2015 ASCOBANS Annual National Reports

This questionnaire has been pre-filled with answers given in 2014 National Report - **please update!**

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

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

General Information

Name of Party
› The Netherlands

Report prepared by

This should indicate the name and affiliation of the lead person for filling in the report.

Name	Steve Geelhoed
Function	Researcher
Organization	IMARES
Address	Ankerpark 27, 1781 AG Den Helder, The Netherlands
Telephone/Fax	+31 317482537
Email	steve.geelhoedt@wur.nl

Coordinating Authority and National Coordinator

Please confirm the Coordinating Authority responsible for the national implementation of the Agreement, and give the name and contact details of the officially appointed National Coordinator (Focal Point).
› Jeroen Vis
Ministry of Economic Affairs, Department of Nature and Biodiversity
P.O.Box 20401, 2500 EK The Hague, The Netherlands
Email: g.a.j.vis@minez.nl

List of National Institutions

List of national authorities, organizations, research centres and rescue centres active in the field of study and conservation of cetaceans, including contact details
› SEAMARCO (Sea Mammal Research Company), Applied research for marine conservation, Julianalaan 46, 3843 CC Harderwijk, The Netherlands. Tel (Office): +31-(0)341-456252; Email contact: researchteam@zonnet.nl

› Stichting Rugvin; Jeruzalem 31a; 6881 JL Velp; the Netherlands; Tel: (+31) (0)26-3635444. Email contact: rugvinfoundation@gmail.com; www.rugvin.nl

› TNO, Netherlands Organisation for Applied Scientific Research; P.O. Box 96864, 2509 JG The Hague, The Netherlands. Phone +31 (0)88-8664119.
Email contact: Frans-Peter.Lam@tno.nl

› Stichting de Noordzee. Natuur, Ruimtelijke Ordening. Drieharingstraat 25. 3511 BH Utrecht, The Netherlands. Phone +31 302340016. www.noordzee.nl

› Naturalis Netherlands Centre for Biodiversity Naturalis. Postbus 9517, 2300 RA Leiden, The Netherlands. +31 71 568 76 00. Email contact: guido.keijl@ncbnaturalis.nl; www.naturalis.nl

› Department of Pathobiology, Faculty of Veterinary Medicine, Utrecht University, Yalelaan 1, 3584 CL Utrecht.

› Ministerie of I&M (Infrastructure and Environment), DG Water. P.O.Box 20901, 2500 EX the Hague, The Netherlands. Email contact: Rene.dekeling@minvenw.nl

› Marine Science & Communication (MS&C). Bosstraat 123, 3971 XC Driebergen, The Netherlands. Phone +31(6)16830430. Email contact: m.siemensma@msandc.nl

› SOSDolfijn. P.O.Box 293, 3840 AG Harderwijk, The Netherlands. Phone +31 341 467438.

› Coastal & Marine Union (EUCC). P.O. Box 11232, 2301 EE Leiden, The Netherlands. Phone +31 71 5122900. Email contact: m.siemensma@kustenzee.nl ; www.eucc.net

› Ministry of EZ (Dutch Ministry of Economic Affairs); P.O.Box 20401, 2500 EK The Hague, The Netherlands. Email contact: g.a.j.vis@minez.nl

› IMARES Wageningen UR (Institute for Marine Resource and Ecosystem Studies), Dept. Fish ecology; P.O. Box 68, 1970AB IJmuiden, The Netherlands. Email contact: mscheidat@wur.nl; www.imares.nl

› NIOZ Royal Netherlands Institute for Sea Research, Landsdiep 4, 1791 SZ ‘t Horntje, The Netherlands. Email contact: Kees.Camphuysen@nioz.nl; www.nioz.nl

Habitat Conservation and Management

Fisheries Interactions

Direct Interaction with Fisheries

1.1 Investigations of methods to reduce bycatch

› IMARES Wageningen UR and Marine Science and Communication (MS&C) continued a Remote Electronic Monitoring project that started in December 2012 to investigate bycatch of harbour porpoises by Dutch gill net fishery (targeting sole, seabass, cod, turbot and brill). This project includes the monitoring of 10 to 12 vessels. The project is funded by the Dutch Ministry of Economic Affairs. Bycaught porpoises are collected for pathological research at the Department of Pathobiology, Faculty of Veterinary Medicine, of Utrecht University (see 5.1).

1.3 Other relevant information

Other relevant information, including bycatch information from opportunistic sources
› See 5.1

› none

1.4 Report under EC Regulation 812/2004

Please provide the link to your country's report under EC Regulation 812/2004.
› The 2015 report EU regulation 812/2004 is not yet published.

Reduction of Disturbance

2.1 Anthropogenic Noise

Please reference and briefly summarise any studies undertaken
› Several (desktop) studies on the potential effects of underwater noise on harbour porpoises have been conducted or finalized in 2015. IMARES, SEAMARCO and TNO co-operated in several projects and were represented in the Working group underwater noise (Werkgroep onderwatergeluid) that published a review on the cumulative effects of impulsive underwater sound. This study focussed on the population effects of the development of offshore wind farms in the North Sea, and produced a noise threshold for the construction of wind farms. The SORIANT (Sound Risk Analysis Tool) and PCoD model were used to quantify potential effects. A different approach to assess the cumulative effects on porpoises is used in the DEPONS project, led by the University of Aarhus, in which IMARES provided ecological and distribution data.

› The above mentioned parties published (part of) the results of a review on the effects of underwater explosions on harbour porpoises. The extent of underwater explosions on the Dutch continental shelf; potential effects on harbour porpoises; and mitigation measures were described. The proposed mitigation measures were used by the Dutch Navy detonation of a block buster in the vicinity of the Dogger Bank https://www.defensie.nl/english/documents/videos/2015/09/09/navy-saves-marine-mammals-from-explosion

› IMARES and TNO reviewed the potential effects of seismic surveys on harbour porpoises. This review sketched: The extent of seismic surveys on the Dutch continental shelf; potential effects on harbour porpoises; and mitigation measures were described. Furthermore, Ozkan Sertlek (Leiden University) published a paper on the description and application of a new airgun source model, aimed to produce sound maps in the North Sea, which is part of his PhD-Thesis is supported by NWO-ZKO grant ‘Effects of underwater noise on fish and marine mammals in the North Sea’.

› TNO continued its participation in the 3S-project, together with main partners FFI (Norway), SMRU (UK) and WHOI (USA) and several associate partners. The second phase of the 3S(2)-3S-project finished in 2015 and was closed with a symposium at the University of St Andrews.
The SONIC-project on Shipnoise on the North Sea (TNO) has been finished. Results can be found at http://www.sonic-project.eu/page/results.php.
SEAMARCO (and TNO) continued with conducting hearing experiments to measure potential effects of sound on the behaviour of harbour porpoises. The effects of seal scarers on harbour porpoises were measured.

› Michael Ainslie (TNO) is convener of an ISO working group that has published a standard on underwater acoustic terminology, including standards for bioacoustics terminology and contributed to ANSI terminology standard for bioacoustics.

› References:
ANSI/ASA S3.20-2015 Bioacoustical Terminology, Acoustical Society of America, New York.

von Benda-Beckmann AM, Aarts G, Sertlek HO, Lucke K, Verboom WC, Kastelein RA, Ketten DR, van Bemmelen R, Lam F-P, Kirkwood RJ & Ainslie MA, 2015. Assessing the Impact of Underwater Clearance of Unexploded Ordnance on Harbour Porpoises (Phocoena phocoena) in the Southern North Sea. Aquatic Mammals 41: 503-523. DOI 10.1578/AM.41.4.2015.503.
Colin MEGD, Ainslie MA, Binnerts B, de Jong CAF, Sertlek HÖ, Karasalo I, Östberg M, Folegot T & Clorennec D. Definition and results of test cases for shipping sound maps. IEEE 2015 Oceans Conference, Genua.
Curé C, Sivle LD, Visser F, Wensveen P, Isojunno S, Harris C, Kvadsheim PH, Lam FPA & Miller PJO, 2015. Predator sound playbacks reveal strong avoidance responses in a fight strategist baleen whale. Mar Ecol Prog Ser 526: 267–282. doi: 10.3354/meps11231
Haan D de, von Benda-Beckmann S., Geelhoed SCV & Lagerveld S, 2015. Potential effects of seismic surveys on harbour porpoises. IMARES Wageningen/TNO Report number C126/15.
Harris CM, Sadykova D, De Ruiter SL, Tyack PL, Miller PJO, Kvadsheim PH, Lam FPA & Thomas L, 2015. Dose response severity functions for acoustic disturbance in cetaceans using recurrent event survival analysis. Ecosphere 6(11): Article 236
Heinis F, Jong CAFde & RWS Werkgroep Onderwatergeluid. 2015. Cumulatieve effecten van impulsief onderwatergeluid op zeezoogdieren. TNO-rapport TNO 2015 R10335. TNO, Den Haag.
ISO/DIS 18405 Underwater Acoustics – Terminology, International Organization for Standardization. Geneva, Switzerland.
Isojunno SC, Curé P, Kvadsheim PH, Lam FPA, Tyack PL, Wensveen PJ & Miller PJO, in press. Sperm whales reduce foraging effort during exposure to 1-2 kHz sonar and killer whale sounds. Ecological Applications
Jansen HWJ & de Jong CAF, 2015. Experimental assessment of underwater radiated noise levels of different ship types. IEEE 2015 Oceans Conference, Genua.
Kastelein RA, Gransier R, Marijt MAT & Hoek L, 2015. Hearing frequencies of a harbor porpoise (Phocoena phocoena) temporarily affected by played back offshore pile driving sounds. J. Acoust. Soc. Am. 137, 556–564, DOI: 10.1121/1.4906261.
Kastelein RA, Gransier R, Schop J & Hoek L, 2015. Effect of intermittent and continuous 6-7 kHz sonar sweep exposures on harbor porpoise (Phocoena phocoena) hearing. J. Acoust. Soc. Am. 137, 1623-1633.
Kastelein RA, Hoek L, Gransier R, de Jong CAF, Terhune JM & Jennings N, 2015. Hearing thresholds of a harbor porpoise (Phocoena phocoena) for playbacks of seal scarer signals, and effects of the signals on behavior. Hydrobiologia 756: 89-103. DOI 10.1007/s10750-014-2035-x.
Kastelein RA, Schop J, Hoek L & Covi, J, 2015. Hearing thresholds of a harbor porpoise (Phocoena phocoena) for narrow-band sweeps. J. Acoust. Soc. Am. 138, 2508–2512. http://dx.doi.org/10.1121/1.4932024.
Kastelein,RA, van den Belt I, Gransier R & Johansson T, 2015. Behavioral Responses of a Harbor Porpoise (Phocoena phocoena) to 24.5-25.5 kHz Sonar Down-sweeps With and Without Side Bands. Aquatic Mammals 41, 400-411. DOI 10.1578/AM.41.4.2015.400
Lafeber FH, Bosschers J, de Jong CAF & Graafland F, 2015. Acoustic reverberation measurements in the Depressurized Wave Basin. AMT conference, Istanbul
Lam FP & Kvadsheim, PH 2015. Effects of Sound in the Ocean on Marine Mammals - ESOMM-2014 Conference. Aquatic Mammals 41(4); 355-356 DOI 10.1578/AM.41.4.2015.355
Miller PJO, Kvadsheim PH, Lam FPA, Tyack PL, Cure C, De Ruiter SL, Kleivane L, Sivle L, van IJsselmuide SP, Visser F, Wensveen PJ, von Benda-Beckmann AM, Martin López L, Narazaki T, Hooker SK, 2015. First indications that northern bottlenose whales are sensitive to behavioural disturbance from anthropogenic noise. R. Soc. open sci. 2: 140484. http://dx.doi.org/10.1098/rsos.140484
Samarra F & Miller PJO, 2015. Prey-induced behavioural plasticity of herring-eating killer whales. Marine Biology 162, 809-821. doi:10.1007/s00227-015-2626-8
Sertlek HÖ & Ainslie MA, 2015. Airgun Source Model (AGORA): Its application for the Dutch North Sea seismic surveys' sound maps. Proc. UA2015 3rd International Conference and Exhibition on Underwater Acoustics. 2015, Crete, Greece.
Sivle L, Kvadsheim PH, C Curé, S Isojunno, Wensveen PJ, Lam FPA, Visser F, Kleivane L, Tyack PL, Harris C & Miller PJO, 2015. Severity of expert-identified behavioural responses of humpback whale, minke whale and northern bottlenose whale to naval sonar. Aquatic Mammals 41(4): 469-502 DOI 10.1578/AM.41.4.2015.469
Wensveen PJ, von Benda-Beckmann AM, Ainslie MA, Lam F-PA, Kvadsheim PH, Tyack PL & Miller PJO, 2015. How effectively do horizontal and vertical response strategies of long-finned pilot whales reduce sound exposure from naval sonar? Mar. Env. Res.106: 68-81

2.2 Ship Strike Incidents

Please list all known incidents and provide information separately for each

	Date	Species	Type of Injury	Fatal Injury (Yes/No)	Type of Vessel (length, tonnage, speed)	Location (coordinates)	More Information (name, email)
Incident	7 nov 2015	minke whale	blunt injury	yes	Ro-Ro ship 'Opaline'	British vessel that entered the Port of Rotterdam	
Incident							
Incident							
Incident							
Incident							
Incident							www.walvisstrandingen.nl
Incident							www.walvisstrandingen.nl
Incident							
Incident							
Incident	none						

2.3 Major Incidents

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

	Date	Location	Type of Incident	Further Information
Incident				
Incident				
Incident				
Incident				
Incident	none			

2.4 Pollution and Hazardous Substances

Please report on main types of pollution and hazardous substances (including source, location and observed effects on cetaceans). Please provide information on any new measures taken to reduce pollution likely to have an impact.
› Contaminant concentrations (PCBs, organotin, PFOS) are annually analysed in beached Harbour porpoises (neonates and juveniles) (2007-ongoing). In 2015-2016 the study is focused on the vectors of accumulation of PCBs in neonates and the use of PCBs and PBDEs as contaminant base for chemical profiling.

› Reference:
Van den Heuvel-Greve M.J., Kwadijk C., Kotterman M. (2016, in prep). Maternal transfer of contaminants and chemical profiles of harbour porpoises stranded along the Dutch coast (in Dutch). IMARES report

Marine Protected Areas

Marine Protected Areas for Small Cetaceans

3.1 Relevant Information

Please provide any relevant information on measures taken to identify, implement and manage protected areas for cetaceans, including MPAs designated under the Habitats Directive and MPAs planned or established within the framework of OSPAR or HELCOM.
› In the Dutch Continental Shelf and Coastal Waters, six sites have been identified as marine protected areas. Three offshore areas; Dogger Bank (Doggersbank), Cleaver Bank (Klaverbank) and Frisian Front (Friese Front),

and three in the coastal zone; Noordzeekustzone in the north and Voordelta and Vlakte van de Raan in the south. These areas have been notified to the EU commission as Special Areas of Conservation (SACs) under the European Habitats and Birds Directives. All of these marine protected areas, except the Voordelta and Frisian Front, have been designated as a special protection zone for the harbor porpoise. The three coastal areas were designated by the Dutch ministry. The three offshore areas will follow later.
The areas will also be reported to the OSPAR Secretariat as MPA's according to the OSPAR Convention. These future SACs will also be designated for small cetaceans, but additional measures for their protection are unlikely, because the protection of the harbour porpoise will cover the whole Dutch EEZ. The conservation target will probably be formulated as follows: “Maintain the extent and quality of the habitat in order to maintain the population in a sustainable condition”.

3.2 GIS Data

Please indicate where GIS data of the boundaries (and zoning, if applicable) can be obtained (contact email / website).
› Noordzee
http://www.noordzeeloket.nl/projecten/noordzee-natura-2000/
official GIS shapefiles for Natura 2000 gebieden:
http://nationaalgeoregister.nl/geonetwork/srv/dut/search#|8829e5dd-c861-4639-a6c8-fdbb6e3440d2
database Natura 2000 species and habitats:
http://www.synbiosys.alterra.nl/natura2000/default.aspx?main=natura2000
general information:
www.natura2000.nl
map of the European Natura 2000 network:
http://natura2000.eea.europa.eu/#
http://ec.europa.eu/maritimeaffairs/atlas/maritime_atlas/#lang=EN;bkgd=5:1;mode=1;pos=11.754:54.605:4;theme=14:1:1;

Surveys and Research

4.1 Abundance, Distribution, Population Structure

Overview of Research on Abundance, Distribution and Population Structure

› Aerial surveys to estimate the abundance of harbour porpoises were conducted on the Dutch Continental Shelf in July 2015. These surveys were conducted along predetermined track lines using distance sampling methods in four areas: A “Dogger Bank”, B “Offshore”, C “Frisian Front” & D “Delta”. Between 11 and 16 July the entire Dutch Continental Shelf (DCS) was surveyed.
In total, 144 sightings of 172 individual harbour porpoises were collected. Porpoise densities varied between 0.36-1.34 animals/km² in the areas A-D. The overall density on the entire Dutch Continental Shelf was 0.70 animals/km².
The total numbers of harbour porpoises on the Dutch Continental Shelf (areas A-D) in July 2015 were estimated at 41 299 (Confidence Interval (CI) = 21 194 - 79 256). This estimate is intermediate between the estimate for July 2010 (25 998, CI = 13 988 – 53 623) and July 2014 (76 773, CI = 43 414-154 265), however, the confidence intervals of the estimates overlap. Therefore the estimates do not differ statistically.

› Land-based observations during systematic seawatches and records of beached animals showed lower numbers in Dutch coastal waters in 2015 (including July) compared to previous years. This caused concern about a potential reduction in abundance of porpoises in Dutch waters. However, the results of the abundance estimates per area show that most porpoises (58.9%) were estimated for the northernmost areas A –Dogger Bank and B – Offshore. This suggests that harbour porpoises had a more offshore distribution in 2015 than in the previous period.

› The NZG Marine Mammals Database is part of the Dutch Seabird Group (NZG) (established by Kees Camphuysen). Its aim is to collect all sightings of marine mammals in and around the Netherlands. The main number of sightings come from two research programs: seawatching and offshore seabird surveys. More information is available at: www.trektellen.nl

› Strandings (live and dead) are collated in a database presented at the website www.walvisstrandingen.nl. Records of live sightings as well as dead animals are also found at www.waarneming.nl and www.telmee.nl.

› The Rugvin foundation is a volunteer based organisation conducting cetacean surveys in the Southern North Sea and Eastern Scheldt and member of the Atlantic Research Coalition (ARC) European Cetacean Monitoring Coalition (ECMC). In 2015 they continued their monitoring programme for the Stena ferry line platforms between Hoek van Holland and Harwich. Resulting in a total number of 154 harbour porpoises and 8 white beaked dolphins.
Rugvin continued their activities in the Eastern Scheldt. The annual count of porpoises was held in September and resulted in a number of 29 porpoises. The Porpoise Photo ID project received a boost by a new team and database. This project will continue in 2016.

› References:
Geelhoed SCV, Lagerveld S & Verdaat JP 2015. Marine mammal surveys in Dutch waters in 2015. Research Report IMARES Wageningen UR - Institute for Marine Resources & Ecosystem Studies, Report No. C189/15.
Haelters J & Geelhoed S, 2015. Minder bruinvissen in de zuidelijke Noordzee? Zoogdier 26(4): 1-3.

› .

4.2 Technological Developments

New Technological Developments
› IMARES reviewed the feasibility of tagging harbour porpoises in Dutch waters. The review describes an overview of the technical status and the different types of tags, 2) how tags have been used in other areas on porpoises, 3) how tags can be attached to porpoises, 4) how porpoises can be obtained for tagging, and 5) what the legal framework for tagging in the Netherlands is.

› A major conclusion of the review is to use a step by step approach to better understand the ecology of the harbour porpoises in Dutch waters through tracking individuals, carefully considering pros and cons in relation to researh questions. A first step could be investigating some of the less invasive methods for tagging (small trailing edge tag, detachable tag) and apply them to captive-cared animals, or incidental captures (e.g. weir fishery) prior to trialling any wild capture programs. This would provide an insight into what methods could best work in The Netherlands, whilst also providing the first data on the behaviour of individual harbour porpoises in Dutch waters

› References:
Scheidat M, Bos O & Geelhoed SCV, 2016. The feasibility of tagging harbour porpoises in Dutch waters. IMARES Report C009/16.

› none

4.3 Other Relevant Research

› Winter 2015 IMARES and University Utrecht conducted field-based experiments to describe fox scavenging marks on carcasses of harbour porpoises. These experiments resulted in two video-taped interactions between foxes and the carcasses. During one of these interactions a fox tried to scavenge on one of the carcasses leaving distinct bite marks. Based on this result and another case study, the appearance of fox induced mutilations was defined as: ‘Multifocal injuries, extremities partly removed, with frayed edges (possible chewing); irregular, and relatively superficial scratches (possible by claws); deeper, focal injury where blubber is penetrated.’ Subsequently a retrospective analysis was conducted of the available post mortem photo database of fresh to moderately fresh necropsied porpoises between 2008-2013 to assess the rate of occurrence of fox induced mutilations on porpoise carcasses. This analysis was conducted to assess the presence of mutilations on stranded porpoises fitting these criteria. Analysis suggests that 12% (N=52) of all carcasses (N=429) was ‘probably fox scavenged’. This was ‘possibly fox scavenged’ for 46% (N=199) and ‘unlikely fox scavenged’ for 22% (N=96). The remaining carcasses (18%, N=81) were qualified as unknown, since they lacked images or were too decomposed making interpretation impossible. The results of this study can aid in identification of causes of the death during necropsies of harbour porpoises.

› References:

IJsseldijk LL & Geelhoed SCV, 2016. Fox scavenging mutilations on dead harbour porpoises (Phocoena phocoena). IMARES Report C036/16.

Use of Bycatches and Strandings

Post-Mortem Research Schemes

5.1 Contact Details

Contact details of research institutions and focal point

› Department of Pathobiology, Faculty of Veterinary Medicine, Utrecht University, Yalelaan 1, 3584 CL Utrecht, The Netherlands. 0031 30 253 3591

5.2 Methodology

Methodology used (reference, e.g. publication, protocol)
› Adapted from: Kuiken T., García Hartmann M, 1991. Proceedings of the first ECS workshop on cetacean pathology; dissection techniques and tissue sampling. ECS Newsletter 17. Special Issue.

› Kuiken T, 1994. Diagnosis of by-catch in cetaceans, Proceedings of the 2nd BCS Workshop on Cetacean Pathology, Montpellier, France. European Cetacean Society Newsletter 26:38-43 and protocols provided by Jauniaux and Siebert

5.3 Samples

Collection of samples (type, preservation method)

› Depending on conservation state:
1. A variety of specific organs/tissues or tissues with pathologic changes. Depending on the type of research formalin-fixed, paraffin-embedded, or frozen to -20ºC (-80ºC for virology research)
2. Gastric contents (frozen to -20ºC handed to IMARES)
3. Liver, fat and muscle (frozen to -20ºC handed to IMARES)
4. Skin (ethanol)
5. Teeth (water or frozen to -20ºC handed to IMARES)
6. Parasites (70% alcohol)
7. Swabs from the genital openings

5.4 Database

Database (number of data sets by species, years covered, software used, online access)
› Excel, Access

5.5 Additional Information

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

› All strandings are collated in a database and shown on the website of Naturalis (www.walvisstrandingen.nl). In 2015, more than 300 animals were stranded: 331 harbour porpoises (about half of the number in 2014), fin whale (Nov), two minke whales,two long-finned pilot whales (1 Jan, 1 Dec), and bottlenose dolphins (3 findings of bones) were registered.

Activities and Results

5.6 Necropsies

Number of necropsies carried out in the reporting period

	Number	Recorded cause of death
Phocoena phocoena	34	see section 5.7
Tursiops truncatus		
Delphinus delphis		
Stenella coeruleoalba		

Grampus griseus		
Globicephala melas	2	see section 5.7
Globicephala macrorhynchus		
Lagenorhynchus albirostris		
Lagenorhynchus acutus		
Orcinus orca		
Hyperoodon ampullatus		
Mesoplodon bidens		
Kogia breviceps		
Other (please specify under number)	minke whalle	see section 5.7
Other (please specify under number)		
Other (please specify under number)		
Other (please specify under number)		
Other (please specify under number)		
Other (please specify under number)		

5.7 Other Relevant Information

Please provide any other relevant information on post-mortem / stranding schemes
› 34 harbour porpoises from 2015 were necropsied at the Department of Pathobiology, Faculty of Veterinary Medicine, of Utrecht University. These were 8 adults, 21 juveniles and 5 neonates. 17 were male, 17 were female. Of the eight adults, five females were necropsied of which three were resting, one was lactating and one was pregnant.
The cause of death were: bycatch (n=6; 2 certain, 1 highly probable, 3 possible); Grey seal attack (n=4; 1 acute and 3 sub-acute); infectious disease (n=10); lack of food (n=7; 6 emaciation with unknown cause and 1 case of starvation of a young animal) and 1 case of birth problems and two cases of blunt trauma. Four cases remained unknown; which were three putrefied cases and one fresh case.

› Between January and December 2015 Electronic Monitoring systems have been installed on a number of Dutch set net vessels. During this time two bycaught animals have been called in by fishermen and brought ashore for further pathological research. Both animals were juvenile; one male and one female. Necropsy findings suggest that asphyxiation as a result of bycatch was the cause of death. Additional findings were a parasitic pneumonia in both cases, and the juvenile female also suffered of a proliferative dermatitis. The effect of these inflammations on the health of these two individuals, and on their cause of death, are uncertain due to the small numbers of investigated ‘certain bycatches’.

› Pilot whales
The first pilot whale stranded on the 11th of January, just four weeks after another animals (17th of December 2014). This was a subadult female om almost 4m long and approximately 600 kg in an advanced state of decomposition. Cause of death was similar to the animal stranded in December 2014; asphyxiations from a common sole (Solea solea) stuck in its nasal cavity. Results of these two individuals were published in Plos one:
In December 2015, a second pilot whale beached in the Netherlands. This was a subadult male in a severe state of decomposition. The necropsy did not reveal any significant pathological changes, but was hampered severely but the state of autolysis of this individual.

› Minke whales
The first minke whale was found bow-caught and entered the port of Rotterdam in November 2015; this was an very fresh juvenile female. This was an animal in a poor nutritive condition. Necropsy and histopathology revealed hemorrhages where the animal was found touching the ships bulb; confirming the ship strike as the cause of death. The second minke whale stranded on the Razende Bol in December 2015; this was a decomposed adult and pregnant female. The necropsy did not reveal any significant pathological changes, but

was hampered severely but the state of autolysis of this individual.

› References::

IJsseldijk LL., Leopold M.F., Bravo Rebolledo E.L., Deaville R., Haelters J., IJzer J., Jepson P.D., Gröne A. (2015) Fatal Asphyxiation in Two Long-Finned Pilot Whales (Globicephala melas) Caused by Common Soles (Solea solea). PLoS ONE 10(11): e0141951. doi:10.1371/journal.pone.0141951

Relevant New Legislation, Regulations and Guidelines

6.1 New Legislation, Regulations and Guidelines

Please provide any relevant information
› As recommended in the Dutch harbour porpoise conservation plan (Camphuysen & Siemensma, 2011) a scientific advisory committee has been appointed in October: Herman Eijsakkers (WUR) Jan Haelters (KBIN) and Jaap van der Meer (NIOZ) are the members.
Marine Science and Communication and IMARES provided an internal report on the current status of the implementation of the Dutch harbour porpoise conservation plan (Camphuysen & Siemensma, 2011) for the Ministry of Economic Affairs.

› Marine Science & Communication organized a national harbour porpoise network day in October 2015 for the Ministry of Economic affairs. Aim of the network day was to inform stakeholders on the current status of the implementation of the Dutch harbour porpoise conservation plan (Camphuysen & Siemensma, 2011) and to discuss with the ministry future policy and research priorities. Over sixty participants representing industry, government, NGO’s and research institutes participated. For a report of the network meeting contact m.siemensma@msandc.nl

› IMARES had the lead for the implementation of the OSPAR MSFD M4-marine mammal indicator on abundance and distribution. Data for the first Intermediate Assessment were collated in cooperation with the University of St Andrews and the Tursiops SEAs project.Two assessments were drafted for a review by the ICES Working Group on Marine Mammal Ecology WGMME) in February 2016: one for coastal species, and one for wide ranging species. Assessments will be finalized after the results of the international SCANS III survey in July 2016 are available.

› References
Camphuysen CJ & ML Siemensma (2011) Conservation plan for the Harbour Porpoise Phocoena phocoena in The Netherlands: towards a favourable conservation status. NIOZ Report 2011-07, Royal Netherlands Institute for Sea Research, Texel.

Public Awareness and Education

7.1 Public Awareness and Education

Please report on any public awareness and education activities to implement or promote the Agreement to the general public and to fishermen.
› Vereniging Kust & Zee, the Dutch section of the Coastal & Marine Union (EUCC) annually publishes the printed “Kust en Zeegids” (http://data.axmag.com/data/VIP/201506/U27993/F340660/FLASH/index.html). Furthermore the EUCC regularly distributes digital newsletters with relevant information on their projects. It also communicates news through its website www.kustenzee.nl and www.eucc.nl.

› The EUCC is part of the ECNC group http://www.ecncgroup.eu which is the European Expertise Centre for Biodiversity and Sustainability. In 2013 they established the ‘Healthy Seas, a Journey from Waste to Wear’ initiative in collaboration with Aquafil and Star Sock, which continued in 2014. The main objective of the Healthy Seas initiative is to remove waste, in particular fishing nets and other marine litter, from the seas for the purpose of recycling these into textile products.

› In 2015 Vereniging Kust & Zee organised for the European project Marlisco a national forum on marine litter. In the room, 47 people participated in the forum, while 178 people followed the event online. (http://www.marlisco.eu/National_Fora_Outcomes.nl.html)

› IVN Consulentschap Zeeland, the National Park Oosterschelde in collaboration with Rugvin Foundation and Marine Science & Communication initiated a project on the Harbour Porpoise in the Oosterschelde Estuary. The project “Welcome Porpoise” has continued in 2015 and aims to make visitors of the National Park aware of porpoises in the Oosterschelde (http://www.np-oosterschelde.nl/).
The Rugvin Foundation also informs the public via posters on the Stena Line ferries about how to observe harbour porpoises.

› In 2011, the North Sea Foundation has initiated two projects to raise awareness about marine litter, MyBeach http://www.mybeach.info/ and Coastwatch http://www.coastwatch.nl. MyBeach is a special area at the beach, next to a beach pavilion, where visitors keep the beach clean. You can recognize this area by information boards, bins and beach flags. Beach clean ups and litter counts are organized here, using the so-called Strandscanner, a special app for the smartphone to count specific litter items. This project continued in 2015.

Possible difficulties encountered in implementing the Agreement

Difficulties in Implementing the Agreement

Please provide any relevant information

› None