

Agenda Item 4.3

Reports

Annual National Reports of ASCOBANS
Parties

Information Document 4.3.b

**Compilation of Annual National
Reports for 2013**

Action Requested

Take note

Submitted by

Secretariat



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

Secretariat's Note

Article 2.5 of the Agreement requires that Parties submit a '*brief report*' '*not later than 31 March each year*' to "*cover progress made and difficulties experienced during the past calendar year in implementing the Agreement*". Article 4.2 also places a related obligation on the Secretariat each year to present Parties with a '*summary of the Party reports no later than 30 June*'.

The attached document is a compilation of all responses received from Parties relating to the year 2013. In order to provide an easy overview of the activities relevant for the implementation of the Agreement throughout the ASCOBANS Area, all Parties' answers have been made available under each question.

The individual reports, including any annexes that were provided, are available on <http://www.ascobans.org/en/documents/national-reports>.

Compilation of Annual National Reports to ASCOBANS

2013



Agreement on the Conservation of Small Cetaceans of the Baltic,
North East Atlantic, Irish and North Seas

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TABLE OF CONTENTS

GENERAL INFORMATION	1
Summary of Party Details	1
Coordinating Authority or Appointed Member of Advisory Committee	2
List of national authorities, organizations, research centres and rescue centres active in the field of study and conservation of cetaceans, including contact details.....	3
NEW MEASURES / ACTIONS TOWARDS MEETING THE OBJECTIVES OF THE CONSERVATION AND MANAGEMENT PLAN AND THE RESOLUTIONS OF THE MEETING OF PARTIES	7
A. HABITAT CONSERVATION AND MANAGEMENT.....	7
1 Direct Interaction with Fisheries.....	7
1.1 Investigations of methods to reduce bycatch	7
1.2 Implementation of methods to reduce bycatch	13
1.3 Other relevant information, including bycatch information from opportunistic sources	15
1.4 In addition, please attach or provide link to your country's Report under EC Regulation 812/2004.....	16
2 Reduction of disturbance	17
2.1 Anthropogenic Noise	17
2.2 Ship Strike Incidents.....	29
2.3 Major Incidents Affecting Significant Numbers* of Cetaceans.....	32
2.4 Pollution and Hazardous Substances	33
2.5 Other Forms of Disturbance	35
3 Marine Protected Areas for Small Cetaceans	37
3.1 Relevant Information	37
3.2 Sources of GIS data of the boundaries (and zoning, if applicable).....	40
B. SURVEYS AND RESEARCH.....	42
4.1 Overview of Research on Abundance, Distribution and Population Structure	42
4.2 New Technological Developments.....	52
4.3 Other Relevant Research	54
C. USE OF BY-CATCHES AND STRANDINGS	58
5 Post-Mortem Research Schemes.....	58
5.1 Contact Details	58
5.2 Methodology.....	58
5.3 Samples	58
5.4 Database.....	58
5.5 Additional Information.....	58
5.6 Number of Necropsies Carried out in Reporting Period:	66

5.7	Other relevant information on post-mortem / strandings schemes	68
D.	LEGISLATION	71
6.1	Relevant New Legislation, Regulations and Guidelines	71
E.	INFORMATION AND EDUCATION.....	74
7.1	Public Awareness and Education	74
	POSSIBLE DIFFICULTIES ENCOUNTERED IN IMPLEMENTING THE AGREEMENT	81

GENERAL INFORMATION

SUMMARY OF PARTY DETAILS

Party	Period covered	Submitted by	Function	Affiliation
Belgium	1.1.- 31.12.2013	Jan Haelters	Operational Directorate Natural Environment, Marine Ecology and Management (MARECO)	Royal Belgian Institute of Natural Sciences (RBINS)
Denmark	1.1.- 31.12.2013	Lars Seidelin	Biologist	Fjord&Bælt
Finland	1.1.- 31.12.2013	Penina Blankett	National Coordinator	Ministry of the Environment
France	1.1.- 31.12.2013	Martine Bigan	National Coordinator	Ministère de l'écologie, du développement durable, du transport et du logement (MEDDE)
Germany	1.1.- 31.12.2013	Oliver Schall	National Coordinator	Federal Ministry for the Environment, Nature Conservation Building and Nuclear Safety (BMUB)
Lithuania	1.1.- 31.12.2013	Vita Augutė	Chief Desk Officer of Biodiversity Division of Nature Protection Department	Ministry of Environment
Netherlands	1.1.- 31.12.2013	Meike Scheidat	Senior Researcher	IMARES
Poland	1.1.- 31.12.2013	Monika Lesz	Counsellor to the Minister	Ministry of the Environment
Sweden	1.1.- 31.12.2013	Susanne Viker	National expert	SwAM
United Kingdom	1.1.- 31.12.2013	Emma Rundall	ASCOBANS Coordinator	Department of Environment, Food and Rural Affairs (Defra)

Coordinating Authority or Appointed Member of Advisory Committee
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FRANCE
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LITHUANIA
Ministry of Environment of the Republic of Lithuania, A. Jaksto g. 4/9, LT-01105 Vilnius, Lithuania, Tel. +370 70662707 / Fax: +370 5 2663663, v.augute@am.lt , National Coordinator: Vita Šiožinytė , Chief Desk Officer of Biodiversity Division Nature Protection Department, Phone number: +370 7066 2707, E-mail: v.siozinyte@am.lt
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UNITED KINGDOM
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List of national authorities, organizations, research centres and rescue centres active in the field of study and conservation of cetaceans, including contact details

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NEW MEASURES / ACTIONS TOWARDS MEETING THE OBJECTIVES OF THE CONSERVATION AND MANAGEMENT PLAN AND THE RESOLUTIONS OF THE MEETING OF PARTIES

A. HABITAT CONSERVATION AND MANAGEMENT

1 DIRECT INTERACTION WITH FISHERIES

1.1 Investigations of methods to reduce bycatch

BELGIUM
None
DENMARK
<p>DTU, AQUA conducted research on Fully Documented Fishery onboard gillnet vessels <15 m. to test whether electronic monitoring can be used to provide reliable documentation of the fishing operation and the catches onboard gillnet vessels less than 15 m in length.</p> <p>Determining optimal pinger spacing for harbour porpoise bycatch mitigation Larsen, Finn ; Krog, Carsten ; Eigaard, Ole; in journal: Endangered Species Research (ISSN: 1863-5407) (DOI: http://dx.doi.org/10.3354/esr00494), vol: 20, issue: 2, pages: 147-152, 2013</p> <p>Acoustic activity of harbour porpoises (<i>Phocoena phocoena</i>) around gill nets Boström, Maria K. ; Krog, Carsten ; Kindt-Larsen, Lotte ; Lunneryd, Sven-Gunnar ; Wahlberg, Magnus; in journal: Aquatic Mammals (ISSN: 0167-5427) (DOI: http://dx.doi.org/10.1578/AM.39.4.2013.389), vol: 39, issue: 4, pages: 389-396, 2013</p>
FINLAND
During the observation scheme 2006-2007 no bycatches were detected or porpoises sighted by the observers.
FRANCE
<p>A programme named INPECMAM has been funded and agreed between the fishermen, the Iroise sea MPA, University of Brest, the National Natural History Museum and Oceanopolis to work on the by-catch of marine mammals (cetaceans and seals) and the depredation in set net fishery in the Iroise sea with also a social approach on these issues. The low result in observed by-catch don't allow, statistically, an extrapolation to estimate the by-catch of the</p>

set net fisheries in Iroise Sea .The final report should be available this summer. The perspective is to continue such research on this topics focusing on areas and period of risk.

The national program OBSMER dedicated to all the observations on board includes the English channel set net fisheries which is not asked by the European regulation. This program is implemented by the ministry of agriculture and fisheries (Direction des Pêches Maritimes et de l'Aquaculture) and IFREMER. All the results are now included in the national report for regulation 812/2004. For set net and pelagic trawl fisheries, observers for the EC regulation (n° 812/2004) are deployed for vessels greater than 15 meters and through pilot studies for vessels less than 15 m. However it was not always possible to put observers on boats less than 8m for safety reason.

During the year 2012, the effort dedicated to observation on board of vessels for the European Regulation 812/2004 represents 199 days at sea for static gears in ICES area VIII, and also 158 days at sea for towed gears in ICES areas VII&VIII. In addition 268 days at sea were dedicated to all kinds of set nets in areas concerned with pingers (zones IV and VII) . Over all 625 fishing days were monitored at sea during the year 2012 for the Ascobans area . The monitoring scheme contained a higher number of days by assuming a coverage rate of 10% throughout the year for trawlers >= 15m, 5% for trawlers = 15 ms and 1% for vessels less than 15 m operating with set nets.

In the Ascobans area, two different species of cetaceans were caught incidentally during the year 2012: *Delphinus delphis* (19 animals), *Phocoena phocoena* (6 animal). The bycatch was estimated on some segments of fleets. An estimate of 172 common dolphins *Delphinus delphis* was obtained for pair midwater trawling in the area VIIe,h and an estimate of 77 common dolphins for set nets in Western Channel. An estimate of 61 harbour porpoises *Phocoena phocoena* was calculated for set nets with vessels less than 15m in area VIIIb and 22 harbour porpoises for netters greater than 15m and working with large mesh size. The coefficients of variation are high on these estimates.

No catch of cetaceans have been observed in some segments well covered by observations. This was the case of the tuna pelagic trawl area VIII, pelagic trawling on small pelagic species in area VIIIb. No estimate has been made possible in some fisheries with set nets in English Channel and in south of North Sea. Analyses made on strandings demonstrate that the incidental catch of *Delphinus delphis* exist in some fisheries of the Bay of Biscay (van Canneyt et al., 2013), fisheries which are not well or enough observed at sea.

It would be useful to improve the monitoring scheme to get enough samples in the potential contributors of cetacean incidental bycatch as PTM seabass trawling and set nets in the Bay of Biscay. In the North Sea/east of English Channel, an effort should be made to increase the samples of vessels.

An additional study of the last three years were also achieved. This study was included in the national report for 812/2004 . A period of three years offers the advantage to increase the amount of observations for an analysis. The fisheries having the higher bycatch rate per cetacean species have been ranked but some samples remain low. A list of métiers having no cetacean bycatch after at least 50 observed days was also established. These results should help to improve the regulation.

Observations done in year 2013 have recorded 12 common dolphins in pelagic trawling and 4 porpoises. Non mandatory observations are still continuing on all set netters in the area dedicated to pingers by the regulation. The 2014 national report is under progress.

In 2014, a new synthesis on interactions between cetaceans and set nets in France will be achieved in order to provide some informations to stakeholders in preparing the new European regulation. This synthesis uses all the observation data available since 2008. A final report should be made available in May 2014. The preliminary results indicate that the main cetacean bycatch is harbour porpoise *Phocoena phocoena* and that 80 % of the French bycatch of porpoises occurs in the monkfish trammel net fisheries and the sole

trammel net fisheries of areas IV, VII and VIII. Some bycatch occur also with GNS gears mainly in area VIII. These results show that the EC regulation need to be improved to include the trammel nets in the mandatory list of set nets requiring pingers and/or observations on board. 1.2 Implementation of methods to reduce bycatch

GERMANY

Acoustic Alerting Device "PAL" (Porpoise ALarm)

PAL (Porpoise ALarm) is a newly developed acoustic warning system for porpoises which imitates the communication sound of porpoises in order to protect the animals from fishing nets.

The alarm system was developed by Prof. Dr. B. Culik (F3 Forschung. Fakten.Fantasie.,Heikendorf) together with the L-3 EALC Nautik (Kiel). The testing phase is carried out together with the Thünen Institute of Baltic Sea Fisheries.

Harbour porpoises communicate by clicks and click-trains. Certain click-trains ("upsweep chirp") have been identified to be used and understood by the animals as a warning sound. The PAL device, a click generator is configured in such a way that it generates corresponding warning clicks with increasing frequency.

In order to test the effectiveness of the device in a field study a project, funded by the BMELV (Federal Ministry for Food, Agriculture and Consumer Protection, now: "BMEL" – "Federal Ministry for Food and Agriculture") is carried out by the Thünen Institute of Baltic Sea Fisheries. The project started in July 2012 with field studies. First results have shown that the animals understand the signal correctly and react with intensive acoustic inspection. This reaction of harbor porpoises has still to be confirmed during ongoing field experiments.

For the field study the Thünen Institute cooperates with local fishermen and has equipped gillnets with the PAL system over the time period of one year. Based on those results, the study is also aiming at further optimizing the warning system and to enable in a first step, the small-scale production of a prototype [BMEL/TI/F3: Forschung Fakten Fantasie / L-3 EALC Nautik].

Further information can be found at: http://www.elac-nautik.de/uploads/images/pdf/L3_ELAC_Nautik_Protection_of_Marine_Mammals.pdf

Alternative fishing gear

The project "Testing and where applicable further development of alternative and ecosystem-friendly fishing gears for the prevention of bycatch of sea birds and harbour porpoises in the German EEZ of the Baltic Sea" (duration: December 2012 – October 2015) is funded by the Federal Agency for Nature Conservation (BfN) and conducted by the German NGO NABU ("Naturschutzbund Deutschland" / Nature And Biodiversity Conservation Union) in cooperation with international institutions (BirdLife International, National Fishery Institution, Gdynia/Poland, Institute of Coastal Research, Sweden and the Swedish Board of Fisheries).

Aim of the project is the practical test of different fishing gears as an alternative to gillnets in the German Baltic Sea fisheries. In a first step, one fishing boat will be equipped with 4 Jigging-Reels and one with an automated long-lining system. Further boats will be equipped with fish traps in the course of the project. With this program, the cost effectiveness as well as the feasibility will be tested. The project contributes to the implementation of a sustainable and ecosystem-friendly fishery within the marine Natura 2000 sites. The program is accompanied by a monitoring scheme to analyze catch rates, bycatch of target and non-target species as well as the economic feasibility of the different alternative fishing gears [Pusch, BfN; Detloff, NABU].

LITHUANIA
There was no investigation of methods to reduce bycatch.
NETHERLANDS
<p>IMARES Wageningen UR and Marine Science and Communication (MS&C) started a Remote Electronic Monitoring project in December 2012 to investigate bycatch of harbor porpoises by Dutch gill net fishery. This project will last until 2016 and includes the monitoring of 10 to 12 vessels. The project is funded by the Dutch Ministry of Economic Affairs.</p> <p>In 2013 an impact assessment was carried out on the effects of set net fisheries on the conservation objectives for harbour porpoises in the Natura 2000 area Noordzeekustzone. For this assessment, existing data was used regarding bycatch in set nets. Different categories of set nets were analysed; commercial and recreational. To reduce the bycatch in commercial set net fisheries on cod, seabass and mullet, the assessment recommends the use of pingers. For commercial set nets aimed at sole, a reduction in net length and a closed season from April to November are recommended. It is proposed to expand the use of these measures to the entire distribution range of the harbour porpoise and not only in the Noordzeekustzone.</p> <p>References: Jongbloed, R.H, N.T. Hintzen, M.A.M. Machiels, A.S. Couperus (2013) Nadere effecten analyse staandwantvisserij – bruinvis in Natura 2000 gebied Noordzeekustzone. IMARES Wageningen UR, report nr. C206/13</p>
POLAND
<p>The project of the Marine Station of the Institute of Oceanography of the University of Gdańsk realized since 2011 and concerning testing in the Puck Bay the traps of a „cod-pot” type as a possible alternative to gill nets which are used in cod fishing is continued.</p> <p>Planned by the Ministry of the Environment in cooperation with the Ministry of Agriculture and Rural Development project titled “Testing Alternative Fishing Gear Protecting Harbour Porpoises and Seals as well as Birds Against Incidental Catches on the Polish Marine Areas” hasn’t been completed due to formal reasons.</p> <p>One plan to implement the project within the scope of the Operational Programme “Fisheries and Sea 2014- 2020” prepared by the Ministry of Agriculture and Rural Development the project HELCOM BALTFIMPA titled “Fisheries Management on the Baltic Sea Protected Areas” concerning the impact of different tools and intensity of commercial fishing on habitats and species in respective Baltic Sea Protected Areas (BSPA) hasn’t been accepted to be financed by the European Commission.</p>
SWEDEN
<p>Studies investigating alternative fishing gear such as cod pots and traps for species like pike-perch and herring have been carried out by the Department of Aquatic Resources, the Swedish University of Agriculture Science. Since July 2011 this research is conducted by the Department of Aquatic Resources of the Swedish University of Agricultural Sciences (SLU).</p> <p>A Swedish fishing gear company Carapax has planned a project with funding for the next year to develop a full-scale cod pot fishing method. The project mainly focuses on how to improve the construction of the pot as well solutions for better handling of the pots on board. The outcome of this project may be of interest to evaluate in terms of bycatch reduction as well as consequences for the fisheries.</p> <p>The Department of Aquatic Resources, the Swedish University of Agriculture Science has carried out a project to try and find out why cod pots do work and catch cod in certain areas</p>

and do not work in other areas. Parameters as prey in the area, current, state of the fish might impact.

You have attached the following documents to this answer.

Königson 2013 Development of alternative gear.pdf - article on alternative fishing gear published in 2013. Describes efforts done by SLU.

Königson 2013 Development of alternative gear.pdf - Report to the Proceedings of the conference: Progress of marine conservation in Europe. It describes why and how Sweden are developing alternative fishing gear.

(the Annex provided can be accessed as part of [AC21/Inf.12.1.i](#))

UNITED KINGDOM

The two main species affected by fishing in UK waters are the harbour porpoise and the short-beaked common dolphin. All Reports to the European Commission on activities conducted by the UK under Regulation 812/2004 [<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2004:150:0012:0031:EN:PDF>], and under Article 12(4) of the Habitats Directive, provide details of the monitoring work undertaken in the UK and estimates of cetacean bycatch. The most recent reports on cetacean bycatch in UK waters submitted to the European Commission under the requirements of EC Regulation 812/2004 can be found on the Department for Environment Food and Rural Affairs (Defra) website

<http://randd.defra.gov.uk/Default.aspx?Menu=Menu&Module=More&Location=Non&ProjectID=18535>].

A dedicated cetacean bycatch monitoring programme is in place and operated by the Sea Mammal Research Unit (SMRU). Fisheries research laboratories operating fisheries observer programmes in the UK also provide data which are included in our assessment of cetacean bycatch. Whilst the UK observer scheme relies upon good collaborative links with industry, fisheries regulations have been enacted in England and Scotland to ensure that there is also a legal obligation for skippers and owners to allow observers on board when asked to do so.

The principle area of concern for cetacean bycatch remains the south-western waters of the Western Channel and Celtic Sea. The situation in the North Sea remains unclear as only limited monitoring has been carried out since the late 1990s. Monitoring activities are focussed on these areas and as sufficient data are compiled, more robust estimates of current bycatch rates will become available.

The latest UK cetacean by-catch report for 2013 as required under EU Regulation 812/2004 suggests an increase in estimated porpoise by-catch. However, this is not primarily due to an increase in direct observations, but rather the result of the inclusion of new data this year. This estimated increase brings with it a number of uncertainties which the authors note have likely led to an over-estimate of porpoise bycatch. This is therefore considered as a precautionary maximum with actual numbers likely to be much lower (full details of estimates of bycatch are given in Annex 1 of the report). However, the UK remains committed to bringing cetacean by-catch down and further work is being done to reduce uncertainties in bycatch estimates. In 2013, actual observer days covered 22 trips (101 days) on pelagic trawlers and 166 trips (346 days) on static gear vessels. In pelagic gears, over time, monitoring has reduced in major trawls for herring and mackerel because observations indicate bycatch is low. Instead, observer effort has switched to smaller pelagic fisheries which have not been routinely sampled in the past. Monitoring continues at a relatively high level in the bass pair trawl fishery which has a known dolphin bycatch issue but where pinger use appears to be effective. In static gear fisheries, roughly 82% of sampling took place in the south and west of the UK (Subarea VII), and around 18% in the North Sea (IV), again where there have been known bycatch issues. Among the static gears sampled, 25 days

were categorized as drift nets and 321 as fixed nets.

In simple terms, bycatch estimates are calculated on the basis of the number of animals observed caught per fishing operation (haul), scaled up to fleet level by estimating actual fishing effort (number of hauls) and applied to the reported number of days at sea by fishery stratum. The most recent figures for 2013 estimate levels of porpoise by-catch by the UK fleet in UK waters to be between 1600-1900 individuals per year (18 actual observed porpoise bycatch incidents). This is significantly higher than in previous years where levels had been estimated at c800 individuals per year. However, bycatch estimates for other species have remained consistent with previous years; c320 common dolphins and c470 seals.

There are several reasons for this estimated increase in harbour porpoise bycatch. Firstly, all UK gillnet fisheries have now been included in the assessment, whereas in previous years estimates were only included for those fisheries where sufficient sampling had been undertaken. Extrapolation of observed bycatch rates to all peripheral areas and the assumptions made relating to fishing effort introduces a greater degree of uncertainty into the 2013 estimates. It is also likely that bycatch has been overestimated in some areas, notably ICES area VIId where observed bycatch rates remain lower than other Area VII sub-areas.

Secondly, porpoise bycatch rates may have actually increased in some areas over the past decade – although the trend is difficult to quantify at this time.

Thirdly, by-catches have been observed in some fisheries (e.g. drift nets and light gillnets for flatfish such as sole) that were not previously seen due to a lower sampling frequency. These métiers were excluded from previous estimates.

Efforts to reduce bycatch

During 2013, investigations on methods to reduce bycatch have focussed on the continued monitoring and testing of acoustic deterrent devices (ADDs), or 'pingers'. The SMRU has continued to monitor the bycatch of common dolphins in the bass pair trawl fishery, which is using DDD pingers on a voluntary basis. Bycatch rates in this fishery continue to remain at very low levels compared with historic rates prior to the adoption of pingers. The SMRU has also continued to monitor the use of DDDs in the offshore gillnet fleet that operates in the South West of England in order maintain an overview of longer term effects of pingers on cetacean bycatch rates and seal depredation levels in these fisheries. A new pinger model (Fishtek 'banana pinger') was also tested by the Cornwall Wildlife Trust in conjunction with Fishtek and local fishermen from the inshore fleet during 2013. The results of this on-going work can be found at http://www.cornwallwildlifetrust.org.uk/livingseas/dolphin_pinger_trial

A number of research projects have been carried out by the Scottish Government, including a recent project that concluded at the end of 2013 entitled 'Evaluating and assessing the relative effectiveness of non-lethal measures, including Acoustic Deterrent Devices (ADDs), on marine mammals'. The aim of this project was to carry out a comprehensive literature and data review on the capabilities of current and developing non-lethal measures for deterring marine mammals. This should help answer questions on design, effectiveness, best practice and impacts of these devices on marine mammals. The final report will be available later in 2014 however further details on this and other cetacean bycatch avoidance research undertaken by the Scottish Government can be found at <http://www.scotland.gov.uk/Topics/marine/marineenvironment/species/19887>

1.2 Implementation of methods to reduce bycatch

BELGIUM
No additional concrete measures were taken to reduce bycatch.
DENMARK
None
FINLAND
None
FRANCE
Modification of practices in pelagic trawling (headline at 5 m depth)
GERMANY
<p>Pingers in vessels > 12m length according to EU Regulation 812/2004. [Kock, TI]</p> <p>Voluntary agreement (17.12.2013) for the conservation of harbour porpoises and sea ducks in the Baltic Sea between the Landesfischereiverband (LFV) (Fishery Association of Schleswig-Holstein), the Fischereischutzverband (FSV) (Fishery Protection Union of Schleswig-Holstein), the Baltic Sea Info-Center Eckernförde (OIC) and the Ministry of Energy transition, Agriculture, Environment and Rural Areas Schleswig- Holstein (MELUR): For the protection of harbour porpoises, the voluntary agreement mandates a reduction of the total length of gillnets to 4km for boats > 8m, to 3km for boats between 6 und 8m and for boats < 6m to a total length of 1,5km. This applies for the period from 1st of July till 31st of August respectively.</p> <p>Within the whale sanctuary of the Wadden Sea in Schleswig-Holstein, the new federal state regulation (4th of December 2013) for coastal fishing excludes any gillnet fishing within the 3 nautical miles zone. Additionally, 2013 ASCOBANS Annual National Reports [Party: Germany] Page 3 of 18 outside the 3 nautical miles zone, gillnet fishing is prohibited with gillnets with a length of > 1,3m from upper line (headrope) to the ground-line (footrope) and a mesh size of > 150mm [MELUR].</p>
LITHUANIA
There was no implementation of methods to reduce bycatch.
NETHERLANDS
<p>In December 2013 the Coastal & Marine Union (EUCC) finished its study on bycatch mitigation within the project funded by the European Fisheries Fund: "bycatch mitigation harbour porpoise". The main aim is to mitigate bycatch of harbour porpoises in the winter set net fishery on cod, turbot and brill in collaboration with the industry. The workability and efficiency of a new pinger (Bananapinger Fishtek UK) and a DDD acoustic device are investigated using both field trials, a behavioural study on a porpoise at research facility SEAMARCO ('BananaPinger' Prototype) and an acoustic evaluation of the BananaPinger by SEAMARCO. The project also aims to: monitor bycatch, facilitate the landing of bycaught porpoises, exchange knowledge, conduct parallel pinger trials and to explore innovative methods to reduce bycatch. The project is a close collaboration between the Dutch Fisheries Organisation (Nederlandse Vissersbond), the Expert group on set net fishery (Kenniskring Staandwant), ten Dutch winter season set net fishermen and the Coastal & Marine Union. The project is funded by the Dutch Ministry of Economic Affairs (EZ) and the European Fisheries fund (EFF).</p>

A short project film has been created about the project explaining about the harbour porpoise in general, its current threats and highlighting the bycatch. The film further zooms in on the project and explains about set net fisheries, the use of acoustic deterrents and its workability. The film is available on: <http://www.kustenzee.nl/pinger/index.htm> and has been directed by Studio BiB (<http://studiobib.nl>). A summary of the project results will follow in 2014. Please contact the EUCC for further questions on this study.

POLAND

In 2013, again, the National Marine Fisheries Research Institute (NMFRI) realized the Monitoring Programme of Incidental Catches of Cetaceans (MPICC) based on the obligations resulting from the Council Regulation (EC) 812/2004. In 2013 one was conducting observations on 12 vessels of the length over 15m, operating from 7 ports and 6 boats from 3 ports. Within the scope of the Programme, the observers spent on the sea 124 days including 79 days on the vessels fishing with the usage of the pelagic trawls and 38 days in fishing voyages (the voyages which took place in November this year are not included, the information will be completed till May 2014), including 10 days on the vessels smaller than 15m when gill nets were used during fishing. As the keelboats changed over the gear during the voyages, 7 days of the observations concerned fishing with the usage of the bottom trawl. They are included in the report as the days of the observations although they didn't meet the requirements of the Council Regulation (EC) 812/2004.

During monitoring the fishing activities in the Baltic Sea with the usage of pelagic trawls or gill nets conducted by the National Marine Fisheries Research Institute in 2013 (April – November), no incidental catch or entanglement in nets of the cetacean was observed. The observations didn't prove any cetacean in nets fishing in the Puck Bay's waters. Polish fishermen didn't report any case of the harbour porpoise's catch either.

SWEDEN

At the Swedish south coast development and testing of new gear has been conducted. The South Coast Fishing Area (Sydkustens fiskeområde) operates experimental fishing project with seal-proof cod cages in collaboration with local fishermen and scientists at SLU. The goal of the South Coast Fishing Area is to develop future coastal fishing industries by initiating and supporting projects and greater integration between fish nutrition and other nutrition in the region. The business is collaboration between the municipalities of Sölvesborg, Kristianstad, Simrishamn and Ystad. In 2013 this project started collaborating with the Department of Aquatic Resources, the Swedish University of Agriculture Science to get a more scientific approach on the project. Several different models of pots have been tried out and the results are promising. The pots fish around 2 to 7,7 kg cod per emptying.

Fishermen in the south of the Kattegat have been offered pingers for free and been successfully using them in the gillnet fisheries for flatfish. Six fishers have been using pingers since March 2011.

During 2012, only one fisher, Kattegatt, was required to use pinger according to EC Regulation 812/2004.

UNITED KINGDOM

The UK continues to fully implement and enforce Council Regulation (EC) 812/2004 through the use of acoustic deterrent devices attached to fishing nets. Implementation of the regulation in the UK has involved close liaison with the industry and ongoing monitoring and support to aid compliance. This has been led primarily by the MMO. Enforcement of the regulation at sea (via pinger detection units) and at the quayside is carried out by MMO officers, the Marine Scotland Compliance and Enforcement Unit, and the Royal Navy, and has included inspections on vessels from other member states. Further information can be found at

http://www.marinemanagement.org.uk/fisheries/monitoring/regulations_cetaceans.htm

1.3 Other relevant information, including bycatch information from opportunistic sources

BELGIUM
No bycatches were reported, although the results of the investigations on stranded animals could demonstrate that bycatch takes place. The Belgian report on the Regulation 812/2004 is attached to this report (the Annex provided can be accessed as part of AC21/Inf.12.1.a)
DENMARK
Swimming patterns of wild harbour porpoises <i>Phocoena phocoena</i> was investigated. The study showed detection and avoidance of gillnets at very long ranges <50 m. It was unclear whether the porpoise use sonar or other senses to detect the nets on long distances Biosonar, dive, and foraging activity of satellite tracked harbor porpoises (<i>Phocoena phocoena</i>). / Linnenschmidt, Meike; Teilmann, Jonas; Akamatsu, Tomonari; Dietz, Rune; Miller, Lee A. I: Marine Mammal Science, Vol. 29, Nr. 2, 2013, s. E77-E97.
FINLAND
After the scheme 2006-2007 porpoise bycatches have not been reported/detected or sightings of porpoises reported by the fisherman or by the fisheries authorities.
FRANCE
Since 2012 January 1st, a French ministerial regulation requires fishermen to report marine mammals by catch with the objective of contributing to scientific knowledge The aims of this regulation don't produce by catch estimates but should involve fishermen through scientific program on knowledge of the species: composition of catches, spatial and temporal distribution, etc.. End of 2012, a pilot program with four fishing ports (Atlantic and English Channel coast) began to assess the possibility of land by-caught animals for biological samples (diet, genetic, age, reproductive status, contaminant). This program is coordinated by PELAGIS/ULR (CRMM) Estimates of by-catch in set net and pelagic trawl fisheries
GERMANY
Monitoring of marine mammal bycatch in commercial fisheries in the North and Baltic Sea through marine mammal observers (sampling) in accordance with EU Regulation 812/2004 [Kock, v. Dorrien, TI]
LITHUANIA
None
NETHERLANDS
Bram Couperus (IMARES Wageningen UR) is serving as chair of ICES expert group Working Group on the Bycatch of Endangered Species (WGBYC).
POLAND
The project "Removal of the Ghost Nets from the Baltic Sea" which was realized by WWF Poland was completed. Within the scope of the project one removed 21,275 ghost nets in total, 1,400 kg in the Lithuanian waters and 19,875 in the Polish waters. One of this project's results is an interactive database of places where there are underwater hooks (shipwrecks,

rocks, other obstacles) which may cause rupture of the fishing gear. The database in three languages – in Polish, in English and in Lithuanian is available on the website sieciwidma.wwf.pl. At present there are 333 objects in the database, 233 of these objects were passed to the base by the Hydrographic Office of the Polish Navy at the end of 2013 as a part of the information exchange. The removal of the ghost nets from the Baltic Sea is planned to be continued within the frameworks of the Operational Programme “Fisheries and Sea” as well as within other sources of financing – both in Poland as well as in other Baltic states.

SWEDEN

In 2010 the SBF bought altogether nine camera systems to place on board fishing boats, to investigate discard as well as marine mammal and bird bycatch. Four of them were placed on trawlers and five on smaller fishing boats fishing with gillnets. A large effort was put into this project but only one fisherman was willing to participate in the project even if they were offered incentives for participating. These systems were later taken over by the SwAM whom is responsible for the task since July 2011.

UNITED KINGDOM

Additional information on potential incidents of bycatch is also provided through necropsies carried out under the UK Cetacean Strandings Investigation Programme (CSIP).

1.4 In addition, please attach or provide link to your country's Report under EC Regulation 812/2004.

BELGIUM

(the Annex provided can be accessed as part of [AC21/Inf.12.1.a](#))

DENMARK

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

FINLAND

None

FRANCE

A report is available from IFREMER for the year 2012. And for the period 2010-2012. The report for 2013 is not finished at this time.

GERMANY

No further information

LITHUANIA

Report is enclosed. You have attached the following documents to this answer: Report 2012 on R812-2004_LT.doc (the Annex provided can be accessed as part of [AC21/Inf.12.1.f](#))

NETHERLANDS

Report EU regulation 812/2004:

Couperus, A. S. 2013. Annual report on the implementation of Council Regulation (EC) No 812/2004 - 2012., p. 16. Ijmuiden. Centrum voor Visserijonderzoek (CVO) CVO report

13.007.
POLAND
http://www.minrol.gov.pl/pol/Rybactwo/Rybolowstwomorskie/Raporty,opracowania,publikacje At the address mentioned above there are Polish reports on the implementation of the Council Regulation (EC)812/2004 for 2010, 2011, 2012. The report for 2013 will be placed on the website as soon as it is completed and translated into English. The report completion and its inclusion on the website of the Ministry of Agriculture and Rural Development are planned for May 2014 the latest.
SWEDEN
See Appendix 1 (the Annex provided can be accessed as part of AC21/Inf.12.1.i) http://ices.dk/sites/pub/Publication%20Reports/Expert%20Group%20Report/acom/2013/WKBYC/wkbyc_2013.pdf#search=wgbyc .Report from the Working Group on Bycatch.
UNITED KINGDOM
http://randd.defra.gov.uk/Default.aspx?Menu=Menu&Module=More&Location=Non&ProjectID=18535

2 REDUCTION OF DISTURBANCE

2.1 Anthropogenic Noise

BELGIUM
There was a question in the Senate (5-9320 dd. 11 June 2013) concerning the recommendation of the European parliament about the use of SONAR during military manoeuvres and the possible impact on cetaceans. In his answer, the minister replied that on board frigates of the Belgian Navy only active/passive hull mounted SONARs are used, operating with a frequency of 6.4 to 8 kHz, and with a maximum range of 9 km. Especially towed low frequency active SONAR, not in use by the Belgian Navy, is potentially harmful for marine mammals. The Belgian Navy uses their SONAR during exercises, especially in European waters. In Belgium, there is no link between the strandings of marine mammals and the use of this SONAR equipment. As a precautionary measure lookout is kept from the bridge during the use of the SONAR, and as soon as marine mammals are spotted, transmissions are interrupted. Also, there is a procedure ongoing for the acquisition of an underwater sound management program. On the basis of this system, the user will be able to identify the marine mammals they can expect in the area of operations, and assess how sensitive these are for underwater noise. In this way, due account can be taken of the marine mammals present in the zone. RBINS organised an international symposium on offshore windfarm monitoring: "Environmental impact of offshore wind farms: Learning from the past to optimise future monitoring programmes" (26-27 November 2013, RBINS, Brussels). Almost 150 people attended, originating from 13 countries and with backgrounds ranging from science to industry, policy and management. Due attention was paid to underwater noise and the effects on marine mammals, especially originating from pile driving. During the symposium, the results of the monitoring of offshore windfarm construction and operation in Belgium up to then were presented: S. Degraer, R. Brabant and B. Rumes (Eds.), 2013. Environmental impacts of the offshore windfarms in the Belgian part of the North Sea: learning from the past to optimize future monitoring programmes. Royal Belgian Institute of Natural Sciences, Brussels. Symposium website: http://www2.mumm.ac.be/winmonbe2013/ Relevant publications Doom, M., Cornillie, P., Gielen, I. & Haelters, J., 2013. De invloed van geluidspollutie op zeezoogdieren. Vlaams

Diergeneeskundig Tijdschrift 82(5): 265-272. Haelters, J., Debusschere, E., Botteldooren, D., Duliere, V., Hostens, K., Norro, A., Vandendriessche, S., Vigin, L., Vincx, M. and Degraer, S., 2013. The effects of pile driving on marine mammals and fish in Belgian waters. In: S. Degraer, R. Brabant and B. Rumes (Eds.). Environmental impacts of the offshore windfarms in the Belgian part of the North Sea: learning from the past to optimize future monitoring programmes. Royal Belgian Institute of Natural Sciences, Brussels; 70-77. Haelters, J., Vigin, L. and Degraer, S., 2013. Attraction of harbour porpoises to offshore wind farms: what can be expected? In: S. Degraer, R. Brabant and B. Rumes (Eds.). Environmental impacts of the offshore windfarms in the Belgian part of the North Sea: learning from the past to optimize future monitoring programmes. Royal Belgian Institute of Natural Sciences, Brussels; 166-171. Haelters, J., Legrand, S., Vigin, L. & Degraer, S., 2013. The effect of piling activities on harbour porpoises in Belgian waters: impact modeling and testing. 27th Conference of the European cetacean society: Interdisciplinary approaches in the study of marine mammals, 8-10 April 2013, Poster presentation. Norro, A., Botteldooren, D., Dekoninck, L., Haelters, J., Rumes, B., Van Renterghem, T & Degraer, S., 2013. Qualifying and quantifying offshore wind farm-generated noise. In: S. Degraer, R. Brabant and B. Rumes (Eds.). Environmental impacts of the offshore windfarms in the Belgian part of the North Sea: learning from the past to optimize future monitoring programmes. Royal Belgian Institute of Natural Sciences, Brussels; 62- 69.

DENMARK

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

Mortensen, Lars O.; Tougaard, Jakob; Teilmann, Jonas. BaltSeaPlan - www.baltseaplan.eu, 2012. 42 s. (BaltSeaPlan Report; Nr. 21).

FINLAND

None

FRANCE

IFREMER continues to apply mitigation measures on his seismic surveys, based on the classical international recommendations. The use of a PAM system is now being considered when high-power seismic sources are to be deployed. The order of a complete passive monitoring system is planned for early 2013.

Study projects are being launched in France (about the monitoring and control of the anthropogenic noise in the sea) in the framework of the DCSMM (Directive Cadre Stratégie pour le Milieu Marin). Most noticeably, a synthesis report (Bilan des activités anthropiques génératrices de bruit sous-marin et de leur récente évolution en France Métropolitaine) has been produced by SHOM (the French Hydrography Service). However at this stage these works do not address directly the impact on the cetacean populations.

GERMANY

Project: "Impacts of underwater noise on marine vertebrates"

The "underwater noise"- project (Cluster 7: "Impacts of underwater noise on marine vertebrates"), funded by the Federal Agency for Nature Conservation (BfN) was continued. The project is coordinated by the ITAW, in close cooperation with the BfN and other research institutions (University Aarhus, Denmark; DW-ShipConsult, Germany; University St. Andrews, UK). The main goal is to develop verifiable norms for the estimation of the impact of underwater noise on marine organisms. Therefore it covers a broad spectrum of diverse and varied tasks:

a. Temporary threshold shift:

In distinct subprojects the hearing sensitivity of harbor porpoises is investigated. The auditory study on harbour porpoises to validate the temporary threshold shift (TTS) level for impulsive noise was carried out. So far five audiograms of free-ranging harbour porpoises were collected and two animals were exposed to an airgun impulse to validate the temporary threshold shift value. The auditory thresholds were determined at 2, 4 and 8 kHz.

b. Sound induced stress:

Blood-samples were taken to evaluate sound induced stress in exposed porpoises. Thereby, a baseline for stress hormones and mRNA expression levels of cytokines and acute phase proteins in blood samples of harbor porpoises in different stress levels was established (Müller et al. 2013; BMC Veterinary Research 9:145; <http://www.biomedcentral.com/1746-6148/9/145>).

c. Behavioral changes:

In addition, so far six porpoises in the natural environment have been equipped with new developed automatic data loggers capable to record the current sonic load in the water. The goal of such research is to gain improved knowledge about possible behavioral changes (escape reactions, changes in diving behavior or emigration from noisy areas) after noisy underwater events.

d. Acoustic noise mapping:

In order to complement the information about noise in the ocean, acoustic noise mapping in Natura 2000 protected areas of the North and Baltic Seas using stationary noise recording systems is carried out. Data was collected at different locations in the Baltic and North Seas. [Siebert, Seibel, Ruser, Müller, Lehnert ITAW; Wittekind, Schuster DWSHIPConsult; Teilmann, Miller, Madsen, Univ. Aarhus; Johnson, Univ. St. Andrews].

Project: "PoMM" (Protection of Marine Mammals)

An international, 3 years project "PoMM" within the European Defence Agency (EDA) to establish a common marine mammal database for risk assessment was continued and finished in the end of 2013. The database contains information on sighting records, probabilities of occurrence, habitat use and species' characteristics. It includes a shared final database for the EDA partners. These data will be implemented into a national database for risk mitigation purposes to support the German Navy.

The project consists of 2 work packages:

In work package 1 (WP 1) a comprehensive marine mammal database, being essential for risk mitigation tools, will be established. In WP2 special investigations on marine mammal acoustics will be carried out. The database will provide knowledge on marine mammals with focus on abundance, seasonal distribution and density of different species in areas of operational interest for European Navies. The database will be used in the planning as well as operational phases, to avoid negative impact on marine mammals by military active sonars.

The database consists of four parts:

- encyclopedia: species' characteristics, dictionary of methods and units, position and time of object, information on data source
- observations : information on sightings, cetacean groups and individuals, examination results, sighting effort
- distribution maps: gridded and polygon maps of abundance, seasonal distribution and density of different species
- acoustics: information on vocalization and recording

WP 1 consists of the work elements (WE) 1.1 Definition of Database Characteristics, WE 2.1

Collection and Description of Basis Data Sets, WE 1.3 Development of In- and Output Tools and WE 1.4 Construction of Common Database

The aims of WP 2 are to develop tools and concepts for acoustic detection (WE 2.1) and to provide a tool for the acoustic classification of marine mammals considering particularly the most critical groups and species. Participating institutions are from following countries: Germany, Norway, United Kingdom, Netherlands, Italy and Sweden. [Puffpaff, Ludwig, BMVg / Siebert, Lorenzen ITAW]

Measurements of shock waves attenuation

A new bottom-mounted sensor unit was used to measure the attenuation of shock waves during disposal of old ammunition in the Baltic Sea. It could be successfully used as a recording device to investigate the effect of underwater explosions for assessing potential acoustic impacts [Ludwig, BMVg].

Acoustic activity recording FINO 3

As part of a joint project of measuring underwater noise in the German North Sea, further click detectors (CPODs) were deployed in the area of the research platform FINO 3 to record harbour porpoise activity. Harbour porpoise presence could be recorded [Ludwig, BMVg].

Environmental monitoring of the wind farm “alpha ventus”

In 2010 started the environmental monitoring of the operational phase at the first German offshore wind farm the test site “alpha ventus” with a total of 12 offshore wind energy plants approximately 45 km north of the island of Borkum (water depth ca. 30 m). In 2011 monitoring was carried out in the second year of operation phase. Aerial surveys and POD investigations were conducted in 2012 to survey the operation of the turbines for “alpha ventus”. The project ended in 2013 with the data assessment and final report [Siebert, Dähne, Gilles, Ruser ITAW].

Noise mitigation measures and monitoring during wind farms installation phases

In 2013 five wind farms conducted installation work, including pile driving in the German EEZ, four of them in the North Sea and one in the Baltic Sea. All five wind farms applied noise mitigation measures according to the incidental provision Nr. 14 of the licences given by BSH. The noise mitigation measures include both a tight monitoring of the pile driving activities including measures to prevent the presence of marine mammals in the vicinity of the construction location and technical measures to reduce pile driving noise. At the five construction sites in 2013 the technical mitigation measures applied, were based on big bubble curtain systems. By the end of 2013 at least 15 different big bubble curtain configurations were developed and applied to fulfil the specific requirements of each construction site in regard with pile dimensions, piling procedure, construction vessel and water depth. Moreover, two converter platforms were installed in the German EEZ of the North sea employing cofferdams for the noise mitigation and one converter was installed with the frame used as an isolating shield.

The general schema of the monitoring and prevention measures included following items:

- Hydro-acoustic measurements at 750m, 1.500m and in the next conservation site (SCI)
- Passive acoustic measurements of the harbour porpoise activity combined with the hydro-acoustic measurements
- Operation of ADDs (pingers) 40 min before pile driving activities start
- Operation of AHD (seal scarer) 10 min after the deployment of the ADDS – ADDs and AHD are removed at latest five minutes after starting with hammering
- Soft-start procedure with hammer energy increasing smoothly and remaining below 500 kJ for ten to twenty minutes

The technical noise mitigation measures in 2013 included following main mitigation systems:

- Simple big bubble curtains (400 m to 1.000 m long) operated with three to seven air compressors in water depths from 23 to 44 m and with different radii to the piling site
 - o With outer ballast chain
 - o With inner ballast chain
 - o With one-sided air supply
 - o With two-sided air supply
- Double big bubble curtains (700 m to 2.000 m long) operated with five to nine air compressors in water depths from 23 to 34 m
- Triple big bubble curtain (3.000 m long) operated with five air compressors in water depths from 25 to 30 m
- Combination of two big bubble curtain systems
- Two special developed cofferdams for converter platforms
- A noise mitigation system employing the base-frame as a cofferdam (construction in 2012, results available in 2013)

The results of the passive acoustic monitoring revealed that no marine mammals remained in the vicinity of the construction site after the deployment of ADDs and AHD. The first results regarding the effectiveness of the noise mitigation systems look promising. Still, the threshold of 160 dB re 1 μ Pa in 750 m radius could not always be achieved.

- Some of the big bubble curtain configurations were successful in meeting the threshold
- In some of the construction sites it proved to be critical to meet the threshold with big bubble curtain systems
- The combination of two big bubble curtain systems was successful.
- The application of cofferdam in two platforms showed that the systems need further development

The application of the system using the base frame as a cofferdam was successful [Boethling, BSH].

Development, deployment and evaluation of a big bubble curtain for mitigating underwater noise associated with pile-driving activities:

The project HYDROSCHALL-OFF BW II was funded by the Federal Ministry for the Environment, Nature Conservation and Nuclear safety (BMU) under the project ref. no. 0325309A/B/C; project coordinator: BioConsult-SH GmbH & Co KG, Husum; project partners: Hydrotechnik Lübeck GmbH, Lübeck; Itap GmbH, Oldenburg; duration: 01.04.2011 - 31.12.2012.

In the last years a number of offshore wind farms were constructed along European coastal waters. Most turbines are built on steel foundations rammed into the sea floor, which creates considerable underwater noise during construction. Several studies demonstrated clear avoidance behaviour of harbour porpoises in quite extended areas around such construction sites due to underwater noise.

Within the framework of the project a new noise mitigation system appropriate for series production was developed and tested during pile driving for the offshore wind farm Borkum West II, currently being constructed by company TRIANEL WINDKRAFTWERK BORKUM GmbH & Co. KG. The wind farm, positioned 45 km north of Borkum Island, consists of 40 wind turbines (WEA) and a transformer station. During foundation work for the turbines (tripod constructions), 120 piles with a diameter of 2.5 m were driven into the sediment by a

hydraulic hammer.

In order to reduce noise emission during pile driving a Big Bubble Curtain (BBC) was developed. This system could be layed out before pile driving started and was tested and operated during construction process of the wind farm Borkum West II. Noise mitigation regarding the Sound Exposure Level (SEL) ranged from 9 dB to 13 dB for the most suitable bubble curtain configuration BBC 2 (hose with small nozzles at short distances to each other) under full air supply. This proved to be very efficient since it reduced the noise-polluted area by 90%. When operating configuration BBC 2 with full air supply the 5% percentile of the sound exposure level (SEL) undershot noise protection norms of 160 dBSEL5 in 750 m distance with 73% of the WEA foundations; the remaining 27% fell between 160 dBSEL5 and 163 dBSEL5 and never exceeded 163 dBSEL5. Acoustic monitoring of harbour porpoises approved a strongly reduced disturbance of animals by usage of a Big Bubble Curtain during pile driving since no avoidance behavior could be proven statistically below median SEL levels of 144-146 dB re 1µPa. Due to these findings the project was the worldwide first where a noise mitigation system was successfully operated under offshore conditions on a large scale, and in which its positive effect on a marine mammal species was demonstrated. The Big Bubble Curtain was proven to be suitable in principle as a noise mitigation system for pile driving [Diederichs, Rose, Höschle, BioConsult SH].

Marine Mammal Database

Following the instructions for the German Navy on the protection of marine mammals and maritime habitats, marine mammal sightings are collected continuously by the German fleet and recorded in a database to improve knowledge about the distribution and habitat use of abundant species. This information is taking into account for the planning of the use of sonar systems during trials [Ludwig, BMVg].

Financial support for publications

Germany has supported with the regular annual voluntary contribution ASCOBANS activities in the field of underwater noise reduction (preparation of a review and development of a briefing) [Schall, BMUB].

Sound Protection Concept

After the nuclear catastrophe of Fukushima - 3years ago- the German government had decided a shut down schedule for all nuclear reactors in Germany. The most important compensation for the losses of nuclear energy is foreseen by growing use of renewable energies. However, this means i.e. that more wind energy plants in the open sea will be necessary and more pile driving and more noise burdens for harbour porpoises. In order to guarantee a sufficient noise protection of cetaceans a "Concept for the Protection of Harbour Porpoise from Sound Exposures during the Construction of Offshore Wind Farms in the North Sea" was developed under the auspices of the Ministry of Environment and has taken effect at the 1st December 2013 by the decision of the Minister for Environment himself. It is intended to foster greater clarity with regard to the requirements of a sufficient implementation of German nature conservation law during the construction of offshore wind farms. As soon as the translated version of this German concept will be available in English, presumably in early spring 2014, ASCOBANS will receive this English version (BMUB).

LITHUANIA

There are no studies of anthropogenic noise done or ongoing

NETHERLANDS

TNO participates in the 3S-project, together with main partners FFI (Norway), SMRU (UK) and WHOI (USA) and several associate partners (e.g. IMR, Norway). In 2013 the third of a

series of experiments took place from 15 June to 15 July, mostly near Jan Mayen, to perform BRS (Behavioural Response Studies) to study the behavioural effects of sonar sound on whales. Target species were northern bottlenose whales and minke whales. One full experiment with a group of N. bottlenose whales showed clear avoidance with the tagged animal diving to maximum depth (beyond 2400m). Some more baseline data will be gathered in 2014, and options for extension of the 3S-program are currently being discussed. Analysis and publication of results are still in progress for previous 3S-experiments (2006-2010), with were Killer whales, (long-finned) pilot whales and sperm whales as target species.

Within the EDA (European Defence Agency) TNO, together with other partners (GER, NOR, ITA, UK), is developing a marine mammal database. This database should become available for participating nations in order to improve accuracy and efficacy of mitigation measures for naval sonar operations. This EDA-PoMM project (Protection of Marine Mammals) has been finalized in 2013.

The NL-mitigation software for naval operations SAKAMATA has been introduced to the fleet of the Royal Netherlands Navy (RNLN) in 2010. The software has been upgraded to improve user interface and implement latest research results and new algorithms for implementing sound exposure calculations and efficacy of ramp-up schemes for sonar transmissions have been published.

The release of Whale FM took place end of 2011 (<http://whale.fm>). This website, as initiated by TNO, is asking volunteers on the internet to help classifying marine mammal sounds ("crowd sourcing"). First publications with classification results are published or submitted.

Noise maps for Maasvlakte 2 construction activities were calculated by TNO, including calculations of cumulative sound exposure for porpoises crossing the construction area.

Christ de Jong and Michael Ainslie are part of the ISO Working Group that is developing a standard for measuring sound radiated from ships. A Publically Available Specification (PAS) published in February 2012 is available from ISO (http://www.iso.org/iso/iso_catalogue/catalogue_tc/catalogue_detail.htm?csnumber=59403)

The ZKO project "Effects of underwater noise on fish and marine mammals in the North Sea" [<http://www.nwo.nl/projecten.nsf/pages/2300168538>] is done in collaboration of TNO, IMARES and SEAMARCO. The objective of one of the involved PhDs is to develop the knowledge required for calculating sound maps of biological relevance for the Dutch North Sea.

Michael Ainslie represents NL on the EC expert Technical Sub-group Underwater Noise "TSG Noise". This Working Group was set up by the EC to advise Member States on interpretation of Descriptor 11 and its two indicators (11.1.1 and 11.2.1). The final report of the TSG Noise was published in February 2012. In 2013 the monitoring guidance (parts I, II, III) were published. In collaboration with other projects in Europe, a standard terminology for underwater sound [AHEWGTUS 2011] has been proposed. This terminology has been adopted by TSG Noise. The TSG report recommends the standard be adopted by all MS. The IQOE draft science plan also refers to the standard.

The PRIMA APP© (Portable Registration and Identification of Marine Animals) is developed by TNO as contracted by the Royal Netherlands Navy (RNLN) and as specified by the NL Hydrographic Office (NLHO). Concept development by TNO, Marine Science & Communication and Sharpener. Biological input is delivered and coordinated by Marine Science & Communication. The Royal Netherlands Navy (RNLN) advertises responsible sonar use. Part of their guidelines is the registration of marine mammals present before, during and after naval sonar operations. In support of this, the PRIMA APP© will be used in order to identify most observed marine mammals easily and reliably. In 2013 a Dutch version of the PRIMA APP© has been developed. TNO and MS&C explore making the PRIMA

APP© available for a larger public.

In 2013 TNO has been involved in a large number of national and international meetings concerned with among others: acoustical terminology, noise from ships and pile driving, deep ocean ambient noise, noise reduction. This is done in the framework of an international network of experts.

A number of Behavioural Response Studies with harbour porpoises were conducted under the lead of SEAMARCO and in cooperation with Dotmoth.co.uk, TNO Netherlands and JunoBioacoustics, NL. Aim is to investigate behavioral responses of harbor porpoises to Swedish sonar signals (around 25 kHz) with and without side bands and behavioral responses of harbor porpoises to pile driving sound. Funding comes from Netherlands Ministry of Defense and Netherlands Ministry of Infrastructure and Environment and FOI, Sweden.

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POLAND

The Institute of Oceanography (including the Marine Station) of the University of Gdańsk realize the Polish part of the project titled BIAS: “Baltic Sea Information on Acoustic Soundscape”. Main goal of the project is to implement descriptor 11 for GES from the Annex Marine Strategy Framework Directive on the Baltic Sea’s regional level. Duration of the project was anticipated from September 2012 till August 2016. One fixed five sets of sea-bottom measuring equipment which will aim at recording ship's underwater noise in the Polish part of the Baltic Sea (the project is also realized by the Foundation for the University of Gdańsk Development).

In September 2013, in the Gdańsk Bay one detonated 2 torpedoes from the Second World War.

In Poland, marine waters are not monitored for the underwater noise. During last few years ships in main sea were recorded. Based on the information of 2011 (a ship type, deadweight tonnage (DWT), draught, length, width and gross weight tonnage (GWT)) one concluded that in the Polish zone, the most threat of noise is constituted through cargo ships, petrochemical and chemical tankers, container ships, tow vessels and passenger ships. Since 2008, figures have been showing that total turnover of all Polish ports have constituted 6.9% of the results for the Baltic Sea basin’s ports.

SWEDEN

In the field of the European Marine Strategy Framework Directive, SwAM has participated in the EU Working for Good Environmental Status (GES WG), to develop the indicators for descriptor 11 (energy and noise).

FOI has published the report "Ambient Underwater Noise Levels at Norra Midsjöbanken during Construction of the Nord Stream Pipeline" which was funded by the Swedish Environment Protection Agency, SEPA, together with Nord Stream AG. It presents results from measurements of noise during the construction of the North Stream pipeline, which passes about 4 km off Norra Midsjöbanken which is a Nature 2000 area. Measures included trenching activities as well as the ambient noise including shipping noise.

FOI has published the report "Skydd av marint liv vid användning av aktiv sonar" (Protection of marine life in connection with the use of active sonar; FOI-R--3716--SE, ISSN 1650-1942). It deals with generating knowhow on the effect of such noise and how to minimize these effects.

FOI has published the report "Akustiska miljöeffekter av svenska marinens aktiva sonarsystem" (Acoustic environmental effects of the Swedish Navy's active sonar systems; FOI-R--3504--SE, ISSN 1650-1942). It presents a summary of existing systems, the frequencies used and their relation to the audiogram of marine mammals residing in Swedish waters. It also gives risk distances for behavioural effects as well as temporary and permanent hearing threshold shifts.

FOI has published the report "Säker användning av militära sonarsystem - nationella handlingsregler och svensk lag" (Safe use of military sonar systems - national handling rules and Swedish law; FOI-R--3656--SE, ISSN 1650-1942). It presents guidelines on how to plan and implement military exercises where active sonar is included.

The 4th Naval warfare flotilla, part of the Swedish Armed Forces, has produced the "Maringeografisk biologikalender" (the Marine geographic biology calendar), a planning tool for the Swedish Navy, with the aim at minimizing the negative effects of military activities on the marine ecosystems. It is presented as an ArcGIS-based map, on which layers with the distribution in time and space of different factors, e.g. protected areas, biological databases for fish, birds, seals, etc., can be shown. It is still under development, and e.g. the SAMBAH harbour porpoise distribution maps will be included when available.

UNITED KINGDOM

Most marine construction or development activities generating noise (i.e. piling) require the developer to apply for consent and carry out the necessary assessments e.g. Environmental Impact Assessments (EIA), Appropriate Assessments (AA) under the Habitats Directive. The Marine Management Organisation (MMO) is responsible for most marine licensing in UK offshore waters and inshore English waters. In Scottish inshore waters Marine Scotland are the licensing body, in Welsh inshore waters it is Natural Resources Wales, and in Northern Ireland inshore waters it is the Department of Environment Northern Ireland (DOENI). [<https://www.gov.uk/how-marine-licensing-works>]

Noise mitigation measures may be required where there is a risk that the activity may disturb or harm cetaceans, including the need for Marine Mammal Observers, soft start piling, and cessation of piling activity when cetaceans are present. As disturbance of cetaceans cannot be eliminated entirely as part of these projects, this mitigation is designed to reduce it to acceptable levels considered to not be detrimental to maintaining their conservation status. Relevant guidance can be found on the UK government website. [<https://www.gov.uk/oil-and-gas-offshore-environmental-legislation>]

The MMO also has a voluntary notification system for seismic surveys occurring in English waters, so that we have a record of these activities taking place and can make assessment

of any disturbance this may cause and suggest implementation of mitigation measures as appropriate [<http://www.marinemanagement.org.uk/protecting/wildlife/geophysical.htm>].

The UK is also required to meet obligations on impulsive sounds and ambient noise under the Marine Strategy Framework Directive (MSFD). The UK published the first part of its Marine Strategy as required under the Directive in December 2012. This contains the characterisation of Good Environmental Status (GES) and associated targets and indicators in UK waters. Part two of the UK Marine Strategy outlining UK monitoring programmes was published in July 2014. The final part of the UK marine Strategy, programmes of measures necessary to achieve GES, will be consulted on during early 2015. Further information on implementation of the MSF in the UK can be found on the UK government website [<https://www.gov.uk/government/policies/protecting-and-sustainably-using-the-marineenvironment/supporting-pages/implementing-the-marine-strategy-framework-directive>]. Further information on the implementation of the MSFD in Europe can be found on the European Commission website [http://ec.europa.eu/environment/marine/eu-coast-and-marine-policy/implementation/reports_en.htm]. To meet our obligations under the MSFD for marine noise the UK has been developing a noise registry which will capture and store records of impulsive sounds in the UK marine environment. This will aid regulators and industry in providing a clear picture of the distribution in space and time of noise generating activities and help the UK to assess whether it is delivering GES.

The UK also continues to actively engage more widely on noise issues within Europe. The UK is currently Vice Chair of OSPAR (Oslo and Paris Conventions for the protection of the marine environment of the North-East Atlantic) and within this Convention is the Chair of the Biodiversity Committee (BDC) which considers cetaceans more generally. The UK also plays an active role in the ICG-MSFD which helps improve regional MSFD coordination and in the EIHA (Environmental Impacts of Human Activities) Committee which considers the impacts of marine noise and is currently developing guidance for Contracting Parties on options for noise mitigation measures.

The UK also co-chairs the EU Technical Sub Group on underwater noise (EU TSG-Noise) with the Netherlands. This group continues to provide advice to Member States on implementing the noise aspects of the MSFD. The UK Underwater Sound Stakeholder continue to meet twice per year, providing an opportunity for industry, non-government organizations and other interested stakeholders to engage directly with Defra and Ministry of Defence (MoD) to discuss emerging issues and exchange information on the impacts of noise in the marine environment. These discussions have helped drive the development of a real-time alert procedure for naval training operations, enabling local information on unusual cetacean sightings, e.g. the presence of a species group closer to shore than is usual, to be incorporated into the training schedule and for operations to be relocated if necessary.

The National Physical Laboratories, on behalf of the UK, continues to lead in the development of underwater noise standards via the British Standards Institute Committee. Engagement in the International Standards Organisation [ISO] Sub-Committee within ISO TC43 (SC3 title: "Underwater Acoustics") continues to be considered a priority. This ISO TC43 sub group will cover "Standardization in the field of underwater acoustics (including natural, biological, and anthropogenic sound), including methods of measurement and assessment of the generation, propagation and reception of underwater sound and its reflection and scattering in the underwater environment including the seabed, sea surface and biological organisms, and also including all aspects of the effects of underwater sound on the underwater environment, humans and marine aquatic life."

Other relevant work carried out during 2013 includes:

- New guidance on marine European Protected Species has been published in Scotland: The Protection of Marine European Protected Species from Injury and Disturbance. Guidance for Scottish Inshore Waters. <http://www.scotland.gov.uk/Topics/marine/marineenvironment/species/19887/20813/epsquid>

[ance?refresh=0.6352101364748239](#)

- A Protocol for Implementing the Interim Population Consequences of Disturbance (PCoD) Approach: Quantifying and Assessing the Effects of UK Offshore Renewable Energy Developments on Marine Mammal Populations. J Harwood, S King, R Schick, C Donovan and C Booth. 2014. Marine and Freshwater Science Vol 5 No 2, Published by Marine Scotland Science. ISSN: 2043-7722.
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<http://uk.whales.org/sites/default/files/wdc-marine-renewable-energy-report.pdf>
- A JNCC contract will report in Autumn 2014 on the potential effects of seismic surveys on cetaceans. The report will analyse data from Marine Mammal Observer reports, submitted as part of the consenting regime for any seismic surveys within the United Kingdom Continental Shelf (UKCS), analysing data from 1994- 2010. The work will build on earlier analysis of Marine Mammal Observer reports (e.g. Stone and Tasker, 2006), but will allow for longer term analysis of potential effects of seismic activities on cetaceans, as well as general trends in the implementation of the JNCC seismic guidelines (http://jncc.defra.gov.uk/pdf/JNCC_Guidelines_Seismic%20Guidelines_August%202010.pdf) throughout this time period.

2.2 Ship Strike Incidents

Date	Species	Type of injury	Fatal injury (Yes / No)	Type of vessel (length, tonnage and speed)	Location (coordinates)	More information: (Name / Email)
BELGIUM						
None						
DENMARK						
None						
FINLAND						
None						
FRANCE						
None						
GERMANY						
03/04/2013	Phocoena phocoena	Internal injuries, bleeding; salivated blood	Yes	Unknown	Elbe river, Hamburg Övelgönne	Wenger@delphinenschutz.org
09/05/2013	Phocoena phocoena	Internal, death rattle	Yes	Unknown	Elbe river, opposite of Airbus (Elbchaussee)	Wenger@delphinenschutz.org
22/05/2013	Phocoena phocoena	Head injury	Yes	Unknown	Elbe river, Otterndorf	Wenger@delphinenschutz.org
31/05/2013	Phocoena phocoena	Head injury caused by ship propeller	Yes	Unknown	Elbe river, Hamburg harbour	Wenger@delphinenschutz.org
11/06/2013	Phocoena phocoena	Head injury, potentially caused by ship propeller	Yes	Unknown	Elbe river, Wedel	Wenger@delphinenschutz.org
LITHUANIA						
None						
NETHERLANDS						
02/08/2013	Fin whale	Hematoma	Yes. Due to the	Container ship, length: 335 m, gross	Unknown – found on the bulb of the	www.walvisstrandingen.nl

Date	Species	Type of injury	Fatal injury (Yes / No)	Type of vessel (length, tonnage and speed)	Location (coordinates)	More information: (Name / Email)
			injuries it is expected the fin whale was hit by a ship when it was still alive.	tonnage: 91621, speed (max/avg): 18/15.6 knots	ship in the harbour in Rotterdam, the Netherlands	
16/09/2013	Fin whale	Hematoma	Yes. Due to the injuries it is expected the fin whale was hit by a ship when it was still alive.	Unknown	Unknown – Found in the water near Rotterdam, stranded the day after near Gravezande. It was already dead for a while. It is expected it drifted here, or was transported here on the bulb of a ship from Bay of Biscay.	www.walvisstrandingen.nl
POLAND						
None						
SWEDEN						
None						
UNITED KINGDOM						
20/07/2013	Bottlenose dolphin	Unknown – carcass couldn't be retrieved for necropsy	Yes	Unknown	Camel estuary, Cornwall, England	Rob Deaville (rob.deaville@ioz.ac.uk)

Date	Species	Type of injury	Fatal injury (Yes / No)	Type of vessel (length, tonnage and speed)	Location (coordinates)	More information: (Name / Email)
20/02/2013	Short-beaked common dolphin	Linear incision caudal peduncle; rib fractures and associated trauma	Yes	Unknown – stranded animal, diagnosed at necropsy	Paignton, Torbay, England	Rob Deaville (rob.deaville@ioz.ac.uk)
24/05/2013	Harbour porpoise	Dorsal thoracic haemorrhage	Yes	Unknown – stranded animal, diagnosed at necropsy	River Thames, London, England	Rob Deaville (rob.deaville@ioz.ac.uk)
13/06/2013	Sowerby's beaked whale	Multiple fractures and associated haemorrhage to upper and lower jaws	Yes	Unknown – stranded animal, diagnosed at necropsy	Drogman harbour, Highland, Scotland	Rob Deaville (rob.deaville@ioz.ac.uk)
21/07/2013	Harbour porpoise	Dorsal thoracic haemorrhage and rib fractures	Yes	Unknown – stranded animal, diagnosed at necropsy	Trevoose head, Cornwall, England	Rob Deaville (rob.deaville@ioz.ac.uk)
27/08/2013	Harbour porpoise	Multiple parallel incisions lateral body wall	Yes	Unknown – stranded animal, diagnosed at necropsy	River Thames, London, England	Rob Deaville (rob.deaville@ioz.ac.uk)
23/11/2013	Minke whale	Dorsal thoracic haemorrhage and fractured cervical vertebra	Yes	Unknown – stranded animal, diagnosed at necropsy	Sea Palling, Norfolk, England	Rob Deaville (rob.deaville@ioz.ac.uk)
19/11/2013	Minke whale	Not examined at necropsy – photos showed multiple parallel linear incisions on dorsal body wall	Unknown	Unknown	Cromer, Norfolk, England	Rob Deaville (rob.deaville@ioz.ac.uk) http://www.theguardian.com/environment/2013/nov/26/norfolk-minke-whales-ship-strikes

2.3 Major Incidents Affecting Significant Numbers* of Cetaceans

Date	Location	Type of incident	Further Information
BELGIUM			
None			
DENMARK			
None			
FINLAND			
None			
FRANCE			
None			
GERMANY			
March-August 2013	Elbe river	Possible ship strikes; other causes: possibly due to the effects of underwater noise or pollutants	More than 20 dead harbour porpoises were found along shores from Hamburg harbour to Wedel [Wenger, GRD]
LITHUANIA			
None			
NETHERLANDS			
None			
POLAND			
None			
SWEDEN			
None			
UNITED KINGDOM			
03/03/2013	Winterton on Sea, Norfolk, England	Multiple stranding	Four freshly dead harbour porpoises exhibiting similar traumatic lesions were found dead stranded in close proximity. Postmortem examination of the only retrievable carcass indicated atypical physical trauma as a probable diagnosis (whether this was as a result of ship strike or grey seal attack/scavenging remains unclear).
24/04/2013	Portmahomack,	Mass stranding	Mass stranding of three long-

Date	Location	Type of incident	Further Information
	Highland, Scotland		finned pilot whales. Two died and one refloated.
12/09/2013	St. Kilda, Western Isles, Scotland	Mass stranding	Two Sowerby's beaked whales live stranded- the larger animal died and the smaller one was refloated (possibly a mother-calf pair).
Further information on the above incidents will be given in the CSIP 2013 annual report to Defra and the Devolved Administrations in the UK, which will be shortly published at: http://randd.defra.gov.uk/Default.aspx?Menu=Menu&Module=More&Location=None&ProjectID=17835&FromSearch=Y&Publisher=1&SearchText=strandings&SortString=ProjectCode&SortOrder=Asc&Paging=10#Description			

**Two or more animals*

2.4 Pollution and Hazardous Substances

BELGIUM
No specific effects on small cetaceans washed ashore at the Belgian coast were investigated, although from selected stranded animals tissue samples were taken for further investigation of pollutant loads.
DENMARK
Sonne C., Leifsson PS, Dietz R 2013. Liver and renal lesions in mercury contaminated narwhals (<i>Monodon monoceros</i>) from North West Greenland. <i>Toxicological and Environmental Chemistry</i> 95:1-14. PFAS profiles in three North Sea top predators: metabolic differences among species?. / Galatius, Anders; Bossi, Rossana; Sonne, Christian; Riget, Frank Farsø; Kinze, Carl Chr.; Lockyer, Christina; Teilmann, Jonas; Dietz, Rune. I: <i>Environmental Science and Pollution Research</i> , Vol. 20, Nr. 11, 2013, s. 8013-8020.
FINLAND
None
FRANCE
Chemical pollution was evaluated in five species of small cetaceans that frequent the NW Iberian Peninsula waters: the common dolphin, the harbour porpoise, the bottlenose dolphin, the striped dolphins and the longfinned pilot whale. To this aim, 14 trace elements (Ag, As, Cd, Co, Cu, Cr, Fe, Hg, Mn, Ni, Pb, Se, V, Zn), 32 congeners of polychlorinated biphenyl ethers (PCBs) and 9 congeners of polybrominated diphenyl ethers (PBDEs) were analysed in samples of the main storage tissues for these pollutants (i.e. liver, kidney and blubber) collected from stranded and/or by-caught animals along the NW Iberian Peninsula coast between 2004 and 2008. Fieldwork was conducted by members of the Spanish (Coordinadora para o estudo dos mamíferos mariños, CEMMA) and Portuguese (Sociedade Portuguesa de Vida Salvagem, SPVS) stranding networks and was part of the PhD project of P. Méndez Fernandez. This project was a collaboration between the university of La Rochelle, the University of Minho, in Braga Portugal, the marine laboratory of Scotland and

the Spanish Oceanographic Institute (IEO) from Vigo, Spain.
GERMANY
<p>Chemical Pollutant Levels</p> <p>Within a project funded by the Federal German Agency of Environment (UBA), the current status of knowledge on chemical pollutant levels in marine mammals and effects of pollutants on the health of marine mammals as investigated and a research plan is developed [Wehrmeister, Siebert, ITAW].</p>
LITHUANIA
No new measurements were taken.
NETHERLANDS
<p>Contaminant concentrations (PCBs, organotin, PFOS) are analysed in beached <i>P. phocoena</i> (neonates and juveniles) (2007-ongoing) (Van den Heuvel-Greve et al., in prep.). Highest median PCB concentrations were found in neonate <i>P. phocoena</i> when compared to juvenile <i>P. phocoena</i>. PFOS concentrations were comparable in livers of neonate and juvenile <i>P. phocoena</i>. Organotin concentrations were highest in juvenile <i>P. phocoena</i>.</p> <p>Reference: Van den Heuvel-Greve M, Kotterman M, Kwadijk C (in prep). Chemical profiles in harbour porpoises, <i>Phocoena phocoena</i>, beached in the southern North Sea. IMARES report.</p>
POLAND
On 13th of February 2014, the project CHEMSEA devoted to the identification and reduction of the threats connected with the chemical munitions dumped in the Baltic Sea was completed. The project was partly financed by the European Union.
SWEDEN
The Swedish Museum of Natural History (SMNH) is carrying out a 3-year study on several contaminants in harbour porpoises from Swedish waters. The study was finished in 2012 and a report of the results should have been delivered to SwAM, but the report has been delayed.
UNITED KINGDOM
<p>Work has continued since the initial UK work undertaken during 2011 to analyse 100 retrospective samples from UK-stranded harbour porpoises (2004-2008) for polychlorinated biphenyls (PCBs) at the Centre for Environment, Fisheries and Aquaculture Science (CEFAS). This initial work combined new data with older data from 1990-2008 in order to provide a near 20-year time series of data for polychlorinated biphenyls (PCBs) (n=540), organochlorine pesticides (OC) (n=489) and brominated diphenyl ethers (BDEs) (n=415) in UK stranded harbour porpoises.</p> <p>During 2013 CEFAS, in collaboration with the UK Cetacean Strandings Investigation Programme (CSIP), finalised analyses on a further 102 cetaceans for levels of PCB's. Samples were derived from both stranded and biopsied animals across Europe and comprised harbour porpoises (n=43), bottlenose dolphins (n=41) and killer whales (n=18). The funding for these analyses was provided by Defra under a project entitled "Risk assessment of polychlorinated biphenyl (PCB) exposure in marine top predators". The results of this work, and the previous analyses carried out (including those funded under a small ASCOBANS project in 2010, reference SSFA2010-3), are now being compiled by the Institute of Zoology in a paper describing levels of PCB's in over 1000 cetaceans sampled</p>

across Europe between 1990 and 2012. This paper will be published during 2014 and will be included in the next UK national report.

The results show that concentrations of organochlorine pesticides, HBCD and BDEs are declining. In contrast, PCB concentrations have reached a plateau since 1997 following earlier reductions due to regulation of commercial use. Further reductions in PCB levels in UK waters are likely to take decades. Blubber PCB concentrations are still at toxicologically significant levels in many stranded harbour porpoises (Jepson et al 2005) and occur at even higher levels in UK-stranded bottlenose dolphins and killer whales (ICES 2010), mainly due to their higher trophic level in marine food chains in these top predator species. Further reductions in PCB inputs into the marine environment are undoubtedly needed to mitigate risk from PCB exposure in these species (ICES 2010, Law et al submitted).

In addition, during 2013, publications were produced on levels of organochlorine pesticides and chlorobiphenyls in bycaught common dolphins (Law et al. 2013a) and also on levels of alternative flame retardants in stranded harbour porpoises (Law et al. 2013b), as a result of the ongoing collaboration between CEFAS and the UK strandings programme.

- Organochlorine pesticides and chlorobiphenyls in the blubber of bycaught female common dolphins from England and Wales. Law RJ; Bersuder P; Barry J; Barber J; Deaville R; Barnett J; Jepson PD. 2013. Marine Pollution Bulletin 69: 238-242.

- Alternative flame retardants, Dechlorane Plus and BDEs in the blubber of harbour porpoises (*Phocoena phocoena*) stranded or bycaught in the UK during 2008. 2013. Law, R.J., Losada, S., Barber, J.L, Bersuder, P., Deaville, R., Brownlow, A., Penrose, R. and Jepson, P.D. *Envi. Int.* 60 81-88

2.5 Other Forms of Disturbance

BELGIUM
No new information.
DENMARK
The effect of harbour porpoise distribution was investigated by the restoration of a large reefs at Læsø. After the establishment of the reef, the number of harbour porpoises to the area. This is due to an increase in fish stocks around the reef. In the area which was used as a reference, could however see a decline in the number porpoise sightings. It is unclear what this decline is due.
Parameters of growth and reproduction of white-beaked dolphins (<i>Lagenorhynchus albirostris</i>) from the North Sea. /Galatius, Anders; Jansen, Okka E; Kinze, Carl Christian. I: <i>Marine Mammal Science</i> , Vol. 29, Nr. 2, 2013, s. 348-355.
FINLAND
None
FRANCE
None
GERMANY
No further relevant information

LITHUANIA
None
NETHERLANDS
None
POLAND
None
SWEDEN
None
UNITED KINGDOM
<p>The Marine Management Organisation (MMO) is the enforcing body in the marine environment for wildlife legislation, and their remit includes disturbance offences. Educational training, focussing on legislation and offences, has been carried out by the MMO around the coast in areas where disturbance activities are an issue. Enforcement action for disturbance offences can be taken by police or MMO where evidence allows. Wildlife licences are issued for certain activities which may cause disturbance to cetaceans in order to control and monitor these activities, and to minimise any disturbance these may cause so as not to be of negative impact. These licences contain conditions that must be adhered to and can be enforced by MMO. Separate but similar provisions are in place in Scotland and administered by Marine Scotland.</p> <p>As a wildlife licensing authority, the MMO makes assessments on wildlife licence applications to ensure that any activity permitted under a licence is not detrimental to the Favourable Conservation Status of the population of a species, and that there are no other suitable alternatives. Any wildlife licences issued to allow the disturbance of cetaceans will seek to minimise this disturbance through conditions placed on the licence. For example a wildlife licence issued for scientific purposes will limit the number of interactions with a local populations and require appropriate vessel manoeuvring during activity undertaken under licence and requires end of licence reports to be submitted on activity undertaken.</p> <p>The MMO is part of the Cornwall Marine Wildlife Group which has established a disturbance register so incidents in the South West of England can be reported and recorded as well as being forwarded to the relevant enforcement authorities as necessary (the Police and MMO). A coastal code of conduct to reduce disturbance of marine species has also been created. http://www.cornwallwildlifetrust.org.uk/livingseas/cornwall_marine_and_coastal_code</p> <p>Disturbance of cetaceans and an incident resulting in the death of a calf have been associated with some inappropriate vessel activities in the South West of England. The MMO swiftly responded to this problem and has since provided follow up action by creating additional educational material. http://www.marinemanagement.org.uk/news/news/130722.htm</p> <p>The MMO also chairs the Partnership for Action Against Wildlife Crime (PAW) Marine Wildlife Working Group, which seeks to coordinate the enforcement of marine wildlife crime, including disturbance offences, under the relevant wildlife legislation. This group includes enforcement authorities and NGOs. http://www.marinemanagement.org.uk/protecting/wildlife/paw.htm</p> <p>There is growing evidence that bottlenose dolphins may be affected by recreational activities within Cardigan Bay, West Wales, including within Cardigan Bay SAC. Abundance (from line transect surveys) within the SAC has declined since 2006 but it remains difficult to attribute a</p>

decline to any one cause; an inverse relationship between vessel numbers and dolphin encounter rates has been suggested; and in areas with high vessel traffic, social structure appears to be disrupted and whistle characteristics altered (Pierpoint et al., 2009; Veneruso & Evans, 2012a; Richardson, 2012; Thompson, 2012; Feingold & Evans, 2013).

Feingold, D. and Evans, P.G.H. (2014) Bottlenose Dolphin and Harbour Porpoise Monitoring in Cardigan Bay and Pen Llyn a'r Sarnau Special Areas of Conservation 2011-2013. Natural Resources Wales Evidence Report Series No. 4. 124pp

Pierpoint, C., Allan, L., Arnold, H., Evans, P., Perry, S., Wilberforce, L., and Baxter, J. (2009) Monitoring important coastal sites for bottlenose dolphin in Cardigan Bay, UK. Journal of the Marine Biological Association of the UK, 89: 1033-1043.

Richardson, H. (2012) The effect of boat disturbance on the bottlenose dolphin (*Tursiops truncatus*) of Cardigan Bay in Wales. MSc thesis, University College London. 71pp.

Thompson, K. (2012) Variations in Whistle Characteristics of Bottlenose Dolphins (*Tursiops truncatus*) in Cardigan Bay, Wales. MSc thesis, University of Bangor. 62pp.

Veneruso G. and Evans P.G.H. (2012) Bottlenose dolphin and harbour porpoise monitoring in Cardigan Bay and Pen Llyn a'r Sarnau Special Areas of Conservation. CCW Monitoring Report No. 95: 1-65.

3 MARINE PROTECTED AREAS FOR SMALL CETACEANS

3.1 Relevant Information

BELGIUM
No new information
DENMARK
In June 2011, Denmark began a monitoring program of the designated SACs (special areas of conservations, Natura2000) for harbour porpoises. Passive acoustic dataloggers, CPODs, have been deployed in two SACs, an acoustic porpoise survey has been conducted in the Inner Danish waters, two aerial surveys have been performed covering SACs: one in the North Sea and one in Skagerrak.
The Natura 2000 project aims to ensure endangered and valuable species. In this project 16 areas has been selected to protect the Harbour Porpoise.
http://naturerhverv.dk/fiskeri/natura-2000-i-hav/marsvin/
http://www.naturstyrelsen.dk/Udgivelser/Aarstal/2013/Vandmiljoe_og_Natur_2012_NOVANA.htm
FINLAND
None
FRANCE
Between October 2008 and February 2010, 95 marine Natura 2000 sites have been designated by France. Among all existing Natura 2000 sites in the ASCOBANS area, Bottlenose dolphin is listed in 39 and Harbour porpoise in 37, both on the Channel and Atlantic coast. The Management Plan of the Marine Protected Area in Iroise Sea (West Brittany) is applicable to the Natura 2000 sites of the Molène archipelago and Ouessant Creation on a new MPA « Estuaires picards / mer d'Opale (English Channel-North Sea)» in December 2012.

GERMANY
<p>Management Plan for harbour porpoises</p> <p>Within the process of developing national management plans for the 8 designated German Special Areas of Conservation / SACs (pursuant to the Habitats-Directive), protection measures for marine mammals/harbour porpoises are being designed and proposed to authorities. In addition, for harbour porpoises, as an Annex IV species of the habitats directive, conservation plans are being developed for the whole German North and Baltic Sea (BfN, ITAW) [Unger, Herr, Siebert, ITAW].</p> <p>Marine Protected Areas in the Exclusive Economic Zone (EEZ)</p> <p>In Autumn 2013 the 18th Parliamentary period started in Germany: during this period the issue of ordinances for the German marine protected sites in the EEZ of the North – and Baltic seas –including those sites of importance for harbour porpoises - is a foreseen task to be tackled early during this period [Schall, BMUB].</p> <p>Support for a Workshop on MPA Management Germany has supported with the regular German annual voluntary contribution the ECS Workshop on MPA Management (7 April 2013) [Schall, BMUB]</p>
LITHUANIA
<p>There are no protected areas for cetaceans established in Lithuania. No measures were taken to identify such areas because of lack of data on cetaceans in Lithuanian sea zone.</p>
NETHERLANDS
<p>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 minister. The three offshore areas will follow later, probably by the end of 2014.</p> <p>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</p>
POLAND
<p>For four years, 9 marine areas which have status of the protected areas – the Baltic Sea Protected Areas under the Helsinki Convention – HELCOM BSPAs have been functioning in Poland. They all are situated within the areas of Nature 2000. At least three of them, in the Pomeranian Bay, the Puck Bay and in Ostoja Słowińska have been considered to be crucial in terms of harbour porpoises conservation according to the currently available expertise justified among others by: historically happening by-catch, observations of single animals as well as data on dead harbour porpoises thrown on the seashore.</p>
SWEDEN
None

UNITED KINGDOM

The following MPAs in place in the UK specifically name cetaceans as either a qualifying or non-qualifying features.

- Cardigan Bay/Bae Ceredigion SAC with bottlenose dolphin considered as a qualifying feature.
- Moray Firth SAC with bottlenose dolphin considered as a qualifying feature.
- Skerries and Causeway SAC with harbour porpoise considered as a qualifying feature.
- Pen Llyn a'r Sarnau/ Llyn Peninsula and the Sarnau SAC with bottlenose dolphin considered a qualifying feature, but not a primary reason for site selection.
- The UK section of Dogger Bank SAC in the North Sea with harbour porpoise, harbour seal and grey seal considered as non-qualifying features (Grade D).
- Croker Carbonate Slabs SAC in the Irish Sea with harbour porpoise and grey seal considered as nonqualifying features.
- Pisces Reef Complex SAC in the Irish Sea with harbour porpoise, grey seal, and harbour seal considered as non-qualifying features.
- Wight-Barfleur Reef SAC in the English Channel with harbour porpoise and bottlenose dolphin considered as non-qualifying features.
- Pobie Bank Reef and Solan Bank Reef in the Scottish offshore region with harbour porpoise, harbour seal and grey seal considered as non-qualifying features.

Other protected areas such as Special Area of Conservation (SACs) and Marine Conservation Zones (MCZs) in place for other features in the UK (and the management measures associated with them) will also indirectly contribute to the conservation of cetaceans in UK waters.

Recent work

- During 2013 work has been on-going by the Joint Nature Conservation Committee (JNCC) to analyse the most up-to-date and extensive dataset on harbour porpoise with the aim of determining whether any further areas suitable for designation as a SAC are present in UK waters. This work will continue throughout 2014.
- The Marine (Scotland) Act and Marine and Coastal Access Act includes new powers for Nature Conservation Marine Protected Areas in the seas around Scotland, to recognise features of national importance and meet international commitments for developing a network of MPAs. Scottish Natural Heritage and the Joint Nature Conservation Committee, as part of the Marine Scotland-led Scottish MPA Project, have identified MPA search features (marine habitats and species) to guide the selection of Nature Conservation MPAs. Within Scottish territorial waters three species of cetaceans, Risso's dolphin, white-beaked dolphin and minke whale have been identified as MPA search features. Work is ongoing to review three MPA search locations for these species and SNH intends to provide advice to Scottish Government in 2014 on whether or not they should be considered for designation. Further information on this project can be found at [http://www.snh.gov.uk/protecting-scotlands-nature/protected-areas/national-designations/marine-protectedareas-\(mpa\)/](http://www.snh.gov.uk/protecting-scotlands-nature/protected-areas/national-designations/marine-protectedareas-(mpa)/) and <http://www.scotland.gov.uk/Topics/marine/marine-environment/mpanetwork>
- The results of site condition monitoring of the bottlenose dolphin SAC in the Moray Firth was published in 2012: SNH Commissioned Report 512: Site Condition Monitoring of bottlenose dolphins within the Moray Firth Special Area of Conservation: 2008-2010. <http://www.snh.gov.uk/publications-data-andresearch/publications/search-the-catalogue/publication-detail/?id=1893>
- Natural Resources Wales commissioned the monitoring of bottlenose dolphin and harbour

porpoise in Cardigan Bay and Pen Llŷn a'r Sarnau Special Areas of Conservation from 2011-2013. Feingold D. and Evans P.G.H 2014 Bottlenose Dolphin and Harbour Porpoise Monitoring in Cardigan Bay and Pen Llŷn a'r Sarnau Special Areas of Conservation 2011 - 2013. NRW Evidence Report Series Report No: 4, 120 pp, Natural Resources Wales, Bangor.

- WDC conducted boat based field surveys off the north-east coast of the Isle of Lewis, in the Eye Peninsula to Butt of Lewis MPA Search Location in the summer of 2013. They produced the following reports that are relevant to cetacean issues in the ASCOBANS region: 'Making space for porpoises, dolphins and whales in UK seas: Harbour Porpoise Special Areas of Conservation, as part of a coherent network of marine protected areas for cetaceans': <http://uk.whales.org/sites/default/files/making-space-for-uk-porpoises-dolphins-andwhales.pdf>

SWF continued to conduct boat-based line-transect surveys of bottlenose dolphins (and harbour porpoise) around Cardigan Bay and Pen Llyn a'r Sarnau SAC's and Isle of Anglesey, along with photo-ID studies of the dolphins. The project provides information on the distribution, population structure and abundance of dolphins, porpoises and seals in the region. Winter surveys also took place in the Anglesey area of North Wales to which the species disperses seasonally. Acoustic monitoring has been conducted in Cardigan Bay, using T-PODs and C-PODs (subject of a PhD by H. Nuuttila, based at the School of Ocean Sciences, University of Bangor obtained in early 2013).

An updated bottlenose dolphin photo-identification catalogue comprising 513 individuals spanning the years 1990 to 2011 was published on behalf of the Natural resources Wales (Feingold & Evans, 2014a, b).

3.2 Sources of GIS data of the boundaries (and zoning, if applicable)

BELGIUM
I.vigin@mumm.ac.be
DENMARK
Signe Sveegaard, sign@dmu.dk
FINLAND
None
FRANCE
Ministère de l'Écologie, du Développement durable des transports et du Logement Mer Grande Arche Tour Pascal A et B 92055 La Défense CEDEX ,Natura 2000 network : charlotte.de-pins@developpement-durable.gouv.fr Téléphone tél : + 33 (01) 40 81 21 22
Agence des aires marines protégées, Président : Jérôme Bignon, député de la Somme Directeur : Olivier LAROUSSINIE, Adresse du siège et contact : Agence des aires marines protégées, 16 quai de la Douane, 29229 Brest Cedex 2, standard : +33 (0)2 98 33 87 67, télécopie : +33 (0)2 98 33 87 77
GERMANY
www.HabitatMareNatura2000.de contains the needed information on the protected sites, however with the traditional geographical maps instead of GIS [BfN].

LITHUANIA
None
NETHERLANDS
<p>Noordzee http://www.noordzeeloket.nl/projecten/noordzee-natura-2000/official</p> <p>GIS shapefiles fr Natura 2000 gebieden: http://nationaalgeoregister.nl/geonetwork/srv/dut/search# 8829e5dd-c861-4639-a6c8-fdbb6e3440d2</p> <p>database Natura 2000 species and habitats: http://www.synbiosys.alterra.nl/natura2000/default.aspx?main=natura2000</p> <p>general information: www.natura2000.nl</p> <p>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;</p>
POLAND
<p>The information on the exact boundaries of the Nature 2000 areas is available in the General Directorate for Environmental Protection (http://www.gdos.gov.pl/Articles/view/1889/Kontakt). This data are also presented on the website: http://Nature2000.gdos.gov.pl/datafiles</p>
SWEDEN
None
UNITED KINGDOM
<p>Details of all UK SACs can be found at http://jncc.defra.gov.uk/page-23. Specific site details:</p> <ul style="list-style-type: none"> • Cardigan Bay/Bae Ceredigion: http://jncc.defra.gov.uk/protectedsites/sacselection/sac.asp?EUCode=UK0012712 • Moray Firth: http://jncc.defra.gov.uk/protectedsites/sacselection/sac.asp?EUCode=UK0019808 • Skerries and Causeway: http://jncc.defra.gov.uk/protectedsites/sacselection/sac.asp?EUCode=UK0030383 • Pen Llyn a'r Sarnau/ Lley'n Peninsula and the Sarnau: http://jncc.defra.gov.uk/protectedsites/sacselection/sac.asp?EUCode=UK0013117 • Dogger Bank: http://jncc.defra.gov.uk/protectedsites/sacselection/sac.asp?EUCode=UK0030352 • Croker Carbonate Slabs: http://jncc.defra.gov.uk/protectedsites/sacselection/sac.asp?EUCode=UK0030381 • Pisces Reef Complex: http://jncc.defra.gov.uk/protectedsites/sacselection/sac.asp?EUCode=UK0030379 • Wight-Barfleur: http://jncc.defra.gov.uk/ProtectedSites/SACselection/sac.asp?EUCode=UK0030380 • Pobie Bank Reef: http://jncc.defra.gov.uk/protectedsites/sacselection/sac.asp?EUCode=UK0030385 • Solan Bank Reef:

<http://jncc.defra.gov.uk/protectedsites/sacselection/sac.asp?EUCode=UK0030386>

Details of MPAs can also be found on the MMO website:

<http://www.marinemanagement.org.uk/protecting/conservation/index.htm>.

B. SURVEYS AND RESEARCH

4.1 Overview of Research on Abundance, Distribution and Population Structure

BELGIUM

The estimate of the average density of harbour porpoises (on the basis of aerial surveys performed by the RBINS) in an area covering most of Belgian waters in 2013 were (within wide confidence intervals): 0.84 animals/km² in January, 0.94 animals/km² in February, 1.72 animals/km² in May and 0.61 animals/km² in September. Besides of harbour porpoises, regular sightings were made of small groups of white-beaked dolphins. One minke whale was observed close to shore. One emaciated humpback whale was observed during a marine mammal survey; ongoing military shooting exercises were halted due to the presence of this animal. During dedicated seabird counts (3473 km sailing) INBO observed in total 147 harbour porpoises, with a maximum of 27 individuals on a single day. In May a group of 4 white beaked dolphins were counted. The RBINS continuously moored 2 to 4 porpoise detectors (C-PoDs) at selected locations. Tens of porpoises were observed in inland waters (Scheldt and tributaries) during late winter/spring (peaking between 27 March and 20 June), something that had not happened during the last decades (www.waarnemingen.be; Haelters, J., 2013. Opmerkelijke aantallen bruinvissen in de eerste helft van 2013 [Remarkable numbers of harbour porpoises in the first half of 2013]. De Strandvlo 33(2): 55-58.)

DENMARK

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

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

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

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

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

Population structure of harbour porpoises.

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

1676.

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

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

Distribution of Cetaceans

Hammond, PS, Macleod, K, Berggren, P, Borchers, DL, Burt, ML, Cañadas, A, Desportes, G, Donovan, GP, Gilles, A, Gillespie, D, Gordon, J, Hedley, S, Hiby, L, Kuklik, I, Leaper, R, Lehnert, K, Leopold, M, Lovell, P, Øien, N, Paxton, C, Ridoux, V, Rogan, E, Samarra, F, Scheidat, M, Sequeira, M, Siebert, U, Skov, H, Swift, R, Tasker, ML, Teilmann, J, Van Canneyt, O Vázquez, JA. (2013). Cetacean abundance and distribution in European Atlantic shelf waters to inform conservation and management. *Biological Conservation* 164: 107-122

Viquerat, S., Feindt-Herr, H., Gilles, A., Peschko, V., Siebert, U., Sveegaard, S. & Teilmann, J. (2013). Abundance of harbour porpoises (*Phocoena phocoena*) in the Western Baltic, Belt Sea and Kattegat. *Marine Biology*, DOI 10.1007/s00227-013-2374-6 http://download.springer.com/static/pdf/707/art%253A10.1007%252Fs00227-013-2374-6.pdf?auth66=1389882289_40ca69187d2cd9021f7093a4dba01d0d&ext=.pdf

Nabe-Nielsen, J., Sibly, R. M., Tougaard, J., Teilmann, J., & Sveegaard, S. (2014). Effects of noise and by-catch on a Danish harbour porpoise population. *Ecological Modelling*, 272, 242–251. doi:<http://dx.doi.org/10.1016/j.ecolmodel.2013.09.025>

Nabe-Nielsen, J., Teilmann, J., & Tougaard, J. (2013). Effects of wind farms on porpoise population dynamics. In *Danish Offshore Wind. Key Environmental Issues – a Follow-up* (pp. 61–68). Copenhagen, Denmark: The Environmental Group: The Danish Energy Agency, The Danish Nature Agency, DONG Energy and Vattenfall.

Wright, A. J., Maar, M., Mohn, C., Nabe-Nielsen, J., Siebert, U., Jensen, L. F., Teilmann, J. (2013). Possible causes of a harbour porpoise mass stranding in Danish waters in 2005. *PLoS ONE*, 8(2), e55553. doi:<http://dx.plos.org/10.1371/journal.pone.0055553>

Abundance survey of harbour porpoises in Kattegat, Belt Seas and the Western Baltic, July 2012 : Note from DCE - Danish Centre for Environment and Energy. / Sveegaard, Signe; Teilmann, Jonas; Galatius, Anders. 2013. 11 s., jun 26, 2013. See attached PDF (the Annex provided can be accessed as part of [AC21/Inf.12.1.b](#))

The stranding anomaly as population indicator: The case of harbour porpoise *Phocoena phocoena* in North-Western Europe. Peltier, H., Baagøe, H.J., Camphuysen, K.C.J., Czeck, R., Dabin, W., Daniel, P., Deaville, R., Haelters, J., Jauniaux, T., Jensen, L.F., Jepson, P., Keijl, G.O., Siebert, U., Van Canneyt, O. & Ridoux, V. (2013) *PLoS ONE*, 8(4): e62180.

Possible Causes of a Harbour Porpoise Mass Stranding in Danish Waters in 2005. Wright, A.J., Maar, M., Mohn, C., Nabe-Nielsen, J., Siebert, U., Jensen, L.F., Baagøe, H.J. & Teilmann, J. (2013) *PLoS ONE*, 8(2): e55553.

Surveys by Institution for Bioscience Aarhus University (contact Anders Galatius, agj@dmu.dk):

- Harbour porpoise 27-30 August, 2013, 123 detections, Belt Seas Acoustic survey
- Harbour porpoise 22 August, 2013 Skagerrak Aerial survey, 42 sightings
- Harbour porpoise 27 July, 2013 North Sea Aerial survey, 51 sightings

12 Harbour Porpoise marked with D-tag, GPS or Argos tags. Institution for Bioscience Aarhus University (contact Anders Galatius, agj@dmu.dk)

You have attached the following documents to this answer (the Annexes provided can be accessed as part of [AC21/Inf.12.1.b](#)):

Abundance_survey_of_harbour_porpoises_2012_20130612.pdf

Input from National Institute of Aquatic Resources - DTU-Aqua.docx

FINLAND

Finland is taking part to SAMBAH (Static Acoustic Monitoring of the Baltic Sea Harbour porpoise) project. In the project, 300 SAM units is used over a two years period (V/2011-IV/2013). 46 units is deployed in Finnish waters. More info available on <http://www.sambah.org>

"One of the main objectives of project SAMBAH is to raise stakeholder and public awareness about the Baltic Sea harbour porpoise. Dissemination activities have been done widely within the project, e.g. targeted meetings, press releases and media events, poster exhibitions in Särkänniemi Dolphinarium and Kotka Maretarium and a 20-minutes documentary movie about the project."

FRANCE

Photo-identification of the coastal group of bottlenose dolphins: the photo-id catalog was updated (Oceanopolis Brest in Iroise Sea MPA).

Photo identification of bottlenose dolphins of the Bay of Mont Saint Michel and Cotentin (GECC, GMN, Al Lark)

Boat surveys on cetaceans in the southern Bay of Biscay (GEFMA); relationship between cetacean populations and climate change (MNHN in the framework of a regional programme on the marine environment).

Data collection of opportunistic sightings (PELAGIS/ULR, GECC, GEFMA, Oceanopolis Brest).

Systematic vessel survey of cetaceans in relation to oceanographic, planktonic and pelagic fish spatial patterns in the Bay of Biscay

- PELGAS Program, Ifremer, PELAGIS/ULR : spring survey carried out yearly in May on the continental shelf of the Bay of Biscay (pelagic fish, plankton, physical parameters and top predators are recorded simultaneously);

- IBTS Program, Ifremer, PELAGIS/ULR: winter survey carried out yearly in January across the English Channel: (pelagic fish, plankton, physical parameters and top predators are recorded simultaneously);

- EVHOE Program, Ifremer, PELAGIS/ULR: autumn demersal fish survey carried out yearly in October- November across the Bay of Biscay (top predators recorded on transit between trawl hauls);

- PELACUS Program Centro Oceanográfico de Vigo (Instituto Español de Oceanografía, IEO), in co-operation with PELAGIS/ULR: spring survey carried out yearly in April over the continental shelf from southern Bay of Biscay to Galicia (pelagic fish, plankton, physical parameters and top predators are recorded simultaneously). SAMM Program: Two 4-months systematic aerial surveys of cetaceans and other megafauna (mainly seabirds) have been conducted by PELAGIS/ULR and AAMP from November 2011 to August 2012 to identify priority areas for the designation of future Natura 2000 sites in the French EEZ. The survey protocol follows a systematic zig-zag line transect pattern across 4 bathymetric strata: coastal, shelf, slope and oceanic. The survey area encompassed the French EEZ extended to the South of Bay of Biscay (Spanish EEZ) and the British Channel. Overall, 100 000 km of transect have been sampled. In the ASCOBANS area, a total of 922 and 1235 sightings of cetaceans were collected during the winter and the summer survey, respectively. Concurrently, sightings of seabirds, turtles and elasmobranchs have been recorded, providing an original overview of the annual distribution of the megafauna species.

In order to improve knowledge of harbor porpoise populations, we have started a pilot

project to create a passive acoustic monitoring scheme along the French coasts. In the MARSAC project, 4 acoustic devices have been deployed since the beginning of 2013 and will be maintained during at least one year in front of Arcachon basin with the collaboration of local fishermen. They are involved to help the scientists to choose the better mooring sites, to give the logistical support to deploy and retrieve the acoustic device and to avoid loss of devices.

Ferry observer surveys between Roscoff and Cork, Portsmouth and Santander (Orca/Oceanopolis Brest/), using a standardized protocol.

Genetic study on harbour porpoise (collaboration between the university of Brest and Oceanopolis Brest). This work was presented successfully, end of September in the case of a PHD (student involved Alfonsi, E.). The ecological niche of five sympatric species of small cetaceans that frequent the waters of the NW Iberian Peninsula was studied in order to determine if there is an habitat and resource partitioning or in opposition a competition among these species in the area (Méndez-Fernandez et al., 2013). This fact is important to determine the main threats at which species will be exposed and therefore have to be taken into account in the future conservational plans that will be carrying out in the area. To this aim, ecological tracers (i.e. stable isotopes of carbon and nitrogen and cadmium concentrations) were analysed in a multi-tracer approach. This study is part of the P. Méndez Fernandez PhD project (presented above) Population structure of common dolphins in the eastern North Atlantic is investigated using a genome-scan approach (RADtag sequencing) (A. Viricel post-doctoral project, PELAGIS/ULR).

Prey preferences among the community of 9 species of deep-diving odontocetes from the Bay of Biscay were investigated from stranded material showing (Spitz et al. 2011. Deep Sea Research I; PELAGIS/ULR). The study described diets from stomach content analysis and showed resource partitioning within the assemblage. With more than 14,000 identified cephalopods from 39 species, the present study highlighted also the poorly known deep-sea cephalopod community off the Bay of Biscay using top cetaceans as biological samplers. An ECOPATH model of the Bay of Biscay was aimed to model the energy fluxes within the food web of this highly pressured ecosystem. A model comprising 30 living and two non-living compartments was successfully constructed with data from the Bay of Biscay continental shelf. Ecological network analysis provided evidence that bottom-up processes play a significant role in the population dynamics of upper-trophic levels, including cetaceans (Lassalle et al. 2011, Progress in Oceanography).

GERMANY

Visual surveys

The following dedicated visual surveys to assess abundance and distribution of harbour porpoises were conducted by the ITAW:

In 2013, four dedicated aerial surveys were carried out in the south (Borkum Reef Ground) and in the northeastern part (Sylt Outer Reef) of the German EEZ in the North Sea.

In July 2013, a survey of the western German Baltic Sea (Kiel Bight and Mecklenburg Bight) was conducted. These surveys are part of the German monitoring programme of Natura 2000 sites, funded by the Federal Agency for Nature Conservation (BfN) [Siebert, Gilles, Viquerat, ITAW].

In July 2012 a vessel-based survey for estimating harbour porpoise density and abundance in the GAP area was conducted in the Western Baltic, Kattegat and Belt Sea, in cooperation between Denmark, Sweden and Germany. Data were analysed, presented and published in 2013. This survey is part of a project funded by the Federal Office for Agriculture and Food (BLE) [Siebert, Viquerat, Herr, Gilles, Peschko, ITAW].

Acoustic Monitoring Wadden Sea

In Fall 2013 a monitoring scheme with four to five CPOD-stations in the German Wadden Sea was established by the Nationalpark Wattenmeer. The ITAW is carrying out the work. Three positions are in the Schleswig- Holstein Wadden Sea and one in the Lower Saxony Wadden Sea [Siebert, Dähne, Meyer-Klaeden, ITAW, Eskensen LKN, Czeck, NP-LS].

Acoustic Monitoring

The C-POD station in the vicinity of the island Minsener Oog and a new, in 2013 installed C-POD station at the mouth of the Jade Bay, were successfully operational in 2013. The results again back up former findings that harbour porpoises enter coastal waters of Lower Saxony mainly in spring (march/april), but for reasons unknown the activity measured in 2013 was lower than in 2012 [Czeck, NP-LS]

Static acoustic monitoring Baltic Sea. With the financial support from the Federal Agency for Nature Conservation (BfN), the German Oceanographic Museum is conducting static acoustic monitoring of harbour porpoises using C-PODs (porpoise click detectors) in the Baltic Sea. Our long-term study has shown seasonal and geographical patterns of harbour porpoises revealing annually migration behaviour. Furthermore, the study highlighted that the harbour porpoise still occurs in the entire German Baltic Sea despite the dramatic decline of the population [Gallus, DMM].

SAMBAH

The aim of the pan-Baltic project SAMBAH (Static Acoustic Monitoring of the Baltic Harbour Porpoise) is to initiate a best practice methodology and to provide data for reliable assessments of distribution and habitat use for this species to allow an appropriate designation of protected areas for this species within the NATURA 2000 network as well as other relevant mitigation measurement. The SAMBAH project has collected two years of acoustic monitoring data (01.05.2011 - 31.04.2013) on the harbour porpoise in the Baltic Sea. Germany was responsible for 16 stations in the German waters. More information is available at: <http://www.meeresmuseum.de/wissenschaft/forschungsprojekte.html> [Gallus, DMM].

STUK3-Monitoring of harbour porpoises at the offshore wind farm “alpha ventus”

Over five years (from 2008 to 2013), BioConsult SH together with IfaÖ, Rostock, (on behalf of Stiftung Offshore Windenergie (DOTI)) collected data on abundance and distribution of marine mammals, following the Standard Investigation Programme (StUk3, BSH 2007) within an area of appr. 2,000 km² around the first German offshore wind farm (OWF) „Alpha ventus“, which is located approximately 45 km north of the island of Borkum, North Sea.

The effects of the construction and operation of OWF „Alpha ventus“ on harbour porpoises (*Phocoena phocoena*) and other marine mammals were analysed by comparing data of three years construction phase and one year operation phase to those of the one year baseline survey. Three different methods were used to assess the presence of marine mammals in the study area during the project phases. Animals were monitored by Passive Acoustic Monitoring (PAM) with porpoise detectors (PODs) at 12 stations positioned at different distances to the wind farm area, and by monthly aerial and ship-based surveys over the whole study period of 5 years.

The area around and easterly of “Alpha ventus” was characterised by lower harbour porpoise densities and 2013 ASCOBANS Annual National Reports [Party: Germany] Page 9 of 18 phenologies differ from those at the Natura 2000 SCI Borkum Reef Ground. Differences in habitat use of porpoises can be explained by various biological/ecosystem functions of the investigated subareas. The Borkum Reef Ground, known as an area rich in fish, seems to serve as a feeding ground year round for porpoises, whereas the area around and easterly of “Alpha ventus” might function as (feeding) habitat only at certain times of a year, and may partly just be a transition zone between areas of high porpoise densities like

Danish waters and Sylter Outer Reef (summer habitats), and Borkum Reef Ground and Dutch/Belgium waters (winter habitats).

It was shown that noise emissions from offshore pile driving caused short-term, large-scale displacement of harbour porpoises which was more severe with longer duration of hammerings. A negative behavioural response of harbour porpoises started at 143 dBSEL50 re 1 μ Pa. Even though animals came back into the wind farm area within two days after pile driving stopped, density and detection rates were lowered in the OWF area and its close surroundings for two more years after construction (2010 and 2011). Numbers gradually increased until Baseline values were reached again or exceeded in the third year after construction (2012). The lower detection rates in the two years following the construction period can be discussed by a longer endurance of a negative effect due to higher ship traffic and occasional works in 2010 and 2011. The gradual increase over years might be explainable by a potential positive effect of the wind farm over time, as organisms start to grow on the foundations and increase foraging possibilities. Furthermore, a general increase of harbour porpoise densities during the last few years in the southern North Sea might have been relevant for the observed pattern. No effects of the construction work at the wind farm Borkum West II, located ca. 8 km north-west of „Alpha ventus“, on harbour porpoises could be seen in the range of the „Alpha ventus“ POD stations [Diederichs, Rose, Höschle, BioConsult SH].

Strandings

An article about strandings of harbour porpoises has been supported. See: <http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0062180> [Czeck, NP-LS]

Harbour porpoises in the Elbe and Weser rivers

The results of an opportunistic sighting scheme implemented by GRD's biologist Denise Wenger in 2007, including the collection of data on sightings of harbour porpoises in Northern Germany's rivers, show that harbour porpoises are increasingly frequenting the rivers Elbe and Weser in springtime during the months from early March through late May. The spatial-temporal pattern shown coincides with the pattern of the anadromous fish shoals of smelt (*Osmerus eperlanus*) and twaite shad (*Alosa fallax*) migrating from the North Sea upstream to their spawning grounds.

Due to intensive media work and public awareness campaigns in 2013, more than 300 people reported their sightings to GRD with detailed descriptions.

A. Elbe river:

Sightings:

For the Elbe river we received 233 reports of sightings in 2013 (including multiple sightings). The first sighting occurred on February 27, followed by sightings on March 6 and 9. From March 10 on, harbour porpoises were spotted within the Hamburg harbour region nearly every day during daylight hours until the end of May. Most sightings were made from land by pedestrians giving evidence that the small cetaceans were swimming close to shore in shallow water (as close as 2 m from shore, 42 sightings within a 2m-20m range from shore). Mostly, the animals were seen swimming calmly. Also from board of the Hamburg ferries many sightings occurred.

Habitat preference:

The data indicate habitat preferences: From Hamburg harbour in the Koehlbrand region (which is a lateral branch of the Elbe main stream where it divides into Süderelbe and Norderelbe at the other side) we obtained reports of harbour porpoise groups of as many as 10 individuals foraging many hours in the afternoon every day over several weeks in late March, early April.

In the Billwerder Bay (Norderelbe) harbour porpoises were observed hunting smelt. Near Teufelsbrück (Elbe river km 630), too, foraging behaviour was observed. Many sighting reports came from this area because there is a café and a restaurant where many people sitting at the pontoon in the afternoon could observe the harbour porpoises. (data not bias/effort corrected)

Harbour porpoises were also foraging off Wedel (Elbe river km 643); this was confirmed by a CPOD we had installed which registered nearly 23 hours harbour porpoise activity with many foraging click trains. A detailed analysis will be made; the results will be reported to ASCOBANS as soon as they are available. © D. Wenger, GRD

Strandings/dead animals:

25 reports concerned findings of dead animals (multiple reports, 19 dead animals from Hamburg harbour to Wedel). Additional strandings were reported to the "Institut für Hygiene (Hamburg State Institute for Hygiene and Environment), publishing the number of about 20 dead animals in 2013 within the Hamburg area with having 5 of them examined. Further 5 animals from different sites, mainly the Schleswig-Holstein side of the Elbe at Wedel or Haseldorf, were brought to ITAW (Institute for Terrestrial and Aquatic Wildlife Research) Büsum for necropsies. Most dead animals were found from May 13 to June 11.

B. Weser river

Sightings:

In 2013 78 sightings of harbour porpoises in the river Weser were reported. Sightings were also reported in the harbor of Bremen and as far as 65km south of the city Bremen. Sporadic sightings were also reported from the tributaries of the Weser Lesum, Hunte and Hamme.

Strandings/dead animals:

For the river Weser 3 dead animals have been reported for 2013: 16th of May 1 calf (no necropsies), 24th of May 1 animal (no necropsies due to decomposition) and 20th of October 1 animal (brought to ITAW (Institute for Terrestrial and Aquatic Wildlife Research) Büsum for necropsies).

Publication in prep.; results and further studies within the context of a dissertation [Wenger, GRD].

Information can be found at:

<http://www.delphinschutz.org/projekte/schweinswale/kleiner-wal-in-großer-not/715-schweinswale-in-weserund-elbe-ergebnisse-2013>

<http://www.delphinschutz.org/projekte/schweinswale/kleiner-wal-in-großer-not>

online opportunistic sighting map:

<https://maps.google.com/maps/ms?msa=0&msid=211379784517064666770.0004d3cd073b366cedb1a&hl=de&ie=UTF8&t=m&ll=53.602285,8.492432&spn=1.629832,2.334595&z=8&source=embed>

Database

New data for a marine mammal data base (containing sightings, strandings, worldwide maps of occurrence and characteristics of 126 species) were integrated from freely available and provided sources, e.g. collected within an EDA project for the protection of marine mammals [Ludwig, BMVg].

Support for Workshops

Germany has supported with the regular German annual voluntary contribution a SAMBAH Stakeholder Workshop and an ECS 2013 Workshop on Population Structure [Schall,

BMUB].

LITHUANIA

Coastal Research and Planning Institute of Klaipeda University is a subcontractor in the international project "Static Acoustic Monitoring of the Baltic Sea Harbour Porpoise" (SAMBAH). Static acoustic monitoring devices which detect and log porpoise sonar click activities were set up in nine sites of Lithuania marine waters. Analysis of the collected data will be accomplished in the middle of 2014, although up-to-the-minute preliminary results are promising - Harbour porpoise was detected in two locations in northern and eastern Lithuanian waters.

NETHERLANDS

Aerial surveys to estimate the abundance of Harbour porpoises were conducted on the Dutch Continental Shelf in March/April 2013 (Geelhoed et al., 2014a). 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 18 March and 22 April the entire Dutch Continental Shelf (DCS) was surveyed.

In total, 197 sightings of 223 individual Harbour Porpoises were collected. Porpoise densities varied between 0.47-1.44 animals/km² in the areas A-D. The overall density on the entire Dutch Continental Shelf was 1.07 animals/km². Harbour Porpoises were widely distributed in March with higher densities in area D "Delta". In the northern part of the DSC the distribution seemed more patchy, with lower densities in the northern part of area B "Offshore" and in area A "Dogger Bank".

The total numbers of Harbour Porpoises on the Dutch Continental Shelf (areas A-D) in March were estimated at ca. 63 000 animals (C.I.: 32 000-129 000). Even though this number is lower than the population estimate in March 2011 (86 000, C.I.: 49 000-165 000) it is similar to the abundance estimate in March 2012 (66 000, C.I.: 37 000-130 000). However, the confidence intervals of the three estimates greatly overlap and therefore these numbers can be considered of comparable size.

In total 12 sightings of other marine mammal species were made. These comprised 11 sightings of in total 11 single seals, which remained unidentified except 1 Grey Seal *Halichoerus grypus* on 6 April. One White-beaked Dolphin was recorded the same day.

In August-September 2013 aerial surveys were conducted in the Dogger Bank and surroundings, covering waters of The Netherlands, the United Kingdom, Denmark and Germany (Geelhoed et al., 2014b). Aim was to investigate the importance of this marine feature as summer habitat for marine mammals. In total 619 harbour porpoises were sighted, of these 21 were calves, which resulted in an estimate of 45,177 (CI 25,105-84,556) harbour porpoises. Highest porpoise density was found in the north-western, southern and southwestern parts of the survey area, whereas over the sandbank itself and to the southeast in Dutch and German waters relatively low densities were estimated.

The Rugvin foundation is a volunteer based organisation conducting cetacean surveys in the Southern North Sea and Oosterschelde and member of the Atlantic Research Coalition (ARC). In 2013 they continued their monitoring programme for the Stena ferry line platforms between Hoek van Holland and Harwich. In 2013, 372 harbour porpoises and 4 white-beaked dolphins were counted. Furthermore, there was 1 undetermined individual counted.

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 (see section C). Records of live sightings as well as dead animals are also found at www.waarneming.nl and www.telmee.nl.

The Rugvin Foundation collected data in the Oosterschelde from the end of 2012 until the end of 2013. This was done using C-PODs (acoustic data loggers), on both sides of the storm surge barrier, that sits between the North Sea and the Oosterschelde. The surge has gates, allowing water to flow in and out of the Oosterschelde. It was unclear whether harbour porpoises can use the gates migrate back and forth. The CPODs registered all year round clicks for harbour porpoises inside the Oosterschelde. It was also found that harbour porpoises were more frequently active and present during winter and less during spring, suggesting that some individuals might migrate northwards in the North Sea during this season. Porpoises were present more often near the storm surge barrier during slack tide and hence, when the water level differences were minimal. Harbour porpoises did not show echolocation activity differences according to daily, nocturnal or twilight time intervals.

References:

Geelhoed, S.C.V., Scheidat, M., van Bemmelen, R.S.A. (2014)a Marine mammal surveys in Dutch waters in 2013. Research Report IMARES Wageningen UR - Institute for Marine Resources & Ecosystem Studies, Report C027/14.

Geelhoed S.C.V, van Bemmelen R.S.A. & Verdaat J.P. (2014b). Marine mammal surveys in the wider Dogger Bank area summer 2013. Research Report IMARES Wageningen UR - Institute for Marine Resources & Ecosystem Studies, Report No. C016/14. DEFRA report No. Department for Environment Food and Rural Affairs, London.

Rodrigues, M.G. (2014) Echolocation activity of Harbour Porpoise *Phocoena phocoena* in the Eastern Scheldt estuary (the Netherlands) and the North Sea. The Rugvin Foundation

POLAND

Poland participated in the SAMBAH project (Static Acoustic Monitoring of the Baltic Sea Harbour Porpoise). In Poland the project is implemented by the Maritime Branch of the Institute of Meteorology and Water Management, the Hel Marine Station and the Chief Inspectorate for Environmental Protection. The project completion is planned for December 2014.

The year-round coast's monitoring with the participation of the volunteers trained by the Hel Marine Station, so called Blue Patrol WWF, will be continued. This project has been realized since 2010 by WWF Poland in partnership with the Marine Station of the Institute of Oceanography of the University of Gdańsk (SMIOUG) under the name: "Supporting Restitution and Conservation of the Baltic Mammals in Poland" and since 2013 also with the Waterbirds Research Group KULING under the name: "Conservation of Mammals and Waterbirds' Habitats". Within the project's scope, SMIOUG does e.g. research with the usage of hydro-acoustic devices C-POD which are used to record the sounds emitted by harbour porpoises.

The project is planned to be completed at the end of 2014. The area of the harbour porpoises' detection covers the area from the Vistula River estuary, along the Vistula Split until the border with Russia.

In 2013 one succeeded in increasing the network of the volunteers of the Blue Patrol WWF from 42 to 200 persons. The volunteers patrol beaches on regular basis searching for mammals and birds which the project concerns. As a part of the preparation for monitoring, one organizes regular trainings – in 2013 one organized 21 trainings in which the volunteers of the Blue Patrol WWF participated.

Observations made by the field co-operators of WWF are recorded in the database prepared by WWF Poland. In 2013, 750 records concerning the observations of the marine mammals

noticed on the Polish coast were entered into the database. 186 of those records were entered by the volunteers of the Blue Patrol WWF

SWEDEN

A LIFE+ Nature application for the SAMBAH project was approved and the Grant Agreement was signed in November 2009 by the Kolmården Wildlife Park as the Coordinating Beneficiary. This project is running over five years (January 2010 – September 2015), and aims at producing an estimate of the total abundance and distribution of harbour porpoises in the Baltic Sea. The project is based upon data from passive acoustic porpoise echolocation loggers (CPODs) deployed from 1 May 2011 to 30 April 2013 at approximately 300 positions at 5-80m in the Baltic Sea. All EU countries around the Baltic Sea participate in the project; Germany with separate funding.

Three types of experiments have been carried out for calculation of the CPOD detection function; (1), all partners have carried out playback trials emitting artificial harbour porpoise clicks at 0-300m from the CPODs in conjunction with their servicing, (2) the German Oceanographic Museum has lead an experiment in which a three-dimensional array has been deployed from a boat, drifting in an area where CPODs have been deployed and porpoises have been present, and (3) the Danish team has deployed CPODs on a line outside pound nets with porpoises trapped inside. In addition to these experiments, the Danish team has deployed acoustic tags on harbour porpoises to obtain data on their click rate. These data sets will be used as input to state of the art population density statistics, and subsequently allow for habitat modelling carried out by AquaBiota Water Research, Stockholm.

In 2013 the CPOD data collection and all experiments on supplementary data have been finished. The CPOD data has been quality controlled and a database for future storage of the data has been designed. Due to the delay in the CPOD data collection (originally planned from January 2010 to December 2012) the project end date has been extended from December 2014 to September 2015. All analyses will be finalized in 2014 and the public end-of-project conference will be held at Kolmården Wildlife Park on 8-9 December 2014.

UNITED KINGDOM

In 2006, the Joint Cetacean Protocol (JCP) project (see <http://jncc.defra.gov.uk/page-5657>) was initiated. The JCP assembled disparate effort-related cetacean sightings datasets from all major sources covering north-west European Atlantic waters e.g. SCANS I & II; CODA surveys; ESAS; SWF; Atlantic Research Coalition (ARC). It also included data from non-governmental and marine renewable industry sources. The JCP is intended to support the identification of trends in distribution and relative abundance but will not generate precise abundance estimates. The Phase III analysis was completed in early 2013, resulting in species specific density layers at the UK scale. Power analysis concluded that the annual population change detectable with good power (>0.8), lay between 6% and 40%, depending on the species.

Three years of annual monitoring of cetaceans has been carried out in Cardigan Bay and Pen Llŷn a'r Sarnau SACs (completed in 2013). This was contracted to the Sea Watch Foundation by Natural Resources Wales (NRW). The interim report can be found at <http://www.seawatchfoundation.org.uk/wpcontent/uploads/2013/06/CCW-Monitoring-Report-2012.pdf> . The full report is available from NRW on request [Feingold D. and Evans P.G.H 2014 Bottlenose Dolphin and Harbour Porpoise Monitoring in Cardigan Bay and Pen Llŷn a'r Sarnau Special Areas of Conservation 2011 - 2013. NRW Evidence Report Series Report No: 4, 120 pp, Natural Resources Wales, Bangor]. In addition, in 2013 NRW commissioned the Sea Watch Foundation to conduct ad-hoc photo-ID surveys of bottlenose dolphins

around the coast of Anglesey and data from these are currently being compiled.

WDC conducted photo-ID surveys off the Isle of Lewis in Scotland in 2013 and 2014. ›

Systematic offshore vessel-based surveys were conducted by SWF in various parts of the UK (Irish Sea, Hebrides, Grampian Region, Shetland, and Eastern England), and regular systematic land-based watches took place in locations all around the British Isles. Most effort was between April and October.

Sightings survey data collected by SWF over the last twenty years contributed to a spatio-temporal analysis of abundance trends by CREEM, University of St Andrews (Paxton et al., 2012). A second edition of an Atlas of marine mammals of the Irish Sea was published (Baines & Evans, 2012), reinforcing earlier findings (Baines & Evans, 2009), funded by the Countryside Council for Wales. The atlas results were subsequently modelled using sensitivity indices developed to assess vulnerabilities of different species to different types of fishing activity.

The population structure of the six major marine mammal species occurring in Welsh waters was reviewed for Countryside Council for Wales (Evans, 2012)

4.2 New Technological Developments

BELGIUM
No new information.
DENMARK
Environmental DNA were used to detect the presence of marine mammals. At the same time acoustic dataloggers detected porpoises. In relation to the datalogger with the highest number of acoustic porpoise detections environmental DNA were found.
Foote, A. D., P. F. Thomsen, S. Sveegaard, M. Wahlberg, J. Kielgast, L. A. Kyhn, A. B. Salling, A. Galatius, L.Orlando, M. T. P. Gilbert 2012. Investigating the potential use of environmental DNA (eDNA) for genetic monitoring of marine mammals. PLOS One 7(8): e41781.
Data from acoustic loggers (POD's) can be used to comment on the frequency of harbour porpoise in a given area.
Kyhn, L. A., J. Tougaard, L. Thomas, L. Rosager Duve, J. Stenback, M. Amundin, G. Desportes, J. Teilmann 2012.From echolocation clicks to animal density - Acoustic sampling of harbor porpoises with static dataloggers. Journal of the Acoustical Society of America 131(1):550-560.
Mann, J. and Teilmann, J. (2103). Environmental impact of wind energy. Environmental Research Letters 8 035001, doi:10.1088/1748-9326/8/3/03500
FINLAND
None
FRANCE
None
GERMANY
Project COSAMM
The COSAMM project is an investigation of the comparability of the various static passive

acoustic monitoring methods used for detection of harbour porpoises and other tooth whales. All available click detectors for harbour porpoises are compared in this project. This is done in order to make representative and comparable statements on the abundance of harbour porpoise, despite the deployment of different devices [Gallus, DMM].

Effectiveness of real-time detection of harbour porpoises

The high noise levels produced by constructing offshore wind farms may induce negative effects on marine mammals. Besides the application of noise mitigation methods such as the use of a bubble curtain, deterrent (pingers) and harassment devices (seal scarer) prior to pile driving, it is stipulated in German waters that no animal is present within an area where high noise levels can still cause injury. Two C-PODs (passive acoustic monitoring) are deployed to document how efficient the mitigation measures have been.

Additional, a new passive acoustic monitoring technique, the Seiche 'Wireless Detection System' (WDS) is used to verify a successful deterrence of harbour porpoises (*Phocoena phocoena*) in realtime. It furthermore enables immediate mitigation action if necessary. The detection system consists of an autonomous network of up to nine buoys deployed around the pile driving location in 1.500 m distance. Each buoy is equipped with a broadband hydrophone, GPS and radio telemetry. The receiving and processing station is located on a dedicated vessel and the buoys can be turned on and off remotely. The software PAMGUARD displays the characterization by using spectrograms, bearing patterns and high/low frequency to classify a candidate porpoise echolocation.

To ensure successful deterrence of animals within a defined zone it is crucial to know the probability of a detection of a real harbour porpoise click train by the WDS buoy and C-POD. We therefore tracked porpoises visually with a geopositioned theodolite from a cliff 20m above sea level. The tracks of surfacing porpoises were compared with the acoustic detection rate from both acoustic detectors, WDS and C-POD, which were bundled. Knowing the distance of the detected animal from the WDS buoy and its heading angle, a detection function was calculated. The detection function of the WDS determines the deployment design of the WDS buoy network around pile driving operations and allows a comparison to the standardized usage of the C-POD [Diederichs, Rose, Höschle, BioConsult SH].

High definition video technique – advanced approach to offshore surveying of marine mammals Increasing human activities at sea require solid data on marine mammal distribution and abundance in order to balance economic activities with conservation demands. In order to obtain unbiased survey data, high definition video techniques have been developed offering the possibility to cover large areas by high definition imaging with a resolution of 2 cm. A flight altitude of 1.800-2.000 feet allows surveying in offshore wind farms which will be closed for conventional survey flights for safety reasons. Digital aerial surveying will thus replace conventional survey techniques in the near future.

However, surveying marine mammals by digital imaging is often discussed as being a challenge due to the fact that animals spent most of the time under the sea surface. In an ongoing study in the German Bight, North Sea, we conducted high definition video surveys on harbour porpoises, a small cetacean which is very common in the area. The videos provided high sighting rates of both surfacing and submerged porpoises and the techniques proves to be highly useful for surveys on small cetaceans [Diederichs, Rose, Höschle, BioConsult SH].

LITHUANIA

None

NETHERLANDS

TNO has built and tested improvements of the acoustic marine mammal detection array Delphinus. This new configuration was first tested at sea along the Norwegian coast in

Feb.2011 in advance of the 3S-2011 BRS experiment. More testing with artificial sources has been performed in 2012, see Kvadsheim et al. 2012. Improvements include a longer baseline of high frequency hydrophones, in order to better estimate direction and range of detected sounds. Also a prototype triplet-hydrophone has been designed to be integrated in the Delphinus towed array. This triplet should be capable to discriminate between the leftward/rightward detection of mammal sounds. Software of the Delphinus system has been upgraded to display detection of marine mammals in a geographical display in real time. The triplet system, together with other improvements to the system was proven to work well for detecting and support the tracking of N. bottlenose whales near Jan Mayen (Kvadsheim et al. 2014).

POLAND

The University of Gdańsk started in 2012 a construction of the modern research vessel designed e.g. to conduct observations of the marine mammals and connected with them hydro-acoustic research. The completion of the construction is planned for 2015.

SWEDEN

SLU have conducted behavioural studies on cods at the entrance of cod pots. The goal is to produce useful results to develop more catch efficient cod pots. This work has continued in cooperation with a project on cod pots by the South Baltic Flag.

UNITED KINGDOM

The Sea Mammal Research Unit (SMRU) has been developing new methods to track porpoises underwater using three dimensional drifting wide aperture passive acoustic arrays with funding from the Scottish Government.

Improved towed arrays are also being developed to estimate porpoise density more accurately, by localising trains of echolocation clicks.

WDC organised a workshop at the International Marine Conservation Committee on noise reduction technologies for pile driving

4.3 Other Relevant Research

BELGIUM

None

DENMARK

Study on genetic differences of harbour porpoise populations.

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

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

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

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

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

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

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

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

Study on growth and reproduction of white-beaked dolphins.

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

Study of how porpoises regulate their hearing during echolocation:

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

Electronic monitoring of harbour porpoise:

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

Behavioral Reactions of Harbor Porpoise to Pile-Driving Noise.

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

Rasmussen, MH, Akamatsu, T, Teilmann, J, Vikingsson, G. and Miller LA. (2013). Biosonar, diving and movements of two tagged white-beaked dolphin in Icelandic waters. *Deep Sea Research II* 88-89: 97-105 <http://dx.doi.org/10.1016/j.dsr2.2012.07.011>

L. A. Kyhn, J. Tougaard, K. Beedholm, F. H. Jensen, E. Ashe, R. Williams, and P. T. Madsen. Clicking in a Killer Whale Habitat: Narrow-Band, High-Frequency Biosonar Clicks of Harbour Porpoise (*Phocoena phocoena*) and Dall's Porpoise (*Phocoenoides dalli*). *PlosOne* 8 (5):e63763, 2013.

Müller, S., Lehnert, K., Seibel, H., Driver, J., Ronnenberg, K., Teilmann, J., van Elk, N., Kristensen, J., Everaarts, E. & Siebert U. (2013). Evaluation of immune and stress status in harbour porpoises (*Phocoena phocoena*): Can stress hormones and mRNA expression levels serve as indicators to assess stress levels? *BMC Veterinary Research*, 9:145 doi:10.1186/1746-6148-9-145

Nabe-Nielsen, J., Tougaard, J., Teilmann, J., Lucke, K., & Forchhammer, M. C. (2013). How a simple adaptive foraging strategy can lead to emergent home ranges and increased food intake. *Oikos*, 122(9), 1307–1316. doi:10.1111/j.1600-0706.2013.00069.x

Sexual dimorphism of Dall's porpoise and harbor porpoise skulls. / Frandsen, Marie Michele Schou; Galatius, A. I: Mammalian Biology, Vol. 78, Nr. 2, 2013, s. 153-156.

FINLAND

None

FRANCE

None

GERMANY

Project: StUkplus - Effects of the construction and operation of the wind farm

The final results of the StUkplus-project at the Testfield wind farm alpha ventus were presented in October 2013. The investigation of the effects of the construction and operation of the wind farm alpha ventus on harbour porpoises was one of the main issues of discussion during the conference in Berlin. The presentations may be found under: <http://stukplusconference.com/conference-material-presentations/> [Boethling, BSH]

Project: BIAS (Baltic Sea Information System on the Acoustic Soundscape)

In 2013 the EU-Life plus project BIAS (Baltic Sea Information System on the Acoustic Soundscape) started with underwater sound measurements in the Baltic Sea. The measurements are planned to cover a whole year. Five measurement sites were chosen in the German EZZ and coastal area of the Baltic Sea. The main objective of BIAS is the implementation of the MSFD requirements for the Descriptor 11 (Noise) in the Baltic Sea. Lead partner is Sweden (FOI). Five more partners are involved: Germany, Denmark, Poland, Finland, Estonia (see: <http://biasproject.wordpress.com/>). [Boethling, BSH]

Project: Do man-made structures and water depth affect the diel rhythms in click recordings of harbour porpoises

The construction of industrial offshore structures may lead to colonization by a variety of marine organisms resulting in locally enhanced biodiversity and biomass, which may then affect the habitat use and behavior of marine predators. For harbor porpoises high nocturnal echolocation activity was demonstrated near industrial structures and it was hypothesized that this was caused by increased feeding opportunities at night. Here we tested the hypothesis that bridge pillars will lead to more nocturnal echolocation activity by porpoises near them than at positions further away. The daily rhythms in porpoise detections near bridge pillars tended to be slightly more pronounced and a greater proportion of clicks occurred during the night. However, water depth had a greater impact on these rhythms, with more nocturnal porpoise echolocation activity and more pronounced daily rhythms in deeper waters. This may be related to different feeding techniques and prey choice by porpoises in deep and shallow water. In deeper water porpoises may be feeding pelagically on herring and cod, which show more activity and are easier to catch at night. In shallow water they may be targeting mainly gobies using a bottom feeding technique and this may not be more efficient at night [Diederichs, Rose, Höschle, BioConsult SH]. Published in: MARINE MAMMAL SCIENCE (2014). DOI: 10.1111/mms.12112

Classification of marine mammals sounds A study about the classification of marine mammal signatures with methods of speech recognition was continued and finished in the end of 2013. Within this study, as part of an European Defence Agency (EDA) project, a software detector for the classification of marine mammal sounds was developed [Ludwig, BMVg].

Acoustic detection of marine mammals

A new towed hydrophone array for the acoustic detection of marine mammals was tested and can be used after finishing further test trials [Ludwig, BMVg].

Strandings
Collection of information about harbour porpoises found dead is continued in the Federal States of Lower Saxony [Czeck, NP-LS/Ramdohr, LAVES], Schleswig Holstein [MELUR/ITAW] and Mecklenburg – West Pomerania [DMM]. Results are available at: http://www.nationalpark-wattenmeer.de/nds/service/publikationen/1129_schweinswale-imk%C3%BCstenmeer-gis-daten-und-berichte [Czeck, NP-LS/Ramdohr, LAVES] http://www.meeresmuseum.de/wissenschaft/schweinswale/totfunde
LITHUANIA
None
NETHERLANDS
None
POLAND
None
SWEDEN
None
UNITED KINGDOM
<p>The Institute of Zoology organised and chaired an international workshop on "Euthanasia protocols to optimize welfare concerns for stranded cetaceans" at the Zoological Society of London over 11-13th September. The workshop was convened under the auspices of the International Whaling Commission (IWC), through funding from the UK and Norwegian governments. 30 people from 13 countries attended the workshop. A number of appropriate techniques (both chemical and physical) were discussed and a range of presentations were given. A report of the workshop was submitted to the IWC Scientific Committee for consideration, and has now been widely disseminated via the IWC website. It is hoped that the outputs will provide resource/s for stranding networks internationally to help practically tackle strandings and associated welfare concerns.</p> <p>Papers from the meeting can be found at http://iwc.int/eptowcfsc2013. The final report of the workshop can be found at http://iwc.int/iwc-report-published-on-stranded-cetaceans-euthana.</p> <p>An updated review of climate change impacts upon marine mammals in UK and adjacent waters was conducted by Evans & Bjørge (2014).</p>

C. USE OF BY-CATCHES AND STRANDINGS

5 POST-MORTEM RESEARCH SCHEMES

5.1 Contact Details

5.2 Methodology

5.3 Samples

5.4 Database

5.5 Additional Information

BELGIUM
Contact details of research institutions / focal point
MUMM ULg (see general information)
Methodology used (reference, e.g. publication, protocol)
No new information since 2009
Collection of samples (type, preservation method)
See strandings protocol; references in previous reports.
Database (Number of data sets by species, years covered, software used, online access)
All sightings and strandings are taken up in a database, partly online on www.mumm.ac.be . Tissues are recorded in a tissue database (not online yet)
Additional Information (e.g. website addresses, intellectual property rights, possibility of a central database)
No new information.

DENMARK
Contact details of research institutions / focal point
Department of Bioscience, Aarhus University, Frederiksborgvej 399, 4000 Roskilde, Denmark. Phone +4528710372, email: agj@dmu.dk The Fisheries and Maritime Museum, Tarpbagevej 2, 6710 Esbjerg V, Denmark. Phone +4576122000, email: lfj@fimud.dk
Methodology used (reference, e.g. publication, protocol)
None

Collection of samples (type, preservation method)
Aarhus University: Teeth, muscle, skin, blubber, liver, kidney, stomach contents, urine, blood, spleen, gonads, lung, diaphragm, faeces The Fisheries and Maritime Museum: some of the above. Contact Lasse Fast Jensen, lfj@fimus.dk National Veterinary Institute, necropsies; Contact Mariann Chriel, march@vet.dtu.dk
Database (Number of data sets by species, years covered, software used, online access)
None
Additional Information (e.g. website addresses, intellectual property rights, possibility of a central database)
Strandings of marine mammals are reported on an annual basis in a report (in Danish) from the Danish Nature Agency. The latest available report covers 2011: http://www.naturstyrelsen.dk/Udgivelser/Aarstal/2012/Strandede_havpattedyr_i_Danmark.htm Future reports will be uploaded at: http://www.naturstyrelsen.dk/Udgivelser/Aarstal/

FINLAND
Contact details of research institutions / focal point
None
Methodology used (reference, e.g. publication, protocol)
None
Collection of samples (type, preservation method)
None
Database (Number of data sets by species, years covered, software used, online access)
None
Additional Information (e.g. website addresses, intellectual property rights, possibility of a central database)
None

FRANCE
Contact details of research institutions / focal point
<p>French stranding network is nationally coordinated by PELAGIS/ULR under an agreement with the Ministry in charge of the Environment. Local voluntary observers, generally under local supervision by various institutions or NGOs (Oceanopolis, GEFMA, GECC, GMN, OCEAM, CMNS, Picardie Nature, ONCFS), have been trained to process stranded cetaceans under a common standardized protocol. An annual synthesis of all strandings reported in France is produced by PELAGIS/ULR. Statistics of stranding for the coasts of France in the ASCOBANS region in 2012 indicate more than 1011 cetaceans reported. Stranding data provides information on death causes, demographic structure (age and reproductive status), diet (stomach content), trophic levels (stable isotopes) and subpopulation structure or movement pattern (genetic, stable isotopes, heavy metals and contaminants).</p> <p>Observatoire PELAGIS/ULR, Université de La Rochelle, La Rochelle PELAGIS/ULR willy.dabin@univ-lr.</p>
Methodology used (reference, e.g. publication, protocol)
Standardized protocol derived from ECS necropsy workshop 2005 (Jauniaux, T. Beans, C; and Dabin W. 2005. Stranding, Necropsy and sampling: Collection data, sampling level end techniques)
Collection of samples (type, preservation method)
<p>Biodemographics samples : gonads (formalin) and teeth (frozen)</p> <p>Diet and feeding ecology: stomach contains (frozen) and blubber fatty acids and stable isotope (frozen)</p> <p>Genetics: skin and kidney (frozen and alcohol)</p> <p>Toxicologic: heavy metal and POP's analysis on muscle, liver and kidney (frozen with specific packaging)</p> <p>Parasitology (alcohol)</p> <p>Histopathology (formalin)</p> <p>Bacteriology and virology (frozen)</p>
Database (Number of data sets by species, years covered, software used, online access)
National stranding data base (1972-2012) contains 14950 records of cetacean strandings in the ASCOBANS area.
Additional Information (e.g. website addresses, intellectual property rights, possibility of a central database)
http://crrm.univ-lr.fr/ with interactive stranding maps

GERMANY
Contact details of research institutions / focal point
<p>Schleswig-Holstein (SH): Terrestrial and Aquatic Wildlife Research (ITAW) of University of Veterinary Medicine Hannover (TiHo), Foundation, Werftstr. 6, D-25761 Büsum</p> <p>Mecklenburg – West Pomerania (MV): German Oceanographic Museum, Katharinenberg 14-20, D-18439 Stralsund</p> <p>Lower Saxony (LS): National Park Authority, LAVES-Institute for Fish & Fishery Products Cuxhaven (only district of Cuxhaven)</p>
Methodology used (reference, e.g. publication, protocol)
<p>SH: Measurements were taken in metric system [Siebert, ITAW, Schwarz-Kaack, MELUR]. Necropsies were only conducted on porpoises from the Baltic Sea funded by the Foundation of Baltic Sea.</p> <p>MV: Basic biological and anatomical data were collected and registered. Necropsy is performed occasionally.</p> <p>LS: metric measurements were taken of carcasses of harbour porpoises found by official bodies in the district of Cuxhaven. Necropsies will be performed due to carcass condition. No necropsies of harbour porpoises were performed in 2013.</p>
Collection of samples (type, preservation method)
<p>SH: Pathological samples were partly taken on porpoises from the Baltic Sea and North Sea.</p> <p>MV: Pathological samples will be collected and examined during necropsy if required.</p> <p>LS: No samples could be taken from carcasses of harbour porpoises in 2013 due to decomposition.</p>
Database (Number of data sets by species, years covered, software used, online access)
<p>SH: MySql, PostgreSQL, Access, Excel</p> <ul style="list-style-type: none"> - North Sea: 91 dead harbour porpoise - Baltic Sea: 97 dead harbour porpoise - River Elbe: 4 dead harbour porpoise - unidentified cetaceans: 14 <p>Between 1990 and 2013 the following number of data sets has been collected per species (data recorded until 14.01.14):</p> <p>Phocoena phocoena: 3.375</p> <p>Delphinus delphis: 8</p> <p>Lagenorhynchus albirostris: 26</p> <p>Lagenorhynchus acutus: 2</p> <p>Stenella caeruleoalba: 1</p> <p>Delphinapterus leucas: 1</p> <p>Delphinapterus ampullatus: 1</p>

<p>Physeter macrocephalus: 7</p> <p>Balaenoptera acutorostrata: 7</p> <p>Balaenoptera physalus: 6</p> <p>Globicephala melaena: 3</p> <p>Tursiops truncatus: 1</p> <p>Mesoplodon bidens: 1</p> <p>MV: Data were collected and registered in Access database and Excel.</p> <p>- 33 dead harbour porpoises.</p> <p>LS: Metric data on 19 carcasses found in the district of Cuxhaven were collected and registered in the IFF Cuxhaven for report to ASCOBANS. Further 10 carcasses outside from District Cuxhaven were reported from the NLWKN to the IFF Cuxhaven</p> <p>- 67 dead harbour porpoises</p>
Additional Information (e.g. website addresses, intellectual property rights, possibility of a central database)
<p>MV: The German Oceanographic Museum is collecting information about incidental strandings and sightings see at:</p> <p>http://www.meeresmuseum.de/wissenschaft/schweinswale/totfunde and</p> <p>http://www.meeresmuseum.de/sichtungen)</p>

LITHUANIA
Contact details of research institutions / focal point
No post-mortem researches were performed
Methodology used (reference, e.g. publication, protocol)
None
Collection of samples (type, preservation method)
None
Database (Number of data sets by species, years covered, software used, online access)
None
Additional Information (e.g. website addresses, intellectual property rights, possibility of a central database)
None

NETHERLANDS
Contact details of research institutions / focal point
Department of Pathobiology, Faculty of Veterinary Medicine, Utrecht University, Yalelaan 1, 3584 CL Utrecht, 030 253 3591
Methodology used (reference, e.g. publication, protocol)
<p>T. Kuiken, M. García Hartmann M Proceedings of the first ECS workshop on cetacean pathology; dissection techniques and tissue sampling. ECS Newsletter 17, (1991) Special Issue.</p> <p>T. Kuiken, Diagnosis of By-Catch in Cetaceans, Proceedings of the 2nd BCS Workshop on Cetacean Pathology, Montpellier, France 1994. European Cetacean Society Newsletter, 26:38-43 and protocols provided by Jauniaux and Siebert</p>
Collection of samples (type, preservation method)
<p>Depending on conservation state:</p> <ol style="list-style-type: none"> 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 -20°C (-80°C for virology research) 2. Gastric contents (frozen to -20°C handed to IMARES) 3. Liver, fat and muscle (frozen to -20°C handed to IMARES) 4. Skin (ethanol) 5. Teeth (water or frozen to -20°C handed to IMARES) 6. Parasites (70% alcohol) 7. Swabs from the genital openings
Database (Number of data sets by species, years covered, software used, online access)
Excel, Access
Additional Information (e.g. website addresses, intellectual property rights, possibility of a central database)
<p>All strandings are collated in a database and shown on the website of Naturalis (www.walvisstrandingen.nl). In 2013, 503 harbour porpoises, 2 bottlenose dolphins (one stranding, one vertebra), a Sowerby's beaked whale (<i>Mesoplodon bidens</i>), two fin whales and 1 sperm whale.</p>

POLAND
Contact details of research institutions / focal point
<p>Hel Marine Station, Institute of Oceanography, University of Gdańsk, Iwona Pawliczka, iwona.pvp@ug.edu</p>

Methodology used (reference, e.g. publication, protocol)
Post-mortem analyses are being conducted according to procedures described in: Kuiken, T. and Hartmann, M.G. (1993). Dissection techniques and tissue sampling. Proceedings of the ECS Workshop, Leiden.
Collection of samples (type, preservation method)
<p>The Hel Marine Station, Institute of Oceanography, University of Gdańsk collects, as part of its statutory activity, data on dead porpoises and dolphins from either bycatch or stranded onshore.</p> <p>The dead specimens, upon their arrival at the Station, are being subject to analyses within the scope limited by the status of the remains. The standard scope of sampling covers:</p> <ul style="list-style-type: none"> - Species determination; - Localization of deadly event; - Establishing factual and supposed cause of death; - Ascertaining of the body length and mass; - Sex ascertaining; - Fat tissue sampling for genetic examination; - Teeth sampling for age determination; - A full post-mortem analysis and storage of biological samples according to Kuiken & Hartmann, 1993.
Database (Number of data sets by species, years covered, software used, online access)
Data have been entered into the standard Access database since 1988. There is no on-line access to this base.
Additional Information (e.g. website addresses, intellectual property rights, possibility of a central database)
<p>One has prepared and has been updating an e-atlas of the mammals' location in Poland titled: "Atlas of Mammals in Poland" (Atlas Ssaków Polski) (the author: Institute of Nature Conservation PAS) Link: http://www.iop.krakow.pl/ssaki/Katalog.aspx). The atlas includes also information on cetaceans' location (this data is entered by SMIOUG based on its database. An example concerning an harbour porpoise, a link: http://www.iop.krakow.pl/ssaki/Gatunek.aspx?spID=183)</p>

SWEDEN
Contact details of research institutions / focal point
Anna Roos, Department of Contaminant research, Swedish Museum of Natural History, PO Box 50007, SE-104 05 Stockholm. anna.roos@nrm.se
Methodology used (reference, e.g. publication, protocol)
Using a common protocol made for cetaceans.

Collection of samples (type, preservation method)
<p>The Baltic Sea, up to Skanör/Måkläppen: Basically samples from all carcasses were collected, and if the carcass was not too rotten SMNH made a full autopsy. Skin, blubber, muscular tissue, kidney, liver, brain, lung, spleen, stomach, intestines teeth etc. are taken and stored deep frozen in SMNH's Environmental Specimen Bank (ESB).</p> <p>Porpoises found in 2011 have autopsied by pathologists at The National Veterinary Institute (SVA) together with personnel from SMNH. All of the carcasses were from the Baltic Sea (including the Kattegat). In addition, eleven stranded porpoises were sampled by GNM. Samples (dorsal fin, blubber, lower jaw) were sent to ESB. Seven of the specimen originated from the Baltic Sea.</p> <p>No report have been delivered by SMNH in 2012. In 2013 there were 6 harbour porpoises reported, all from the Swedish west coast. They were all nonsexually mature. Three of them could be considered as by-catch (found on the beach with injuries from fishing nets + drowned).</p>
Database (Number of data sets by species, years covered, software used, online access)
<p>The SMNH has a database of porpoise samples from 1972 until today, and consist of more than 700 specimens.</p> <p>Software: MySQL. No online access yet.</p> <p>Data include: species, location, cause of death, blubber thickness (several places), length, weight, weight of several organs etc.</p> <p>The SMNH also has a database on reported live (and dead) animals, all published on line at www.nrm.se/tumlare.</p>
Additional Information (e.g. website addresses, intellectual property rights, possibility of a central database)
<p>The SMNH host a web page where the public can report sightings of live porpoises: www.nrm.se/tumlare</p>

UNITED KINGDOM
Contact details of research institutions / focal point
<p>UK Cetacean Strandings Investigation Programme (CSIP). Contact point- Rob Deaville, Institute of Zoology, Regents Park, London, NW1 4RY, ENGLAND. rob.deaville@ioz.ac.uk. www.ukstrandings.org</p> <p>Natural Resources Wales – Dr Thomas Stringell, Senior Marine Mammal Ecologist tom.stringell@naturalresourceswales.gov.uk</p>
Methodology used (reference, e.g. publication, protocol)
<p>Methodology in Deaville and Jepson et al (2011) followed; Deaville and Jepson (compilers) (2011) CSIP Final Report for the period 1st January 2005-31st December 2010. Pp 1-98 http://randd.defra.gov.uk/Document.aspx?Document=FinalCSIPReport2005-2010_finalversion061211released[1].pdf</p>

Collection of samples (type, preservation method)
<p>A range of samples are routinely collected according to the method of Deaville and Jepson et al (2011). A variety of tissues are routinely sampled for any bacteriological, virological and/or histopathological investigations when deemed appropriate. A number of preservation methods are employed;</p> <ul style="list-style-type: none"> • stored frozen at -20oC or -80oC; • stored in 70% ethanol (parasites); • or in 10% buffered formalin (fixed samples)
Database (Number of data sets by species, years covered, software used, online access)
<p>The CSIP holds data on nearly 11700 cetaceans reported stranded around the UK between 1990 and present day. In addition, detailed pathological data is also held on over 3300 UK stranded cetaceans which were necropsied by the CSIP during the same period. Data collected on strandings and during necropsies are routinely recorded in a web-accessed relational database (http://data.ukstrandings.org). A proportion of data held on this system is also made available to the public via a Defra funded portal, the NBN gateway (www.nbn.org.uk/).</p>
Additional Information (e.g. website addresses, intellectual property rights, possibility of a central database)
<p>The CSIP is co-funded by Defra, Scottish Government and Welsh Government, with additional funding also provided by Natural Resources Wales.</p> <p>Further information on the CSIP is available at www.ukstrandings.org. Intellectual property rights to the data directly generated as a result of CSIP research belong to Defra.</p>

5.6 Number of Necropsies Carried out in Reporting Period:

Species	Number	Recorded cause of death
BELGIUM		
<i>Phocoena phocoena</i>	+50	<p>The total number of washed ashore (dead) harbour porpoises in 2013 was 149 (including inland waters), with the highest numbers ever recorded in April, May and June. Of these, 132 washed ashore along the coast or in harbours, 16 washed ashore on the banks of the river Scheldt or tributaries, and 1 in inland waters at Bruges. A large proportion of the stranded animals (57%) was not collected due to the state of decomposition, due to an inaccessible location, or due to the fact that they were not found. Many animals were in a condition that did not allow drawing conclusions about the cause of death. Detailed data are not available yet, but preliminary data indicate that at least 15 of the animals that had washed ashore along the coast had died due to bycatch in fishing gear (with indications of bycatch in a number of other animals). None of the bycaught animals were reported by fishermen, but there are indications that bycatch occurred in both recreational set net fisheries on the beach and in professional fisheries, both inside and outside Belgian waters.</p>

Species	Number	Recorded cause of death
		Two animals had possibly died during or after an attack by a grey seal
<i>Lagenorhynchus albirostris</i>	1	Cause of death unknown (decomposed).
<i>Balaenoptera acutorostrata</i>	1	Cause of death related to plastic ingestion. One of the plastic items in the stomach had a Scottish origin (publication in preparation).
DENMARK		
<i>Phocoena phocoena</i>	24	Different. Contact Marianna Chriél (see 5.3)
<i>Delphinus delphis</i>	7	Different. Contact Marianna Chriél (see 5.3)
FINLAND		
None		
FRANCE		
None		
GERMANY		
<i>Phocoena phocoena</i>	SH: 23 / MV: 25	MV: Recorded strandings only partially to be necropsied; recorded cause of death: drawn, parasitic diseases, bacterial infection, pneumonia, dystocia
<i>Delphinus delphis</i>	1	
LITHUANIA		
None		
NETHERLANDS		
<i>Phocoena phocoena</i>	240	
POLAND		
<i>Phocoena phocoena</i>	4	unrecorded
<i>Hyperoodon ampullatus</i>	1	unrecorded
SWEDEN		
None		
UNITED KINGDOM		
<i>Phocoena phocoena</i>	95	Bycatch (n=16), Bottlenose Dolphin Attack (n=15), Starvation (n=14), Starvation (neonate) (n=9), Live Stranding (n=7),

Species	Number	Recorded cause of death
		Generalised Bacterial Infection (n=6) Pneumonia, Parasitic (n=5), Physical Trauma, unidentified cause (n=5), Others (n=5), Physical Trauma, Boat/Ship Strike (n=3), Gastritis &/or Enteritis (n=2), Pneumonia, Mycotic (n=2), Pneumonia, Bacterial (n=1), Grey Seal Attack (n=1), (Meningo)encephalitis (n=1), Neoplasia (n=1), Not Established (n=2).
<i>Tursiops truncatus</i>	1	Live Stranding (n=1)
<i>Delphinus delphis</i>	20	Bycatch (n=7), Others (n=3), Live Stranding (n=2), Starvation (n=2), (Meningo)encephalitis (n=1), Generalised Bacterial Infection (n=1), Physical Trauma, Boat/Ship Strike (n=1), Neonatal death (n=1), Not Established (n=2)
<i>Stenella coeruleoalba</i>	6	Starvation (n=3), (Meningo)encephalitis (n=1), Pneumonia, Parasitic (n=1), Physical Trauma, unidentified cause (n=1)
<i>Globicephala melas</i>	6	Live Stranding (n=3), (Meningo)encephalitis (n=2), Starvation (neonate) (n=1)
<i>Lagenorhynchus albirostris</i>	3	Live Stranding (n=2), Physical Trauma (n=1)
<i>Mesoplodon bidens</i>	3	Live Stranding (n=2), Physical Trauma, Boat/Ship Strike (n=1)
<i>Kogia breviceps</i>	1	Live Stranding (n=1)
<i>Balaenoptera acutorostrata</i>	6	Entanglement (n=3), Generalised Bacterial Infection (n=1), Live Stranding (n=1), Physical Trauma, Boat/Ship Strike (n=1)
<i>Balaenoptera physalus</i>	1	(Meningo)encephalitis (n=1)
<i>Megaptera novaeangliae</i>	1	Not Established (n=1)

5.7 Other relevant information on post-mortem / strandings schemes

BELGIUM

Publications/posters on the results of research:

The investigation of a sperm whale that had washed ashore during 2012 revealed a very high level of infection of the blood with *Edwardsiella tarda*. Although the death of the animal was caused by the stranding, the presence of the animal in the southern North Sea could have been caused by the infection. It is possible that the infection was related to fish consumption (fish remains in the stomach; fish as the possible source for *Edwardsiella*) and the presence of a piece of hard plastic inside the stomach). Cools, P., Haelters, J., Lopes Dos Santos Santiago, G., Claeys, G., Boelens, J., Leroux-Roels, I., Vaneechoutte, M. & Deschaght, P., 2013. *Edwardsiella tarda* sepsis in a live-stranded sperm whale (*Physeter macrocephalus*). *Veterinary Microbiology* 166(1-2): 311-315.

Other relevant publications

Haelters, J., Leopold, M., Kerckhof, F., Jauniaux, T., Degraer, S., Verheyen, D., Hese, E., Mielke, L., Baptist, M., Keijl, G., Begeman, L., Hiemstra, S. & Grone, A., 2013. Grey seals predating on harbour porpoises: a recent and spreading phenomenon? 27th Conference of the European Cetacean Society: Interdisciplinary approaches in the study of marine mammals, 8-10 April 2013, Sétubal (Portugal), Book of abstracts 121-122.

Peltier, H., Baagøe, H.J., Camphuysen, K.C.J., Czeck, R., Dabin, W., Daniel, P., Deaville, R., Haelters, J., Jauniaux, T., Jensen, L.F., Jepson, P.D., Keijl, G.O., Siebert, U., Van Canneyt, O. & Ridoux, V., 2013. The stranding anomaly as population indicator: the case of harbour porpoise *Phocoena phocoena* in North-Western Europe. PLoS ONE 8(4): e62180. doi:10.1371/journal.pone.0062180

Necropsy workshop

An international necropsy workshop was organized (7th Cetacean Necropsy Workshop) at the university of Liège (8-9 July 2013). A number of harbour porpoises were autopsied. The main subjects were autopsy techniques, including the dissection of the inner ear of cetaceans.

DENMARK

See attached:

You have attached the following documents to this answer. ASCOBANS - strandings.xlsx (the Annexes provided can be accessed as part of [AC21/Inf.12.1.b](#)):

FINLAND

None

FRANCE

Recent developments were aimed at improving the monitoring value of stranding data by constructing a framework for the interpretation of stranding data sets (Peltier et al. 2012 Ecological Indicators; PELAGIS/ULR) and proposing several spatial indicators. By using the drift model MOTHY (Modèle Océanique de Transport d'HYdrocarbures) initially developed by MétéoFrance it was possible to model the drift of cetacean carcasses. Model runs were conducted every 10 days over the period 1990-2009 resulting in maps of stranding probability averaged by months, seasons or the whole year; in addition, prediction of stranding under the null hypothesis were produced (here, H0 means that cetaceans and mortality are uniformly distributed in space and time). Finally, real stranding data sets of harbor porpoise and common dolphin gathered from strandingschemes of Belgium, France, the Netherlands, Germany, Denmark and the United-Kingdom were used to back calculate their origin with MOTHY. Comparisons between the null hypothesis and stranding observation reveal anomalies that are the difference between expected and observed stranding data sets (Peltier et al, 2013, PlosONE, PELAGIS/ULR). Recent work aimed predicting the origin of common dolphin observed strandings along British and French coasts and correcting them by maps of stranding probability, in order to construct distribution of dead dolphins inferred from strandings. These maps represented the number of dead dolphins at sea, irrespective of drift conditions and according to changes in abundance and/or mortality rate (Peltier et al., in review, Ecological Indicators, PELAGIS/ULR). Current work funded by Fond de Dotation pour la Biodiversité aims improving these indicators for highlighting interactions between small cetaceans and fisheries. Expected results will map mortality origin of small cetaceans with bycatch evidences and will provide estimations of bycaught animals irrespective of drift conditions.

GERMANY
No other relevant information
LITHUANIA
None
NETHERLANDS
<p>Between January 2013 and December 2013, 240 harbour porpoises were necropsied at the Department of Pathobiology of the University of Utrecht. For 132 porpoises the cause of death was unknown (mostly due to autolysis). Of the remaining animals, the percentage of bycatch was between 9% and 26%. For the period of the study from 2009 to 2012 the bycatch percentage is between 10 and 28%.</p> <p>Between April and July 2013 the Electronic Monitoring system had been installed on 4 Dutch set net vessels. During this time two bycaught animals have been called in by fishermen and brought ashore for further pathological research. One of the specimens was used for an experiment to study the appearance and development of pseudo hemorrhages after death. It was collected in the same evening the bycatch occurred and transported to a medical centre for an MRI scan. Immediately after it was transported to the NIOZ harbour on the isle of Texel. The animal stayed for 7 days in the water after which it was transported back to Utrecht for necropsy.</p> <p>In the studied animal, some pseudo hemorrhages actually did appear after death: a promising result which preferably requires confirmation by carrying out at least five repeated experiments. The study will continue in the summer 2014.</p>
POLAND
None
SWEDEN
None
UNITED KINGDOM
<p>NB Causes of death in some individuals are provisional and pending the results of follow up analyses. Finalised causes of death will be given in the CSIP 2013 annual report to Defra and the Devolved Administrations in the UK, which will be shortly published at; http://randd.defra.gov.uk/Default.aspx?Menu=Menu&Module=More&Location=Non&ProjectID=17835&FromSearch=Y&Publisher=1&SearchText=strandings&SortString=ProjectCode&SortOrder=Asc&Paging=10#Description CSIP</p> <p>The CSIP Annual Report to Defra for the period 1st January-31st December 2012 may be accessed via the following link: http://randd.defra.gov.uk/Document.aspx?Document=11840_FINALUKCSIPAnnualReport2012.pdf Scottish Marine Animal Strandings Scheme This is an on-going project which provides a systematic and coordinated approach to the surveillance of marine animal strandings. It builds on the wider UK Cetacean Strandings Investigation Programme (CSIP) which is supported by Scottish Government. It aims to collate, analyze and report data for all cetacean, marine turtle, seal and basking shark strandings around the Scottish coast; to determine the causes of death; and to undertake surveillance on the incidence of disease in stranded cetaceans in order to identify any substantial new threats to their conservation status. See: http://www.strandings.org/</p>

D. LEGISLATION

6.1 Relevant New Legislation, Regulations and Guidelines

BELGIUM
<p>The occurrence of harbour porpoises far inland during late winter/spring of 2013, and bycatch in recreational fisheries were subjects of questions in the Flemish and federal parliament. Bycatch of harbour porpoises in recreational fisheries was further discussed at a provincial and local community level. No new regulations or guidelines were adopted as a result of the questions and discussions. There was a request by the European Union (DG ENV; EU Pilot 3801/12/ENVI) for more information about bycatch of porpoises in recreational fisheries. It was asked if the results of the assessments in the framework of the Marine Strategy Framework Directive had led to the conclusion that there was no need to take further measures to reduce bycatch. An answer is expected during 2014.</p>
DENMARK
<p>The Danish Nature Agency has drafted a new Action plan for stranded cetaceans in Denmark in 2012.</p> <p>Natura 2000 as described in section A</p>
FINLAND
None
FRANCE
<p>A new legislation on marine mammals was released in July 2011 clarifying the disturbance and the harassment. There is also an article on the necessity to declare any by-catch to help the research. There are also provisions for the protection of the habitat of the species.</p>
GERMANY
<p>Noise mitigation measures</p> <p>The incidental provision 14 of the licenses for offshore wind farms given by the BSH requires the application of noise mitigation measures to meet the threshold of 160 dB re 1µ Pa (SEL) in 750 m. At this time several noise mitigation systems are available or under development. In 2013, BSH published instructions for the determination of the effectiveness of noise mitigation systems [Boethling, BSH].</p> <p>Information can be found at: http://www.bsh.de/de/Produkte/Buecher/Standard/Offshore_wind_farms_-_Measuring_specification_for_the_quantitative_determination_of_the_effectiveness_of_noise_control_systems.pdf</p> <p>Fisheries and Bycatch reduction</p> <p>Federal State regulation for the revision of the federal state regulation for coastal fisheries (4th of December, 2013) [MELUR].</p> <p>EU legislation</p> <p>Currently the EU is in a revision process of the EU regulation 812-2004 (Bycatch regulation). The EU Parliament has developed a valuable proposal taking care of harbour porpoise protection issues. Germany is lobbying to care for a good compromise between the position of the EU Council and the EU Parliament in this issue [Schall, BMUB].</p>

Marine Protected areas Cf. contribution under 3. Marine Protected areas in the EEZ [Schall, BMUB].

LITHUANIA

The Management plan and the Action plan for harbor porpoise in Lithuanian Baltic Sea area were prepared and adopted by order of Minister of Environment on 29 February 2012. The implementation of the plans started at the beginning of 2013 and will continue until the end of 2014. The main aim of the plans is to improve the knowledge on a state of harbor porpoise in Lithuanian Baltic Sea area by implementation of information actions, e.g. installation of information boards in the coastal area, publishing booklets and creation of a video film about the species, inquiry of fishermen about bycatch, arrangement of lectures for fishermen.

NETHERLANDS

The Dutch Ministry of Economic Affairs (EZ) commissioned the writing of a "Harbour porpoise species conservation plan: towards a favourable conservation status" (Camphuysen & Siemensma 2011). The aim of this conservation plan is to improve or at least maintain the current conservation status of Harbour Porpoises in North Sea waters under Dutch jurisdiction.

Concerning the Marine Strategy Framework Directive (MSFD), in the Initial Assessment report the currently available information is described on the abundance, distribution and habitat use of harbour porpoises on the Dutch Continental Shelf. In the report on the description of a Good Environmental Status, the present state at species level is described for e.g. harbour porpoises, leading to a definition for Good Environmental Status for Biodiversity. In the Targets & Indicators report the number of harbour porpoises is proposed as one of the indicators for GES 1 Biodiversity - 1.2 Population size. Also the OSPAR EcoQO on by-catch levels is proposed as one of the indicators for GES 4 Food webs - 4.3.1 Abundance trends of functionally important selected groups/species. In the "Dutch Marine Strategy part 1" a final selection of the proposed targets & indicators has been made. Sea mammals are mentioned under Descriptors 1 (Biodiversity) and 4 (Foodweb). For both descriptors there are no indicators yet for sea mammals. Indicators for harbor porpoises will be developed using the "Harbour porpoise species conservation plan: towards a favourable conservation status" (Camphuysen & Siemensma 2011). In the "Dutch Marine Strategy part 2 - MSFD monitoring programme", the outlines are given for a monitoring programme necessary to gather information for reporting under the MSFD. For the biodiversity descriptor - harbour porpoise, the Netherlands aim to use international surveys (such as the Small Cetacean Abundance Survey in the North Sea and Adjacent Waters - SCANS). Until then, national surveys will be carried out. Moreover, specific harbour porpoise counts and combined counts (with birds) are being considered. For the food web descriptor, information on quantities of stranded harbour porpoises combined with autopsy data (thickness of blubber and stomach contents) will be used to formulate specific research. Reports on by-catches in gill nets are also included.

For species that are protected under the Habitats Directive, national objectives will be the same as under the Habitats Directive.

References

Boon AR, Prins TC, Slijkerman DME, Schipper CA (2011) Environmental targets and associated indicators. Implementation of the Marine Strategy Framework Directive for the Dutch part of the North Sea: background document 3. Deltares rapport, IMARES rapport C128/11.

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.

Prins TC, Slijkerman DME, de Mesel I, Schipper CA, van den Heuvel-Greve MJ (2011) Initial Assessment. Implementation of the Marine Strategy Framework Directive for the Dutch part of the North Sea. Background document 1 (of 3). Deltares-IMARES report.

Prins TC, Slijkerman DME, Schipper CA, van den Heuvel-Greve MJ (2011) Determination of Good Environmental Status. Implementation of the Marine Strategy Framework Directive for the Dutch part of the North Sea. Background document 2 (of 3). Deltares-IMARES report.

Ministerie van Infrastructuur en Milieu ism Ministerie van Economische Zaken, Landbouw en Innovatie (2012) Mariene strategie voor het Nederlandse deel van de Noordzee 2012-2020 Deel 1

Ministerie van Infrastructuur en Milieu ism Ministerie van Economische Zaken, Landbouw en Innovatie (2014) Ontwerp Mariene strategie voor het Nederlandse deel van de Noordzee 2012-2020 Deel 2. KRMMonitoringprogramma.

POLAND

The Chief Inspectorate for Environmental Protection has prepared a draft of the Minister of the Environment' regulation on the scope and method of marine waters monitoring including issues of the biodiversity, all elements of the food chain, the seabed integrity, pollution, the underwater noise as well as electromagnetic fields and these factors' impact on the mammals.

One of the results of the project titled" Supporting Restitution and Conservation of Baltic Mammals in Poland" which is realised by WWF Poland and the Marine Station of the Institute of Oceanography of the University of Gdańsk are the projects of the conservation plan for the harbour porpoise and the grey seal which will constitute a base for the General Directorate for Environmental Protection to conduct consultations and accept plans mentioned above.

SWEDEN

During 2010 SEPA started developing national guidelines for underwater noise and marine mammals. This responsibility for the guidelines has now shifted to the SwAM. A background report that SEPA commissioned by AquaBiota Water Research which has been received by the SwAM. The guidelines do not cover noise from vessels, but will be useful during constructions of windparks, pipelines, blastings, etc. SwAM has not approved the report in 2012.

UNITED KINGDOM

The Exclusive Economic Zone Order 2013 came into force on 31st March 2014. This boundary relates to rights under Part V of the United Nations Convention on the Law of the Sea. The new Exclusive Economic Zone (EEZ) replaces the 200nm fishing limit.

Implementation and enforcement of the Council Regulation (EC) 812/2004 was set into force on 1 July 2013. The Marine Management Organisation (MMO) is responsible for enforcement in English and Welsh waters, whilst Marine Scotland is responsible in Scottish Waters. This regulation requires each member state to reduce cetacean by-catch through the use of acoustic deterrent devices (pingers), attached to nets, and applies in all of ICES area IV of the North Sea, and areas VII d, e, f, g, h and j.

E. INFORMATION AND EDUCATION

7.1 Public Awareness and Education

BELGIUM
<p>In a temporary exhibit at the University of Ghent, attention was paid to the hearing of marine mammals. Lectures were given on the subject, and a publication figured in a widely available book on noise, sound and science (in Dutch): Doom, M. & Haelters, J., 2013. De invloed van geluidspollutie op zeezoogdieren. In: Jonckheere, A., Lagae, B., Wautier, K. & Segers, D. (Redactie). Wetenschap zet de toon. Uit het Wetenschappelijk verleden 8: 67-79.</p> <p>To inform official authorities (fire department, police, Maritime Police, Coastguard, etc.) about what to do in cases of strandings and bycatches of live and dead marine protected species, an information brochure was published by the RBINS and Coastguard: Haelters, J., Kerckhof, F., Maebe, S., Schallier, R. & Degraer, S., 2013. Wat te doen bij waarnemingen, strandingen en incidentele vangsten van beschermde zeedieren? Gids voor informatie en actie. Koninklijk Belgisch Instituut voor Natuurwetenschappen en Kustwacht.</p> <p>A program on national television was dedicated to plastic debris at sea. Attention was paid to a washed ashore minke whale that had died due to plastic ingestion (11 April 2013; channel "Eén").</p> <p>To inform the public at large of the biodiversity values of the Belgian part of the North Sea, including the harbour porpoise, a brochure in Dutch and French was published. (French title is : « La mer du Nord belge: Une eau vive! Biodiversité et Natura 2000 dans la partie belge du mer de Nord. ». The publication can be downloaded from the website www.lamerdunord.be or www.de-noordzee.be</p> <p>Web based initiatives</p> <p>Initiatives towards the public to record, report and distribute marine mammal sightings continue:</p> <p>www.waarnemingen.be is an initiative of Natuurpunt Studie vzw and Stichting Natuurinformatie that collects records of observations of species of different taxonomic groups, including cetaceans, from volunteers. For 2013, 339 observations of in total 698 harbour porpoises were reported to this website, of which 151 observations (318 animals) during April. One observation was reported of in total 4 white-beaked dolphins. A single Minke whale was seen and photographed from a landbased watchpoint at Koksijde.</p> <p>Natuurpunt raises public awareness by www.natuurbericht.be, providing short notes on the occurrence of biodiversity, including cetaceans, in Flanders and the Belgian part of the North Sea. In 2013, items were published on the stranding of a minke whale, the sighting of a minke whale and septicaemia in a sperm whale. These items can be viewed (in Dutch) at: http://www.natuurbericht.be/index.php?id=10310&cat=strand_en_zee http://www.natuurbericht.be/index.php?id=11155&cat=strand_en_zee http://www.natuurbericht.be/index.php?id=11504&cat=strand_en_zee</p> <p>www.zeezoogdieren.org is an ongoing initiative by Frank Wagemans (Natuurpunt vzw) and Jaap van der Hiele (EBBZ Zuidwest) that gives ad hoc information of noteworthy facts of marine mammals from Dutch and Belgian waters.</p> <p>The RBINS manages an online database on strandings and selected sighting records: http://www.mumm.ac.be/EN/Management/Nature/search_strandings.php. During 2013 several observation daytrips (on a ship with a capacity of 50 people), called 'North Sea Pelagics' were organised, an initiative to present cetaceans in their natural environment to the wider public. More information on www.northseapelagics.be. Observations made during</p>

the trips were reported to the RBINS.
DENMARK
<p>Fjord&Bælt in Kerteminde, Denmark, houses four harbour porpoise (3 live-caught and 1 born in the facility) for research and public display. The center is visited by more than 55,000 guests every year, including more than 7,000 school children. A long range of Danish and international media teams (TV, radio, newspapers, home pages) visit the center every year and usually focus their outreach on harbour porpoise research and conservation. Fjord&Bælt is hosting the yearly meeting about harbour porpoise conservation by the Danish Nature Agency. The meeting includes government representatives, scientists, legislators, and NGOs and creates local media interest.</p> <p>In 2012 the center opened a new big exhibition with the theme Oceans of sound. An essential part of these exhibitions are the harbour porpoises behaviour and senses. There is special focus on research and conservation efforts of harbour porpoises during a number of arrangements in Kerteminde, such as the Day of the Baltic Porpoise, two yearly science festivals, and 'special events', scheduled by Fjord&Bælt with regular intervals. The outreach for the public is based on the four harbour porpoises at the center. In 2012 actors at Fjord&Bælt performed a theatre for young children about harbour porpoise conservation in particular and marine protection in general.</p>
FINLAND
<p>Finland has continued the harbour porpoise sighting campaign and received information of six possible sightings of 7-8 animals in year 2013.</p> <p>The Ministry of the Environment and the Ministry of Agriculture and Forestry have established a common practice of recommending fishermen to avoid fishing with nets in coastal areas where harbour porpoises have been sighted.</p>
FRANCE
<p>Public conferences (Oceanopolis-Brest and PELAGIS/ULR)</p> <p>National stranding network: training for volunteers and national meeting (PELAGIS/ULR)</p> <p>Observer training in the frame of fishing observation scheme, council regulation 812/04 (PELAGIS/ULR)</p> <p>Regional stranding network: training for volunteers and annual meeting (LEMM/Océanopolis)</p> <p>Educational workshops on cetaceans implemented for schools by the Education Department/ Oceanopolis)</p> <p>Movie on cetaceans and ferries survey produced by Brittany Ferries and Oceanopolis broadcasted onboard the ferries+ conference on board</p> <p>New exhibition on cetaceans: National Museum Paris, partnership Oceanopolis. An itinerant version circulates in Europe.</p>
GERMANY
<p>Tourism-Human-Nature</p> <p>In the frame of the bilateral (Danish-German) INTERREG IVa project "Tourism-Human-Nature", several exhibition modules are being developed. The project is funded by the European regional development fund and modules will be placed in the project partner's different science centers around Southern Denmark and Northern Germany. Thematically, the modules will focus on research and protection of marine mammals and domesticated terrestrial animals as well as on the management of invasive marine species. Teaching programs and expedition boxes for schools are developed to train children and teachers in</p>

marine sciences [Knickmeier, Witte CAU, Siebert ITAW].

Sailors on the Lookout for Harbour Porpoises

The German Oceanographic Museum became responsible for the sailor project which was previous a project by the Society for the Conservation of Marine Mammals. This project includes registration of sightings of harbour porpoises and the findings of dead porpoises. Through the webpage of the museum and on our flyers on projects we provide information on sightings of porpoises (<http://www.meeresmuseum.de/sichtungen.html>) and dead animals (<http://www.meeresmuseum.de/totfunde.html>) and explain what people should do if they encounter a porpoise or find one dead. It is possible to contact us by post, email or telephone [Gallus, DMM].

Ministerial Support for the Baltic Harbour Purpoise Day

Peter Altmaier, Federal Minister for Environment in 2013, issued 11.5.2013 a Press Release on the occasion of a visit in the Marine Museum in Stralsund timely closely related to the Baltic Harbour Porpoise Day and underlined the critical situation of harbour porpoises in the Baltic and the need of their protection. This release was used by a lot of German media to spread information about the issues of harbour porpoise protection and additionally it was published on the BMU Internet page. In this release the SAMBAH project was highlighted too as an essential help to clarify the current distribution situation of porpoises in the Baltic [Schall, BMUB].

Children Pages on ASCOBANS Webpage

Germany has supported with the regular annual German voluntary contribution the Development of Children's Pages on ASCOBANS Website [Schall, BMUB].

LITHUANIA

Various implementation activities of the Management plan and the Action plan for harbor porpoise in Lithuanian Baltic Sea have begun in 2013.

Short movie about Harbour porpoise was created. It is planned to introduce the film to the public through regional televisions and a national channel in 2014. It will be demonstrated in the Lithuanian Sea Museum as well.

Information about Harbour porpoise and its biology, ecology, history of observations in Lithuania, international status of protection and threats have been made available in the web site of Lithuanian Ministry of Environment (in Lithuanian language: <http://www.am.lt/VI/files/0.399438001358237915.doc> <http://www.am.lt/VI/files/0.917139001367477480.docx>).

Layouts of two different brochures have been made. The brochure of a shape of Harbour porpoise will contain information for the public. Another brochure with more specific information and practical design will be dedicated to fishermen. Both brochures and three beach information boards are scheduled to be produced in summer of 2014.

Some more activities are expected to take place in 2014.

The International Harbor Porpoise Day was celebrated on 16th May 2013 at the Lithuanian Sea Museum. Celebration of the International Harbor Porpoise Day started a three-day long festival dedicated to the celebration of IHPD, giving a name to the young of Grey seal which had been fostered in the Museum and a conference on a traditional seamanship.

The Museum organized a lecture about Harbour porpoise and the artistic session "Save Harbour porpoise of Baltic sea" where the main participants were children from the foster home "Smiltelė" and a high school "Lapių". A joint artistic work was created during this session "Save Harbour porpoise of Baltic sea" and it was exhibited in the entrance of the Museum for the next days of the festival.

In 2013 the Lithuanian Sea Museum offered a new educational programme for little children. Teaching sessions are held in kindergartens or in the Museum. One of the subjects which are presented to children is Harbour porpoise.

NETHERLANDS

Jeroen Hoekendijk and Marije Siemensma (Marine Science & Communication) organised the first Harbour Porpoise Forum (HPF) on January 30th 2013, at the Royal Netherlands Institute for Sea Research (NIOZ) on Texel. The theme of this day: 'Science driven by curiosity, enthusiasm and engagement'. A full day programme dedicated to harbour porpoise research with speakers from the Netherlands and neighboring countries who voluntarily contributed by presenting their work, methods, results and future perspectives, with ample time for discussion. Topics addressed varied from the biology of this species to the challenges of acoustical monitoring and Grey Seal depredation. The HPF was open to anyone interested. During lunch several interactive activities were scheduled such as a demonstration on locating harbour porpoises from video recording; the analysis of stomach contents and a visit to the porpoises in captivity at Ecomare. Please contact the organisers for more information: harbourporpoiseforum@gmail.com

Vereniging Kust & Zee, the Dutch section of the Coastal & Marine Union (Eucc) annually publishes the printed "Kust en Zeegids". 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 has an exhibition centre on the Pier of Scheveningen, The Hague (Kust&Zee x- Pierience) which officially opened in March 2011.

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. 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.

IVN Consulentenschap 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 2013 and aims to make visitors of the National Park aware of porpoises in the Oosterschelde (<http://www.np-oosterschelde.nl/>). In September 2012 a brochure as one of the project results has been presented to visitor of the National Park Oosterschelde. Focus of this brochure is to learn visitors where to observe Harbour Porpoises, from either boat or land and how to recognise this small whale. Further more the brochure informs about the Harbour Porpoise in general.

The Rugvin Foundation also informs the public via posters on the Stena Line ferries about how to observe harbour porpoises (see B, 4.1).

In 2011, the North Sea Foundation, a Dutch NGO, has initiated two projects to raise awareness on 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 cleanups and litter counts are organized here, with use of the 'Strandscanner', a special app for the smartphone to count specific litter items. The application also includes an option to record stranded cetaceans, such as harbour porpoises. The number of participating "MyBeaches" increased from 2 in 2011, 6 in 2012 and 24 in 2013. Many of the participating "MyBeaches" also organise beach cleaning activities, art expositions and other activities. In 2013, a cleaning tour for volunteers was organised, covering the entire Dutch North Sea coast in 24 days. In this tour 6590 kg waste was collected.

Coastwatch is an education project for high school students, with lectures in the class and on the beach. Also in 2011, the North Sea Foundation introduced the big 5; harbour porpoise, cod, thornback ray, dead man's fingers (a soft coral) and Northern gannet, to create more awareness and increase protection of these species.

In 2012, the North Sea Foundation together with the Plastic Soup Foundation started the 'Beat the Micro Bead' Campaign to raise awareness on micro plastics in body care products. This generated so much attention via (social) media, that in 2013 the campaign went world-wide. In December 2012, a multinational declared to remove all microbeads in their products by 2015. Other multinationals follow suit.

On 25 April 2013 the national event Girlsday was kicked-off at the TNO research basin in The Hague. Girlsday.nl is addressing school girls (age 10-15) to consider a professional career in technology. As part of this national kick-off, the (new) topic of underwater noise and related research was highlighted. The formal (national) start of the event was initiated by Her Majesty Queen Maxima, together with the minister of Education, Culture and Science, dr. Jet Bussemaker, in presence of a large group of schoolgirls.

POLAND

In August 2013 Poland hosted the 20th ASCOBAN Advisory Committee Meeting as well as the meeting of the North Sea Group. The meetings aroused the media interest for the theme of the harbour porpoises conservation, some articles in press appeared as well as programmes on country-wide TV and on the radio.

On the area under the SMIOUG management, on 9th of September 2013, one opened a museum under the name "Dom Morświna" ("The Harbour Porpoise's House"). In the museum there are cabinets and boards containing information on the biology, harbour porpoises' usage, and their relations with human as well as current problems which affect these animals. Thanks to the large screen televisions, visitors can watch films and animations devoted not only to harbour porpoises, but also other cetaceans which visited Polish part of the Baltic Sea during last decades. The records present e.g. the white-beaked dolphin, the fin whale, humpback whales and common dolphins.

On 19/05/2013, for the International Day of the Baltic Harbour Porpoise, the Marine Station of the Institute of Oceanography of the University of Gdańsk organized an educational and informative stand which was situated in Skwer Kościuszki in Gdynia, next to the harbour porpoise' monument.

From 22nd to 24th of May 2013, during the PolFish Fairs, the Marine Station prepared a stand devoted to balanced principles of the marine resources use. The information on the methods of marine mammals' bycatch prevention was not missing.

During annual event "Day of Fish" organized by the Hel Marine Station of the Institute of Oceanography of the University Gdańsk with participation of Gaja Club and FishSecretariat, on 28/07/2013, one organized an educational and informative stand with the literature on the fauna of the Baltic Sea – one of the stands was dedicated to harbour porpoises and promotion of the Jastarnia Plan-ASCOBANS.

Conservation, examinations of the harbour porpoises and promotion of the ASCOBAN Agreement were also an element of the educational stand of the Marine Station during the Baltic Science Festival.

From 1st to 31st of July 2013, the Marine Station organized an social campaign for active participation in developing of the areas protection's marine plans Nature 2000, e.g.: in relation to the coexistence of fisheries and harbour porpoises' biological needs. The vehicles of the content were City Lights on the public transport stops. A multimedia agency assessed their efficiency for about 1.5 million people.

The Marine Station of the Institute of Oceanography of the University of Gdańsk and the

Foundation for the University of Gdańsk Development produced a CD with a film titled : "Bałtyckie Morświny" ("Baltic Harbour Porpoises) in three languages: in Polish, German and English.

WWF Poland takes many educational actions aiming at improvement in the Polish society knowledge on the marine mammals. In 2013 the following actions were taken: publication 2nd edition so called: "Blue Handbook" – 40-pages pocket-book with information on seals, harbour porpoises and birds being subject to WWF's monitoring. The print run of the handbook accounted for 50,000 copies and was sent to schools, offices and institution all over the coast and was also distributed by the volunteers of the Blue Patrol WWF. Additionally, on the WWF spokesperson's initiative, the theme connected with the marine mammals conservation including the harbour porpoise has often appeared in Polish media. Furthermore, the volunteers of the Blue Patrol WWF have given the lectures (mainly in schools) on the Baltic mammals conservation, have participated in cultural events and organized stands during local open-air events e.g. during concerts of Lato z Radiem organized by the radio channel named Jedyńka.

The public TV has televised many times (on 3 channels, in the advertising interval) a video promoting SAMBAH project as a part of the activities aiming at harbour porpoises' conservation. The website www.morswin.pl is the source for spreading the knowledge on harbour porpoises and promoting the ASCOBANS Agreement.

SWEDEN

The Kolmården Wildlife Park, in the dolphinarium, has a one-day program "Närkontakt Delfin" (Dolphin Close Encounters), available on demand to pre-booked groups. It offers an in-depth lecture on dolphin biology in general and also gives updated information on the dire situation of the Baltic harbour porpoise. A special SAMBAH exhibition is presented to all visitors to the Lagoon, one of the public display areas of the Dolphinarium. In addition the staff of Kolmården has given lectures on SAMBAH for special tour groups at the dolphinarium and during conferences. The main dolphin show, called LIFE. presents a strong message about the grave effects of pollution on the marine eco systems.

There are two different websites and database systems for reporting of harbour porpoises and cetacean in general: one is the web site of SMNH accessible for the public to report live harbour porpoises, the other is the Species Gateway (Artportalen).

The report form of SMNH's web site is relatively simple which make it relatively easy for almost anyone to complete a report (www.nrm.se/tumlare). Statistics from 2012 have not been compiled but in 2011 at least 177 reports were submitted. Most of the reports came from the Swedish west coast. All reports are quality controlled before being published on the web. The web page also includes photos, and a couple of very interesting films of porpoises playing around a small boat. Data from the SMNH's database have not been submitted to the HELCOM/ASCOBANS Harbour porpoise database and map service. However, SwAM have asked SMNH to complete that.

Species Gateway (Artportalen) is an independent site by the Swedish Species Information Centre at the SLU for collecting sightings of species (www.artportalen.se/default.asp). The site is open to anyone who wishes to contribute their data and is more detailed in data, relative to that one of the SMNH. It also demands relatively more of the observer to be complete the report, than in the SMNH's database. Beside the option to report cetaceans in the reporting system for mammals, Amphibians and Reptiles, there are reporting systems for all organism groups. The data can be used by anyone – the general public, scientists, organisations and authorities. All observations are published first and are verified later by authorized persons within the organisations.

Data of the two databases are not directly exchangeable but information to some extent has been transferred to the SMNH. Booth reporting databases has been developed by support

from SEPA. However, the authorities should consider which of the organizations that will have national responsibility for receiving reports. Therefore SwAM initiated a meeting regarding this in 2012, which was held in 2013. Both parties agreed to make a joint interface and the data should be stored in a way to make it easier to execute statistical reports from. ›

SAMBAH's web site (www.sambah.org) gives general information about the project's objectives, activities, methodologies etc.

Harbor porpoise day 18 of May 2014 at "Naturum Kullaberg"

19 of may there was activities around

UNITED KINGDOM

The Natural History Museum (NHM) held a one day meeting on 20th September 2013 to mark the centenary of strandings data collection in the UK. A range of presentations were given, including some covering the work of the CSIP.

CSIP staff from NHM and Zoological Society of London (ZSL) also helped run a stall on UK strandings/cetaceans at 'Science Uncovered' at the Natural History Museum on 27th September. Skeletal material, parasites and fixed material was on display, along with a video of a short-beaked common dolphin stranding necropsy carried out at ZSL. Over 10000 people attended on the evening. (<http://www.nhm.ac.uk/natureplus/community/general/science>).

The role of ASCOBANS was publicised throughout both events. The work of the CSIP in the UK (and the role of ASCOBANS) has also been publicised during 2013 through numerous presentations, demonstration necropsies and social media activity by CSIP staff e.g. <http://www.facebook.com/pages/Cetacean-Strandings-Investigation-Programme-UKstrandings/142706582438320>

Whale and Dolphin Conservation (WDC) reached out to more than 80,000 people through its Wildlife Centre's and Shorewatch volunteer programme in Scotland. They have also continued to provide advice, ideas and assistance with facts, proofing and language to the development of the ASCOBANS website Kids Zone section.

The twelfth annual National Whale & Dolphin Watch week was organised by Sea Watch Foundation between 27 July and 4 August. Dedicated effort-based watches were conducted at 78 sites and from ten vessels around the British Isles from Shetland to the Isle of Scilly and Channel Islands. More than 500 persons participated directly in the event with 900 hours of observation effort, resulting in 970 sightings involving ten cetacean species (in descending order of frequency: harbour porpoise, bottlenose dolphin, minke whale, short-beaked common dolphin, white-beaked dolphin, Risso's dolphin, killer whale, Atlantic white-sided dolphin, humpback whale, and sei whale). The event received widespread regional and national media coverage. A full report was published (Gibas, 2013).

Sea Watch continued to run a Dolphin Adoption scheme aimed particularly at children, to encourage them to take on individual responsibility for safeguarding photo-identified dolphins and to follow their fortunes. Other educational and public awareness programmes were undertaken throughout the UK, with displays, lectures and training courses. Sea Watch also participated in the World Whale Conference held in Brighton on 15-16 March, with talks, species ID demonstrations and exhibits

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POSSIBLE DIFFICULTIES ENCOUNTERED IN IMPLEMENTING THE AGREEMENT

BELGIUM
No new information.
DENMARK
None
FINLAND
None.
FRANCE
None
GERMANY
No difficulties to report.

LITHUANIA
<p>The main difficulties originate from an insufficient data on presence of cetaceans in the marine waters of Lithuania.</p> <p>Common Bottlenose Dolphin (<i>Tursiops truncatus</i>) was recorded two times - one dead individual was found in 1998 and two animals were observed in 2007. According to the information of The IUCN Red List of Threatened Species it may be the best way to consider the Common Bottlenose Dolphin as extralimital in all Baltic Sea.</p> <p>The last records of two Harbour Porpoise findings (as bycatch) were in 2001 and 2003. No Harbour Porpoises were detected during the marine mammals inventory in 2007-2009, which was a part of the LIFE project "Marine Protected Areas in the Eastern Baltic Sea". Final data from the international project "Static Acoustic Monitoring of the Baltic Sea Harbour Porpoise" (SAMBAH) will be available only in the end of 2014, although up-to-the-minute primary results are promising - Harbour porpoise was detected in two locations of Lithuanian waters.</p>
NETHERLANDS
None
POLAND
None
SWEDEN
None
UNITED KINGDOM
None