Agenda Item 2	Review of New Information on Threats and Other Issues Relevant to Small Cetaceans
Document NR.4	**2021 Annual National Report: Denmark**
Action Requested	• Take note • Comment
Submitted by	Denmark

2021 ASCOBANS National Report

1 January – 31 December 2021

As outlined in ASCOBANS Resolution 8.1 (Rev.MOP9) *National Reporting*, this form will cover the year 2021 (Year 2), and the following topics included in the Annex to the Resolution, in addition to the standard Sections I (General Information) and VII (Other Matters):

- Bycatch (Section II A1)
- Resource Depletion (Section II A2)
- Marine Debris (Section II C9)
- Surveys and Research (Section III A: Biological Information, B: Monitoring Programmes, C: Other Research)
- Use of Strandings Records (Section IV)

The national reports submitted will inform discussions at the 27th Meeting of the ASCOBANS Advisory Committee (28-30 September 2022).

- All questions apply to the reporting period of 1 January - 31 December 2021.
- 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.
- The deadline for the submission of National Reports is 31 March 2022.

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: ascobans.secretariat@ascobans.org.

High-level Summary of Key Messages

In your country, for 2021 (Year 2), what does this report reveal about:

1. **The most successful aspects of implementation of the Agreement?** (list up to five items)

- The fishery bycatch estimate based on camera monitoring are published. This provides an important input in the management of the Belt Sea Population of porpoises.
- A pilot study examining harbour porpoise stomach content for plastic did not indicate that plastic to be a problem for porpoises.
- PAM studies in six Danish Natura 2000 sites show an increase in porpoise detections since 2012. However, MiniSCANS-II in 2020 showed a (not significant) decrease from approx. 42,000 in 2016 to 17,000 porpoises. This will be examined further during SCANS-IV in 2022.

2. **The greatest challenges in implementing the Agreement?**

- It is a slow process to develop and implement indicators of the EU MSFD. Once implemented, these will hopefully provide a framework that will ensure progress in protecting this species.
- The lack of sufficient information on bycatch covering the Baltic population makes it impossible to assess the treat level and decide on mitigations.

3. **The main priorities for future implementation of the Agreement?**

- Ensure funding for SAMBAH-II. It is essential that we gain more information on this critically endangered population of harbour porpoises, so that management can be implemented to project the population.

Section I: General Information

A. Country Information

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

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**

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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: 9.2, **8.5 (Rev.MOP9)**, 8.4 (Rev.MOP9), 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?

Method	Used	Percentage (% by monitoring method, of total bycaught animals, by gear type if applicable)
Dedicated observser schemes	☐	
Fisheries observes	☒	1.1% coverage in demersal seine, no bycaught animals observed 1.5% coverage in longline fisheries, no bycaught animals observed 0.6% was coverage in Otter trawl, no bycaught animals observed
Remote Electronic Monitoring	☒	Se below
Self-reporting by fishermen	☐	
Pathological investigation	☐	
Assessment at stranding site	☐	

Comments:

It is not clear what the percentage is. Reported here is the fisheries with have carried observes but where no bycatch was observed. The ones with bycatch is reported below in table 1.2.

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	**0**	**2021**	**GN**	**27.3.a.20**	**0.25% (effort measured in fishing days)**	**Video-based electronic monitoring**
HP Harbour porpoise	**5**	**2021**	**GN**	**27.3.a.21**	**0.34% (effort measured in fishing days)**	**Video-based electronic monitoring**
HP Harbour porpoise	**16**	**2021**	**GN**	**27.3.b.23**	**7.03% (effort measured in fishing days)**	**Video-based electronic monitoring**
HP Harbour porpoise	**1**	**2021**	**GN**	**27.3.c.22**	**0.45% (effort measured in fishing days)**	**Video-based electronic monitoring**

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
HP Harbour porpoise	**NO Data**			Choose an item.		
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?
Mandatory use of acoustic deterrents in certain gill net fisheries – for vessels > 12 m	Choose an item.	2004	☐ No ☐ Yes. Comments: No specific studies have been conducted
Seasonal closure (1. Nov – 31. Jan) for gill net fisheries in designated N2000 site (Adler Grund & Rønne Banke), supplemented with mandatory use of pingers in the area the rest of the year – for all vessel lengths.	H Arkona Basin	2022	☐ No ☐ Yes. Comments: No yet. Regulation entry into force on the 1. June 2022.
	Choose an item.		☐ No ☐ 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:

A decrease in the Danish gillnet effort has been registered over the last many years. E.g. From 2010 -2021 the gillnet effort is reduced by 39%.

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

https://orbit.dtu.dk/en/publications/bycatch-of-marine-mammals-and-seabirds-occurrence-and-mitigation

https://backend.orbit.dtu.dk/ws/portalfiles/portal/265245263/392_2021_Miljoskaansomhed_og_okologisk_baeredygtighed_i_dansk_fiskeri.pdf

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

Please provide the nature of the evidence and describe per species (Annex B) where applicable.

Species	Increasing	Decreasing	Staying the same	Unknown	Nature of the evidence (e.g. strandings, observer schemes)
HP Harbour porpoise	☐	☒	☐	☐	As the gillnet effort has decreased over the years so will the level of bycatch. Only, however, if the gillnet fishing patterns stays the same. E.g. no change in the mesh sizes used.
Choose an item.	☐	☐	☐	☐	
Choose an item.	☐	☐	☐	☐	

☐ **Not applicable.** Comments:

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.

Cod and Herring have been identified as important food objects for adult porpoises in DK waters.
are
Cod in subarea 4 division 7.d, and subdivision 20: the depletion is mainly in southern North sea (4.C) and the English channel 7.D.
Cod in subdivision 21: depletion in the full area
Cod in subdivsion 22-24: depletion in all areas
Cod in subdivision 24-29: depletion in all areas

Herring:
Herring in subdivision 20-24 (spring spawners) depletion in all areas

For the two species combined the two stocks has mainly declined in (4.c.,sd 21-29)

2.2. Where are these depletions in national waters occurring?
Sub-areas/regions as defined by ICES/OSPAR & HELCOM.

Area	Region
27.3.a.21	H Kattegat
27.4.c	OII 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
TAC regulation	Annual	Fishing 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.

Denmark is collecting samples of fat tissue from all marine mammals but at present there is insufficient data to analysis an actual impact of environmental impacts.

2.5. Are there any national efforts to evaluate cetacean body condition at sea (e.g. surveys)?
☐ **No.**
☒ **Yes.**
Please provide details.

The Department of Biology at University of Southern Denmark are conducting such studies using drones. For more information contact Magnus Wahlberg.

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
ICES advise provides annual stock status see. E.g. ICES advice 2021-http://doi.org/10.17895/ices.advice.9099

2.7. Is the perceived level of pressure from resource depletion in your country increasing, decreasing, staying the same or unknown?
Please provide the nature of the evidence and describe per species (Annex B) where applicable.

Species	Increasing	Decreasing	Staying the same	Unknown	Nature of the evidence

HP Harbour porpoise	☐	☐	☐	☒	Some stocks have increased while others have decreased and how it affects the HP population is unknown as porpoises can eat allot of other non commercial species.
Choose an item.	☐	☐	☐	☐	
Choose an item.	☐	☐	☐	☐	

☐ **Not applicable.** Comments:

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:

Include parameters provided through monitoring (e.g. type of litter (size, shape, material), amount, impacts on species, geographical location, etc.)
We are monitoring the content of waste in dead fulmars. The number of birds are very different from year to year with a very low number in 2021.
We are also monitoring waste on beaches.
In 2021, DK conducted a survey on marine plastic in sea mammals (Aarhus University).

9.2. Are these data publicly available?

☐ **No.**

☒ **Yes.** Please provide web link:

Monitoring of waste in general: Contact person: Jakob Strand, Aarhus University, jak@ecos.au.dk

Marine mammals: https://dce.au.dk/udgivelser/tr/nr-200-249 **(no 230)**

9.3. What species of small cetaceans were found to have been impacted by marine debris?
No species.

Species	# of impacted individuals	Year	Region	Description of the impact

Choose an item.		dd/mm/yy	Choose an item.	
Choose an item.		dd/mm/yy	Choose an item.	
Choose an item.		dd/mm/yy	Choose an item.	

9.4. Are there any mitigation measures in place?

☐ **No.**

☒ **Yes.** Provide information in the table below.

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

Measure:	General waste management incl. no open landfills etc.	
Date of implementation:	1990s	**Region:** Choose an item.
Has the measure been effective?	☐ **No.** ☒ **Yes.** Comments:	
Other information:		

Copy table if needed.

Measure:	No special fee system in harbours	
Date of implementation:	2015	**Region:** Choose an item.
Has the measure been effective?	☐ **No.** ☒ **Yes.** Comments:	
Other information:	All waste from ships can be delivered at harbours without any additional costs	

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

Collection and prevention of lost and abandoned fishing gear is a high priority in Denmark. Most recently, the Ministry for Food, Agriculture and Fisheries has organized and financed a project, where the main focus was on collecting lost and abandoned fishing gear in Limfjorden. The project started in June 2021 and ended in March 2022.

Further, The Danish Fisheries Agency received a report from the National Institute of Aquatic Resources in March 2022 (Ghost Nets in Danish Waters, https://fiskeristyrelsen.dk/fileadmin/user_upload/Fiskeristyrelsen/Tilskud/Hav-_og_fiskeriudviklingsprogrammet/Eksempler_paa_Miljoe_og_Innovationsprojekter_medfinansieret_fra_Den_Europaeiske_Hav_og_Fiskerifond/Ghost_nets_in_Danish_waters_final_report_DTU_Aqua_Report_no._394-2021.pdf)

In addition, DKK 9 million has been granted to strengthen the efforts against marine waste, where the main focus will be on collecting and preventing the so called ghost nets.

Finally, new measures are planned for recreational fishermen, where they will be required to report lost fishing gear.

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

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
Choose an item.	☐	☐	☐	☒	But according to the report from Aarhus University the level is quite low in mammals
Choose an item.	☐	☐	☐	☐	
Choose an item.	☐	☐	☐	☐	

☐ **Not applicable.** Comments:

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 (Rev.MOP9), 8.4 (Rev.MOP9), 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. Did your country conduct national dedicated surveys on abundance and distribution during the reporting period?

☐ **No.**

☒ **Yes.** Provide information in the table below.

Add rows if necessary. Attach maps separately, clearly marking which survey they apply to. **Note:** Information relevant to SCANS-IV is to be provided in Question 1.2.

Location	Project	Time period	Method	Species	Animal abundance (including confidence limits or CV)	Link to project/ report/ publication
Skagerrak	National monitoring	July 2021	Aerial survey - line transect	HP Harbour porpoise	Not yet published	Not yet published
Southern North Sea	National monitoring	July 2021	Aerial survey - line transect	HP Harbour porpoise	Not yet published	Not yet published
Belt Seas	National monitoring	All year	Passive acoustic monitoring	HP Harbour porpoise	Not yet published	Not yet published

Relevant information on distribution during the reporting period:

In general, the abundance estimated based on these surveys is stable in the Southern North sea and decreasing in Skagerrak. In the Belt Seas, six Natura 2000 sites are monitoring and the detection rate in all 6 have increased since the beginning of the monitoring program in 2011.

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

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

1.3. Is the abundance of species in your country increasing, decreasing, staying the same or unknown? Please provide the nature of the evidence and describe per species (Annex B) where applicable.

Species	Increasing	Decreasing	Staying the same	Unknown	Nature of the evidence
HP Harbour porpoise	☐	☐	☒	☐	Based on data from SCANS-II, MiniSCANS, SCANS-III and MIniSCANS-II it seems that he abundance is stable.
Choose an item.	☐	☐	☐	☐	
Choose an item.	☐	☐	☐	☐	

☐ **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?

For each life history parameter, please identify the species and provide web links and details where applicable.

Age of sexual and physical maturity	☒ **No** ☐ **Yes** Please describe: Species: Choose an item.
Inter-birth intervals	☒ **No** ☐ **Yes** Please describe: Species: Choose an item.
Calf and adult mortality rates	☒ **No** ☐ **Yes** Please describe: Species: Choose an item.
Potential reproductive span/capacity	☒ **No** ☐ **Yes** Please describe: Species: Choose an item.
Longevity	☒ **No** ☐ **Yes** Please describe: Species: Choose an item.
Diet	☒ **No** ☐ **Yes** Please describe: Species: Choose an item.
Age and sex structure	☒ **No** ☐ **Yes** Please describe: Species: Choose an item.
Other relevant factors	☒ **No** ☒ **Yes** Please describe: blubber thickness is measured on stranded or bycaught porpoises. Species: HP Harbour porpoise

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 (Rev.MOP9), 8.9, 8.8, 8.5 (Rev.MOP9), 8.4 (Rev.MOP9), 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. Did your country have national monitoring programmes that enabled 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) during the reporting period?

☐ **No.**

☒ **Yes.** Please provide an overview in the table below.

Add rows if necessary.

Within MPAs	**Approach:** ☐ Line transect surveys ☐ Photo-ID ☐ Strandings ☒ Passive Acoustic Monitoring ☐ Other, please specify:
	Target Species: (Copy drop-down to add more species) HP Harbour porpoise
	Institution(s): Aarhus University
Wider Seas	**Approach:** ☒ Line transect surveys ☐ Photo-ID ☐ Strandings ☐ Passive Acoustic Monitoring ☐ Other, please specify:
	Target Species: (Copy drop-down to add more species) HP Harbour porpoise
	Institution(s): Aarhus University

3.2. Please provide the relevant information regarding aerial surveying activities.

Provide the number of surveys, area covered, relevant species, and timeframe of the survey.
Results are mentioned under “abundance estimate”

3.3. Please provide the relevant information regarding Passive Acoustic Monitoring (PAM).

5 stations are deployed for a year in each of six Natura 2000 sites. The third full year of PAM in the six sites were completed in 2021.

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

☒ **No.**

☐ **Yes.** Provide information below.

Please provide the collaborators and links per programme.
But the methods are discussed and aligned as much as possible among neighbouring countries.

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

Provide web links if available.
SCANS-IV in July 2022

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

Per species, please identify the relevant outputs. Provide web links if available.
In the Belt Seas, six Natura 2000 sites are monitoring and the detection rate in all 6 have increased since the beginning of the monitoring program in 2011.

C. Other Research

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

Per project, please provide the institution, duration, aim(s) / objective(s), and the method.
Teilmann, J., Dietz, R. & Sveegaard, S. 2022. The use of marine waters of Skåne by harbour porpoises in time and space. Aarhus University, DCE - Danish Centre for Environment and Energy, 76 pp. Technical Report No. 236. http://dce2.au.dk/pub/TR236.pdf

Amundin M, Carlström J, Thomas L, Carlén I, Teilmann J, Tougaard J, Loisa O, Kyhn LA, Sveegaard S, Burt ML, Pawliczka I, Koza R, Arciszewski B, Galatius A, Laaksonlaita J, MacAuley J, Wright AJ, Gallus A, Dähne M, Acevedo-Gutiérrez A, Benke H, Koblitz J, Tregenza N, Wennerberg D, Brundiers K, Kosecka M, Tiberi Ljungqvist C, Jussi I, Jabbusch M, Lyytinen S, Šaškov A, Blankett P. 2022. Estimating the abundance of the critically endangered Baltic Proper harbour porpoise (Phocoena phocoena) population using passive acoustic monitoring. Ecology and Evolution. 12(2):Article e8554. https://doi.org/10.1002/ece3.8554

Elmegaard SL, McDonald BI, Teilmann J, Madsen PT. 2021. Heart rate and startle responses in diving, captive harbour porpoises (Phocoena phocoena) exposed to transient noise and sonar. Biology Open. 10(6):Article bio058679. https://doi.org/10.1242/bio.058679

Clausen KT, Teilmann J, Wisniewska DM, Balle JD, Delefosse M, van Beest FM. 2021. Echolocation activity of harbour porpoises, Phocoena phocoena, shows seasonal artificial reef attraction despite elevated noise levels close to oil and gas platforms. Ecological Solutions and Evidence. 2(1):Article e12055. https://doi.org/10.1002/2688-8319.12055

Unger B, Nachtsheim D, Martinez NR, Siebert U, Sveegaard S, Kyhn LA, Balle JD, Teilmann J, Carlström J, Owen K, Gilles A 2021. MiniSCANS-II: Aerial survey for harbour porpoises in the western Baltic Sea, Belt Sea, the Sound and Kattegat in 2020. 30 p

Larsen F, Kindt-Larsen L, Sørensen TK, Glemarec G. 2021. “Bycatch of marine mammals and seabirds - Occurrence and mitigation”, DTU Aqua Report no. 389-2021

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 (Rev.MOP9)**, 8.7, 8.4 (Rev.MOP9), 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:

The network is coordinated by Denmark's museum of the sea in Esbjerg. Other collaborators are Copenhagen University, Aarhus University, Ministry of the Environment, the Nature Agency, DTU and Aalborg University.

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:

If a marine mammal is found the Natura Agency should be contacted and they will make sure that the stranded animal is included in the network database.

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

☐ **No.**

☒ **Yes.**

Please provide details:

DK has the funding to conduct 25 necropsies on harbour porpoises each year. All larger whales are also necropsied.

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:

It is updated by Denmark's museum of the sea in Esbjerg. They also publish the annual data, but they are a few years behind. This means that the numbers reported here are from 2019.

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

Please identify the new responsible institution(s) and provide their: responsibility (responding to live-strandings, collection of carcasses, necropsies, stranding database), phone number, email, and website.

1.7. Were cases photographed, measured or sampled even if not collected for necropsy during the reporting period?

☒ **No.**

☐ **Yes.**

Please provide details:

unknown

1.8. Were there recorded stranding events in your country during the reporting period?

☐ **No.**

☒ **Yes.**

How many strandings occurred? (Specify live and dead) _59 dead_____

Please also provide more details in the table below.

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)
HP Harbour porpoise	Choose an item.	**59**	**59**	**0**	**56 stranded and 3 bycaught**
WBD White-beaked dolphin	OII Southern North Sea	**2**	**2**	**0**	
Humpback whale	Skagen	**1**	**1**	**0**	
LFPW Long-finned pilot whale	Choose an item.	**2**	**2**	**0**	

1.9. Were any necropsies conducted during the reporting period?

☐ **No.**

☒ **Yes.**

Please provide information below:

We here report on 2019 data.

Here, 14 harbour porpoises were necropsied but revealed no signs of serious infectious diseases and all were tested negative for morbillivirus.

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)

Section VII: Other Matters

A. Other information or comments important for the Agreement:[1]

B. Difficulties in implementing the Agreement:

It is a slow process to develop and implement indicators of the EU MSFD. Once implemented, these will hopefully provide a framework, that will ensure progress in protecting this species.

The lack of sufficient information on bycatch covering both the Baltic and the Belt Sea population makes it impossible to assess the treat level and decide on mitigations (not covered by subjects in this report)

C. Burning issues:

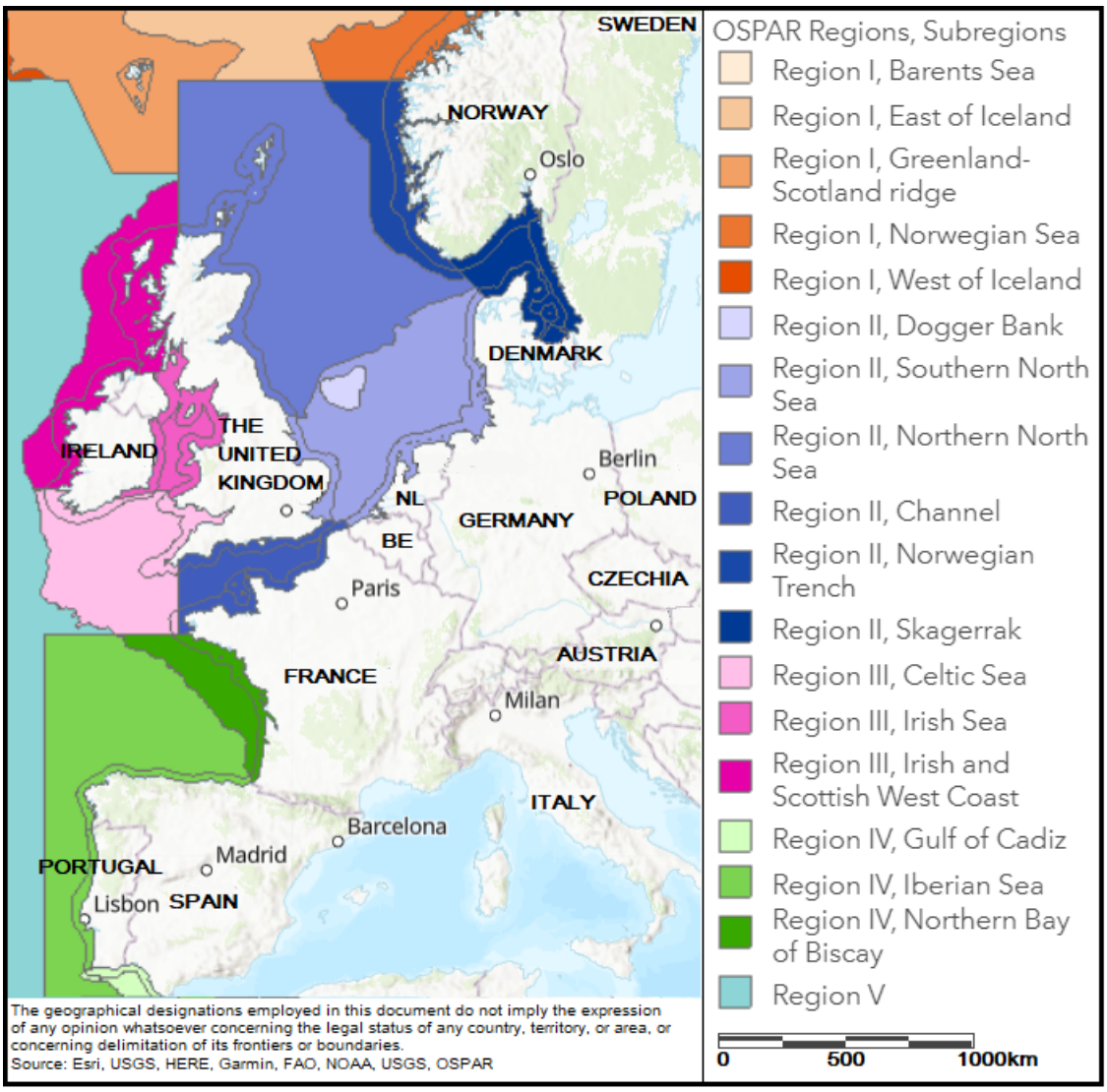
Ensure funding for SAMBAH-II. It is essential that we gain more information on this critically endangered population of harbour porpoises, so that management can be implemented to project the population.

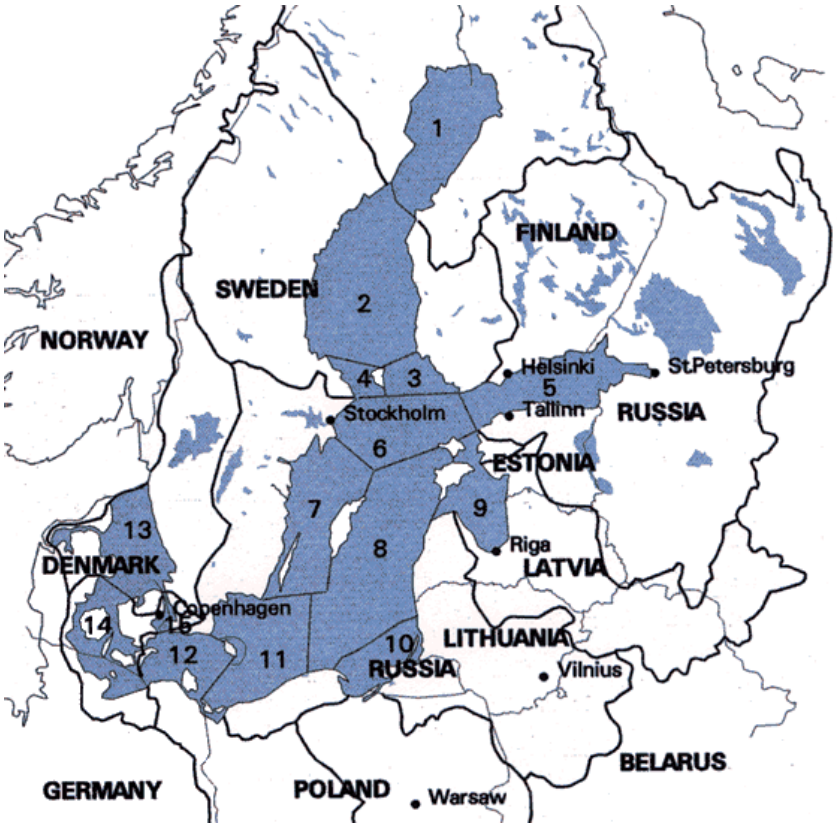
[1] Opportunity to include other information relevant to the topics covered in this form but which are missing.

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.

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



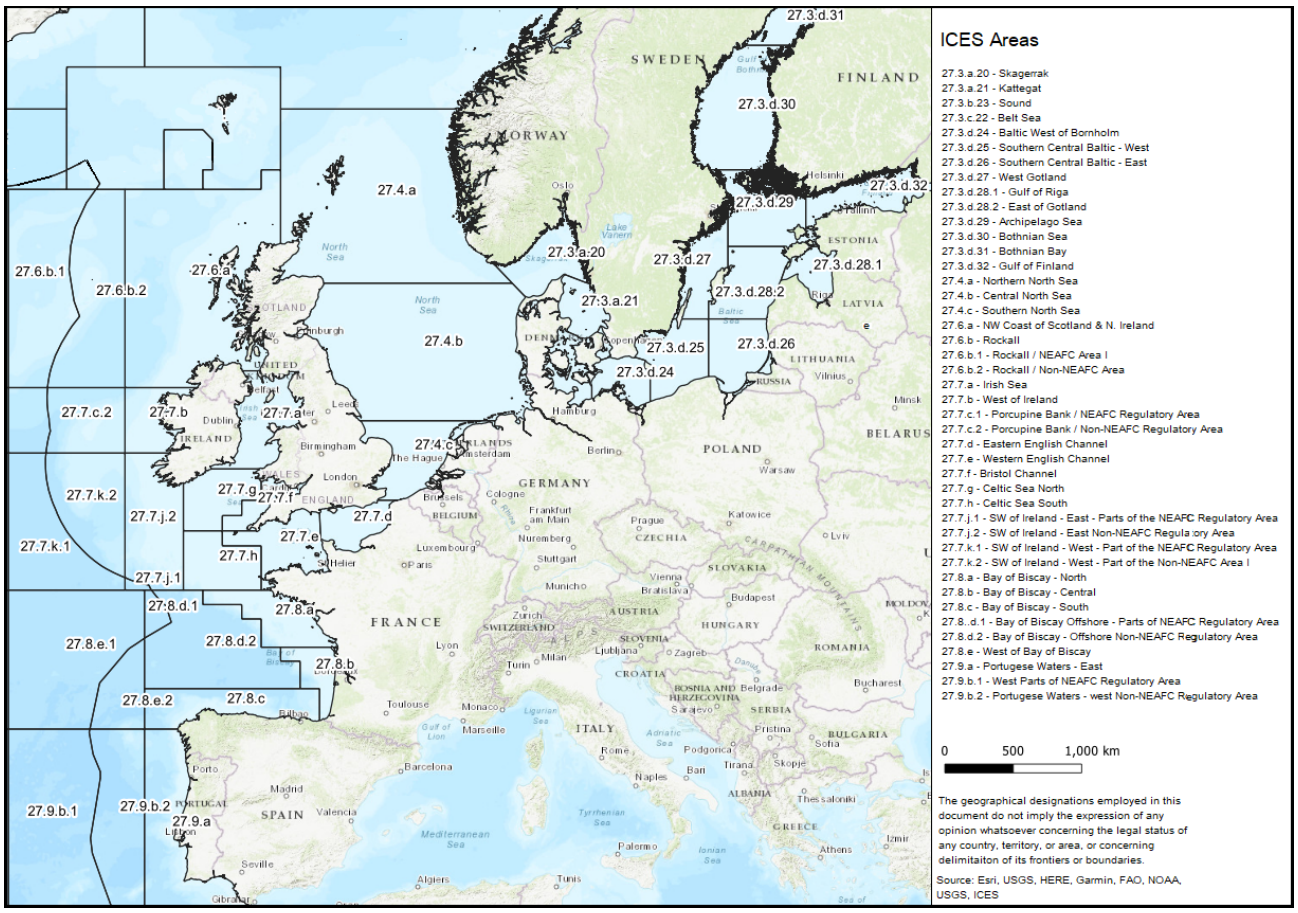


A map of the Baltic Sea drainage basins (catchment area), and marine subdivisions, including basins.
1. Bothnian Bay
2. Bothnian Sea
3. Archipelago Sea
4. Åland Sea
5. Gulf of Finland
6. Northern Baltic Proper
7. Western Gotland Basin
8. Eastern Gotland Basin
9. Gulf of Riga
10. Gdansk Basin
11. Bornholm 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	Wet 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		


27.3.d.31
SWEDEN
FINLAND
27.3.d.30
NORWAY
27.4.a
27.3.d.32
27.3.d.29
27.3.a.20
27.3.d.27
27.3.d.28.1
27.6.b.1
27.6.a
27.6.b.2
27.3.d.28.2
27.3.a.21
ESTONIA
LATVIA
27.4.b
27.3.d.25
27.3.d.26
LITHUANIA
27.3.d.24
RUSSIA
27.7.c.2
27.7.b
27.7.a
27.4.c
BELARUS
IRELAND
POLAND
27.7.k.2
GERMANY
27.7.g
27.7.f
27.7.j.2
27.7.d
27.7.e
27.7.k.1
27.7.h
27.7.j.1
27.8.d.1
27.8.a
FRANCE
27.8.e.1
27.8.d.2
27.8.b
27.8.e.2
27.8.c
ITALY
SPAIN
27.9.b.1
27.9.b.2
27.9.a
PORTUGAL
GREECE
ALBANIA
SERBIA
BULGARIA
ROMANIA
HUNGARY
SLOVAKIA
CZECHIA
AUSTRIA
SWITZERLAND
BELGIUM
CROATIA
SLOVENIA
ICES Areas
27.3.a.20 - Skagerrak
27.3.a.21 - Kattegat
27.3.b.23 - Sound
27.3.c.22 - Belt Sea
27.3.d.24 - Baltic West of Bornholm
27.3.d.25 - Southern Central Baltic - West
27.3.d.26 - Southern Central Baltic - East
27.3.d.27 - West Gotland
27.3.d.28.1 - Gulf of Riga
27.3.d.28.2 - East of Gotland
27.3.d.29 - Archipelago Sea
27.3.d.30 - Bothnian Sea
27.3.d.31 - Bothnian Bay
27.3.d.32 - Gulf of Finland
27.4.a - Northern North Sea
27.4.b - Central North Sea
27.4.c - Southern North Sea
27.6.a - NW Coast of Scotland & N. Ireland
27.6.b - Rockall
27.6.b.1 - Rockall / NEAFC Area I
27.6.b.2 - Rockall / Non-NEAFC Area
27.7.a - Irish Sea
27.7.b - West of Ireland
27.7.c.1 - Porcupine Bank / NEAFC Regulatory Area
27.7.c.2 - Porcupine Bank / Non-NEAFC Regulatory Area
27.7.d - Eastern English Channel
27.7.e - Western English Channel
27.7.f - Bristol Channel
27.7.g - Celtic Sea North
27.7.h - Celtic Sea South
27.7.j.1 - SW of Ireland - East - Parts of the NEAFC Regulatory Area
27.7.j.2 - SW of Ireland - East Non-NEAFC Regulatory Area
27.7.k.1 - SW of Ireland - West - Part of the NEAFC Regulatory Area
27.7.k.2 - SW of Ireland - West - Part of the Non-NEAFC Area I
27.8.a - Bay of Biscay - North
27.8.b - Bay of Biscay - Central
27.8.c - Bay of Biscay - South
27.8..d.1 - Bay of Biscay Offshore - Parts of NEAFC Regulatory Area
27.8.d.2 - Bay of Biscay - Offshore Non-NEAFC Regulatory Area
27.8.e - West of Bay of Biscay
27.9.a - Portugese Waters - East
27.9.b.1 - West Parts of NEAFC Regulatory Area
27.9.b.2 - Portugese Waters - west Non-NEAFC Regulatory Area
0
500
1,000 km
The geographical designations employed in this document do not imply the expression of any opinion whatsoever concerning the legal status of any country, territory, or area, or concerning delimitaiton of its frontiers or boundaries.
Source: Esri, USGS, HERE, Garmin, FAO, NOAA, USGS, ICES

Annex B: Species covered by ASCOBANS

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

Drop down menu small cetacean species:

Choose an item.