

Agenda Item 2

Review of New Information on Threats to
Small Cetaceans

Document NR 8

**2018 Annual National Report (DRAFT)
Denmark**

Action Requested

Take note

Submitted by

Denmark



Note:

Delegates are kindly reminded to bring their own document copies to the meeting, if needed.

ASCOBANS National Reporting Format

1 January 2016 – 31 December 2018

As outlined in [ASCOBANS Resolution 8.1](#) on National Reporting, this format will cover the following Sections of the Annex to the Resolution, in addition to the standard Sections I and VII:

- Disturbance, incl. potential physical impacts (Section II B5, B6, B7)
- Habitat Change and Degradation incl. potential physical impacts (Section II C10, C11, C12, C13, C14)
- Area-based Conservation / Marine Protected Areas (Section II E16, E17)
- Education and outreach (Section VI A)

Exceptionally, the reporting period for questions here is 1 January 2016 – 31 December 2018, unless stated otherwise, to accommodate the requirements of the next Meeting of Parties to ASCOBANS, scheduled for 2020. The reports will inform discussion at the 25th Meeting of the Advisory Committee (AC25), which will be held in September 2019.

Where possible, National Coordinators should consult with, or delegate to, experts for particular topics so as to ease the reporting burden. The Secretariat has provided a list of potential country contacts as a starting point. Once the baseline information is in place, it should become easier to update in the future. Please include relevant web links where requested.

Please note that numbering of the sections refers to numbering as in Resolution 8.1. This means the first section in the current form is number 5 (Cetacean Watching Industry) and not number 1.

High-level Summary of Key Messages

In your country, for the reporting period from 2016 to 2018, what does this report reveal about:

1. The most successful aspects of implementation of the Agreement? *(list up to five items)*
2. The greatest challenges in implementing the Agreement? *(list up to five items)*
3. The main priorities for future implementation of the Agreement? *(list up to five items)*

Section I: General Information

A. Country Information

1. Name of Party / Non-Party Range State:

Denmark

2. Details of the Report Compiler

Name: Signe Sveegaard

Function: Senior advisor

Organization: Aarhus University

Postal Address: Frederikeborgvej 399, 4000 Roskilde

Telephone: 28951664

Email: ssv@bios.au.dk

Does the Report Compiler act as ASCOBANS National Coordinator (i.e. focal point)?

No Yes

Focal point: Camilla Uldahl, Ministry of Environment and Food of Denmark, Tolderlundsvej 5, 5000 Odense C, cakis@mst.dk

3. Details of contributor(s)

Topic(s) contributed to: Outreach

Name: Maria Palner

Function: scientific assistant

Organization: Aarhus University

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Copy box if needed

Section II: Habitat Conservation and Management (threats and pressures on cetaceans)

B. Disturbance (incl. potential physical impacts)

8. 5. Cetacean Watching Industry

AIM: to determine if the developing cetacean watching industry poses a threat to small cetaceans.
Relevant Resolutions: 8.9, 8.2, 8.1, 6.1, 5.4

Whale and dolphin watching is a global industry that can provide socio-economic benefits to local communities by attracting tourism, as well as strengthening public awareness of conservation needs. However, it also has the potential of being harmful when it interferes with the behaviour of animals in their natural environment and may even lead to injury or death. As the cetacean watching industry is still scarcely developed in some countries, collecting this data now allows tracking the development of the industry.

It is of particular importance to ASCOBANS to obtain an overview of the current scale of the activities and to monitor the development of the industry in the future. This is done by quantifying the number and locations of operators, reporting negative interactions and providing information on the development and implementation of any guidelines regarding cetacean watching.

Filling out this section accurately and completely will help to detect any indications of potential threats, allow timely mitigation action and enable Parties and Non-Party Range States to work towards a coordinated approach regarding the development of cetacean watching guidelines in the Agreement area.

Note: We are here only addressing commercial cetacean watching activities which take place from vessels and include viewing of small cetacean species. Operators are defined as those offering trips with a primary focus: they advertise specifically with the aim to see small cetaceans, or a secondary focus: they advertise either for other taxa, such as birds or seals, or large cetaceans, or more general for wildlife, but mention the opportunity to see small cetaceans.

Questions:

5.1. Do you have any commercial small cetacean watching industry operating in your country?

- No.** Go to **Question 5.3.**
- Yes.** Continue with **Question 5.2.**

5.2. In the table below, provide the sub-regions, ports and operators from which commercial cetacean watching takes place. Please tick the boxes if small cetacean watching is a primary and/or secondary focus of the operators and, in the first case what the target species are.

Overview of commercial small cetacean watching activities per sub-region.

OSPAR / HELCOM Sub-region	Port	Operator	small cetacean watching		Link to website or contact details	
			Primary focus / target species	Secondary focus		
H The Sound	Helsingør	Øresund Aquarium – Aquarium that offer porpoise sighting tours sporadically	<input checked="" type="checkbox"/>	HP Harbour porpoise Choose a species Choose a species Choose a species	<input type="checkbox"/>	https://www.oresundsakvariet.ku.dk/english/experiences/rib-boat-sea-tour/
H Belt Sea	Middelfart	Aventura – tour boat	<input checked="" type="checkbox"/>	HP Harbour porpoise Choose a species Choose a species Choose a species	<input type="checkbox"/>	Henrik Traugott-Olsen, Mail: mail@visitmiddelfart.dk Web: http://www.galeasen-

5.8. Does your country have any mitigation measures (codes of conduct/guidelines) in place in the event of disturbance or harassment during swimming with small cetaceans in place?

No.

Yes. List below the type of measures and relevant information:

All tour operators have been contacted and several have a protocol of turning of the engine once the porpoises were close by, but no one have it written down. The tours all occur in areas of high porpoise density as well as high recreational leasure boat traffic. Frequency of tours: 1-7 per week during summer.

5.9. Are there any solitary sociable dolphin interactions in your country?

Occasionally, individual solitary dolphins may associate with humans, resulting in increased interactions between the two which may lead to impacts upon either. Sometimes incidents occur and can lead to harm for cetaceans and/or swimmers.

No. Go to **Question 5.12.**

Yes. Provide information in the table below:

If several interactions have been reported please copy this table.

5.10. List any incidents of harassments to small cetaceans in the context of interactions with solitary sociable dolphins reported to authorities – and the outcome if known (behavioural response, injury, death, any court proceedings).

If there were several reported incidents, copy the table and add.

5.11. Does your country have any mitigation measures (codes of conduct/guidelines) in place in the event of interactions with solitary sociable dolphins?

No.

Yes. List below the type of measures and relevant information:

This information will enable comparisons to be made across the Agreement area, and ultimately may lead to the provision of overall, consistent guidelines.

5.12. List initiatives/projects (including PhD, MSc) in 2016-2018 involving studies of the cetacean watching industry, “swim with small cetacean” operations, solitary sociable dolphin interactions and their possible effects on cetaceans (incl. title, organisation, lead author).

No relevant information for Denmark

5.13. List publications (reports, theses, papers in journals, books) from any study in your country in 2016-2018 relating to small cetacean watching industry, swim with dolphins (or small cetaceans) operations, solitary sociable dolphin interactions and their possible effects on cetaceans.

Riisager-Pedersen C, Galatius A, Olsen MT. 2017. Mapping Danish marine mammal ecotourism. Poster session præsenteret ved Annual Conference of the European Cetacean Society 2017, Middelfart, Danmark.

Riisager-Pedersen C. 2017. Marine mammal management in light of eco-tourism. Master thesis at Natural History Museum of Denmark, University of Copenhagen, Denmark.

5.14. Please provide web links to other relevant information in your country on cetacean watching industry, swim with dolphins (or small cetaceans) operations, solitary sociable dolphin interactions and their possible effects on cetaceans for this section.

Description	Web link
<i>No relevant information for Denmark</i>	

5.15. Has there been any other notable instances / issues related to cetacean watching industry in 2016-2018 in your country?

no

5.16. Is the perceived level of pressure from commercial small cetacean watching in your country increasing, decreasing, staying the same or unknown?²

To be done on a species by species basis where applicable (see Annex B) and by region where relevant (see Annex A).

Scientific name of the species	Increasing	Decreasing	Staying the same	Unknown
Harbour porpoises			x	

Not applicable. Comments:

B. Disturbance (incl. potential physical impacts)

9. 6. Recreational Sea Use

AIM: to determine whether recreational sea use is detrimental to small cetaceans and, if so, to identify types of activity and areas of concern.

Relevant Resolutions: 8.9, 8.2, 8.3, 8.1, 7.1, 6.1, 5.4

Recreational use of the sea by humans includes a wide variety of activities, some of which are known to have a potential negative impact on small cetaceans. This includes RIBs (rigid-hulled inflatable boats), hard-hulled boats exceeding 10 knots in speed, yachts and personal water crafts such as jet skis and kayaks; and excludes recreational fishing and sea-angling.

Interactions can cause animals to change behaviour and move away, but can also have more serious impacts, such as injury or even death due to collision. ASCOBANS has agreed on a number of resolutions that highlight the importance to review all available information on recreational use of the sea. Obtaining an overview of best practices and guidelines will enable comparisons to be made across the Agreement Area, and ultimately may lead to the provision of overall, consistent guidelines that might be developed at a regional or national level. In this section we strive to obtain an overview of potential risk areas and national sources that have data on incidents with small cetaceans related to recreational sea use.

Questions:

6.1. Are data on recreational sea use available for your country?

- No.** Go to **Question 6.3.**
- Yes.** Provide information in the table below:

² This is a question based on Resolution 8.1, Annex 1.

Type of information: (e.g. number of licenced recreational vessels per region, tourist number per region, other)

Yes, University of Copenhagen have been collecting this information covering all the Danish Sea in a database since 2013. It is now analysed as spatially and available as GIS mapping of marine recreational use intensity, 1 x 1 km grid, Data owner:

Berit C. Kaae, Senior Researcher, Copenhagen University, email: bck@ign.ku.dk

Most recently the data is being analysed in the project ECOMAR: <https://niva-denmark.dk/ecomar/>

Several reports have been published, but only in Danish:

Kaae, BC, Olafsson, AS & Draux, H 2018, Blåt friluftsliv i Danmark. IGN Rapport, Institut for Geovidenskab og Naturforvaltning, Københavns Universitet.

Riemann, B, Al-Hamdani, Z, Olafsson, AS, Hasler, B, Kaae, BC, Murray, C, Göke, C, Kallenbach, E, Olesen, HJ, Nabe-Nielsen, J, Tougaard, J, Andersen, JH, Egekvist, J, Overgaard Leth, J, Dahl, K, Christoffersen, M, Zandersen, M, Termansen, M, Sveegaard, S & Harvey, T 2019, Maritim arealplanlægning i Øresund: Scenarier for udvikling af erhvervs-, samfunds- og miljømæssige forhold. Miljøbiblioteket, bind 6, bind 6, Aarhus Universitetsforlag, Aarhus.

Web link or other relevant link to data: only available through contact to data owner.

6.2. Is information on main areas of recreational sea use available for your country?

Many range states are mapping human activities to fulfil obligations under the EU Maritime Spatial Planning Directive, MSFD, OSPAR, and HELCOM; this information is relevant (though often not readily accessible) to ASCOBANS in understanding the extent and trends of human activities potentially impacting small cetaceans.

- No.**
 Not applicable. Comments:
 Yes. Provide information in the table below:

Which area: (Please refer to the overview of OSPAR & HELCOM sub-regions in Annex A, if possible.) all of the Danish waters

Type of information: (e.g. maps, GIS files, reports) GIS maps

Is the data available online? **No.** Comments:
 Yes. Provide link:

6.3. Was there any incidents of disturbance or harassment to small cetaceans in relation to recreational sea use in your country?

- No.**
 Unknown.
 Yes. Provide information in the table below:

6.4. Does your country have any mitigation measures (codes of conducts/guidelines/laws/rules) in place in the event of disturbance or harassment of cetaceans through recreational sea use?

- No.**
 Yes. Provide information in table below:

(Specify if these mitigation measures are linked to a specific species/region/activity only. Include web links to relevant information.)

6.5. List initiatives/projects (including PhD, MSc) in 2016-2018 involving studies on the disturbance or harassment of cetaceans through recreational sea use in your country (incl. title, organisation, lead author, web link).

Laia Rojano Doñate is doing her PhD at Aarhus University and as a part of this she will examine the effect of underwater noise on harbour porpoise energy/activity budgets.

6.6. List publications (reports, theses, papers in journals, books) in 2016-2018 from any study in your country relating to disturbance or harassment of cetaceans through recreational sea use .

Hermanssen, L. 2019. *A noise World: Characteristics of anthropogenic underwater noise in shallow coastal waters and the impacts on marine mammals*. PhD thesis. Department of Bioscience, Aarhus University, Denmark. 190 pp.

Wisniewska, DM, Johnson, M, Teilmann, J, Siebert, U, Galatius, A, Dietz, R & Madsen, PT 2018, 'High rates of vessel noise disrupt foraging in wild harbour porpoises (*Phocoena phocoena*)', *Proceedings of the Royal Society B: Biological Sciences*, bind 285, nr. 1872, 20172314. <https://doi.org/10.1098/rspb.2017.2314>

Sveegaard, S, Tougaard, J & Teilmann, J 2017, 'To lystbådehavnes påvirkning af marsvin: Endelig afrapportering', 11 s. – Danish report on the effect of recreational ships on porpoises in Great Belt.

6.7. Please provide web links to other relevant information for this section.

Description	Web link

6.8. Have there been any other notable instances / issues in your country in the reporting period?

Not to our knowledge.

6.9. Is the perceived level of pressure from recreational sea use in your country increasing, decreasing, staying the same or unknown?³

To be done on a species by species basis where applicable (see Annex B) and by region where relevant (see Annex A).

Scientific name of the species	Increasing	Decreasing	Staying the same	Unknown
Harbour porpoise				x

Not applicable. Comments:

B. Disturbance (incl. potential physical impacts)

10. Other Sources of Disturbance

AIM: to identify new sources of disturbance that can be a threat to small cetaceans.

Relevant Resolutions: 8.9, 8.1, 6.1

With human activities in the seas increasing particularly in the coastal zone, overlap of cetacean and human habitat use is not covered by the questions above. A human activity can for example cause a cetacean to change behaviour, or it can cause physical harm or death. This section aims to identify new sources of disturbance that can be a threat to small cetaceans. The issue of noise, for example, is covered under section B3.

³ This is a question based on Resolution 8.1, Annex 1.

7.1 Have there been any incidents of disturbance to small cetaceans in your country, not covered in the items above?

- No.
- Unknown.
- Yes. Please provide information in the table below:

Any incidents of disturbance to cetaceans not covered in Sections B5 or B6 by the report.

7.2 List initiatives/projects (including PhD, MSc) in 2016-2018 involving studies on other sources of disturbance in your country (incl. title, organisation, lead author, web link).

The DEPONS project (DISTURBANCE EFFECTS ON THE HARBOUR PORPOISE POPULATION IN THE NORTH SEA) has been ongoing 2012-2019 and has just finished – see reference below.

Cara Callager, PhD project at Aarhus University 2017-2020: Modeling The Energetics And Population Dynamics Of Harbor Porpoises In The North Sea In Response To Anthropogenic Disturbance.

7.3 List publications (reports, theses, papers in journals, books) in 2016-2018 from any study in your country relating to other sources of disturbance.

Nabe-Nielsen J. 2019. DEPONS model version 2.0: Individual-based model for simulating impact of wind farm construction noise on the North Sea harbour porpoise population. [Software]. <https://doi.org/10.5281/zenodo.2544525>

Brandt M, Dragon A-C, Diederichs A, Bellmann MA, Wahl V, Piper W, Nabe-Nielsen J, Nehls G. 2018. Disturbance of harbour porpoises during construction of the first seven offshore wind farms in Germany. Marine Ecology - Progress Series. 596(213-232):213-232. <https://doi.org/10.3354/meps12560>

van Beest F, Teilmann J, Hermannsen L, Galatius A, Mikkelsen L, Sveegaard S, Balle JD, Dietz R, Nabe-Nielsen J. 2018. Fine-scale movement responses of free-ranging harbour porpoises to capture, tagging and short-term noise pulses from a single airgun. Royal Society Open Science. 5(1). <https://doi.org/10.1098/rsos.170110>

van Beest FM, Kindt-Larsen L, Bastardie F, Bartolino V, Nabe-Nielsen J. 2017. Predicting the population-level impact of mitigating harbor porpoise bycatch with pingers and time-area fishing closures. Ecosphere (Washington, D.C.). 8(4). <https://doi.org/10.1002/ecs2.1785>

Mikkelsen L, Hermannsen L, Beedholm K, Madsen PT, Tougaard J. 2017. Simulated seal scarer sounds scare porpoises, but not seals: species-specific responses to 12 kHz deterrence sounds. Royal Society Open Science. 4(7). <https://doi.org/10.1098/rsos.170286>

*Kindt-Larsen L, Berg CW, Tougaard J, Sørensen TK, Geitner K, Northridge S, Sveegaard S, Larsen F. 2016. Identification of high-risk areas for harbour porpoise *Phocoena phocoena* bycatch using remote electronic monitoring and satellite telemetry data. Marine Ecology. 555:261-271. <https://doi.org/10.3354/meps11806>*

Tougaard J, Wright AJ, Madsen PT. 2016. Noise exposure criteria for harbour porpoises. Popper AN, Hawkins A, red. I The effects of noise on aquatic life II. Springer. s. 1167-1173. (Advances in Experimental Medicine and Biology).

Wisniewska DM, Johnson M, Teilmann J, Rojano Doñate L, Shearer J, Sveegaard S, Miller LA, Siebert U, Madsen PT. 2016. Ultra-High Foraging Rates of Harbor Porpoises Make Them Vulnerable to Anthropogenic Disturbance. Current Biology. 26(11):1441-1446. <https://doi.org/10.1016/j.cub.2016.03.069>

7.4 Please provide web links to other relevant information.

Description	Web link

7.5 Has there been any other notable instances / issues in your country the reporting period?

unknown

C. Habitat Change and Degradation (incl. potential physical impacts)

10. Pollution and hazardous substances (incl. microplastics)

AIM: to illustrate progress, during the reporting period, on understanding, monitoring and mitigating impacts on cetaceans of important and emerging pollution-related hazards.

Relevant Resolutions: 8.9, 8.8, 8.7, 8.4, 8.3, 8.2, 8.1, 7.4, 7.1, 6.1, 5.7

Our oceans have been subject to a wide range of different types of pollution over the last decades. Top-predators such as small cetaceans that feed on higher trophic prey, tend to accumulate many of these potentially hazardous substances. There are a number of contaminants and pathogens that are known or suspected to have impacts on cetacean health, immune status or reproduction. These include for example: polychlorinated biphenyls (PCBs) and other persistent organic pollutants (POPs), oil pollution (polycyclic aromatic hydrocarbons), toxins from harmful algal blooms (HABs), sewage, radionuclides, toxic elements, tri-butyl tin (TBT), morbillivirus, and Brucella. In addition, micro- and nano-plastics are also present in the environment and their impacts are presently poorly understood.

Monitoring can be done in tissues of cetaceans obtained from live animals through biopsies, or from dead animals that are generally found on the shore. Necropsies allow the sampling of different tissues such as blubber, muscle, kidney or liver and these can be analysed subsequently.

To better understand the impact of contaminants on cetacean health, to detect new emerging hazards and to work towards a common protocol for analysing sampling Parties are asked to provide information on their programs.

NOTE: Macroplastics and discarded fishing gear are covered under Section C 9 Marine Debris.

Questions:

11. Does your country conduct monitoring of pollutants in small cetaceans?

Several pollutants have serious effects on individual cetaceans and can threaten populations. The aim is to capture the nature of existing monitoring and identify gaps in terms of which pollutants are monitored, the extend of this monitoring and the establishment of securely funded long-term data series.

No.

Yes.

Any comments:

12. Who is carrying out the pollutant monitoring program? Please provide information on the institution(s)/agencies that collect the samples and carry out the analyses. Copy table if needed.

Name:
Role in monitoring: *(e.g. sample collection, analyses, other)*
Postal Address:
Contact Person:
Telephone:

Email:
Weblink:

12.3. Select the small cetacean species that were covered by your monitoring program during the reporting period from 2016 to 2018. Mark the year in which the species was sampled with an x.

2016	2017	2018	Species ⁴	2016	2017	2018	Species
			Choose a species				Choose a species
			Choose a species				Choose a species

Any comments:

Select the source of your samples (*multiple answers possible*)

- Necropsy from stranding
- Necropsy from bycatch
- Sample from live stranding
- Biopsy from live animal
- Other (specify in comments)

Any comments:

Select the geographical coverage of your monitoring program (*several answers are possible*)

<p>OSPAR Region I Arctic Waters</p> <input type="checkbox"/> Norwegian Sea	<p>OSPAR Region IV Bay of Biscay and Iberian Coast</p> <input type="checkbox"/> N. Bay of Biscay <input type="checkbox"/> Iberian Sea <input type="checkbox"/> Gulf of Cadiz	<p>HELCOM cont.</p> <input type="checkbox"/> Gulf of Finland <input type="checkbox"/> Northern Baltic Proper <input type="checkbox"/> Western Gotland Basin <input type="checkbox"/> Eastern Gotland Basin <input type="checkbox"/> Gulf of Riga <input type="checkbox"/> Gdansk Basin <input type="checkbox"/> Bornholm Basin <input type="checkbox"/> Arkona Basin <input type="checkbox"/> Kattegat <input type="checkbox"/> Belt Sea <input type="checkbox"/> The Sound
<p>OSPAR Region II Greater North Sea</p> <input type="checkbox"/> Dogger Bank <input type="checkbox"/> Southern North Sea <input type="checkbox"/> Northern North Sea <input type="checkbox"/> Channel <input type="checkbox"/> Norwegian Trench <input type="checkbox"/> Skagerrak	<p>OSPAR Region V Wider Atlantic</p> <input type="checkbox"/> subregions?	
<p>OSPAR Region III Celtic Sea</p> <input type="checkbox"/> Celtic Sea <input type="checkbox"/> Irish Sea <input type="checkbox"/> Irish & Scottish W. Coast	<p>HELCOM</p> <input type="checkbox"/> Bothnian Bay <input type="checkbox"/> Bothnian Sea <input type="checkbox"/> Archipelago Sea <input type="checkbox"/> Åland Sea	

A map of the regions and sub-regions can be found in the Annex A.

Select the contaminant / pathogen analyses you have conducted for small cetaceans.

<input type="checkbox"/> POPs (e.g. PCBs)	<input type="checkbox"/> Radionuclides	<input type="checkbox"/> <i>Brucella</i>	<input type="checkbox"/> Others:
<input type="checkbox"/> Oil (e.g. PAHs)	<input type="checkbox"/> Toxic elements	<input type="checkbox"/> Microplastics	<input type="checkbox"/> Others:
<input type="checkbox"/> HAB toxins	<input type="checkbox"/> TBT	<input type="checkbox"/> Nanoplastics	<input type="checkbox"/> Others:
<input type="checkbox"/> Sewage	<input type="checkbox"/> Morbillivirus		

Any comments:

⁴ Please refer to Annex B for list of species, including scientific names.

Does your country determine microplastics in cetaceans?

- No.** Go to **Question 10.9.**
- Yes.** Please provide information in the table below:

Do you have a specific protocol to monitor microplastic in small cetaceans? No Yes
If yes, please provide details and weblinks or upload document.

There is currently no agreed protocol between Parties. Best practice needs to be established to make sure that all results obtained are comparable between research institutes. In particular, it is essential to avoid contamination of samples during processing, e.g. with airborne microplastic fibres.

List initiatives/projects (including PhD, MSc) in 2016-2018 in your country involving studies on impact of pollution and hazardous substances (incl. microplastics) on small cetaceans (incl. title, organisation, lead author).

Rune Dietx and Christian Sonne. The Ongoing project BaltHealth is planning to examine the POP concentration in Danish poprhoises. <https://projects.au.dk/bonusbalthealth/>

List publications (reports, theses, papers in journals, books) and other evidence from your country in 2016-2018 relating to the impact of pollution and hazardous substances (incl. microplastics) on small cetaceans.

We need to capture information on new knowledge arising from monitoring schemes or other research projects, especially results which enhance our understanding of impacts of hazardous pollutants and/or assess their known or likely effects on cetacean population status (e.g. considering PCB concentrations in blubber in relation to threshold for inhibition of reproduction). Where relevant, please report separately per pollutant, species and area.

impact of pollution and hazardous substances (incl. microplastics) on small cetaceans.

If applicable, list any additional evidence/data of reduced impacts of pollutants on small cetaceans following implementation of national mitigation measures (e.g. decline of contaminant levels in blubber over time).

Not applicable

Provide web links to other relevant information to this section.

Description	Web link

Has there been any other notable instances / issues in your country in the reporting period?

unknown

Is the perceived pressure from pollution and hazardous substances in your country increasing, decreasing, staying the same or unknown?⁵

To be done on a species by species basis where applicable (see Annex B) and by region where relevant (see Annex A).

Scientific name of the species	Increasing	Decreasing	Staying the same	Unknown

Not applicable. Comments:

⁵ This is a question based on Resolution 8.1, Annex 1.

C. Habitat Change and Degradation (incl. potential physical impacts)

11. Ship Strikes

AIM: Understanding the potential risk of ship strike as a cause of injury/death in small cetaceans.

Relevant Resolutions: 8.9, 8.2, 8.1, 6.1, 5.4

Ship strikes are collisions between vessels and cetaceans. In the last decades evidence has emerged that ship strikes might occur more often than previously thought and can have a significant impact on small resident cetacean populations. Most research so far has focused on large cetaceans as those animals are often carried visibly into port at the bow of a vessel. For small cetaceans ship strike events are not well documented.

Ship strike occurrence is directly linked to the frequency of shipping activity, including such directed at cetaceans, i.e. cetacean watching. To quantify this risk, it is important to know what kind of vessels are involved in the strike, in particular the vessel speed as well as the type and size of vessel. But it is also important to have information on the cetaceans involved, in particular if the animals were engaged in a particular behaviour such as feeding.

Ship strike can cause direct death or injury in cetaceans. Even collisions that are non-fatal might leave individuals with a reduction in their survival chances. To determine the occurrence of ship-strikes different sources are used. For small cetaceans, direct observations are the rarest. Necropsies of stranded animals can find evidence of characteristic trauma and photographs of animals that survived ship strikes can show typical injuries, such as marks left by propellers. One way to quantify how many animals in a population are impacted by ship strike is to look at the percentage of animals in a photo-identification catalogue that show ship strike marks.

As this is still a not well documented threat this section aims to obtain an overview of what kind of data and research is available and ongoing in the Parties.

Questions:

11.1. Are there reports available in your country of ship strikes with small cetaceans from visual observations?

The International Whaling Commission (IWC) has a global database for ship strike incidents with cetaceans. Whether or not your country is Party to the IWC, it is encouraged for countries to provide all ship strike incident information to the IWC database.

No. Go to **Question 11.2.**

Yes. Please provide information in the table below:

Has the incident of a ship strike with a small cetacean been submitted to the IWC Ship Strike Database? <input type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> Unknown
Area: <i>(check with OSPAR/HELCOM map in Annex A)</i> Choose a region
Species name (scientific), if known <i>(see Annex B):</i>
Date of incident:
Contact: <i>(if available contact details of the observer)</i>
Description of the observed incidence: <i>(Group size if other cetaceans presence, was the cetacean alive or dead after the collision, was the animal retrieved, indications of animal being dead before collision, any other information; if known, provide information on the vessel type, name, speed of the vessel, any damage to the vessel or injuries to people)</i>
If animal was retrieved and necropsied, is there a necropsy report for this cetacean? <input type="checkbox"/> No <input type="checkbox"/> Yes

If yes, provide link/contact details:
List any other relevant links to websites or other information, photographs or publications, if available:

11.2. Are there reports in your country of vessel strikes from necropsies of stranded animals for 2016-2018?

- No.** Go to **Question 11.3.**
 Yes. Please provide information in the table below:

Overview of necropsied small cetaceans showing evidence of ship-strike.

Year	Location Sub-area (OSPAR / HELCOM)	Species	Necropsied animals			
			Number of animals showing ship strike markings ⁶	Number of animals with known cause of death	Number of animals with cause of death ship strike	
					possible	certain
	Choose a region	Choose a species				
	Choose a region	Choose a species				
	Choose a region	Choose a species				

Provide source of information and database link if applicable:

11.3. Does your country have a protocol in use to determine that a cause of death in post mortem examination is due to a vessel strike?

- No.**
 Yes. Please provide information below:

<i>A veterinarian will aim to determine the cause of death during harbour porpoise autopsy.</i>

11.4. Is there evidence in your country from existing photo-identification catalogues of small cetaceans of any non-lethal ship strike for the 2016-2018?

For populations of small cetaceans, such as bottlenose dolphins, one can identify those animals in photo-identification catalogues of animals that show ship-strike evidence (e.g. scars). Monitoring the % of animals that show ship strike evidence can be a useful tool to monitor the development of this threat.

- No.** we do not have a photo-ID monitoring program.
 Yes. Please provide information in the table below:

Overview of ship strike evidence in photo-identification catalogues

11.5. Do you have any other photographs or evidence of ship strikes outside of photo-identification catalogue? **No** **Yes**

<i>Provide links where applicable</i>

11.6. List initiatives/projects (including PhD, MSc) involving studies of ship strike and its possible effects on small cetaceans for 2016-18 in your country (incl. title, organisation, lead author)

⁶ These can be sub-acute (animal dies not immediately after the ship-strike) or chronic lesions (scar forming starts, but there is likely infection/inflammation) or healed lesions that are unrelated to the cause of death (although they could have affected an animals health status in the longer term).

No information available

11.7. List publications (reports, theses, papers in journals, books) from your country relating to small cetacean ship strikes

No information available

11.8. List any management / policy actions related to mitigating ship strike for small cetaceans (re-routing, tracking animals, ship speed limits) in your country

No information available

11.9. Has there been any other notable instances / issues of ship strike on small cetaceans in your country in the reporting period?

No information available

11.10. Is the perceived level pressure from ship strikes on small cetaceans in your country increasing, decreasing, staying the same or unknown?⁷

To be done on a species by species basis where applicable (see Annex B) and by region where relevant (see Annex A).

Scientific name of the species	Increasing	Decreasing	Staying the same	Unknown
Harbour porpoise				x
White beaked dolphin				x
Minke whale				x

Not applicable. Comments:

C. Habitat Change and Degradation (incl. potential physical impacts)

12. Climate change (incl. ocean acidification)

AIM: To illustrate progress on understanding, monitoring and mitigating negative effects on small cetaceans of important and emerging climate-change-related hazards.

Relevant Resolutions: 8.9, 8.4, 8.3, 8.2, 8.1, 7.4, 7.1, 6.1, 5.7

It is certain that climate change is altering the habitat of cetaceans. However, our understanding on how the predicted changes will impact different species and populations is still lacking. CMS⁸ highlights the importance on addressing potential issues through the engagement of researchers to better understand the underlying processes, as well as conservation managers and policy makers to monitor changes and to mitigate negative impacts. Focussing on tangible climate change effects relevant to cetaceans, such as ocean warming, prey depletion / prey range shifts, ocean acidification, increased frequency and intensity of ocean storms, changes in sea ice, weakening of the North Atlantic Drift, we need to gather evidence on the

⁷ This is a question based on Resolution 8.1, Annex 1.

⁸ [CMS Resolution 12.21](#) on Climate Change and Migratory Species.

existence and nature of climate change effects on small cetaceans and evaluate current monitoring programmes and mitigation measures.

This section aims to provide an overview of what kind of activities are already ongoing in the member states to address climate change. The focus is hereby on those actions specifically regarding cetaceans as well as the most likely impacts on their habitat and prey. Climate change represents possibly the most important future threat to the status of cetaceans in the ASCOBANS region. Direct effects may arise due to ocean warming, resulting in (generally northward) in distribution shifts so that the animals continue to occupy waters with temperature regimes compatible with their thermal niches. Key indirect effects will result from changes in prey distribution and abundance due to ocean warming, ocean acidification and changes in ocean current systems.

Questions:

12.1. Does your country monitor climate effects on cetaceans?⁹

Climate change will have a multiplicity of possible direct and indirect effects on cetaceans. Attempting to quantify this is challenging, these questions are aimed to provide an overview of the type of monitoring programmes that are conducted that may provide indirect evidence of climate change on cetaceans.

- No.** Go to **Question 12.3.**
- Yes.** Continue to **Question 12.2.**

12.2. Which effects has your country been monitoring in the reporting period from 2016 to 2018?

Overview of monitoring activities related to climate change effects on small cetaceans. Please add additional direct or indirect effects if applicable.

Monitoring activity	Comments <i>(if possible, provide e.g. contact / link to project)</i>
<input type="checkbox"/> Changes in small cetacean abundance	
<input type="checkbox"/> Changes in small cetacean distribution	
<input type="checkbox"/> Changes in small cetacean migration or movement range	
<input type="checkbox"/> Changes in small cetacean migration or movement timing	
<input type="checkbox"/> Changes in small cetacean community structure	
<input type="checkbox"/> Changes in reproductive success and timing in small cetaceans	
<input type="checkbox"/> Changes in prey (fish) abundance and distribution	
<input type="checkbox"/> Changes in timing of prey (fish) spawning and migration	
<input type="checkbox"/> Changes in fishing effort	
<input type="checkbox"/> Changes in the occurrence of pathogens <i>(from sampled individuals)</i>	
<input type="checkbox"/> Incidences of algal blooms <i>(if yes, where; specify year)</i>	
<input type="checkbox"/> ...	

⁹ This refers to direct and indirect effects.

12.3. List new initiatives / projects which provide evidence / data about climate change effects on small cetaceans in your country in 2016-2018 (title, organization, lead author; include the species concerned, the climate change effect observed, who did the work)

Provide web links if available.

12.4. List new reports/publications which provide evidence / data of climate change effects on small cetaceans in your country in 2016-2018 (title, organization, lead author; include the species concerned, the climate change effect observed, who did the work)

Provide web links if available.

12.5. Are there any actions / measures in your country to reduce identified climate change impacts on small cetaceans (directly or indirectly)?

No.

Yes. Please describe below:

12.6. List any gaps in monitoring / mitigation of climate change effects on cetaceans

In order to plan future monitoring and mitigation we need to be aware of current gaps and emerging issues.

12.7. List any emerging potential issues related to climate change effects on small cetaceans

12.8. Has there been any other notable instances / issues on climate change effects on small cetaceans in your country in the reporting period?

12.9. Is the perceived level of pressure from climate change to small cetaceans in your country increasing, decreasing, staying the same or unknown?¹⁰

To be done on a species by species basis where applicable (see Annex B) and by region where relevant (see Annex A).

Scientific name of the species	Increasing	Decreasing	Staying the same	Unknown

Not applicable. Comments:

C. Habitat Change and Degradation (incl. potential physical impacts)

13. Physical Habitat Change (e.g. from construction)

¹⁰ This is a question based on Resolution 8.1, Annex 1.

AIM: Human activities in the Agreement area have the potential to impact upon small cetaceans. Tracking those activities causing physical habitat change and better understanding their relative impacts will help shape any necessary mitigation action required.

Relevant Resolutions: 8.11, 8.9, 8.6, 8.4, 8.3, 8.2, 8.1, 7.1, 6.2, 6.1, 5.7

Human activities in the Agreement area have the potential to impact upon small cetaceans. Tracking those activities that cause physical habitat change and obtaining a better understanding of their relative impacts will help shape any necessary mitigation action.

This section aims to review new information on physical habitat change, e.g. from construction, and its impacts on small cetaceans, their prey and their habitat, and make recommendations to Parties and other relevant authorities for further action.

The collation of this information will contribute to the development of risk maps showing the spatial and temporal (by season) distribution of activities that have an impact on cetaceans, including information provided in National Reports, taking into account the work done by other organisations.

Note: In the term “physical habitat change”, we include a) coastal/marine construction – artificial islands, harbours, bridges, oil/gas platforms, wind turbines, tidal turbines; and b) seabed damage – dredging, bottom trawling.

Questions:

13.1. Provide spatial information on locations (in form of maps and/or links) of physical habitat change in your country by activity type (dredging, marine construction, coastal construction) for 2016-18.

Many range states are mapping human activities to fulfil obligations under the EU Maritime Spatial Planning Directive, MSFD, OSPAR, and HELCOM; this information is relevant (though often not readily accessible) to ASCOBANS in understanding the extent and trends of human activities potentially impacting small cetaceans.

Activity: Marine wind farms. Denmark has many marine wind farms and more are continuously being planned and constructed. A total list of existing and planned projects can be found here:

<https://ens.dk/ansvarsomraader/vindenergi/eksisterende-havvindmoelleparker-og-aktuelle-projekter>

Which area: Danish national waters

Type of information: Map of existing wind farms:



List of size and year of operation:

- Tunø Knob (1995) 10 turbines, 5 MW
- Middelgrunden (2000) 20 turbines, 40 MW
- Horns Rev I (2002) 80 turbines, 160 MW
- Rønland (2003) 8 turbines, 17,2 MW
- Nysted (2003) 72 turbines, 165,6 MW
- Samsø (2003) 10 turbines, 23 MW
- Frederikshavn (2003) 3 turbines, 7,6 MW
- Horns Rev II (2009) 91 turbines, 209,3 MW
- Avedøre Holme (2009/10) 3 turbines, 10,8 MW
- Sprogø (2009) 7 turbines, 21 MW
- Rødsand II (2010) 90 turbines, 207 MW
- Anholt (2013) 111 turbines, 399,6 MW
- Horns Rev 3 (2019) 49 turbines; 400 MW

Is the data available online? No. Comments:

Yes. Provide link: <https://ens.dk/ansvarsomraader/vindenergi/eksisterende-havvindmoelleparker-og-aktuelle-projekter>

13.2. Does your country have any cases of impacts on physical habitat change (e.g. dredging, marine construction, coastal construction) for small cetaceans for 2016-18?

No.

Yes. Describe in the table below:

Will be included in next draft

13.3. Does your country have any mitigation measures to prevent impacts on small cetaceans during physical habitat change activities (e.g. dredging, marine construction, coastal construction)?

No.

Yes. Describe in the table below:

Overview of mitigation measures related to small cetaceans and physical habitat change activities.

Any new project has to abide by the regulations in the habitats directive regarding the protection of harbour porpoises. Thus all new project have to assess their impact on porpoises and mitigate if the impact are assessed to have a long-term impact on the local population.

The Danish Energy Agency have published guidelines for procedure and mitigations with relation to marine constructions.

To be extended in next draft.

13.4. List initiatives/projects (including PhD, MSc) in your country in 2016-2018 involving studies of impacts from physical habitat change on small cetaceans (incl. title, organisation, lead author).

The DEPONS project (DISTURBANCE EFFECTS ON THE HARBOUR PORPOISE POPULATION IN THE NORTH SEA) has been ongoing 2012-2019 and has just finished – see reference below.

The TANGO project 2018-2020: Consortium of Aarhus University (Jakob Tougaard), Swedish National Museum of Natural History and Swedish Defense Research Agency. Maritime authorities in Sweden and Denmark have proposed a rerouting of the main shipping routes (the Tango-route) into the Baltic, scheduled to be effectuated in 2020. This project will describe changes to the soundscape, quantify effects on harbour porpoise abundance, and correlate these changes to the changes in ship traffic.

13.5. List publications (reports, theses, papers in journals, books) in 2016-2018 in your country relating to potential impacts of physical habitat change on small cetaceans.

Nabe-Nielsen J. 2019. *DEPONS model version 2.0: Individual-based model for simulating impact of wind farm construction noise on the North Sea harbour porpoise population. [Software]*.
<https://doi.org/10.5281/zenodo.2544525>

Brandt M, Dragon A-C, Diederichs A, Bellmann MA, Wahl V, Piper W, Nabe-Nielsen J, Nehls G. 2018. *Disturbance of harbour porpoises during construction of the first seven offshore wind farms in Germany. Marine Ecology - Progress Series. 596(213-232):213-232.* <https://doi.org/10.3354/meps12560>

van Beest FM, Kindt-Larsen L, Bastardie F, Bartolino V, Nabe-Nielsen J. 2017. *Predicting the population-level impact of mitigating harbor porpoise bycatch with pingers and time-area fishing closures. Ecosphere (Washington, D.C.). 8(4).* <https://doi.org/10.1002/ecs2.1785>

Sveegaard S, Teilmann J, Tougaard J 2017. *Marine mammals in the Swedish and Danish Baltic Sea in relation to the Nord Stream 2 project: Expert Assesment. Aarhus University, DCE – Danish Centre for Environment and Energy. 68 s. (Scientific Report from DCE - Danish Centre for Environment and Energy, Bind 237).*

Wisniewska DM, Johnson M, Teilmann J, Rojano Doñate L, Shearer J, Sveegaard S, Miller LA, Siebert U, Madsen PT. 2016. *Ultra-High Foraging Rates of Harbor Porpoises Make Them Vulnerable to Anthropogenic Disturbance. Current Biology. 26(11):1441-1446.*
<https://doi.org/10.1016/j.cub.2016.03.069>

13.6. Provide web links to other relevant information.

13.7. Has there been any other notable instances / issues in your country regarding physical habitat change in the reporting period?

unknown

13.8. Is the perceived level of pressure from physical habitat change) in your country increasing, decreasing, staying the same or unknown?¹¹

To be done on a species by species basis where applicable (see Annex B) and by region where relevant (see Annex A).

Scientific name of the species	Increasing	Decreasing	Staying the same	Unknown
Harbour porpoise				x

Not applicable. Comments:

C. Habitat Change and Degradation (incl. potential physical impacts)

14. Other issues

Question:

14.1. List any other issues not mentioned above.

¹¹ This is a question based on Resolution 8.1, Annex 1.

E. Area-based Conservation / Marine Protected Areas

16. List of protected areas, e.g. Natura 2000 sites

AIM: to provide information on existing and proposed marine protected areas with cetaceans as part of the selection criteria.

Relevant Resolutions: 8.2, 8.1, 5.7

Marine protected areas (MPAs) are considered under numerous agreements (including the Convention on Biological Diversity, Habitats Directive, Bern Convention, Ramsar Convention, OSPAR Convention, HELCOM, ACCOBAMS) as a tool to achieve conservation goals. Part of ASCOBANS remit is to provide expert advice for the conservation and management of small cetaceans. This includes inviting Parties and Range States to continue or initiate research aimed at locating areas of special importance to the survival (in particular breeding and feeding) of small cetaceans as suitable sites for the establishment of protected areas, and to implement appropriate management actions in these areas on their own or in the context of other intergovernmental bodies to ensure the protection of small cetaceans.

To monitor the progress of such work to fulfil the obligations of Resolution 5.7 (2006) and actions in the 2017-2020 workplan, ASCOBANS requires information (e.g. location, species, status, spatial data, management plans and monitoring) on existing and proposed marine protected areas with cetaceans as part of the selection criteria.

It is of particular interest to ASCOBANS to obtain an overview of the current scale of marine protected areas and to review best practice approaches to management of marine protected areas, in order to make recommendations to Parties, taking MPAs beyond being just 'paper parks'.

Questions:

16.1. Please complete and/or update the following table, providing details of existing or proposed MPAs with cetaceans forming part of the selection criteria.

Please copy the table for each MPA.

Name (full name of MPA)	Sydlige Nordsø, DK00VA347	
ASCOBANS Action Plan	<input type="checkbox"/> Jastarnia Plan <input checked="" type="checkbox"/> North Sea Plan	<input type="checkbox"/> WBBK Plan <input type="checkbox"/> Not Applicable
<i>OSPAR / HELCOM sub-area</i>	Region II, Southern North Sea	
Size (m²)	2473000000 (2473 km ²)	
Cetacean species forming part of selection criteria	Harbour porpoise	
MPA status	<input checked="" type="checkbox"/> Designated <input type="checkbox"/> Submitted <input type="checkbox"/> Under consultation	<input type="checkbox"/> Recommended <input type="checkbox"/> Other, please specify:
Date of designation (if applicable)	2011	
Legislation / Directive	<i>Habitats Directive</i>	
Are there management measures in place?	<input checked="" type="checkbox"/> No. <input type="checkbox"/> Yes. Provide link:	

Link to shapefiles and/or or online map	http://natura2000.eea.europa.eu/Natura2000/SDF.aspx?site=DK00VA347
Link to any other online information	

Name (full name of MPA)	Vadehavet med Ribe Å, Tved Å og Varde Å vest for Varde, DK00AY176	
ASCOBANS Action Plan	<input type="checkbox"/> Jastarnia Plan <input checked="" type="checkbox"/> North Sea Plan	<input type="checkbox"/> WBBK Plan <input type="checkbox"/> Not Applicable
OSPAR / HELCOM sub-area	Region II, Southern North Sea	
Size (m ²)	1353000000 (1353 km ²)	
Cetacean species forming part of selection criteria	Harbour porpoise	
MPA status	<input checked="" type="checkbox"/> Designated <input type="checkbox"/> Submitted <input type="checkbox"/> Under consultation	<input type="checkbox"/> Recommended <input type="checkbox"/> Other, please specify:
Date of designation (if applicable)	2011	
Legislation / Directive	Habitats Directive	
Are there management measures in place?	<input checked="" type="checkbox"/> No. <input type="checkbox"/> Yes. Provide link:	
Link to shapefiles and/or or online map	http://natura2000.eea.europa.eu/Natura2000/SDF.aspx?site=DK00AY176	
Link to any other online information		

Name (full name of MPA)	Gule Rev, DK00VA259	
ASCOBANS Action Plan	<input type="checkbox"/> Jastarnia Plan <input checked="" type="checkbox"/> North Sea Plan	<input type="checkbox"/> WBBK Plan <input type="checkbox"/> Not Applicable
OSPAR / HELCOM sub-area	Region II, Skagerrak	
Size (m ²)	109000000 (109 km ²)	
Cetacean species forming part of selection criteria	Harbour porpoise	
MPA status	<input checked="" type="checkbox"/> Designated <input type="checkbox"/> Submitted <input type="checkbox"/> Under consultation	<input type="checkbox"/> Recommended <input type="checkbox"/> Other, please specify:
Date of designation (if applicable)	2011	
Legislation / Directive	Habitats Directive	
Are there management measures in place?	<input checked="" type="checkbox"/> No. <input type="checkbox"/> Yes. Provide link:	
Link to shapefiles and/or or online map	http://natura2000.eea.europa.eu/Natura2000/SDF.aspx?site=DK00VA259	
Link to any other online information		

Name (full name of MPA)	Store Rev, DK00VA258	
ASCOBANS Action Plan	<input type="checkbox"/> Jastarnia Plan <input checked="" type="checkbox"/> North Sea Plan	<input type="checkbox"/> WBBK Plan <input type="checkbox"/> Not Applicable

<i>OSPAR / HELCOM sub-area</i>	Region II, Skagerrak	
Size (m²)	109000000 (109 km ²)	
Cetacean species forming part of selection criteria	Harbour porpoise	
MPA status	<input checked="" type="checkbox"/> Designated <input type="checkbox"/> Submitted <input type="checkbox"/> Under consultation	<input type="checkbox"/> Recommended <input type="checkbox"/> Other, please specify:
Date of designation (if applicable)	2011	
Legislation / Directive	<i>Habitats Directive</i>	
Are there management measures in place?	<input checked="" type="checkbox"/> No. <input type="checkbox"/> Yes. Provide link:	
Link to shapefiles and/or or online map	http://natura2000.eea.europa.eu/Natura2000/SDF.aspx?site=DKO0VA258	
Link to any other online information		

Name (full name of MPA)	Skagens Gren og Skagerrak, DK00FX112	
ASCOBANS Action Plan	<input type="checkbox"/> Jastarnia Plan <input checked="" type="checkbox"/> North Sea Plan	<input type="checkbox"/> WBBK Plan <input type="checkbox"/> Not Applicable
<i>OSPAR / HELCOM sub-area</i>	Region II, Skagerrak	
Size (m²)	2703000000 (2703 km ²)	
Cetacean species forming part of selection criteria	Harbour porpoise	
MPA status	<input checked="" type="checkbox"/> Designated <input type="checkbox"/> Submitted <input type="checkbox"/> Under consultation	<input type="checkbox"/> Recommended <input type="checkbox"/> Other, please specify:
Date of designation (if applicable)	2011	
Legislation / Directive	<i>Habitats Directive</i>	
Are there management measures in place?	<input checked="" type="checkbox"/> No. <input type="checkbox"/> Yes. Provide link:	
Link to shapefiles and/or or online map	http://natura2000.eea.europa.eu/Natura2000/SDF.aspx?site=DKO0FX112	
Link to any other online information		

Name (full name of MPA)	Store Middelgrund, DK00VA250	
ASCOBANS Action Plan	<input type="checkbox"/> Jastarnia Plan <input type="checkbox"/> North Sea Plan	<input checked="" type="checkbox"/> WBBK Plan <input type="checkbox"/> Not Applicable
<i>OSPAR / HELCOM sub-area</i>	H Kattegat	
Size (m²)	21000000 (21km ²)	
Cetacean species forming part of selection criteria	Harbour porpoise	
MPA status	<input type="checkbox"/> Designated <input type="checkbox"/> Submitted <input type="checkbox"/> Under consultation	<input type="checkbox"/> Recommended <input type="checkbox"/> Other, please specify:

Date of designation (if applicable)	2011
Legislation / Directive	Habitats Directive
Are there management measures in place?	<input checked="" type="checkbox"/> No. <input type="checkbox"/> Yes. Provide link:
Link to shapefiles and/or or online map	http://natura2000.eea.europa.eu/Natura2000/SDF.aspx?site=DK00VA250
Link to any other online information	

Name (full name of MPA)	Gilleleje Flak og Tragten, DK00VA171	
ASCOBANS Action Plan	<input type="checkbox"/> Jastarnia Plan <input type="checkbox"/> North Sea Plan	<input checked="" type="checkbox"/> WBBK Plan <input type="checkbox"/> Not Applicable
OSPAR / HELCOM sub-area	H Kattegat	
Size (m ²)	151000000 (151km ²)	
Cetacean species forming part of selection criteria	Harbour porpoise	
MPA status	<input checked="" type="checkbox"/> Designated <input type="checkbox"/> Submitted <input type="checkbox"/> Under consultation	<input type="checkbox"/> Recommended <input type="checkbox"/> Other, please specify:
Date of designation (if applicable)	2011	
Legislation / Directive	Habitats Directive	
Are there management measures in place?	<input checked="" type="checkbox"/> No. <input type="checkbox"/> Yes. Provide link:	
Link to shapefiles and/or or online map	http://natura2000.eea.europa.eu/Natura2000/SDF.aspx?site=DK00VA171	
Link to any other online information		

Name (full name of MPA)	Røsnæs, Røsnæs Rev og Kalundborg Fjord, DK005X276	
ASCOBANS Action Plan	<input type="checkbox"/> Jastarnia Plan <input type="checkbox"/> North Sea Plan	<input checked="" type="checkbox"/> WBBK Plan <input type="checkbox"/> Not Applicable
OSPAR / HELCOM sub-area	H Belt Sea	
Size (m ²)	57000000 (57km ²)	
Cetacean species forming part of selection criteria	Harbour porpoise	
MPA status	<input checked="" type="checkbox"/> Designated <input type="checkbox"/> Submitted <input type="checkbox"/> Under consultation	<input type="checkbox"/> Recommended <input type="checkbox"/> Other, please specify:
Date of designation (if applicable)	2011	
Legislation / Directive	Habitats Directive	
Are there management measures in place?	<input checked="" type="checkbox"/> No. <input type="checkbox"/> Yes. Provide link:	
Link to shapefiles and/or or online map	http://natura2000.eea.europa.eu/Natura2000/SDF.aspx?site=DK005X276	
Link to any other online information		

Name (full name of MPA)	Fyns Hoved, Lillegrund og Lillestrand, DK008X183	
ASCOBANS Action Plan	<input type="checkbox"/> Jastarnia Plan <input type="checkbox"/> North Sea Plan	<input checked="" type="checkbox"/> WBBK Plan <input type="checkbox"/> Not Applicable
<i>OSPAR / HELCOM sub-area</i>	H Belt Sea	
Size (m²)	22000000 (22km ²)	
Cetacean species forming part of selection criteria	Harbour porpoise	
MPA status	<input checked="" type="checkbox"/> Designated <input type="checkbox"/> Submitted <input type="checkbox"/> Under consultation	<input type="checkbox"/> Recommended <input type="checkbox"/> Other, please specify:
Date of designation (if applicable)	2011	
Legislation / Directive	<i>Habitats Directive</i>	
Are there management measures in place?	<input checked="" type="checkbox"/> No. <input type="checkbox"/> Yes. Provide link:	
Link to shapefiles and/or or online map	http://natura2000.eea.europa.eu/Natura2000/SDF.aspx?site=DK008X183	
Link to any other online information		

Name (full name of MPA)	Æbelø, havet syd for og Nærå, DK008X184	
ASCOBANS Action Plan	<input type="checkbox"/> Jastarnia Plan <input type="checkbox"/> North Sea Plan	<input checked="" type="checkbox"/> WBBK Plan <input type="checkbox"/> Not Applicable
<i>OSPAR / HELCOM sub-area</i>	H Belt Sea	
Size (m²)	113000000 (113km ²)	
Cetacean species forming part of selection criteria	Harbour porpoise	
MPA status	<input checked="" type="checkbox"/> Designated <input type="checkbox"/> Submitted <input type="checkbox"/> Under consultation	<input type="checkbox"/> Recommended <input type="checkbox"/> Other, please specify:
Date of designation (if applicable)	2011	
Legislation / Directive	<i>Habitats Directive</i>	
Are there management measures in place?	<input checked="" type="checkbox"/> No. <input type="checkbox"/> Yes. Provide link:	
Link to shapefiles and/or or online map	http://natura2000.eea.europa.eu/Natura2000/SDF.aspx?site=DK008X184	
Link to any other online information		

Name (full name of MPA)	Havet mellem Romsø og Hindsholm samt Romsø, DK008X185	
ASCOBANS Action Plan	<input type="checkbox"/> Jastarnia Plan <input type="checkbox"/> North Sea Plan	<input checked="" type="checkbox"/> WBBK Plan <input type="checkbox"/> Not Applicable
<i>OSPAR / HELCOM sub-area</i>	H Belt Sea	
Size (m²)	42000000 (42km ²)	

Cetacean species forming part of selection criteria	Harbour porpoise	
MPA status	<input checked="" type="checkbox"/> Designated <input type="checkbox"/> Submitted <input type="checkbox"/> Under consultation	<input type="checkbox"/> Recommended <input type="checkbox"/> Other, please specify:
Date of designation (if applicable)	2011	
Legislation / Directive	<i>Habitats Directive</i>	
Are there management measures in place?	<input checked="" type="checkbox"/> No. <input type="checkbox"/> Yes. Provide link:	
Link to shapefiles and/or or online map	http://natura2000.eea.europa.eu/Natura2000/SDF.aspx?site=DK008X185	
Link to any other online information		

Name (full name of MPA)	Lillebælt, DK008Z047	
ASCOBANS Action Plan	<input type="checkbox"/> Jastarnia Plan <input type="checkbox"/> North Sea Plan	<input checked="" type="checkbox"/> WBBK Plan <input type="checkbox"/> Not Applicable
<i>OSPAR / HELCOM sub-area</i>	H Belt Sea	
Size (m²)	352000000 (352km2)	
Cetacean species forming part of selection criteria	Harbour porpoise	
MPA status	<input checked="" type="checkbox"/> Designated <input type="checkbox"/> Submitted <input type="checkbox"/> Under consultation	<input type="checkbox"/> Recommended <input type="checkbox"/> Other, please specify:
Date of designation (if applicable)	2011	
Legislation / Directive	<i>Habitats Directive</i>	
Are there management measures in place?	<input checked="" type="checkbox"/> No. <input type="checkbox"/> Yes. Provide link:	
Link to shapefiles and/or or online map	http://natura2000.eea.europa.eu/Natura2000/SDF.aspx?site=DK008Z047	
Link to any other online information		

Name (full name of MPA)	Centrale Storebælt Og Vresen	
ASCOBANS Action Plan	<input type="checkbox"/> Jastarnia Plan <input type="checkbox"/> North Sea Plan	<input checked="" type="checkbox"/> WBBK Plan <input type="checkbox"/> Not Applicable
<i>OSPAR / HELCOM sub-area</i>	H Belt Sea	
Size (m²)	623000000 (623km2)	
Cetacean species forming part of selection criteria	Harbour porpoise	
MPA status	<input checked="" type="checkbox"/> Designated <input type="checkbox"/> Submitted <input type="checkbox"/> Under consultation	<input type="checkbox"/> Recommended <input type="checkbox"/> Other, please specify:
Date of designation (if applicable)	2011	
Legislation / Directive	<i>Habitats Directive</i>	

Are there management measures in place?	<input checked="" type="checkbox"/> No. <input type="checkbox"/> Yes. Provide link:
Link to shapefiles and/or or online map	
Link to any other online information	

Name (full name of MPA)	Maden på Helnæs og havet vest for, DK008X198	
ASCOBANS Action Plan	<input type="checkbox"/> Jastarnia Plan <input type="checkbox"/> North Sea Plan	<input checked="" type="checkbox"/> WBBK Plan <input type="checkbox"/> Not Applicable
OSPAR / HELCOM sub-area	H Belt Sea	
Size (m ²)	21000000 (21km ²)	
Cetacean species forming part of selection criteria	Harbour porpoise	
MPA status	<input checked="" type="checkbox"/> Designated <input type="checkbox"/> Submitted <input type="checkbox"/> Under consultation	<input type="checkbox"/> Recommended <input type="checkbox"/> Other, please specify:
Date of designation (if applicable)	2011	
Legislation / Directive	Habitats Directive	
Are there management measures in place?	<input checked="" type="checkbox"/> No. <input type="checkbox"/> Yes. Provide link:	
Link to shapefiles and/or or online map	http://natura2000.eea.europa.eu/Natura2000/SDF.aspx?site=DK008X198	
Link to any other online information		

Name (full name of MPA)	Flensborg Fjord, Bredgrund og farvandet omkring Als (Bredgrund), DK00VA254	
ASCOBANS Action Plan	<input type="checkbox"/> Jastarnia Plan <input type="checkbox"/> North Sea Plan	<input checked="" type="checkbox"/> WBBK Plan <input type="checkbox"/> Not Applicable
OSPAR / HELCOM sub-area	H Belt Sea	
Size (m ²)	652000000 (652km ²)	
Cetacean species forming part of selection criteria	Harbour porpoise	
MPA status	<input checked="" type="checkbox"/> Designated <input type="checkbox"/> Submitted <input type="checkbox"/> Under consultation	<input type="checkbox"/> Recommended <input type="checkbox"/> Other, please specify:
Date of designation (if applicable)	2011	
Legislation / Directive	Habitats Directive	
Are there management measures in place?	<input checked="" type="checkbox"/> No. <input type="checkbox"/> Yes. Provide link:	
Link to shapefiles and/or or online map	http://natura2000.eea.europa.eu/Natura2000/SDF.aspx?site=DK00VA254	
Link to any other online information		

Name (full name of MPA)	Femern Bælt, DK00VA260
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ASCOBANS Action Plan	<input type="checkbox"/> Jastarnia Plan <input type="checkbox"/> North Sea Plan	<input checked="" type="checkbox"/> WBBK Plan <input type="checkbox"/> Not Applicable
OSPAR / HELCOM sub-area	H Belt Sea	
Size (m ²)	115000000 (115km ²)	
Cetacean species forming part of selection criteria	Harbour porpoise	
MPA status	<input checked="" type="checkbox"/> Designated <input type="checkbox"/> Submitted <input type="checkbox"/> Under consultation	<input type="checkbox"/> Recommended <input type="checkbox"/> Other, please specify:
Date of designation (if applicable)	2011	
Legislation / Directive	Habitats Directive	
Are there management measures in place?	<input checked="" type="checkbox"/> No. <input type="checkbox"/> Yes. Provide link:	
Link to shapefiles and/or or online map	http://natura2000.eea.europa.eu/Natura2000/SDF.aspx?site=DKO/OVA260	
Link to any other online information		

16.2. Provide information on management measures particularly relevant to small cetaceans in MPAs listed above. Including any temporal/spatial restriction of activities (i.e. seasonal fishery closures, changes to vessel activity etc.).

In order to monitor implementation of MPA management measures and make recommendations on best practice, we need to understand what management measures are being used and be aware of examples of what approaches are proving effective.

To date (September 2019) no extra regulation (besides the general strict protection described in the EU Habitat Directives) are implemented in the SACs for harbour porpoises.

16.3. Provide details of existing or proposed monitoring schemes related to the effectiveness of MPAs / management measures listed above for small cetaceans.

The SACs for harbour porpoises was designated in 2010 and have been monitored since 2011. The monitoring scheme are described here for each geographical region of the:

Jastarnia Plan: No MPAs but Passiv acoustic monitoring (PAM) in the most Eastern Danish waters in intervals.

WBBK Plan: The population are counted (Ship and aerial survey) once during every 6th year EU monitoring period during the so called "MiniSCANS" in collaboration with Sweden and Germany. The first count was in 2012 and the next will be in 2020. The six largest MPA in the WBBK area are also monitored by PAM (5 CPODs for 1 year per six year monitoring period).

North Sea Plan: The 5 SACs are monitored annually by aerial surveys using the distance sampling method developed during SCANS-III.

16.4. Recommend any best practice approaches to management (threat mitigation) of MPAs listed above for small cetaceans.

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16.5. List new initiatives/projects involving studies of cetaceans relating to MPAs in your country (title, organization, lead author; include the species concerned, who did the work)

In order to plan future approaches for MPA management and monitoring we need to be aware of current gaps and emerging issues.

Sveegaard et al. 2018-2019: Ongoing project to determine the power of passive acoustic monitoring – a powerful tool for detecting trends in harbour porpoise densities in Danish MPAs. Aarhus University.

16.6. List new reports/publications involving studies of cetaceans relating to MPAs in your country (title, organization, lead author; include the species concerned, who did the work)

van Beest FM, Kindt-Larsen L, Bastardie F, Bartolino V, Nabe-Nielsen J. 2017. Predicting the population-level impact of mitigating harbor porpoise bycatch with pingers and time-area fishing closures. Ecosphere (Washington, D.C.). 8(4). <https://doi.org/10.1002/ecs2.1785>

16.7. Provide web links to other relevant information.

Section VI: Information and Education

A. Education and outreach

AIM: to determine if there are gaps in the outreach and education activities and if further materials should be produced in your country or by the Secretariat (e.g. on certain themes, species, regions, languages, for certain target audiences).

Relevant Resolutions: 8.3, 8.2, 5.8, 8.13

ASCOBANS Communication, Education and Public Awareness (CEPA) Plan¹² was presented at the 17th Meeting of the Advisory Committee. The purpose of the CEPA Plan was to identify actions and activities to be undertaken by the Secretariat, Parties and relevant partners. In addition, the Advisory Committee recommended the following overarching principles: (i) Carefully identifying the audience – e.g. children, students, policy makers, fishers – and making materials appropriate to each particular audience; (ii) Noting that different localities, communities and cultures may require different approaches; (iii) Preparing outreach and education materials in relevant languages (including on the website); and (iv) Building joint initiatives with ‘partner’ organizations and others. The CEPA aimed for more effective engagement with audiences, greater impact upon audiences, closer relationship with key conservation issues; more effective connection with educational, fundraising and promotional initiatives; and more effective and easily understood communication of relevant areas of science. In this spirit, the purpose of this section is to highlight successes and to identify potential gaps in outreach and education activities and related materials.

Questions:

1. Please list education/outreach activities in 2016-2018 in your country, which are of relevance to conservation of small cetaceans in ASCOBANS’ remit (e.g. activities during the International Day of the Baltic Harbour Porpoise in May)

Organiser	Name of activity (incl. translation to English, where applicable)	Date(s)	Location	Target audience (general public, scientists, children, fishers; other – please state)	Links (for further information)
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¹² See [AC17 Report](#), Annex 10 (starting on page 65).

Copenhagen University	Marine Mammal Biology and Research	annually	Copenhagen	University students	https://kurser.ku.dk/course/NMB15001U
Aarhus University	Middelfart porpoise listening station	continuously	Middelfart	All public	
Aarhus University	ECS Conference (Workshops, porpoise safari, public speaks)	29 th of April – 3 rd of May 2017	Middelfart, Denmark	Scientist and general public	https://www.europeancetaceansociety.eu/sites/default/files/ECS_full-program_opslag.pdf
Aarhus University - Maria KH. Palner	Dissection, public outreach, roll-up and teaching	23-26 th of May, 2018	Hirtshals Denmark	General public, children and municipalities and politicians	Yearly public meeting: https://naturmoedet.dk/english-information/
Aarhus University - Maria KH. Palner	Information movies on 1) Porpoise stomach content and 2) porpoise sound and noise.	October 2018	Denmark	Children and general public	Porpoise stomach contents: https://www.youtube.com/watch?v=550Ri2vB2Gg Sound and noise: https://www.youtube.com/watch?v=WP_wUU3PmZA&t=150s
Aarhus University - Maria KH. Palner	Teaching school children	2018	Denmark (Køge and Holte)	Children 10-16 years.	

2. Please list current information/outreach materials produced in your country, which are of relevance to ASCOBANS' remit and species.

Name of publication <i>(incl. translation into English, where applicable)</i>	Author(s)	Publisher	Year	Links <i>(to download publication)</i>	Can ASCOBANS distribute the link to publication for outreach purposes?
					<input type="checkbox"/> No <input type="checkbox"/> Yes
					<input type="checkbox"/> No <input type="checkbox"/> Yes

3. List other organisations engaged in outreach relevant to ASCOBANS' remit, incl. web links.

Department of Bioscience, Aarhus University, Denmark. <http://bios.au.dk/en/>

Aventura Charter, Galeasen AVENTURA, Søndergade 21, DK 5500 Middelfart, www.galeasen-aventura.dk

Fjord&Belt, Margrethes Plads 1, 5300 Kerteminde, www.fjordbaelt.dk

The website <http://www.hvaler.dk/> run by Carl C. Kinze collects all incidental sightings. They also have a facebook site: <https://www.facebook.com/groups/hvaler.dk/>

Middelfart Museum, <https://www.middelfart-museum.dk/det-gamle-laug>

Øresund Aquarium, University of Copenhagen, Strandpromenaden 5, 3000 Helsingør, <https://www.oresundsakvariet.ku.dk/english/>

The Middelfart harbour porpoise Listening Station:

- <http://bios.au.dk/en/about-bioscience/organisation/marine-mammal-research/projects/porpoise-livestreaming/>
- *Scala L, Pierpoint C, Teilmann J, Petersen KV, Narramore J, Morris J. 2017. Middelfart listening station: A Static Acoustic Monitoring Solution for Monitoring Harbour Porpoise & Ship Traffic in a Marine Protected Area. ECO Magazine. 34-37.*

4. Please list other initiatives relevant to ASCOBANS' remit that are not included above.

5. List any gaps in your country's outreach relevant to ASCOBANS' remit. What would be needed to fill these gaps?

6. List outreach activities foreseen for 2020, in which you would like ASCOBANS to be involved.
The next Meeting of the Parties to ASCOBANS is scheduled to be held in 2020.

7. Resources permitting, are there any materials that you think the ASCOBANS Secretariat should produce?

- No.
- Yes. Please describe what, and why:

8. Has there been any notable instances / issues in your country related to education and outreach in the reporting period?

unknown

Section VII: Other Matters

A. Other information or comments important for the Agreement:¹³

¹³ Opportunity to include other information relevant to the topics covered in this form but which are missing.

B. Difficulties in implementing the Agreement:

A major issue in conservation of harbour porpoises remain the missing data on bycatch and ways to mitigate this.

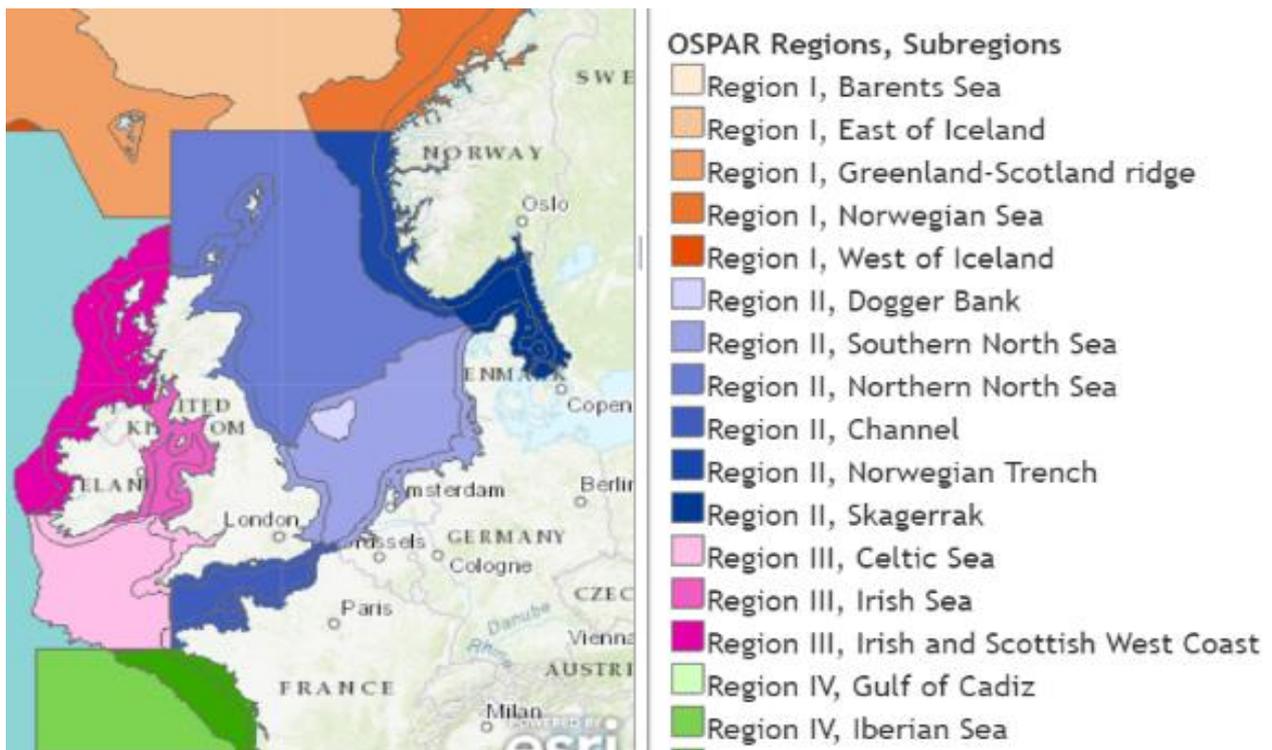
ANNEX A: Overview of the sub-regions as defined by OSPAR and HELCOM.

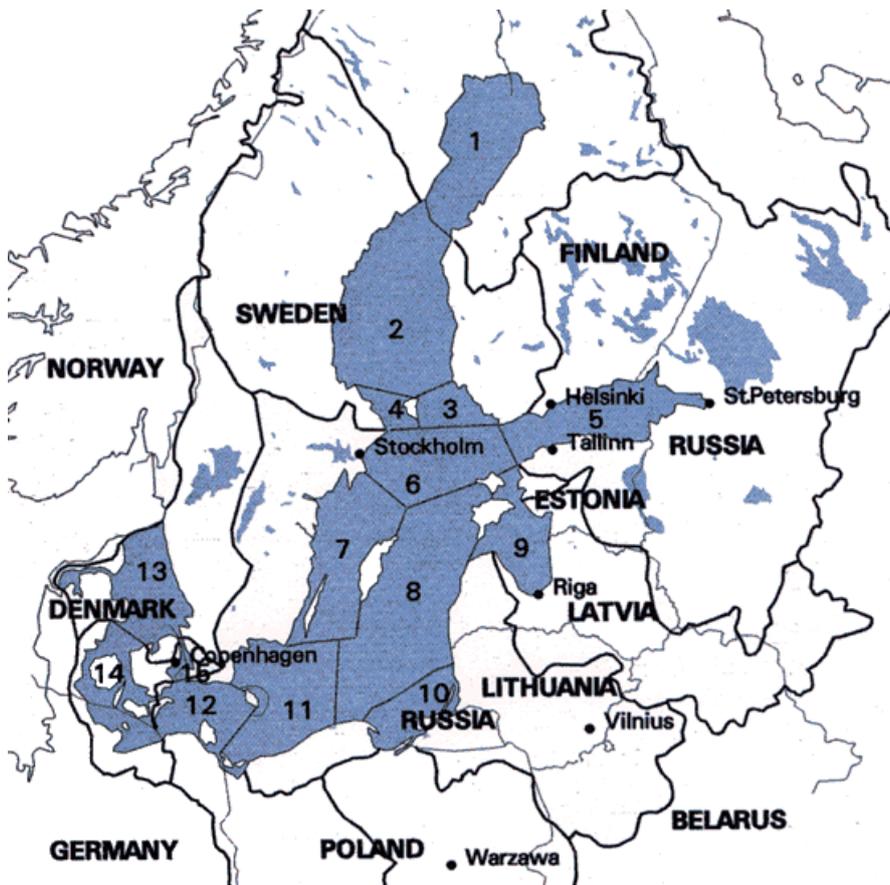
Choose an item.

Drop-down menu sub-regions OSPAR and HELCOM

Choose an item.

<p>OSPAR Region I Arctic Waters</p> <ul style="list-style-type: none"> <input type="checkbox"/> Norwegian Sea <p>OSPAR Region II Greater North Sea</p> <ul style="list-style-type: none"> <input type="checkbox"/> Dogger Bank <input type="checkbox"/> Southern North Sea <input type="checkbox"/> Northern North Sea <input type="checkbox"/> Channel <input type="checkbox"/> Norwegian Trench <input type="checkbox"/> Skagerrak <p>OSPAR Region III Celtic Sea</p> <ul style="list-style-type: none"> <input type="checkbox"/> Celtic Sea <input type="checkbox"/> Irish Sea <input type="checkbox"/> Irish & Scottish W. Coast 	<p>OSPAR Region IV Bay of Biscay and Iberian Coast</p> <ul style="list-style-type: none"> <input type="checkbox"/> N. Bay of Biscay <input type="checkbox"/> Iberian Sea <input type="checkbox"/> Gulf of Cadiz <p>OSPAR Region V Wider Atlantic</p> <ul style="list-style-type: none"> <input type="checkbox"/> subregions? <p>HELCOM</p> <ul style="list-style-type: none"> <input type="checkbox"/> Bothnian Bay <input type="checkbox"/> Bothnian Sea <input type="checkbox"/> Archipelago Sea <input type="checkbox"/> Åland Sea 	<p>HELCOM cont.</p> <ul style="list-style-type: none"> <input type="checkbox"/> Gulf of Finland <input type="checkbox"/> Northern Baltic Proper <input type="checkbox"/> Western Gotland Basin <input type="checkbox"/> Eastern Gotland Basin <input type="checkbox"/> Gulf of Riga <input type="checkbox"/> Gdansk Basin <input type="checkbox"/> Bornholm Basin <input type="checkbox"/> Arkona Basin <input type="checkbox"/> Kattegat <input type="checkbox"/> Belt Sea <input type="checkbox"/> The Sound
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A map of the Baltic Sea drainage basins (catchment area), and marine subdivisions, including basins.

1. Bothnian Bay
2. Bothnian Sea
3. Archipelago Sea
4. Åland Sea
5. Gulf of Finland
6. Northern Baltic Proper
7. Western Gotland Basin
8. Eastern Gotland Basin
9. Gulf of Riga
10. Gdansk Basin
11. Bornholm Basin
12. Arkona Basin
13. Kattegat
14. Belt Sea
15. The Sound

ANNEX B: Species covered by ASCOBANS.

Code	Common name	Scientific name
AWSD	Atlantic white-sided dolphin	<i>Lagenorhynchus acutus</i>
BBW	Blainville's beaked whale	<i>Mesoplodon densirostris</i>
BD	Bottlenose dolphin	<i>Tursiops truncatus</i>
CBW	Cuvier's beaked whale	<i>Ziphius cavirostris</i>
CD	Short-beaked Common Dolphin	<i>Delphinus delphis</i>
FKW	False killer whale	<i>Pseudorca crassidens</i>
GBW	Gervais' beaked whale	<i>Mesoplodon europaeus</i>
HP	Harbour Porpoise	<i>Phocoena phocoena</i>
KW	Killer Whale	<i>Orcinus orca</i>
LFPW	Long-finned pilot whale	<i>Globicephala melas</i>
NBW	Northern bottlenose whale	<i>Hyperoodon ampullatus</i>
PKW	Pygmy killer whale	<i>Feresa attenuata</i>
PSW	Pygmy sperm whale	<i>Kogia breviceps</i>
RD	Risso's dolphin	<i>Grampus griseus</i>
RTD	Rough-toothed dolphin	<i>Steno bredanensis</i>
SBW	Sowerby's beaked whale	<i>Mesoplodon bidens</i>
SD	Striped dolphin	<i>Stenella coeruleoalba</i>
SFPW	Short-finned pilot whale	<i>Globicephala macrorhynchus</i>
TBW	True's beaked whale	<i>Mesoplodon mirus</i>
WBD	White-beaked dolphin	<i>Lagenorhynchus albirostris</i>

Drop down menu Small Cetacean Species:

Choose an item.