

Agenda Item 4.3

Reports

National Reports of ASCOBANS Parties

National Report 5

2016 – 2019 National Report:

The Netherlands

Action Requested

Take note

Submitted by

The Netherlands



Note:

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

ASCOBANS National Reporting Form

1 January 2016 – 31 December 2019

As outlined in [ASCOBANS Resolution 8.1](#) on National Reporting, this form will cover the years 2016, 2017, 2018 and 2019, and all Sections of the Annex to the Resolution:

- Section I: General Information
- Section II: Habitat Conservation and Management (threats and pressures on cetaceans)
- Section III: Surveys and Research
- Section IV: Use of Bycatches and Strandings
- Section V: Legislation
- Section VI: Information and Education
- Section VII: Other Matters

The national reports submitted will inform discussions at the 9th Meeting of the Parties to ASCOBANS (8-10 September 2020).

- All questions apply to the reporting period 2016-2019.
- Region in the tables refers to the sub-regions as defined by the HELCOM and OSPAR, and Areas refers to the sub-areas as defined by ICES. An overview and maps of these can be found in Annex A. Species can be chosen from the drop-down list provided, based on ASCOBANS species list, see Annex B.
- Throughout the form, please include relevant web links and add rows where applicable.

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.

For any questions, please do not hesitate to contact the Secretariat.

High-level Summary of Key Messages

In your country, for the reporting period from 2016 to 2019, what does this report reveal about:

1. **The most successful aspects of implementation of the Agreement?** (list up to five items)
 - SCANS survey summer 2016
 - REM project to estimate bycatch in the Dutch commercial set-net fishery
 - Development of the updated Conservation Plan for the Harbour Porpoise in The Netherlands
 - Continuation and formalisation (e.g. WOT - statutory research tasks) of monitoring tasks
 - More holistic analyses of different national and international data sets at both national and international levels (for example from strandings as well as survey databases)

2. **The greatest challenges in implementing the Agreement?** (list up to five items)
 - Long-term funding of monitoring or new research projects
 - Acquiring offshore animals (e.g. through bycatches) for post mortem exams
 - Methods for assessing cumulative impacts
 - Understanding the ecological role of the Harbour Porpoise in Dutch waters (and beyond).

3. **The main priorities for future implementation of the Agreement?** (list up to five items)
 - Finalization of the new Dutch Conservation Plan for Harbour porpoise 2020
 - International cooperation with all stakeholders/parties involved on assessing bycatch for the North Sea harbour porpoise
 - Development of alternative methodologies to make monitoring cost-effective and multi-targeted (e.g. High Definition aerial surveys, fishery monitoring, PAM, tagging)

Section I: General Information

A. Country Information

1. **Name of Party / Non-Party Range State:** The Netherlands

2. **Details of the Report Compiler**

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 Does the Report Compiler act as ASCOBANS National Coordinator (i.e. focal point)?
 No **Yes**

3. **Details of contributor(s) over the last 4 years**

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Topic(s) contributed to: Strandings

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Topic(s) contributed to: Marine debris

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

A. Fisheries-related Threats

1. Bycatch

AIM: to illustrate progress on understanding, monitoring and mitigating bycatch of small cetaceans.
Relevant Resolutions: 8.5, 8.4, 8.3, 7.3, 7.1, 6.1, 5.8, 5.7, 5.5, 3.3

Bycatch, the entanglement of an animal in fishing gear, is identified as a major cause of mortality in small cetaceans. Every effort should be made to reduce bycatch towards zero as quickly as possible. Parties to ASCOBANS have agreed on a number of resolutions that highlight the importance of mitigating bycatch of small cetaceans in the Agreement Area, as available data indicates that levels of bycatch pose a considerable threat to their conservation status. Parties have agreed that modifications of fishing gear and relevant practices shall be applied in order to reduce negative impacts where data indicates unacceptable interaction. The Agreement Area requires improved monitoring, collation of data, and consideration of appropriate mitigation measures, while also taking into account similar work in other areas.

To better understand the extent of the impact of bycatch on small cetaceans, monitoring and mitigation measures in place, and ongoing work in the Agreement Area, countries are requested to provide relevant information.

Note: This section includes bycatch in recreational fisheries.

Questions:

1.1. How is bycatch assessed/monitored in your country?

Year	Method	Used	Percentage (% by monitoring method, of total bycaught animals, by gear type if applicable)
2016	Dedicated observer schemes	<input type="checkbox"/>	
	Fisheries observers	<input checked="" type="checkbox"/>	<5%
	Remote Electronic Monitoring	<input checked="" type="checkbox"/>	65%
	Self-reporting by fisherman	<input checked="" type="checkbox"/>	10%
	Pathological investigation	<input checked="" type="checkbox"/>	20%
	Assessment at stranding site	<input type="checkbox"/>	
2017	Dedicated observer schemes	<input type="checkbox"/>	
	Fisheries observers	<input checked="" type="checkbox"/>	<5%
	Remote Electronic Monitoring	<input checked="" type="checkbox"/>	80%
	Self-reporting by fisherman	<input checked="" type="checkbox"/>	10%
	Pathological investigation	<input checked="" type="checkbox"/>	10%
	Assessment at stranding site	<input type="checkbox"/>	
2018	Dedicated observer schemes	<input type="checkbox"/>	
	Fisheries observes	<input checked="" type="checkbox"/>	<5%
	Remote Electronic Monitoring	<input type="checkbox"/>	
	Self-reporting by fisherman	<input checked="" type="checkbox"/>	<5%
	Pathological investigation	<input checked="" type="checkbox"/>	90%
	Assessment at stranding site	<input type="checkbox"/>	
2019	Dedicated observser schemes	<input type="checkbox"/>	
	Fisheries observes	<input checked="" type="checkbox"/>	<5%
	Remote Electronic Monitoring	<input type="checkbox"/>	
	Self-reporting by fisherman	<input checked="" type="checkbox"/>	<5%
	Pathological investigation	<input checked="" type="checkbox"/>	90%
	Assessment at stranding site	<input type="checkbox"/>	

Comments:

The scale of the pathological investigation was about the same between years. The percentage here is interpreted as mean how much of the different methods were used to assess bycatch per year. So it decreases for pathological investigation when the REM for the bottom-set gillnet was conducted (2013 to 2017). Self-reporting by fishermen is not done in a systematic frame, but occurs occasionally when fishermen notify researchers when they have a bycatch. However structural continuation of the cooperation with the gillnet fisheries sector is lacking as well as representative monitoring in gillnet fisheries.

In addition fisheries observers assess the incidental bycatch of cetaceans in Dutch pelagic fisheries. EU Council Regulation 812/2004 requires observer coverage in ICES areas VI, VII and VIII in the period 1 December – 31 March (fleet segment NLD003) and outside this area in all areas year round (fleet segment NLD004). In the Dutch situation the monitoring is integrated with the collection of catch data under the EC Data Collection Regulation 199/2008 and Decision 93/2010. There is also a limited coverage of static gear within this observer program. No small cetacean bycatches were reported in either fishery for the years 2016, 2017 and 2018.

In 2019 a bycatch was noted by the public of an animal caught (initially alive) in a gillnet.

1.2. Which species of small cetaceans were recorded as bycatch by commercial fishing in the reporting period?

Overview of bycaught small cetaceans per region. Provide information where available.

Species	Number of bycaught animals observed	Year (incl. season if available)	Gear type	Area	Overall sampling effort	Monitoring method used
HP Harbour porpoise	1	12 March 2017	Trammel net (GTR)	27.4.c	Approx. 10% of commercial Dutch bottom set gillnet fleet	REM
HP Harbour porpoise	1	April 2017	Single-walled gillnet (GNS)	27.4.c	Unknown	Self-reporting by fisherman outside the REM project; considered to have been caught dead
HP Harbour porpoise	1	1 May 2016	Single-walled gillnet (GNS);	27.4.c	Unknown	REM – outside monitored effort
HP Harbour porpoise	1	11 May 2016	Trammel net (GTR)	27.4.c	Unknown	REM – outside monitored effort; considered to have been caught dead
HP Harbour porpoise	1	27 May 2019	Single-walled gillnet (GNS) for sea bass	27.4.c	Unknown	There was a report from the public that a porpoise was in a gillnet and still alive. It died after it could not be released on time

1.3. Which species of small cetaceans were recorded as bycatch by recreational fishing in the reporting period?

Overview of bycaught small cetaceans per region. Provide information where available.

Species	Number of bycaught animals observed	Year (incl. season if available)	Gear type	Area	Overall sampling effort	Monitoring method used
Choose an item.	-	-	-	Choose an item.	-	-

1.4. Has there been any notable incidents/issues related to bycatch during the reporting period in your country?

No.

Yes. Please provide details:

(mass bycatch incidents, unusual species bycatch etc.)

1.5. Are there any mitigation measures in place?

No.

Yes. Please provide details: What mitigation measures (including alternative gear) are being used and where? (acoustic deterrent devices, seasonal closures, gear modifications etc.)

Mitigation approach	Region	Year implemented	Has the mitigation measure been effective?
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Pingers	Oil Southern North Sea	2016	<input type="checkbox"/> No <input type="checkbox"/> Yes. Unknown. Comments: this is voluntary and not monitored
Closures	Oil Southern North Sea		<input type="checkbox"/> No <input type="checkbox"/> Yes. Comments: effectiveness is not monitored
	Choose an item.		<input type="checkbox"/> No <input type="checkbox"/> Yes. Comments:

1.6. Have there been changes in fishing effort (for fisheries known to have an impact) in the reporting period?

- No.
- Unknown/not applicable. Comments:
- Yes. Please provide details:

In general fishing effort for bottom-set gillnet has been going down over the last decade.

1.7. Relevant new research/work/collaboration on bycatch in your country.

(List initiatives/ projects (incl. PhD, MSc); publications (reports, theses, papers in journals, books) from any study; web links to other relevant information)

Couperus AS (2018) *Annual report on the implementation of Council Regulation (EC) No 812/2004 – 2016*. CVO report; No. 18.008. IJmuiden: Centrum voor Visserijonderzoek. <https://doi.org/10.18174/450585>

Couperus AS (2018). *Annual report on the implementation of Council Regulation (EC) No 812/2004 – 2017*. CVO report; No. 18.019. IJmuiden: Centre for Fishery Research (CVO). <https://doi.org/10.18174/464120>

Couperus AS (2019) *Annual report on the implementation of Council Regulation (EC) No 812/2004 –2018*. CVO report; No. 19.021. IJmuiden: Centre for Fishery Research (CVO). <https://doi.org/10.18174/509868>

Hammen vd T & de Graaf M (2016) *Recreational fisheries in the Netherlands: Analyses of the 2015 screening survey, the 2014 – 2015 logbook survey and the 2014 – 2015 Gillnet survey*. CVO report; No. 17.005. Available at: <http://dx.doi.org/10.18174/409681>

Hammen vd T & de Bruin P (2020) *Recreatieve staandwant survey 2018-2019*. CVO repor; No. 20.007. Available at: <https://doi.org/10.18174/516509>

Scheidat M & Königson S (2016) *Workshop on Remote Electronic Monitoring with Regards to Bycatch of Small Cetaceans*. The Hague, Netherlands, 2 October 2015. Available at: http://www.ascobans.org/sites/default/files/document/ASCOBANS_WS_REM_2015_Report.pdf

Scheidat M, Couperus B & Siemensma M (2018) *Electronic monitoring of incidental bycatch of harbour porpoise (Phocoena phocoena) in the Dutch bottom set gillnet fishery (September 2013 to March 2017)*. Wageningen Marine Research report; No. C102/18. IJmuiden: Wageningen Marine Research. <https://doi.org/10.18174/466450> Available at: <https://research.wur.nl/en/publications/electronic-monitoring-of-incidental-bycatch-of-harbour-porpoise-p>

1.8. Is the perceived level of pressure from bycatch in your country increasing, decreasing, staying the same or unknown?

To be done per species where applicable.

Species	Increasing	Decreasing	Staying the same	Unknown	Nature of the evidence (e.g. strandings, observer schemes)
HP Harbour porpoise	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Choose an item.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Choose an item.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Not applicable. Comments:
 There are no indications that bycatch events have changed from the time the REM project was running (2013 to 2017). However, this is not certain as fishing effort and porpoise distribution are changing over time, likely influencing bycatch numbers.

A. Fisheries-related Threats

2. Resource Depletion

AIM: to determine areas where, and to what extent, depletion of fish stocks have occurred during the reporting period. In addition; identify ongoing mitigation efforts regarding detrimental implications for small cetaceans.

Relevant Resolutions: 8.9, 8.3, 7.1, 6.1

Depletion in fish stocks due to overfishing and other factors generates pressure on the favourable conservation status of small cetaceans (through possible food shortage). More integrated management and reductions in fishing effort (also prompted by concern about fish stock depletion or other ecosystem considerations) have been encouraged, especially in areas of known risk. Further research, effective fishery regulations and innovation within certain fishing methods are considered to be helpful steps towards mitigating this pressure.

Parties to ASCOBANS have agreed on a number of resolutions that (1) determine the impact of the depletion of fish stocks on small cetaceans, (2) encourage fishing effort reductions and (3) review new information on these depletions to make recommendations. Resource depletion in the Agreement Area requires improved monitoring, collation of data, and consideration of appropriate mitigation measures, while also taking into account similar work in other areas.

It is of particular interest to ASCOBANS to understand the extent of prey depletions, any related ongoing work, monitoring and mitigation measures in the Agreement Area. Countries are requested to provide relevant information.

Questions:

2.1. Based on the latest stock assessments, are there any notable depletions of fish species which would be a concern for small cetaceans?

- No.**
 Yes. Please provide details.

Porpoises in Dutch waters are opportunistic foragers and have been shown to feed on a large range of different species. The information on their prey consumption based on stranded animals (stomach contents) does not indicate a change that could be linked to a fish stock in the southern North Sea that has been reduced. Additionally, porpoises in Dutch waters likely conduct seasonal movements related to prey availability. These relationships are, however, still poorly understood.

Cod numbers have been declining up to the early 2000s, but recovered in most of the North Sea in the years 2016/17, with the exception of the southern North Sea. Since then there is a general decrease in all areas with unclear reasons.

The spawning stock biomass of herring has fluctuated over the years; there is no decline. However, a potential concern is the low recruitment since 2002 and especially low recruitment in 2015 and 2017.

For whiting the spawning-stock biomass (SSB) has fluctuated since the mid-1980s. Recruitment (R) has been fluctuating without trend, but the last two year classes are below average.

ICES (2019). *Cod (Gadus morhua) in Subarea 4, Division 7.d, and Subdivision 20 (North Sea, eastern English Channel, Skagerrak)*. In Report of the ICES Advisory Committee, 2019. ICES Advice 2019, cod.27.47d20, <https://doi.org/10.17895/ices.advice.5640>

ICES (2019). *Herring (Clupea harengus) in Subarea 4 and divisions 3.a and 7.d, autumn spawners (North Sea, Skagerrak and Kattegat, eastern English Channel)*. In Report of the ICES Advisory Committee, 2019. ICES Advice 2019, her.27.3a47d, <https://doi.org/10.17895/ices.advice.4716>

ICES (2019). *Whiting (Merlangius merlangus) in Subarea 4 and Division 7.d (North Sea and eastern English Channel)*. In Report of the ICES Advisory Committee, 2019. ICES Advice 2019, whg.27.47d, <https://doi.org/10.17895/ices.advice.4878>

2.2. Where are these depletions in national waters occurring?

Sub-areas/regions as defined by ICES/OSPAR & HELCOM.

Area	Region
27.4.c	Oil Southern North Sea
Choose an item.	Choose an item.

2.3. What measures are being taken to manage pressures on depleted fish stocks, including relevant regulations/guidelines (current / planned / year of implementation)?

Measure	Timeframe information	Relevant driver
ICES provides advice on takes for the various fish stocks	annual	Information on biomass, recruitment, mortality

2.4. Is there any evidence within your country’s national waters that resource depletion may be impacting small cetaceans (e.g. evidence of starvation)?

- No.**
- Yes.** Please provide details.

There is some indication that the cause of death of younger porpoises in the summer is linked to malnutrition. These younger animals feed primarily on fish of no commercial interest, such as gobies. These have a low nutritional value and it is hypothesized that this might cause malnutrition and subsequent starvation. It is no clear if the prey choice is linked to resource depletion or due to the inexperience of the young animals to hunt other prey.

2.5. Are there any national efforts to (e.g. surveys) evaluate cetacean body condition at sea?

- No.**
- Yes.** Please provide details.

There has been a pilot study to see if drone footage can be used to determine body conditions of harbour porpoise. The research is ongoing.

2.6. Relevant new research/work/collaboration on resource depletion in your country.

(List initiatives/ projects (incl. PhD, MSc); publications (reports, theses, papers in journals, books) from any study; web links to other relevant information)

Hin V, Harwood J & de Roos AM (2019) Bio-energetic modeling of medium-sized cetaceans shows high sensitivity to disturbance in seasons of low resource supply. *Ecological Applications* 29 (5):e01903. 10.1002/eap.1903

2.7. Is the perceived level of pressure from resource depletion in your country increasing, decreasing, staying the same or unknown?

To be done per species where applicable.

Species	Increasing	Decreasing	Staying the same	Unknown	Nature of the evidence
HP Harbour porpoise	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
WBD White-beaked dolphin	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Choose an item.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Not applicable. Comments:

B. Disturbance (incl. potential physical impacts)

3. Noise (impulsive i.e. piling and continuous/ambient i.e. shipping)

AIM: to illustrate progress on understanding, monitoring and mitigating negative effects on small cetaceans from underwater noise during the reporting period.
Relevant Resolutions: 8.11, 8.9, 8.6, 8.4, 8.3, 7.1, 6.2, 6.1

Small cetaceans are especially susceptible to underwater noise due to their high responsiveness to sound and wide hearing range. Good environmental status, as defined by the European Union, suggests that the introduction of energy, including underwater noise, is at levels that do not adversely affect the marine environment. Anthropogenic noise pollution has generally increased in recent times and generates a broad range of frequencies due to a wide variety of human activities. Impulsive and continuous noise present different impacts on small cetaceans, which include communicative masking, behavioural response and physiological injury. Noise in marine environments potentially impedes communication, affects distribution and hence feeding and reproduction of small cetaceans. Studies show that not only cetaceans but also fish and other marine life may be negatively impacted by anthropogenic noise.

Parties to ASCOBANS have agreed on implementation of measures through a number of resolutions that (1) highlight the potential impact that noise pollution may have on small cetaceans in the Agreement Area and (2) commit to reduce the pressure presented by underwater noise. The Agreement Area requires improved monitoring, collation of data, and consideration of appropriate mitigation measures.

To better understand the extent to which noise negatively impacts the health of small cetaceans, and to learn about new work relevant to the topic, countries are requested to provide related information.

Questions:

3.1. To which noise registers/databases has your country contributed to date?

ICES Impulsive Noise Register (for HELCOM and OSPAR Parties)	National registry	Other
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable Specify (e.g. JNCC noise registry): Data on Unexploded Ordnance are collected by the Dutch Navy and shared with the Royal Netherlands Meteorological Institute (KNMI)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Specify:

3.2. Any instances/issues in the reporting period including information on planned or completed significant developments/activities, including the details of monitoring in place before, during and after the project:

Development/ Individual Activity of impulsive noise (e.g. construction, seismic, sonar)	Status	Environmental Impact Assessment (EIA)	Strategic Environmental Assessment (SEA)	Information on noise management and monitoring			Region
				Regulations/ guidelines exist	Monitoring conducted	Mitigation in place	
Wind farms construction Gemini	Complete	<input type="checkbox"/> No. <input checked="" type="checkbox"/> Yes. Weblinks:	<input type="checkbox"/> No. <input type="checkbox"/> Yes. Weblinks:	Yes	Yes	Not Applicable	OII Southern North Sea
Wind farm construction Borssele (ongoing)	Not Applicable	<input type="checkbox"/> No. <input checked="" type="checkbox"/> Yes. Weblinks:	<input type="checkbox"/> No. <input type="checkbox"/> Yes. Weblinks:	Yes	Yes	Yes	OII Southern North Sea
	Choose an item.	<input type="checkbox"/> No. <input type="checkbox"/> Yes. Weblinks:	<input type="checkbox"/> No. <input type="checkbox"/> Yes. Weblinks:	Choose an item.	Choose an item.	Choose an item.	

3.3. Relevant new research/work/collaboration on underwater noise in your country.

<p>(List initiatives/ projects (incl. PhD, MSc); publications (reports, theses, papers in journals, books) from any study; web links to other relevant information)</p> <p>Projects: JOMOPANS: The aim of this international project is the development of a framework for an operational monitoring program for underwater sound in the North Sea. With measurements and models the underwater soundscape is mapped. The tools made in this project help policy makers, marine managers and other stakeholders to better assess where sound in the North Sea might have negative effects on marine life. The work is subsidized by Interreg for the North Sea Region. https://northsearegion.eu/jomopans</p> <p>In 2015, the Ministry of Economic Affairs and Rijkswaterstaat initiated an integrated monitoring and research programme to study gaps in our knowledge relating to the impact of offshore wind farms on the ecosystem of the North Sea. This so-called <i>WoZEP</i> Offshore wind energy ecological programme 2017-2021 envisages research on more fundamental and overarching topics related to effects of wind farms on indicator species, including the harbour porpoise.</p> <p>Environmental Impact assessments were conducted for the windparks Gemini and Borssele.</p>

SEANSE - Strategic Environmental Assessment North Sea Energy as an aid for Maritime Spatial Planning (SEANSE). In the framework of the implementation of the Political Declaration on energy cooperation between the North Seas Countries a common environmental assessment framework (CEAF) for assessing ecological cumulative effects of offshore renewable energy development is being developed. One of the proposed framework approaches is a modelling tool to quantitatively assess cumulative impacts of piling for offshore wind farm construction on the harbour porpoise population (more information available via TNO).

TNO participates in the *3S-project*, together with main partners FFI (Norway), SMRU (UK) and Cerema (Fra) and several associate partners; it is sponsored by the defense organizations or navies of US, UK, FR, UK and NL. In the 3rd phase of the project (3S3, 2016-2021) additional baseline and behavioural response data was gathered in from 2016 to 2019. This project has resulted in multiple peer-reviewed publications (currently more than 50) addressing different aspects of the response of animals to sonar sound and compare this to other types of responses. Three full Behavioural Response Studies (BRS) of 2, 3 and 4 weeks were conducted in 2016, 2017 and 2019. In 2019 the exposure experiments were supported by the operational frigate of the Royal Norwegian Navy, the KNM Otto Sverdrup. The cruise reports of 2016 and 2017 are available online: Lam et al.(2018ab).

Publications:

Aarts G, von Benda-Beckmann AM, Lucke K, Sertlek HÖ, et al. (2016). Harbour porpoise movement strategy affects cumulative number of animals acoustically exposed to underwater explosions. *Marine Ecology Progress Series* 557, 261-275

Ainslie M, Halvorsen MB, Dekeling RPA, Laws RM, Duncan AJ, Frankel AS, Heaney KD, Küsel ET, MacGillivray AO, Prior MK, Özkan Sertlek H & Zeddies DG (2016) Verification of airgun sound field models for environmental impact assessment, Proceedings of Meetings on Acoustics 27:1

Berges BJP, Geelhoed SCV, Scheidat M & Tougaard J (2019) Quantifying harbour porpoise foraging behaviour in CPOD data: identification, automatic detection and potential application. Wageningen, Wageningen Marine Research (University & Research centre), Wageningen Marine Research report C039/19 Quantifying harbour porpoise foraging behaviour in CPOD data: identification, automatic detection and potential application, pp. 41

von Benda-Beckmann AM, Aarts G, Sertlek HO, Lucke K, WC Verboom et al. (2015) Assessing the Impact of Underwater Clearance of Unexploded Ordnance on Harbour Porpoises (*Phocoena phocoena*) in the Southern North Sea. *Aquatic Mammals* 44 (3): 340-341

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<http://dx.doi.org/10.1098/rspb.2018.2592>

3.4. Report on noise management for cumulative impacts, including relevant regulations and guidelines, seismic shot point densities and level of impact deemed acceptable.

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Heinis F, de Jong CAF, von Benda-Beckmann S & Binnerts B (2019) Framework for Assessing Ecological and Cumulative Effects – 2018, Cumulative effects of offshore wind farm construction on harbour porpoises HWE: 18.153RWS_KEC2018

3.5. Is the perceived level of pressure from underwater noise in your country increasing, decreasing, staying the same or unknown?

To be done per species basis where applicable.

Species	Increasing	Decreasing	Staying the same	Unknown	Nature of the evidence
HP Harbour porpoise	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Based on an expected increase in wind farm construction and shipping.
Choose an item.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Not applicable. Comments:

B. Disturbance (incl. potential physical impacts)

4. Ocean Energy

AIM: to understand the extent and development of current and planned ocean energy projects, and progress in monitoring and mitigation of their negative effects on small cetaceans during the reporting period.

Relevant Resolutions: 8.11, 8.9, 8.6, 8.3, 6.2

Renewable energy is a necessary component of the efforts to supply the energy needs of human populations while combatting climate change. Efforts to harness renewable energy sources, however, should be conducted in a way that does not have a harmful impact on biological diversity and the marine environment. There are potential adverse effects of ocean energy on small cetaceans from such energy projects. In regard to small cetaceans, this can include potential lethal interactions or injury, negative behavioural impacts from displacement and changes in fecundity, calf survival and juvenile and adult mortality. There remains uncertainty regarding quantifying the (magnitude of the) pressure from ocean energy production on small cetaceans.

Parties to ASCOBANS have agreed to introduce precautionary measures and procedures for activities surrounding the development of renewable energy in marine environments in order to minimise and mitigate possible effects on small cetaceans, by following best practices. Parties have committed to investigating such pressures and robustly monitoring and mitigating them through environmental impact assessments. Addressing all aspects relevant to the conservation of protected species in regard to ocean energy and collaboration with other organizations working on or potentially interested in the issue is to the benefit of small cetaceans in the Agreement Area.

It is of particular interest to ASCOBANS to understand current and ongoing renewable energy projects in the Agreement Area, mitigation measures and procedures in use and other work relevant to the topic. Countries are requested to provide information relevant to their activities.

Questions:

4.1. Please enter wind energy farm data into the table below.

Name of wind farm	Operational date (or foreseen grid connection date)	Area	Output (megawatts per turbine)	Number of turbines	How were the individual wind turbines installed in the seabed?	Was scour protection used?	Noise mitigation during construction used? (multiple ticks possible)	If the wind farm is floating, how was it anchored?	Other mitigation used in pre-/post-construction	Additional information
Gemini: Buitengaats and ZeeEnergi	dd/10/16	27.4	4.0 MW	150	Pile-driving	Yes	<input type="checkbox"/> Single bubble curtains <input type="checkbox"/> Double bubble curtains <input checked="" type="checkbox"/> Acoustic deterrent devices <input checked="" type="checkbox"/> Time/area closures <input type="checkbox"/> Other, please specify:	Not applicable		Test with simultaneous pile driving in both wind farms. Actual overlap on 9 occasions, less than half an hr.

Choose an item.

4.2. Please enter wave power installation data into the table below.

Name of installation	Operational date (or foreseen grid connection date)	Area	Output (megawatts per turbine)	Number of turbines	How is the installation anchored?	Was scour protection used?	Mitigation used in pre-/during/post-construction	Additional information
-	dd/mm/yy	Choose an item.	-	-	-	Choose an item.	-	-

4.3. Please enter tidal energy installation data into the table below.

Name of installation	Operational date (or foreseen grid connection date)	Area	Output (megawatts per turbine)	Number of turbines	Type	Collision mitigation	Other mitigation used in pre-/during/post-construction	Additional information
-	dd/mm/yy	Choose an item.	-	-	Choose an item.	Choose an item.	-	-

4.4. Please enter tidal lagoon/barrage installation data into the table below.

Name of installation	Operational date (or foreseen grid connection date)	Area	Output (megawatts per turbine)	Number of turbines	Type	Collision mitigation	Other mitigation used in pre-/during/post-construction	Additional information
Tocado Tidal Power Plant Eastern Scheldt	24/02/16	27.4.c	1.25 MW	5	Other, please specify:	No	mitigation restricted to logging of incidents, and two years of monitoring possible effects	Specific location: In the storm surge barrier at the entrance of the Eastern Scheldt Type comments: turbines are incorporated in the storm surge barrier.

Choose an item.

4.5. Has there been any other instances/issues related to ocean energy during the reporting period in your country?

No.

Yes. Please provide details:

4.6. How is the pressure managed, incl. relevant regulations / guidelines and the year of implementation (current and planned)?

4.7. Relevant new research/work/collaboration on ocean energy in your country.

Projects:

WOZEP Offshore wind energy ecological programme was initiated by the Ministry of Economic Affairs and Rijkswaterstaat to study gaps in our knowledge relating to the impact of offshore wind farms on the ecosystem of the North Sea.

Passive acoustic monitoring (PAM) and aerial surveys the abundance and behaviour of harbour porpoises were studied during construction of the GEMINI and Borssele wind parks.

Porpoise behaviour was studied by simultaneous visual observations and passive acoustic monitoring in the vicinity of a periodically active porpoise deterrent, the FaunaGuard-PM, in the Marsdiep, Western Dutch Wadden Sea, in February-April 2016.

Publications:

Scheidat M & Porter L (2019) Chapter 2: Monitoring marine mammals. In: Wildlife and Wind Farms – Conflicts and Solutions edited by Martin Perrow. Volume 4 - Offshore: Monitoring & Mitigation. Pelagic Publishing. 330 pp.

Vrooman J, Schild G, Rodriguez AG & van Hest F (2019) North Sea wind farms: ecological risks and opportunities. North Sea Foundation, Utrecht, the Netherlands.

4.8. Mark the perceived level of pressure from ocean energy in your country to the table below.

For example, active construction of new developments could increase the pressure, while decommissioning or addition of mitigation measures to pre-existing projects could decrease the pressure.

Energy type	Status 2019 relative to previous years	Nature of the evidence
Wind energy	Increasing	
Wave power	Not Applicable	
Tidal energy	Unknown	
Tidal lagoon/barrage	Unchanged	

Comments:

B. Disturbance (incl. potential physical impacts)

5. Cetacean Watching Industry

AIM: to determine if the developing cetacean watching industry poses a threat to small cetaceans.

Relevant Resolutions: 8.9, 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.

5.2. In the table below, provide the sub-regions 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. If necessary, add rows.

Region	Small cetacean watching		Link to website or contact details (include information on ports and operators if available)	
	Primary focus / target species	Secondary focus		
Oll Southern North Sea	<input type="checkbox"/>	HP Harbour porpoise	<input checked="" type="checkbox"/>	Ports: Neeltje Jans, ZeelandColijnplaat, Eastern Scheldt Operator: info@deltasafari.nl website: deltasafari.nl

5.3. Does your country have a definition of the term ‘harassment’ in general and/or as it relates to the Cetacean Watching Industry? ¹

- No.
- Yes. Provide definition below:

The Netherlands has a number of regulations relating to Animal Welfare. These regulations define harassment, but mainly relate to domesticated animals. For wild animals the Nature Conservation Act, which follows the EU Habitats Directive directly, defines deliberate disturbance.

5.4. Have there been any incidents of harassment towards small cetaceans in the context of commercial cetacean watching reported to authorities during the reporting period?

- No.

5.5. Does your country have any operators that offer swimming with dolphins (or other small cetaceans)?

In some parts of the world this has become an important tourism industry with potential impacts for both small cetaceans and swimmers. Although scarcely developed, it has occurred within the ASCOBANS Agreement Area, and requires at least background monitoring. Sometimes incidents occur and can lead to harm for small cetaceans and/or swimmers.

- No. Go to Question 5.9.
- Yes. Provide information in the table below.

Location	Species	Operator	Any reported incidents between small cetaceans or swimmers.
-	Choose an item.	(include link to website)	<input type="checkbox"/> No <input type="checkbox"/> Yes, please describe:

5.6. List any incidents of harassment to small cetaceans during the reporting period in your country in the context of swimming with small cetaceans reported to authorities – and the outcome if known (behavioural response, injury, death, any court proceedings).

Date	Context of incidence	Outcome for (a) the animal or (b) human (e.g. behavioural response, injury, death)	Legal procedures/ court proceedings/ convictions that took place	Responsible authority for such reports	Link to websites or documentation of this report
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¹ For example, the US Marine Mammal Protection Act uses the term harassment, and defines two levels: Level A harassment means any act of pursuit, torment, or annoyance that has the potential to injure a marine mammal or marine mammal stock in the wild. Level B harassment refers to acts that have the potential to disturb (but not injure) a marine mammal or marine mammal stock in the wild by disrupting behavioural patterns, including, but not limited to, migration, breathing, nursing, breeding, feeding, or sheltering. NB. The UK uses the term ‘disturbance’ in its legislation.

dd/mm/yy	-				
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5.7. 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 small cetaceans and/or swimmers.

- No.** Go to **Question 5.12.**
- Yes.** Provide information in the table below.

Region	Date	Species	Link to websites	Reported incidents between small cetaceans and swimmers
Choose an item.	dd/mm/yy	Choose an item.		

5.8. Does your country have any mitigation measures (codes of conduct/guidelines) in place in the event of disturbance or harassment in the context of commercial cetacean watching, swimming with cetaceans, and interactions with solitary sociable dolphins?

No.

Comment: The general legal framework prohibits the harming of cetaceans. It is unknown if operators have specific codes of conduct.

Yes. Please add below the type of measures and relevant information:

Measure: (may include regional measures)			
Date of implementation:		Region: Choose an item.	
Has the measure been effective?	<input type="checkbox"/> No <input type="checkbox"/> Yes. Comments:		
Other information:			

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

Date	Context of incidence	Outcome for (a) the animal or (b) human (e.g. behavioural response, injury, death)	Legal procedures/court proceedings/convictions that took place	Responsible authority for such reports	Link to websites or documentation of this report
dd/mm/yy					

5.10. Relevant new research/work/collaboration on the cetacean watching industry, “swim with small cetacean” operations, solitary sociable dolphin interactions and their possible effects on small cetaceans in your country.

(List initiatives/ projects (incl. PhD, MSc); publications (reports, theses, papers in journals, books) from any study; web links to other relevant information)
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5.11. Have there been any other instances/issues related to cetacean watching industry during the reporting period in your country?

- No.**
- Yes.** Please provide details:

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

To be done per species where applicable.

Species	Increasing	Decreasing	Staying the same	Unknown	Nature of the evidence
HP Harbour porpoise	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	No change in the number of dolphin operators or the scale of the operation.

Choose an item.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Choose an item.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Not applicable. Comments:

B. Disturbance (incl. potential physical impacts)

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, 8.3, 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 the use of RIBs (rigid-hulled inflatable boats), hard-hulled boats exceeding 10 knots in speed, yachts and personal watercrafts such as jet skis, kayaks and surfboards; 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:

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

Web link or other relevant link to data: The Maritime Research Institute Netherlands (MARIN) is working on estimates on recreational vessels, due in the last quarter of 2019

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.

Region	Type of information	Is the data available online?	Provide link to data, or comment on unavailability
Choose an item.	(e.g. maps, GIS, reports)	<input type="checkbox"/> No <input type="checkbox"/> Yes	(weblinks)

6.3. Were 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.

Date	Area	Context of incidence	Outcome for (a) the animal or (b) human	Legal procedures/ court proceedings/ convictions	Link to websites or documentation of the incident
dd/mm/yy	Choose an item.	(e.g. what kind of recreational activity)	(e.g. behavioural response, injury, death)		

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 small cetaceans through recreational sea use?

- No.
 Yes. Provide information in table below:

Measure:	The Nature Conservation Act requires an assessment of new activities that can potentially cause negative effects in harbour porpoises. Mitigation measures need to be taken when effects are expected.	
Date of implementation:		Region: Oil Southern North Sea
Has the measure been effective?	<input type="checkbox"/> No. <input checked="" type="checkbox"/> Yes. Comments: some events like boat races were forbidden (< 2016) due to concerns they might cause harm to porpoises	
Other information:		

6.5. Relevant new research/work/collaboration on disturbance or harassment of small cetaceans through recreational sea use in your country.

(List initiatives/ projects (incl. PhD, MSc); publications (reports, theses, papers in journals, books) from any study; web links to other relevant information)
 -

6.6. Have there been any other instances / issues related to recreational sea use in your country during the reporting period?

- No.
 Yes. Please provide details:

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

To be done per species where applicable.

Species	Increasing	Decreasing	Staying the same	Unknown	Nature of the evidence
HP Harbour porpoise	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Choose an item.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

- Not applicable. Comments:

B. Disturbance (incl. potential physical impacts)

7. Other Sources of Disturbance

AIM: to identify new sources of disturbance that could be a threat to small cetaceans.
 Relevant Resolutions: 8.9, 6.1

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

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

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

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

Description of event:		Date: dd/mm/yy	Area: Choose an item.
Outcome for (a) the animal or (b) human	(e.g. behavioural response, injury, death)		
Describe mitigation measures:			
Legal procedures/ court proceedings/ convictions:			
Links to relevant information:	(websites, etc.)		

7.2. Relevant new research/work/collaboration on other sources of disturbance in your country.

(List initiatives/ projects (incl. PhD, MSc); publications (reports, theses, papers in journals, books) from any study; web links to other relevant information)

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

8. Unexploded Ordnance

AIM: to provide information on the mitigation, management and potential negative impacts of unexploded ordnance on small cetaceans during the reporting period.
 Relevant Resolutions: 8.11, 8.9, 8.8, 8.3

Unexploded chemical and conventional munitions present a threat to small cetaceans. Hazards exist from unexploded munitions, which release chronic contaminants, and upon detonation, which is physically hazardous from extreme underwater noise and a sudden release of toxic substances. Unexploded ordnance is a notable threat in many areas, such as the Baltic Sea, where the quantity is unknown, though estimates are high. Information on disposal, state of corrosion and quantities of dumped munition is limited, as are meaningful data on the measured environmental impacts. The significance of this pressure's impact on small cetaceans requires further quantification. However, it is clear that mitigation measures are necessary to support alternatives to detonations, and when no alternative is feasible, to reduce negative impacts on small cetaceans.

In the ASCOBANS Area, millions of tons of unexploded ordnance are present in the marine environment and thousands of sea users, such as fishermen, encounter such munitions every year. Parties have agreed on resolutions to support (1) research investigating the pressure on marine animals and habitat and (2) mitigation measures regarding effects of disintegrating submerged munitions on the marine environment. Parties are to strive towards providing relevant information to required bodies and supporting efforts to address the negative implications from this pressure in other regional and international organizations and waters.

Questions:

8.1. To which registers/databases covering conventional and chemical munitions has your country contributed to date?

<input checked="" type="checkbox"/> OSPAR	<input type="checkbox"/> None	<input type="checkbox"/> Unknown
<input type="checkbox"/> HELCOM	<input checked="" type="checkbox"/> Other, please state: Because detonations of unexploded ordnance can interfere with geoseismic monitoring, all detonations exceeding 25 kg (TNT eq.) are also reported to the Royal Netherlands Meteorological Institute (KNMI).	

8.2. Please fill in Table 8.2 below on unexploded ordnance. For explanation of terms, see [AC22/Inf.4.6.c](#).

8.3. Have there been any instances/issues (not listed in Table 8.2) related to the issue of unexploded ordnance during the reporting period in your country?

- No.**
- Yes.** Please provide details:

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8.4. How is the issue of unexploded ordnances being managed?

(incl. mitigation measures, relevant regulations/guidelines, year of implementation; may include planned management)

After publication of a report on unexploded ordnance in the Dutch North Sea (Von Benda-Beckman et al, 2015) a procedure to adjust the current protocol is in place. To minimize the impact no single measure can be prescribed but a mix of measures depending on the situation will be prescribed.

8.5. Relevant new research/work/collaboration on the issue of unexploded ordnance in your country.

(List initiatives/ projects (incl. PhD, MSc); publications (reports, theses, papers in journals, books) from any study; web links to other relevant information)

8.6. Is the perceived level of pressure from unexploded ordnance in your country:

<input type="checkbox"/> Increasing	<input type="checkbox"/> Decreasing	<input type="checkbox"/> Staying the same	<input checked="" type="checkbox"/> Unknown
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Nature of evidence:

Not applicable. Comments:

Table 8.2 on Unexploded Ordnance (adapted from the OSPAR reporting format)

OSPAR Ref. No	First located (Area)	Nature of encounter	Date	Type of munition	Action taken	State of munition (corrosion)	Release, Destruction (Area)	Remarks	Depth of Explosion	Estimated net weight of explosive material of demolished UXO	Demolition charge: net weight of explosive material added	Observations during explosion
If available, otherwise leave blank	Please select	Please select	dd/mm/yy	Please select	Please select	Please select	Please select	(incl. mitigation measures taken, if any)	Meters on seafloor / raised	TNT equivalent in kg	TNT equivalent in kg	Please select
	Choose an item.	Choose an item.		Choose an item.	Choose an item.	Choose an item.	Choose an item.					Choose an item.

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

9. Marine Debris (ingestion and entanglement)

AIM: to illustrate progress, during the reporting period, on understanding, monitoring and mitigating impacts of marine debris on small cetaceans.
Relevant Resolutions: 8.8, 8.3, 6.1

Marine debris, such as macroplastics and discarded fishing gear, poses a threat to small cetaceans due to the potential for these materials to be ingested or to cause entanglement. Commercial fishing operations, recreational fishing and cargo shipping are notable sources of this material, of which the majority is plastic and ghost nets. However, it is assumed that most of the marine litter worldwide comes from land, although this differs per region. Even small amounts of macroplastics that have been ingested may present serious effects on small cetaceans, such as detrimental influence on the gastrointestinal tract or leaching pollutants into the body, potentially leading to mortality or reduced body condition. Entanglement is well-established as a threat to small cetaceans as plastic debris continues to accumulate in aquatic environments, and may cause physical injuries, reduced survival or drowning.

To better understand the impact of marine debris on small cetaceans and measures in place to mitigate these effects, countries are requested to provide relevant information.

Note: Includes macroplastics and discarded fishing gear. Microplastics are covered under Section C 10 Pollution and Hazardous Substances.

Questions:

9.1. Does your country have monitoring in place to assess levels of marine debris?

- No.** Go to **Question 9.3.**
 Yes. Provide information in the table below:

(e.g. type of litter (size, shape, material), amount, impacts on species, geographical location, etc.; include parameters provided through monitoring)

OSPAR Litter Monitoring Programme of beach litter

Beach litter monitoring: Data on the amount of litter on a given stretch of coastline is recorded at item level. Items to be recorded are predefined by the Guideline for Monitoring Marine Litter on the Beaches in the OSPAR Maritime Area (OSPAR Agreement 2010-02).

OSPAR Plastic particles in Fulmar stomachs in the North Sea

Plastic ingestion by Fulmars: Two types of plastic categories are distinguished in the OSPAR Common Indicator. Industrial plastic pellets are separated from consumer debris such as sheets, foams, threadlike materials, and hard fragments. For each of these categories the number of particles and mass (in grams and to the fourth decimal place) is recorded. The final assessment is based only on the total weight of plastics in stomachs, but industrial and consumer waste plastics have different sources and as such provide very useful information for interpreting the monitoring data.

Dutch seafloor litter monitoring in the North Sea

This is a monitoring programme developed to evaluate the state of marine waters (Good Environmental Status) within the Marine Strategy Framework Directive (MSFD) for the Marine Litter descriptor (D10). The Dutch monitoring program for this descriptor includes the collection of data on the presence, abundance and distribution of macro litter on the seafloor. According to the Dutch program, the data on seafloor litter must be collected during statutory task fish surveys using a standardised GOV (Grand Ouverture Verticale) fishing net as part of the International Bottom Trawl Survey (IBTS), which is carried out yearly in the North Sea. The Dutch seafloor litter monitoring results are uploaded to the ICES DATRAS database, and are used in OSPAR assessments of seafloor litter in the North Sea. Due to this aggregation of many ICES seafloor litter surveys of the North Sea (Volwater and van Hal, 2020).

9.2. Are these data publicly available?

- No.**
 Yes. Please provide a link:

<https://oap.ospar.org/en/osparassessments/intermediateassessment-2017/pressures-humanactivities/marine-litter/beach-litter/https://oap.ospar.org/en/osparassessments/intermediateassessment-2017/pressures-humanactivities/marine-litter/plasticparticles-fulmar-stomachs-north-sea/>

9.3. What species of small cetaceans were found to have been impacted by marine debris?

Species	# of impacted individuals	Year	Region	Description of the impact
HP Harbour porpoise	Unknown (sampling not systematic)		Oil Southern North Sea	No entanglements were recorded. Ingested plastics are found in a small proportion of harbour porpoises. Marine debris has not been found to be a cause of death for harbour porpoise.
Choose an item.			Choose an item.	

9.4. Are there any mitigation measures in place?

No.

Comment: OSPAR Regional Action Plan contains measures to reduce plastic pollution

Yes. Provide information in the table below.

(Mitigation measures might include e.g. changes in gear to prevent loss, entanglement response, adoption of measures to reduce land-based/boat-based sources of marine debris)

Measure:	
Date of implementation:	Region: Choose an item.
Has the measure been effective?	<input type="checkbox"/> No. <input type="checkbox"/> Yes. Comments:
Other information:	

9.5. How is marine debris managed? (incl. relevant regulations / guidelines and the year of implementation, current and planned)

OSPAR Regional Action Plan contains measures to reduce plastic pollution
--

9.6. Relevant new research/work/collaboration on marine debris in your country.

(List initiatives/ projects (incl. PhD, MSc); publications (reports, theses, papers in journals, books) from any study; web links to other relevant information e.g. link to OSPAR reports)

Kühn S, Bravo Rebolledo EL & van Franeker JA (2015) Deleterious effects of litter on marine life. In Marine anthropogenic litter, eds. Bergmann M, Gutow L & Klages M pages 75–116. Springer, Berlin. <http://edepot.wur.nl/344861>

Kühn S, van Werven B, van Oyen A, Meijboom A, Bravo Rebolledo EL & van Franeker JA (2017) The use of potassium hydroxide (KOH) solution as a suitable approach to isolate plastics ingested by marine organisms. Mar. Pollut. Bull. 115, 86e90. <https://doi.org/10.1016/j.marpolbul.2016.11.034>

Provencher JF, Bond AL, Avery-Gomm S, Borrelle SB, Bravo Rebolledo EL, Hammer S, Kühn S, Lavers JL, et al. (2017) Quantifying ingested debris in marine megafauna: A review and recommendations for standardization. Analytical Methods 9: 1454–1469. <https://doi.org/10.1039/C6AY02419J>.

van Franeker JA, Bravo Rebolledo EL, Hesse E, et al. (2018) Plastic ingestion by harbour porpoises *Phocoena phocoena* in the Netherlands: Establishing a standardised method. Ambio 47: 387–397. <https://doi.org/10.1007/s13280-017-1002-y>

Unger B, Bravo Rebolledo EL, Deaville R, Gröne A, IJsseldijk LL, Leopold MF, Siebert U, Spitz J, et al. (2016) Large amounts of marine debris found in sperm whales stranded along the North Sea coast in early 2016. Marine Pollution Bulletin 112: 134–141. <http://dx.doi.org/10.1016/j.marpolbul.2016.08.027>.

Volwater J & van Hal R (2020) Dutch seafloor litter monitoring in the North Sea: International Bottom Trawl Survey 2020. (Wageningen Marine Research report; No. C049/20). IJmuiden: Wageningen Marine Research. <https://doi.org/10.18174/523229>

Werner S, Budziak A, Van Franeker JA, Galgani F, Maes T, Matiddi M, Nilsson P, Oosterbaan L, et al. (2016) Harm caused by marine litter. MSFD GES TG Marine Litter - Thematic Report. JRC Technical Report EUR 28317, Publications Office of the European Union, Luxembourg. <http://dx.doi.org/10.2788/19937>.

9.7. Is the perceived level of pressure from marine debris in your country increasing, decreasing, staying the same or unknown?

To be done per species where applicable.

Species	Increasing	Decreasing	Staying the same	Unknown	Nature of the evidence
HP Harbour porpoise	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	The formal MSFD indicator for marine debris shows decreasing trends.

Not applicable. Comments:

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

10. Pollution and hazardous substances (incl. microplastics)

AIM: to illustrate progress on understanding, monitoring and mitigating impacts of important current and emerging pollution-related hazards on small cetaceans. during the reporting period
Relevant Resolutions: 8.9, 8.8, **8.7**, 8.4, 8.3, **7.4**, 7.1, 6.1, 5.7

Marine environments 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 small 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 marine environment and their impacts are presently poorly understood.

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

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

Note: Includes microplastics. Macroplastics and discarded fishing gear are covered under Section C 9 Marine Debris.

Questions:

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

Several pollutants have serious effects on individual small 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. Go to **Question 10.7.**

Yes.

Comments:

10.2. 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.

<p>Name: Department of Pathobiology, Faculty of Veterinary Medicine, Utrecht University Role in monitoring: sample collection Postal Address: Yalelaan 1, NL-3584 CL Utrecht Contact Person: Lonneke IJsseldijk Telephone: T +31 30 253 5312, M +31 6 244 556 98 Email: L.L.IJsseldijk@uu.nl Weblink:</p>
<p>Name: Wageningen Marine Research Role in monitoring: analysis Postal Address: Korringaweg 7, NL-4401 NT Yerseke Contact Person: Martine van den Heuvel-Greve Telephone: +31 317 483823 Email: martine.vandenheuvel-greve@wur.nl Weblink:</p>

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

2016	2017	2018	2019	Species	2016	2017	2018	2019	Species
x	x	x	x	HP Harbour porpoise					Choose a species

Comments:

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10.4. 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)

Comments:

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

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

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

<input checked="" type="checkbox"/> POPs (e.g. PCBs)	<input type="checkbox"/> Radionuclides	<input type="checkbox"/> Brucella	<input checked="" type="checkbox"/> Others: potential infectious agents
<input type="checkbox"/> Oil (e.g. PAHs)	<input checked="" type="checkbox"/> Toxic elements	<input checked="" 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	<input type="checkbox"/> Others:	<input type="checkbox"/> Others:

Comments:

Pathogen analysis is conducted in suspected cases as after macro- and microscopic examination.
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10.7. Does your country determine microplastics in small 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.)

Van Franeker JA, Bravo Rebolledo EL, Hesse E, IJsseldijk LL, Kuhn S, Leopold M & Mielke L (2018) Plastic ingestion by harbour porpoises *Phocoena phocoena* in the Netherlands: Establishing a standardised method. *Ambio* 47(4):387–397. <https://link.springer.com/article/10.1007%2Fs13280-017-1002-y>

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.

10.8. Relevant new research/work/collaboration on impact of pollution and hazardous substances (incl. microplastics) on small cetaceans in your country.

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 small 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.

(List initiatives/ projects (incl. PhD, MSc); publications (reports, theses, papers in journals, books) from any study; web links to other relevant information)

Projects:

KRM Monitoring Bruinvissen 2018-2020. Wageningen Marine Research. (Project Leader: Steve Geelhoed).
Subproject: Contamination analyses of blubber and tissue samples of harbour porpoises. (primary PCB's and to a lesser extent on PBDE's, HCB, HBCD, PFAS and OTC's.) Lead Scientist: Martine van den Heuvel-Greve (email: martine.vandenheuvel-greve@wur.nl)

Publications:

van den Heuvel-Greve MJ, Kwadijk C & Kotterman MJJ (2016) Overdracht van contaminanten van moeder naar jong en chemische profielen in bruinvissen gestrand langs de Nederlandse kust. (Rapport / Wageningen Marine Research; No. C096/16). Wageningen Marine Research. <https://edepot.wur.nl/400727>

van den Heuvel-Greve MJ, IJsseldijk LL, Kwadijk C & Kotterman M (2017) Contaminants in harbour porpoises beached along the Dutch coast: A first overview of contaminants in all age classes. (Wageningen Marine Research rapport; No. C069/17). Yerseke: Wageningen Marine Research. <https://doi.org/10.18174/422164>

van den Heuvel-Greve MJ, IJsseldijk LL, Kwadijk C & Kotterman M (2018) Contaminants in harbour porpoises beached along the Dutch coast; data report 2018. Wageningen, Wageningen Marine Research (University & Research centre), Wageningen Marine Research report C039/18.

van den Heuvel-Greve MJ, IJsseldijk LL, Kwadijk CJAF, van den Brink AM & Kotterman MJJ (2020) Contaminants in harbour porpoises beached along the Dutch coast; data report 2019. Wageningen, Wageningen Marine Research (University & Research centre), Wageningen Marine Research report (being finalized).

Microplastic research is covered under the section on Marine Debris.

10.9. 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).

-

10.10. Have there been any instances/issues related to pollution and hazardous substances in your country during the reporting period?

No.

Yes. Please provide details:

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

To be done per species where applicable.

Species	Increasing	Decreasing	Staying the same	Unknown	Nature of the evidence
HP Harbour porpoise	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

Not applicable. Comments:

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 pressure, it is important to know what kind of vessels are involved in the strike, as well as the type, size and speed of the vessel. But it is also important to have information on the small cetaceans involved, in particular if the animals were engaged in certain 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 chance of survival. 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 assess the percentage of animals in a photo-identification catalogue that bear 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 countries.

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 small 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.**
- Yes.** Please provide information from the reporting period in the table below.

Has the ship strike been submitted to the IWC Ship Strike Database?	Region	Species (if known)	Date of incident (dd/mm/yy)	Contact (if available contact details of the observer)	Description of the observed incidence (Group size if other cetaceans present, dead/alive after collision, animal retrieval, animal being dead before collision, other information, vessel type/name, speed, damage to vessel or injuries to people)	Is there a necropsy report?	Websites, other information, photographs or publications: (provide links)
Choose an item.	Choose an item.	Choose an item.				Choose an item. Link:	
Choose an item.	Choose an item.	Choose an item.				Choose an item. Link:	

11.2. Are there reports in your country of vessel strikes from necropsies of stranded animals for the reporting period?

- No.**
- Yes.** Please provide information in the table below.

General Information			Necropsied animals		Comments
Year	Region	Species	Number of animals with cause of death ship strike (e.g. animals showing ship strike markings ²)		
			possible	certain	
2019	OII Southern North Sea	HP Harbour porpoise	-	2*	*The cause of death is blunt trauma. Though other causes for blunt trauma have been ruled out, there is no certainty that this is caused by ship strikes.
2018	OII Southern North Sea	HP Harbour porpoise	1	2*	*The cause of death is blunt trauma. Though other causes for blunt trauma have been ruled out, there is no certainty that this is caused by ship strikes
2017	OII Southern North Sea	HP Harbour porpoise	1 (plus 1 euthanized)	2*	*The cause of death is blunt trauma. Though other causes for blunt trauma have been ruled out, there is no certainty that this is caused by ship strikes
2016	OII Southern North Sea	HP Harbour porpoise	0	3*	*The cause of death is blunt trauma. Though other causes for blunt trauma have been ruled out, there is no certainty that this is caused by ship strikes

² 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).

Comments:

2016: of 55 animals necropsied, 3 animals showed blunt trauma. For two the blunt trauma was likely the cause of death, but there might have been other health issues. The third animal was a live stranding that showed bleeding in the brain.

2017: of 55 animals necropsied two porpoises showed blunt trauma as cause of death; one porpoise showed blunt trauma but it could not be determined if it was the cause of death; one live stranding showed signs of blunt trauma and was euthanized

2018: of 50 animals necropsied two showed clear signs of blunt trauma as cause of death; one possible.

2019: of 57 animals three showed signs of blunt trauma, one likely linked to intraspecific interactions. The second animal showed no indications of a grey seal attack. It had been swimming around with the injuries for some time. The injuries could be due to a collision with a vessel.

Provide source of information and database link if applicable:

Reports (in Dutch) on the results of the necropsies conducted on harbour porpoise since 2009 can be downloaded at this link: <https://www.uu.nl/onderzoek/strandingsonderzoek/het-onderzoek/onderzoeksverslagen>

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:

It is not a stand-alone protocol but part of a procedure to determine the likelihood the observed blunt trauma was caused by a ship-strike or other causes.

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

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.**
 Yes. Please provide information in the table below.

Overview of ship strike evidence in photo-identification catalogues:

General Information			Photo-identified animals in the catalogue			
Year	Region	Species	# individual animals in the photo-identification catalogue	# animals showing ship strike markings (e.g. scars)		
				possible	certain	Unknown
2016	OII Southern North Sea	HP Harbour porpoise	21 (sub)adult animals with 2 (unidentified) calves [cumulative identified animals up to 2016: 39]	0	0	
2017	OII Southern North Sea	HP Harbour porpoise	36 (sub)adult animals with 4 (unidentified) calves [cumulative identified animals up to 2017: 52]	0	0	
2018	OII Southern North Sea	HP Harbour porpoise	42 (sub)adult animals with 5 (unidentified) calves [cumulative identified animals up to 2018: 64]	1	0	
2019	OII Southern North Sea	HP Harbour porpoise	44 (sub)adult animals with 5 (unidentified) calves [cumulative identified animals up to 2019: 72]	1 (same individual as in 2018)	0	

Comment: There is a photo-identification catalogue from Stichting Rugvin for a small harbour porpoise population in the Oosterschelde (Eastern Scheldt), an estuary in the southern part of the Netherlands. Some animals show healed wounds, for example from Grey seal attacks. There is one animal that shows a scar that has been identified as having been caused possibly by a ship-strike (this is animal L045R038 which can be seen online in the photo-id catalogue available at <https://rugvin.nl/wp-content/uploads/2019/01/catalogus-2015-2018.pdf>). No certain visible ship strike scars have been identified. Information can be found via Stichting Rugvin at www.rugvin.nl. The photo-identification webpage is updated regularly and is accessible at: <https://rugvin.nl/oosterschelde/foto-id-bruinvisseren-oosterschelde/>

11.5. Do you have any other photographs or evidence of ship strikes outside of photo-identification catalogue?

- No.**
 Yes. Please provide details:

11.6. Relevant new research/work/collaboration on ship strike and its possible effects on small cetaceans in your country.

(List initiatives/ projects (incl. PhD, MSc); publications (reports, theses, papers in journals, books) from any study; web links to other relevant information)

Necropsy reports, available at <https://www.uu.nl/onderzoek/strandingsonderzoek/het-onderzoek/onderzoeksverslagen>

IJsseldijk LL, Kik MJL, van Schalkwijk L & Gröne A (2020). Postmortaal onderzoek van bruinvissen (*Phocoena phocoena*) uit Nederlandse wateren, 2019. Statutory Research Tasks Unit for Nature & the Environment (WOT Natuur & Milieu), WOT-technical report (being finalized)

IJsseldijk LL, Kik MJL, Solé L & Gröne A (2019). Postmortaal onderzoek van bruinvissen (*Phocoena phocoena*) uit Nederlandse wateren, 2018. Biologische gegevens, gezondheidsstatus en doodsoorzaken. Wettelijke Onderzoekstaken Natuur & Milieu, WUR. WOT-technical report 150. 34 blz.; 8 fig.; 3 tab.; 25 ref; 2 Bijlagen.

IJsseldijk LL, Kik MJL, Solé L & Gröne A (2018). Postmortaal onderzoek van bruinvissen (*Phocoena phocoena*) uit Nederlandse wateren, 2017. Biologische gegevens, gezondheidsstatus en doodsoorzaken. Wettelijke Onderzoekstaken Natuur & Milieu, WUR. WOT-technical report 116. 50 blz.; 10 fig.; 5 tab.; 44 ref; 2 Bijlagen.

IJsseldijk LL, Kik MJL, Solé L & Gröne A (2017). Postmortaal onderzoek van bruinvissen (*Phocoena phocoena*) uit Nederlandse wateren, 2016. Wettelijke Onderzoekstaken Natuur & Milieu, WUR. WOT-technical report 96. 41 blz.; 10 fig.; 3 tab.; 13 ref; 2 Bijlagen.

11.7. List any management/policy actions/relevant regulations/guidelines related to mitigating ship strike for small cetaceans (re-routing, tracking animals, ship speed limits) in your country and the year of implementation (current and planned).

Provide web links if available.

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

No.

Yes. Please provide details:

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

To be done per species where applicable.

Species	Increasing	Decreasing	Staying the same	Unknown	Nature of the evidence
HP Harbour porpoise	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Choose an item.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Choose an item.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

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 of important and emerging climate change related impacts on small cetaceans.

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

It is certain that climate change is altering the habitat of cetaceans. However, our understanding of how the predicted changes will impact different species and populations can be further developed by identifying issues and trends through reporting. CMS³ highlights the importance of addressing potential issues through the engagement of (1) researchers to better understand the underlying processes, as well as (2) conservation managers and policy makers to monitor changes and to mitigate negative impacts. Focus should be given to understanding tangible climate change effects relevant to cetaceans, such as changing ocean temperatures, prey depletion / prey range shifts, ocean acidification, increased frequency and intensity of ocean storms, changes in sea ice and weakening of the North Atlantic Drift. Such occurrences require that we gather evidence on the 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 on those actions specifically regarding cetaceans as well as the most likely impacts on their habitat and prey. Climate change possibly represents one of the most important future threat to the status of cetaceans in the ASCOBANS region. Direct effects may arise due to ocean warming, resulting in distribution shifts (generally northward) 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 undertake monitoring that has potential to contribute to knowledge and identification of climate impacts on small cetaceans?⁴

Climate change will have a multiplicity of possible direct and indirect effects on small 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 small cetaceans.

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

12.2. Which effects has your country been monitoring during the reporting period?

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

Monitoring activity	Comments (if possible, provide contact / link to project)
<input checked="" type="checkbox"/> Changes in small cetacean abundance	Aerial surveys DCS; Steve Geelhoed
<input checked="" type="checkbox"/> Changes in small cetacean distribution	Aerial surveys DCS; Steve Geelhoed
<input type="checkbox"/> Changes in small cetacean migration or movement range	
<input checked="" type="checkbox"/> Changes in small cetacean migration or movement timing	Land-based sea watching https://www.trektellen.nl/
<input type="checkbox"/> Changes in small cetacean community structure	
<input type="checkbox"/> Changes in reproductive success and timing in small cetaceans	
<input checked="" type="checkbox"/> Changes in prey (fish) abundance and distribution	Wageningen Marine Research does stock assessments on commercial species
<input type="checkbox"/> Changes in timing of prey (fish) spawning and migration	
<input type="checkbox"/> Changes in fishing effort	Wageningen Marine Research, Wageningen Economic Research
<input checked="" type="checkbox"/> Changes in the occurrence of pathogens (from sampled individuals)	Department of Pathobiology, Faculty of Veterinary Medicine, Utrecht University. See 10.6
<input type="checkbox"/> Incidences of algal blooms (if yes, where; specify year)	
<input type="checkbox"/> Other (specify):	

12.3. Relevant new research/work/collaborations which provide evidence/data about climate change, including its emerging potential issues and effects, on small cetaceans in your country.

(List initiatives/ projects (incl. PhD, MSc); publications (reports, theses, papers in journals, books) from any study; web links to other relevant information); include the species concerned, the climate change effect observed, who did the work)

³ [CMS Resolution 12.21](#) on Climate Change and Migratory Species.

⁴ This refers to direct and indirect effects.

Not to our knowledge

12.6. Have there been any instances / issues related to identified trends in small cetacean populations as a result of climate change in your country during the reporting period?

- No.**
 Yes. Please provide details:

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

To be done per species. basis where applicable.

Species	Increasing	Decreasing	Staying the same	Unknown	Nature of the evidence
HP Harbour porpoise	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Choose an item.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Not applicable. Comments:

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

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

AIM: human activities in the Agreement Area have the potential to impact upon small cetaceans. Tracking those activities that cause physical habitat change and improving our understanding of their relative impacts will help shape any necessary mitigation action required.
 Relevant Resolutions: 8.11, 8.9, 8.6, 8.4, 8.3, 7.1, 6.2, 6.1, 5.7

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 small cetaceans, including information provided in National Reports, taking into account the work done by other organizations.

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 the reporting period.

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.

Region	Type of information (e.g. maps, GIS, reports)	Is the data available online?	Provide web link to data, or comment on unavailability
Oil Southern North Sea		<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes	Sand extraction areas https://www.arcgis.com/home/webmap/viewer.html?url=https%3A%2F%2Fgeoservices.rijkswaterstaat.nl%2Farcgis%2Frest%2Fservices%2FGDR%2Fwingsgebieden_noordzee%2FfeatureServer&source=sd
Oil Southern North Sea		<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes	Dredge dump areas

			https://www.arcgis.com/home/webmap/viewer.html?url=https%3A%2F%2Fgeoservices.rijkswaterstaat.nl%2Farcgis%2Frest%2Fservices%2FGDR%2Fstort_loswal%2FFeatureServer&source=sd
--	--	--	---

13.2. Does your country have any reported cases of physical habitat change (e.g. dredging, marine construction, coastal construction) impacting small cetaceans during the reporting period?

No.

Yes. Please provide details:

Provide web links if available.

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

No.

Yes. Please provide details below:

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

Measure:	
Industry:	
Activity type:	
Has the measure been effective?	<input type="checkbox"/> No. <input type="checkbox"/> Yes. Comments:
Other information:	

Copy table if needed.

13.4. Relevant new initiatives/projects/publications (reports, theses, papers in journals, books) in your country during the reporting period on impacts from physical habitat change on small cetaceans (incl. title, organization, lead author).

Not to our knowledge.

13.5. Have there been any other instances/issues in your country regarding physical habitat change during the reporting period?

No.

Yes. Please provide details:

--

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

To be done per species basis where applicable.

Species	Increasing	Decreasing	Staying the same	Unknown	Nature of the evidence
HP Harbour porpoise	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Expert judgment
Choose an item.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Not applicable. Comments:

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

14. Other issues

14.1. List any other issues related to habitat change and degradation not mentioned above.

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D. Management of Cumulative Impacts

15. Marine Spatial Planning

AIM: to provide information on existing and proposed marine spatial plans and processes during the reporting period that may impact small cetaceans.
 Relevant Resolutions 8.9, 8.6, 8.3

A growing demand for use of maritime space increases pressure on ecosystems and marine resources. Marine ecosystems with good environmental status provide notable benefits to a number of economic outputs. Implementation of an integrated spatial planning and management approach can better mitigate negative impacts from maritime activities on marine environments. Spatial planning can support sustainable marine development through coordinated, coherent and transparent decision-making and the encouragement and identification of multi-purpose uses in relevant projects. Marine spatial planning is essential when selecting the most appropriate siting for marine-based projects. Particular attention should be given to critical habitat and relevant species, such as small cetaceans, in order to achieve good environmental status.

ASCOBANS Parties have agreed on a number of resolutions that support the integration of marine spatial planning into development processes. Small cetaceans benefit from good marine spatial planning and this is highlighted in the resolutions. Countries are requested to provide information relevant to their country in this regard.

Questions:

15.1. Please provide information in regard to current and foreseen marine spatial planning.

National plans(s) and processes in force:	<p>The <i>National Water Plan</i> provides a policy framework for MSP based on the Water Act, and includes the Policy Document for the North Sea 2016-2021 as an appendix. This Policy Document includes a framework vision map and currently constitutes the Netherlands' Maritime Spatial Plan.</p> <p>The <i>Dutch Nature Conservation Act</i> (Natuurbeschermingswet) took effect on 1 January 2017. This new act replaces 3 other laws: the Nature Conservancy Act 1998, the Flora and Fauna Act and the Forestry Act. In some cases, to carry out work in Dutch conservation areas a dispensation or an all-in-one Permit for Physical Aspects with regard to activities that might harm protected species. Guidelines are laid down in an approved code of conduct. More information can be found at: https://business.gov.nl/regulation/code-conduct-nature-conservancy-act/</p>
National plan(s) and processes in preparation:	<p>The <i>Environment and Planning Act</i> (Omgevingswet) provides an integrated legal framework for the protection and utilization of the physical environment and activities that (may) affect it. Upon its entry into force (expected earliest in 2021), it will replace a large number of existing laws. This includes the Nature Conservation Act, the Water Act (Waterwet), the Spatial Planning Act (Wet ruimtelijke ordening) and many others. Relevant exceptions include the Offshore Wind Energy Act, the Mining Act (Mijnbouwwet) and the Fisheries Act (Visserijwet 1963) that will remain in existence as separate laws.</p> <p>The Dutch Nature Conservation Act will be integrated in the Environmental and Planning Act in a policy neutral way, which means that the level of protection will not change and the rules on area and species protection will remain the same from a substantive point of view. The content of the rules related to the protection of the harbour porpoise will therefore not change. The differences are of a procedural nature: the new instruments and procedures of the Environment and Planning Act. The Act will also provide the legal basis for the implementation</p>
Further information, including links to online resources and maps where available:	<p>With the adoption of the EU Directive on Maritime Spatial Planning (2014/89/EU), all coastal EU Member States are</p>

	required to prepare cross-sectoral maritime spatial plans by 2021. These plans can be found on http://msp-platform.eu
Transboundary plans(s) and processes in force:	
Transboundary plan(s) and processes in preparation:	
Further information, including links to online resources and maps where available:	

15.2. Have there been any other instances/issues in your country regarding marine spatial planning during the reporting period?

No.

Yes. Please provide details:

15.3. Relevant new research/work/collaboration on marine spatial planning in your country.

(List initiatives/ projects (incl. PhD, MSc); publications (reports, theses, papers in journals, books) from any study; web links to other relevant information)

E. Area-based Conservation / Marine Protected Areas

16. Protected areas, e.g. Natura 2000 sites

AIM: to provide information on existing and proposed marine protected areas with small cetaceans as part of the selection criteria.
Relevant Resolutions: 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, MSFD) as a tool to achieve conservation goals. Part of ASCOBANS remit is to provide expert advice on 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. This also includes advising on appropriate management measures 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 and actions in the workplan, ASCOBANS requires information (e.g. location, species, status, spatial data, management plans and monitoring) on existing and proposed marine protected areas with small 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.

Questions:

16.1. Does your country have MPAs (existing or proposed) where small cetaceans are the primary reason for the (proposed) designation?

No.

Yes. Please provide details/updates in table below:

Name (full name of MPA)	ASCOBANS Action Plan	Region	Size (km ²)	Species	MPA status	Date of designation (if applicable)	Legislation/ directive (e.g. Habitats Directive)	Is there a site-specific management plan in place?	Link to shapefile and/or online map	Link to any other online information
	<input type="checkbox"/> Jastarnia Plan <input type="checkbox"/> North Sea Plan <input type="checkbox"/> WBBK Plan <input type="checkbox"/> Common Dolphin SAP <input type="checkbox"/> Not Applicable	Choose an item.		Choose an item. (Copy drop-down to add more species)	<input type="checkbox"/> Designated <input type="checkbox"/> Submitted <input type="checkbox"/> Under consultation <input type="checkbox"/> Recommended <input type="checkbox"/> Not Applicable	dd/mm/yy		<input type="checkbox"/> No. <input type="checkbox"/> Yes. Link:		

16.2. Does your country have MPAs (existing or proposed) with small cetaceans are forming part of the selection criteria?

No.

Yes. Please provide details/updates in table below:

Name (full name of MPA)	ASCOBANS Action Plan	Region	Size (km ²)	Species forming part of selection criteria	MPA status	Date of designation (if applicable)	Legislation/ directive (e.g. Habitats Directive)	Is there a site-specific management plan in place?	Link to shapefile and/or online map	Link to any other online information
Dogger Bank	<input type="checkbox"/> Jastarnia Plan <input checked="" type="checkbox"/> North Sea Plan <input type="checkbox"/> WBBK Plan <input type="checkbox"/> Common Dolphin SAP <input type="checkbox"/> Not Applicable	Oil Southern North Sea	4734	HP Harbour porpoise (Copy drop-down to add more species)	<input type="checkbox"/> Designated <input type="checkbox"/> Submitted <input type="checkbox"/> Under consultation <input type="checkbox"/> Recommended <input type="checkbox"/> Not Applicable	2016	Habitats Directive	<input checked="" type="checkbox"/> No. <input type="checkbox"/> Yes. Link:	https://www.natura2000.nl/gebied/en/noordzee/doggersbank/doggersbank-kaart	https://www.natura2000.nl/index.php/gebieden/noordzee/doggersbank

Cleaver Bank	<input type="checkbox"/> Jastarnia Plan <input checked="" type="checkbox"/> North Sea Plan <input type="checkbox"/> WBBK Plan <input type="checkbox"/> Common Dolphin SAP <input type="checkbox"/> Not Applicable	Oil Southern North Sea	1539	HP Harbour porpoise (Copy drop-down to add more species)	<input checked="" type="checkbox"/> Designated <input type="checkbox"/> Submitted <input type="checkbox"/> Under consultation <input type="checkbox"/> Recommended <input type="checkbox"/> Not Applicable	2016	Habitats Directive	<input checked="" type="checkbox"/> No. <input type="checkbox"/> Yes. Link:	https://www.natura2000.nl/gebieden/noordzee/klaverbank/klaverbank-kaart	https://www.synbiosys.alterra.nl/natura2000/documenten/gebieden/165/PUBLICATIEVERSIEN/2020/definitief%20besluit%20klaverbank%20met%20kaart.pdf
Frisian Front MSFD Area (MPA was not designated for HP, but proposed measures aim at reducing bottom trawling, which will benefit porpoises in the long run)	<input type="checkbox"/> Jastarnia Plan <input checked="" type="checkbox"/> North Sea Plan <input type="checkbox"/> WBBK Plan <input type="checkbox"/> Common Dolphin SAP <input type="checkbox"/> Not Applicable	Oil Southern North Sea	1000	HP Harbour porpoise (Copy drop-down to add more species)	<input type="checkbox"/> Designated <input type="checkbox"/> Submitted <input type="checkbox"/> Under consultation <input type="checkbox"/> Recommended <input checked="" type="checkbox"/> Not Applicable MSFD areas are not formally designated, CFP is legal basis	na	Marine Strategy Framework Directive, Common Fisheries Policy	<input checked="" type="checkbox"/> No. <input type="checkbox"/> Yes. Link:		https://www.noordzeeloket.nl/publish/pages/158924/marine_strategy_part_1_main_document_2018_-_2024.pdf
Central Oystergrounds MSFD Area (MPA was not designated for HP, but proposed measures aim at reducing bottom trawling, which will benefit porpoises in the long run)	<input type="checkbox"/> Jastarnia Plan <input checked="" type="checkbox"/> North Sea Plan <input type="checkbox"/> WBBK Plan <input type="checkbox"/> Common Dolphin SAP <input type="checkbox"/> Not Applicable	Oil Southern North Sea	1000	HP Harbour porpoise (Copy drop-down to add more species)	<input type="checkbox"/> Designated <input type="checkbox"/> Submitted <input type="checkbox"/> Under consultation <input type="checkbox"/> Recommended <input checked="" type="checkbox"/> Not Applicable	na	Marine Strategy Framework Directive, Common Fisheries Policy	<input checked="" type="checkbox"/> No. <input type="checkbox"/> Yes. Link:		https://www.noordzeeloket.nl/publish/pages/158924/marine_strategy_part_1_main_document_2018_-_2024.pdf
North Sea coastal zone Noordzee-kustzone	<input type="checkbox"/> Jastarnia Plan <input checked="" type="checkbox"/> North Sea Plan <input type="checkbox"/> WBBK Plan <input type="checkbox"/> Common Dolphin SAP <input type="checkbox"/> Not Applicable	Oil Southern North Sea	1445	HP Harbour porpoise (Copy drop-down to add more species)	<input checked="" type="checkbox"/> Designated <input type="checkbox"/> Submitted <input type="checkbox"/> Under consultation <input type="checkbox"/> Recommended <input type="checkbox"/> Not Applicable	2010	Habitats Directive	<input type="checkbox"/> No. <input checked="" type="checkbox"/> Yes. Link:	https://www.natura2000.nl/gebieden/friesland/noordzeekustzone/nordzeekustzone/nzkdokumenten/default.aspx#folder=389024	https://rwsnatura2000.nl/Gebieden/nordzeekustzone/NZK_Documenten/default.aspx#folder=343139

Vlakte van de Raan	<input type="checkbox"/> Jastarnia Plan <input checked="" type="checkbox"/> North Sea Plan <input type="checkbox"/> WBBK Plan <input type="checkbox"/> Common Dolphin SAP <input type="checkbox"/> Not Applicable	OII Southern North Sea	175	HP Harbour porpoise (Copy drop-down to add more species)	<input checked="" type="checkbox"/> Designated <input type="checkbox"/> Submitted <input type="checkbox"/> Under consultation <input type="checkbox"/> Recommended <input type="checkbox"/> Not Applicable	2010	Habitats Directive	<input type="checkbox"/> No. <input checked="" type="checkbox"/> Yes. Link: https://www.rwsnatuura2000.nl/gebieden/vlaktevanderaan/vv_dr_documenten/default.aspx#folder=479202	https://www.synbiosys.alterra.nl/natura2000/goolemapsgebied.aspx?id=n2k163&groep=10	https://www.rwsnatuura2000.nl/gebieden/vlaktevanderaan/default.aspx
Voordelta	<input type="checkbox"/> Jastarnia Plan <input checked="" type="checkbox"/> North Sea Plan <input type="checkbox"/> WBBK Plan <input type="checkbox"/> Common Dolphin SAP <input type="checkbox"/> Not Applicable	OII Southern North Sea	835	HP Harbour porpoise (Copy drop-down to add more species)	<input checked="" type="checkbox"/> Designated <input type="checkbox"/> Submitted <input type="checkbox"/> Under consultation <input type="checkbox"/> Recommended <input type="checkbox"/> Not Applicable	2008	Habitats Directive	<input type="checkbox"/> No. <input checked="" type="checkbox"/> Yes. Link: https://www.rwsnatuura2000.nl/gebieden/voordelta/VD_Documenten/default.aspx	https://www.synbiosys.alterra.nl/natura2000/goolemapsgebied.aspx?id=n2k113&groep=10	https://www.rwsnatuura2000.nl/gebieden/voordelta/default.aspx
Wadden Sea	<input type="checkbox"/> Jastarnia Plan <input type="checkbox"/> North Sea Plan <input type="checkbox"/> WBBK Plan <input type="checkbox"/> Common Dolphin SAP <input type="checkbox"/> Not Applicable	OII Southern North Sea	2710	HP Harbour porpoise	<input checked="" type="checkbox"/> Designated <input type="checkbox"/> Submitted <input type="checkbox"/> Under consultation <input type="checkbox"/> Recommended <input type="checkbox"/> Not Applicable	2008	Habitats Directive	<input type="checkbox"/> No. <input checked="" type="checkbox"/> Yes. Link: https://www.waddenzee.nl/fileadmin/content/Dossiers/Overheid/N2000_dec_2016/DEFINITIEF_Waddenzee_Natura_2000-beheerplan_2016-2022.pdf	https://www.synbiosys.alterra.nl/natura2000/goolemapsgebied.aspx?id=n2k001&groep=1	https://www.natura2000.nl/gebieden/friesland/waddenze
Westerschelde & Saeftinghe	<input type="checkbox"/> Jastarnia Plan <input type="checkbox"/> North Sea Plan <input type="checkbox"/> WBBK Plan <input type="checkbox"/> Common Dolphin SAP <input checked="" type="checkbox"/> Not Applicable	OII Southern North Sea	437	HP Harbour porpoise (Copy drop-down to add more species)	<input checked="" type="checkbox"/> Designated <input type="checkbox"/> Submitted <input type="checkbox"/> Under consultation <input type="checkbox"/> Recommended <input type="checkbox"/> Not Applicable	2010	Habitats Directive	<input type="checkbox"/> No. <input type="checkbox"/> Yes. Link: https://www.zwdelta.nl/sites/all/files/default/publicaties/westerschelde_en_saeftinghe_natura_2000_deltawateren_beheerplan_2016-2022.pdf	https://www.synbiosys.alterra.nl/natura2000/goolemapsgebied.aspx?id=n2k118&groep=10	https://www.natura2000.nl/gebieden/zeeiland/westerschelde-saeftinghe

Oosterschelde	<input type="checkbox"/> Jastarnia Plan <input type="checkbox"/> North Sea Plan <input type="checkbox"/> WBBK Plan <input type="checkbox"/> Common Dolphin SAP <input checked="" type="checkbox"/> Not Applicable	OII Southern North Sea	370	HP Harbour porpoise (Copy drop-down to add more species)	<input checked="" type="checkbox"/> Designated <input type="checkbox"/> Submitted <input type="checkbox"/> Under consultation <input type="checkbox"/> Recommended <input type="checkbox"/> Not Applicable	2010	Habitats Directive	<input type="checkbox"/> No. <input checked="" type="checkbox"/> Yes. Link: https://www.zwdelta.nl/sites/all/files/default/publicaties/oosterschelde_natura_2000_deltawateren_beheerplan_2016-2022.pdf	https://www.natura2000.nl/gebieden/zeeland/oosterschelde-oosterschelde-kaart	https://www.natura2000.nl/gebieden/zeeland/oosterschelde
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16.3. Provide information on management measures, including regulations/guidelines, particularly relevant to small cetaceans in MPAs listed above. Including any temporal/spatial restriction of activities (i.e. seasonal fishery closures).

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.

Site Name	Pressure (add pressures per site as applicable)	Measure (add measures per pressure per site as applicable)

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

MPA-specific measures for cetaceans are lacking. Generic measures to reduce bycatch and impacts of underwater noise are implemented. Harbour Porpoise Conservation Plan is updated in 2020.

16.5. Relevant new research/work/collaboration relating to MPAs in your country.

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

(List initiatives/ projects (incl. PhD, MSc); publications (reports, theses, papers in journals, books) from any study; web links to other relevant information; include the species concerned, who did the work)

ICES WGMME report, including ToR d. Catalogue the Marine Protected Areas for marine mammals in the ICES area and evaluate the efficacy of MPAs for cetaceans:
https://www.ices.dk/sites/pub/Publication%20Reports/Expert%20Group%20Report/acom/2011/WGMME/wgmme_2011_final.pdf

Ministry of Infrastructure and Water Management and Ministry of Agriculture, Nature and Food Quality, 2018. Marine Strategy for the Dutch part of the North Sea, part 1. Update of current environmental status, good environmental status, environmental targets and indicators 2018-2024. Available at:
<https://www.noordzeeloket.nl/beleid/europese/achtergrond/documenten-mariene/>

Section III: Surveys and Research

A. Biological Information (per species)

1. Abundance estimates

AIM: to provide new information on abundance and life history parameters of small cetaceans during the reporting period.
Relevant Resolutions: 8.5, 8.4, 8.3, 7.1, 6.1, 5.7, 5.5, 4.7, 3.5, 3.3

Abundance estimates and information on life history are of critical importance for the determination of broader species attributes such as populations levels, health and overall status. These parameters can contribute towards determination of GES and provide a reference for mortality events. Abundance and life history parameters are typically assessed from monitoring programmes. Fluctuations in these parameters can provide insight into trends in populations. Information on abundance and life history parameters can inform the need for mitigation measures, and regional assessment of these parameters allows for a more spatially targeted and concentrated response to support national assessments.

In the ASCOBANS Area, small cetacean abundance and life history should be monitored in response to a number of ASCOBANS resolutions. Continued monitoring of these parameters is essential to understanding current status and trends.

Questions:

1.1. Please submit the relevant information on national dedicated surveys on abundance and distribution during the reporting period into the table below.

If additional space is required, please submit the information in an excel table. Attach maps separately, clearly marking which survey they apply to. **Note:** Information relevant to SCANS-III is to be provided in question 1.2.

Location	Project	Time period	Method	Species	Animal abundance	Link to project/ report/ publication

					(including 95% confidence limits or CV)	
Dutch Continental Shelf		Jul 2017	Aerial survey - line transect distance sampling	HP Harbour porpoise	46,902 (24,389 – 93,532, cv 0.35)	https://doi.org/10.18174/448322
Dutch Continental Shelf		Jul 2018	(e.g. line transect, Photo ID, etc.)	HP Harbour porpoise	63,514 (34,276 – 119,734, cv 0.32)	https://doi.org/10.18174/466280
Dutch Continental Shelf		Jul 2019	(e.g. line transect, Photo ID, etc.)	HP Harbour porpoise	38,911 (20,791 - 76,822, cv 0.35)	https://doi.org/10.18174/515228

Relevant information on distribution during the reporting period:

(Include species, method, time period, weblinks, and other relevant information)

Available at:

Distribution maps per year are found in doi's mentioned above

1.2. Other relevant new research/work/collaboration on abundance estimates in regard to small cetaceans in your country during the reporting period.

Dam van S, Solé L, IJsseldijk LL, Begeman L & Leopold MF (2017) The semi-enclosed tidal bay Eastern Scheldt in the Netherlands: porpoise heaven or porpoise prison? *Lutra* 60 (1): 5-18
<https://library.wur.nl/WebQuery/hydrotheek/2281844>

Gilles A, Viquerat S, Becker EA, Forney KA, Geelhoed SCV, Haelters J, Nabe-Nielsen J, Scheidat M, Siebert U, Sveegaard S, van Beest FM, van Bemmelen R & Aarts G (2016) Seasonal habitat-based density models for a marine top predator, the harbor porpoise, in a dynamic environment. *Ecosphere* 7 (6):e01367. 10.1002/ecs2.1367
<https://doi.org/10.1002/ecs2.1367>

Hammond PS, Lacey C, Gilles A, Viquerat S, Börjesson P, Herr H, Macleod K, Ridoux V, Santos MB, Scheidat M, Teilmann J, Vingada J & Øien N (2017) Estimates of cetacean abundance in European Atlantic waters in summer 2016 from the SCANS-III aerial and shipboard surveys. <https://synergy.st-andrews.ac.uk/scans3/files/2017/05/SCANS-III-design-based-estimates-2017-05-12-final-revised.pdf>

Geelhoed SCV & Scheidat M (2018) Abundance of harbour porpoises (*Phocoena phocoena*) on the Dutch Continental Shelf, aerial surveys 2012-2017. *Lutra* 61: 127-136.
<https://library.wur.nl/WebQuery/groenekennis/2034650>

Podt A (2020) Photo-identification catalogue of harbour porpoises (*Phocoena phocoena*) in the Eastern Scheldt 2015-2019. Rugvin Foundation. https://rugvin.nl/wpcontent/uploads/2020/03/catalogus_2015-2019.pdf

Weel, SMH, Geelhoed SCV, Tulp I & Scheidat M (2018) Feeding behaviour of harbour porpoises (*Phocoena phocoena*) in the Ems estuary. *Lutra* 61 (1): 137-152. <https://porpoise.org/library/feeding-behaviour-of-harbour-porpoises-phocoena-phocoena-in-the-ems-estuary/>

1.3. Is the abundance of species in your country increasing, decreasing, staying the same or unknown? To be done per species basis where applicable.

Species	Increasing	Decreasing	Staying the same	Unknown	Nature of the evidence
HP Harbour porpoise	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	See 1.1. time series 2016-2019 provides no measurable change
Choose an item.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Not applicable. Comments:

A. Biological Information (per species)

2. New information on life history parameters

2.1. Is there new information on the following life history parameters in the reporting period?

Age of sexual and physical maturity	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes Please describe: IJsseldijk, L. & Gröne, A. 2016. Investigation into hearing damage and life history of Dutch stranded harbour porpoises. Species: HP Harbour porpoise
Inter-birth intervals	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes Please describe: Species: Choose an item.
Calf and adult mortality rates	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes Please describe: Species: Choose an item.
Potential reproductive span/capacity	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes Please describe: Species:
Longevity	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes Please describe: from strandings data the oldest male porpoise was 13 years of age, the oldest female 24 years of age. Species: HP Harbour porpoise
Diet	<input type="checkbox"/> No <input type="checkbox"/> Yes Please describe: Van Dam S., Solé L., IJsseldijk L.L., Begeman L. & Leopold M.F. 2017. The semi-enclosed tidal bay Eastern Scheldt in the Netherlands: porpoise heaven or porpoise prison? Lutra 60: 5-18. https://library.wur.nl/WebQuery/hydrotheek/2281844 Mairo A &, Leopold M, 2018. Stapels bruinvissen! Hoe verhoudt een snelle massa-sectie zich tot het lopende dieet-onderzoek? Wageningen, Wageningen Marine Research, Wageningen Marine Research rapport C032/18. https://edepot.wur.nl/448545 Species: HP Harbour porpoise
Age and sex structure	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes Please describe: Species: Choose an item.
Other relevant factors	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes Please describe: mortality due to Grey seal attacks Species: HP Harbour porpoise Podt, A., & IJsseldijk, L. L. (2017). Grey seal attacks on harbour porpoises in the Eastern Scheldt: Cases of survival and mortality. Lutra, 60(2), 105-116. https://rugvin.nl/wp-content/uploads/2018/01/Lutra-602_Podt-IJsseldijk_2017_lr.pdf

For each life history parameter, provide web links and details where applicable and add more species if necessary.

B. Monitoring Programmes

3. Overview of current monitoring and survey schemes

AIM: to provide information on the progress of monitoring programmes, relevant methodologies and aims thereof, and status of small cetaceans during the reporting period.
 Relevant Resolutions: 8.11, 8.9, 8.8, 8.5, 8.4, 8.3, 7.3, 7.1, 6.1, 5.7

Monitoring programmes provide important data on biological and environmental attributes, such as population status, abundance and spatial-temporal distribution. They create opportunities for new research and development, including potential improvements to methodology for monitoring in terms of accuracy, practicality and cost efficiency.

In the ASCOBANS Area, application of coherent monitoring programmes focused on small cetaceans, which collect and provide objective, robust and comparable data, is a key component in understanding and improving the conservation status of small cetaceans through appropriate management. Parties have agreed to design, implement and support relevant monitoring programmes through a number of resolutions. Such efforts are also supported by legislation from a number of bodies which identify monitoring as a requirement in

management systems. Additionally, Parties have been encouraged to coordinate their monitoring programmes, which promotes international cooperation and synergies. Parties have also been encouraged to review such monitoring programmes and propose improvements for the betterment of conservation efforts.

It is the interest of ASCOBANS to understand the current monitoring programmes utilised, their outputs, and future activities in the Agreement Area. Countries are requested to provide information relevant to their activities as well as potential improvements to such programmes and efforts.

Questions:

3.1. Are there national monitoring programmes that enable assessment of the Conservation Status of small cetaceans in your waters (i.e. provides abundance estimates and/or life history parameters and information on pressures)?

- No.
- Yes. Please provide an overview in the table below.

Dutch Continental Shelf	Approach: <input checked="" type="checkbox"/> Line transect surveys <input type="checkbox"/> Photo-ID <input type="checkbox"/> Strandings <input type="checkbox"/> Passive Acoustic Monitoring <input type="checkbox"/> Other, please specify:
	Target Species: (Copy drop-down to add more species) HP Harbour porpoise
	Institution(s): Delta Project Management MWTL aerial surveys
Dutch Continental Shelf	Approach: <input checked="" type="checkbox"/> Line transect surveys <input type="checkbox"/> Photo-ID <input type="checkbox"/> Strandings <input type="checkbox"/> Passive Acoustic Monitoring <input type="checkbox"/> Other, please specify:
	Target Species: (Copy drop-down to add more species) HP Harbour porpoise WBD White-beaked dolphin
	Institution(s): Wageningen Marine Research
Easter Scheldt	Approach: <input type="checkbox"/> Line transect surveys <input type="checkbox"/> Photo-ID <input type="checkbox"/> Strandings <input checked="" type="checkbox"/> Passive Acoustic Monitoring <input type="checkbox"/> Other, please specify:
	Target Species: (Copy drop-down to add more species) HP Harbour porpoise
	Institution(s): Stichting Rugvin Photo-Identification work is conducted for a small area in the Dutch Easter Scheldt, (technically outside the North Sea).

3.2. Please provide the relevant information with regards to aerial surveying activities.

Number of surveys	Area covered	Species	Timeframe of survey
3	Dutch Continental Shelf	HP Harbour porpoise	Summer
3	Dutch Continental Shelf	WBD White-beaked dolphin	Summer
4	Dutch Continental Shelf	HP Harbour porpoise	Bi-monthly

3.3. Please provide the relevant information with regards to Passive Acoustic Monitoring (PAM).

Location of moored instruments	Timeframe of survey	Species	Make and model of instruments used
Borssele wind farms Southern North Sea	Oct 2019-2020	HP Harbour porpoise	CPOD, soundtraps
		Choose an item.	

3.4. Are any of these programmes carried out in collaboration with other countries?

- No.
- Yes. Describe below:

Programme	Collaborators	Links
Database for the North Sea including SCANS surveys together with national aerial surveys in the North Sea following SCANS protocol.	Tierärztliche Hochschule Hannover; Royal Belgium Institute of Natural Science; Aarhus University Denmark; Sea Mammal Research Unit, St. Andrews, Scotland	

3.5. Please provide details on any planned activities relevant to monitoring programmes.

Wageningen Marine Research survey scheme will be changed; 3-yearly surveys in spring and summer. This is planned in addition to a 6-yearly international SCANS survey

3.6. Relevant outputs/findings from monitoring programmes to note.

Species	Relevant outputs
HP Harbour porpoise	(Provide web links if available)
Choose an item.	(Provide web links if available)
Choose an item.	(Provide web links if available)

B. Monitoring Programmes

4. Other research (not mentioned elsewhere in Section II, III or IV)

4.1. Please provide relevant information in regard to other research (not mentioned elsewhere in Sections II, III, IV).

Project name	Institution	Duration	Aim(s)/Objective(s)	Method

Section IV: Use of Strandings Records

A. Stranding Network and Strandings

AIM: to provide information on stranding events and demonstrate progress of stranding networks in understanding, monitoring and mitigating strandings of small cetaceans.
 Relevant Resolutions: **8.10, 8.7, 8.4, 8.3, 7.4, 7.3, 7.1, 6.1, 5.7**

Stranding of cetaceans is an ever-present occurrence and analysis through necropsy and sampling can provide indications of reason for injury and death. Stranding numbers also provide information on population status, abundance and distribution. Effective response to strandings contributes to the maintenance of favourable conservation status of small cetaceans and also has implications for animal welfare. Comprehensive stranding networks are a critical asset in managing small cetacean strandings and have resulted in large numbers of animals rescued and returned to sea. These networks also have the capacity to guide the public on animal welfare, human health and safety considerations during stranding events.

In the effort to mitigate the anthropogenic causes of these occurrences, Parties have agreed to measures through a number of resolutions. Continued monitoring of stranding causation and further developing guidance for best practices in stranding response and necropsies was identified by Parties as important tasks to pursue, as was setting up stranding response networks. This information is to align with appropriate sampling practices and countries should ensure that the data is available for researchers. Additionally, development and support of international strandings databases and regular reporting is conducted through relevant research institutes and stranding schemes. ASCOBANS Secretariat encourages the ongoing funding and support of engagement with organizations for further development of guidelines, best practices and maintaining dataflow for capacity building across stranding networks.

To better understand the extent to which stranding events occur and how these events are managed, it is the interest of ASCOBANS for countries to provide the relevant information on these occurrences within the Agreement Area, procedures undertaken in response to stranding events, necropsies and information on stranding networks.

Questions:

1.1. Is there a national stranding network in place?

- No.** Go to **Question 1.4.**
 Yes. Please provide details:

Consisting of volunteers, SOS Dolfijn, and Utrecht University. Naturalis Biodiversity Centre maintains the database.

1.2. Does the national stranding network cover the whole, or part of the reporting country's coastline?

- Whole coastline.**
 Part of the coastline. Please provide details:

1.3. Are necropsies carried out to determine cause of death?

- No.**
 Yes. Please provide details:

A sample of 50 fresh stranded Harbour porpoises is necropsied annually. Also other species are necropsied, if possible (but strandings of other species are very limited, see below). Reports can be downloaded here: <https://www.uu.nl/onderzoek/strandingsonderzoek/het-onderzoek/onderzoeksverslagen>

1.4. Is there a database of strandings?

- No.** Go to question 1.6.
 Yes. Continue to question 1.5.

1.5. Is the data available online or downloadable on request?

- No.**
 Yes. Please provide details:

<https://www.walvisstrandingen.nl/> maintained by Naturalis Biodiversity Centre

1.6. Provide details for the institution(s) responsible for a stranding database, responding to live-strandings, collection of carcasses, and for conducting necropsies.

Responsible Institution	Responsibility	Phone number	Email	Website
SOS Dolfijn	<input checked="" type="checkbox"/> Responding to live-strandings <input type="checkbox"/> Collection of carcasses <input type="checkbox"/> Necropsies <input type="checkbox"/> Stranding database	+31 (0)6-46 656 601 +31 341 467438. +31 (0)6-65098576 (in case of stranding)		https://www.sosdolfijn.nl/
Utrecht University, Faculty of veterinary science	<input type="checkbox"/> Responding to live-strandings <input checked="" type="checkbox"/> Collection of carcasses <input checked="" type="checkbox"/> Necropsies <input type="checkbox"/> Stranding database	(030) 253 4722. Lonneke IJsseldijk	L.L.IJsseldijk@uu.nl	https://www.uu.nl/onderzoek/strandingsonderzoek
Naturalis Biodiversity Centre	<input type="checkbox"/> Responding to live-strandings <input type="checkbox"/> Collection of carcasses <input type="checkbox"/> Necropsies <input checked="" type="checkbox"/> Stranding database	Guido Keijl - +31 71 568 76 00	guido.keijl@ncbnaturalis.nl	www.walvisstrandingen.nl www.naturalis.nl

1.7. Are any cases photographed, measured or sampled even if not collected for necropsy?

No.

Yes. Please provide details:

Volunteers provide pictures and measurements of stranded animals, and can enter these into the database at www.walvisstrandingen.nl. However, training is needed to improve data collection by volunteers. Efforts are conducted to extend the database and improve the registration of animals in the future.

1.8. Provide details relevant for recorded stranding events during the reporting period.

Reporting year	Species	Region	Total animals stranded	Number of dead animals	Number of animals stranding alive	Response to live stranding (describe # of successful cases and methods used)
2016	HP Harbour porpoise	OII Southern North Sea	660	648	12	3 re-floated successfully (1 by itself) 2 rehabilitated 6 died soon 1 euthanized
	Indet. Beaked whale	OII Southern North Sea	1	1	0	
	Indet. Dolphin	OII Southern North Sea	1	1	0	
	CD Short-beaked Common dolphin	OII Southern North Sea	3	3	0	
	SBW Sowerby's beaked whale	OII Southern North Sea	2	2	0	
	SD Striped dolphin	OII Southern North Sea	2	2	0	
2017	HP Harbour porpoise	OII Southern North Sea	682	668	14	6 died soon 6 euthanized 1 re-floated successfully 1 unknown
	CD Short-beaked Common dolphin	OII Southern North Sea	1	1	0	
	SBW Sowerby's beaked whale	OII Southern North Sea	2	0	2	2 died soon --> 1 necropsy
	SD Striped dolphin	OII Southern North Sea	1	1	0	
	WBD White-beaked dolphin	OII Southern North Sea	1	1	0	1 necropsy
2018	HP Harbour porpoise	OII Southern North Sea	469	464	5	1 died soon 2 euthanized 1 re-floated successfully 1 re-floated unsuccessfully, died soon
	LFPW Long-finned pilot whale	OII Southern North Sea	1	0	1	1 died soon --> necropsy
	CD Short-beaked Common dolphin	OII Southern North Sea	1	0	1	1 re-floated unsuccessfully, died soon
2019	HP Harbour porpoise	OII Southern North Sea	503	488	15	7 died soon 1 euthanized 5 re-floated successfully 2 re-floated unsuccessfully, died soon

Indet. dolphin	Oil Southern North Sea	2	2	0	
WBD White-beaked dolphin	Oil Southern North Sea	1	0	1	Died soon --> 1 necropsy

1.9. Provide details relevant to necropsies.

Protocol used for dissection methodologies, collection of samples etc.	Reporting year	Number of carcasses necropsied	What causes of death were identified? (add percentage if available)	Comment
https://www.ascobans.org/sites/default/files/document/ascobans_ac25_inf3.2_rev1_best-practice-cetacean-post-mortem-investigation.pdf	2016	55 HP	Grey seal attacks (31%), infectious diseases (29%), emaciation (18%), presumed bycatch (11%)	
	2017	55 HP	Infectious diseases (36%), presumed bycatch (20%), grey seal attacks (18%), trauma (5%) and emaciation (5%)	
	2017	1 SBW	Unknown, emaciated	
	2017	1 WBD	Acute bacterial infection	
	2018	50 HP	Infectious diseases (28%), grey seal attacks (28%), presumed bycatch (16%), emaciation (10%), starvation (6%) and trauma (6%)	
	2018	LFPW	Infectious disease	
	2019	57 HP	Infectious diseases (30%), grey seal attacks (21%), presumed bycatch (11%), emaciation (9%), perinatal (9%) starvation (9%), other (7%), undetermined (5%)	

1.10. Other relevant new research/work/collaboration on strandings and stranding networks in your country.

(List initiatives/ projects (incl. PhD, MSc); publications (reports, theses, papers in journals, books) from any study; web links to other relevant information)

Gilbert MJ, IJsseldijk LL, Rubio-García A, Gröne A, Duim B, Rossen J, Zomer AL, Wagenaar JA (2020) After the bite: bacterial transmission from grey seals (*Halichoerus grypus*) to harbour porpoises (*Phocoena phocoena*). R. Soc. Open Sci. 7: 192079. <http://dx.doi.org/10.1098/rsos.192079>

Haelters J, Everaarts E, Bunskoek P, Begeman L, Hinrichs JWJ & IJsseldijk LL (2016) A suspect scavenging event by red foxes (*Vulpes vulpes*) on a live, stranded harbour porpoise (*Phocoena phocoena*). Aquatic Mammals, DOI 10.1578/AM.42.2.2016.227 <https://porpoise.org/library/suspected-scavenging-event-red-foxes-vulpes-vulpes-live-stranded-harbour-porpoise-phocoena-phocoena/>

Foster G, Whatmore AM, Dagleish MP, Malnick H, Gilbert MJ, Begeman L, ... & IJsseldijk LL (2019) Forensic microbiology reveals that *Neisseria animaloris* infections in harbour porpoises follow traumatic injuries by grey seals. Scientific Reports 9(1): 1-8. <https://www.nature.com/articles/s41598-019-50979-3>

IJsseldijk LL, Kik MJL & Gröne A (2019) Post-mortem research on porpoises (*Phocoena phocoena*) from Dutch waters, 2018. Biological data, health status and causes of death. Statutory Research Tasks Unit for Nature & the Environment (WOT Natuur & Milieu), WOT-technical report 150. 34 p.; 8 Figs; 3 Tabs; 25 Refs; 2 Annexes. https://www.uu.nl/sites/default/files/doi_i477075_002.pdf

IJsseldijk LL, Kik MJL, van Schalkwijk L & Gröne A (2020) Postmortaal onderzoek van bruinvissen (*Phocoena phocoena*) uit Nederlandse wateren, 2019. Statutory Research Tasks Unit for Nature & the Environment (WOT Natuur & Milieu), WOT-technical report (being finalized)

IJsseldijk LL, Ordonez SR, Förster C, de Vrieze G, Gröne A, ... & Kik M (2015) Identification of a novel gammaherpesvirus associated with (muco) cutaneous lesions in harbour porpoises (*Phocoena phocoena*). Archives of virology. 160(12) 3115-3120. <https://pubmed.ncbi.nlm.nih.gov/26370791/>

IJsseldijk LL, Brownlow A, Davison N, Deaville R, Haelters J, Keijl G, Siebert U & ten Doeschate MTI (2018) Spatiotemporal analysis in white-beaked dolphin strandings along the North Sea coast from 1991-2017. Lutra, 61 (1):

153-163 https://www.uu.nl/sites/default/files/ijseldijk_et_al._2018._spatiotemporal_analysis_of_white-beaked_dolphin_strandings_lutra_61_002.pdf

Keijl GO, Begeman L, Hiemstra S, IJsseldijk LL & Kamminga P (2016) Cetaceans stranded in the Netherlands in 2008-2014. *Lutra*, 59(1-2), 75-107.

https://www.walvisstrandingen.nl/sites/default/files/images/Keijletal_2016_strandingen2008_2014.pdf

Morell M, Lehnert K, IJsseldijk LL, Raverty SA, Wohlsein P, Gröne A, ... & Shadwick RE (2017) Parasites in the inner ear of harbour porpoise: cases from the North and Baltic Seas. *Diseases of aquatic organisms*, 127(1) 57-63.

<https://pubmed.ncbi.nlm.nih.gov/29256428/>

Ten Doeschate MTI, IJsseldijk LL, Hiemstra S, de Jong EA, Strijkstra A, Gröne A & Begeman L (2017) Quantifying parasite presence in relation to biological parameters of harbour porpoises *Phocoena phocoena* stranded on the Dutch coast. *Diseases of Aquatic Organisms*, 127(1): 49-56. <https://repub.eur.nl/pub/103748>

van den Heuvel-Greve MJ, Kwadijk CJAF & Kotterman MJJ (2016) Overdracht van contaminanten van moeder naar jong en chemische profielen in bruinvissen gestrand langs de Nederlandse kust. (Rapport / Wageningen Marine Research; No. C096/16). Wageningen Marine Research. <https://edepot.wur.nl/400727>

van den Heuvel-Greve MJ, IJsseldijk L, Kwadijk C & Kotterman M (2017) Contaminants in harbour porpoises beached along the Dutch coast: A first overview of contaminants in all age classes. (Wageningen Marine Research rapport; No. C069/17). Yerseke: Wageningen Marine Research. <https://doi.org/10.18174/422164>

van den Heuvel-Greve MJ, IJsseldijk LL, Kwadijk C, Kotterman M (2018) Contaminants in harbour porpoises beached along the Dutch coast; data report 2018. Wageningen, Wageningen Marine Research (University & Research centre), Wageningen Marine Research report C039/18

van den Heuvel-Greve MJ, IJsseldijk LL, Kwadijk CJAF, van den Brink AM & Kotterman MJJ (2020) Contaminants in harbour porpoises beached along the Dutch coast; data report 2019. Wageningen, Wageningen Marine Research (University & Research centre), Wageningen Marine Research report (being finalized)

van de Velde N, Devleeschauwer B, Leopold M, Begeman L, IJsseldijk LL, Hiemstra S, IJzer J, Brownlow A, Davison N, Haelters J, Jauniaux T, Siebert U, Dorny P & De Craeye S (2016) *Toxoplasma gondii* in stranded marine mammals from the North Sea and Eastern Atlantic Ocean: Findings and diagnostic difficulties externe link *Veterinary Parasitology*, Volume 230, 30 October 2016, Pages 25–32. DOI:10.1016/j.vetpar.2016.10.021

<https://pubmed.ncbi.nlm.nih.gov/27884438/>

Section V: Legislation

A. Overview of Legislative Framework

AIM: to provide information on national, regional and international legislation and guidelines relevant to small cetaceans during the reporting period.

Relevant Resolutions: 8.10, 8.9, 8.8, 8.6, 8.5, 8.4, 8.3, 7.1, 6.2, 6.1, 5.7, 5.4

Legislation and guidelines are a key component of efforts to support favourable conservation status of small cetaceans in the ASCOBANS Area. A number of existing legislation and guidelines bear relevance to conservation efforts for small cetaceans on national, regional and international scales. Regular updating and adaptation of guidelines and legislation (where applicable) can ensure ongoing prevention, minimization and reduction of negative impacts of marine activities on small cetaceans. In addition, these actions support transparent and reliable management.

Parties to ASCOBANS have agreed to support the requisition, development and the implementation of legislation and guidelines to assess, minimize and mitigate pressures on favourable conservation status of small cetaceans in the Agreement Area. Parties have committed to these actions through a number of resolutions regarding pressures known to be detrimental to small cetaceans. It is in the interest of ASCOBANS for countries to provide information on current and foreseen national, regional and international legislation and guidelines relevant to small cetaceans in the Agreement Area.

Questions:

1.1. Please provide the applicable information regarding legislation and guidelines relevant to small cetaceans in the table below.

Are national guidelines relevant for small cetaceans currently in place in your country?	<input type="checkbox"/> No. <input checked="" type="checkbox"/> Yes. Please identify the guidelines concerned: Dutch Conservation Plan and Framework for Cumulative Assessment (Kader Ecologie en Cumulatie)
Is national legislation relevant for small cetaceans currently in place in your country?	<input type="checkbox"/> No. <input checked="" type="checkbox"/> Yes. Please identify the legal statuses concerned: Nature Protection Act (Habitats Directive) and MSFD
Are regional and/or international guidelines relevant for small cetaceans currently in place in your country?	<input type="checkbox"/> No. <input checked="" type="checkbox"/> Yes. Please identify the guidelines concerned: ASCOBANS HP Conservation Plan
Is regional and/or international legislation relevant for small cetaceans currently in place in your country?	<input type="checkbox"/> No. <input checked="" type="checkbox"/> Yes. Please identify the legal statuses concerned: OSPAR and ASCOBANS requirements

1.2. Have there been any instances/issues related to national, regional and/or international legislation during the reporting period in your country?

No.

Yes. Please provide details:

Section VI: Information and Education

A. Education and outreach

AIM: to determine if there are gaps in the outreach and education activities and if additional material should be produced in your country or by the Secretariat (e.g. on certain themes, species, regions, languages, for certain target audiences).
 Relevant Resolutions: 8.13, 8.3, 8.2, 5.8,

ASCOBANS Communication, Education and Public Awareness (CEPA) Plan⁵ 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:

1.1. List education/outreach activities in the reporting period in your country, which are of relevance to conservation of small cetaceans in the ASCOBANS Area (e.g. activities during the International Day of the Baltic Harbour Porpoise in May)

⁵ See [AC17 Report](#), Annex 10 (starting on page 65).

Organizer	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)
Stichting Rugvin	Studio Porpoise (porpoise listening station)		Oosterschelde (Eastern Scheldt)	General public	https://rugvin.nl/oosterschelde/studio-bruinvis/
Stichting Rugvin	Courses cetacean observation and photography				https://rugvin.nl/voorlichting/cursus-walvisobservatie/
Stichting Rugvin	Presentations/lectures			General public	https://rugvin.nl/voorlichting/presentaties/
National Park Eastern Scheldt (IVN Zeeland)	Interactive harbour porpoise map "Bruinvispotter"	Continuous	Eastern Scheldt	General public	https://www.ontdekdeoosterschelde.nl
SOS Dolfijn	Travelling whale hospital		North Sea	General public, children	https://www.sosdolfijn.nl/kids-corner/reizende-walvisziekenhuis
SOS Dolfijn	Lessons for schools			children	https://www.sosdolfijn.nl/meer-leren/lespakket
University Utrecht	Stranding network day	Bi-annually	Utrecht	Volunteers stranding network	
Werkgroep zeezoogdieren	Marine mammal days	Annually	Haarlem, Groningen, Texel	General public	https://werkgroepzeezoogdieren.nl/
Ministry Infrastructure and Water Management	Development of harbor porpoise game: "Bruinvisbord"			General public, children	
WWF	Harbour porpoise brochure		Online	General public, children	https://www.wwf.nl/global/assets/pdf/rapportage-bruinvis-2020.pdf
Ministry of Agriculture, Nature and Food Quality and Marine Science & Communication	Harbour porpoise conservation stakeholder day	22 Nov 2019	Teylers Museum Haarlem	Dutch Stakeholders harbour porpoise conservation	

1.2. List current information/outreach materials produced in your country, which are of relevance to ASCOBANS Area and species.

Name of publication (incl. translation into English, where applicable)	Author(s)	Publisher	Year	Links (to download publication)	Can ASCOBANS distribute the link to publication for outreach purposes?
North Sea wind farms: ecological risks and opportunities	J. Vrooman, G. Schild, A.G. Rodriguez, F. van Hest.	North Sea Foundation	2019	https://www.noordzee.nl/north-sea-wind-farms-ecological-risks-and-opportunities/	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes
De Bruinvisfolder (The harbour porpoise brochure)	Stichting Rugvin	Stichting Rugvin/WWF NL	2018	https://rugvin.nl/wp-content/uploads/2020/03/bruinvisfolder-2018-04.pdf	<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes
Poster on Studio Harbour Porpoise	Stichting Rugvin	Stichting Rugvin	2019	https://rugvin.nl/stichting-rugvin/publicaties-media/	
Walvisstrandingen (whale strandings)	Naturalis Biodiversity Centre	Naturalis Biodiversity Centre		https://www.walvisstrandingen.nl/	

1.3. List other organizations engaged in outreach relevant to the ASCOBANS Area, incl. web links.

North Sea Foundation (www.noordzee.nl), WWF Netherlands (www.wnf.nl), Stichting In De Noordzee ('In the North Sea foundation', <http://www.indenoordzee.nl/>). Stichting Duik de Noordzee Schoon ('Dive the North Sea Clean foundation', www.duikdenoordzeeschoon.nl)

1.4. List other initiatives/work/collaboration relevant to the ASCOBANS Area that are not included above.

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

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

No.

Yes. Please describe what, and why:

Section VII: Other Matters

A. Other information or comments important for the Agreement:⁶

IJsseldijk LL, ten Doeschate MTI, Davison N, Gröne A & Brownlow A (2018) Crossing boundaries for cetacean conservation: Setting research priorities to guide management of harbour porpoises [externe link. Marine Policy, 95 https://www.sciencedirect.com/science/article/pii/S0308597X18301799](https://www.sciencedirect.com/science/article/pii/S0308597X18301799)

Meer van der J, Eijsackers H & Haelters J (2016) Eerste advies Bruinvisonderzoek (advice from the Advisory Commission). Ongepubliceerde notitie. In Dutch, unpublished.

Meer van der J, Eijsackers H & Haelters J (2019) Tweede advies Bruinvisonderzoek. Ongepubliceerde notitie. In Dutch, unpublished.

Siemensma ML & Scheidat M (2015) Stand van zaken soortbeschermingsplan Bruinvis 2014. IMARES Rapport C077/15

B. Difficulties in implementing the Agreement:

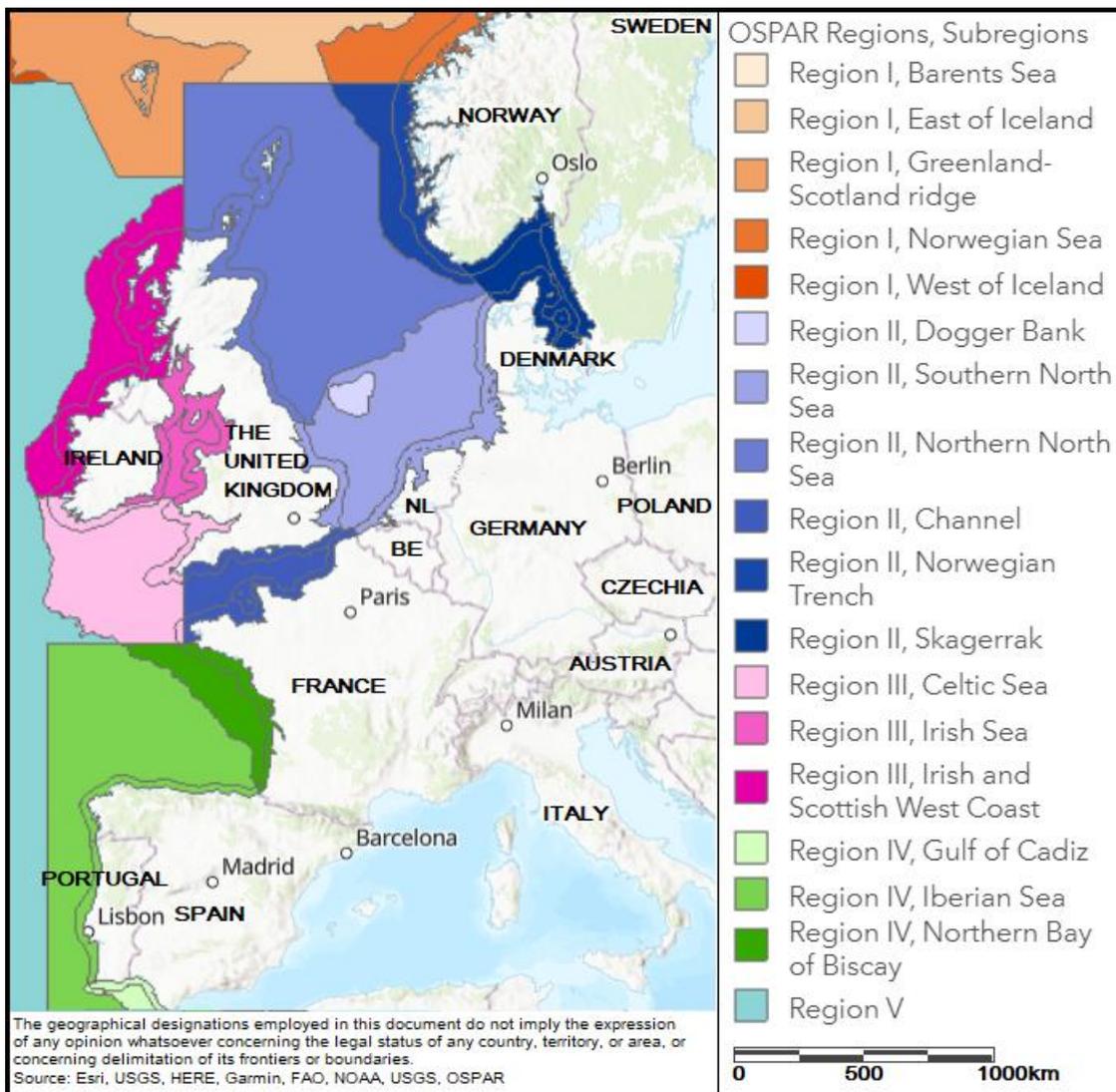
⁶ Opportunity to include other information relevant to the topics covered in this form but which are missing.

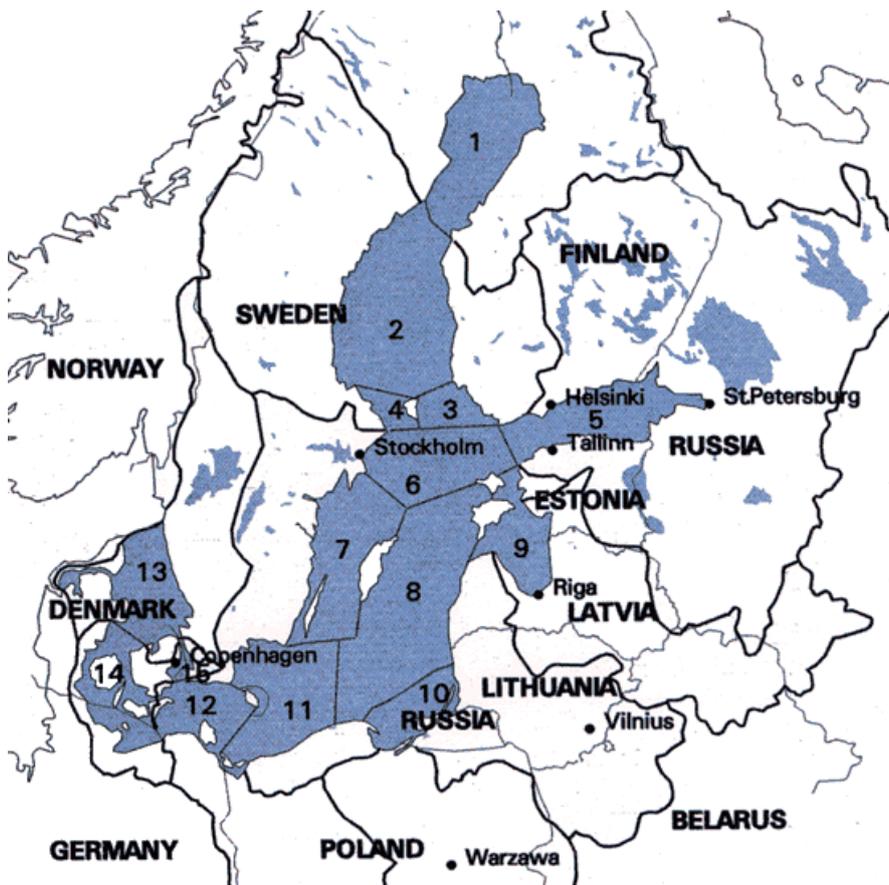
Annex A: Overview of the sub-regions as defined by OSPAR and HELCOM, and areas as defined by ICES.

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"/> <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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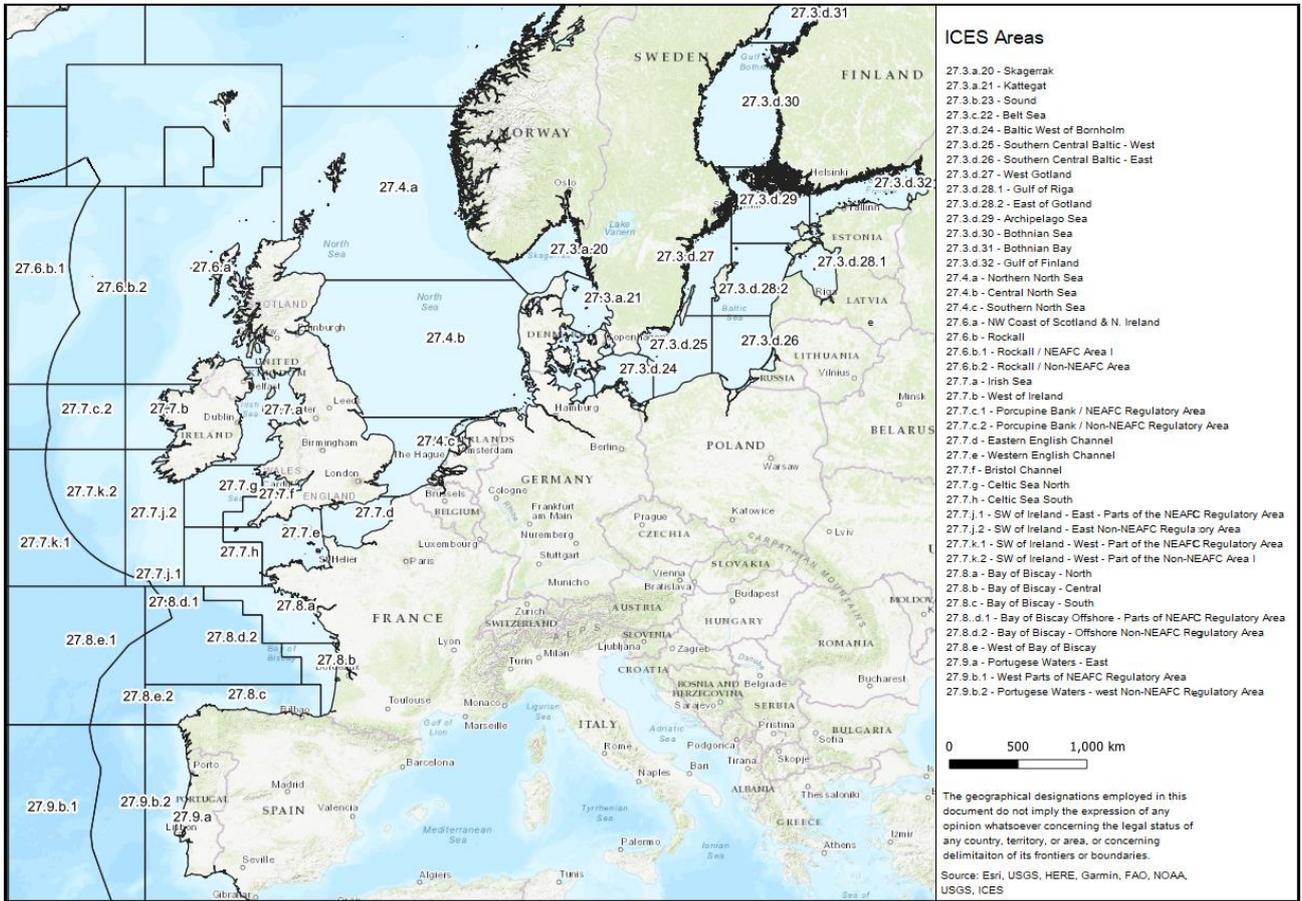
A map of the Baltic Sea drainage basins (catchment area), and marine subdivisions, including basins.

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

Drop-down menu of ICES Areas

Choose an item.

Area	Area Description	Area	Area Description
27.3	Skagerrak, Kattegat, Sound, Belt and Baltic Seas	27.7.b	West of Ireland
27.3.a	Skagerrak and Kattegat	27.7.c	Porcupine Bank
27.3.a.20	Skagerrak	27.7.c.1	Porcupine Bank / NEAFC Reg. Area
27.3.a.21	Kattegat	27.7.c.2	Porcupine Bank / Non-NEAFC Reg. Area
27.3.b.c	Sound and Belt Sea	27.7.d	Eastern English Channel
27.3.b.23	Sound	27.7.e	Western English Channel
27.3.c.22	Belt Sea	27.7.f	Bristol Channel
27.3.d	Baltic Sea	27.7.g	Celtic North Sea
27.3.d.24	Baltic West of Bornholm	27.7.h	Celtic Sea South
27.3.d.25	Southern Central Baltic – West	27.7.j	SW of Ireland – East
27.3.d.26	Southern Central Baltic – East	27.7.j.1	SW of Ireland – East – Parts of the NEAFC Reg. Area
27.3.d.27	West of Gotland	27.7.j.2	SW of Ireland – East – Non-NEAFC Reg. Area
27.3.d.28.1	Gulf of Riga	27.7.k	SW of Ireland - West
27.3.d.28.2	East of Gotland	27.7.k.1	SW of Ireland – West – Part of the NEAFC Reg. Area
27.3.d.29	Archipelago Sea	27.7.k.2	SW of Ireland – West – Part of the Non-NEAFC Area I
27.3.d.30	Bothnian Sea	27.8	Bay of Biscay
27.3.d.31	Bothnian Bay	27.8.a	Bay of Biscay North
27.3.d.32	Bay of Finland	27.8.b	Bay of Biscay Central
27.4	North Sea	27.8.c	Bay of Biscay South
27.4.a	Northern North Sea	27.8.d	Bay of Biscay Offshore
27.4.b	Central North Sea	27.8.d.1	Bay of Biscay Offshore – Part of the NEAFC Reg. Area
27.4.c	Southern North Sea	27.8.d.2	Bay of Biscay Offshore – Non-NEAFC Reg. Area
27.6	Rockall, NW Coast of Scotland and N. Ireland	27.8.e	West of Bay of Biscay
27.6.a	NW Coast of Scotland and N. Ireland	27.9	Portuguese Waters
27.6.b	Rockall	27.9.a	Portuguese Waters – East
27.6.b.1	Rockall / NEAFC Reg. Area I	27.9.b	Portuguese Water - West
27.6.b.2	Rockall / Non-NEAFC Reg. Area	27.9.b.1	Portuguese waters – West Part of the NEAFC Reg. Area
27.7	Irish Sea, West of Ireland, Porcupine Bank, Eastern and Western English Channel, Bristol Channel, Celtic Sea North and South, and Southwest of Ireland – East and West	27.9.b.2	Portuguese waters – Non-NEAFC Reg. Area
27.7.a	Irish Sea		



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.