REPORT OF THE 7TH MEETING OF THE ASCOBANS JASTARNIA GROUP

Copenhagen, Denmark

14-16 February 2011

Agreement on the Conservation of Small Cetaceans of the Baltic, North East Atlantic, Irish and North Seas

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Table of Contents

1. Opening of the Meeting 2
2. Adoption of the Agenda 2
3. Presentations by Invited Experts 2
4. Update on Progress regarding SAMBAH 3
5. Implementation of the Jastarnia Plan and the Recommendations of the 6th Meeting of the Jastarnia Group (as endorsed by AC17) 3
   5a. Bycatch reduction 3
   5.b. Research and Monitoring 10
   5.c. Marine Protected Areas 13
   5.d. Public Awareness 14
   5.e. ASCOBANS' cooperation with other bodies 15
6. Coverage of the Western Baltic, Inner Danish Waters and the Kattegat/Skagerrak Area 17
7. Development of Terms of Reference for a Baltic Coordinator 19
8. Any Other Business 20
9. Date and Venue of the 8th Meeting of the Jastarnia Group 20
10. Closure of Meeting 20

Annex 1: List of Participants 21
Annex 2: Agenda 23
Annex 3: Recommendations 25
Annex 4: Presentation: Baltic Fund for Nature 21
Annex 5: Presentation: Population Structure of Harbour Porpoises in the Greater Baltic Region – evidence of separation based on geometric morphometric comparisons 37
Annex 6: Presentation: Develop a Comprehensive Public Awareness Campaign 46
Annex 7:Teilmann *et al.* Status of a Harbour Porpoise Population – evidence of population separation and declining abundance 54
Annex 8: Draft Terms of Reference for an ASCOBANS Baltic Sea Coordinator 70

7th Meeting of the ASCOBANS Jastarnia Group

Copenhagen, Denmark, 14-16 February 2011

1. Opening of the Meeting

Rüdiger Strempel (Coalition Clean Baltic, Chair) welcomed the delegates to Copenhagen, and called upon Maj Munk (Denmark) as representative of the host government to address the meeting.

2. Adoption of the Agenda

The Chair proposed the adoption of the provisional agenda subject to a change in the running order, by which the presentations of the invited experts were to be taken on two separate days rather than in immediate succession. The presentation by Anders Galatius (Invited Expert) would be taken on the second day. The agenda as amended was adopted.

3. Presentations by Invited Experts

Roustam Sagitov (Invited Expert) gave a two-part presentation (Annex 4), explaining first the activities of the organization, the Baltic Fund for Nature and secondly, giving an account of the harbour porpoise in Russian waters. Dr Sagitov taught at St Petersburg University, was a director of the NGO and was chair of Russia's IUCN Committee.

The Baltic Fund for Nature had been established in 1995 as a subsidiary of the St. Petersburg Naturalists' Society which dated back to 1868. Since the fall of Communism, Russia's neighbours had shown considerable willingness to cooperate with Russian conservationists, and links had been established with the Universities of Uppsala and Stockholm, WWF Sweden and the Coalition Clean Baltic. The St Petersburg Naturalists' Society had a democratic structure and its remit covered research, sustainable development, education, ecotourism and the conservation of rare species. With respect to marine mammals, it was monitoring seals in the Baltic Sea and the endemic sub-species of seal found in Lake Ladoga.

With regard to the harbour porpoise in the Russian waters of the Gulf of Finland there was no recent information from the Kaliningrad region, although the species was known to occur in neighbouring Lithuanian and Polish waters. Historically two bottlenose dolphins had been bycaught (in 1871 and 1906), one white-beaked dolphin had been seen in 1935 and eight instances of bycatch and carcasses had been recorded for harbour porpoises in the period 1856-1992. In 1901 a harbour porpoise was caught by fishermen in Lake Ladoga after it had apparently swum up the Neva.

The grant awarded through ASCOBANS would allow a study to be undertaken in Russian waters with a focus on fishermen both in Kaliningrad and the Gulf of Finland. Permission would be obtained from the Ministry of Transport to circulate a questionnaire to all maritime traffic on its way to or from St. Petersburg to try to have all sightings recorded. The Baltic Fund for Nature would make the questionnaire available to the ASCOBANS Secretariat. The use of acoustic devices might fall foul of the military, although an oil company would be approached concerning fitting equipment to offshore oilrigs. The Chair suggested that if necessary and endorsed by Parties, the ASCOBANS Secretariat could offer to write a letter of endorsement to help secure permissions to use acoustic devices.

The Russian fisheries effort in the Baltic concerning vessels from outside the Kaliningrad area consisted of two to three herring trawlers in the Gulf of Finland with some gill and smaller nets targeting bream, perch and roach, so there was no thought to be a bycatch

problem for marine mammals there (although possibly for marine duck species). The Kaliningrad fleet was larger but much of the time it operated in the Atlantic. Studies in Estonia found that seals were taking large quantities of fish from nets.

Anders Galatius (Invited Expert) gave a presentation entitled "Population structure of harbour porpoises in the greater Baltic region: Evidence of separation based on geometric morphometric comparisons" (Annex 5). Details of his presentation are reported under agenda item 5.b.aa. below.

4. Update on Progress regarding SAMBAH

In the absence of Mats Amundin, Sara Königson (Sweden) briefed the Group on the latest developments. All partners had now signed their contracts and all participating countries would have deployed the equipment by May. The severe winter had caused some delays, as had securing the necessary permissions in some localities. In Denmark, the major concern was with consultations with stakeholders. In Sweden automatic pop-up buoys were being used, whose location was not obvious from the surface, reducing the risk of interference. These buoys were trawler-resistant and were released by signal so that the data could be collected.

Iwona Pawliczka (Poland) reported that 39 PODs would be deployed, nine in depths of less than 20 metres and 30 with automatic release mechanisms in deeper water. The latter type was more expensive but their purchase had been covered within the agreed budget. The Polish SAMBAH team had gone to a fishermen's meeting to explain the project and the reaction had been positive. The nine surface buoys should not pose a problem. The test buoy was still in place, but adverse weather may have kept the fleet in port preventing any interference with it.

The Secretariat reported that the production of leaflets in all nine project languages and stickers had been financed by ASCOBANS by making use of the German voluntary contribution for 2010.

RECOMMENDATION

- *Recommendations 14-20 from the 6th Meeting of the Jastarnia Group (Annex 6 of the Report of the 17th Meeting of the ASCOBANS Advisory Committee were reiterated.*

5. Implementation of the Jastarnia Plan and the Recommendations of the 6th Meeting of the Jastarnia Group (as endorsed by AC17)

5a. Bycatch reduction

aa. Reduce Fishing Effort in Certain Fisheries (Recommendation 1 of the Jastarnia Plan)

Krzysztof Skóra (Advisor to the Chair) showed some slides illustrating changes in the number of Polish boats which had gillnets included in their fishing licences (GNS & GND) in the period 2004-2009. The number of vessels had declined (the annual figures for 2004-2009 being 767, 636, 580, 578, 542 and 533 respectively), but it did not necessarily follow that the gillnetters' fishing effort had been reduced in all segments of the fleet. The reduction concerned 53% of boats above 12m length and only 19% of boats below 12 m length, which mainly used gillnets in the coastal zone. In 2009 the potential Polish fleet of gillnetters consisted of 411 and 122 boats respectively in those two segments. The case of Puck Bay – a traditional fishing ground for small boats (<15m) with a high rate of harbour porpoise bycatch – showed that a radical reduction of this fleet had taken place in the 1980s and

1990s (there had been 379 boats in 1979, and only 203 in 1995). In the period 2004-2009 only 130-120 gillnetters remained. In the Pomeranian Bay region (ICES area 24– where pingers were obligatory, but only for gillnetters above 12m length) the reduction from 2004 to 2009 was 70% and 32% in those two segments of gillnetters. In 2009 in Pomeranian Bay region 84 boats of <12m and 28 boats of >12m length remained.

Poland and EU regulations set limits to the length of gillnets that could be used (vessels under 12 metres could set 100, vessels between 12m and 15m 200 and boats over 18m 300 nets). Outside territorial waters it was the length not the number of nets that was regulated (boats under 12 metres being allowed 9km, and those over 12m 21 km). Comparing those limits multiplied by the number of gillnetters was the only method for studying the changes of the potential fishing pressure from gillnetters from year to year. It would be good to have the possibility of comparing at least those numbers in all Baltic countries year by year, especially for a coastal fleet operating in territorial waters. . Currently no monitoring system existed (probably not only in the Polish fishery sector) for checking of soak time (length of line x time deployed) of GNS *in situ.*

Leszek Dybiec (Poland) said that three years earlier a programme to decommission fishing vessels had started. More permits were needed and more controls had been introduced. Cod could now only be landed at 5 ports and not 11 as before. The take-up from structural grants had been higher in western Poland which accounted for 70% of the decommissioned ships. Inspectors were unable to assess fishing effort simply by the quantity of nets. He recognized that fisheries and environmental interests had to be reconciled, and hoped that both sides could work together to address the bycatch problem in gillnets, working through HELCOM, ICES and the Baltic RAC. The European Commission was about to launch a new programme on salmon and pelagic stocks and the Council of Ministers was considering the advice from ICES. Stocks had recovered since the moratorium. The Baltic Sea was however quite small and hosted a relatively small number of species, and it was expected that fisheries effort would have to be reduced across the board, with some areas closed for certain types of fishery.

Stefan Bräger (Germany) asked how effort was measured and whether soak time figures were available, as EU regulations only required the recording of the number of vessels and the number of days at sea.

Poland was requested to make its fisheries effort data available to ASCOBANS.

Sara Königson (Sweden) said that dioxins were now being discussed as this had a great effect on salmon, eel and herring fisheries.

The Chair commented that fisheries effort seemed to be declining but as an incidental result of other measures and not as a direct result of the Jastarnia Plan recommendation. He asked whether any direct measures were being planned, and if not, how measures could be induced, given that fisheries effort still remained too high for the Jastarnia Plan objectives to be met. He referred to the Recommendation which called for incentives to fishermen, national legislation and European legislation. Sara Königson asked whether specific numeric targets needed to be set while Krzysztof Skóra said that it was not necessarily general fisheries efforts, only those types with a higher likelihood of causing bycatch that needed to be addressed.

Petra Deimer (Germany) said that as the bycatch problem was not improving, fishing effort needed to be further reduced. Krzysztof Skóra said that more data were required and from countries other than Poland. As the availability of fish just off the coast was reducing, fishermen were going further out to sea for their catch. Ms Königson pointed to the potential conflict with socio-economic considerations, as most of the fisheries causing concern were facing economic difficulties, and Governments were promoting policies to support small threatened communities. Petra Deimer pointed to contradictions in policies promoting

smaller-scale, artisanal fisheries over industrial fisheries, as it was the former that posed the greater threat of bycatch.

RECOMMENDATION

- *Parties should 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.*

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

aaa. Implementation of Relevant Recommendations adopted by the 6th Meeting of the Jastarnia Group

There was little to report from the Secretariat or the Group. With regard to the recommendation on reducing duplication of effort, it was noticed that it had not always been possible to ensure cross-representation at meetings, so coordination efforts might be improved. As resources were limited, any solutions that had no cost implications would be particularly welcome. There appeared to be little problem with liaising with HELCOM, with whom Jastarnia Group members were in regular contact. Heidrun Frisch (Secretariat) reported that contact had also been established with DG Mare of the European Commission, which was likely to be represented at the upcoming Advisory Committee Meeting.

Iwona Pawliczka (Poland) said that since the formation of the North Sea Working Group the Jastarnia Group needed to liaise with its North Sea counterpart. It was noted that the Bycatch Working Group, chaired by Russell Leaper, had not been particularly active, but the Secretariat pointed out that the Working Group would have to react to the outcomes of the European Commission's review of regulation 812/2004. Mr Leaper was now in touch with the CMS Scientific Councillor for Bycatch (Barry Baker) regarding the development of briefing materials for representatives of ASCOBANS in fisheries fora.

Heidrun Frisch (Secretariat) reported that two interns of the CMS Secretariat with legal backgrounds had spent some time trying to draw together a synopsis of regulations regarding the handling of bycaught specimens throughout the ASCOBANS Area. It appeared that little information was available in English and the Secretariat suggested that therefore the best approach would be to write to all Parties and seek the information from the National Coordinators. In non-Party Range States, the Secretariat could approach the CMS Focal Point, as bycatch was of interest to the Convention as well as the Agreement. Stefan Bräger (Germany) said he was unaware of any penalties being imposed for landing bycaught animals, although Iwona Pawliczka (Poland) had been informed that Lithuanian fishermen used to be fined, which was a disincentive to reporting bycatch.

Roustam Sagitov (Invited Expert) said that bycatch was not covered by Russian legislation, and bycaught animals were usually discarded by fishermen as an encumbrance. There was however an official at the Russian Ministry (Natalia Barbevova) charged with following ASCOBANS matters and an International Department was shadowing MEAs. He would pass the contact details of the Russian official to the Secretariat. There was a possibility that the next National Action Plan would include a programme for cetaceans, and Russian interest in the CMS Family seemed to be increasing. Mr Sagitov would continue his efforts to increase awareness of ASCOBANS with the Russian authorities. It was pointed out that Russia was involved in other bodies such as HELCOM where issues of concern to ASCOBANS were being discussed.

RECOMMENDATIONS

- *Briefing notes on ASCOBANS positions regarding bycatch should be developed for 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, as foreseen for the entire ASCOBANS Area in the terms of reference for the Bycatch Working Group. A Baltic Coordinator, if appointed, could take on this task.*
- *The ASCOBANS Secretariat should produce a synopsis of bycatch-related regulations of relevance to individual fishermen, especially with regard to legal sanctions for bycatch and incentives for those delivering carcasses. The ASCOBANS Secretariat, with the support of the ASCOBANS Coordinators should also investigate what incentives are offered to those delivering carcasses, irrespective of whether such incentives are laid down in national legislation.*

bbb. Other related issues

Sara Königson (Sweden) said that the project to install cameras on board vessels had encountered difficulties, with only one boat accepting the equipment which was later sabotaged. Denmark had however fared better. This was confirmed by Anders Galatius (Invited Expert) who said the footage gave a clear idea of what was happening at sea. Sweden would review its incentive scheme and might follow the lead of British Columbia in Canada, where landing quotas were increased in return for cooperation.

The Chair pointed to the provision of the Jastarnia Plan calling for the establishment of a Working Group (Jastarnia Plan Recommendation 2). No action had been taken and the Chair sought suggestions on how to make some progress. Stefan Bräger said that there had been some interest from fishermen in the Stralsund Workshop, but unfortunately there had been insufficient follow-up action taken. He noted however that in the Netherlands, the Swedish cod traps had been promoted among fishermen.

Petra Deimer (Germany) pointed out that the original idea of the Jastarnia Group was for fishermen's representatives to attend. Only the Swedish fishermen ever sent anyone. Sara Königson expressed doubts about the efficacy of large-scale international workshops, believing local events would be better received. Krzysztof Skóra said that in Poland workshops were organized although they were often not well attended, and those who showed an interest did not spread the message.

Penina Blankett spoke of the experience in Finland where seal interactions with nets were a major issue. Some local stakeholders were reluctant to adjust their practices and give up traditional rights even if these rights could only be exercised at the cost of killing endangered species.

The Chair saw the appeal of a national approach where local circumstances were better understood and presentations could be made in the local language. Iwona Pawliczka (Poland) said that harbour porpoise numbers were now so low that opponents were using the argument that conservation efforts were now a waste of time. As the Parties were unable to implement the existing recommendations, it would be advisable to review them and redraft them so that they could be put into effect. In any case, a cross-sectoral approach was needed.

The Chair said that it was almost certain that bycatch was still happening, but levels of reporting seemed to be less now than in the past.

Petra Deimer confirmed that from her experience of a strandings network, it was clear that interactions with fisheries were a major cause of strandings. Along the German Baltic coast, 170 dead harbour porpoises recorded annually, many showing signs of having been caught in nets. The Chair felt that while stranding networks were valuable they were no substitute

for a proper reporting regime. In Finland, WWF had paid fishermen for bycatch reports regarding seals, which the fishermen regard as a pest.

The Chair asked whether reporting should be referred to the European Commission and that they be asked to tighten the Habitats Directive to impose a legal obligation to report carcasses. Petra Deimer said that former seal hunters had been employed to scour the beaches in Germany. An online reporting system could allow members of the public to report strandings and the appropriate authorities to come to retrieve the specimens. Anna Dębicka (Advisor to the Chair) said that the stranding network set up in Poland relied on volunteers and they were each allocated 10km of coastline to patrol. Five stranded harbour porpoises had been found in Poland by members of the network. The German network was less formal and it relied on the general public and publicity campaigns alerting people as to how to respond when a carcass was found. Krzysztof Skóra (Advisor to the Chair) said that in Poland only four reports of bycatch had been received since Regulation 812/2004, while 24 stranded animals had been found. Levels of reporting had declined significantly.

Leszek Dybiec (Poland) thought that bycatch reporting could improve, but it had to be borne in mind that fishermen perceived marine mammals as a pest. This was certainly true of seals which destroyed nets and was probably also true of harbour porpoises. Cooperation between the fisheries and environmental authorities could be better and data collection programmes stepped up; HELCOM was doing so to some extent. There was an insufficient legal basis for data collection. The fact that the FAO was dealing with discards and bycatch presented an opportunity to liaise better with other actors, as did the continuing discussion of fisheries reforms within the European Union.

Heikki Lehtinen (Finland) felt that reporting was probably insufficient and agreed that the lack of a legal basis (bycatch was not included in the EU logbook) was a contributing factor. With no obligation to report bycatch, most fishermen did not do so. Incentive schemes and a voluntary, collaborative approach were the best way forward, and the Jastarnia Group should press for this when providing its advice to the Common Fisheries Policy review.

Sara Königson (Sweden) confirmed that the scheme operated by the Natural History Museum by which fishermen were paid for delivering bycaught specimens seemed to work. The financial incentive was important to compensate the fishermen for the work involved in landing and reporting the bycaught animal.

The Chair summarized that two approaches seemed to be emerging. In order to overcome the reluctance of fishermen to report bycatch, incentive schemes could be introduced offering them money or legislation could be enacted requiring them to report. It was recognized that bycatch was not deliberate and should not be stigmatized. The two approaches were complementary, but Heikki Lehtinen said that a statutory system would have to be enforced and monitored. Petra Deimer said that Germany had discontinued its incentive scheme but one German region operated a reporting system built on a public information campaign which allowed carcasses to be reported anonymously to the authorities.

Krzysztof Skóra (Advisor to the Chair) said that fishermen were sceptical towards environmentalists and resented Regulation 812/2004 and the prohibition of drift nets. However, Regulation 812/2004 had been drafted by the fisheries authorities of the EU and as a result it did not achieve environmental objectives. Other EU legislation obliged member states to adopt an ecosystem approach, which would put pressure on fisheries authorities to adopt greener policies. One simple step would be to amend the logbooks to include a column for bycatch, although Heikki Lehtinen (Finland) questioned whether the column was large enough to contain useful information. Public opinion and the media were sympathetic to conservation, and the usual reaction to finding so many dead mammals on the coast was to assume that fisheries were responsible.

Roustam Sagitov (Invited Expert) said that fishermen tended to consider all bycatch – birds, seals or porpoises – as a waste product to be discarded; this attitude had to be changed. Iwona Pawliczka (Poland) accepted that fishermen did not want to cause bycatch but on the other hand they did not seem motivated to do anything to reduce it. She supported the "carrot and stick" approach of incentives and regulation, but urged that reporting incentives should only cover costs, lest they encouraged bycatch. Mr Sagitov agreed. In Russia payments were made to bring seals to scientists but at a level that they were not seen as a bounty. Ms Königson was wary of crossing the boundary of paying fishermen to adhere to the law.

Leszek Dybiec (Poland) said that cameras on board would make bycatch and discarding more difficult to cover up and assist with documentation.

RECOMMENDATIONS

- *Parties should establish national processes to develop guidelines and methods for reducing and monitoring bycatch in the relevant fisheries, as called for in Jastarnia Plan Recommendation 2, and to report on progress in achieving this.*
- *Parties should enact national legislation obliging fishermen to report bycatch of cetaceans in their log books and to deliver carcasses to the competent authorities. A lump sum reimbursement should be provided to fishermen to cover parts of the cost of delivering the carcasses.*

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. Development of an overview of related studies and practical examples for the Baltic Sea (and possibly beyond)

Stefan Bräger (Germany) said that an initiative in Germany to replace old gear had not taken off to the same extent as the similar initiative in Sweden. He supported the previous year's recommendation that the Jastarnia Group should compile a catalogue of studies being undertaken as a simple means of information exchange. Sara Königson (Sweden) explained that a related project was being funded by the Swedish government and EU structural funds. The pilot scheme had involved three fishermen and more projects would be started. A small expert meeting with participants from Denmark, Germany and Norway had been held under the auspices of the Nordic Council. As Germany was known to have an interest, it had been invited; it would be possible to include Poland too.

The Secretariat was asked to devise a format for compiling a list of research projects on alternative fishing gear (with guidance from the Group). For studies in countries with no ASCOBANS contact point, the Secretariat could address the CMS Focal Point or go through HELCOM.

RECOMMENDATION

- *Noting the recent promising new methods of monitoring and mitigating bycatch across the Baltic Sea region, the Jastarnia Group recommends that this information be made available to those not or not fully aware of it, especially fishermen. An overview of studies related to this issue and practical examples from around the Baltic Sea should be compiled by the Secretariat with input from the Jastarnia Group.*

bbb. Other related issues

The Chair asked whether there were any other studies similar to one concerning the use of cod traps in Sweden. Sara Königson informed that meeting that the cod traps had now received their green accreditation. However, cod gillnets and long-lines were also certified despite the fact that they caught seals, birds and porpoises, and often were not fitted with pingers. Petra Deimer said that a Norwegian design for long line gear covered the bait preventing birds from becoming ensnared. The timing of fishing effort was also a factor in reducing bycatch. The question was posed whether the Marine Stewardship Council (MSC) which awarded green labels considered any methods to be damaging.

Krzysztof Skóra made a presentation showing progress of the project of active protection of harbour porpoises in the Puck Bay. The project included the deployment of PODs and later on a barrier of acoustic deterrent devices across the entrance to Puck Bay, one of the harbour porpoise "hot spots" in the Baltic Sea. So far, the occurrence of harbour porpoises was noted mostly in winter and spring. . During the winter only parts of the Bay froze over, allowing porpoises to enter its waters, but also making fishing possible most of the year.

Heikki Lehtinen (Finland) said that cod traps were still in the early stages of development and their use had not reached commercial levels. He was also sceptical about "porpoise friendly" labelling and asked whether ASCOBANS had given serious thought to the criteria which should underlie the concept. The Chair explained that the Advisory Committee had discussed green labelling recently but no definitive stance had been adopted. Stefan Bräger (Germany) confirmed that the MSC was concerned with bycatch, and reportedly several fisheries seeking MSC certification were successful because of their use of pingers. Use of alternative gear should also be promoted.

Mr Lehtinen suggested that the Secretariat gather criteria from fisheries worldwide, so that an evaluation could be made of which methods could be adapted for use in the Baltic. The Chair pointed out that such schemes were already operating and there was no need to duplicate their efforts, but no clear definition of what "porpoise-friendly" meant had been devised. ASCOBANS should contribute to the debate to ensure the criteria were properly drawn up and ensure that the MSC was aware of the Agreement's existence and its agenda. Mr Skóra pointed to the success of the porpoise-friendly sprat tins sold in Poland which consumers appreciated and which helped to increase public awareness. Sara Königson had had dealings with the Swedish labelling authority, but found that her advice was not always taken into account, and some dubious practices had been accredited.

The Chair summarized by saying ASCOBANS had a policy on labelling so the Jastarnia Group could call for action. He also referred to a Baltic RAC paper on seabird bycatch which called for remedial action on the precautionary principle even though understanding of the cause was not complete.

RECOMMENDATIONS

- *Noting the successful application of cod traps in Sweden, the Jastarnia Group recommends that Parties undertake or continue efforts to test cod traps and other porpoise-friendly gear. The possibility of establishing a porpoise-friendly label should be investigated.*
- *The Jastarnia Group recommends that the Secretariat approach the Marine Stewardship Council and other similar certification organizations to urge them to prioritize bycatch of cetaceans in the evaluation criteria applied for certifying fisheries and to promote porpoise-friendly fishing gear and other mitigation measures as described in the Jastarnia Plan.*

dd. Implement a pinger programme on a short-term basis (Jastarnia Plan Recommendation 4)

Sara Königson (Sweden) reported that pingers were being used in ICES Area 24 off southern Sweden. Ten fishermen had acquired them in 2007. The devices were expected to last for two years but there was no place in the logbooks to record their use. Anders Galatius (Invited Expert) confirmed that pingers were being used in Denmark but he had no detailed information. Justyna Szumlicz (Poland) needed to collate the information but could provide it in due course. Iwona Pawliczka (Poland) presented some data showing to what extent different types of gear were responsible for bycatch. Smaller boats using similar gear to larger vessels were not obliged to deploy pingers and it was not clear how many boats fished in ICES Area 24. Krzysztof Skóra (Advisor to the Chair) wondered whether Regulation 812/2004 was working better in other countries, as he was beginning to doubt whether it had saved a single harbour porpoise from being bycaught. He also questioned the effectiveness of observer programmes. Heikki Lehtinen (Finland) said that two observers in the northern Baltic had registered few sightings and no bycatch and had concluded that there was no problem. DG Mare was compiling the report. Stefan Bräger (Germany) said that the Group should take a clear stand and call for the regulation to be improved and strengthened. Ms Pawliczka said that the Group should advise that the regulation was not achieving its aim and as drafted was not suitable for the Baltic Sea. Parties could clearly not rely on the Regulation to meet their obligations under ASCOBANS.

RECOMMENDATION

- *Noting that Regulation 812/2004 in its current form is not sufficiently protecting harbour porpoises in the Baltic Sea, the Jastarnia Group encourages Baltic Sea Range States to implement comprehensively the bycatch mitigation measures laid down in the Jastarnia Plan.*

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)

Prior to the discussion of this agenda item, Anders Galatius (Invited Expert) gave a presentation entitled "Population structure of harbour porpoises in the greater Baltic region: Evidence of separation based on geometric morphometric comparisons" (Annex 5). Harbour porpoises had been present in the Baltic for 9,000 years, but had been suffering a noticeable decline since the 1950s. The population had a higher density in Danish waters than elsewhere in the region but here too it was declining. A number of recent studies had been carried out (Palmé, 2008 and Wiemann, 2010) and telemetric evidence showed that harbour porpoises from Danish waters rarely entered the Baltic proper. Huggenberger's morphological studies from 2002 showed a difference in the skull shapes of specimens from the Belt and the Baltic, providing an interesting cline between the North Sea, the Danish and the Baltic populations. Using a carefully selected sample of skull measurements, which excluded as many variants as possible that might skew the results, the coordinates of key features on the skull were read by a scanner to produce a 3-D map. Specimens from Stockholm, Uppsala, Helsinki, Hel and Copenhagen were used. Anders Galatius said he was aware of a further specimen in St. Petersburg, but he had not been able to travel to measure it. The specimens measured showed considerable differences from a specimen from Greenland, and distinct but less noticeable differences compared with North Sea specimens, while specimens from the Belt and Inner-Baltic were most similar to each other. Plotting the measurements to establish whether the differences constituted a continuum, a divergence became apparent in the Belt populations. Adding other small cetacean species,

both coastal and pelagic, the shape and angle of the beak were related to the animals' feeding habits. The Belt populations were bottom-feeders, given the shallow waters with a few deeper channels and little open water of the kind found in the North Sea and Baltic proper.

The Chair drew the attention of the meeting to the paper "Status of a harbour porpoise population - evidence of population separation and declining abundance", which had been tabled upon request of Signe Sveegaard (Denmark), placing particular emphasis on the final paragraph which projected that the population might drop to 2,000 before a statistically significant trend could be established. The paper recommended that urgent actions be taken to ensure that favourable conservation status was re-established for the Belt Sea harbour porpoise population. Stefan Bräger (Germany) described the paper as one of the most significant to have been presented to the Group in some time, as it showed that the population had declined from 27,000 to 10,000 (a fall of 60%). He suggested that a new survey be carried out in the waters covered in the paper, i.e. those of Denmark, Germany and Sweden. If funding was found quickly, the survey could be carried out in 2013. Anders Galatius (Invited Expert) said that the survey should use similar methods to SCANS to enhance compatibility, but that would add to the cost. Petra Deimer (Germany) said that the paper confirmed her worst fears as it showed that the conservation status of the population concerned was worse than previously thought.

RECOMMENDATION

- *A survey of the Belt Sea harbour porpoise population should be undertaken as soon as possible. The survey should be carried out in such a way as to be comparable to the SCANS surveys.*

aaa. Implementation of relevant Recommendations Adopted by the 6th Meeting of the Jastarnia Group

No implementation measures were reported.

bb. Develop and apply new techniques (e.g. acoustic monitoring) for assessing trends in abundance (Jastarnia Plan Recommendation 6)

Stefan Bräger mentioned a new research project at the German Oceanographic Museum in Stralsund entitled "Comparison of Static Acoustic Monitoring Methods for harbour porpoises and other odontocete species" (COSAMM) which was comparing different recording devices.

cc. Develop interactive pingers or pingers using frequencies not audible to seals (Jastarnia Plan Recommendation 7)

Sara Königson (Sweden) had learnt of a British pinger that was inaudible to seals. She had an electronic version of the associated leaflet, which she would forward to the Secretariat. Mr Bräger said that the devices were inexpensive (£20) and were battery operated (http://fishtekmarine.com/acousticPinger.php). Iwona Pawliczka said that devices that were not only inaudible but also invisible to seals were also needed, if the curiosity of the captive seals at Hel was any indication.

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)

The previous meeting of the Group had not made any recommendations and the final outcomes of the Task Group 11 of the EU Marine Strategy Framework Directive Working Group on Good Environmental Status, led by Mark Tasker, were not yet known. Krzysztof Skóra suggested that a leaflet be drafted for engineers explaining the types and levels of noise likely to be harmful. The information was available but was not reaching those who needed to have access to it. Stefan Bräger thought that the information should also be posted on the ASCOBANS website, where all relevant references could be drawn together.

RECOMMENDATION

- *Information on the impacts of anthropogenic pressures (e.g. bycatch, noise, pollution, disturbance) 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.*

ee. Monitor bycatch in fisheries known to be harmful to harbour porpoises to be able to estimate bycatch levels (Jastarnia Plan Recommendation 9)

This subject had been considered earlier under item 5.a.bb.bbb. and it was not discussed further.

ff. Further develop sustainable alternative fishing gear with no bycatch of harbour porpoises (Jastarnia Plan Recommendation 10)

This subject had been considered earlier under item 5.a.cc. and it was not discussed further.

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

aaa. Implementation of relevant recommendations adopted by the 6th Meeting of the Jastarnia Group

No implementation measures were reported.

bbb. Other related issues

Sara Königson (Sweden) reported that scientists from across the Baltic region had submitted data for the ICES Working Group's advice to the European Commission. Iwona Pawliczka (Poland) doubted whether the data were detailed enough to be of real interest to ASCOBANS and noted that they varied in quality and age (some dated from 2004). Each country collected different information, and it was also important to assess what types of information were not being collected. Heikki Lehtinen (Finland) said countries were constrained by their data gathering programmes and it might be worth reviewing the level of data collected and the cost of doing so.

Iwona Pawliczka and Sara Königson undertook to provide an updated version of the data collection form contained in Appendix 2 to the Revised Jastarnia Plan (2009) to the Secretariat and the Chair.

RECOMMENDATION

- *The Parties are urged to compile data on fisheries effort as required in Recommendation 11 of the Jastarnia Plan, based on a revised version of the form contained in Appendix 2a of the Jastarnia Plan. The updated form will be submitted to the 18th Meeting of the Advisory Committee.*

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

aaa. Implementation of relevant recommendations adopted by the 6th Meeting of the Jastarnia Group

No implementation measures were reported.

bbb. Other related issues

This agenda item had been partly covered during the discussion on SAMBAH. Stefan Bräger said that in Germany's experience a great deal of measuring equipment was lost due to wind and currents as well as shipping and trawling.

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

Krzysztof Skóra (Advisor to the Chair) said that ghost nets were more of a problem in the Mediterranean than in the Baltic Sea, but they did still occur. It appeared that some nets were lost at sea. In Hel, a special place had been set aside to allow fishermen to leave old nets. NGOs were seeking funding for a project in the Baltic to help clear old nets away. Sara Königson (Sweden) said that Swedish fishermen had successfully applied for Structural Fund money to pay for the collection of debris during periods when they were not allowed to fish.

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 recommendations adopted by the 6th Meeting of the Jastarnia Group

The sixth meeting of the Group had recommended that it should offer its expertise to other forums, and these might include those responsible for developing the EU Baltic Sea Strategy and identifying Marine Protected Areas. Stefan Bräger (Germany) said that none of Germany's SACs or protected areas in the Baltic to date had management plans implemented.

It appeared that no member of the Group had been approached for advice, except in the most general terms. Iwona Pawliczka (Poland) said that without being familiar with individual sites and the particular circumstances it was difficult to give specific guidance.

bbb. Possible ways of supporting the establishment of management plans for SACs in the Baltic Sea

Roustam Sagitov (Invited Expert) wondered whether the coverage of the Baltic by protected areas was adequate. In the Russian part of the Gulf of Finland, 11per cent of the surface had been designated, but the situation was far less favourable off Kaliningrad, where one area had just been de-designated. The Chair pointed out that the Jastarnia Plan called for the network of sites to be expanded and its connectivity improved. Penina Blankett remarked that the CBD target of 10 per cent of the area being designated had been fulfilled in the Baltic Sea, but the problem was insufficient management and devising management plans relied on having good core data. Krzysztof Skóra informed the meeting that consideration was given to extending the Puck Bay SAC PLH220032, which was however opposed by some stakeholders. Petra Deimer commented that the Natura 2000 sites were proposed by the Member States and the Commission oversaw the entire network. Member States were however obliged to protect candidate sites as though they had already been designated. Stefan Bräger wondered whether the sites being proposed for harbour porpoises were suitable and adequate, given that the species was so wide ranging. Roustam Sagitov (Invited Expert) said sites could have some seasonal significance throughout the species' migration. Krzysztof Skóra said that he had to counter arguments that Puck Bay was not a suitable site for designation for harbour porpoises because their numbers were so low, but clearly action was needed because of the high mortality rate. With regard to extending the site network, it appeared that the selection of SACs had been completed in Germany. Finland was extending some of its sites, but mainly for habitats such as reefs and sandbanks of no interest to harbour porpoises. Both Poland and Denmark were considering extending sites adjoining German waters.

RECOMMENDATION

- *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 (Jastarnia Plan Recommendation 15)

aaa. Implementation of relevant recommendations adopted by the 6th meeting of the Jastarnia Group

One of the recommendations from the Group, namely the production of a fishermen's leaflet, had been superseded by decisions at the 17th Advisory Committee Meeting. The designation of Focal Points for the Baltic Harbour porpoise database was however still relevant. Finland had designated its Focal Point (Penina Blankett). The person who had been in charge of the database at HELCOM had left the organization and was yet to be replaced.

bbb. Update on HELCOM-ASCOBANS harbour porpoise data base

Penina Blankett (Finland) gave a demonstration of the HELCOM database. Stefan Bräger (Germany) asked whether HELCOM would prefer to receive constant updates of data or regular periodic contributions. The Secretariat undertook to clarify this.

ccc. Other related issues

Petra Deimer circulated a printout of the inter-active map from the sightings database that her organization (German Society for the Conservation of Marine Mammals, GSM) maintained. The locations could all be found on Google maps. GSM also issued periodic press releases and all data were passed to HELCOM. The interactive sightings map could be accessed at the GSM website (www.gsm-ev.de); it would however be transferred to the German Oceanographic Museum in Stralsund in the future. A sightings campaign had been launched in Finland with participation from as far away as Kiel. The Baltic Sea Portal (www.itameriportaali.fi/en_GB/) was now also available in English, with links to the Swedish language site "Tumlare" and the Swedish Museum of Natural History.

Roustam Sagitov (Invited Expert) confirmed receipt of a quantity of the Russian version of the ASCOBANS leaflet and would carefully target its distribution to fishermen, the authorities and schools.

Krzysztof Skóra and Anna Dębicka (Advisors to the Chair) gave a presentation highlighting public awareness campaigns carried out in Poland. As was now customary, the International Day of the Baltic Harbour Porpoise had been celebrated in Gdynia and it attracted considerable media interest. Displays had been exhibited at the Festival of Science and at consultations over Natura 2000 sites. Harbour porpoise clicks were available online (http://www.morswin.pl/index_base.php?Screen_Option=1&Page_ID=99) as ring tones for mobile phones. The WWF Poland website had some information on the work of the network of volunteers. Some 50,000 copies of a "blue book" had been distributed on beaches, to passengers at Warsaw railway station heading for the coast and at schools. Eighty blue notice boards had been set up with information about what members of the public should do if they found a stranded animal. Research had indicated that 50 per cent of Poles had never heard of Harbour porpoises, and of the 50 per cent that had, 30 per cent did not know that they were mammals.

RECOMMENDATION

- *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.*
- *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.*

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 JG 6 recommendations

Heidrun Frisch (Secretariat) confirmed that the Baltic RAC received a standing invitation to attend all ASCOBANS meetings and the invitation had been reciprocated to ASCOBANS.

Justyna Szumlicz (Poland) reported that the most recent meeting of the Baltic RAC had concentrated on discards. Sara Königson (Sweden) had asked for the issue of alternative gear to be placed on the agenda, but she was offered a side event slot instead, which unfortunately was sidelined.

Heikki Lehtinen (Finland) drew attention to the relatively new high-level group, BALTFISH, which had existed for only a year, so it would be advisable to establish contact with it now. The fact that Germany was lead country in the Baltic Strategy was an opportunity for some flagship projects to be promoted, as it would give ASCOBANS access to a funding mechanism which would address the primary problem of lack of resources. However, to maximize the potential benefits ASCOBANS representatives would need to attend meetings to influence outcomes.

bbb. Adaptation of HELCOM Indicator Fact Sheet to cover the entire Baltic Sea

Stefan Bräger (Germany) had circulated a draft of a revised version of the HELCOM Indicator Fact Sheet on the harbour porpoise and received minimal feedback. Some text had been deleted from the original version. The deadline for submission was the end of February and input from the Group was urgently requested.

ccc. Other related issues

European Commission

Heidrun Frisch (Secretariat) reported that she had been in contact with Elizabeth Guttenstein of DG Mare, who had expressed an interest in attending the meeting of the Jastarnia Group but had not been able to come due to other engagements. She was hoping to be able to attend the Advisory Committee Meeting in May. The absence of any mention of bycatch of non-target species from the Green Paper on Common Fisheries Policy Reform had been noted and the joint CMS/ASCOBANS Secretariat had already commented to that effect in December 2009, while the public consultation was ongoing. Parties and NGOs had also been encouraged to do the same. Since now was a critical time in that process, with basic legislation being drafted, while at the same time the responsible persons in DG Mare had changed, the Secretariat was about to resume contact with the Commission in order to reiterate the points made.

Penina Blankett (Finland) highlighted that the EU Baltic Sea Strategy did mention HELCOM but failed to mention ASCOBANS, despite the Agreement being HELCOM's lead partner on harbour porpoise conservation.

Penina Blankett (Finland) said that the EU Baltic Sea Strategy was running flagship projects on Marine Protected Areas and preventing the spread of invasive alien species. INTERREG was another avenue to pursue. Details of the scheme were on the European Commission website and the grants available could exceed €1 million. Roustam Sagitov said that Russia was not eligible for INTERREG funding but could benefit from other funding streams. Ms Königson suggested submitting a project to promote the use of alternative fishing gear. A large project would also present an opportunity to collaborate with a wider range of stakeholders.

Stefan Bräger (Germany) said that the Marine Strategy Framework Directive was pressure-led rather than species-led and eleven descriptors for good environmental status were being developed. Member States were required to show that they had achieved a good environmental status. Further indicators were being considered but it was not yet clear whether they would be adopted. The issue of noise posed difficulties as individual incidents were more easily measured than for example constant ambient noise. Krzysztof Skóra (Advisor to the Chair) felt that the indicators had to include the conservation status of endangered species. Heikki Lehtinen (Finland) said that bycatch was not the only indicator, and that ASCOBANS should use its influence with HELCOM to promote its agenda. Signe Sveegaard (Denmark) added that individual countries could also apply pressure in international forums to advance concerns discussed by ASCOBANS.

Other Fora

Heikki Lehtinen (Finland) thought ASCOBANS needed a comprehensive plan on how to involve itself in other forums dealing with cross-cutting issues. The Chair pointed out that this was done through maintaining a list of relevant meetings which was discussed at each Advisory Committee Meeting. Iwona Pawliczka (Poland) said that liaising with such other bodies would be an obvious task for the Baltic Coordinator. Until now, ASCOBANS had had to rely on other people who happened to be attending the meeting to represent the Agreement's interest. Leszek Dybiec (Poland) said that the Marine and Baltic Strategies were current projects and ASCOBANS needed to influence them. Roustam Sagitov (Invited Expert) said that ASCOBANS should also liaise with the Ramsar Convention which was well advanced with the management plans for its sites, some of which were located in the Baltic Sea. It was also suggested that the Teilmann et al. report "Status of a harbour porpoise population - evidence of population separation and declining abundance" (Annex 7) should be brought to the attention of the IUCN Species Survival Commission and the IWC Scientific Committee once published. It was however noted that for reviewing Red List status, the IUCN SSC worked to a cycle rather than reacting to third party reports.

RECOMMENDATIONS

- *The Jastarnia Group encourages Parties to take advantage of the financial resources available within the framework of the European Union Strategy for the Baltic Sea Region by working towards launching two flagship projects under Priority Area 2 of the Strategy (To preserve natural zones and biodiversity, including fisheries) relating to a) monitoring bycatch in fisheries known to be harmful to harbour porpoises to be able to estimate bycatch levels; and b) developing and promoting the use of alternative fishing gear in collaboration with the fisheries sector.*
- *Parties should provide the financial resources required to enable ASCOBANS representatives to attend BALTFISH and RAC meetings and events. Once this funding is ensured, the Secretariat should write to BALTFISH and the Baltic RAC suggesting enhanced cooperation and the inclusion of ASCOBANS issues in the agenda of BALTFISH and RAC meetings*
- *Baltic Sea Parties should ensure that ASCOBANS is duly involved in updating and further developing the EU Strategy for the Baltic Sea Region.*
- *The Secretariat should write to HELCOM asking that HELCOM take full account of ASCOBANS work in the context of developing CORESET indicators.*

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

The Chair explained that the Advisory Committee had revised the Jastarnia Group's recommendation and had suggested that a chapter might be added to the Jastarnia Plan to deal with the waters immediately to the west of the area currently covered by the Plan. The Group was to report back to the 2012 Advisory Committee.

Signe Sveegaard (Denmark) referred again to the paper "Status of a harbour porpoise population - evidence of population separation and declining abundance" (Annex 7), which she had co-authored. The report found that the estimated population had fallen from 27,769 to 10,865 between 1994 and 2005 and that by the year 2027 it would have fallen further to less than 2,000, a level so low that the population's ability to reproduce would be reduced. As young, inexperienced animals were more likely to be caught and tagged, the authors of the report could not confidently estimate the population structure. It was known that younger animals covered greater distances (as far as Norwegian and British waters) than mature

ones. The Jastarnia Plan currently was demarcated in the west by the Darß-Limhamn Ridge, which was considered by some to be an artificial boundary. Ms Sveegaard said that the area inhabited by the Belt Sea population was still difficult to define.

Sara Königson (Sweden) doubted whether the objectives for the area currently covered by the Plan and the proposed additional water were the same. Maj Munk (Denmark) said that the problems faced by the populations in the North Sea, Inner Danish Waters and the Baltic were different and these could not be addressed by making small adjustments to the Jastarnia Plan. Petra Deimer (Germany) said that Ms Sveegaard's presentation made clear that the harbour porpoise population in Inner Danish Waters was in a worse state than had been thought and it made more sense for ASCOBANS as a conservation body to follow the geographic divisions of HELCOM rather than the ICES fisheries zones. Maj Munk Denmark asked how the Plans could be used to secure policy changes from other Ministries, notably Fisheries Departments.

The Chair said that the options still available were for Inner Danish Waters to be included within a revised Jastarnia Plan or for those waters to have a Plan of their own. Stefan Bräger said that the Baltic harbour porpoise population was estimated in the 100s while that in Inner Danish Waters was in the 1000s. Combining the areas would dilute the focus on the severely threatened Baltic population. A Plan for the Inner Danish Waters could be largely based on the existing Jastarnia Plan and as a separate project might attract German, Danish or Swedish funding. Heidrun Frisch (Secretariat) reminded the Group that it had carefully considered the matter at its last meeting and had recommended to AC17 the inclusion of this population in an amended version of the Jastarnia Plan, rather than the creation of a separate instrument. Justyna Szumlicz (Poland) said that the Polish Fisheries Ministry would prefer a single Plan covering all waters, although others doubted whether one Plan could address the different circumstances across the wider Baltic. Iwona Pawliczka (Poland) suggested that the two different population units with different conservation needs merited the preparation of two separate plans.

Heidrun Frisch (Secretariat), supported by Heikki Lehtinen (Finland), suggested that the packaging of the measures was secondary to the measures themselves. The Chair agreed that the Group consider the measures necessary for the waters west of Darß and then decide whether the Jastarnia Plan should be extended or whether a separate Plan was necessary. This work could be done by a Working Group or a consultant and the issue was likely to take up half of the next Jastarnia Group meeting. Terms of reference would be needed for a consultancy and it would be preferable for one of three countries involved (Germany, Sweden and Denmark) to take the lead. Signe Sveegaard expressed a tentative interest on behalf of Denmark. Any country prepared to take the lead should notify the Secretariat. The Secretariat would assist the lead country in developing draft terms of reference for a consultant, which should ideally be circulated before the next Advisory Committee Meeting. The possibility of the consultancy being added to projects for funding under INTERREG or BONUS was raised and the Secretariat requested to investigate this

RECOMMENDATION

- *A consultant should be commissioned to develop with intersessional input from the Jastarnia Group a draft paper containing background information and proposed objectives and measures for the "gap area" currently not covered by the Jastarnia Plan. This paper should be reviewed and refined by the 8th meeting of the Jastarnia Group with a view to enabling formal adoption of such objectives and measures by the 7th Meeting of the Parties.*

7. Development of Terms of Reference for a Baltic Coordinator

During the last Advisory Committee Meeting, Poland had raised the possibility of appointing a Baltic Sea Coordinator. A draft set of terms of reference had been circulated, based on those for the North Sea Coordinator.

The draft terms of reference were discussed and the amended version (Annex 8) would be forwarded to the Advisory Committee. A number of activities were removed, while others were clarified.

Penina Blankett said that to liaise with local authorities, anyone promoting the Plan would need to speak the local national languages. There were remote parts of Finland where English was not widely spoken, so it would be better for national officials to deal with this. Iwona Pawliczka said that a representative of an international body lent weight to the arguments in many cases.

As the Baltic Coordinator would have no official status, he or she would need the support of National Coordinators. Heikki Lehtinen asked whether the Jastarnia Plan really needed a coordinator, while Ms Blankett said that if the post were created, sustainable funding should be identified to ensure its continuity. Part of the Coordinator's role would be to assist with fundraising. Ms Pawliczka said that the Jastarnia Group and Plan needed more presence and a representative in international forums. Mr Bräger said that some of the tasks assigned to the Coordinator were already being carried out by the Group. Clarification was sought regarding the role of the Coordinator in organizing workshops; the coordinator's role could be to organize the venue, invite speakers and provide logistical support or could include acting as moderator and making presentations. Petra Deimer felt that the job description was becoming all-embracing and care should be taken to avoid duplication with the mandate of the Jastarnia Group itself.

Mr Lehtinen felt that NGOs already did a good job of collecting legislation and regulations, and did not see what purpose collating this material served. He thought that collecting scientific information would be more useful than a list of regulations. The Chair clarified that NGOs had not produced a comprehensive summary of legislation and there were so many sources of scientific papers that it would be impossible for one person to keep up with them all. Ms Pawliczka commented that NGOs rarely concentrated on the Baltic Sea. An overview of what was happening in various international forums would be useful. Ms Blankett observed that information specific to the Baltic Sea might be in local languages rather than English.

It was envisaged that the post would be part-time at 0.5 days per week, but this might need to be increased given the number of meetings to attend and the general workload. Signe Sveegaard suggested a contract for at least two days a week with the possibility of periods of full-time employment (such as one month) at the very start of the contract). Others thought that 2.5 days a week would be more realistic. The Secretariat was asked for advice regarding the cost implications of such a consultancy. Heidrun Frisch cited the example of a recent contract with a fixed budget where the bids received varied from 16 to 60 days' work, making an estimate for this new position difficult. She suggested advertising the position once pledges from Parties had been received also with a fixed budget and asking for an offer of work time, accompanied by a work plan, as would also be done for the North Sea Plan Coordinator, for whom money from Germany was available.

RECOMMENDATION

- *The terms of reference for the Baltic Sea Coordinator as developed by the Group should be adopted and a Baltic Sea Coordinator be appointed as soon as possible.*

8. Any Other Business

The Chair drew attention to a project proposal submitted by Dr Andrew Foote. The Secretariat had received the proposal following their call at the start of the year. The deadline for project proposals had now expired. He sought the views of the scientists present. Anders Galatius said that he was familiar with the work and endorsed the project. Stefan Bräger supported it too.

RECOMMENDATION

- *The project proposed by Dr Andrew Foote ("Innovative conservation genetic analyses of Baltic Sea Harbour porpoise: analyzing sub-fossil samples to understand past change; development of genetic monitoring methods") should be accepted by the Advisory Committee for funding through ASCOBANS.*

9. Date and Venue of the 8th Meeting of the Jastarnia Group

The possibility of holding the next meeting on a ferry operating on the Baltic Sea was being considered. The dates, probably in February 2012, would be confirmed in due course.

10. Closure of Meeting

After the customary expressions of thanks to all involved in the organization and execution of the meeting, the Chair declared the meeting closed.

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Agenda

1. Opening of the Meeting
2. Adoption of the Agenda
3. Presentations by Invited Experts
4. Update on Progress regarding SAMBAH
5. Implementation of the Jastarnia Plan and the Recommendations of the 6th Meeting of the Jastarnia Group (as endorsed by AC17)

5a. Bycatch reduction

aa. Reduce Fishing Effort in Certain Fisheries (Recommendation 1 of the Jastarnia Plan)

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

aaa. Implementation of Relevant Recommendations adopted by the 6th Meeting of the Jastarnia Group

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. Development of an overview of related studies and practical examples for the Baltic Sea (and possibly beyond)

bbb. Other related issues

dd. Implement a pinger programme on a short-term basis (Jastarnia Plan Recommendation 4)

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)

aaa. Implementation of relevant Recommendations Adopted by the 6th Meeting of the Jastarnia Group

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 recommendations adopted by the 6th Meeting of the Jastarnia Group

bbb. Other related issues

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

aaa. Implementation of relevant recommendations adopted by the 6th Meeting of the Jastarnia Group

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 recommendations adopted by the 6th Meeting of the Jastarnia Group

bbb. Possible ways of supporting the establishment of management plans for SACs in the Baltic Sea

5.d. Public Awareness

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

aaa. Implementation of relevant recommendations adopted by the 6th meeting of the Jastarnia Group

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 JG 6 recommendations

bbb. Adaptation of HELCOM Indicator Fact Sheet to cover the entire Baltic Sea

ccc. Other related issues

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

7. Development of Terms of Reference for a Baltic Coordinator

8. Any Other Business

9. Date and Venue of the 8th Meeting of the Jastarnia Group

10. Closure of Meeting

Recommendations

BYCATCH REDUCTION

1) Parties should 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.

2) Briefing notes on ASCOBANS positions regarding bycatch should be developed for 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, as foreseen for the entire ASCOBANS Area in the terms of reference for the Bycatch Working Group. A Baltic Coordinator, if appointed, could take on this task.

3) The ASCOBANS Secretariat should produce a synopsis of bycatch-related regulations of relevance to individual fishermen, especially with regard to legal sanctions for bycatch and incentives for those delivering carcasses. The ASCOBANS Secretariat, with the support of the ASCOBANS Coordinators should also investigate what incentives are offered to those delivering carcasses, irrespective of whether such incentives are laid down in national legislation.

4) Parties should establish national processes to develop guidelines and methods for reducing and monitoring bycatch in the relevant fisheries, as called for in Jastarnia Plan Recommendation 2, and to report on progress in achieving this.

5) Parties should enact national legislation obliging fishermen to report bycatch of cetaceans in their log books and to deliver carcasses to the competent authorities. A lump sum reimbursement should be provided to fishermen to cover parts of the cost of delivering the carcasses.

6) Noting the recent promising new methods of monitoring and mitigating bycatch across the Baltic Sea region, the Jastarnia Group recommends that this information be made available to those not or not fully aware of it, especially fishermen. An overview of studies related to this issue and practical examples from around the Baltic Sea should be compiled by the Secretariat with input from the Jastarnia Group.

7) Noting the successful application of cod traps in Sweden, the Jastarnia Group recommends that Parties undertake or continue efforts to test cod traps and other porpoise-friendly gear. The possibility of establishing a porpoise-friendly label should be investigated.

8) The Jastarnia Group recommends that the Secretariat approach the Marine Stewardship Council and other similar certification organizations to urge them to prioritize bycatch of cetaceans in the evaluation criteria applied for certifying fisheries and to promote porpoise-friendly fishing gear and other mitigation measures as described in the Jastarnia Plan.

9) Noting that Regulation 812/2004 in its current form is not sufficiently protecting harbour porpoises in the Baltic Sea, the Jastarnia Group encourages Baltic Sea Range States to implement comprehensively the bycatch mitigation measures laid down in the Jastarnia Plan.

RESEARCH AND MONITORING

10) A survey of the Belt Sea harbour porpoise population should be undertaken as soon as possible. The survey should be carried out in such a way as to be comparable to the SCANS surveys.

11) Information on the impacts of anthropogenic pressures (e.g. bycatch, noise, pollution, disturbance) 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.

12) The Parties are urged to compile data on fisheries effort as required in Recommendation 11 of the Jastarnia Plan, based on a revised version of the form contained in Appendix 2a of the Jastarnia Plan. The updated form will be submitted to the 18th Meeting of the Advisory Committee.

MARINE PROTECTED AREAS

13) 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

14) 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.

15) 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.

ASCOBANS' COOPERATION WITH OTHER BODIES

16) The Jastarnia Group encourages Parties to take advantage of the financial resources available within the framework of the European Union Strategy for the Baltic Sea Region by working towards launching two flagship projects under Priority Area 2 of the Strategy (To preserve natural zones and biodiversity, including fisheries) relating to a) monitoring bycatch in fisheries known to be harmful to harbour porpoises to be able to estimate bycatch levels; and b) developing and promoting the use of alternative fishing gear in collaboration with the fisheries sector.

17) Parties should provide the financial resources required to enable ASCOBANS representatives to attend BALTFISH and RAC meetings and events. Once this funding is ensured, the Secretariat should write to BALTFISH and the Baltic RAC suggesting enhanced cooperation and the inclusion of ASCOBANS issues in the agenda of BALTFISH and RAC meetings

18) Baltic Sea Parties should ensure that ASCOBANS is duly involved in updating and further developing the EU Strategy for the Baltic Sea Region.

19) The Secretariat should write to HELCOM asking that HELCOM take full account of ASCOBANS work in the context of developing CORESET indicators.

COVERAGE OF THE WESTERN BALTIC, INNER DANISH WATERS AND THE KATTEGAT/SKAGERRAK AREA

20) A consultant should be commissioned to develop with intersessional input from the Jastarnia Group a draft paper containing background information and proposed objectives and measures for the "gap area" currently not covered by the Jastarnia Plan. This paper should be reviewed and refined by the 8th meeting of the Jastarnia Group with a view to enabling formal adoption of such objectives and measures by the 7th Meeting of the Parties.

DEVELOPMENT OF TERMS OF REFERENCE FOR A BALTIC COORDINATOR

21) The terms of reference for the Baltic Sea Coordinator as developed by the Group should be adopted and a Baltic Sea Coordinator be appointed as soon as possible.

OTHER

22) The project proposed by Dr Andrew Foote ("Innovative conservation genetic analyses of Baltic Sea Harbour porpoise: analyzing sub-fossil samples to understand past change; development of genetic monitoring methods") should be accepted by the Advisory Committee for funding through ASCOBANS.

23) Recommendations 14-20 from the 6th Meeting of the Jastarnia Group (Annex 6 of the Report of the 17th Meeting of the ASCOBANS Advisory Committee were reiterated.

Baltic Fund for Nature

Dr. Roustam Sagitov
14-16 February 2011

Baltic Fund for Nature

was established in 1995

as a structural unit of
St.Petersburg Naturalists Society -
one of the oldest environmental and scientific NGOs in Russia,
founded in 1868
at St.Petersburg University

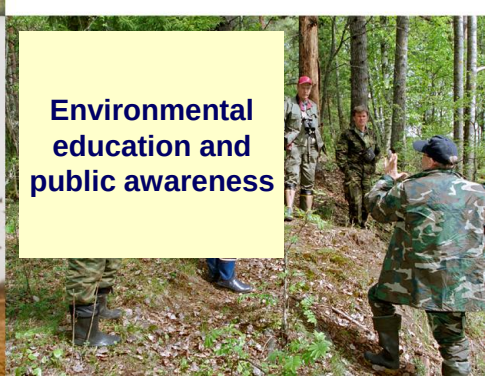
Baltic Fund for Nature

- Research projects: studying and preserving **biodiversity, rare species and valuable biotopes**
- **Protected Areas** network development
- Sustainable economic practices especially **nature friendly agriculture**
- Environmental education, awareness, **ecotourism** development
- Improvement of **environmental NGO network**

Biodiversity conservation

Baltic Fund for Nature: programs

Sustainable development of rural areas



Environmental education and public awareness

Biodiversity conservation: species

Seals monitoring project

in co-operation with
WWF,
Swedish Museum of Natural History,
Finnish Game and Fisheries Research Institute,
Estonian Fund for Nature

Since 1993

State of Salmon populations in the Gulf of Finland

In co-operation with Coalition Clean Baltic, since 1995

Monitoring of White-Tailed Sea Eagle

in co-operation with
WWF,
Swedish Museum of Natural History,
Finnish Game and Fisheries Institute,
Estonian Fund for Nature

1995-1998

Common endangered species. INTERREG Project, in co-operation with Metsähallitus

- Flying squirrel
- Ringed seal
- White-backed woodpecker

Environmental education

Over 30 TV programs produced and broadcasted since 1998 in co-operation with local TV channels

NatureWatch Baltic

Environmental education project for schools in The Baltic sea region
The program is co-ordinated by WWF Sweden and supported by SIDA

NatureWatch Baltic in Russia:

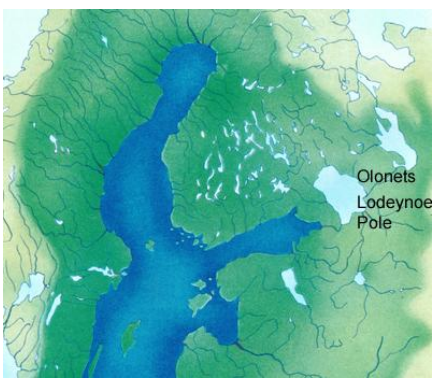
- Started in 1995
- **Over 300 schools** from St. Petersburg, Leningrad, Pskov, Novgorod regions, Republic of Karelia
- Seminars for schoolteachers, children conferences, publication of manuals and guidebooks

Ladoga Lake: area of special concern

Ladoga Seal monitoring project
in co-operation with Metsähallitus
since 1998

Feasibility study of the Ladoga Lake region
in co-operation with WWF Denmark
1999 - 2000

- **Biodiversity monitoring**
- **Sustainable agriculture & Local development**
- **Ecotourism**

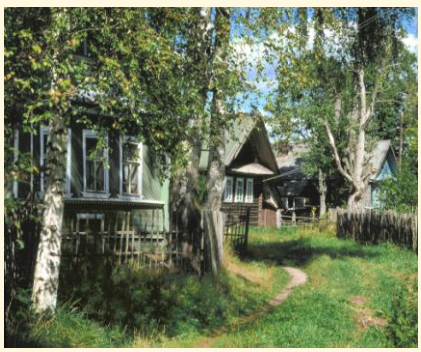


Our strategy

Involvement in project implementation representatives of different institutions

Our experience:

Involvement of local people is
a corner stone of successful implementation
of nature protection and sustainable development ideas



Baltic Fund for Nature

Our partners

WWF Sweden
WWF Denmark
WWF Finland
WWF Russia
WWF International

Baltic Fund for Nature

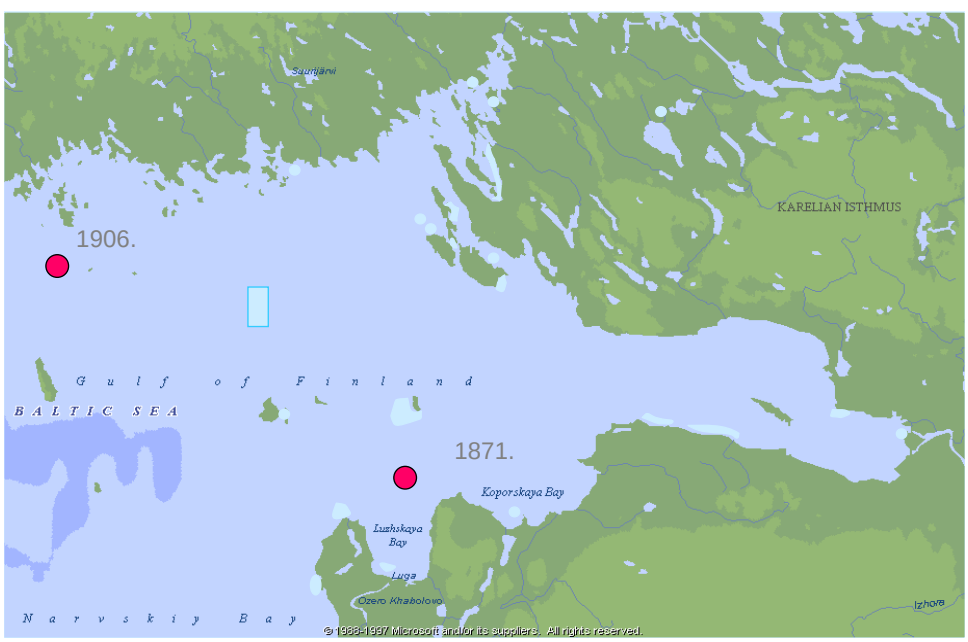
Our main partners in Russia:

- St.Petersburg State University
- Karelian Research Center of RAS
- Zoological Institute of RAS
- Botanical Institute of RAS
- Pskov State Pedagogical Institute
- Association of Zapovedniks and National Parks of NW Russia
- Club “Ecology” (Novgorod)
- Lake Peipus project (Pskov)
- “Green World” (Sosnovy Bor)
- “Neva river clear waters” (St.Petersburg)
- Environmental Education Center “Zapovedniks”
- Biodiversity Conservation Center

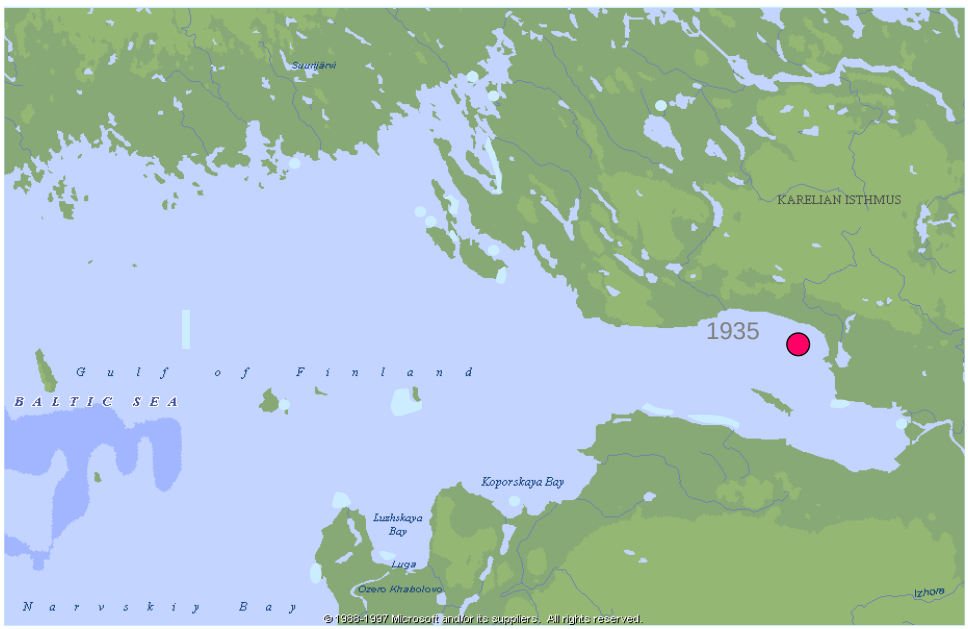
- Ministry for Natural Resources of Russian Federation
- Department for Natural Resources of North-West Federal District
- Committee for Natural Resources of Pskov Region
- Committee for Natural resources of Novgorod Region
- St. Petersburg city Administration
- Government of Leningrad region
- Government of Pskov region
- Government of Karelian Republic

Harbour Porpoise and other dolphins in the Russian waters of the Gulf of Finland

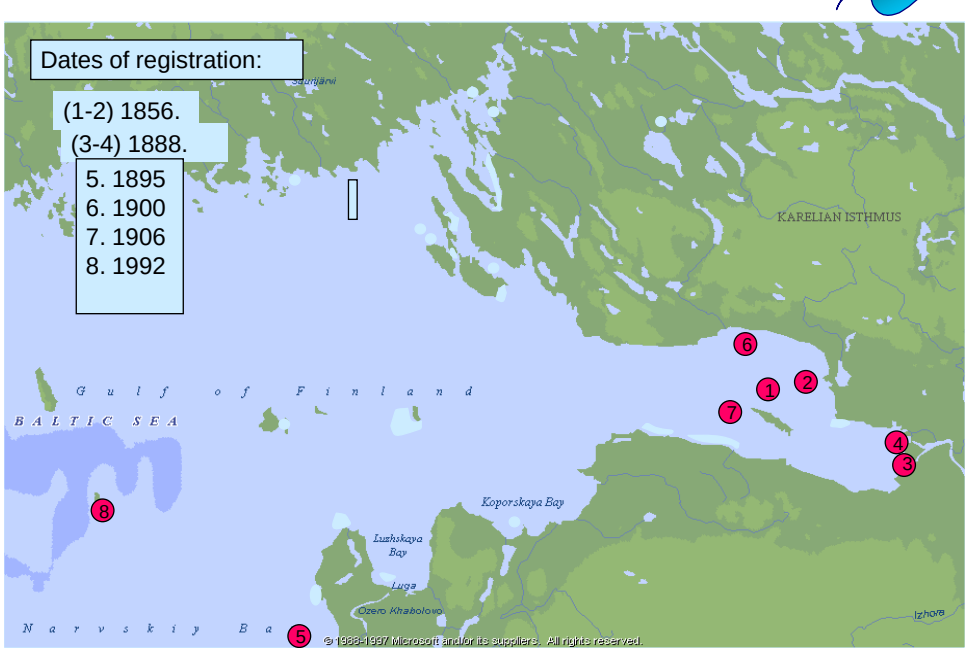
Common Bottlenose Dolphin *(Tursiops truncatus)*



White-beaked Dolphin *(Lagenorhynchus albirostris)*



Harbour Porpoise *(Phocaena phocaena)*

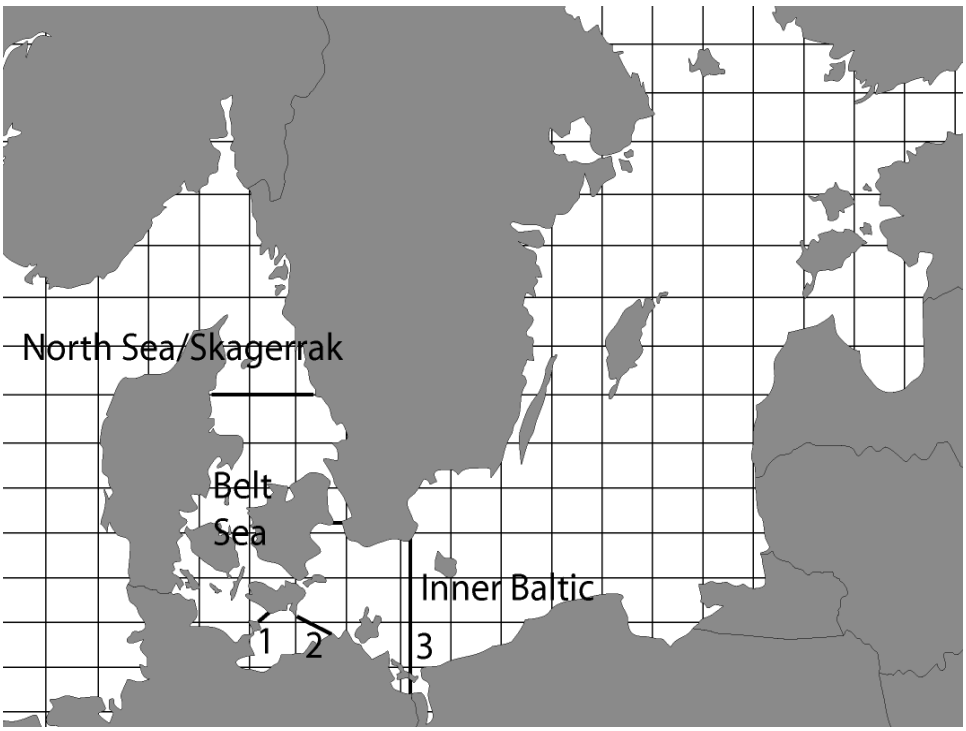


Harbour Porpoise in Lake Ladoga (1901)

Population structure of harbour porpoises in the greater Baltic region: Evidence of separation based on geometric morphometric comparisons

Anders Galatius, Carl Chr Kinze, Jonas Teilmann

National Environmental Research Institute
Aarhus University



Porpoises in the Baltic area

- Harbour porpoises were common in the inner Baltic and numbers have declined dramatically since ca 1950
- Although numbers may also be declining here, the Danish Belt Sea has one of the highest densities of porpoises in the world
- Porpoises immigrated to the Baltic ca 9,000 years ago

Previous studies:

Molecular data:

In a review, Palmé et al. (2008) questioned results previous molecular studies and found that there was no available evidence for a separate Baltic population

Wiemann et al. (2010) found 'small but significant separation'

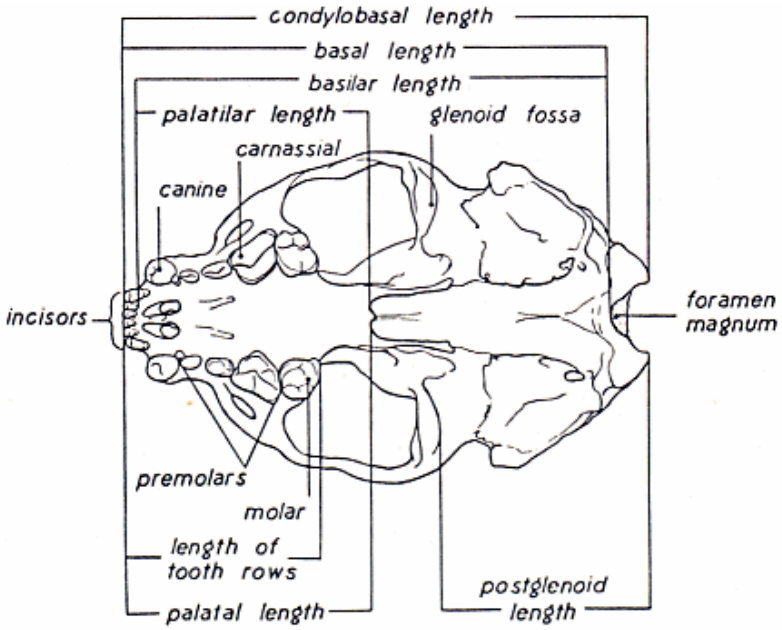
Telemetry:

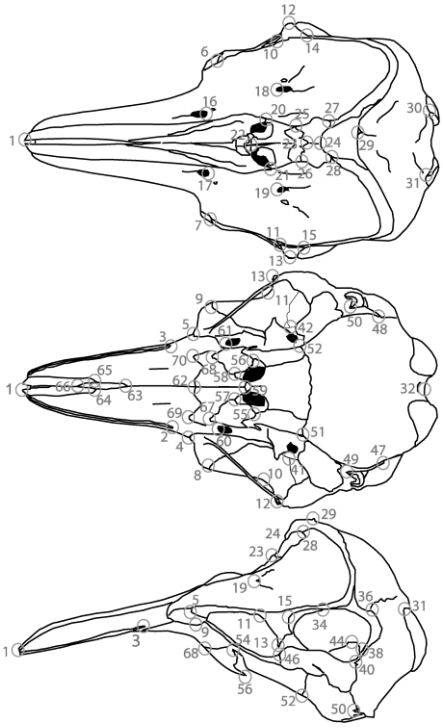
Porpoises tagged in Danish waters rarely swim deep into the Baltic

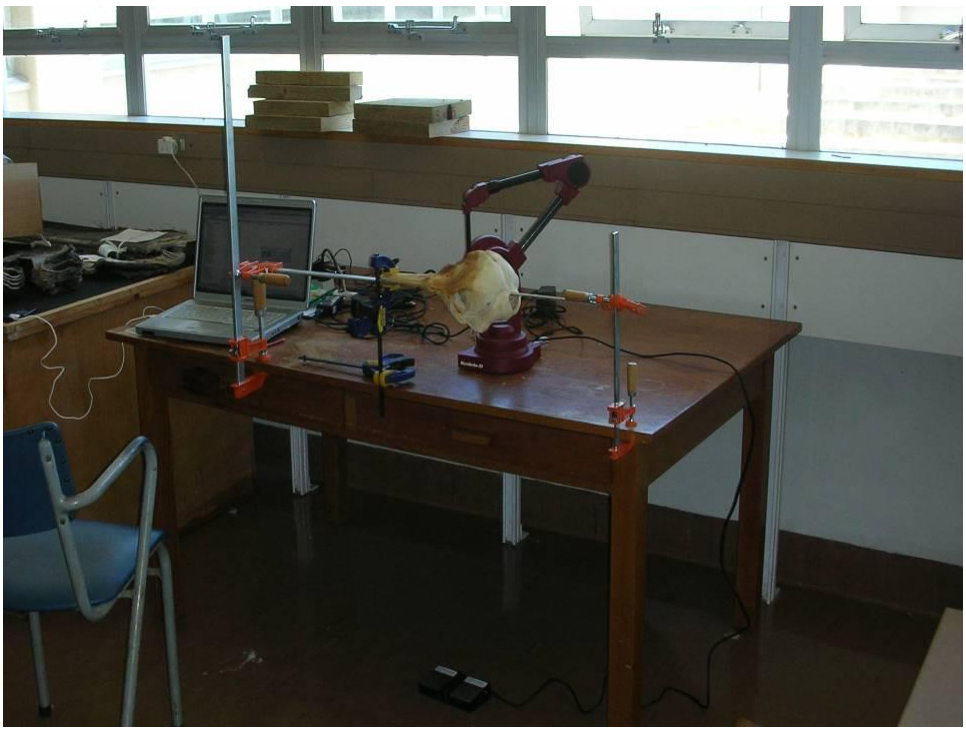
Morphology:

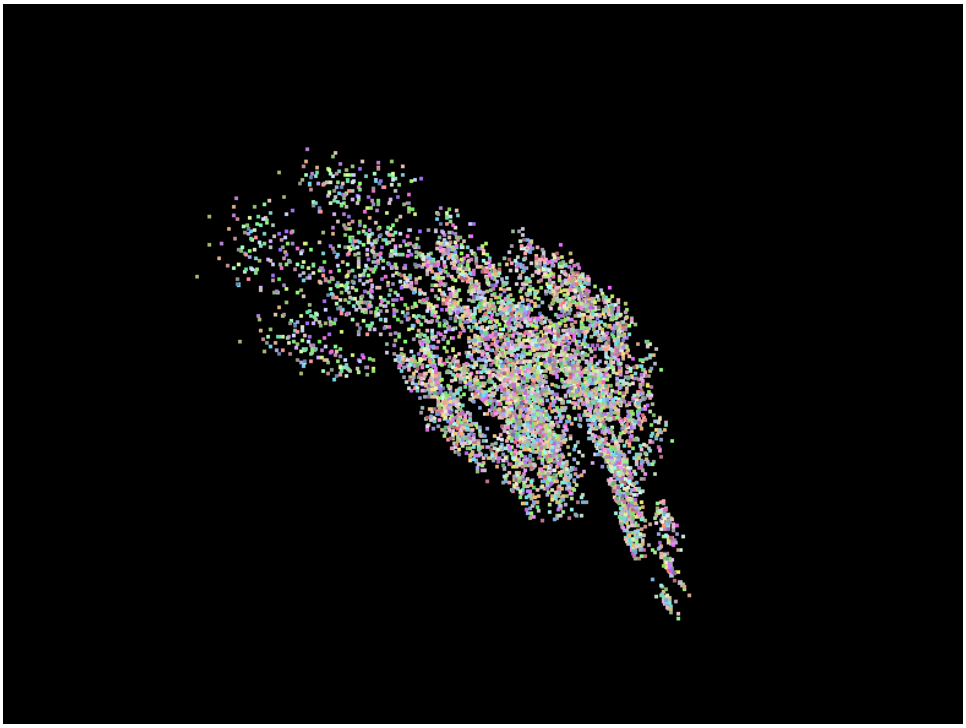
Huggenberger et al. (2002) found significant differences of skull proportions between the Belt Sea and the inner Baltic

- Are Baltic and Belt Sea porpoises morphologically different?
- How do possible differences relate to differences between other units?
- Are morphological differences caused by a continuum of differentiation; a 'cline' from the North Sea to the Baltic?
- Can possible shape differences be interpreted as adaptive to specific conditions?



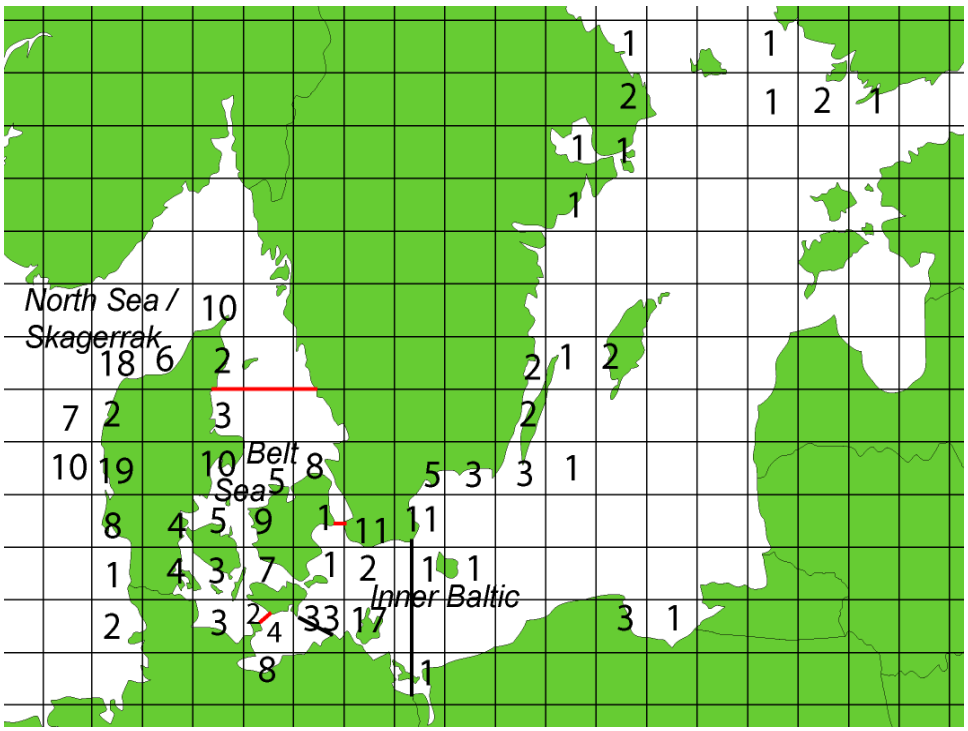


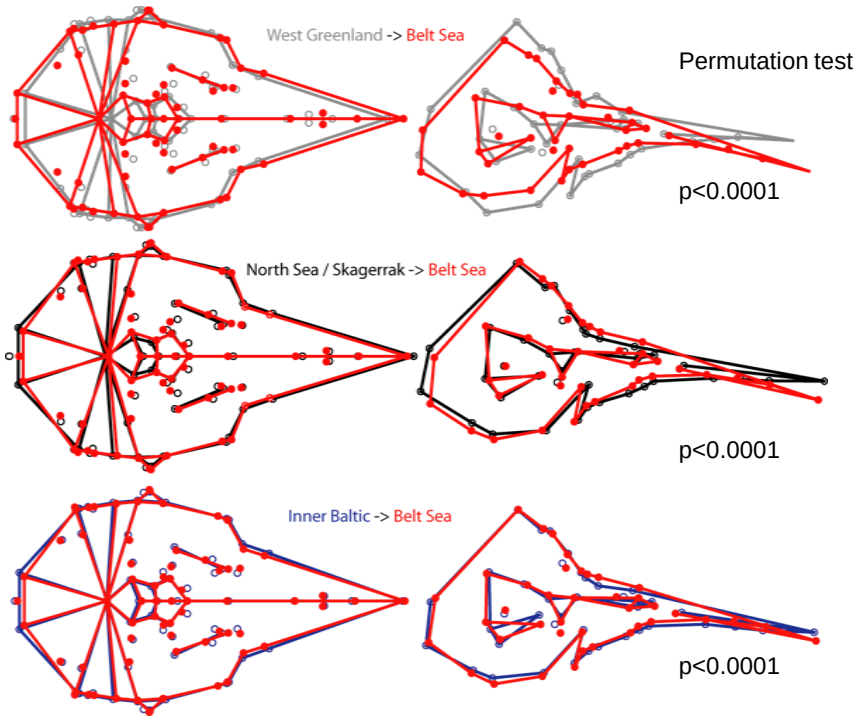




Methods

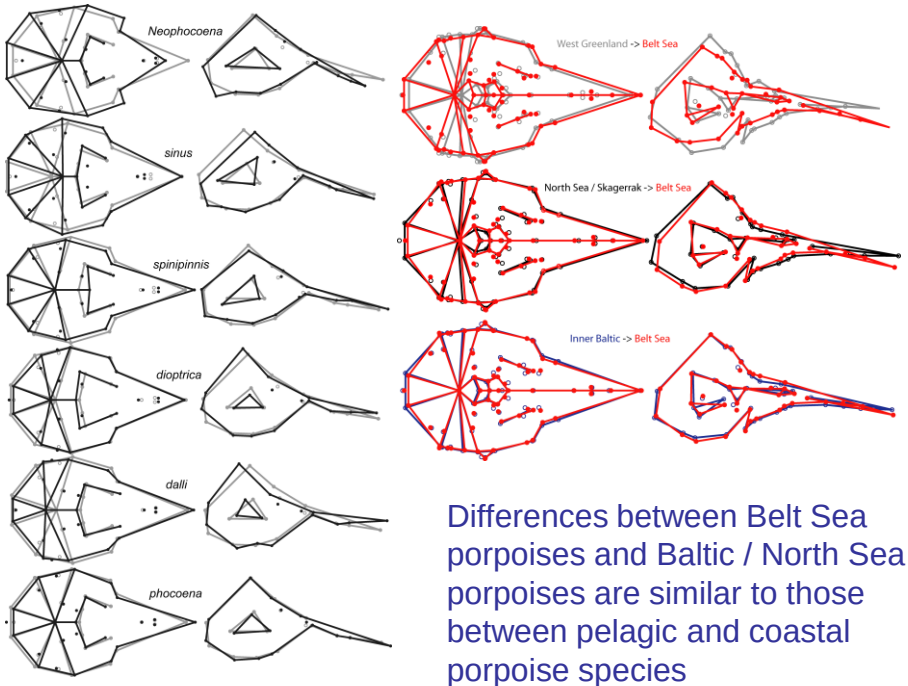
- Porpoises in the size range of sexually mature animals were included
- In order to exclude size-related variation, comparisons were performed on the residuals of a regression of shape on size
- Using only female or only summer samples did not improve discrimination





Do shape differences represent a continuum?

- Discriminant vectors North Sea -> Belt Sea and Belt Sea -> Baltic Sea intersect at an angle of 120.3° - which is significantly different from independence (90°)
- This indicates that Belt Sea porpoises are divergent – is this divergence an adaptation?



From: *Galatius et al. 2011. J. Morph.* ***272****: 136-148*

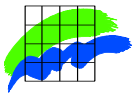
Differences between Belt Sea porpoises and Baltic / North Sea porpoises are similar to those between pelagic and coastal porpoise species

Is the Belt Sea a unique habitat?

- Generally very shallow – with some deeper channels
- Strong halo- and thermoclines, strong wind and density-driven currents
- No open water

Thanks to:

- ASCOBANS for financial support
- Mogens Andersen of the Danish Museum of Natural History, Klaus Harder of the German Oceanographic Museum, Ulf Johansson and Peter Mortensen of the Stockholm Natural History Museum, Mats Eriksson of the Museum of Evolution in Uppsala, Iwona Pawliczka of Hel Marine Station and Martti Hildén of the Natural History Museum in Helsinki provided valuable assistance in their respective collections.



National Environmental Research Institute
Aarhus University

Develop a comprehensive public awareness campaign (Poland, 2010)

(Jastarnia Plan Recommendation 15)

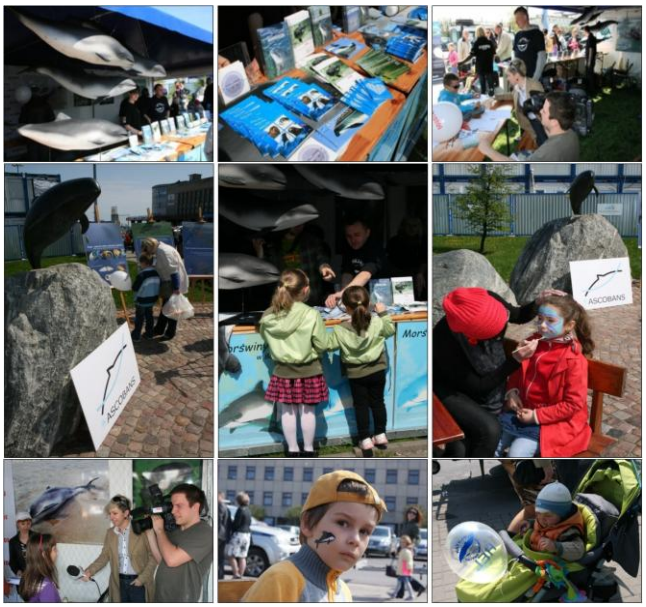
www.morswin.pl

ASCOBANS

www.ssakibaltyckie.wwf.pl

www.morswin.pl

International Day of Baltic Harbour Porpoise



www.morswin.pl

The Baltic Festival of Sciences (Gdynia)

Mobilisation of the public for elaborating management plans for NATURA2000 sites and species

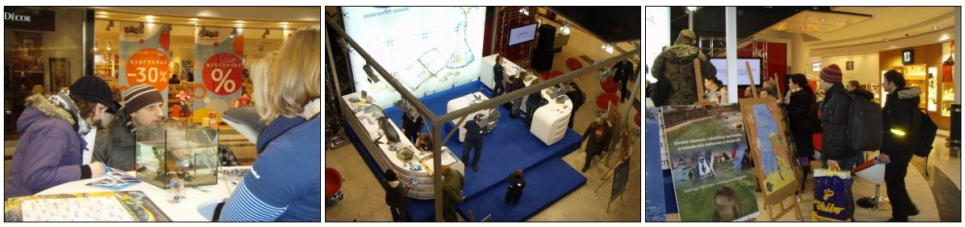
www.hel.ug.edu.pl

„Harbour porpoise clicks in mobile phones”

www.morswin.pl

www.morswin.pl

Edu-info activity in shoping center



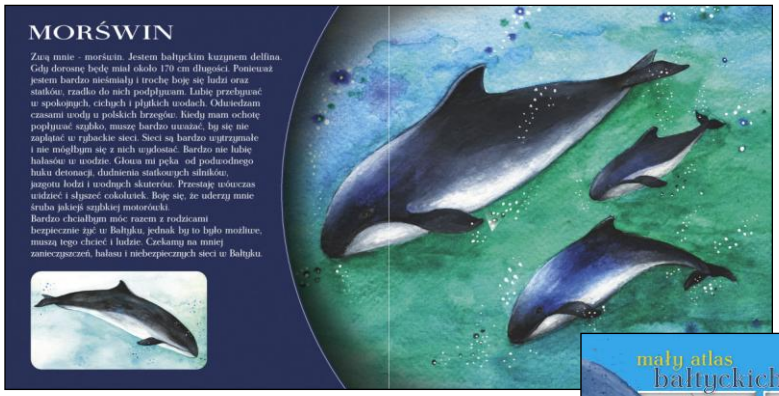
The Day of Fish, Hel

NO FISH = NO FISHERMEN, NO SEALS AND NO HARBOUR PORPOISES !

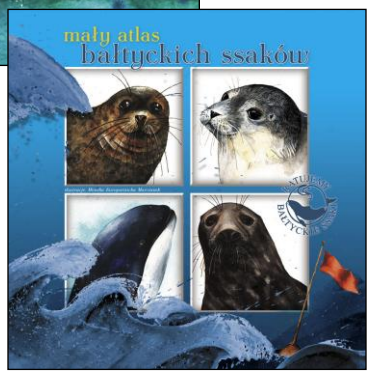
NO FISH WITHOUT HABITATS !

Public lectures

www.morswin.pl



www.morswin.pl & www.fokarium.pl



Small Atlas
of the Baltic Mammals

Info for fishery sector

www.morswin.pl

www.morswin.pl

INFOBOARD and Street Screens

Keep the Baltic clean - you only swim in it, I live here !

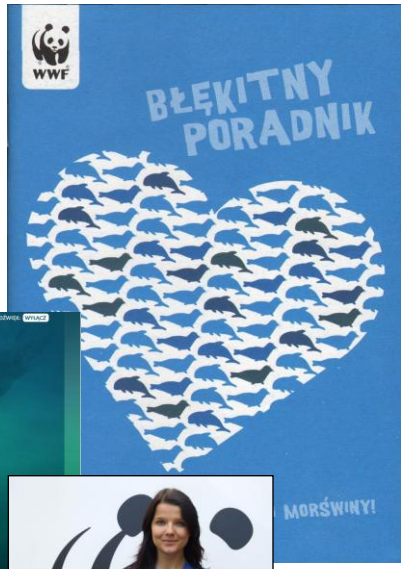
Project: co-financed by the European Union from the funds of the European Regional Development Fund within the Operational Programme Infrastructure and Environment

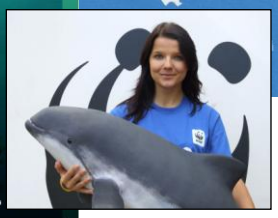
Support for the Restitution and Protection of the Baltic Marine Mammals in Poland

INFRASTRUKTURA I ŚRODOWISKO
NARODOWA STRATEGIA SPÓJNOŚCI
WWF
UG
UNIA EUROPEJSKA
EUROPEJSKI FUNDUSZ ROZWOJU REGIONALNEGO

Support for the restitution and protection ...

www.ssakibaltyckie.wwf.pl





Support for restitution and protection ...

80 ! on whole polish coast

Millward Brown SMG/KRC
in 2010 for WWF Poland ...
More than 50% of Polish citizens heve never heard about harbour porpoise.
Among the part, which had heard about porpoises: more than 30% didn't know that it was a mammal.

UNIWERSYTET GDAŃSKI
Stacja Morska Instytutu Oceanografii Uniwersytetu Gdańskiego
RATUJEMY BAŁTYCKIE SSAKI
Prep. by Hel Marine Station IOUG
Fot.K.E.Skóra, Arch.SMIOUG (c)
W badaniach i ochronie bałtyckich morświnów pomagają nam też:
WOJEWÓDZKI FUNDUSZ OCHRONY ŚRODOWISKA I GOSPODARKI WODNEJ W GDAŃSKU
LOTOS
MINISTERSTWO ŚRODOWISKA

Jastarnia Group 7 Report
Annex 7

Status of a harbour porpoise population - evidence of population separation and declining abundance

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Aarhus University, National Environmental Research Institute, Dept. of Arctic Environment, Frederiksborgvej 399, DK-4000 Roskilde, Denmark

*Corresponding author: jte@dmu.dk

ABSTRACT

Three separate harbour porpoise populations have been identified in the waters between the North Sea and the Baltic Sea. The three populations inhabit (1) North Sea and Skagerrak, (2) Kattegat, the Belt Sea, the Sound and the Western Baltic (named the Belt Sea Population) and (3) the Inner Baltic, respectively. Proper management of harbour porpoises require reliable information on population status and range. In this study, we use satellite tracking data from harbour porpoises to define population boundaries between these populations. With the use of these new population boundaries, abundance estimates for the Belt Sea population was calculated based on two visual surveys (SCANS) in 1994 and 2005. The population size in was calculated to be 27,767 (CV=0.45, 95% CI=11,946-64,549) in 1994 and 10,865 (CV=0.32, 95% CI=5,840-20,214) in 2005. Although these estimates are not significantly different on the 5% level, we advocate that the declining trend is taken seriously, and that conservation actions are taken to ensure that favourable conservation status is established for the Belt Sea harbour porpoise population.

Key words: Abundance estimate, harbour porpoise, *Phocoena phocoena*, population separation

INTRODUCTION

Proper management of a species require reliable information on population status. This requires knowledge of movements, migrations, habitat preferences, identification of population boundaries, and regularly repeated abundance estimates. Such information is seldom available for cetacean populations due to the difficulties in studying animals in the continuum of the oceans, where animals may move between areas with neighbouring populations. In the last decades, harbour porpoises (*Phocoena phocoena*) in European waters have been studied intensely to identify separate populations and monitor the status of the species (e.g., Siebert et al. 2006, Wiemann et al. 2010). The main driver for this effort has been the fact that several thousands of harbour porpoises are bycaught in gillnet fisheries (Tregenza et al. 1997, Vinther and Larsen 2004). Despite a reduced fishing effort due to depleted fish stocks and the use of pingers on gillnets to avoid bycatch, the status of the harbour porpoises in Europe still remain unclear (Siebert et al. 2006).

The harbour porpoise is the smallest and also the most numerous cetacean in Europe (Hammond et al. 2002). It has a wide continuous but uneven distribution throughout European waters. The distribution is presumably linked to the distribution of prey (Koopman 1998, Santos and Pierce 2003), which in turn is linked to environmental parameters such as hydrography and bathymetry (e.g., Bailey and Thompson 2009, Edrén et al. 2010, Embling et al. 2010), but so far only few studies have investigated the direct relationship between porpoises and their prey, and many issues in this regard remains unclear (Sveegaard et al. In review) Abundance estimates for smaller areas have been conducted (e.g., Heide-Jørgensen et al. 1993, Gillespie et al. 2005), but large scale surveys have only been carried out in 1994 (SCANS I, (Small Cetaceans in the European Atlantic and North Sea)) and 2005 (SCANS II). For the Northeast Atlantic continental shelf waters the total number of harbour porpoises was estimated in 1994 to be 341,366 animals (CV = 14.0; Hammond et al. 2002) and in the equivalent area in 2005 to be 334,948 (CV = 0.16; SCANS II 2008). No abundance estimates for subareas representing biological populations are so far available.

Various methods have been used to understand the population structure of harbour porpoises in the North East Atlantic and in particular the transition zone between the North Sea and the Baltic Sea. This transition zone consists of waters from the Skagerrak in the north through the Kattegat, the Danish Belt Seas, the Sound and the Western Baltic to the inner Baltic (Fig. 1). Previous studies on skull differences (Kinze 1985, Börjesson and Berggren 1997 Huggenberger et al. 2002), contaminant levels (Bruhn et al. 1999, Berggren et al. 1999), stable isotopes (Angerbjörn

et al. 2006) and genetics (Tiedemann et al. 1996, Andersen et al. 1997, Wang & Bergreen 1997, Andersen et al. 2001) have tried to elucidate the population structure in this area. The results are somewhat inconsistent, possibly due to small sample sizes differences in area definition and methods. However, more comprehensive molecular and morphological studies have recently confirmed the existence of three harbour porpoise populations in the transition zone between the North Sea and the Baltic Sea (Wiemann et al. 2010, Galatius et al. 2010). These populations inhabit (1) North Sea and Skagerrak, (2) Kattegat, Belt Sea, the Sound and Western Baltic (from now on called the Belt Sea population), and (3) the inner Baltic, respectively.

The porpoises in the Inner Baltic have long been of concern and was in 2008, assigned the status of 'Critically Endangered' on the IUCN red list (www.iucnredlist.org). Little is known about the distribution and status of this population, but until the first half of the 20th century, porpoises were abundant in the Inner Baltic Sea. However, a dramatic decline has been observed during the past 50-100 years (Skora et al. 1988; Koschinski 2002; Andersen et al. 2001). Based on two separate surveys, estimated population sizes of 599 (CI=200-3300) animals in 1995 (Hiby and Lovell 1996) and 93 (95% CI=10-460) in 2002 (Berggren et al. 2004). Due to very few observations these estimates have great uncertainties. Management plans to protect porpoises in the Baltic Sea as well as the Belt Sea population that represents the only possible source of new gene flow into the Baltic Sea is therefore highly needed.

Based on the identified population structure found in the studies mentioned above, we used satellite tracking data from harbour porpoises to define population boundaries between these populations. The boundaries was defined as the line between populations showing the least overlap in movements of satellite tagged harbour porpoises from the North Sea/Skagerrak population and the Belt Sea populations. Based on these new population boundaries, new abundance estimates will be calculated based on the 1994 and 2005 surveys to reveal the status of this population.

MATERIALS & METHODS

Determining population borders

To monitor the status of a population, it is essential to determine the exact borders of the area from which the abundance can be estimated. In species like the harbour porpoise where populations are

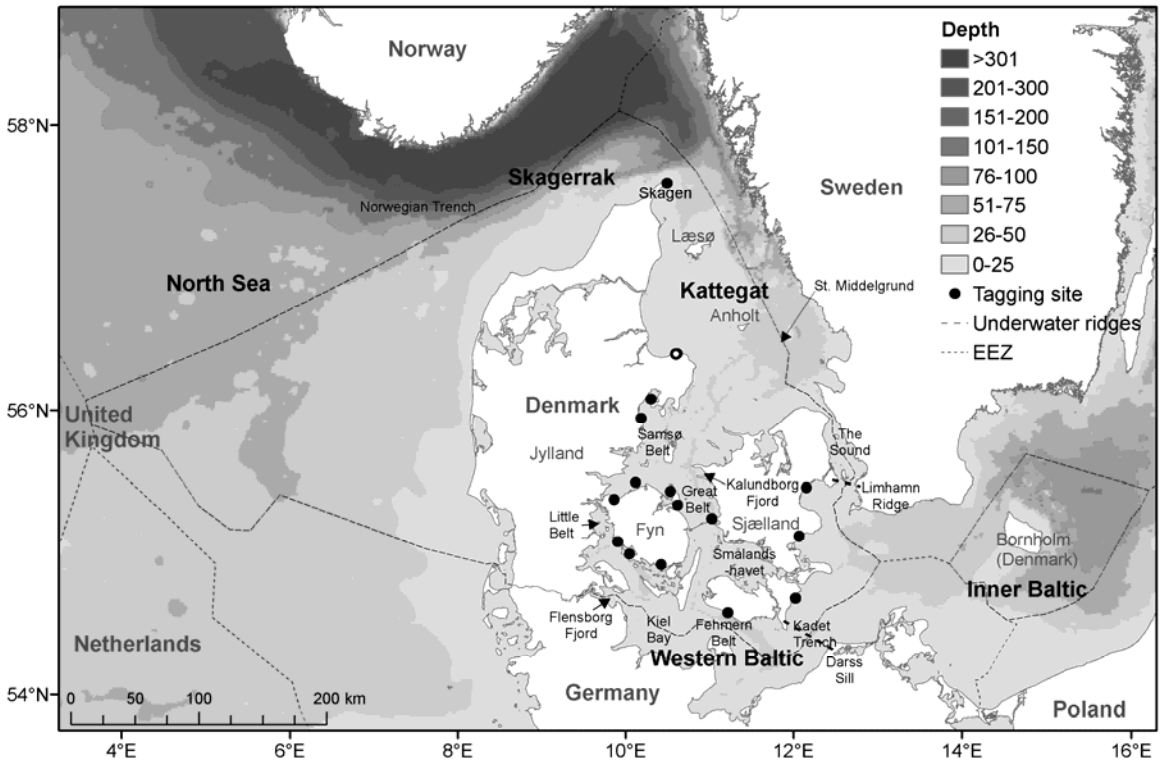

Figure 1. Map of the study area with names mentioned in the text. The locations of the pound nets where the harbor porpoises were live caught and tagged are indicated with black dots. The tagging location on Djursland (open circle) was excluded in the population border calculation to avoid erroneous assignments of locations. The thin dashed line indicates the international Exclusive Economic Zones (EEZ). Map projection: Universal Transverse Mercator, Zone 32N, WGS84.

often overlapping, it is difficult to establish such borders. In this study, we use locations from satellite tracked porpoises from separate populations to calculate the border that creates the minimum overlap, i.e. the smallest number of locations on the "wrong" side of the border.

Twenty-four harbour porpoises were tagged at Skagen on the northern tip of Jylland between May 2000 and September 2003 and 58 harbour porpoises were tagged in the Belt Sea from April 1997 to June 2010 (Fig. 1). Porpoises were caught alive incidentally in pound nets. Harbour porpoises were usually tagged within 24 h of being discovered by the fisherman. An Argos satellite transmitter was attached to the dorsal fin of the porpoises using 2–3 polyoxymethylen 5-mm pins covered with silicone tubes (Geertsen et al. 2004, Teilmann et al. 2007, for more details on tagging procedure, transmitters and effects of tagging, see Eskesen et al. 2009, Sveegaard et al. 2011). Satellite contact remained for up to seventeen month (mean transmission time: 106 days). The locations of the tagged animals were determined by the ARGOS system. Locations were filtered by

a SAS-routine, Argos-Filter v7.03 (for details on location error and the filtering process, see Douglas 2006, Sveegaard et al. 2011). The most accurate location was selected for each day resulting in a total number of 5,855 locations. The locations were imported into ArcGIS 9.3 (ESRI) and the mapped with the Zone 32 (N) Universal Transverse Mercator projection, using the WGS 1984 datum.

To determine the border between populations in the Kattegat, each tagged animal was assigned to either the North Sea/Skagerrak population or the Belt Sea population based on tagging site. Thirteen porpoises tagged in the middle of the transition zone (on Djursland in the central Kattegat, Fig. 1) were excluded from the analysis, since the population affiliation of these animals are uncertain and we wanted to avoid assignments to a wrong population. Furthermore, only the locations within the area of the transition zone were included in the analysis. This meant exclusion of locations west of 10˚E and south of 56˚25'N (Fig. 3). To obtain equal contribution from animals from the two populations, the dataset was normalised to one location per animal per day. This was done by multiplying (weighting) each location by the duty cycle (days between transmissions) of each tag, i.e. if a tag was set to transmit every second day, each location from that tag would weigh double in the analysis. The number of animals was also normalised by multiplying the proportion of animal between the two populations to all locations. This only applied weight to the locations from the porpoises tagged in the Skagerrak/North Sea population.

The optimal method for defining the population border would be to focus on the distribution of mature harbour porpoises in the reproduction period, which may potentially

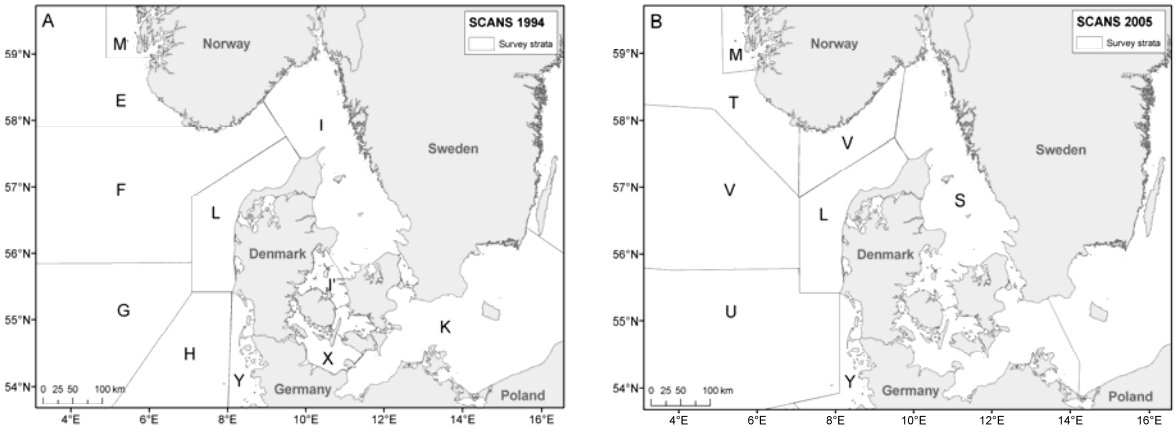

Figure 2. Survey strata used during A) the SCANS I in 1994 and B) SCANS II in 2005 (Modified from SCANS II 2008).

exchange genes between populations. In this area, length of harbour porpoise at sexual maturity has been defined females > 143 cm and males > 135 cm corresponding to an age of 3-4 years (Lockyer and Kinze 2003). However, since porpoises grow 5-10 cm in length per year at this age, and since several of the porpoise transmitted for a long period and thus reached maturity within the time of transmission, we defined sexual maturity as females > 140 cm and males > 130 cm at the time of tagging. Nevertheless, only 2 mature porpoises from the Belt Sea population and 6 from the Skagerrak/North Sea population swam into the transition zone in the reproductive period (May-August), and consequently, we decided to include the distribution of (1) all porpoise locations all year, (2) mature porpoises in the reproductive season and (3) immature porpoises in the reproductive season in the analysis. The border was calculated as an east-west line between Denmark and Sweden with fewest possible porpoise locations from the Belt Sea population north of the line and fewest possible porpoise locations south of the line from the Skagerrak/North Sea population. Furthermore, the number of locations on the "wrong" side of the line should be equal for both populations. A standard linear equation ($y = a*x + b$) was used and the performance of the slope (a) was tested in 0.5 degree steps (i.e. for every 1˚E the slope was set to 0.5˚N, 1.0, 1.5, etc). For each of these steps the line that divided the overlapping locations equally was found by manually adjusting "b" in the equation. When all the lines with the best fit for each step were found, the one with the lowest equal number of overlapping locations was chosen.

Since no porpoises were tagged in the Inner Baltic Sea this approach could not be used to find the border between the Belt Sea population and the population in the inner Baltic Sea. Instead morphometric and genetic evidence supported by satellite locations were be used to set this border (Galatius et al. 2010; Wiemann et al. 2010).

Abundance estimation

For the abundance estimation, the population area was limited by the possibilities of comparing the two SCANS surveys. Since the strata east of Fehmarn Belt in 1994 (Strata 'K', see Fig. 2) had too few observations for an abundance to be estimated, this area could not be included in the analysis. Instead, the boundary was defined as the narrowest part of the northern Sound and Fehmarn Belt (Fig. 2). To the north, the boundary was defined by the satellite locations as described above.

Ship based double platform line transect surveys, were conducted in the study area from late June to mid July in both 1994 and 2005, in addition part of the Belt Sea and western Baltic was covered by a double aerial survey in 1994 (SCANS II 2008). Since the strata for the two surveys did

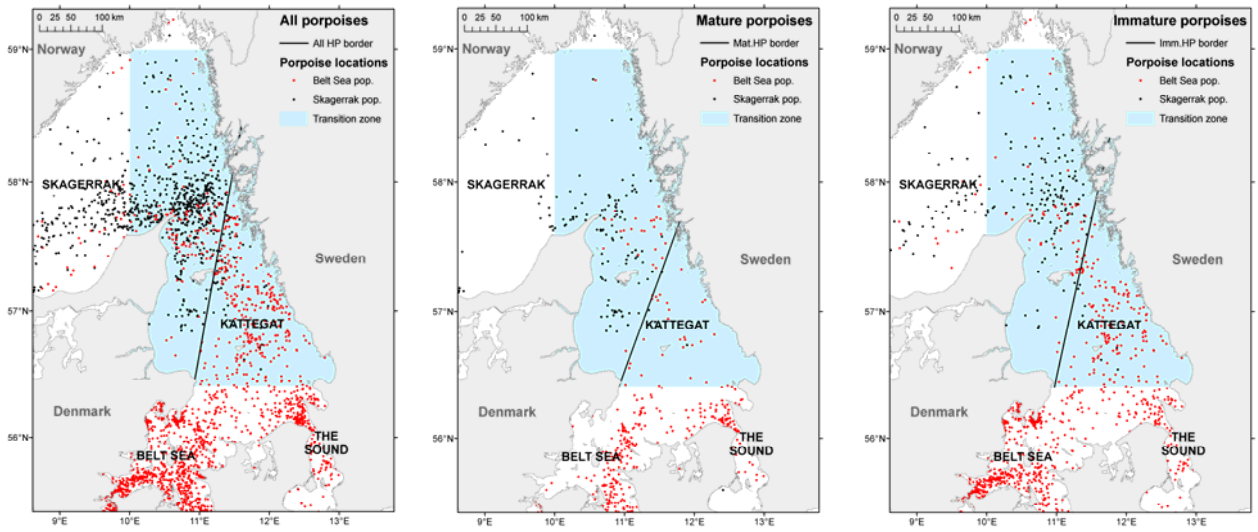

Figure 3. Locations from satellite tracked harbour porpoises from 1997-2010 (1 location porpoise^{-1} day^{-1}). The area used for calculating borders between the Belt Sea and the Skagerrak/North Sea populations are indicated with a blue square, while the resulting border is shown with a black line. Left panel: All harbour porpoises all month (Skagerrak: n=24, Belt Sea: n=22), centre panel: Mature harbour porpoises in the reproductive season from May to August (Skagerrak: n=6, Belt Sea: n=2) and right panel: Immature harbour porpoises in the reproductive season (Skagerrak: n=9, Belt Sea: n=6).

not cover identical areas new calculations was made for ship based surveys (strata I in 1994 and S in 2005). For 1994 the aerial survey for strata X was added to the ship based survey (Fig. 2A). The abundance estimates from area X and part of area I in 1994, was summarised and a new coefficients of variance (CV) and confidence intervals (CI) was calculated using the method described in Buckland et al. (2001), i.e. the combined standard error (SE) was found by applying the formula:

$$SE_{BeltSeaPop}=\sqrt{(SE_{StrataI}^2+SE_{StrataX}^2)}$$

and the new CV by dividing $SE_{BeltSeaPop}$ by the combined abundance estimate. Observers on two platforms were used to correct for animals missed on the transect line and also for the effects of movement of animals in response to the ship (Laake and Borchers 2004). Survey effort was only conducted in sea state 0-2 in order to be able to calculate a reliable detection function (Teilmann 2003). The calculations followed exactly those given in SCANS II (2008) and provide an unbiased estimate of the total abundance of harbour porpoises.

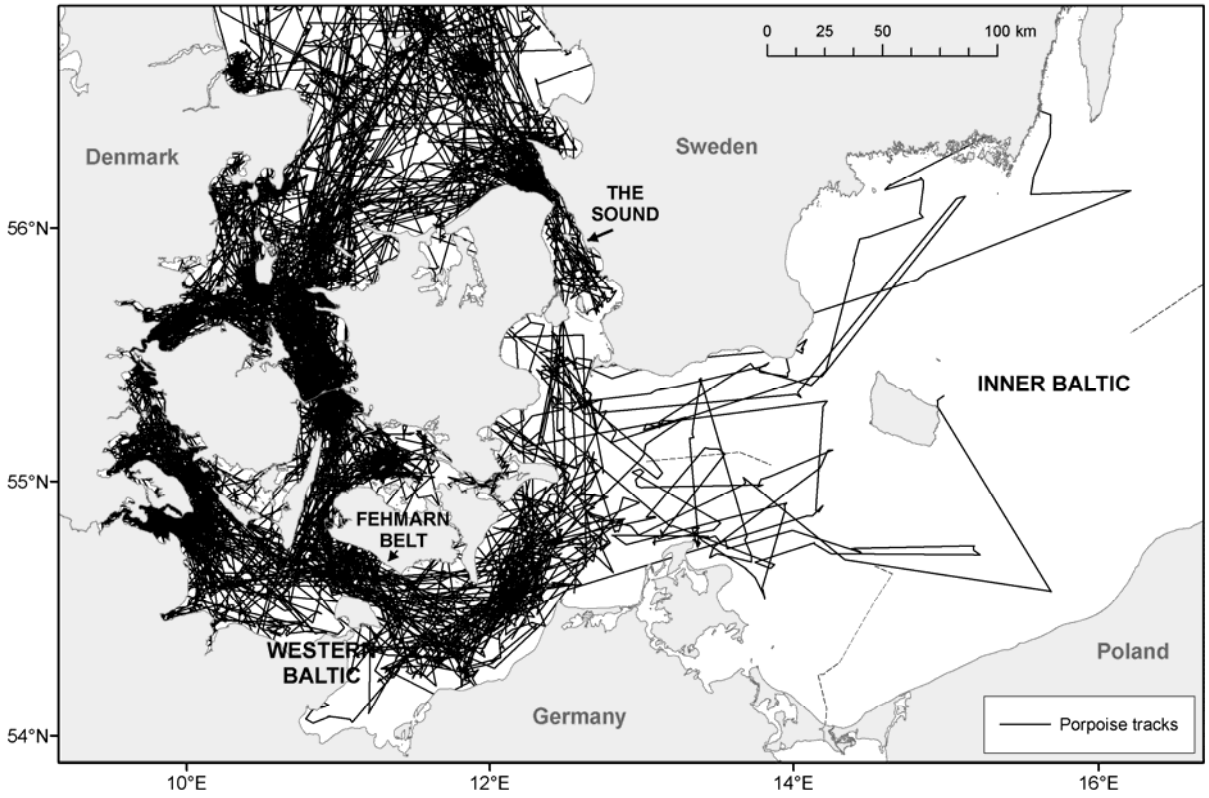

Figure 4. Tracks from 58 satellite tracked harbour porpoises from the Belt Sea population from 1997 to 2010, showing the extent of movements into the Inner Baltic.

RESULTS

The calculated borders between the Belt Sea population and the Skagerrak/North Sea population for all porpoises, mature porpoises and immature porpoises are shown in Fig. 3. Due to the little variation between the lines and the low number of locations from the mature harbour porpoises, we chose to set the population border based on "All porpoises" (Fig. 3A). The best fit for all population borders in the Kattegat resulted in a diagonal line (y=3x+23.55) from the eastern point of Djursland (56˚28'37''N, 10˚55'15''E) in Denmark to the Swedish coast (58˚03'28''N, 11˚27'54''E) (Fig. 3). Only 3.7 % of the locations belonging to two populations were found on the opposite side of the line. Based on the available data, this line provides a fixed border between the two populations that was used to divide the populations in the abundance estimations below.

For the southern border, Galatius et al. (2010) found that Fehmarn Belt was an equally good border to separate the population in the inner Baltic as the two alternatives; the Darss underwater ridge and a line from the south-eastern point of Sweden to the German/Polish border. Wiemann et al. (2010)

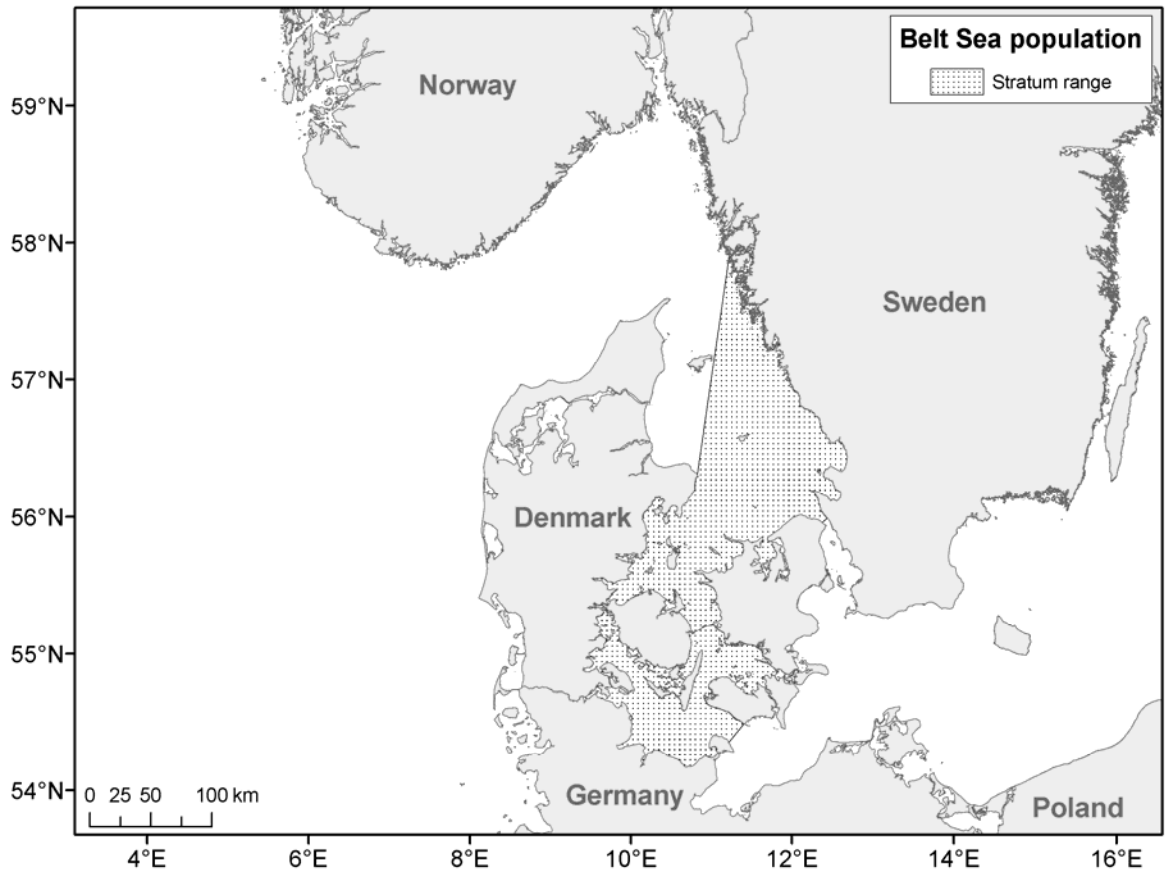

Figure 5. The scattered area illustrates the extent of the Belt Sea harbour porpoise population and the area used for abundance estimations in the present paper.

and other previous studies found a separation at the Darss underwater ridge. Porpoise were not tagged in the Inner Baltic Sea and we therefore only know that the animals from the Belt Sea population swim into the Inner Baltic, but not how far porpoises from the Inner Baltic move into the Belt Sea region (Fig. 4). Given the few porpoises that swim east of 13˚E, the border based on satellite tracking will probably lie west of this line. This is still within the population boundary estimated by Galatius et al. (2010), but about 50 km east of the Darss underwater ridge. However, since the SCANS I survey in 1994 was limited to west of Fehmarn Belt, this border was chosen to estimate abundance for the Belt Sea population. This chosen border resulted in 14% of the locations for the satellite tagged Belt Sea porpoises to be outside (East of) of the population boundary.

Abundance estimation

The Belt Sea population size was calculated to be 27,767 (CV=0.45, 95% CI=11,946-64,549) in

1994 and 10,865 (CV=0.32, 95% CI=5,840-20,214) in 2005 (See Table 1). Although this equals a decrease in density from 1.16 porpoises/km2 in 1994 to 0.36 porpoises/km2 in 2005, the high variations of the estimates does not provide statistically significant results on 5% level ($p>0.05$).

DISCUSSION

Movements of harbour porpoises are complex, and although limited seasonal movements have been found, no organised seasonal migration pattern have been found and consequently most animals utilise the same area year round (Sveegaard et al. 2011). No difference in home range have been found between the sexes, but immature porpoises have twice the home range size compared to adults in the Belt Sea population area, suggesting some exploratory behaviour of young animals (Sveegaard et al. 2011). The northern border of the Belt Sea population was determined with only 3.7% of locations outside the population boundary and the south-eastern border with 14% locations outside. The latter could indicate that the actual population border between the Belt Sea population and the Baltic Sea population may be located further east. However, in this study we did not have the option of moving it for the abundance analysis, due to limitations in survey data. Nevertheless, based on the results of this study, and the supporting evidence from genetics and morphometrics (Wiemann et al. 2010, Galatius et al. 2010), we are quite confident that the Belt Sea population can be defined by an area with fixed borders year round.

The establishment of an exact boundary is important, if a monitoring program of the population and their habitats should be established as required by the EU Habitats Directive, stating that all member states shall take action to maintain or restore a favourable conservation status of harbour porpoises (92/43/EEC). Member States are required to report every six years, on whether

Table 1. On track survey effort, total number of observations of individual harbour porpoises, *Phocoena phocoena* (n), estimates mean group size, harbour porpoise density, harbour porpoise abundance and upper and lower 95% confidence intervals (CI) for the Belt Sea harbour porpoise population.

Survey	Year	Area (km^2)	Survey effort (km)	n	Mean group size	Porpoise density (CV)	Porpoise abundance (CV)	Lower CI	Upper CI
SCANS I	1994	30,254	595	160	1.46	1.16 (0.46)	27,769 (0.45)	11,946	64,549
SCANS II	2005	30,254	639	122	1.66	0.36 (0.32)	10,865 (0.32)	5,840	20,214

their conservation status is favourable and on the implementation of measures taken to ensure this. Conservation status is defined in the Habitats Directive as "the sum of the influences acting on the species that may affect the long-term distribution and abundance of its populations" and can be considered as 'favourable', if the species is maintaining itself as a viable component of its natural habitats and if abundance and range are maintained. This only makes sense, if the population structure is known as smaller populations may disappear unnoticed if only abundance of porpoises on a European level is assessed. This may have been the case for the two SCANS surveys, where the overall abundance between the SCANS surveys in 1994 and 2005 revealed no overall change in abundance. The distribution had, however, changed significantly from the Northern North Sea to the Southern North Sea. Whether this is a result of changing fish stocks, or declines in local populations is unknown (SCANS II 2008).

Satellite tagging of porpoises in the Belt Sea region has taken place between 1997 and 2010, covering most of the period between the two SCANS surveys, and no emigration have been observed that coincide with the overall SCANS results (Sveegaard et al. 2011). The declining abundance estimates from 27,767 in 1994 to 10,865 in 2005 is therefore unlikely due to emigration into the Southern North Sea or to the Inner Baltic. Although the abundance estimates have large confidence intervals, the low estimate in 2005 should give reasons for great concern and until further abundance estimates are available, the population should be considered as having an unfavourable conservation status. Bycatch of porpoises in gillnets are believed to be a major threat to porpoises throughout their range (Read et al. 2006), but no estimate of bycatch in the Kattegat, Belt Sea, Sound or the Baltic exists. Siebert et al. (2006) reported that a significantly higher proportion of the stranded harbour porpoises on the German Baltic coast compared to the German North Sea coast could be determined as bycatches and that fishermen reported higher bycatch rates in the Germen Baltic than in the German North Sea. This is further supported by the fact that bycatch was found to be the primary cause of death for harbour porpoises in the Baltic Sea while infectious diseases and perinatal death predominated in the North Sea (Siebert et al. 2001, Wünschmann et al. 2001).

Although the abundance estimates have overlapping confidence intervals, the Belt Sea population may be close to extinction before new abundance estimates are available and significant results are obtained. To detect a significant (α=0.05) trend in porpoise abundance, the number of years needed was found using the program TRENDS. Assuming identical intervals between surveys (11 years), coefficient of variation (~0.4), rate of decline (~8 % per year) found in the two SCANS

surveys and a power level of 0.8, four surveys in total would be required, equalling 33 years from 1994 to 2027. By then the Belt Sea population would be reduced to less than 2000 individuals. In conclusion, we therefore recommend that actions are taken to ensure that favourable conservation status is re-established for the Belt Sea harbour porpoise population. The main pressure seem to be the bycatch in gillnet fishery, however, the influence of other threats from declines in food availability, shipping, construction work, seabed exploitation, contaminants, and diseases should also be considered.

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Draft Terms of Reference for an ASCOBANS Baltic Sea Coordinator

1. Background

As outlined in the ASCOBANS Recovery Plan for Harbour Porpoises in the North Sea, "Experience has shown that in order to be effective, Conservation Plans must have a recognised, full-time co-ordinator. This is particularly true where effective conservation requires action (including legislative action) by a number of stakeholders including: intergovernmental and national authorities, scientists from several disciplines, representatives from industry, local communities, and interested NGOs. The scale of work required by this Plan exceeds the resources available within the (part-time) ASCOBANS Secretariat."

This is equally true with respect to the Baltic Sea area and its highly demanding Jastarnia Plan. An ASCOBANS Baltic Sea Coordinator should therefore be appointed.

2. Terms of Reference

a) Qualifications

The co-ordinator should have a background in marine nature conservation as well as experience and a proven understanding of the political and legal context and of scientific issues concerning harbour porpoise conservation in the Baltic Sea. He or she should be an effective communicator, able to establish and maintain relations with and to represent ASCOBANS positions vis-à-vis the various stakeholders.

The co-ordinator could either be a staff member of an appropriate institution based in a Baltic Sea Party to ASCOBANS or an experienced individual.

b) Tasks

Reporting to the Jastarnia Group, the ASCOBANS Baltic Sea Coordinator would, in particular, have to perform the following tasks:

- Promote and explain the Jastarnia Plan to relevant stakeholders, including:
  - International and supranational bodies
  - Range states
  - Appropriate local authorities in cooperation with the ASCOBANS National Coordinators
  - NGOs
  - Appropriate industries

  Where needed and appropriate, this would include participation in the meetings of relevant bodies and other events.
- Provide advice on appropriate funding mechanisms and support fundraising efforts.
- Document and collate in cooperation with the ASCOBANS National Coordinators existing international and national regulations and guidelines that are relevant to the conservation and management of harbour porpoises in the Baltic Sea and to provide this collation to all stakeholders.

It is expected that the Coordinator would require an initial one month phase of full time work and the work would then average 2.5 days per week.