 sites (SACs) where harbour porpoises form part of the selection criteria. This could be achieved by reducing gillnet fishing effort and implementing alternative fishing gear both inside and outside protected areas, as well as pingers outside protected areas.*

bb. Involve Stakeholders in the Work of Reducing Bycatch of Harbour Porpoises

Heidrun Frisch (Secretariat) reported that there were a number of recommendations related to this Agenda point from the previous Meeting of the Group. These concerned: briefing notes for members of the group attending other fora (a task which had been assigned to the Baltic Coordinator, but the post had not yet been created); compiling a synopsis of relevant regulations; making a list of projects of interest; establishing national processes to development guidelines for reducing and monitoring bycatch; enacting legislation requiring fishermen to report bycatch in their logbooks; compiling an overview of studies relating to monitoring and mitigation of bycatch, and approaching the Marine Stewardship Council (MSC) and similar organizations that ran green labelling schemes.

Jonas Teilmann (Denmark) reported on the positive experience of attending the Baltic RAC to explain about SAMBAH as well as other local meetings concerning Harbour porpoise conservation.

In the absence of a Baltic Coordinator it was agreed that a working group should be established to draft the briefing notes. The information should be presented in a manner understandable to fishermen and other stakeholders. Geneviève Desportes (North Sea Plan Coordinator) said that the need for such briefing was not specific to the Jastarnia area but was relevant for all of ASCOBANS, and she as North Sea coordinator might have to prepare similar material. What was missing was a clear idea of what the priorities for her work were. Information needed to be presented differently to the various audiences such as RACs with policymakers and local meetings with fishermen.

Monika Lesz (Poland) reminded the meeting that the Polish EU Presidency had organized a meeting on the EC Regulation 812/2004 where it had been decided to await the outcomes of the review of the Common Fisheries Policy (CFP). At the national level, a new strategy for Harbour porpoise conservation was being developed with stakeholders, NGOs and local government.

Ms Frisch reported that some preliminary research had been done by interns with regard to compiling a list of bycatch-related regulations. There was currently no spare capacity at the Secretariat to take the work forward, and Ms Frisch said that she would seek donors from among the Parties to fund a consultancy.

With regard to the Marine Stewardship Council (MSC) and other organizations running green labelling schemes, it had proved difficult to identify the best way to collaborate, but some initial contact had been made. CMS was also interested in establishing contact with MSC so a joint approach with ASCOBANS was proposed. The application of one Danish fishery for accreditation had been declined on the grounds that there was a risk of Harbour porpoise bycatch. Thanks to information provided by Sweden, the Secretariat had been able to comment on a proposed certification for a Swedish cod fishery.

Mr Teilmann reported that video monitoring had been extended to a further 6-7 boats and now covered 16 gillnetters in the Kattegat and Belt Sea. The risk of bycatch was not confined to Harbour porpoises but also involved birds and other marine species. Fishermen around Bornholm had volunteered to have cameras fitted to their boats to secure green accreditation. He recommended the wider use of surveillance cameras which could be set up to work only when the winches were in operation and were less likely than observers to miss carcasses falling out of the nets. Maintenance was minimal, as the hard disks rarely needed to be replaced and the cameras were waterproof. Observers were limited in number and could not cover the whole fleet. The fishermen were willing to cooperate as their quotas were increased and they were exempted from having to attach pingers. Katarzyna Kamińska (Poland) said the new CFP would probably ban discarding chosen species of commercially exploited fish but added that when discussing measures for monitoring of compliance with the discard ban, many countries were opposed to cameras on all vessels on the grounds of cost. Sara Königson (Sweden) reported that the Swedish experience with cameras was less fortunate, because the fishermen considered the financial incentives to be bribes rather than compensation. She wanted more information on how the Danish project had overcome this problem, and Signe Sveegaard (Denmark) said that the provisional report was available. Using observers on small boats with limited space was not always possible, and the alternative of deploying escort vessels was also expensive; video surveillance seemed to be the cheapest option. The following papers were circulated by email for the participants' information:

Kindt-Larsen, L., Kirkegaard, E., and Dalskov, J. 2011. Fully documented fishery: a tool to support a catch quota management system. – ICES Journal of Marine Science, 68: 1606–1610.

Kindt-Larsen, L and Dalskov, J. 2010. DTU Aqua Pilot study of marine mammal bycatch by use of an Electronic Monitoring System

Tilander, D. and Lunneryd, S.G. Pilot study of Electronic Monitoring (EM) system for fisheries control on smaller vessels

Krzysztof Skóra (Poland) felt that the CFP had not been a great success and hoped that the revised policy would be more effective through being more "bottom-up" than "top-down". The issue of illegal fisheries needed to be addressed, and the ball was in the fisheries departments' court to find a solution. Environment Departments needed to exert influence to have issues relating to birds, seals and cetaceans properly addressed.

Penina Blankett (Finland) reported that some fishermen had voluntarily adopted the practice of recording their bycatch. This was not obligatory and not all fishermen were participating.

Finland was also undertaking a thorough review of its fisheries legislation, which would take some time to complete. Ms Königson said that there was legislation in Sweden requiring fishermen to report bycatch to the police when it was landed.

ACTION POINTS

- *A small drafting group should develop briefing notes on ASCOBANS positions regarding bycatch. If and to the extent appropriate, these could be based on any drafts that the North Sea Coordinator may prepare for fora in that area. These briefing notes should be used by anyone representing ASCOBANS at Baltic Sea RACs and other meetings of relevant EU and Baltic Sea bodies in order to maintain a consistent and appropriate approach.*
- *Given the positive experiences in the Danish fishery, Parties should implement video surveillance widely in order to document bycatch of porpoises and identify and implement effective mitigation measures, and at the same time reduce discards of fish. Currently video surveillance is the most accurate measure for bycatch estimates and total documentation of the fishery, applicable also to small vessels, and meets the requirements of Article 12 of the Habitats Directive.*

cc. Replace fishing methods known to be associated with high porpoise bycatch (i.e. set nets) and introduce alternative gear considered less harmful

The Chair recalled that this action dated from the original draft of the Jastarnia Plan and had stood the test of time. He noted that apart from the successful development of cod traps in Sweden, no Parties had much progress to report. Denmark intervened to say that experiments with longlines and hooks had been undertaken but had encountered problems with seals stealing the bait. The method was likely to be abandoned and gillnetting resumed. Sara Königson (Sweden) commented that reverting to gillnets would not reduce problems with seals, whereas adopting traps or pots would. Signe Sveegaard (Denmark) asked whether extending green labelling would work, pointing to the success of the sprats in Poland. Krzysztof Skóra (Poland) explained that the initial phase of the green labelling had been financed through an environmental fund, but fishermen were still sceptical, even though the porpoise-friendly sprats had been commercially viable. A second edition of the tin with a seal-friendly motif had also proved popular with tourists. He wanted to learn more about the Swedish experience with alternative gear as the Hel Marine Station had acquired some pots and staff were trying to find out how best to deploy them. He added that he hoped that the new CFP would include provisions to finance innovations. Penina Blankett (Finland) informed the meeting that the proposals for the European Marine and Fisheries Fund for 2014-2020 included more provisions for environmental initiatives. The final draft was not yet ready and negotiations were still going on in Brussels but the initial indications were encouraging.

Ms Königson said that Sweden was implementing a programme for fishermen to use up to 200 pots commercially; the initiative had strong stakeholder involvement. She was also working beyond Sweden to discuss alternative fishing gear; the subject had been raised with other Nordic countries in February 2011 and at another meeting in the Netherlands with North Sea countries. Pots and traps were being used for target species other than cod.

Ms Sveegaard suggested that the wording of the Recommendation should reflect that tests had all shown that cod traps were effective, so it would now be in order to move towards implementation and away from research. Mr Skóra said that it was quite clear which gear was safer and efforts should be made to adapt mid-water trawls for shallower waters where they were currently prohibited. Katarzyna Kamińska (Poland) mentioned that the thickness

of gillnets affected how easily Harbour porpoises could detect them, while the Chairman responded that the results of coating nets with barium sulphate were not clear.

ACTION POINTS

- *Noting the successful application of cod pots in Sweden, Parties should undertake or continue efforts to test and implement pots, traps and other porpoise-friendly gear.*
- *With respect to recreational fisheries, Parties should work towards banning those types of gear known to pose a threat to harbour porpoises.*

dd. Implement a pinger programme on a short-term basis

Katarzyna Kamińska (Poland) gave a presentation on the Polish Harbour porpoise observer programme undertaken in 2011 under EC Regulation 812/2004 by the National Marine Fisheries Institute in Gdynia. The study had involved placing observers on some vessels smaller than the threshold size set down in the Regulation and covered ICES areas 24, 25, 26 and 28. In addition to trawls, some static gear, especially around Puck Bay where incidents of bycatch had been recorded, was examined. Both the length of nets and the total soak time were measured. During the study six bycaught birds were found – three alive (one specimen each of Razorbill *Alca torda,* Red-throated Diver *Gavia stellata* and Velvet Scoter *Melanitta fusca*) and three dead specimens of Guillemot *Uria aalgae*. The study covered 7.6% of fixed nets and 1.1% of trawlers. Figures for specific areas such as Puck Bay could possibly be made available. As trawlers were not considered to be a cause of bycatch, future monitoring efforts would shift more towards gillnetters.

Signe Sveegaard (Denmark) said that in Denmark where most of the fleet was under the 15m threshold, there had been a move towards video monitoring. She also doubted whether pingers were now really considered to be a short-term interim solution, as they seemed to be entrenched in law. Their long-term effects on habitat exclusion and habituation were not fully understood. The Chair said that interest in developing interactive pingers seemed to have disappeared. He agreed that the original provision that pingers be used for just a two- or three-year interim period had apparently been forgotten.

Krzysztof Skóra (Poland) presented a slide showing data for the ICES area 24 and a poster depicting the pinger barrier across Puck Bay. He had been surprised at the number of clicks recorded by the acoustic devices and this level of detection provided the basis for further work on estimating Harbour porpoise numbers in the Bay. He further presented graphics showing the number of boats and nets in each sector and the type of gillnets (bottom set and floating) deployed across the Gulf of Gdańsk. Figures showed that fisheries efforts were reduced during periods of high sea ice. Over the period 1998-2011 ten dead animals had been found on the coast along with three sightings. In conclusion, Mr Skóra said that he was still weighing the advantages of pingers reducing bycatch against the disadvantages of the animals being driven away from their preferred habitat. Jonas Teilmann (Denmark) said that the decisive argument was whether sufficient alternative habitat was easily available and that a lower number of porpoise clicks when pingers were on indicated either that there were no specimens in the area or that they had been permanently frightened away. Mr Skóra said that there were indications that Harbour porpoises were regularly although rather rarely present and it would be possible to create a migration corridor for porpoises and equip fishing boats with gear that would allow them to continue to operate without causing bycatch.

ee. Cross-cutting Recommendation by JG7

After the Group had had the opportunity of re-examining the European Commission's communication (2011) 578, it was agreed that its contents were to be welcomed as a

number of key concerns had been positively addressed. Two issues of direct relevance to the Jastarnia Plan were Regulation 812/2004 and Area 24 with the use of pingers and observer programmes. One shortcoming of the observer programme was that, due to low coverage, no bycatch had been discovered although it was definitely known to occur. The Chair stressed the unique nature of the Baltic where the fishing fleet had an unusual profile of predominantly small boats which were difficult to cover with an observer programme. This point had been raised in the fourth conclusion in the communication. The Commission had also stressed that fisheries legislation was supplemented by environmental obligations contained in instruments such as the Habitats Directive. Krzysztof Skóra (Poland) added that Baltic gillnets were different too (hence his earlier request that a clear definition be provided) and that the Regulation would be improved by being more responsive to local conditions and requirements. He did not think it was advisable to wait for the new CFP to be decided before making changes. The Chair concluded summarizing the Group's view that the CFP should be more regionalized and Regulations such as 812/2004 should be adapted to local circumstances; its suitability for and effectiveness in the Baltic were limited. More localization was a fine ideal but the devil would be in the detail.

Jonas Teilmann (Denmark) raised concerns that specific problems concerning bycatch of Harbour porpoises and Common dolphins in particular types of gear might be lost in a far broader policy initiative such as the revised CFP. Despite its imperfections, he was wary of the idea of repealing Regulation 812/2004, and replacing it with a series of broader measures. Monika Lesz (Poland) concurred that a specific Regulation was preferable to a more general policy, but the regulation needed to be strengthened, properly implemented and geared more towards the problems of the Baltic.

ACTION POINTS

- *Noting that Regulation 812/2004 in its current form does not protect harbour porpoises in the Baltic Sea sufficiently and that according to EC Communication (2011) 578, a revision is not foreseen in the near future and that bycatch mitigation measures will probably in future be addressed in the new Common Fisheries Policy (CFP), Baltic Sea Range States are urged to implement comprehensively and without delay the bycatch mitigation measures laid down in Recommendations 1-4 of the Jastarnia Plan.*
- *Given that the Jastarnia Group has the most specific expertise related to harbour porpoise conservation in the Baltic Sea area and in light of the specific problems and situation in the Baltic Sea, the Secretariat should address the European Commission to urge it to seek the Group's advice when the technical measures framework (TMF) and data collection framework (DCF) of the Common Fisheries Policy (CFP) are being drafted. Parties should also convey the same message to appropriate fora.*
- *Since the preparation of measures to be taken under the new Common Fisheries Policy (CFP) will take time, the Secretariat will also include in the communication to the European Commission the Jastarnia Group's strong call for an urgent amendment of Regulation 812/2004 to address the specific problems in the Baltic Sea.*
- *The AC Chair and the Secretariat should continue approaching the European Commission to draw attention to the need to address the bycatch problem in the Baltic.*

5.b. Research and Monitoring

aa. Analyze stock affinities of harbour porpoises in the "transition zone" of the south-western Baltic

This issue had been identified as a high priority but there had been no recommendation arising from the previous meeting of the Group when a presentation had been made on a genetics study.

bb. Develop and apply new techniques (e.g. acoustic monitoring) for assessing trends in abundance

This was considered to be of medium priority and was addressed to Range States and scientific stakeholders. Jonas Teilmann (Denmark) said that there would be more to report when the results of the SAMBAH project began to emerge.

cc. Develop interactive pingers or pingers using frequencies not audible to seals

The Chair said that this issue was likely to be addressed at the forthcoming Advisory Committee meeting. Geneviève Desportes (North Sea Plan Coordinator) thought that research into such deterrents had been discontinued, but the Chair seemed to remember that some development was still being undertaken in Australia. Heidrun Frisch (Secretariat) reported that the Friends of CMS had funded some work in Germany and Denmark by Boris Culik on a "porpoise alert" which replicated the warning sounds made by mothers to their calves and prompted porpoises to investigate their environment. Trials on captive animals had been promising but the devices had not been properly tested yet in real conditions. Only two devices were being used and more would be needed to obtain enough data for analysis.

Sara Königson (Sweden) said that Marije Siemensma who would be attending the Advisory Committee had been working on trials for pingers in the Netherlands. More information would be available at that meeting.

dd. Investigate possible detrimental effects of various types of sound and disturbance (including pinger signals, noise from vessels, wind farms or construction and seabed exploration for oil and gas) on harbour porpoises

Jonas Teilmann (Denmark) gave details of two projects that were relevant: a literature review of guidelines for industry on acceptable levels of noise and the effects on animals' behaviour and hearing; and a large experimental project funded by the BfN regarding underwater noise and marine mammals. Temporary hearing loss in captive animals was being examined and preliminary results had shown that damage occurred at levels lower than had been expected, although it was difficult to replicate wild conditions in the confined spaces occupied by captive animals. The work was going to take a further three years.

Erland Lettevall (Sweden) said that Sweden had also commissioned a report on the effects of noise and the draft results had been received. Consideration was now being given to whether new guidelines or legislation were necessary.

Mr Teilmann had heard that new regulations or legislation had been introduced in Germany concerning turbines and other countries were likely to follow. Petra Deimer-Schütte (GSM) undertook to find out details but suspected that the origins lay in pile driving and underwater explosions. It transpired that no new law had been passed but recommendations had been prepared.

A working group had established in the context of the development of indicators for Good Environmental Status for the EU Marine Strategy Framework Directive and its report was now available through the ICES website. It contained data on pile-driving and background noise. Mr Teilmann added that the work on these indicators was still going on, but no new report had become available. Penina Blankett (Finland) said that the group's work was being monitored by the corresponding Group under HELCOM.

ACTION POINTS

- *Parties are invited to commission research on whether pingers cause habitat exclusion and habituation.*
- *Germany recently issued recommendations on the reduction of sound emissions associated with construction of offshore wind farms and set an upper limit for pile driving operations. This good example and the results of current studies should be reflected both in the national legislation of Parties and in the relevant indicators for Good Environmental Status to be developed for the Marine Strategy Framework Directive.*

ee. Monitor bycatch in fisheries known to be harmful to harbour porpoises to be able to estimate bycatch levels

Penina Blankett (Finland) cited that related obligations under the Habitats Directive concerning incidental killing were contained in Article 12 (iv). Sara Königson (Sweden) and Signe Sveegaard (Denmark) both felt that it was important to avoid rather than document bycatch. Jonas Teilmann (Denmark) said that properly applied video monitoring had three potential advantages which endeared it to fishermen: it reduced discards, helped secure better prices and contributed to saving porpoises.

The Chair suggested that as the Group was not primarily concerned with eco-labelling, although it was a positive incentive for fishermen, it would be better to concentrate on issues more within the Group's remit. Ms Blankett agreed that the Group's recommendations should be addressed at the target audience with a clear indication of the action required. In response to a question from Iwona Pawliczka (Poland), Ms Königson confirmed that some cod fisheries had been certified for eco-labelling and reduced bycatch was one of the criteria.

ff. Further develop sustainable alternative fishing gear with no bycatch of harbour porpoises

The Chair suggested that as this subject had already been discussed at length, there was no point in reopening the debate. Katarzyna Kamińska (Poland) however raised the issue of a new project on fisheries with Habitats Directive sites and suggested that the Advisory Committee might be interested in hearing more about HELCOM BALTFIMPA (Managing Fisheries in Baltic Marine Protected Areas) project, which also dealt with issues related to other species such as seal pups entering nets. Harbour porpoises were one of the main focuses for BALTFIMPA in Denmark, but other species had greater priority in other countries. It was suggested that ASCOBANS might wish to be an observer on the project Reference Group, given that the Agreement was eligible as an observer to HELCOM. The Agreement could be represented by a national delegate already attending. Some scepticism was expressed about how effective the policy of "wearing two hats" was in securing ASCOBANS a voice in various fora.

ACTION POINT

- *By 1 March 2012 Parties should inform the HELCOM Secretariat that ASCOBANS is to be nominated to participate in the reference group for the BALTFIMPA project. The 19th Advisory Committee Meeting should nominate the ASCOBANS representative.*

gg. Compile data on fishing effort

The Chair recalled that it had long been decided that it would be a suitable subject for a consultancy to compile data on fisheries effort, but resources had never been found to finance the project. ICES too constantly sought different types of data but the information requested was not available to all Member States. Krzysztof Skóra (Poland) pointed to the graphics in one of his presentations which showed some localized data but stressed that there were no national statistics for fisheries effort in Poland, for the vessels below 15 m.

hh. Examine habitat preference for harbour porpoises

Heidrun Frisch (Secretariat) reminded the Group that the last meeting had requested a survey of the Belt Sea harbour porpoise population as a matter of urgency. Signe Sveegaard (Denmark) announced that Denmark was planning to do some survey work in July but so far only the 50% of the funding (Denmark's share) had been confirmed. It had yet to be decided whether the work could proceed without the remaining funding from Germany and Sweden. It was envisaged that the survey should be carried out in the Belt Sea and the Western Baltic. Sara Königson (Sweden) welcomed cooperative projects to conduct survey work but wondered whether it was appropriate for the Group to endorse one particular project. Jonas Teilmann (Denmark) said that ASCOBANS had done so in the past, but felt that in this case, it was probably too late to influence any decisions as the bids had been submitted.

ACTION POINT

- *Denmark, Germany and Sweden are strongly encouraged to collaborate in order to survey the Western Baltic (gap area) harbour porpoise population and evaluate trends in population density and abundance.*

ii. Investigate the prevalence of derelict ("ghost") gear and the feasibility of its removal

Sara Königson (Sweden) reported that a researcher had been dredging off the coast of Gotland in search of ghost nets but had found none, suggesting either there was not a problem or that the currents were so strong that any derelict gear was swept away. Penina Blankett (Finland) felt that there was a problem of ghost nets but it was not clear how bad it was. Monika Lesz (Poland) promised to provide more details at the Advisory Committee on two related projects, one of which had been funded by a Swedish organization Baltic Sea 2020. Ms Königson added that a major study had been undertaken in the Baltic two years before and the final results were still awaited. The photographic evidence was however discouraging as it showed quite a number of dead animals entangled in discarded nets.

Petra Deimer-Schütte (GSM) said that encouraging fishermen to retrieve ghost nets helped raised public awareness as well as enhancing fishermen's environmental credentials.

Jonas Teilmann (Denmark) asked whether ghost nets were responsible for Harbour porpoise deaths, while the Chair wondered whether there was a specific Baltic angle which meant that the Group should take the lead. He suspected that other fora such as ICES were dealing

with it. Krzysztof Skóra (Poland) was of the view that ghost nets were still ensnaring porpoises but not to the same extent as illegal gillnets. WWF Poland had data which were available arising from spending 24 days at sea during which time 6,000 kg of nets were retrieved. The Hel Marine Station was also actively involved and had organized a scheme where fishermen could dispose of old nets on land for recycling

Ms Blankett said that in the Baltic Sea it had been estimated that over 100km of nets was lost each year.

ACTION POINT

- *Parties are encouraged to analyse available data on the occurrence of derelict fishing gear in order to quantify the problem. They should report their findings to the next meeting.*

5.c. Marine Protected Areas

aa. Expand the network of protected areas in the Baltic Sea and improve its connectivity to ensure the development of appropriate harbour porpoise management plans for these areas

Heidrun Frisch (Secretariat) reminded the Group that a legal opinion concerning the German Exclusive Economic Zone had been circulated in advance of the meeting. Signe Sveegaard (Denmark) drew attention to a map showing a large protected area shared between Germany and Poland where results from the SAMBAH project were being keenly awaited. Helena Feindt-Herr (Germany) said that management plans for German marine SACs were in the process of being elaborated.

ACTION POINT

- *Parties, Range States and NGOs seeking to develop management plans for SACs and MPAs designated for the harbour porpoise are encouraged to make use of the expertise available within the Jastarnia Group.*

5.d. Public Awareness

aa. Develop a comprehensive public awareness campaign

Heidrun Frisch (Secretariat) summarized the contents of the related recommendations of the previous year's meeting. Petra Deimer-Schütte (GSM) felt that these recommendations could all be reiterated but wondered whether the role of the National Focal Points in raising awareness in their countries should be enhanced.

Ms Deimer-Schütte stressed that the Secretariat, Parties and NGOs should enhance cooperation with the fisheries sector in developing education and outreach material and undertaking other education and outreach activities.

ACTION POINTS

- *Information on the impacts of anthropogenic pressures (bycatch, noise, pollution, disturbance etc.) on cetaceans, specifically geared to relevant professional groups, should be made available on the ASCOBANS website. The information should be compiled and updated by the Secretariat with continuous input from the relevant Working Groups.*

- *All Parties and Range States should establish sighting campaigns and related databases similar to those established by GSM in Germany, the Finnish Ministry of the Environment and the Swedish Museum of Natural History. The websites should be interlinked. The data should be submitted to HELCOM regularly.*

5.e. ASCOBANS' cooperation with other bodies

aa. Strive for close consultation and cooperation between ASCOBANS and other relevant regional and international bodies

Jonas Teilmann (Denmark) referred to the developments under the Marine Strategy Framework Directive already mentioned under item 5. b. dd, through which indicators concerning underwater noise were being developed. It was proposed to measure background noise and limit the levels of certain frequencies with variations to take account of different depths. It had been recommended that the Marine Strategy cover noise which would be new ground for EU legislation.

Penina Blankett (Finland) reported on the outcomes of the Fourth Meeting of the HELCOM CORESET Expert Workshop on Biodiversity Indicators which had taken place in Copenhagen, Denmark, 12-13 September 2011. She presented a draft paper on two of the core indicators, namely blubber thickness of marine mammals and the pregnancy rate of marine mammals. These indicators could be used to assess animal health and the effects on human-induced and other environmental pressures such as pollutants, disturbance and climate change. HELCOM was still accepting written comments on the draft paper, and participants were encouraged to write to the contact provided by the Secretariat by the end of the week if they wished to contribute to the elaboration of these indicators.

Heidrun Frisch (Secretariat) informed the meeting that the Secretariat was in regular contact with HELCOM. With respect to the Porpoise Database now operated by HELCOM, she reminded Parties that they should nominate someone to provide the information regularly to the HELCOM Secretariat; these nominees were not necessarily the ASCOBANS Coordinators. Ms Blankett had given a demonstration of the HELCOM multi-layered maps at previous meetings. According to the decision made during the last HELCOM HABITAT meeting, Katarzyna Kamińska (Poland) requested the Jastarnia Group to provide comments on the updated HELCOM Recommendation 17/2 on protection of harbour porpoise. The Jastarnia Group had no substantive comments on the amended HELCOM Recommendation 17/2.

ACTION POINT

- *Parties should designate focal points dealing with the Baltic Harbour Porpoise Database operated by HELCOM. The Secretariat should remind Parties to provide the details of these focal points to the Secretariats of ASCOBANS and HELCOM.*

6. Coverage of the Western Baltic, Inner Danish Waters and the Kattegat/Skagerrak Area

(Review and fine-tuning of draft Gap Area Plan)

Signe Sveegaard (Denmark) as one of the team which had compiled the draft Conservation Plan led the detailed discussion on the coverage of the "gap area". The draft had been circulated in advance of the meeting and extensive comments had been received from Finn Larsen from the National Institute of Aquatic Resources of the Technical University of Denmark, who was unable to be present at this meeting. During the discussion the text was projected onto a screen and amendments were made in track changes.

One of the first issues to be resolved was the name of the area covered by the Plan and the final choice was "Western Baltic, Belt Seas and the Kattegat". Another essential decision was the delimitation of the area with options including following ICES or HELCOM. It was decided that the eastern boundary should be a line between the Darß Ridge and Limhamn. The northern boundary should be in line with HELCOM, which would entail a slight overlap with the area covered by the North Sea Plan, the delimitations of which followed a definition provided for the North Sea Conference of Ministers. It was not however thought that this would present any difficulties.

A decision would also be needed in due course regarding whether this Plan would stand alone or somehow be annexed to either the North Sea or Jastarnia Plan and whether it would need its own steering group. The discussion on implementation focused on whether three independent Plans with three separate steering groups were necessary, when the issues were similar and the people involved were the same. The disadvantage of merging all three Plans would be the risk of the highly endangered Baltic population losing the attention it had attracted through having a dedicated Plan.

There was a lengthy and detailed discussion concerning the presentation and contents of the draft Plan. It was agreed that the introductory paragraphs should be pared down to provide only the barest background history. The comment was made that the recommendations were rather "top-down" and prohibitive and certain key issues had not been covered (e.g. the development of alternative gear). It was also suggested that some of the recommendations should be reordered and some could be merged. Concerns were also expressed that the criticisms contained in Mr Larsen's comments might indicate that the draft plan would meet strong resistance from the Fisheries sector.

There was a discussion of the effectiveness of banning certain activities. The prohibition was often ignored and the authorities had to develop means of enforcement. Denmark had imposed a ban and fishermen operating illegally had been taken to court and fined. There was some support expressed for replacing the terminology of "prohibition" with "phasing out" and "reduction".

Ms Sveegaard undertook to incorporate all comments from the floor and circulate a fresh draft shortly after the Meeting. After the Group had had the opportunity of commenting, the revised draft would be distributed to a wider audience which would address one of the criticisms made by Mr Larsen. Focal Points would be requested to circulate the draft to other relevant ministries and agencies.

ACTION POINTS

- *Parties should undertake national consultations with stakeholders, in particular the fishing sector, to give them the opportunity to provide comments before the draft Conservation Plan for Harbour Porpoises in the Western Baltic, Belt Seas and Kattegat is finalized. If possible, Parties are invited to undertake these consultations prior to the 19th Meeting of the Advisory Committee to inform that meeting's deliberation of the Plan.*
- *The 19th Meeting of the Advisory Committee should review and as appropriate amend the draft Conservation Plan for Harbour Porpoises in the Western Baltic, Belt Seas and Kattegat, with a view to the Plan being adopted at the 7th Meeting of the Parties.*

7. Other Recommendations

Heidrun Frisch (Secretariat) introduced the three other recommendations from the 7th Meeting of the Group, one of which covered seven Recommendations from the 6th Meeting of the Group.

It was agreed to reiterate two bycatch-related recommendations, one concerning recreational fisheries and bycatch and one calling upon the Chair of the Advisory Committee and the Secretariat to approach the European Commission and raise the issue of bycatch in the Baltic. Ms Frisch confirmed that the Secretariat was in regular contact with the European Commission on this issue.

8. Any Other Business

Krzysztof Skóra (Poland) drew the meeting's attention to a new publication on cetaceans produced by the Stralsund *Meeresmuseum* and co-authored by several members of the Jastarnia Group. Further information on the book could be found at the following website:

http://www.meeresmuseum.de/wissenschaft/publikationen/meer-und-museum.html

Penina Blankett (Finland) suggested devising a table to record the extent to which the Group's recommendations from various meetings had been implemented. Heidrun Frisch (Secretariat) explained that there was no automated retention of Recommendations and the Group should reiterate its views and recommendations to the Advisory Committee at each meeting. Mr Skóra suggested adopting a simple symbol system similar to the one used by HELCOM to denote how well implementation was progressing. Signe Sveegaard (Denmark) warned against having too many recommendations as their impact would be reduced. A Working Group consisting of Ms Blankett, Sara Königson (Sweden), Geneviève Desportes (North Sea Plan Coordinator) and Heidrun Frisch (Secretariat) was established to design the template during the session.

Ms Frisch explained that the Action Points would be subject to a further round of editing before being circulated to the Group by email after the meeting. A template for the table recording the status of Recommendations and progress in implementing them would be annexed to the Report (Annex 6).

ACTION POINT

- *The Secretariat should prepare an overview of all recommendations of Jastarnia Group Meetings and the status of their implementation as reflected in available reports, based on the template drafted by the Group (attached as Annex XX).*

9. Date and Venue of the 9th Meeting of the Jastarnia Group

Sweden had expressed an interest in hosting the next meeting of the Group in Gothenburg. The dates of the meeting would depend on the timing of the 2013 Advisory Committee, but the target dates would be in late January or February 2013.

The Secretariat would liaise with the Swedish authorities and a date would be announced after the Advisory Committee in Galway.

10. Closure of Meeting

After the customary expressions of thanks to all involved in the meeting, Penina Blankett (Finland), who had taken over as chair from Karl-Hermann Kock (Germany) for the last items, closed the meeting.

List of Participants

Gerhard **ADAMS**
Federal Ministry of the Environment
Robert-Schuman-Platz 3
53175 Bonn
Germany
Tel:+49 228 3052632
Fax: +49 228 3052684
Gerhard.Adams@bmu.bund.de

Penina **BLANKETT**
Ministry of the Environment
PO Box 35
FI- 00023 Government
Finland
Tel: +358 50 463 8196
Fax: +358 9 1603 9318
penina.blankett@ymparisto.fi

Petra **DEIMER-SCHUETTE**
GSM- Society for the Conservation of Marine Mammals
Garstedter Weg 4
25474 Hasloh
Germany
Tel: +49 4106 4712
Fax: +49 4106 4775
pdeimer@gsm-ev.de

Geneviève **DESPORTES**
(North Sea Plan Coordinator)
c/o GDnatur
Stejlestraede 9
Bregnor
5300 Kerteminde
Denmark
Tel: +45 6523 1767
Fax: +45 2025 0267
Genevieve@gdnatur.dk

Helena **FEINDT-HERR**
Institute of Terrestrial and Aquatic Wildlife Research
University of Veterinary Medicine, Hannover
Werftstrasse 6
25761 Buesum
Germany
Tel: +49 5118568177
Fax: +49 5118568181
helena.herr@tiho-hannover.de

Lutz **FRIEDRICHSEN**
Federal Ministry of Food, Agriculture and Customer Protection
Rochusstrasse 01
53123 Bonn
Germany
Tel:+49 228 995293412
Fax : +49 228 995294084
Lutz.Friedrichsen@bmelv.bund.de

Katarzyna **KAMINSKA**
Ministry of Agriculture and Rural Development
Fisheries Department
30 Wspólna Street
00-922 Warsaw
Poland
Tel: +48 22623 2099
katarzyna.kaminska@minrol.gov.pl

Karl-Hermann **KOCK**
Institut für Seefischerei, Johann Heinrich von Thünen Institut für ländliche Räume, Wald und Fischerei
Palmaille 9
22767 Hamburg
Germany
Tel: +49 40 38 905 104
Fax: +49 40 38 905 263
karl-hermann.kock@vti.bund.de

Sara **KÖNIGSON**
Costal Laboratory Institute of Aquatic Research – SLU
Institute of Marine Research
Turistgatan 5
Lysekil
Sweden
Tel: +46 702215915
sara.konigson@slu.se

Monika **LESZ**
Ministry of the Environment
Wawelska St 52/54
Warsaw
Poland
Tel: +48 225792667
Fax: +48 225792730
Monika.Lesz@mos.gov.pl

Erland **LETTEVALL**
Swedish Agency for Marine and Water Management (SwAM)
411 18 Gothenburg
Sweden
Tel: +46 10 6986219
erland.lettevall@havochvatten.se

Sebastian **MUELLER**
Institute of Terrestrial and Aquatic Wildlife Research
University of Veterinary Medicine Hannover (for Bfn)
Werftstrasse 6
25761 Buesum
Germany
Tel:+49 5118568164
Fax: +49 5118568181
sebastian.mueller@tiho-hannover.de

Iwona **PAWLICZKA**
Hel Marine Station
University of Gdansk
Morska 2
84150 Hel
Poland
Tel: +48 58 6750836
Fax: +48 58 5235527
iwona.pvp@ug.edu.pl

Oliver **SCHALL**
BMU
Robert-Schuman-Platz 3
53175 Bonn
Germany
Tel: +49 228 3052632
Fax: +49 228 3052684
Oliver.Schall@bmu.bund.de

Krzysztof E. **SKÓRA**
WWF Poland /SMIOUG
PL – 84-/50 Hel
Morskaz
Tel: + 48 586750836
skora@ug.edu.pl

Signe **SVEEGAARD**
Department of Bioscience
Aarhus University
Frederiksborgvej 399
4000 Roskilde
Denmark
Tel: +45 28951664
sign@dmu.dk

Jonas **TEILMANN**
Department of Bioscience
Aarhus University
Frederiksborgvej 399
4000 Roskilde
Denmark
Tel: +45 21424291
jte@dmu.dk

Secretariat:

UNEP/CMS/ASCOBANS Secretariat
UN Campus
Hermann-Ehlers-Str. 10
53113 Bonn
Germany
Tel: + 49 228 815 2416
Fax: + 49 228 815 2440

Heidrun **FRISCH**
(ASCOBANS Coordinator)
h.frisch@ascobans.org

Borja **HEREDIA**
(Senior Advisor)
bheredia@cms.int

Bettina **REINARTZ**
(Administrative Assistant)
breinartz@ascobans.org

Robert **VAGG**
(Report Writer)
rvagg@cms.int

Agenda

1. Opening of the Meeting
2. Adoption of the Agenda
3. Presentation by Invited Expert

   Dr. Andrew Foote, Centre for Geogenetics, Natural History Museum of Denmark: Genetic Monitoring of Harbour Porpoises from Seawater Samples
4. Brief Update on Progress Regarding SAMBAH
5. Implementation of the Jastarnia Plan and the Recommendations of the 7th Meeting of the Jastarnia Group (as endorsed by AC18)

5.a. Bycatch reduction

- aa. Reduce Fishing Effort in Certain Fisheries (Recommendation 1 of the Jastarnia Plan)
  - aaa. Implementation of relevant JG7 Recommendation (Rec. 1)
  - bbb. Other related issues
- bb. Involve Stakeholders in the Work of Reducing Bycatch of Harbour Porpoises
  - aaa. Implementation of Relevant JG7 Recommendations (Rec. 2-6, 8)
  - bbb. Other related issues
- cc. Replace fishing methods known to be associated with high porpoise bycatch (i.e. set nets) and introduce alternative gear considered less harmful (Jastarnia Plan Recommendation 3)
  - aaa. Implementation of Relevant JG7 Recommendation (Rec. 7)
  - bbb. Other related issues
- dd. Implement a pinger programme on a short-term basis (Jastarnia Plan Recommendation 4)
- ee. Cross-cutting Recommendation by JG7 (Rec. 9)

5.b. Research and Monitoring

- aa. Analyze stock affinities of harbour porpoises in the “transition zone” of the south-western Baltic (Jastarnia Plan Recommendation 5)
- bb. Develop and apply new techniques (e.g. acoustic monitoring) for assessing trends in abundance (Jastarnia Plan Recommendation 6)
- cc. Develop interactive pingers or pingers using frequencies not audible to seals (Jastarnia Plan Recommendation 7)
- dd. Investigate possible detrimental effects of various types of sound and disturbance (including pinger signals, noise from vessels, wind farms or construction and seabed exploration for oil and gas) on harbour porpoises (Jastarnia Plan Recommendation 8)
- ee. Monitor bycatch in fisheries known to be harmful to harbour porpoises to be able to estimate bycatch levels (Jastarnia Plan Recommendation 9)
- ff. Further develop sustainable alternative fishing gear with no bycatch of harbour porpoises (Jastarnia Plan Recommendation 10)

gg. Compile data on fishing effort (Jastarnia Plan Recommendation 11)

aaa. Implementation of Relevant JG7 Recommendations (Rec. 12)

bbb. Other related issues

hh. Examine habitat preference for harbour porpoises (Jastarnia Plan Recommendation 12)

aaa. Implementation of Relevant JG7 Recommendations (Rec. 12)

bbb. Other related issues

ii. Investigate the prevalence of derelict ("ghost") gear and the feasibility of its removal (Jastarnia Plan Recommendation 13)

5.c. Marine Protected Areas

aa. Expand the network of protected areas in the Baltic Sea and improve its connectivity to ensure the development of appropriate harbour porpoise management plans for these areas (Jastarnia Plan Recommendation 14)

aaa. Implementation of relevant JG7 recommendation (Rec. 13)

bbb. Other related issues

5.d. Public Awareness

aa. Develop a comprehensive public awareness campaign (Jastarnia Plan Recommendation 15)

aaa. Implementation of relevant JG7 recommendations (Rec. 11, 14, 15)

bbb. Update on HELCOM-ASCOBANS harbour porpoise data base

ccc. Other related issues

5.e. ASCOBANS' cooperation with other bodies

aa. Strive for close consultation and cooperation between ASCOBANS and other relevant regional and international bodies (Jastarnia Plan Recommendation 16)

aaa. Implementation of relevant JG7 recommendations (Rec. 16-19)

bbb. Other related issues

aaaa. HELCOM CORESET – core indicators for harbour porpoises in the Baltic Sea

6. Coverage of the Western Baltic, Inner Danish Waters and the Kattegat/Skagerrak Area (Review and fine-tuning of draft Gap Area Plan)

aa. Implementation of relevant JG7 recommendation (Rec. 20)

bb. Other related issues

7. Other Recommendations (Rec. 21-23)

8. Any Other Business

9. Date and Venue of the 9th Meeting of the Jastarnia Group

10. Closure of Meeting

Action Points

BYCATCH REDUCTION

1) A small drafting group should develop briefing notes on ASCOBANS positions regarding bycatch. If and to the extent appropriate, these could be based on any drafts that the North Sea Coordinator may prepare for fora in that area. These briefing notes should be used by anyone representing ASCOBANS at Baltic Sea RACs and other meetings of relevant EU and Baltic Sea bodies in order to maintain a consistent and appropriate approach.

2) A small drafting group should develop briefing notes on ASCOBANS positions regarding bycatch, if possible based on any drafts that the North Sea Coordinator may prepare for fora in this area. These should be used by anyone representing ASCOBANS at Baltic RACs and other meetings of relevant EU and Baltic Sea bodies in order to maintain a consistent and appropriate approach.

3) Given the positive experiences in the Danish fishery, Parties should implement video surveillance widely in order to document bycatch of porpoises and identify and implement effective mitigation measures, and at the same time reduce discards of fish. Currently video surveillance is the most accurate measure for bycatch estimates and total documentation of the fishery, applicable also to small vessels, and meets the requirements of Article 12 of the Habitats Directive.

4) Noting the successful application of cod pots in Sweden, Parties should undertake or continue efforts to test and implement pots, traps and other porpoise-friendly gear.

5) With respect to recreational fisheries, Parties should work towards banning those types of gear known to pose a threat to harbour porpoises.

6) Noting that Regulation 812/2004 in its current form does not protect harbour porpoises in the Baltic Sea sufficiently and that according to EC Communication (2011) 578, a revision is not foreseen in the near future and that bycatch mitigation measures will probably in future be addressed in the new Common Fisheries Policy (CFP), Baltic Sea Range States are urged to implement comprehensively and without delay the bycatch mitigation measures laid down in Recommendations 1-4 of the Jastarnia Plan.

7) Given that the Jastarnia Group has the most specific expertise related to harbour porpoise conservation in the Baltic Sea area and in light of the specific problems and situation in the Baltic Sea, the Secretariat should address the European Commission to urge it to seek the Group's advice when the technical measures framework (TMF) and data collection framework (DCF) of the Common Fisheries Policy (CFP) are being drafted. Parties should also convey the same message to appropriate fora.

8) Since the preparation of measures to be taken under the new Common Fisheries Policy (CFP) will take time, the Secretariat will also include in the communication to the European Commission the Jastarnia Group's strong call for an urgent amendment of Regulation 812/2004 to address the specific problems in the Baltic Sea.

9) The AC Chair and the Secretariat should continue approaching the European Commission to draw attention to the need to address the bycatch problem in the Baltic.

RESEARCH AND MONITORING

10) Parties are invited to commission research on whether pingers cause habitat exclusion and habituation.

11) Germany recently issued recommendations on the reduction of sound emissions associated with construction of offshore wind farms and set an upper limit for pile driving operations. This good example and the results of current studies should be reflected both in the national legislation of Parties and in the relevant indicators for Good Environmental Status to be developed for the Marine Strategy Framework Directive.

12) By 1 March 2012 Parties should inform the HELCOM Secretariat that ASCOBANS is to be nominated to participate in the reference group for the BALTFIMPA project. The 19th Advisory Committee Meeting should nominate the ASCOBANS representative.

13) Denmark, Germany and Sweden are strongly encouraged to collaborate in order to survey the Western Baltic (gap area) harbour porpoise population and evaluate trends in population density and abundance.

14) Parties are encouraged to analyse available data on the occurrence of derelict fishing gear in order to quantify the problem. They should report their findings to the next meeting.

MARINE PROTECTED AREAS

15) Parties, Range States and NGOs seeking to develop management plans for SACs and MPAs designated for the harbour porpoise are encouraged to make use of the expertise available within the Jastarnia Group.

PUBLIC AWARENESS

16) Information on the impacts of anthropogenic pressures (bycatch, noise, pollution, disturbance etc.) on cetaceans, specifically geared to relevant professional groups, should be made available on the ASCOBANS website. The information should be compiled and updated by the Secretariat with continuous input from the relevant Working Groups.

17) All Parties and Range States should establish sighting campaigns and related databases similar to those established by GSM in Germany, the Finnish Ministry of the Environment and the Swedish Museum of Natural History. The websites should be interlinked. The data should be submitted to HELCOM regularly.

COOPERATION WITH OTHER BODIES

18) Parties should designate focal points dealing with the Baltic Harbour Porpoise Database operated by HELCOM. The Secretariat should remind Parties to provide the details of these focal points to the Secretariats of ASCOBANS and HELCOM.

COVERAGE OF THE WESTERN BALTIC, BELT SEAS AND KATTEGAT

19) Parties should undertake national consultations with stakeholders, in particular the fishing sector, to give them the opportunity to provide comments before the draft Conservation Plan for Harbour Porpoises in the Western Baltic, Belt Seas and Kattegat is finalized. If possible, Parties are invited to undertake these consultations prior to the 19th Meeting of the Advisory Committee to inform that meeting's deliberation of the Plan.

20) The 19th Meeting of the Advisory Committee should review and as appropriate amend the draft Conservation Plan for Harbour Porpoises in the Western Baltic, Belt Seas and Kattegat, with a view to the Plan being adopted at the 7th Meeting of the Parties.

OTHER

21) The Secretariat should collaborate with HELCOM SEAL to obtain data on harbour porpoise strandings in the Russian territories of the Baltic Sea.

22) The Secretariat should prepare an overview of all recommendations of Jastarnia Group Meetings and the status of their implementation as reflected in available reports, based on the template drafted by the Group (attached as Annex XX).

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Annex 4

Genetic monitoring as a promising tool for conservation and management

Michael K. Schwartz[1], Gordon Luikart[2,3] and Robin S. Waples[4]

Definiton of genetic monitoring:

Quantifying **temporal** changes in population genetic metrics or other population data generated using molecular markers.

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Genetic monitoring as a promising tool for conservation and management

Michael K. Schwartz[1], Gordon Luikart[2,3] and Robin S. Waples[4]

Definition of genetic monitoring:

Quantifying **temporal** changes in population genetic metrics or other population data generated using molecular markers.

Category 1: identifying species, populations or individuals.
Category 2: monitoring population genetic parameters.

Challenges of genetic monitoring of marine mammals

- Collection of samples at regular intervals can be challenging and expensive

- For small cetaceans, genetic studies typically rely on stranded or bycaught specimens for genetic studies and it takes time to obtain sufficient samples – i.e. qualifies as ***genetic assessment*** rather than ***genetic monitoring*** under the definition of Schwartz *et al*. (2006).

Environmental DNA (eDNA) - extra-cellular produced by biological excretory processes such as the sloughing of skin, urination and defecation.

Could have potential to facilitate genetic monitoring using samples collected at regular intervals and is non-invasive so suitable for small species.

Environmental DNA (eDNA) - extra-cellular produced by biological excretory processes such as the sloughing of skin, urination and defecation.

Could have potential to facilitate non-invasive genetic monitoring.

Environmental DNA

Controlled Conditions

The Fjord & Bælt Centre, Denmark

4 harbor porpoises

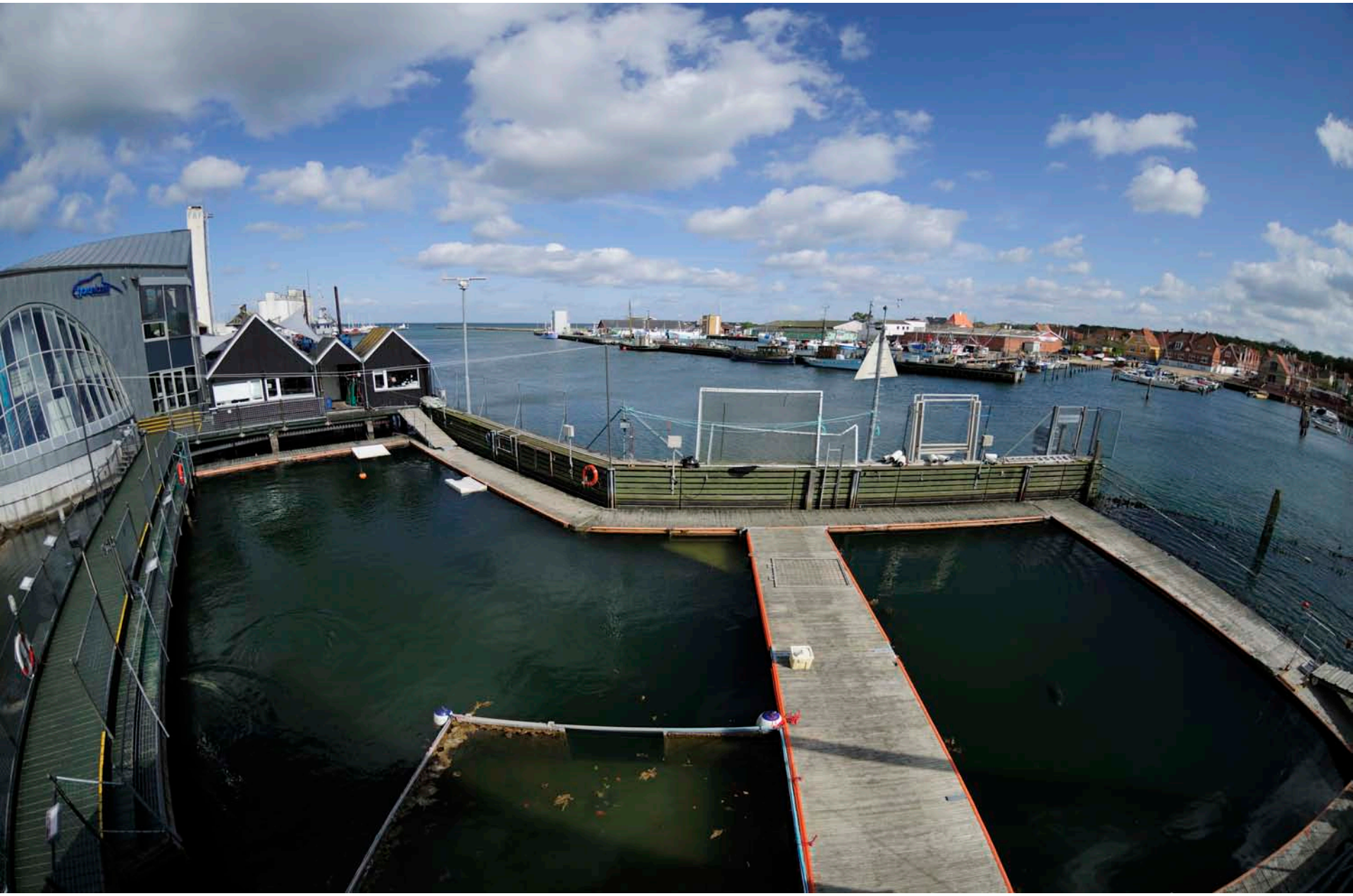
4 million liter basin

Environmental DNA

Controlled Conditions

Environmental DNA

Controlled Conditions



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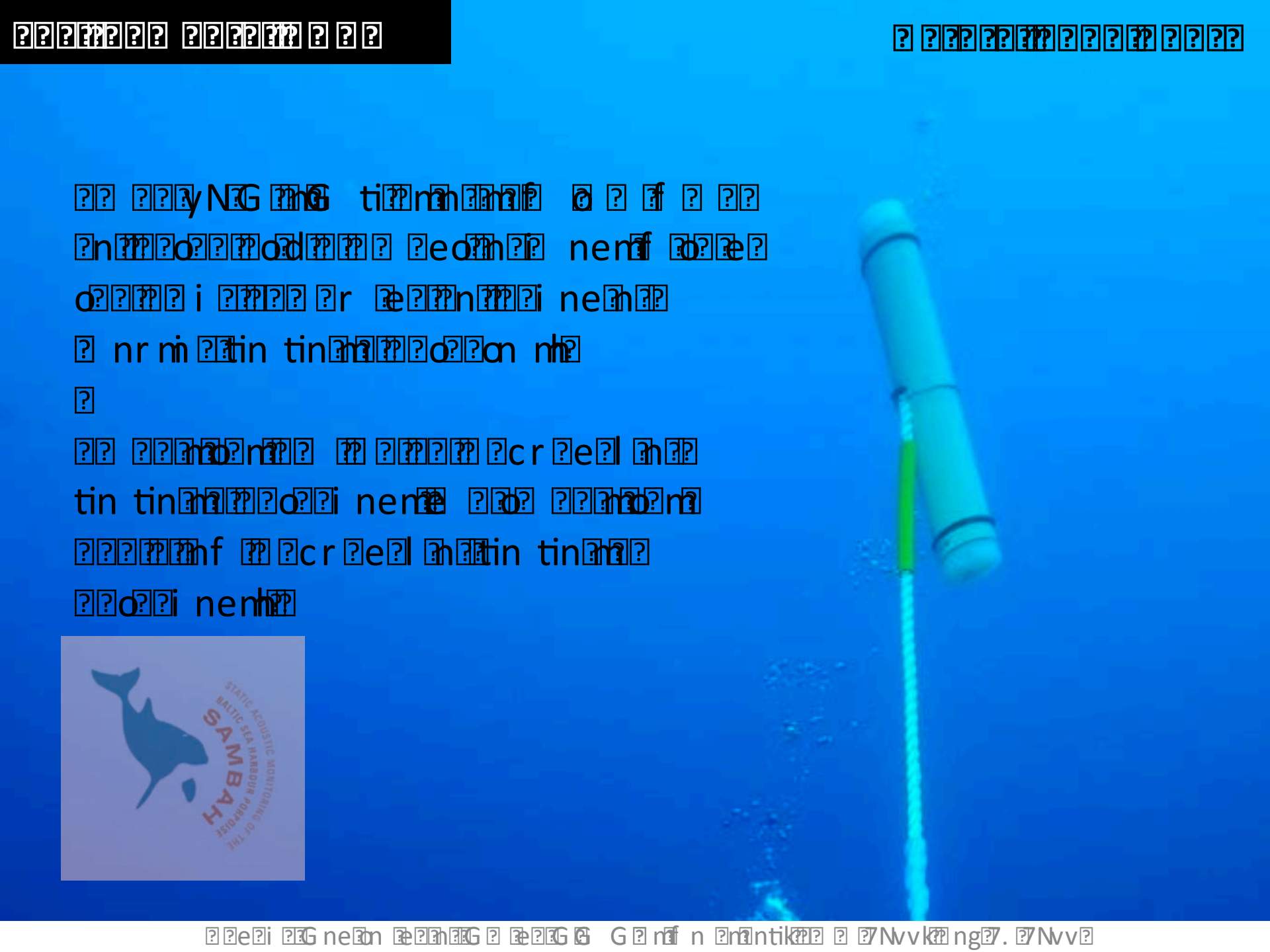
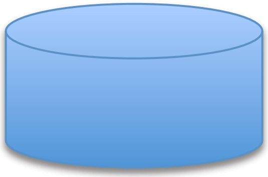
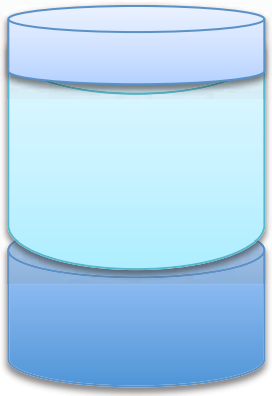



vy G m f o



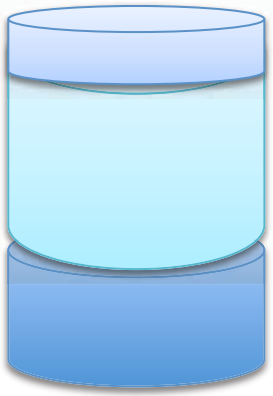
vhyG ?hm? G ?? ?d? ?Q? ?

QQG ?bdffi?d?e n??

vyG ?m?f ? ? ?

[illegible]

[illegible]



[illegible]

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Environmental DNA

Controlled Conditions

A qPCR assay was designed to amplify a 37 bp region of the 12S region, which was unique to harbour porpoise within an 81 bp amplicon.

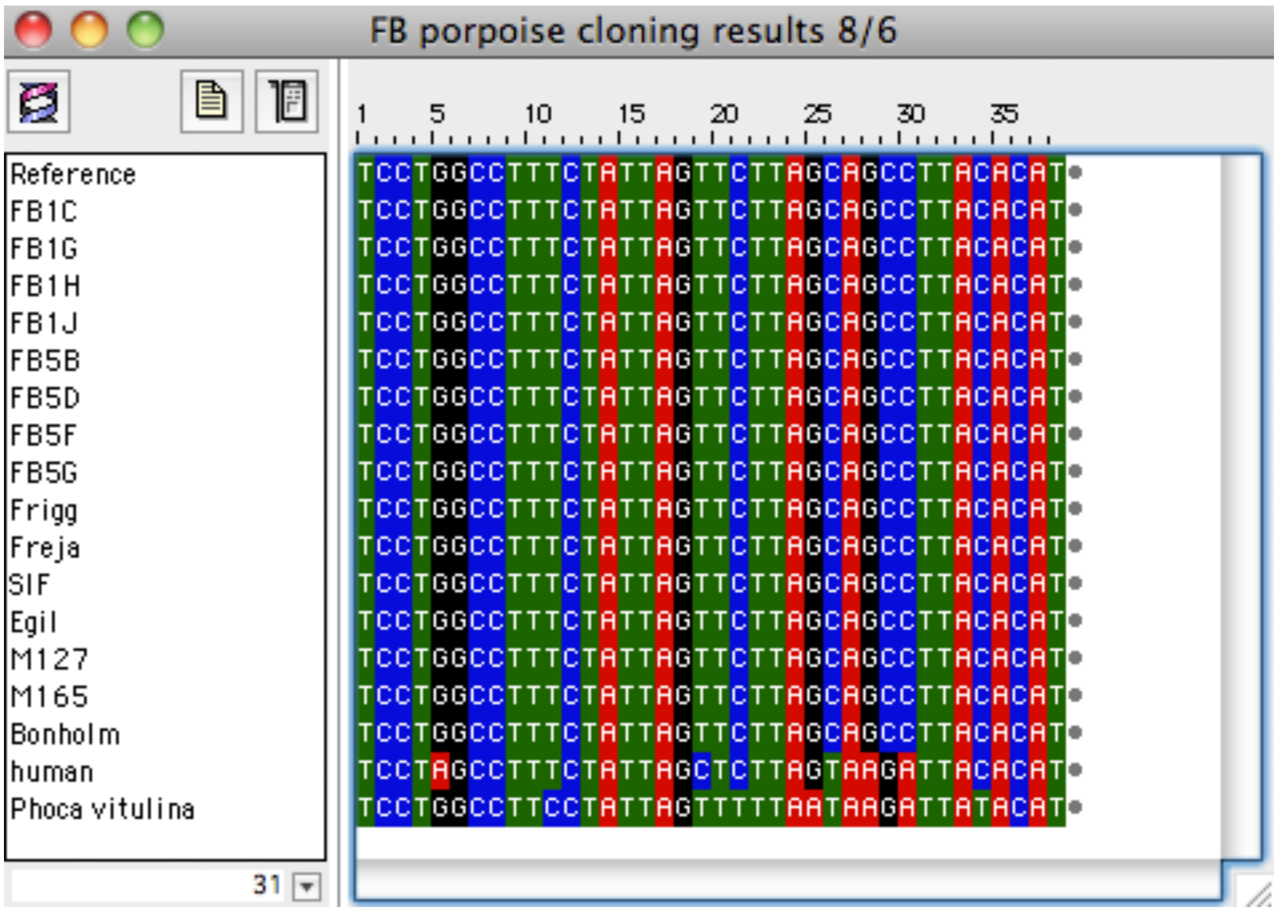
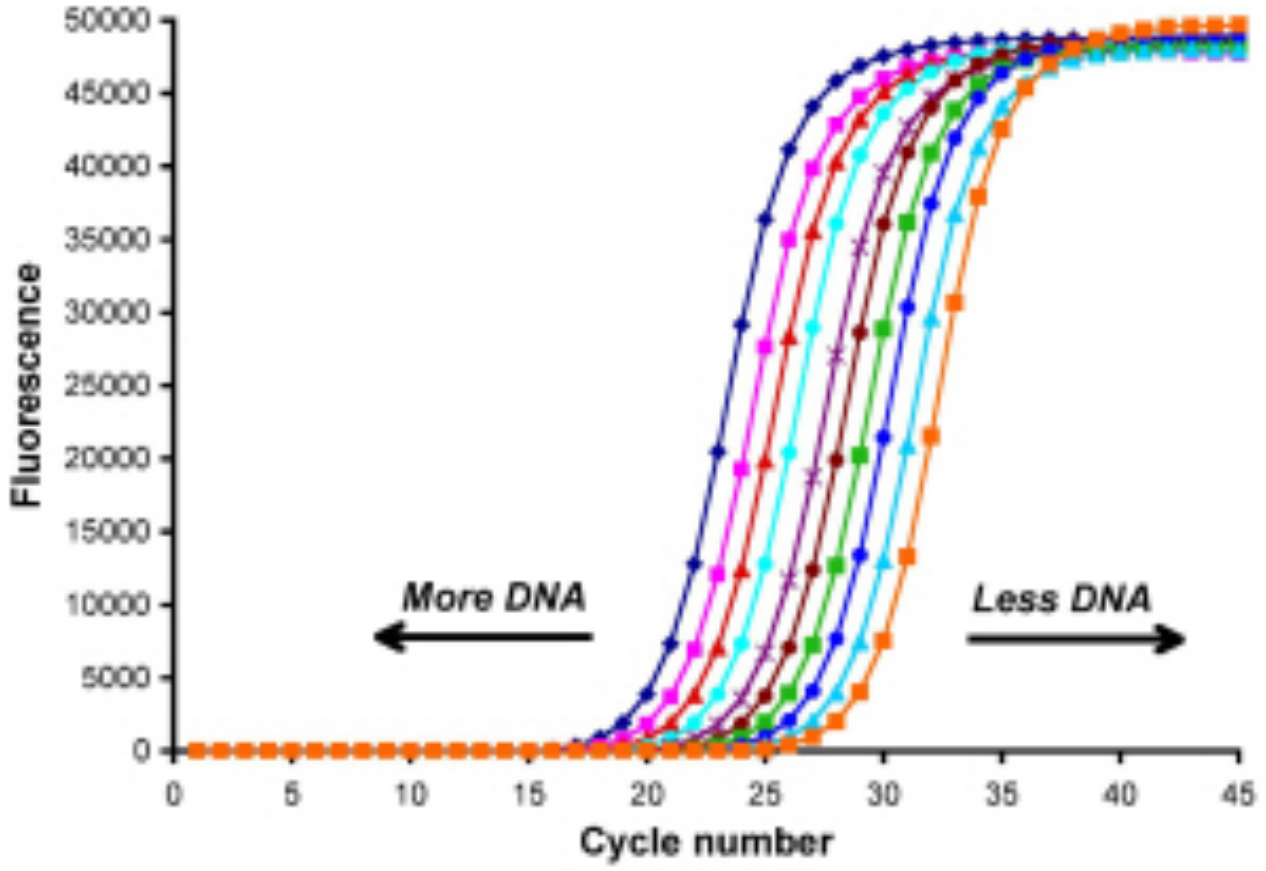


Table 3

Species	Sequence	Max Identity, %
Phocoena phocoena	TCCTGGCCTTTCTATTAGTTCTTAGCAGCCTTACACAT	100
Stenella coeruleoalba	TCCTGGCCTTTCTATTAGTTCTTAGCAG**A**CTTACACAT	97
Stenella attenuata	TCCTGGCCTTTCTATTAGTTCTTAGCAG**A**CTTACACAT	97
Grampus gresius	TCCTGGCCTTTCTATTAGTTCTTAGCAG**A**CTTACACAT	97
Delphinus capensis	TCCTGGCCTTTCTATTAGTTCTTAGCAG**A**CTTACACAT	97
Monodon monoceros	TCCTGGCCTTTCTATTAGTTCTTAG**T**AGCCTTACACAT	97
Lagenorhynchus albirostris	TCCTGGCCTTTCTATTAGTTCTTAGCAG**A**CTTACACAT	97
Orcaella brevirostris	TCCTGGCCTTTCTATTAGTTC**C**TAGCAG**A**CTTACACAT	94
Peponocephala electra	TCCTGGCCTTTCTATTAGTTCTTAGCAG**AT**TTACACAT	94
Pseudorca crassidens	TCCTGGCCTTTCTATTAGTTCTTAGCAG**AT**TTACACAT	94
Steno bredanensis	TCCTGGCCTTTCTATTA**A**TTCTTAGCAG**A**CTTACACAT	94
Orcaella heinsohni	TCCTGGCCTTTCTATTAGTTC**C**TAGCAG**G**CTTACACAT	94
Globicephala macrorhyncus	TCCTGGCCTTTCTATTAGTTCTTAGCAG**AT**TTACACAT	94
Globicephala melas	TCCTGGCCTTTCTATTAGTTCTTAGCAG**AT**TTACACAT	94
Orcinus orca	TCCT**A**GCCTTTCTATTAGTTCTTAGCAG**A**CTTACACAT	94

Environmental DNA



Environmental DNA

Location	C-POD detections		Genetic detections	
	% Porpoise positive days	Mean clicks per hour	Positive PCRs	Cycle threshold
Positive control			3/3	18, 18, 18
Fjord & Bælt pen	-	-	3/3	34, 35, 35
<10m from F&B pen	-	-	1/3	49
>10m from F&B pen	-	-	0/3	-
1 (5)			1/3	49
2 (10)			0/3	-
3 (20)			0/3	-
4 (29)			0/3	-
5 (51)			0/3	-
6 (44)			0/3	-
7 (46)			2/3	38, 50*
8 (0)			0/3	-

Environmental DNA

Sequences producing significant alignments:

Accession	Description	Max score	Total score	Query coverage	E value	Max ident
JF289176.1	Peponocephala electra isolate M6 mitochondrion, complete genc	75.8	75.8	100%	1e-11	100%
JF289175.1	Peponocephala electra isolate P5 mitochondrion, complete genc	75.8	75.8	100%	1e-11	100%
JF289174.1	Pseudorca crassidens isolate 96 mitochondrion, complete genor	75.8	75.8	100%	1e-11	100%
JF289173.1	Pseudorca crassidens isolate 92 mitochondrion, complete genor	75.8	75.8	100%	1e-11	100%
JF339976.1	Globicephala macrorhynchus isolate Glomac65 mitochondrion, c	75.8	75.8	100%	1e-11	100%
JF339972.1	Globicephala melas isolate GlomelG5 mitochondrion, complete	75.8	75.8	100%	1e-11	100%
HM060334.1	Globicephala melas mitochondrion, complete genome	75.8	75.8	100%	1e-11	100%
HM060333.1	Globicephala macrorhynchus mitochondrion, complete genome	75.8	75.8	100%	1e-11	100%
HM060332.1	Pseudorca crassidens mitochondrion, complete genome	75.8	75.8	100%	1e-11	100%
JF289172.1	Feresa attenuata isolate 36 mitochondrion, complete genome	67.9	67.9	100%	3e-09	97%
JF289171.1	Feresa attenuata isolate 35 mitochondrion, complete genome	67.9	67.9	100%	3e-09	97%
EU557097.1	Stenella coeruleoalba mitochondrion, complete genome	67.9	67.9	100%	3e-09	97%
EU557096.1	Stenella attenuata mitochondrion, complete genome	67.9	67.9	100%	3e-09	97%
EU557095.1	Grampus griseus mitochondrion, complete genome	67.9	67.9	100%	3e-09	97%
EU557094.1	Delphinus capensis mitochondrion, complete genome	67.9	67.9	100%	3e-09	97%
AJ554061.1	Lagenorhynchus albirostris complete mitochondrial genome	67.9	67.9	100%	3e-09	97%
X78168.1	S.coeruleoalba mitochondrial 12S rRNA gene, female	67.9	67.9	100%	3e-09	97%
X78169.1	S.coeruleoalba mitochondrial 12S rRNA gene, male	67.9	67.9	100%	3e-09	97%

Environmental DNA

Environmental Genome Shotgun Sequencing of the Sargasso Sea

2 APRIL 2004 VOL 304 SCIENCE www.sciencemag.org

OPEN ACCESS Freely available online PLOS BIOLOGY

The *Sorcerer II* Global Ocean Sampling Expedition: Northwest Atlantic through Eastern Tropical Pacific

Conclusions

Environmental DNA has some potential for non-invasive genetic monitoring of marine mammal populations. However, the low amounts and high fragmentation of eDNA lead to stochastic detections and limited population genetic information.


KØBENHAVNS
UNIVERSITET


Statens Naturhistoriske Museum


fjord&bælt
Oplev havets magi


Centre for GeoGenetics


NATIONAL ENVIRONMENTAL
RESEARCH INSTITUTE
AARHUS UNIVERSITY


STATIC ACOUSTIC MONITORING OF THE
BALTIC SEA HARBOUR PORPOISE
SAMBAH


Danmarks
Grundforskningsfond
Danish National
Research Foundation

SAMBAH

Static Acoustic Monitoring of the Baltic Sea Harbour Porpoise

Overall project coordinator:
Mats Amundin
Kolmården Wildlife Park, Sweden

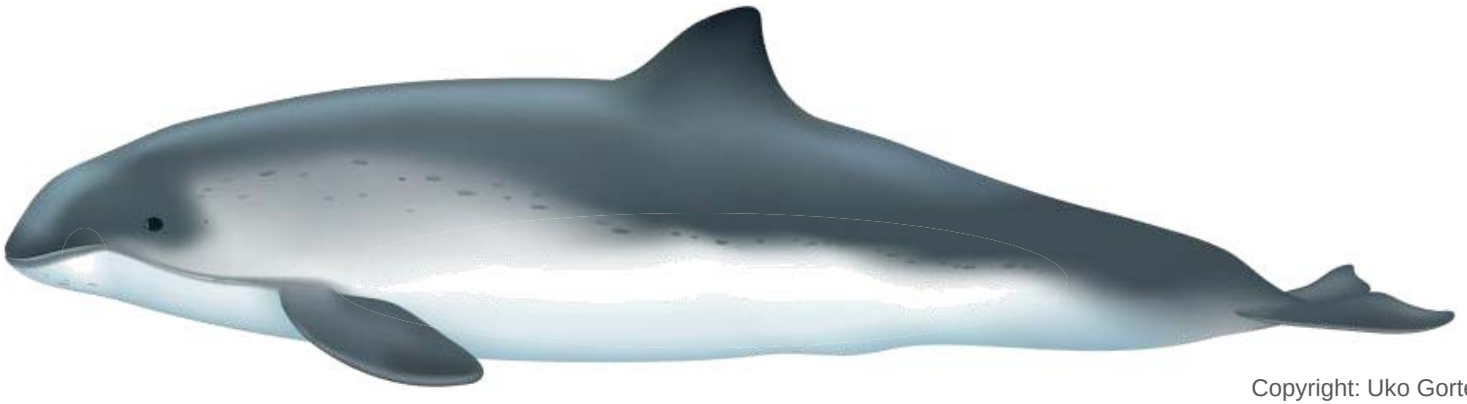
Project managers:
Ida Carlén & Julia Carlström
AquaBiota Water Research, Sweden

Contact:
info@sambah.org
Web site:
www.sambah.org

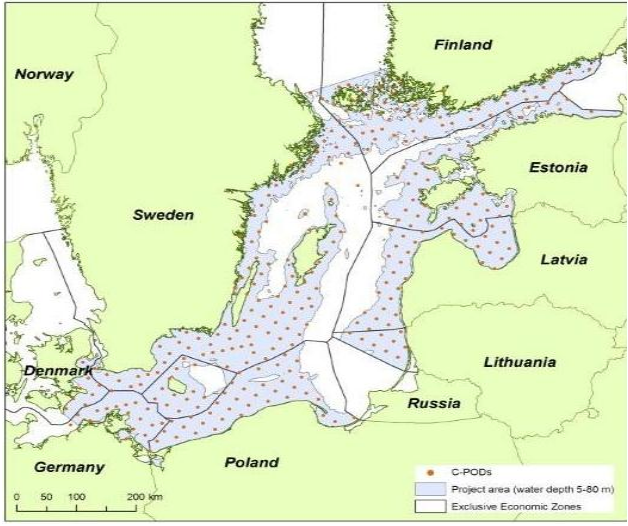
An EC LIFE+ Nature project

The Baltic harbour porpoise (*Phocoena phocoena*)

- IUCN red list: Baltic Sea population critically endangered (CR)
- EU Habitats Directive: Annex II and IV
- Baltic Sea population estimates ~ 100 - 600 (CI 10 - 3300)
- Threats: bycatch in gillnet fishery, pollution, disturbance, eutrophication and overfishing
- Important areas essentially unknown. Protected areas only in (Danish), German and Polish waters



SAMBAH objectives



1. Estimate density, abundance and distribution within the project area

2. Identify habitat preferences, hotspots and areas with higher risk of conflicts with anthropogenic activities

3. Increase the knowledge about the Baltic harbour porpoise among policymakers, managers, stakeholders, users of the marine environment and the public

4. Implement best practice methods for cost efficient, large scale surveillance of harbour porpoises in a low density area

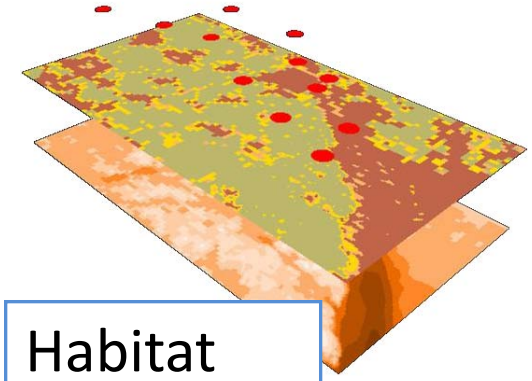
Methods

Acoustic data

$$\hat{D} = \frac{n(1-\hat{c})}{K\pi w^2 \hat{P}T\hat{r}}$$

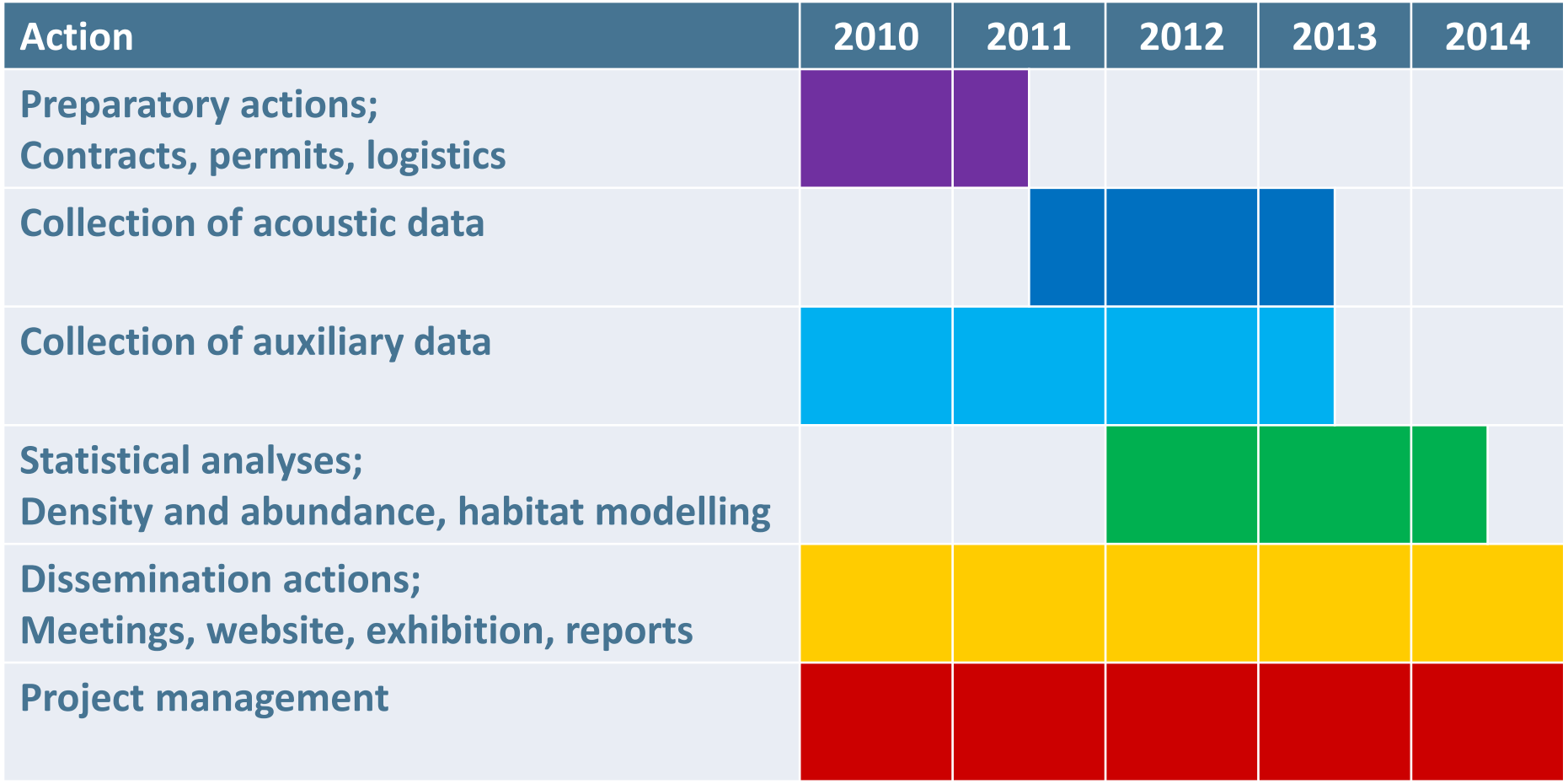
Auxiliary data, e.g. on echolocation

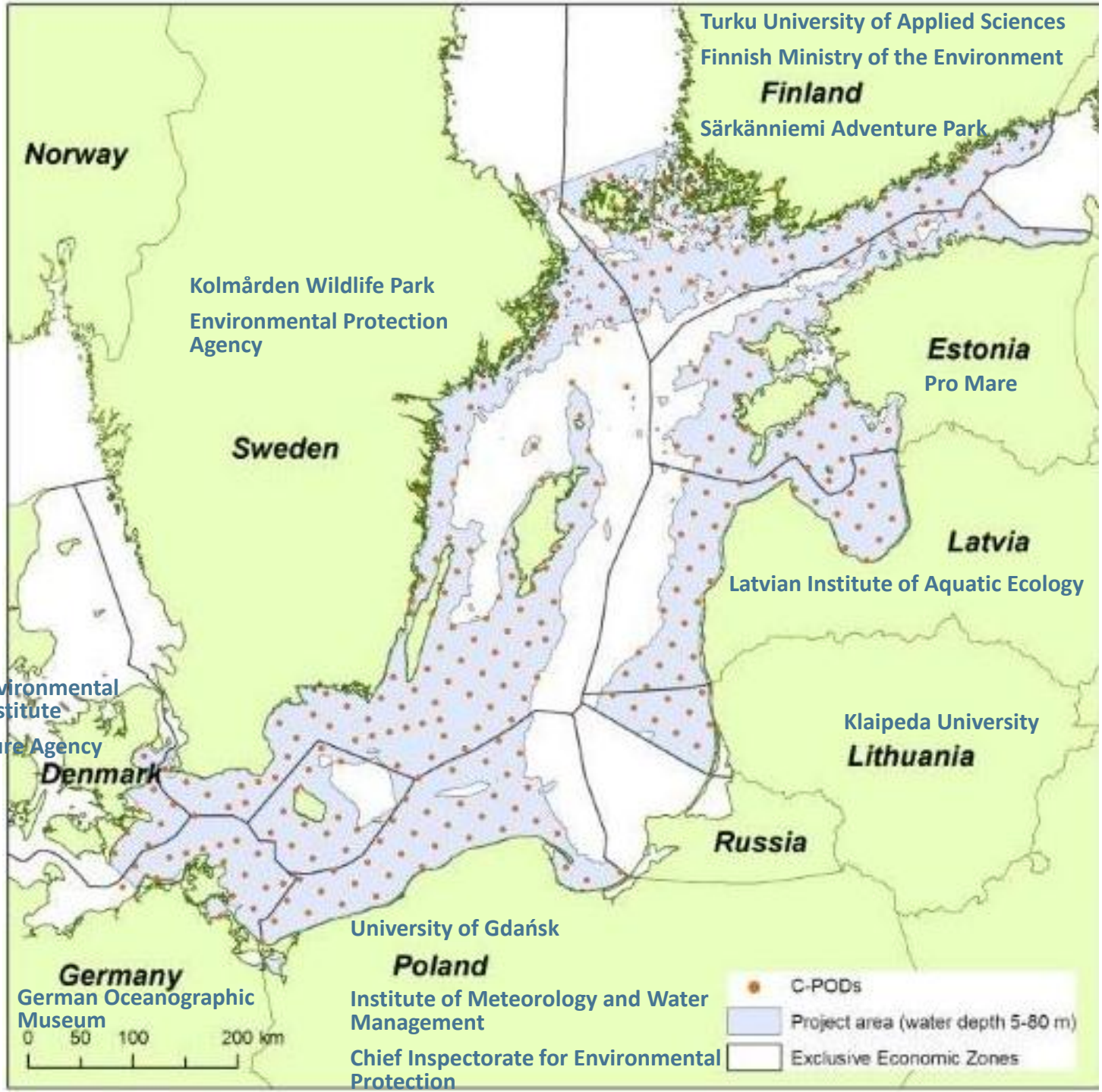
Density and abundance analyses



Habitat modelling

SAMBAH time schedule





Subcontracted analyses:

CREEM, St Andrews University, UK

AquaBiota Water Research, SE

Acoustic data collection

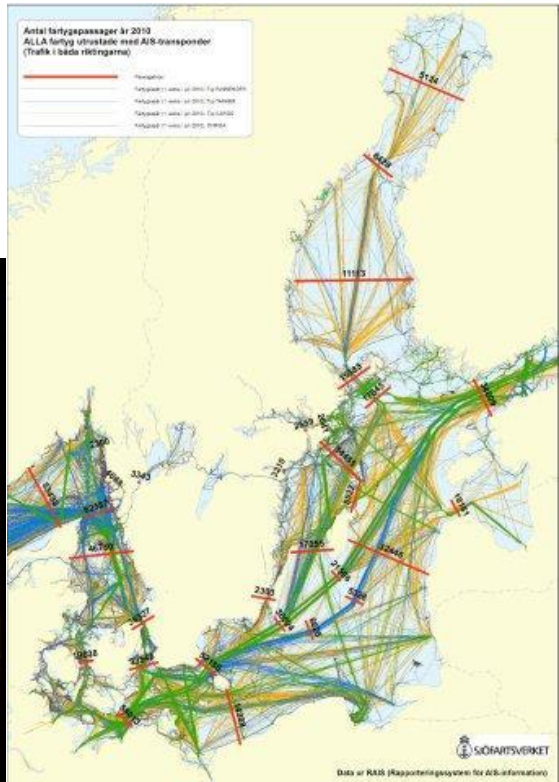
- Area 5-80 m depth
- ~ 300 C-PODs
- Anchored 2m above the bottom
- May 2011 – April 2013
- Service interval 3-4 months

  - download data

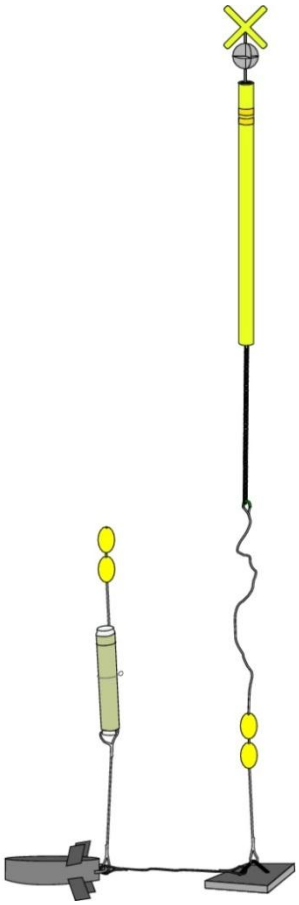
  - replace batteries

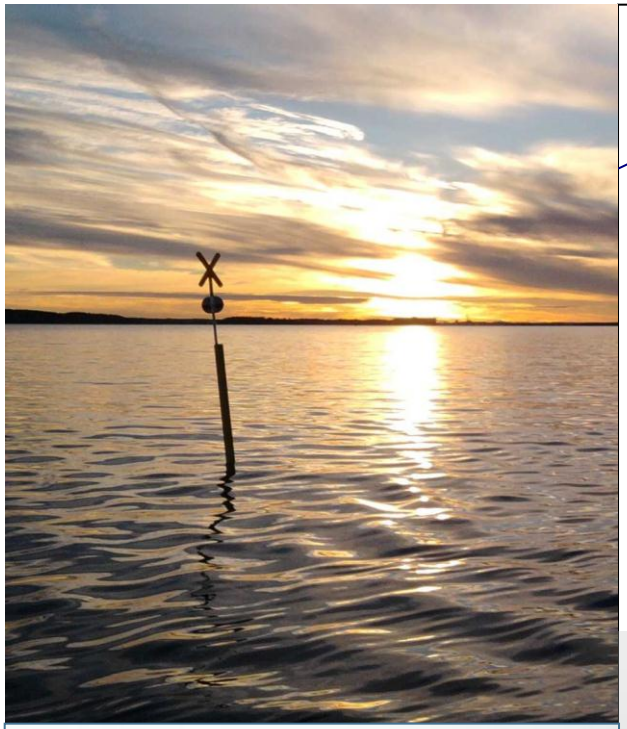
Anchoring challenges

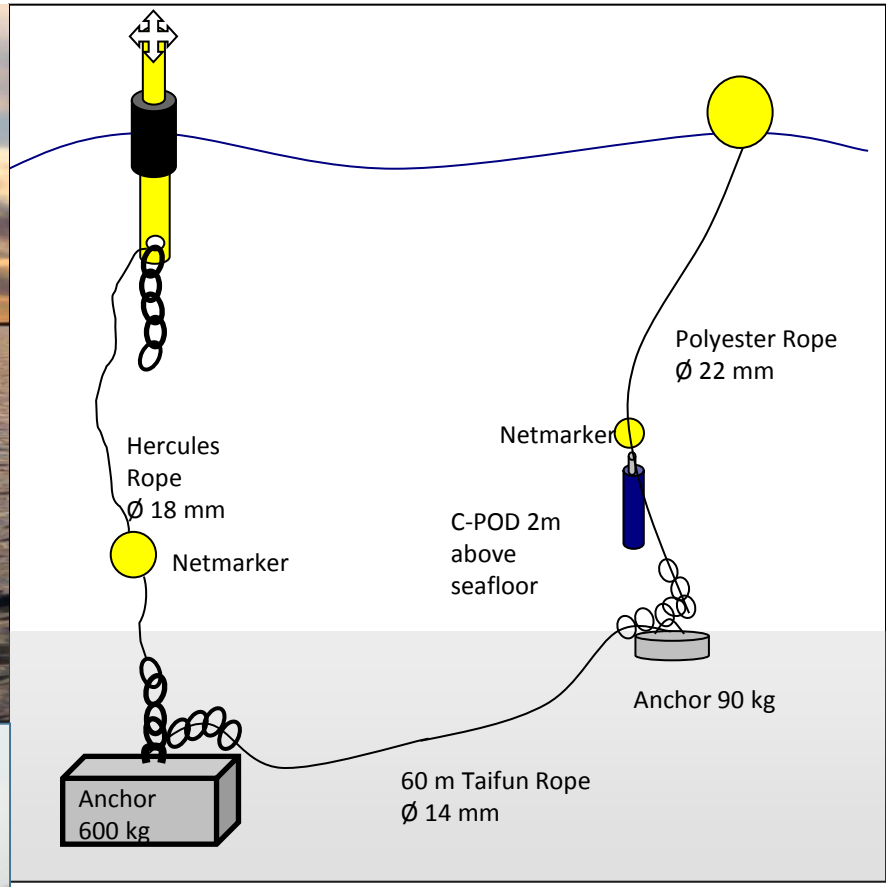
- Ice
- Bottom and pelagic trawling
- Shipping incl. submarines
- Theft and vandalism
- Various bottom substrates



Anchoring with surface marker







Anchoring without surface marker

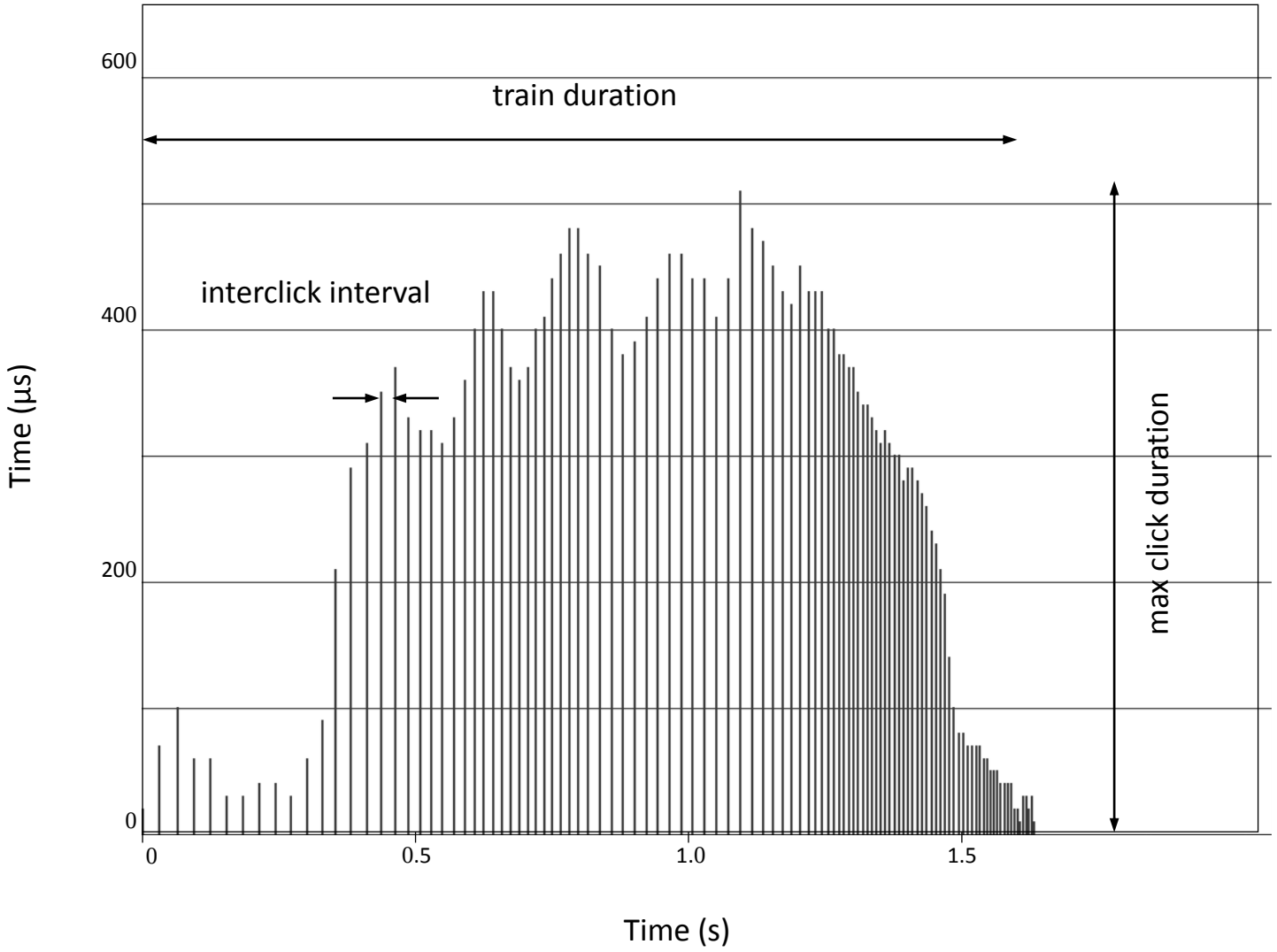
Post-processing of C-POD data

- **Automatic processing**

  - Identification of click trains

  - Distinguish porpoise trains from other sound sources
- **Processing will be further developed within SAMBAH**

Porpoise click train



Auxiliary data

- Group size – opportunistic sightings and surveys
- Click rate – acoustic tag data
- Detection probability – many methods incl. 3D model of tag data

Porpoises in Danish pound nets

- Detection function estimated by lines with C-PODs
- Acoustic and satellite tags providing data on:
  - Click rate
  - Position
  - Dive depth
  - Dive duration
  - Swim speed
  - 3D compass

Density estimation results

- Total porpoise abundance in project area
- Porpoise density at C-POD positions

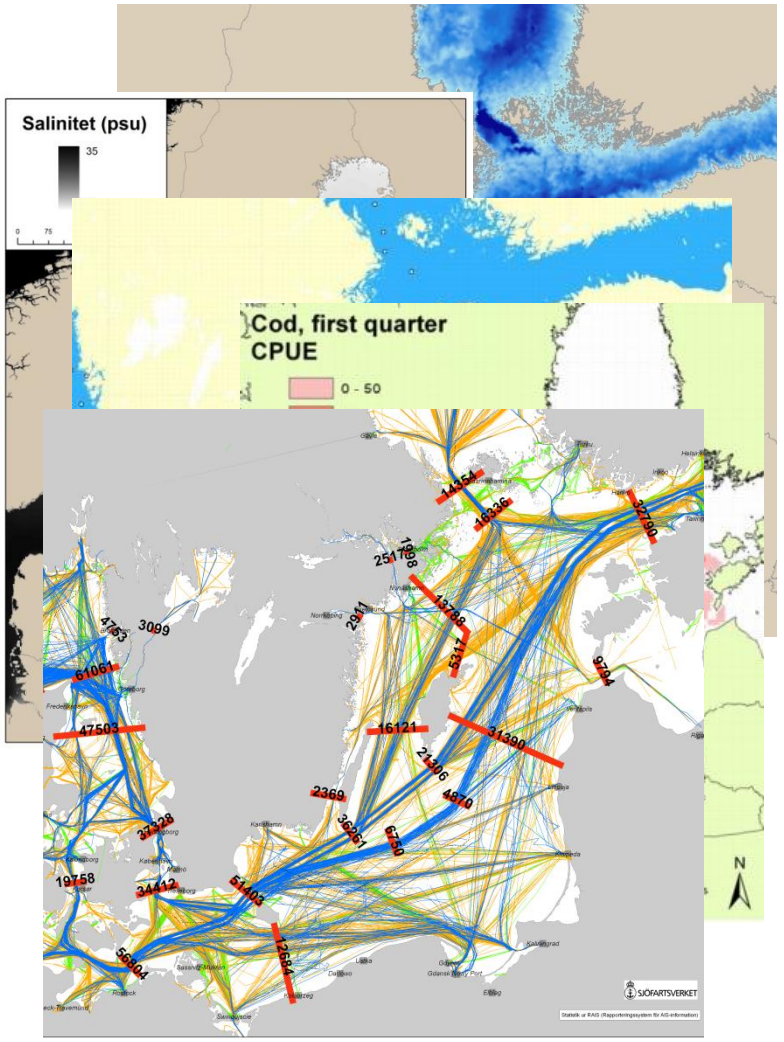
Variables for habitat modelling

Calibration variable:

- Porpoise density at C-POD positions

Prediction variables, e.g.:

- Depth, bottom slope
- Substrate
- Temperature, salinity, current
- Oxygen concentration
- Fish distribution (e.g. cod, herring, sprat)
- Vessel traffic



SAMBAH dissemination actions

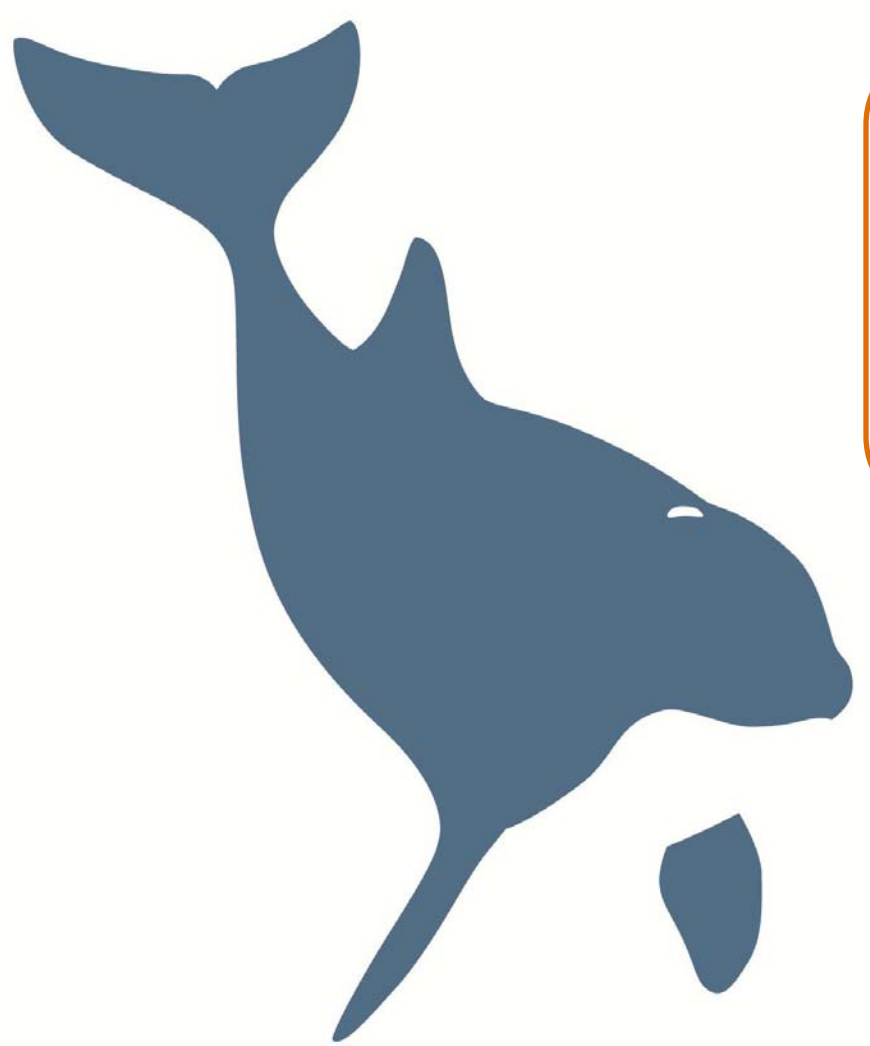
- Web site www.sambah.org
- European Cetacean Society workshop
- National information meetings
- Exhibitions at Fjord&Bælt, Natur Bornholm, Kolmården, Hel Marine Station and Särkänniemi Adventure Park
- TV, newspaper and leaflet
- Networking with relevant authorities and organisations
- Results to international databases
- Scientific publications
- Non-technical reports to managers, policymakers and stakeholders
- End-of-project conference

Ways of supporting SAMBAH

- **Spread information on the Baltic porpoise in general and on SAMBAH and the C-PODs in particular**

  ⇨ Minimise the risk of removal of C-PODs

- **Please do not move any devices encountered at sea**
- **Please contact the name on the device or people from the SAMBAH project if a lost device is encountered**



Thank you!

☺

Implementation of the Action Points Agreed by the Jastarnia Group

Jastarnia Plan Recommendation	Action requested by the Jastarnia Group	Actors	Priority	Status	Deadline for action	Actions taken					
						Denmark	Finland	Germany	Lithuania	Poland	Sweden
Bycatch Reduction											
1. Reduce fishing effort in certain fisheries											
	(JG7/AP1) Step up actions to reduce fishing effort involving gear known to cause high porpoise bycatch rates as required under the Jastarnia Plan, and to provide information documenting the magnitude and location of such effort.	Parties									
2. Involve stakeholders in the work of reducing bycatch of harbour porpoises											
3. Replace fishing methods known to be associated with high porpoise bycatch (i.e. set nets) and introduce alternative gear that is considered less harmful											
4. Implement a pinger programme on a short-term basis											
Research and Monitoring											
5. Analyse stock affinities of harbour porpoises in the “transition zone” of the south-western Baltic											
6. Develop and apply new techniques (e.g. acoustic monitoring) for assessing trends in abundance											
7. Develop interactive pingers or pingers using frequencies not audible to seals											
8. Investigate possible detrimental effects of various types of sound and disturbance (including pinger signals, noise from vessels, wind parks or constructions and seabed exploration for oil and gas) on harbour porpoises											

9. Monitor bycatch in fisheries known to be harmful to harbour porpoises to be able to estimate bycatch levels											
10. Further develop sustainable alternative fishing gear with no bycatch of harbour porpoises											
11. Compile Data on Fishing Effort											
12. Examine habitat preference of harbour porpoises											
13. Investigate the prevalence of derelict (“ghost”) gear and the feasibility of its removal											
Marine Protected Areas											
14. Expand the network of protected areas in the Baltic Sea and improve its connectivity and ensure the development of appropriate harbour porpoise management plans for these areas.											
Public Awareness											
15.Develop a comprehensive public awareness campaign, based on the elements outlined below:2											
ASCOBANS Cooperation with Other Bodies											
16. Strive for close consultation and cooperation between ASCOBANS and other relevant regional and international bodies.											