

Agenda Item 13

National Reporting

Document 13.b

**2012 Annual National Report
Denmark**

Action Requested

- Take note
- Comment

Submitted by

Denmark



**NOTE:
DELEGATES ARE KINDLY REMINDED TO BRING THEIR OWN COPIES OF DOCUMENTS
TO THE MEETING**

2012 ASCOBANS Annual National Reports

This format for the ASCOBANS Annual National Reports was endorsed by the 6th Meeting of the Parties in 2009. Reports are due to be submitted to the Secretariat by 31 March of each year.

Parties are requested to use this report to provide NEW information on measures taken or actions towards meeting the objectives of the Conservation and Management Plan and the Resolutions of the Meeting of the Parties.

The 7th Meeting of the Parties in 2012 agreed to move to online reporting with immediate effect. In order to benefit fully from the opportunities for synergies among CMS Family treaties afforded by this tool, Parties decided that a revised national report format be developed by a small working group assisted by the Secretariat for consideration by the Advisory Committee in preparation for the 8th Meeting of the Parties. While retaining the questions related only to ASCOBANS, it should align more closely to the format used in CMS, AEWA and EUROBATS.

General Information

Name of Party

> Denmark

Report submitted by

Name	Lars Seidelin
Function	Biologist
Organization	Fjord&Bælt
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Changes

Changes in Coordinating Authority or appointed Member of the Advisory Committee

> Lars Seidelin will take over from Magnus Wahlberg, Fjord&Bælt

List of National Institutions

List of national authorities, organizations, research centres and rescue centres active in the field of study and conservation of cetaceans, including contact details

> DTU AQUA, National Institute of Aquatic Resources, Section of Coastal Ecology, Technical University of Denmark, Charlottenlund Slot, Jægersborg Allé 1, 2920 Charlottenlund, Denmark. Contact person: Finn Larsen, phone +4535883496, email: fl@aqua.dtu.dk

> The Fisheries and Maritime Museum, Tarpbagevej 2, 6710 Esbjerg V, Denmark. Contact person: Lasse Fast Jensen, phone +4576122000, email: lfj@fimus.dk

> Fjord&Bælt and Marine Biological Research Center, University of Southern Denmark, Margrethes Plads 1, 5300 Kerteminde, Denmark. Contact person: Lars Seidelin, phone: +4542131554, email: lars@fjord-baelt.dk

> Department of Bioscience, Aarhus University, Frederiksborgvej 399, 4000 Roskilde, Denmark. Contact person: Jonas Teilmann, phone +4587158494, email: jte@dmu.dk

Habitat Conservation and Management

Fisheries Interactions

Direct Interaction with Fisheries

1.1 Investigations of methods to reduce bycatch

> DTU, AQUA conducted research on Fully Documented Fishery onboard gillnet vessels <15 m. to test whether electronic monitoring can be used to provide reliable documentation of the fishing operation and the catches onboard gillnet vessels less than 15 m in length.

1.2 Implementation of methods to reduce bycatch

> None

1.3 Other relevant information

Other relevant information, including bycatch information from opportunistic sources

> Swimming patterns of wild harbour porpoises *Phocoena phocoena* was investigated. The study showed detection and avoidance of gillnets at very long ranges <50 m. It was unclear whether the porpoise use sonar or other senses to detect the nets on long distances

1.4 Report under EC Regulation 812/2004

Please provide the link to your country's report under EC Regulation 812/2004.

> <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2011:0578:FIN:EN:HTML>

Reduction of Disturbance

2.1 Anthropogenic Noise

Please reference and briefly summarise any studies undertaken

> Effects of underwater noise on harbour porpoises around major shipping lanes.

Mortensen, Lars O.; Tougaard, Jakob; Teilmann, Jonas.

BaltSeaPlan - www.baltseaplan.eu, 2012. 42 s. (BaltSeaPlan Report; Nr. 21).

2.2 Ship Strike Incidents

Please list all known incidents and provide information separately for each

	Incident 1	Incident 2	Incident 3	Incident 4	Incident 5
Date	None				
Species					
Type of Injury					

Fatal Injury (Yes/No)					
Type of Vessel (length, tonnage, speed)					
Location (coordinates)					
More Information (name, email)					

2.3 Major Incidents

Major Incidents Affecting Significant Numbers of Cetaceans (two or more animals)

	Incident 1	Incident 2	Incident 3	Incident 4	Incident 5
Date	None				
Location					
Type of Incident					
Further Information					

2.4 Pollution and Hazardous Substances

Please report on main types of pollution and hazardous substances (including source, location and observed effects on cetaceans). Please provide information on any new measures taken to reduce pollution likely to have an impact.

> None

2.5 Other Forms of Disturbance

Please provide any other relevant information, e.g. relating to recreational activities affecting cetaceans.

> The effect of harbour porpoise distribution was investigated by the restoration of a large reefs at Læsø. After the establishment of the reef, the number of harbour porpoises to the area. This is due to an increase in fish stocks around the reef. In the area which was used as a reference, could however see a decline in the number porpoise sightings. It is unclear what this decline is due.

Marine Protected Areas

Marine Protected Areas for Small Cetaceans

3.1 Relevant Information

Please provide any relevant information on measures taken to identify, implement and manage protected areas for cetaceans, including MPAs designated under the Habitats Directive and MPAs planned or established within the framework of OSPAR or HELCOM.

> In June 2011, Denmark began a monitoring program of the designated SACs (special areas of conservations, Natura2000) for harbour porpoises. Passive acoustic dataloggers, CPODs, have been deployed in two SACs, an acoustic porpoise survey has been conducted in the Inner Danish waters, two aerial surveys have been performed covering SACs: one in the North Sea and one in Skagerrak.

3.2 GIS Data

Please indicate where GIS data of the boundaries (and zoning, if applicable) can be obtained (contact email / website).

> Contact: Signe Sveegaard, sign@dmu.dk

Surveys and Research

4.1 Abundance, Distribution, Population Structure

Overview of Research on Abundance, Distribution and Population Structure

> The SAMBAH project to estimate abundance and distribution of harbour porpoises in the Baltic Sea by static acoustic monitoring is running in the data collection phase. Analysis of data starts in 2013.

> A study showed that the number of harbour porpoises were significantly higher from April to October than during winter. It also showed that cod, herring and goby were the common prey during summer and winter.

Sveegaard, S., H. Andreasen, K. N. Mouritsen, J. P. Jeppesen, J. Teilmann, C. C. Kinze 2012. Correlation between the seasonal distribution of harbour porpoises and their prey in the Sound, Baltic Sea. *Marine Biology* 159: 1029-1037.

> Satellite telemetry data have been used to define high density areas of porpoises. These areas have been helpful in determining the newly established Danish marine Nature2000 areas.

Sveegaard, S., Teilmann, J., Tougaard, J., Dietz, R., Mouritsen, K. N., Desportes, G., Siebert, U. 2011. High-density areas for harbor porpoises (*Phocoena phocoena*) identified by satellite tracking. *Marine Mammal Science* 27(1), 230-246.

> Population structure of harbour porpoises.

Galatius, A., Kinze, C.C., Teilmann, J. (2012) Population structure of harbour porpoises in the greater Baltic region: Evidence of separation based on geometric morphometric comparisons. *Journal of the Marine Biological Association of the United Kingdom*. 92: 1669-1676.

> Reef establishment and how it influences on the distribution of harbour porpoise.

Mikkelsen, L. 2012. Re-established stony reef in Kattegat, Denmark attracts harbour porpoises (*Phocoena phocoena*).

4.2 Technological Developments

New Technological Developments

> Environmental DNA were used to detect the presence of marine mammals. At the same time acoustic dataloggers detected porpoises. In relation to the datalogger with the highest number of acoustic porpoise-detections environmental DNA were found.

Footo, A. D., P. F. Thomsen, S. Sveegaard, M. Wahlberg, J. Kielgast, L. A. Kyhn, A. B. Salling, A. Galatius, L. Orlando, M. T. P. Gilbert 2012. Investigating the potential use of environmental DNA (eDNA) for genetic monitoring of marine mammals. *PLOS One* 7(8): e41781.

> Data from acoustic loggers (POD's) can be used to comment on the frequency of harbour porpoise in a given area.

Kyhn, L. A., J. Tougaard, L. Thomas, L. Rosager Duve, J. Stenback, M. Amundin, G. Desportes, J. Teilmann 2012. From echolocation clicks to animal density - Acoustic sampling of harbor porpoises with static dataloggers. *Journal of the Acoustical Society of America* 131(1):550-560.

4.3 Other Relevant Research

> Study on genetic differences of harbour porpoise populations.

de Luna, C. J., S. J. Goodman, O. Thatcher, P. D. Jepson, L. Andersen, K. Tolley, A. R. Hoelzel 2012. Phenotypic and genetic divergence among harbour porpoise populations associated with habitat regions in the North Sea and adjacent seas. *Journal of evolutionary biology* doi: 10.1111/j. 1420 9101.2012.02461.

> Harbour porpoise and climate changes.

Heide-Jørgensen, M. P., M. Iversen, N. Hjort Nielsen, C. Lockyer, H. Stern, M. Hvid Ribergaard 2012. Harbour porpoises respond to climate change. *Ecology and Evolution* 580-586.

> New measurements of the sound beam pattern of porpoises:

Koblitz, J., Wahlberg, M., Stilz, P., Madsen, P., Beedholm, K., Schnitzler, H.-U. 2012. Asymmetry and dynamics of a narrow sonar beam in an echolocating harbour porpoise. *Journal of the Acoustical Society of America*, in press.

> Study on offshore pile driving.

Brandt, M. J., A. Diedrichs, K. Betke, G. Nehls 2012a. Effect of offshore pile driving on harbour porpoise (*Phocoena phocoena*). In: AN Popper & A Hawkins (eds.): *The effects of noise on aquatic life*. Springer-Verlag, NY, pp. 281-284.

> Linnenschmidt, M., J. Teilmann, T. Akamatsu, R. Dietz, L. A. Miller 2012c. Biosonar, dive, and foraging activity of satellite tracked harbor porpoises (*Phocoena phocoena*). DOI: 10.1111/j.1748 7692.2012.00592.x

> Thyroid and stress hormones in free-ranging and captive porpoises:

Siebert, U., Pozniak, B., Hansen, Kirstin A., Nordstrom, G., Teilmann, J., van Elk, Niels, Vossen, A., Dietz, R. 2011. Investigations of Thyroid and Stress Hormones in Free-Ranging and Captive Harbor Porpoises (*Phocoena phocoena*): A Pilot Study. *Aquatic Mammals* 37(4), 443-453.

> Galatius, A., Bossi, R., Sonne, C., Rigét, F.F., Kinze, C.C., Lockyer, C., Teilmann, J., Dietz, R. (in press) Perfluorinated alkylated contaminant profiles of three marine mammal species from the North Sea: a comparative study. *Environmental Science and Pollution Research*.

> Study on growth and reproduction of white-beaked dolphins.

Galatius, A., Jansen, O.E., Kinze, C.C. (in press) Parameters of growth and reproduction of white-beaked dolphins (*Lagenorhynchus albirostris*) from the North Sea. *Marine Mammal Science*.

> Study of how porpoises regulate their hearing during echolocation:

Linnenschmidt, M., Beedholm, K., Wahlberg, M., Kristensen, J. H., Nachtigall, P. E. 2012. Keeping returns optimal: gain control elicited by dynamic hearing thresholds in a harbour porpoise. *Proceedings of the Royal Society B*, doi 10.1098/rspb.2011.2465.

> Electronic monitoring of harbour porpoise:

Lotte Kindt-Larsen, Jørgen Dalskov, Bjarne Stage, Finn Larsen, Observing incidental harbour porpoise *Phocoena phocoena* bycatch by remote electronic monitoring. DOI: 10.3354/esr00455

> Behavioral Reactions of Harbor Porpoise to Pile-Driving Noise.

Tougaard, Jakob; Kyhn, Line Anker; Amundin, Mats; Wennerberg, Daniel; Bordin, Carolina. *The Effects of Noise on Aquatic Life*. red. / Arthur N. Popper; Anthony Hawkins. Springer Berlin Heidelberg New York, 2012. s. 277-280 (*Advances in Experimental Medicine and Biology*; Nr. 730).

Use of Bycatches and Strandings

Post-Mortem Research Schemes

5.1 Contact Details

Contact details of research institutions and focal point

> Department of Bioscience, Aarhus University, Frederiksborgvej 399, 4000 Roskilde, Denmark. Phone +4528710372, email: agj@dmu.dk

> The Fisheries and Maritime Museum, Tarpbagevej 2, 6710 Esbjerg V, Denmark. Phone +4576122000, email: lfj@fimus.dk

5.3 Samples

Collection of samples (type, preservation method)

> Aarhus University: Teeth, muscle, skin, blubber, liver, kidney, stomach contents, urine, blood, spleen, gonads, lung, diaphragm, faeces

> The Fisheries and Maritime Museum: some of the above.

5.5 Additional Information

Additional information (e.g. website addresses, intellectual property rights, possibility of a central database)

> Strandings of marine mammals are reported on an annual basis in a report (in Danish) from the Danish Nature Agency. The latest available report covers 2011:

http://www.naturstyrelsen.dk/Udgivelser/Aarstal/2012/Strandede_havpattedyr_i_Danmark.htm

> Future reports will be uploaded at:

<http://www.naturstyrelsen.dk/Udgivelser/Aarstal/>

Activities and Results

5.6 Necropsies

Number of necropsies carried out in the reporting period

	Number	Recorded cause of death
Phocoena phocoena	4	1 bycaught, 3 not yet determined
Tursiops truncatus		
Delphinus delphis		
Stenella coeruleoalba		
Grampus griseus		
Globicephala melas		
Globicephala macrorhynchus		
Lagenorhynchus albirostris	2	Not yet determined
Lagenorhynchus acutus		
Orcinus orca		
Hyperoodon ampullatus		
Mesoplodon bidens		
Kogia breviceps		

Other (please specify under number)		
Other (please specify under number)		
Other (please specify under number)		
Other (please specify under number)		
Other (please specify under number)		
Other (please specify under number)		

5.7 Other Relevant Information

Please provide any other relevant information on post-mortem / stranding schemes
> None

Relevant New Legislation, Regulations and Guidelines

6.1 New Legislation, Regulations and Guidelines

Please provide any relevant information

> The Danish Nature Agency has drafted a new Action plan for stranded cetaceans in Denmark in 2012.

Public Awareness and Education

7.1 Public Awareness and Education

Please report on any public awareness and education activities to implement or promote the Agreement to the general public and to fishermen.

> Fjord&Bælt in Kerteminde, Denmark, houses four harbour porpoise (3 live-caught and 1 born in the facility) for research and public display. The center is visited by more than 55,000 guests every year, including more than 7,000 school children. A long range of Danish and international media teams (TV, radio, newspapers, home pages) visit the center every year and usually focus their outreach on harbour porpoise research and conservation. Fjord&Bælt is hosting the yearly meeting about harbour porpoise conservation by the Danish Nature Agency. The meeting includes government representatives, scientists, legislators, and NGOs and creates local media interest.

> In 2012 the center opened a new big exhibition with the theme Oceans of sound. An essential part of these exhibitions are the harbour porpoises behaviour and senses. There is special focus on research and conservation efforts of harbour porpoises during a number of arrangements in Kerteminde, such as the Day of the Baltic Porpoise, two yearly science festivals, and 'special events', scheduled by Fjord&Bælt with regular intervals. The outreach for the public is based on the four harbour porpoises at the center. In 2012 actors at Fjord&Bælt performed a theatre for young children about harbour porpoise conservation in particular and marine protection in general.

Possible difficulties encountered in implementing the Agreement

Difficulties in Implementing the Agreement

Please provide any relevant information

> None