

**Agenda Item 8.1: Annual National Reports 2005 and 2006**

**Annual National Reports for 2006  
Submitted to the Secretariat as of 17 April 2007**

**Submitted by: Secretariat**



***NOTE:***  
**IN THE INTERESTS OF ECONOMY, DELEGATES ARE KINDLY REMINDED TO BRING  
THEIR OWN COPIES OF THESE DOCUMENTS TO THE MEETING**

## **Secretariat's Note**

As of 17 April 2007 the Secretariat had received reports from Denmark, Finland, France, Lithuania, the Netherlands and Sweden. These are attached. This document contains a revised version of the Danish report.

# ASCOBANS Annual National Report 2006

## DENMARK

### A. General information

Name of party: DENMARK	Period covered: 2006
Name of report compiler: <b>Magnus Wahlberg</b> the Danish Institute for Fisheries Research (DIFRES), Esbjerg Fisheries and Maritime Museum, Fjord&Bælt (F&B), the Ministry of Environment – Forest and Nature Agency and the National Environmental Research Institute (NERI).	Date of report: <b>April 14, 2007</b>
<b>Fjord&amp;Bælt, Margrethes Plads 1, 5300 Kerteminde, Denmark; <a href="mailto:magnus@fjord-baelt.dk">magnus@fjord-baelt.dk</a></b>	
Any changes in coordinating authority, appointed member of advisory committee: none	

### B. NEW measures/action towards meeting the resolutions of the 4th Meeting of Parties

#### 1. Direct interaction of small cetaceans with fisheries

##### Investigations of methods to reduce by-catch:

DIFRES has continued work on mitigating bycatch of porpoises in bottom-set gill nets. A controlled pinger spacing experiment was conducted in the Danish hake fishery in the North Sea in July-September 2006. The results show that the pinger type used can be deployed with larger spacing than hitherto believed. Details are presented in IWC/SC/59/SM2. In the same fishery and period DIFRES also conducted a controlled experiment with alerting pingers. The results were not encouraging. Details are presented in IWC/SC/59/SM (Contact: [fl@dfu.min.dk](mailto:fl@dfu.min.dk)).

DIFRES also continued research on methods of reducing by-catch of dolphins in pelagic trawls as part of the EU-funded project NECESSITY (Contact: [fl@dfu.min.dk](mailto:fl@dfu.min.dk)).

In addition, DIFRES currently performs a M. Sc. project at Fjord&Bælt investigating the detection abilities of harbour porpoises to synthesized echoes of various kinds of gill nets (Contact: [fl@dfu.min.dk](mailto:fl@dfu.min.dk)).

Teilmann et al. (2006)<sup>2</sup> published a paper on how harbour porpoises at Fjord&Bælt react on sounds from pingers, showing habituation effects after prolonged exposure.

Wahlberg (2006)<sup>3</sup> quantified the loss in sound intensity for pingers in shallow waters, showing that the sound field can be highly variable depending on bottom substrate and bathymetry.

Jørgensen (2006) finished a M.Sc. at the Copenhagen University / Danish National Protection Agency showing effects of large-scale usage of pingers on the distribution of harbour porpoises.

<b>Estimates of by-catch in set net and pelagic trawl fisheries:</b>			
Species	Estimated number of by-caught animals	Area (ICES area or more detailed)	Notes (type of fishery, effort, seasonal variations, etc.)
Harbour porpoises	No new estimate for 2006. The most recent estimate is that from 2001-2002 presented by Vinther and Larsen (2004) <sup>1</sup>		
Other species	Few, but the exact number and species involved unknown.		

**Implementation of guidelines, new legislation, etc. to reduce by-catch:**

The council of the European Union has on March 22, 2004 adopted common regulations in order to reduce incidental by-catches of small cetaceans. Acoustic deterrent devices will progressively become mandatory in all European waters for gillnet fisheries carried out with vessels over 12m of length. These regulations also recommend 'research on new mitigation measures'. Denmark has taken these new regulations into account in its revised Action Plan for Reducing Incidental By-catches of Harbour Porpoises endorsed in March 2005 (cf. below Implementation of guidelines...).

<sup>1</sup>Vinther and Larsen (2004). Updated estimates of harbour porpoise by-catch in the Danish bottom set gillnet fishery. *J.Cetacean Res. Manage.* 6(1): 19-24.

<sup>2</sup>Teilmann, J., Tougaard, J., Miller, L.A., Kirketerp, T., Hansen, K. & Brando, S. (2006). Reactions of captive harbor porpoises (*Phocoena phocoena*) to pinger-like sounds. - *Marine Mammal Science* 22(2): 240-260.

<sup>3</sup>Wahberg (2006). Sound propagation of signals from two pingers and an acoustic harassment device in shallow waters. Report, National Board of Fisheries, Sweden.

**2. Reduction of disturbance to small cetaceans**

**Information on levels of disturbance:**

The National Environmental Research Institute is investigating the effects on harbour porpoises of wind farm constructions and operations at Nysted Offshore Wind farm and Horns Reef Offshore Wind Farm since 1999. The monitoring programs are based on stationary acoustic recordings (T-PODs) at both farms and in addition ship surveys at Horns Reef. The monitoring programs finish by the end of 2005. The final report on the projects will be available in 2006. There is a recent paper published in 2006 on this topic by Carstensen et al (2006)<sup>4</sup>. Reports on the effect on harbour porpoises of the construction and operation phases are available at the following web page:

[http://www.hornsrev.dk/Engelsk/default\\_ie.htm](http://www.hornsrev.dk/Engelsk/default_ie.htm)

Madsen et al. (2006)<sup>5</sup> reviewed the existing literature on how harbour porpoises and other marine mammals react to sounds from windmills and windmill construction work.

The University of Ruhr-Bochüm (Germany) has resumed a project investigating the hearing sensitivity of harbour porpoises at the Fjord&Bælt, for looking at the effect of man-made noise on harbour porpoise hearing, especially offshore windmill construction works, and to provide guidelines for safe intensity level for sound emissions during underwater operations.

**Implementation of guidelines, new legislation, etc. to reduce disturbance:**

No new guidelines or legislation implemented.

<sup>4</sup>Carstensen, J., Henriksen, O.D. & Teilmann, J. (2006). Impacts of offshore wind farm construction on harbour porpoises: acoustic monitoring of echo-location activity using porpoise detectors (T-PODs). - *Marine Ecology Progress Series* 321: 295-308.

<sup>5</sup>Madsen, P.T., Wahlberg, M., Tougaard, J., Lucke, K. & Tyack, P. (2006). Wind turbine underwater noise and marine mammals: implications of current knowledge and data needs. - *Marine Ecology Progress Series* 309: 279-295.

**3. Protected areas for small cetaceans**

**Measures taken to identify, implement and manage protected areas:**

The Danish implementation of the EU Habitat Directive included previously the designation of several sites, which were considered important for harbour porpoises (cf. National Report 1998). However, new findings led to a revision of this list and the Danish implementation of the EU Habitat Directive includes now the designation of only one site (The Wadden Sea), which is considered important for harbour porpoises. It will in the future be considered whether other areas should be included. A M. Sc. study on this topic was finished by Sveegaard (Copenhagen University / National Environmental Research Institute).

**4. Further research on small cetaceans**

**Implementation of schemes to use and gain information from stranded cetaceans:**

A Danish contingency plan concerning marine mammals includes guidelines for handling stranded cetaceans.

All other stranded cetaceans than porpoises are systematically collected and tissue samples and skeletons kept in the collections of the two responsible museums, Fisheries and Maritime Museum, Esbjerg and Zoological Museum, Copenhagen. Samples from stranded harbour porpoises are opportunistically collected.

The total number of stranded animals in Denmark were:

- 83 harbour porpoises
- 2 whitebeaked dolphins
- 1 whitesided dolphin

**Research on abundance, population structure etc.:**

NERI conducts regular ship surveys for harbour porpoises at Horns Reef as part of the monitoring program for Horns Reef Offshore Wind Farm. Annual status reports are available and the final report will be available at; [http://www.hornsrev.dk/Engelsk/default\\_ie.htm](http://www.hornsrev.dk/Engelsk/default_ie.htm)

Kyhn (2006) finished a M. Sc. thesis at Aarhus University / National Environmental Research Institute concerning the efficiency of using automated acoustic data loggers for estimating the abundance of harbour porpoises.

In 2005 Denmark supported the SCANS II (Small Cetaceans in the Europeans Atlantic and North Sea II) dedicated to estimate the abundance of small cetaceans in European Atlantic waters. Extensive ship and aerial surveys were conducted in July 2005, to which NERI, F&B and DHI participated to. Data on abundance for Danish and other EU waters will be available in 2006. Project information and preliminary results can be found at: <http://biology.st-andrews.ac.uk/scans2/>

The Danish Environmental Research Institute is also investigating if there are genetic differences between harbour porpoises in various parts of the Baltic Seas. To this investigation they also add genetic analysis of previously collected samples from Little Bælt in 1860 and in 1941-44.

**Research on the effects of pollutants on cetacean health:**

No new projects reported.

**5. Public awareness and education**

**Measures taken in the fields of public awareness and education to implement or promote the Agreement:**

The Fjord&Bælt houses 3 harbour porpoises for research purposes and public education and awareness. Through exhibition and talks, the center provides information to the general public and special groups on harbour porpoises in general, the by-catch problem and the effort undertaken to mitigate it in Denmark. The Fjord&Bælt web page ([www.fjord-baelt.dk](http://www.fjord-baelt.dk)) also contains information on harbour porpoise conservation.

The Fishery and Maritime Museum is a public museum, which offers lessons on cetaceans as well as exhibitions on whales and whale strandings. Its homepage; [www.hvaler.dk](http://www.hvaler.dk) reports on whales and whale sightings in Danish waters.



Implementation of guidelines, new legislation, etc. to reduce disturbance

### 3. Protected areas for small cetaceans

None.

Measures taken to identify, implement and manage protected areas

### 4. Further research on small cetaceans

Look at point 5.

Implementation of schemes to use and gain information from stranded cetaceans

**In plan.**

Research on abundance, population structure etc.

None.

Research on the effects of pollutants on cetacean health

### 5. Public awareness and education

**Finland has continued the harbour porpoise sighting campaign and received information of only one sighting of single animal in year 2006. In July 2006 there was an observation of a humpback whale in Bothnian Bay (Himanka).**

<http://www.fimr.fi/en/itamerikanta/uutiset/1298.html>

**In late autumn, on 3<sup>rd</sup> November 2006, two common dolphins were first sighted off Korppo in the Archipelago Sea, in front of the Korppostörm Archipelago Center . After two weeks of swimming around in a bigger area they were found drowned in a fishing gear (salmon) in the 14<sup>th</sup> November near Kimito, 50 km eastwards from Korppoo. It was a cow and its calf, the calf was still suckling. The two carcasses where taken to Evira (Finnish Food Safety Authority) in Oulu for post mortem analysis.**

**The harbour porpoise working group has finalized its work in preparing the Finnish action plan for harbour porpoise. Below is the English summary of the publication:**

**The harbour porpoise in Finland**

**Suggested actions for the protection of the harbour porpoise in Finland**

The goal of the working group has been to develop an operating plan regarding Finland's approach to harbour porpoise conservation, as mandated by international and national conservation obligations for the species. General information about the harbour porpoise, and its habitat and characteristics are provided, and its occurrence in Finland since the mid 1800's. A harbour porpoise registry for the Finnish Environment Institute has been compiled from this information.

The harbour porpoise has been observed in Finnish waters for at least 7000 years. Information about the occurrence of the harbour porpoise since the 1800's has been gathered from sightings reported in the Museum of Natural History archives, literature, news paper articles and collections of specimens. Based on these findings, the harbour porpoise has, before the 1940's, been a fairly common sight on Finnish coasts. The advent of particularly harsh weather conditions during the winters of the 1940's on the Baltic Sea resulted in a crash in the harbour porpoise population. Since then, the revival of the harbour porpoise population has been hindered by environmental toxins, a decrease in the quality of their habitats and by the species being accidentally caught in fishing nets. Underwater noise pollution and increased marine traffic are other factors that may inhibit the reviving of the harbour porpoise population.

In 2001, Finland's Ministry of the Environment started a harbour porpoise sighting campaign, and as a result, sightings of the species have indeed increased. This does not imply, however, that the number of harbour porpoises is increasing. Rather, it is likely that people report their sightings more readily than before.

The harbour porpoise is classified as a threatened species world wide. Under EU legislation, whales, including harbour porpoises, are listed in annex IV of the Habitats Directive, and are thus classified as a species in need of special protection. Additionally, the species is protected under various international environmental conservation agreements. The purpose of the ASCOBANS Agreement is to protect the small whales that inhabit the Baltic and North seas, This agreement includes a specific plan, the Jastarnia Plan, for the reviving of the Baltic harbour porpoise.

Under Finland and Åland's legislation, the harbour porpoise is a protected species. Lately, the species has not been examined in reports by the Ministry of the Environment because there has been no evidence of its increase in Finland. Based on information collected for this study, the harbour porpoise may have increased in numbers also in Finnish territorial waters. The working group maintains that the assessment of the harbour porpoises' endangered status should be reviewed.

The report presents different ways in which the protection of the harbour porpoise can be furthered in Finland. The working group holds to the importance of surveying the occurrence of harbour porpoises in Finland's territorial waters, and to participating in international research projects related to the species. Some of the species' protection action is based on EU legislation. This is true, for example, for fishing restrictions and monitoring programs. Additional ways of increasing publicity to raise harbour porpoise awareness are also suggested.

Measures taken in the fields of public awareness and education to implement or promote the Agreement

# ASCOBANS Annual National Report

## A. General information

Name of party : FRANCE	Period covered : year 2006
Name of report compiler/ Sami Hassani Océanopolis	Date of report: 05/ 04/07
Any changes in co-ordinating authority, appointed member of advisory committee	

## B. NEW measures/action towards meeting the resolutions of the 2<sup>nd</sup> Meeting of Parties

### 1. Direct interaction of small cetaceans with fisheries

Investigations of methods to reduce by-catch			
EU NECESSITY project to reduce cetacean by-catch in pelagic trawl fisheries , mechanical and acoustic devices (end of project in May 2007) FR PROCET1 project to reduce cetacean bycatch in pelagic trawl with some commercial pingers (end of project in September 2006). FR PROCET2 project : news trials on mitigation in pelagic trawling by using mechanical and acoustic systems. (end of project in September 2007)			
Implementation of methods to reduce by-catch			
Modification of practices in pelagic trawling (headline at 5 m depth);			
Estimates of by-catch in set net and pelagic trawl fisheries			
For pelagic trawl fisheries, estimates have been provided last year with the PETRACET project (pelagic trawling in area VII and VIII) . Updated estimates will be provided with the Necessity project.			
Observers for the EC regulation( n° 812/2004) are deployed and updated estimates for pelagic trawling in area VII and VIII and first estimates for netting in area VIII should be available in June 2008. The table below brings the last bycatch estimates available for some FR and UE pelagic trawl fisheries (Petracet)			
Species	Estimated number of by-caught animals	Area (ICES area or more detailed)	Notes (type of fishery, effort, seasonal variations, etc.)
Common dolphin	- 10 < <b>11</b> < 33	VII	FR Bass pelagic trawling
Common dolphin	24 < <b>575</b> < 1125	VIII	FR Bass pelagic trawling
Common dolphin	72 < <b>674</b> < 2694	All areas	All EU pelagic trawling
	<b>(Petracet results)</b>		

### 2. Reduction of disturbance to small cetaceans

Information on levels of disturbance (e.g. seismic surveys, new high-speed ferry routes, studies about acoustic impacts on cetaceans, etc.)
Contacts are established between French marine biologists and the French Navy and are managed by the Ministry of the Ecology and Sustainable Development and the Admiralty. The aim of these contacts are to exchange knowledge on effects and mitigation measures. A workshop on marine environment characterisation was organised in Brest in September 2006 with small sessions on mitigation of disturbance;.
A report on the seismic and acoustic activities of the French oceanographic fleet made by IFREMER is available (mailto: Xavier.Lurton@ifremer.fr). In 2006 Ifremer implemented its first seismic mitigation in the Mediterranean Sea.
Some experiments on the effect of some commercial pingers and prototypes was carried out on common dolphins by CRMM and IFREMER. These studies on acoustic impact are done through the EU NECESSITY project.
Implementation of guidelines, new legislation, etc. to reduce disturbance
In 2006 Ifremer implemented its first seismic mitigation in the Mediterranean Sea. The protocol used was based on the NMFS recommendations.

### 3. Protected areas for small cetaceans

#### Measures taken to identify, implement and manage protected areas

Natura 2000 marine site procedures in progress: 4 sites have been proposed to the E.C. on the Channel and Atlantic coast for Harbour purpose and 12 for Bottlenose dolphin .

New law on Marine Protected Area voted (march 2006). Marine Protected Area in Iroise Sea in project (public inquiry in autumn 2006).

Creation of a National Agency for the Marine Protected Areas (Brest)

### 4. Further research on small cetaceans

#### Implementation of schemes to use and gain information from stranded cetaceans

National stranding network since 1970. National annual report, sample and tissue bank, data base, national coordination CRMM/University of La Rochelle.

#### Research on abundance, population structure etc.

Monitoring of the coastal group of bottlenose dolphins (Oceanopolis Brest in Iroise Sea), photo-identification, home range, population structure...

Photo identification of bottlenose dolphins of the Bay of Mont Saint Michel and Cotentin (GECC, GMN, Ocean-Ocean, 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 (CRMM/ULR, GECC, GEFMA, Oceanopolis Brest).

Systematic boat survey of cetaceans in relation to oceanographic, planktonic and pelagic fish patterns in the Bay of Biscay (programme PELGAS, Ifremer, CRMM/ULR)

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

#### Research on the effects of pollutants on cetacean health

Transfer and bioaccumulation of heavy metals (mainly mercury, lead and cadmium) in cetaceans (CRELA/ULR)

### 5. Public awareness and education

#### Measures taken in the fields of public awareness and education to implement or promote the Agreement

Public conferences (Oceanopolis-Brest)

## ASCOBANS Annual National Report

### A. General information

Name of party LITHUANIA	Period covered 2006
Name of report compiler Laura Janulaitienė	Date of report 9 March 2007
Any changes in co-ordinating authority, appointed member of advisory committee	

### B. NEW measures/action towards meeting the resolutions of the 2<sup>nd</sup> Meeting of Parties

#### 1. Direct interaction of small cetaceans with fisheries

Investigations of methods to reduce by-catch			
No investigations on methods to reduce by-catches of harbor porpoises have been conducted so far.			
Implementation of methods to reduce by-catch			
Yes, on the basis of the Council Regulation (EC) No. 812/2004.			
Estimates of by-catch in set net and pelagic trawl fisheries			
Species	Estimated number of by-caught animals	Area (ICES area or more detailed)	Notes (type of fishery, effort, seasonal variations, etc.)
-	-	-	-

#### 2. Reduction of disturbance to small cetaceans

Information on levels of disturbance (e.g. seismic surveys, new high-speed ferry routes, studies about acoustic impacts on cetaceans, etc.)
No measures on disturbance reduction have been implemented.
Implementation of guidelines, new legislation, etc. to reduce disturbance
Annually, new order of Minister of the Environment concerning the compensation for damage of wild fauna and their habitats, including harbour porpoise, was implemented.

#### 3. Protected areas for small cetaceans

Measures taken to identify, implement and manage protected areas
No protected areas for cetaceans are identified in Lithuania.

#### 4. Further research on small cetaceans

Implementation of schemes to use and gain information from stranded cetaceans
There are no such scheme implemented.
Research on abundance, population structure etc.
No research on abundance and population structure.

Research on the effects of pollutants on cetacean health

None.

#### **5. Public awareness and education**

Measures taken in the fields of public awareness and education to implement or promote the Agreement

The lectures for schoolchildren and students on protection of marine ecosystems including small cetaceans as well as local harbor porpoises are permanently organized in the Lithuanian Sea Museum display.

The International Harbour Porpoise Day mentioned in the Lithuanian Sea Museum in 2006 too. The postcards about harbor porpoise have been distributed among the Lithuanian Sea Museum visitors, ASCOBANS posters and a life-size model of harbour porpoise have been exhibited at the aquarium hall of the Lithuanian Sea Museum, moreover, a film and photos about harbour porpoise were demonstrated to the visitors.

The article in daily press and interview in the radio of Klaipėda were made on the International Harbor Porpoise Day.

# ASCOBANS Annual National Report

## A. General information

<i>Name of party:</i> Netherlands	<i>Period covered:</i> 1 January – 31 December 2006
<i>Name of report compiler:</i> ir. A.S. Adams	<i>Date of report:</i> 19 March 2007
<i>Any changes in co-ordinating authority, appointed member of advisory committee.</i> The co-ordinating authority is the Ministry of Agriculture, Nature & Food Quality, focal person is Drs. M.H.W (Maaïke) Moolhuijsen. Post address P.O. Box 40201 NL-2500 EK Den Haag. Telephone (+)31 70 378 5315. E-mail: m.h.w.moolhuijsen@minlnv.nl	

## B. NEW measures/action towards meeting the resolutions of the 2<sup>nd</sup> Meeting of Parties

### 1. Direct interaction of small cetaceans with fisheries

#### Effects of pingers on the behaviour of North Sea fish species

To reduce the unwanted bycatch in gillnets, pingers (acoustic alarms) have been developed that are attached to the nets. In the European Union, pingers will be made compulsory in some areas in 2005 and in others in 2007. However, pingers may affect non-target marine fauna such as fish.

Therefore a study has been carried out by Seamarco and IMARES (Institute for Marine Resources and Ecosystem Studies) in The Netherlands, to quantify the effects of seven presently commercially-available pingers on the behaviour of five North Sea fish species in a large tank. The species tested were: sea bass (*Dicentrarchus labrax*), pout (*Trisopterus luscus*), thicklip mullet (*Chelon labrosus*), herring (*Clupea harengus*), and cod (*Gadus morhua*).

The fish were housed as single-species schools of 9–13 individuals in a tank. The behaviour of fish in quiet periods was compared with their behaviour during periods with active pingers. The results varied both between pingers and between fish species.

Of the seven pingers tested, four elicited responses in at least one fish species, and three elicited no responses. Whether similar responses would be elicited in these fish species in the wild, and if so, whether such responses would influence the catch rate of fisheries, cannot be derived from the results of this study. However, the results indicate the need for field studies with pingers and fish. Based on the small number of fish species tested, the present study suggests that the higher the frequency of a pinger, the less likely it is to affect the behaviour of marine fish.

*Kastelein, Ronald, A., Sander van der Heul, Jan van der Veen, Willem C. Verboom, Nancy Jennings, Dick de Haan, Peter J.H. Reijnders 2007. Effects of commercially-available acoustic alarms, designed to reduce small cetacean bycatch in gillnet fisheries, on the behaviour of North Sea fish species in a large tank. Mar. Env. Res. (in press)*

#### Effects of pingers on the behaviour of bottlenose dolphins

A basin study started in 2005 on the impact of pinger sounds (a technical mitigation tool to reduce dolphin by-catches in fishing gear) on

a captive bottlenose dolphin of the dolphinarium Bruges (Belgium).  
 Nowadays there are commercial pingers in use, which produce very high-frequency sound of high density noise, which will mask echo-location sonar reflections with possible negative effects for dolphins to navigate in dangerous trawl areas and could have an opposite effect and add to bycatch in stead of a reduction.  
 The research deals with the question what the threshold of the frequency density is ( $\Delta F$ ) and with which type of sound dolphins first meet problems in detecting a target.  
 IMARES defined the test signals with the SaveWave and AquaTec pinger types as sound model as well as the acoustic measurements and calibrations of the equipment.  
 The study is conducted in the mainframe of the EU co-funded project "Necessity" and executed in co-operation with Seamarco (Ron Kastelein) and the dolphinarium Bruges, Belgium.

Net modifications to reduce by-catch of cetaceans in pelagic trawling

Sea trials on net modifications to reduce by-catch of cetaceans in pelagic trawling were carried out by IMARES from 15/09/2006 to 05/10/2006 onboard FRV "Walther Herwig III" in EU-project NECESSITY (Contract No SSP8-CT-2003-501605). A 'cetacean tunnel barrier' was rigged in the front part of a 4300 meshes circumference pelagic trawl to avoid the animals from entering the aft part of the trawl and induce an escape route in front of the barrier. The research was conducted in the Bay of Biscay along the French shelf edge and started on the most northern position of the research area (position 46.43.3N and 004.36.8 W). The most southern position was 45.05.4 N and 002.25.7 W.

After initial test hauls, fishing was continued day and night, optimise chances of encountering animals and observe their behaviour against the barrier. Autonomous video recorder systems were attached to the trawl's top panel at the position of the tunnel barrier outlet. A WESMAR™ trawl sonar was attached to the centre of the headrope to detect fish entering the trawl and any other vocalisation as time reference for the video observations at the tunnel barrier. A total of 19 instrumented hauls were carried out, during all of which video and sonar recordings were collected. On night hauls the trawl was fished with an opened codend to avoid fish catches and hauling of the gear at night. A panel of 250 mm square meshes in the codend collected larger animals, which passed the barrier. The towing speed was about 4-5 knots. The ship's hull sonar system was used in passive mode to detect cetacean vocalisations and their position and heading relative to the ship and trawl. On the first night haul three male common dolphins (*Delphinus Delphis*) were caught, on that haul the video instrumentation was not fully optimised and the illumination of the target area contained saturated areas. Relatively large numbers of sunfish (*Mola mola*) were bycaught with the highest numbers in the southern part of the research area (51 in 12 hours, 11 in 2:15 hours). All newly developed underwater instruments performed as expected, no other damage than a cable failure can be reported.

*Investigations of methods to reduce by-catch*

*Implementation of methods to reduce by-catch*

*Estimates of by-catch in set net and pelagic trawl fisheries*

Species	Estimated number of by-caught animals	Area (ICES area or more detailed)	Notes (type of fishery, effort, seasonal variations, etc.)
Harbour porpoise	>200	Dutch North Sea coast	Presumably gillnets

**2. Reduction of disturbance to small cetaceans**

Impact study of a wind farm off the North Sea coast of The Netherlands

The first phase of a study on the possible impact of a wind farm off the North Sea coast of The Netherlands (close to Bergen at Sea) has

been finished. The outcome has provided reference data on abundance, occurrence and distribution of harbour porpoises in the wind farm area and two reference sites. Both boat surveys and the deployment of hydrophones (T-PODs) have been used to acquire the necessary baseline data. The construction of the wind farm has been finalised at the end of 2006. During the construction works, noise levels have been recorded and are being processed. Early 2007, the second phase of this study will start and continue for at least two years to investigate again abundance, occurrence and distribution of harbour porpoises.

#### High speed ferry routes

There are no longer high speed ferry routes under dutch control. In June 2006 Stena Line announced the termination of the high-speed service with the catamaran ferry *Stena Discovery* per 8 January 2007. It had been carrying the majority of the passenger traffic on the Hoek van Holland–Harwich route. This service was halted due to the excessive costs and competition from the budget airlines. The service is replaced by regular ferries.

#### Acoustic impacts

An interdepartmental working group is formed to discuss and survey the issue of acoustic impacts. There are plans to investigate the size of the problem in the Dutch continental shelf. There are also plans to investigate the acoustic sensitivity of Harbour porpoise in basins, but there are problems in the use of test animals.

#### Effects of sonar on marine mammals

In 2003 a study started on the effects of sonar on marine mammals. TNO developed software (SAKAMATA) that provides information on the marine mammals that may be expected in the operational area, as well as on the sensitivity of their hearing. SAKAMATA includes a database for the audiovisual monitoring of marine mammals. For each operational area the system will generate a so-called ramp-up scheme, that takes into account the sonar specifications, the environmental conditions and the species of marine mammals present in the area. With SAKAMATA it is possible to keep the hearing damage to marine mammals within limits.

[http://www.tno.nl/content.cfm?context=markten&content=product&laag1=178&laag2=177&item\\_id=580&taal=2](http://www.tno.nl/content.cfm?context=markten&content=product&laag1=178&laag2=177&item_id=580&taal=2)

During military exercises of the Royal Netherlands Navy there is the conduct that, when marine mammals are visually or acoustic observed, they turn to passive sonar (which means: only listening).

[http://www.minlnv.nl/portal/page?\\_pageid=116,1640803&\\_dad=portal&\\_schema=PORTAL&p\\_news\\_item\\_id=20071-14k-](http://www.minlnv.nl/portal/page?_pageid=116,1640803&_dad=portal&_schema=PORTAL&p_news_item_id=20071-14k-)

There is a research project together with United Kingdom and Norway on the sensitivity of Killer whale to sonar.

[http://www.minlnv.nl/portal/page?\\_pageid=116,1640803&\\_dad=portal&\\_schema=PORTAL&p\\_news\\_item\\_id=20071-14k-](http://www.minlnv.nl/portal/page?_pageid=116,1640803&_dad=portal&_schema=PORTAL&p_news_item_id=20071-14k-)

#### *Information on levels of disturbance*

*(e.g. seismic surveys, new high-speed ferry routes, studies about acoustic impacts on cetaceans, etc.)*

There are no guidelines or new legislation to reduce disturbances to small cetaceans.

*Implementation of guidelines, new legislation, etc. to reduce disturbance*

### **3. Protected areas for small cetaceans**

#### Special Areas of Conservation (SACs) in the Dutch sector of the North Sea

A study has been carried out by IMARES (the Institute for Marine Resources and Ecosystem Studies) in The Netherlands on request of the The Dutch government, with the aim to identify candidate Special Areas of Conservation (SACs) under the Bird- and Habitat Directive and OSPAR in the Dutch sector of the North Sea. This study has been finalized and presented to the responsible authorities. In the Dutch Continental Shelf and Coastal Waters 4 areas have been identified as marine areas: Friese Front, Klaverbank, Doggerbank and parts of the

coastal zone.

In 2008, these areas will be proposed to the EU commission as Special Areas of Conservation (SAC's) under the European Birds and Habitats Directives and will also be reported to the OSPAR Secretariat as MPA's according to the OSPAR Convention. Although it is not to be expected that these potential SACs will be designated for small cetaceans especially, they may well contribute to their protection.

*Measures taken to identify, implement and manage protected areas*

#### 4. Further research on small cetaceans

##### Stranded harbour porpoises

In September 2006, 64 earlier in that year on the Dutch North Sea coast stranded harbour porpoises, have been investigated. This was a joint study by the Institute for Marine Resources and Ecosystem Studies and the Royal NIOZ. Of the carcasses suitable for investigation, the percentage bycatch-victims are estimated at 64-70%. The majority of the studied animals were subadult, but the estimated percentage bycatch did not differ between young and old(er) animals.

Porpoises strand on the coast the entire year round, but there are two distinct periods when higher numbers were found. The first wave of strandings was observed in March and April. These animals were healthy, freshly dead, often with full stomachs. Of these spring strandings, around 84% are estimated to have died because of drowning in fishing gear (nets). A second wave was discernable in the summer. These animals were usually unhealthy, with very little blubber reserves and empty stomachs. Drowning as a cause of death of these summer strandings was estimated to amount to only 25%. Animals unsuitable for investigation (progressed state of decomposition) were not equally distributed over the year: few in the spring period when the estimated percentage bycatch was very high, and much more rotten animals in summer period with a lower estimated bycatch percentage. When the found bycatch percentages amongst the fresh carcasses were applied to all the collected stranded porpoises including the unsuitable ones, the percentage bycatch victims during the collection period, decreased to 53-57%.

The outcome of this investigation reveals that the percentage bycatch amongst all collected animals is at least 53% (excluding animals which were suspected to be bycaught, but no conclusive evidence) and a maximum bycatch percentage (including the suspected possible bycatch victims).

The number of stranded porpoises on the Dutch North Sea coast has strongly increased in recent years. It is expected that in 2006 around 500 porpoises will strand. The increase runs parallel to the increase in numbers of porpoises observed alive off the Dutch coast. Porpoises are strictly protected under the Dutch Flora and Fauna Law, which is based on the EU Habitat Directive. The large amount and annually rapid increasing number of dead stranded animals, from which a high percentage are bycatch victims, is of great concern.

*Leopold M.F. & C.J. Camphuysen 2006. Bruinvisstrandingen in Nederland in 2006: Achtergronden, leeftijdsverdeling, sexratio, voedselkeuze en mogelijke oorzaken. IMARES Rapport COB3/06, NIOZ Report 2006\_5, Wageningen IMARES en Koninklijk Nederlands Instituut voor Onderzoek der Zee, Texel*

(see also: [www.walvisstrandingen.nl](http://www.walvisstrandingen.nl)).

*Implementation of schemes to use and gain information from stranded cetaceans*

##### Overview on occurrence harbour porpoises

A historic overview has been produced on the past and present occurrence of harbour porpoises in Dutch coastal waters. This overview spans the 20<sup>th</sup> century till present, and is based on effort corrected sightings from sea-watching sites, and *ad hoc* observations. Along the mainland North Sea coast in The Netherlands (i.e. south of Den Helder) several fixed effort sites exist, providing very frequent sightings and a clear-cut seasonal pattern.

Harbour porpoises initially were winter visitors in Dutch coastal waters, but are becoming year-round visitors. Adult females with small

offspring have been observed with increasing regularity in recent years. Documented strandings show a similar trend: increasing numbers wash ashore, and more frequent strandings of young individuals. It is postulated that the same trends and seasonal patterns occur at the west-Frisian islands, which is corroborated by opportunistic sightings only.

The increase in harbour porpoises in the Dutch waters since the mid-1990s until now, is linked to a distributional shift of harbour porpoises in the North Sea rather than population fluctuations. The re-distribution may be triggered by local reductions or regional changes in principal prey available.

Scientists from The Netherlands have actively participated in the cetacean survey SCANS II, and the results have been and will be reported to ASCOBANS and elsewhere in different fora.

*Research on abundance, population structure etc.*

#### Consequences at the population level of exposure of marine mammals to contaminants

In order to assess consequences at the population level of exposure of marine mammals to contaminants, a study has been carried out using bottlenose dolphins as a sentinel species. It has shown that the annual accumulation rate of polychlorinated biphenyls (PCBs) in Sarasota bottlenose dolphins might be depressing the population growth rate.

*Hall, A.H., McConnell, B.J., Rowles, T.K., Aguilar, A., Borrell, A., Schwacke, L., Reijnders, P. J. H. & Wells, R. S. 2006. An individual based model framework to assess the population consequences of polychlorinated biphenyl exposure in bottlenose dolphins. Environ. Health Perspect. 114 (suppl.1): 60-64.*

*Research on the effects of pollutants on cetacean health*

## **5. Public awareness and education**

### Whales and Dolphins of the North Sea

In 2006 the Foundation of the North Sea published a book "Walvissen en dolfijnen in de Noordzee", written by Kees Camphuysen and Gerard Peet. This book was sponsored by the ministry of Agriculture, Nature and Food Quality, VSBfonds, Prins Bernhard Cultuurfonds, ANWB, Natuurpunt, Federal public service, Kust en zee, UNEP en CMS. It is also available in English under the title: "Whales and Dolphins of the North Sea". This book will be presented to the members of the ASCOBANS meeting.

*Measures taken in the fields of public awareness and education to implement or promote the Agreement*

## A. General information

Sweden Name of party	060101- 061231 Period covered
Christina Rappe Name of report compiler	2007-03-28 Date of report
Any changes in co-ordinating authority, appointed member of advisory committee	

## B. NEW measures/action towards meeting the resolutions of the 2<sup>nd</sup> Meeting of Parties

### 1. Direct interaction of small cetaceans with fisheries

Investigations of methods to reduce by-catch

The pike perch fisheries in the Baltic has for a long time suffered from seal damages. The National Board of Fisheries is investigating if it is possible to replace nets with fish traps both to reduce seal damages and to replace the net fishery with alternative fishing gear.

The traps used are so called push-up traps. They have been a success in Sweden in the salmon and white fish fisheries. They are now introduced in the pike perch fisheries and the results are promising. In the salmon fisheries the traps mostly replace older traps but in the white fish and pike perch fisheries the traps replace nets and therefore reduce net effort. The project started in 2005 and will continue during 2007 .



The push-up trap fishing for pike perch in shallow waters.

Implementation of pingers: Swedish fishermen do get pingers for free. Fishermen have been informed about the regulations and also practical information about where and how they can get hold of the pinger. Around 9 fishermen have bought pingers and are using them when fishing in areas where pingers are required.

Observerprogram: Three observers are employed and have been out on board of fishing boats observing harbour porpoise by-catch since august 2006.

**2. Reduction of disturbance to small cetaceans**

<b>Fast Ferries</b>	
<b>Name/type of craft</b>	<b>Route (return)</b>
HSS Stena Carisma	Gothenburg-Fredrikshavn
HSC Gotlandia 2	Nynäshamn-Visby-Oskarshamn
Information on levels of disturbance (e.g. seismic surveys, new high-speed ferry routes, studies about acoustic impacts on cetaceans, etc.)	
Nothing to report	
Implementation of guidelines, new legislation, etc. to reduce disturbance	

**3. Protected areas for small cetaceans**

<p>No area has been identified as a protective area for harbour porpoise in the Baltic. In the Skagerrak two Natura 2000 sites has been identified to harbour porpoises. The sites are: Vrångöskärgården and Koster-Väderöfjorden.</p>
Measures taken to identify, implement and manage protected areas

**4. Further research on small cetaceans**

<p>Post mortem investigations are carried out on all small cetaceans by-caught or found stranded in the Baltic. The animals should be brought fresh to the Swedish Museum of Natural History, Stockholm where the investigations are conducted. From harbour porpoises by-caught or stranded on the Swedish west coast, in most cases only a piece of tissues from the dorsal fin is sampled. In some cases whole specimen from the Swedish west coast is sampled. For further detail se prior information sent to ASCOBANS.</p> <p>During 2006 four porpoises from the Baltic were collected whole. Tissue samples were taken and stored in the Environmental Specimen Bank at the Swedish Museum of Natural History. One of the porpoises was drown in fishing gear, the other three were stranded animals.</p>
---

Implementation of schemes to use and gain information from stranded cetaceans
<p>The Swedish Fishermens organisation and the Swedish Board of Fisheries are estimating the presence of harbour porpoises in the south Baltic sea, the areas covered by the 812 regulation. 35 Porpoise click detectors (PCL:s) have been placed close by fishing gear during the year 2006. The results from the study are being analysed.</p> <p>A study concerning the effect of pingers on seals has been carried out, with the objective to investigate if the seal-fishery conflict increase with increasing use of pingers. The results are currently being analysed.</p> <p>Research on abundance, population structure etc.</p>
See above
Research on the effects of pollutants on cetacean health

**5. Public awareness and education**

<p>The International Day of the Porpoises, in May 2006, was celebrated at “Havets Hus” (an aquarium in Lysekil, on the Swedish West Coast).</p>
<p>The Swedish Museum of Natural History in Stockholm has a web site where sightings of live porpoises are collected. The web site has been in force since 2003 and an increasing number of sightings have been registered. During 2006 a total of 184 sightings were reported to the web page (in 2005: 129, 2004 130 and in 2003 49). So far the webpage is in Swedish only (<a href="http://www.nrm.se/tumlare">http://www.nrm.se/tumlare</a>).</p> <p>A poster was produced by the SEPA and the Swedish Museum of Natural History in Stockholm illustrating the differences between seals and porpoises, some basic information about porpoises and information on how and where to report sightings. Out of 2000 copies, so far ¼ of the posters have been distributed to various institutions.</p> <p>Posters regarding sighting harbour porpoises has been distributed to Fishermens organisations, marinas, museums, directly to fishermen by onboard observers and others.</p> <p>A DVD with information about pingers and their effect have been distributed to museums, the fishermens organisation, the observers and others.</p>
Measures taken in the fields of public awareness and education to implement or promote the Agreement