

# Sixth Compilation of Annual National Reports

Bonn, 2002



**ASCOBANS**

Agreement on the Conservation of Small Cetaceans of the Baltic and North Seas

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## Preface

The ASCOBANS Secretariat is pleased to present its sixth Annual Compilation of National Reports. This new compilation, comprising the reports for 2001, impressively documents the manifold activities the seven reporting Parties undertook to implement the Agreement in the first year of its third triennium. Parties have continued to make considerable efforts to achieve the aim of ASCOBANS, which is to maintain or restore a favourable conservation status for small cetaceans.

All of these efforts are worthy of mention, but space does not allow for a comprehensive overview in this preface. For this reason, the Secretariat would like to highlight just one particular activity benefiting the especially endangered Baltic harbour porpoise. In the summer of 2001, Finland initiated a public awareness programme aimed at the general public and those likely to encounter harbour porpoises in their daily activities: boatmen, fishermen, border guards, nature conservation and fishery authorities, nature conservation organisations, universities and others. As a result, there were no fewer than seven harbour porpoise sightings in an area no longer believed to be part of the species' range.

This campaign, which was continued in the summer of 2002, is an impressive example of how greater public awareness can contribute to our knowledge and thereby promote conservation of small cetaceans in the ASCOBANS area. To quote the poet and statesman Johann Wolfgang von Goethe: we only see what we know.

Rüdiger Stempel  
Executive Secretary

Bonn, 2002



## A. GENERAL INFORMATION

### 1. Summary of Party Details

<b>Party</b>	<b>Period Covered</b>	<b>Report Compiler</b>	<b>Coordinating Authority</b>
Belgium	1 January 2001 - 31 December 2001	Jan Haelters MUMM 3e en 23e Linienregimentsplein 8400 Oostende	Dr Thierry Jacques, MUMM* Ministère de la santé publique et de l'Environnement, Gulledulle 110 1200 Bruxelles
Denmark	2001	Palle Uhd Jepsen in cooperation with the Danish Institute for Fisheries Research, the Ministry of Food, Ag- riculture and Fishery, Fjord&Bælt, National Environmental Re- search Institute, and the Zoological Museum, University of Copen- hagen	Mr Palle Uhd Jepsen National Forest and Nature Agency, Nature and Wildlife Section, Ålholtvej 1 6840 Oksbøl
Finland	2001	Penina Blankett	Penina Blankett Ministry of the Environment P.O. Box 380 00131 Helsinki Finland
Federal Republic of Germany	1 January - 31 December 2001		Dr Tilman Pommeranz Federal Ministry for the Environment, Na- ture Conservation and Nuclear Safety Postfach 120629 53048 Bonn
Poland	1 January - 31 December 2001	Iwona Kuklik, Krzysz- tof Skora Hel Marine Station University of Gdańsk P.O. Box 37 84-150 Hel	Mr Andrzej Langowski Ministry of Environmental Protection, Natural Resources and Forestry, Department for Nature Conservation Ul Wawelska 52/54 00-922 Warsaw
Sweden	2001	Christina Rappe	Christina Rappe Swedish Environmental Protection Agency Blekholtsterrassen 36 10648 Stockholm
United Kingdom of Great Britain and Northern Ire- land	1 January - 31 December 2001	Stacey Hughes, DEFRA	Mr John Clorley Dept. for Environment, Food & Rural Affairs (DEFRA) Species Conservation Branch Temple Quay House 2 The Square Bristol BS1 6EB

## 2. Institutions and Organisations mentioned in national reports

<i>Country</i>	<i>Name</i>	<i>Pages</i>
<b>Belgium</b>	Laboratoire d'Océanologie, Université de Liège	17
<b>Denmark</b>	Danish Environmental Research Institute	20
	Danish Fisheries Research Institute	6, 20
	Danish Outdoor Council	25
	Fisheries and Maritime Museum, Esbjerg	25
	Fjord&Bælt, Kerteminde	6, 7, 20, 22, 23, 25
	GB Bank Foundation	25
	Ministry of Food, Agriculture and Fishery	7
	National Environmental Research Institute	11
	National Forest and Nature Agency	20, 25
	Ornis Consult	11
	Zoological Museum, Copenhagen	25
<b>France</b>	Centre de Recherche sur les Mammifères Marins, La Rochelle	19
<b>Germany</b>	Research and Technology Centre, Büsum	17, 20, 23
	German Oceanographic Museum, Stralsund	17, 20
	Institute for Baltic Research, Warnemünde	17
	Veterinary Institute for Fish and Fishery Products, Cuxhaven	17
	Multimar-Wattforum Tönning	26
	National Park Service Schleswig-Holstein	26
<b>Poland</b>	Hel Marine Station, University of Gdańsk	24, 26
<b>Sweden</b>	Kolmårdens Djurpark	6
	Stockholm University Harbour Porpoise Group	24
<b>UK</b>	Centre for Environmental Data and Records (CEDaR)	18
	Centre for Environment, Fisheries and Aquaculture Science (CEFAS)	24
	Ceredigion County Council	12
	Cornish Fish Producers' Organisation	7
	Countryside Council for Wales (CCW)	12, 19, 22
	Department of Trade and Industry (DTI)	14, 16
	Environment and Heritage Service (N. Ireland)	18, 27
	"Friends of Cardigan Bay"	22
	Hebridean Whale and Dolphin Trust	27
	Institute of Zoology (IoZ)	17, 18, 24
	Irish Naturalists Journal	18
	Irish Whale and Dolphin Group (IWDG)	27
	Joint Nature Conservation Committee (JNCC)	14, 15
	Moray Firth Partnership	15
	National Assembly for Wales	19
	Natural History Museum, London (NHM)	17, 18, 19, 27
	Scottish Agricultural College Veterinary Science Division (SACVSD)	18, 21, 24
	Sea Mammal Research Unit (SMRU)	7, 8, 18, 21,
	Ulster Museum	18
	University of Aberdeen Zoology Department	21
	University of St. Andrews	15
	Veterinary Research Laboratory of the Department of Agriculture and Rural Development (N. Ireland)	18
	WWF-UK	24

**B. NEW MEASURES/ACTION TOWARDS MEETING THE RESOLUTIONS OF  
THE MEETING OF THE PARTIES**

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

a. Investigations of methods to reduce bycatch

***Belgium***

All three gillnet fishermen were contacted (personally) and additionally were sent a letter asking for information on incidental catches of marine mammals (March 2001). Only a very limited bycatch of harbour porpoises and seals was reported.

***Denmark***

The research programme EPIC<sup>1</sup>, with participation from Denmark, Sweden and the UK, initiated in 1998 and finalised in September 2001, has produced a report (now publicly available) to EC DG XIV (97/0006). The EPIC project addresses methods for mitigation of bycatches of harbour porpoises in bottom-set gillnets, and the area of study focuses on the North Sea and Inner Danish waters. Results should be applicable to other areas and different situations.

The study involved recording and analysing behaviour of harbour porpoises mainly in controlled (enclosed) conditions, in relation to foraging, reaction to obstacles presented and acoustic stimuli, and potential deterrent devices. Research and technical improvements of deterrent devices, signal processing, relevant analysis and engineering on the basis of new data and current research were undertaken. In addition, monitoring of the bycatch rate for the harbour porpoise population(s) at risk in set gillnet fisheries in Danish waters through monitoring schemes, and of population biology and diet through sampling of bycatches were continued with collation of a biological database and bibliography of bycatch publications for dissemination via CD-ROM and media presentation through videos to the fishing industry.

Reduction of harbour porpoise bycatch by use of high-density gillnets was tested in sea trials in the Danish North Sea bottom set gillnet fishery in September-October 2000<sup>2</sup>. The sea trials were conducted as a controlled experiment with conventional gillnets as the control group. Eight porpoises were caught in the control nets and none in the high-density nets. Analyses of porpoise catch rates show that this reduction is highly significant (ANOVA, P=0.002). Of the four fish species analysed only the catch rate for cod was significantly different between the

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<sup>1</sup> Lockyer, C., M. Amundin, G. Desportes, A.D. Goodson and F. Larsen, F. 2001. *The tail of EPIC*. Final report of EPIC, Elimination of Harbour Porpoise Incidental Catches. EU Project DG XIV 97/0006, 249pp.

<sup>2</sup> Larsen, F., Eigaard, O.R. and J. Tougaard, 2002 Reduction of harbour porpoise bycatch in the North Sea by high density gillnets. Paper presented to the Scientific Committee of the International Whaling Commission, Shimomoseki, May 2002, SC/54/SM30. 12pp.

two groups of nets, with CPUE in the high-density nets being approx. 30% percent lower than in the control nets. Subsequent investigations conducted in seawater tanks under controlled conditions revealed that there was no difference in acoustic target strength of the two net types, and that the nets behaved similarly under various conditions. The authors conclude that the mechanical properties of the high-density nets, primarily the increased stiffness, are the main reasons for the differences in catch rates for cod and for porpoises.

The two-year research project NAPER, "New Alternatives to Porpoise Entanglement Reduction", funded by the Nordic Council of Ministers, was initiated by Fjord&Bælt (Denmark), Kolmårdens Djurpark (Sweden) and the Danish Fisheries Research Institute.

The NAPER project further investigates, both in enclosed condition at Fjord&Bælt (2001) and in the wild (2002), a new "pinger" concept tested successfully during the EPIC project, an "interactive" pinger, where the deterrent sound was triggered by the porpoises' own sonar. The interactive pinger is an interesting alternative since the deterrent sounds are only transmitted when they are necessary, i.e. when a porpoise is swimming toward a net. As a consequence, the sound emitted to the environment is reduced and the unpredictability of the deterrent signal will delay habituation. A crucial factor in this concept is however to insure that porpoises aim their sonar at the device, so they trigger it often enough to be deterred from the net. The idea is then to acoustically alert the animal by adding enticing sounds to the device, so the porpoises are stimulated to investigate it with their sonar. The main objectives are to investigate the effectiveness of using enticing sounds, to select the best triggering regimes and to estimate the efficiency of the interactive pinger in situations where porpoises search food at the bottom, by bottom grubbing, i.e. moving in a vertical position the snout very close to the bottom with both vision and echolocation focussing on the bottom.

### ***Finland***

None.

### ***Federal Republic of Germany***

No investigations were conducted in German fisheries to reduce bycatch.

### ***Poland***

Puck Bay has been identified as a "hot spot" for porpoises due to a relatively high level of incidental takes (average 5 individuals/year). To find a possible relation between the fishing intensity and porpoise occurrence, a project is being planned with application of acoustic high frequency porpoise detectors (PODs) to monitor seasonal occurrence and abundance of porpoises in Puck Bay. It is aimed to give an understanding of the scale of porpoise bycatch to implement appropriate methods to reduce bycatch in the region.

## ***Sweden***

Pingers have proven effective in reducing harbour porpoise bycatch, but have some negative side-effects. "Interactive" pingers, which are triggered by porpoise sonar clicks, address some of these side effects, e.g. reducing "noise pollution" and delaying habituation.

Trials using interactive pingers were carried out at Fjord&Bælt (Denmark), on two harbour porpoises held in a sea pen and acclimatized to captivity. Further testing with wild, naïve porpoises are planned for the summer of 2002.

## ***United Kingdom***

The Sea Mammal Research Unit (SMRU) in collaboration with the Cornish Fish Producers' Organisation and two Irish partners ran a field trial to investigate the effectiveness of Dukane Netmark 1000™ pingers in minimising the bycatch of porpoises in the Celtic Sea set net fishery. The report of this work was accepted by the European Commission in June 2001. As previously reported to ASCOBANS, the results suggest that these pingers were effective in reducing bycatch by more than 90%.

Monitoring work by the SMRU on UK gillnet fisheries has continued, and has been stepped up on UK pelagic trawlers during 2001. In the course of 2001 the SMRU placed Dukane Netmark 1000 pingers around the mouth of one of the trawls of the pelagic pair teams targeting bass in the English Channel, but this did not reduce incidence of dolphin bycatch in this instance.

### **b. Implementation of methods to reduce bycatch**

## ***Belgium***

A Royal Decree on the protection of marine species, signed by the King on 21 December 2001 and published in the Official Journal on 14 February 2002 (for the full text, in Dutch and French, see <http://www.staatsblad.be/>), bans the use of bottom set gill nets in recreational fisheries below the low water mark. These nets are known to occasionally kill harbour porpoises and seals. The use of these nets had already diminished due to new legislation setting a minimum mesh size. The Royal Decree was proposed by the minister responsible for marine fisheries, and the minister responsible for the marine environment.

A new (third) gillnet vessel setting up to 15 km of bottom set gill net was operational from mid March 2001 onwards.

## ***Denmark***

In 2000 the Ministry of Food, Agriculture and Fishery issued a ministerial order on compulsory application of pingers in certain types of gill-net fishery for cod in the North Sea in the period 1 August to 31 October.

### ***Finland***

None.

### ***Federal Republic of Germany***

No methods to reduce bycatch have been implemented.

### ***Poland***

No implementation.

### ***Sweden***

No action reported during 2001. Methods to reduce bycatch will be introduced in 2002 in the national management plan for harbour porpoises.

### ***United Kingdom***

In January 2001, UK Fisheries Minister Elliot Morley wrote to EU Commissioner Franz Fischler seeking international action to support the ASCOBANS resolution on small cetacean bycatch. He also suggested that the Commission should actively consider the compulsory use of acoustic devices (pingers) on all Community fixed gear fisheries. This was followed up in April 2001 by a written presentation to the Commission of the findings to date of SMRU research on cetacean bycatch.

In response to the Commission's Green Paper on the review of the Common Fisheries Policy, in September 2001 the UK stressed the need to strengthen the integration of environmental considerations into fisheries policy, referring specifically to the need for the Commission to take action under the CFP to reduce small cetacean casualties caused by fishing.

In July 2001, the Government set up a Working Group to develop a UK Bycatch Response Strategy. The overall aim of the Strategy is to identify what measures can be taken, and the constraints on those measures, to work towards meeting the 1.7% ASCOBANS bycatch target by the fourth Meeting of Parties in 2003. At the second meeting in October, SMRU presented to the Group information on bycatch estimates for each fishery, comparing rates between fisheries, and summarised the efficacy and status of various mitigation methods. The latter included a recommendation that a dolphin "separator grid" should be trialled in the bass fishery in the Spring of 2002. DEFRA is planning to produce the Strategy in 2002.

Under the auspices of the Cetacean and Turtle Biodiversity Action Plan Group, two meetings of the Fisheries Sub-Group took place in 2001. This forum was set up by the Cetacean and Turtle Group to recommend actions to reduce the negative interaction of cetaceans and marine turtles with commercial fisheries and, in conjunction with the Bycatch Response Strategy Group, help to identify measures to assist the UK in fulfilling its obligations under

ASCOBANS. The Group comprises Government officials, conservationists and fishing industry representatives.

c. Estimates of bycatch in set net and pelagic trawl fisheries

***Belgium***

<b>Estimates of bycatch in set net and pelagic trawl fisheries</b>			
<b>Species</b>	<b>Estimated number of by-caught animals</b>	<b>Area (ICES area or more detailed)</b>	<b>Notes (type of fishery, effort, seasonal variations etc.)</b>
Harbour porpoise	1 +	Ivc (102)	Bottom set gill net (recreational beach fishery)

***Denmark***

<b>Estimates of bycatch in set net and pelagic trawl fisheries:</b>			
<b>Species</b>	<b>Estimated number of by-caught animals</b>	<b>Area (ICES area or more detailed)</b>	<b>Notes (type of fishery, effort, seasonal variations etc.)</b>
Harbour porpoise	approx. 2,900-3,900 per year (2001 estimates according to method). The information will currently be updated as part of an ongoing monitoring programme on by-catch	<u>IV b</u> (mainly in coastal and off-shore waters along the West Coast of Jutland) <u>III a, b and c</u> The monitoring programme on bycatch includes the Inner Danish Waters.	Set-net fishery for cod, hake, plaice and turbot mainly in late summer and autumn.
Other species	Few, but the exact number and species involved unknown.		

***Finland***

None

***Federal Republic of Germany***

Interaction of small cetaceans with German fisheries in the North Sea was low. Gill net fisheries targeting sole did not catch small cetaceans due to the low net height of 50 – 70 cm used. Gill net fisheries on cod, turbot and other flatfish were conducted by only one vessel which was 17 m in size. The bycatch of this vessel will be investigated in 2002/2003.

The situation was more complicated in the Baltic. A substantial part of the gill net fisheries was conducted by vessels of less than 10 m and by part-time fishermen. No catch and effort

statistics exist for these fisheries. This problem will be investigated further in 2003. Bycatches were reported by fishermen on a voluntary basis. The bycatch of harbour porpoise reported in the western Baltic (Kiel Bight and Mecklenburg Bight) was 7 individuals in 2001. No bycatch was recorded in the central Baltic, i.e. at the island of Rügen and east of Rügen.

<b>Estimates of bycatch in set net and pelagic trawl fisheries</b>			
<b>Species</b>	<b>Estimated number of by-caught animals</b>	<b>Area (ICES area or more detailed)</b>	<b>Notes (type of fishery, effort, seasonal variations, etc.)</b>
Harbour porpoise	A few at most	Strandings in Area IVb	Set net fisheries
Harbour porpoise	7	Area IIIc, ICES Area 22: Kiel Bight and western part of Area IIIId, ICES Area 24, Mecklenburg Bight.	Set net fisheries

### **Poland**

Data on bycatch in Polish waters are available only as direct numbers. The bycatch level has not been estimated due for lack of information on both fishing effort and population size of harbour porpoises. Bycatch has been recorded in set net and drift net coastal fishery.

<b>Species</b>	<b>Estimated number of by-caught animals</b>	<b>Area (ICES area or more detailed)</b>	<b>Notes (type of fishery, effort, seasonal variations, etc.)</b>
<i>Phocoena phocoena</i>	2	ICES/IIIId – Polish central coast and the Gulf of Gdańsk	cod set net fishery
<i>Phocoena phocoena</i>	1	ICES/IIIId – the Gulf of Gdańsk	salmon drift net coastal fishery

### **Sweden**

The following figures are of known and reported bycaught harbour porpoises. Altogether nine animals were reported dead or bycaught in Swedish waters during 2001. Only three of these were caught in nets. The remainder (6) were found dead, but these animals could have been caught in fishing nets as well. The figures presented here are very uncertain, as Sweden have no observer program. An estimate of the actual bycatch figures cannot be made from the figures presented below.

<b>Species</b>	<b>Estimated number of by-caught animals</b>	<b>Area (ICES area or more detailed)</b>	<b>Notes (type of fishery, effort, seasonal variations etc.)</b>
<i>Phocoena phocoena</i>	1	IIIa, 55°59,256 N, 12°39,359 E, Southern Kattegat	“Toggegarn”, Mesh size 160 mm
<i>Phocoena phocoena</i>	1	IIIa, Skagerrak between Kungen and Tistlarna (Lysekil-Tjörn)	Trawl for crayfish
<i>Phocoena phocoena</i>		Blekinge, southern Baltic sea, ICES 25	Net

## ***United Kingdom***

The latest estimates of porpoise bycatch in UK set net fisheries in the North Sea and to the west of Scotland are still based on fishing effort data for the year 1999. By the end of 2001 195 days at sea and 210 fishing operations had been observed in pelagic trawl fisheries around the UK; target species included herring, mackerel, bass, pilchards and sprats. No cetacean bycatches were observed except in the bass fishery where 52 animals were observed in 11 hauls among 116 observed in 2001. Estimates of total bycatch have not yet been made for this fishery, but are unlikely to be very much higher than the observed figure due to the high level of observer coverage during 2001.

<b>Species</b>	<b>Estimated number of by-caught animals</b>	<b>Area (ICES area or more detailed)</b>	<b>Notes (type of fishery, effort, seasonal variations, etc.)</b>
Harbour porpoise	436 (95% CI 351-684)	IVabc	Cod, turbot, skate, sole fisheries
Harbour porpoise	22 (95% CI 14-39)	ICES area VIa	Crayfish, dogfish, skate fisheries
Common dolphin	52 (observed total)	VIIefgh	Bass

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

- a. Information on levels of disturbance (e.g. seismic surveys, new high-speed ferry routes, studies about acoustic impacts on cetaceans etc.)

## ***Belgium***

The catamaran-type fast ferries crossing the English Channel from Ostend to Dover were replaced in 2001 by equally fast (40 knots) monohull types. However, the crossings were not carried out during a large part of the year, and only with one ship instead of two.

Old ammunition is no longer destroyed at sea.

## ***Denmark***

Very limited information is available on disturbance from various sources. The impacts on harbour porpoises and other small cetaceans from high-speed ferries are not known. However, the operations with that type of vessel are strictly regulated as new routes cannot be established without a proper EIA (Environmental Impact Assessment) procedure including considerations on the disturbance to water birds and marine mammals.

The disturbance of harbour porpoises from two offshore windfarms at Horns Reef (off Blåvandshuk) and Rødsand (South-east Sealand off Nysted) are presently being monitored by National Environmental Research Institute and Ornis Consult. The construction of the windfarms started in spring/summer 2002 and will be finalized at Horns Reef in Autumn 2002

and at Rødsand in Autumn 2003. The effect of the construction on operation of the windfarms are monitored by surveys (mainly from ship) and acoustic monitoring (PODs).

### ***Finland***

The completed questionnaire on high-speed ferries was sent to the Secretariat.

### ***Federal Republic of Germany***

The current information on German seismic surveys is given in Document AC9/Doc. 9 (P), Dist. 10th May 2002, *Preliminary Information on Seismic Activities*. It was attempted to present data according to new ASCOBANS specifications, i.e. line-kilometres of high energy pulses per months and standard areas since 1997. This must be further improved regarding e.g. completeness as well as temporal and spatial resolution.

The current information on high-speed ferry routes in German waters is given in Document AC9/Doc. 17 (S), Dist. 3rd June 2002, *High-Speed Ferries. Secretariat's Update*.

### ***Poland***

Geophysical seismic survey, North of Rozewie (Polish central coast); from 6 - 25 December 2001, carried out by research vessel "American Explorer".

### ***Sweden***

During 2001 the Geological Survey of Sweden (SGU) conducted several surveys with a 10 cubic inch "sleeve gun". Bråviken was surveyed and so were the areas outside Oxelösund, Trosa and Söderhamn (also Lake Mälaren).

High speed ferries with a maximum speed of 31-36 knots operate on the following routes: Gothenburg - Fredrikshamn, Nynäshamn - Visby and Malmö - Copenhagen.

### ***United Kingdom***

Ceredigion County Council, supported by the Countryside Council for Wales (CCW), continued their study on cetacean site use and boat traffic at two sites along the Marine Heritage Coast and Cardigan Bay candidate Special Area of Conservation (cSAC) in 2001. Previous results showed that behaviour of recreational motor boat and speedboat users had not changed over the study period. In 2000 Ceredigion County Council attempted to improve adherence to the Code of Conduct by issuing a system of warnings to persistent users. A report is due in 2002.

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

***Belgium***

The Royal Decree on the protection of marine species (21 December 2001, Official Journal 14 February 2002) provides for a better protection of small cetaceans. It makes killing, transport and the intentional disturbance of all cetaceans illegal. It provides the opportunity to set guidelines, or even require an environmental impact assessment for certain scientific and commercial seismic surveys. The use of certain seismic equipment has to be notified to the authority dealing with marine environmental protection. For the use of sonar equipment producing sounds with a frequency of 5 kHz or lower, the use of airguns with a total volume of 250 cubic inches or more and the use of explosives of more than 100 TNT equivalent, an environmental license is required. This means that an EIA (Environmental Impact Assessment) report needs to be submitted. The relevant authorities assess this EIA. In licensing these activities, conditions for the deployment of the equipment can be imposed.

***Denmark***

Within some nature and wildlife reserves, e.g. the Wadden Sea, general measures (speed limits) are taken to reduce disturbance to marine mammals. Special guidelines and legislation are not implemented.

***Finland***

None.

***Federal Republic of Germany***

No special guidelines or special new legislation have been implemented in order to reduce disturbance.

In the Wadden Sea of the Federal State of Lower Saxony the protection of harbour porpoises is generally part of the amended National Park Law which entered into force on 1 August 2001.

For North Sea coastal waters off the Federal State of Schleswig-Holstein it is intended to introduce speed reductions for vessels. Off the region of Dithmarschen this shall apply for an area extending seawards for three nautical miles and off the region of Nordfriesland for twelve nautical miles (outer border of the National Park including the Whale Protection Area, see below).

***Poland***

No implementation.

## ***Sweden***

No action reported.

## ***United Kingdom***

With the implementation of the Offshore Petroleum Activities (Conservation of Habitats) Regulations 2001 in May, the Department of Trade and Industry (DTI) has introduced a new requirement for consent for oil and gas seismic surveys which will, with the assistance of the Joint Nature Conservation Committee (JNCC), consider effects on cetaceans. Guidance notes are being drafted for industry, and can be found on the DTI's website at: [www.dti.gov.uk](http://www.dti.gov.uk). It is hoped that the consent process may also provide a mechanism to fulfil any reporting requests on seismic surveys to ASCOBANS.

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

#### **a. Measures taken to identify, implement and manage protected areas**

## ***Belgium***

No protected areas specifically for cetaceans were established in Belgian waters.

## ***Denmark***

The Danish implementation of the EU Habitat Directive includes the designation of several sites that are considered important for harbour porpoises. A list of Danish designated Habitat Directive sites important for harbour porpoises was included in the National Report 1998.

## ***Finland***

None.

## ***Federal Republic of Germany***

The Whale Protection Area in the North Sea off the islands of Sylt and Amrum (Schleswig-Holstein) was been described in Germany's Annual National Report to ASCOBANS for the year 2000. Currently attempts are being made to ban all set net fisheries there in accordance with the EU.

## ***Poland***

Projects to be carried out in Puck Bay to monitor the occurrence and abundance of porpoises will provide relevant data for selection of the region as a potential protected area.

## ***Sweden***

No area has been identified as a protective area for harbour porpoise in the Baltic. In the Skagerrak three Natura 2000 sites have been identified for harbour porpoises.

The sites are:

Vrångöskärgården (SE0520001)

Koster (SE0520133)

Väderöarna (SE0520143)

## ***United Kingdom***

As a result of a UK court judgement in 1999, the UK Government is currently taking steps to implement both the Wild Birds and the Habitats Directives beyond its territorial waters where it exercises sovereign rights. JNCC has been asked to undertake work necessary to identify areas that may qualify as possible offshore Special Areas of Conservation (SACs) and Special Protected Areas (SPAs). The Regulations to extend the Directives' application will be consulted on later this year, with the aim of designating the first offshore Natura 2000 site in 2003.

In response to the conclusion of the EC Habitats Committee meeting in December 2000, JNCC has commissioned the University of St. Andrews to analyse the Joint Cetacean Database with a view to identifying:

- areas important for the continuous or regular presence of the harbour porpoise (subject to seasonal variation); and
- areas of high population density (in relation to neighbouring areas).

They are due to report to JNCC in June 2002. JNCC will then consider the results with a view to identifying potential SACs for the species.

In 2001 the Moray Firth Partnership completed a widespread public consultation seeking agreement to around 100 individual actions contained in its draft Moray Firth Management Scheme. The Scheme is aimed at securing the future of the vulnerable population of bottlenose dolphins within the Moray Firth cSAC through a combination of statutory requirements and voluntary principles. It addresses a wide range of potential threats to the dolphins caused by disturbance, contamination, disease and depletion of food resources, and includes management of activities such as contaminant discharge, boat traffic, dredging and sea disposal operations, fishing, military activity and oil industry operations.

The draft Scheme was developed by a wide range of stakeholders and overseen by the Moray Firth SAC Management Group, facilitated by the Moray Firth Partnership, with sponsorship from EC LIFE Environment Fund and the various management agencies based around the Firth. Following completion of the consultation, a final version was launched in January 2002. Copies of the Scheme are available at [www.morayfirth-partnership.org](http://www.morayfirth-partnership.org).

The DTI conducted the second Strategic Environmental Assessment of the UK Continental Shelf (SEA2) during 2001. SEA2 covered the Mature Areas of the Offshore North Sea and, as for SEA1, consideration was given to the potential impacts on cetaceans in the area. The SEA2 Assessment Document, Post Public Consultation Report and further information on the SEA process can be accessed at: [www.habitats-directive.org](http://www.habitats-directive.org).

#### **4. Further research on small cetaceans**

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

##### ***Belgium***

The Royal Decree of 21 December 2001 imposes rules for the intervention in case of strandings and bycatches of protected species, and for the scientific research. The stranding of cetaceans has to be notified to the relevant authority (MUMM). Fishermen have to report the bycatch of cetaceans, and - if technically feasible – provide the relevant authority with the (dead) bycaught animals.

Independent observers can - if technically feasible - be put on board fishing vessels to assess the bycatch of protected species.

##### ***Denmark***

A Danish contingency plan concerning marine mammals includes guidelines for handling stranded cetaceans. As many stranded harbour porpoises as possible are collected for analyses in order to improve the knowledge on population structure, age and sex ratio, nutritional status, general health and the levels of contaminants in tissues and organs.

Similar investigations for white-beaked dolphins were initiated in 2001:

During 2001 the following observations of stranded cetaceans were recorded:

- White-beaked dolphin: 16
- Common dolphin: 1
- Minke whale: 3
- Harbour porpoise: about 139 (some are probably discarded bycaught animals)
- Sperm whale: 1

##### ***Finland***

See 5 below.

### ***Federal Republic of Germany***

A stranding network for cetaceans is in force since the 1950's for the coast of the federal state of Mecklenburg-Western Pommerania in the Baltic Sea and since 1990 for the coast of Schleswig-Holstein in the Baltic Sea and North Sea. The coast of Lower Saxony in the North Sea is covered too. The details on the present situation are given by Document AC9/Doc. 16 (S), Dist. 3rd June 2002, *Information submitted by Parties and Range States in response to post-mortem research questionnaire*.

Necropsies of all stranded and bycaught cetaceans were carried out by the Research and Technology Centre (Büsum) of the University of Kiel, the Veterinary Institute for Fish and Fishery Products (Cuxhaven) and the German Oceanographic Museum (Stralsund). Samples for organic pollutants were taken and analysed at the Institute for Baltic Research Warnemünde. Samples for heavy metals were taken and analysed at the Laboratoire d'Océanologie, Université de Liège, Belgium.

In 2001, 68 of 122 stranded (and 3 bycaught) harbour porpoises were studied in Schleswig-Holstein, 9 of 23 stranded harbour porpoises in Lower Saxony and 16 of 23 stranded (and 3 bycaught) harbour porpoises in Mecklenburg-Western Pommerania. No unusual illnesses or particular epidemics were found.

### ***Poland***

No new implementation.

### ***Sweden***

Post mortem investigations are carried out on all small cetaceans bycaught or found stranded in the Baltic. The animals have to be brought fresh to the Swedish Museum of Natural History, Stockholm, where the investigations are conducted. From harbour porpoises from the Swedish west coast a piece of tissue from the dorsal fin is sampled. For further detail see prior information sent to ASCOBANS.

### ***United Kingdom***

During 2001, under the DEFRA-funded UK Cetacean Strandings Programme, a total of 533 cetacean strandings comprising 16 species were reported to the Natural History Museum (NHM) from England, Wales, Scotland, Northern Ireland and the Isle of Man (see Annex).

The NHM has continued to gather information on all cetacean strandings (also bycaught cetaceans and those seen floating dead at sea). Carcasses from England and Wales considered suitable for post-mortem investigation are taken to the Institute of Zoology (IoZ) for examination by veterinary pathologists. The resultant information on species, sex, length, place and date of stranding is combined with that from Scotland provided by the Scottish Agricultural College and recorded on the NHM's National Cetacean Strandings database. Samples of

teeth, parasites and stomach contents from cetaceans continue to be studied at the NHM to provide information on the ages and biology of dead stranded cetaceans.

As part of this research the IoZ is continuing to investigate diseases, causes of death and potential relationships between health and chronic exposure to environmental pollutants (particularly organochlorines and heavy metals) in cetaceans (mainly harbour porpoises) stranded in England and Wales. Pathological and other data from strandings investigations conducted in England and Wales, together with strandings data from Scotland, continues to be archived centrally in the Poseidon database held at the Institute of Zoology. In 2001 the IOZ conducted 109 necropsies of stranded cetaceans in England and Wales, and a further six necropsies of harbour porpoise bycatches retrieved from fishing vessels (mainly as part of observer-based research conducted by SMRU). Of the stranded cetaceans examined in England and Wales during 2001, bycatch was identified as the cause of death of eleven (17.5%) harbour porpoises and 20 (62.5%) common dolphins. The number and proportion of common dolphins diagnosed as bycatches are similar to previous years. However, the number and proportion of harbour porpoises diagnosed as bycatches in England and Wales were lower than 2000 and continue a declining trend since the mid-1990s. In addition, nine harbour porpoises were killed by bottlenose dolphins (seven in the Cardigan Bay area) including the first two cases in England (Cornwall and Devon). Fifteen harbour porpoises died due to pneumonias caused by combinations of parasitic, bacterial and mycotic infections and three porpoises had fatal generalised bacterial infections.

The IoZ carried out necropsies on 6 harbour porpoise carcasses during 2001 that were retrieved directly from fishing vessels as part of observer-based bycatch research conducted by SMRU.

In Scotland, this program of research on stranded marine mammals is carried out by the Scottish Agricultural College Veterinary Science Division (SACVSD). 74 cetaceans were necropsied during 2001 with most of these being harbour porpoises (n=49). The most common cause of death in harbour porpoises found stranded in Scotland is attack by bottlenose dolphin(s) (n=19). The next most common cause of death is lung parasitism leading to secondary infections. Three of the porpoises were found to have died as a result of probable entanglement in fixed nets.

There were a number of live strandings, particularly of dolphins, including 5 striped, 2 bottlenose, 2 common, 4 Atlantic white-sided and 3 white-beaked. Also discovered to have live stranded were 1 long-finned pilot whale, 1 Northern bottlenose whale and 2 Sowerby's beaked whales.

Tissues from all carcasses necropsied have been added to the collection at SACVSD and are made available to bona fide researchers.

Strandings data from Northern Ireland is collated by the Environment and Heritage Service (EHS) and the Ulster Museum and recorded on the Centre for Environmental Data and Records (CEDaR) database. It is then passed to the NHM and the Irish Naturalists Journal. In 2001, 4 harbour porpoises were reported stranded in Northern Ireland. The harbour porpoises were examined by the Veterinary Research Laboratory of the Department of Agriculture and

Rural Development in Northern Ireland to establish cause of death. Samples were taken and passed to The NHM for further analysis.

In addition to the strandings co-ordinators funded by DEFRA, the National Assembly for Wales is funding the Welsh Strandings Co-ordinator in conjunction with CCW.

b. Research on abundance, population structure etc.

### ***Belgium***

The project on Seabirds and marine mammals: pathology, ecology and ecotoxicology has finished. It is planned to continue with a similar project from mid 2002 onwards. An extensive summary in Dutch, French and English of the final report of this study can be downloaded from the website <http://www.belspo.be/belspo/>; the full text can be ordered through the same website.

In 2001 the record number of 20 harbour porpoises stranded. Another animal was found dead at sea by fishermen, and was delivered to MUMM. For the first time (recorded), a pregnant female washed ashore. One animal was a certain bycatch in recreational bottom set gill nets, set from the beach. From the North of France, around ten small cetaceans were received for scientific research purposes, in a co-operation with the Centre de Recherche sur les Mammifères Marins of La Rochelle (France). Most of these cetaceans were harbour porpoises (one certain bycatch), but also one stranded *Stenella coeruleoalba* and one *Mesoplodon bidens* were investigated by the intervention network (MARIN). Additionally, one live stranded *Stenella coeruleoalba* was transported by MUMM from the North of France to the rehabilitation center at Harderwijk, the Netherlands, where it died ten days later.

#### Some publications:

Das, K., Debacker, V., Lepoint, G., Gobert, S., Holsbeek, L., Joiris, C.R. and Bouquegneau, J.M. 2000. Marine mammals stranded on the Belgian and Dutch coasts: Approach of their feeding ecology by stable isotope and heavy metal measurements. *European Research on Cetaceans*. Pp. 219-222 In: Proceedings of the Fourteenth Annual Conference of the European Cetacean Society, Cork, Ireland, 2-5 April 2000 (Eds. P.G.H. Evans, R. Pitt-Aiken, E. Rogan) 384pp.

Das, K., Lepoint, G., Loizeau, V., Debacker, V., Dauby P. and Bouquegneau, J.M. 2000. Tuna and dolphin associations in the Northeast Atlantic: Evidence of different ecological niches from stable isotope and heavy metal measurements. *Mar. Pollut. Bull.* 40: 102-109.

Debacker, V., Coignoul, F., Das, K., Haelters, J., Holsbeek, L., Jacques, T., Jauniaux, T., Joiris, C.R., Stienen, E., Tavernier, J., Van Waeyenberge, J. and Bouquegneau, J.-M., 2002. North Sea seabirds and marine mammals: pathology and ecotoxicology. Final Report of the project MN/DD/50-53 funded by the SSTC, Brussels. 181 p.

Haelters, J. and Di Marcantonio, M., 2002. Report of the sightings of marine mammals during the TdH 2001. In: Di Marcantonio, M., and Haelters, J., 2002. Tour d'Horizon 2001 report, MUMM, Brussels, 11p.

Jauniaux, T., Charlier, G., Desmecht, M., Haelters, J., Jacques, T., Losson, B., Van Gompel, J., Tavernier J. and Coignoul, F. 2000. Pathological findings in two fin whales (*Balaenoptera physalus*) with evidence of morbillivirus infection. *J. Comp. Path.* 123: 198-201.

## ***Denmark***

The Danish project on satellite tracking of harbour porpoises is carried out in cooperation between the Danish Environmental Research Institute, the Danish Fisheries Research Institute, Fjord&Belt and the National Forest and Nature Agency. 17 porpoises were tagged with satellite transmitters in 2001, including 15 from Skagen, 1 from Sjælland and 1 from Djursland. Information on movements and diving behaviour was collected for up to 11 months.

A study of harbour porpoise population structure<sup>3</sup> in the North Atlantic region including the ASCOBANS area, based on genetical analysis using DNA micro-satellites, has been completed.

## ***Finland***

See 5 below.

## ***Federal Republic of Germany***

A research project of the University of Kiel, which examined the genetic structure of the Baltic, Kattegat and Belt Seas harbour porpoise populations was finalized. The results will be published soon. Morphometric investigations were done on the skulls of harbour porpoises from the German Bight, the outer part or transition area of the Baltic Sea and the central Baltic Sea (German Oceanographic Museum). The results will be published in 2002. The results of both studies indicate the existence of populations in the Baltic different from the North Sea populations. Further differences were found between the animals from the transition area and the central Baltic Sea, indicating the occurrence of a separate population in the Baltic proper.

In 2001 the German Oceanographic Museum and the University of Rostock started a project to investigate the applicability and limits of the PODs (Porpoise Detectors) in controlled situations with harbour porpoises in captivity (Fjord&Bælt, Kerteminde, Denmark) as well as in the field (Fyns Hoved, Denmark). These experiments will be recapitulated with the new version of PODs in 2002. Additionally in 2002 a utilisation profile of different areas in German and Polish waters will be elaborated giving diurnal and seasonal variation of the presence and absence of harbour porpoises.

In 2001 Kiel University's Research and Technology Centre at Büsum conducted research in the Whale Protection Area off the islands of Sylt and Amrum. One aim of the study was to conduct visual surveys from boats in this area to determine the distribution and density of harbour porpoises. Additionally, PODs were deployed in the North Sea and also towed during the visual surveys to decide whether these devices can be used to monitor habitat use.

This work will be continued in 2002 in the Whale Protection Area. Additionally it is planned to conduct a total of four aerial surveys in the German North Sea and Baltic Sea using line-

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<sup>3</sup> Andersen, L.W., Ruzzante, D.E., Walton, M., Berggren, P., Bjørge, A. and C.Lockyer. 2001. Conservation genetics of harbour porpoises, *Phocoena phocoena*, in eastern and central North Atlantic. *Conservation Genetics* 2:309-324.

transect methodology. The main objective of this study is to identify areas of high densities of harbour porpoises as well as to investigate seasonal changes of distribution and density.

In 2001 a study on the incidence of harbour porpoises was also started for the coast of Lower Saxony (National Park Administration, Wilhelmshaven).

### ***Poland***

A passive acoustic and visual survey of Polish waters was carried out by an IFAW sailing boat from 19 August to 15 September, resulting in one visual and one acoustic detection for respectively 434 km of visual and 2210 km of acoustic trackline. The results did not allow an estimate of the abundance of porpoises in the surveyed area.

### ***Sweden***

An aerial survey according to a plan proposed by Per Berggren will be carried out to give a better population estimate. The proposed survey will be carried out in July 2002, but was originally planned for summer 2001. The survey will be conducted in the area that represents the currently known distribution range of the Baltic Sea harbour porpoise population (ICES rectangles 24 and 25 and the westernmost part of 26). The eastern limit of the survey area is defined by a line between the city of Kalmar in the south east of Sweden and the border between Poland and Russia in Gdańsk Bay. The total size of the survey area is 54,000 km<sup>2</sup>. The survey area includes Swedish, Danish German and Polish territorial waters.

### ***United Kingdom***

The SMRU have continued to investigate the feeding habits of porpoises based on stomachs of animals recovered from fishing nets. Whiting continue to dominate the list of fish species consumed, with smaller quantities of herring, cod, sprat, gobies and other species. Most of the fish consumed, as estimated from otolith sizes, were less than 30cm in length, with a modal value of 16cm. The SMRU have also been examining the stomach contents of common dolphins stranded along UK Channel coasts having died as a result of fishery interactions. These animals were found to have been feeding very largely on sardines or pilchards and horse mackerel, with small quantities of mackerel and a few other species.

The SMRU, in collaboration with Aberdeen University Zoology Department and the Veterinary Science Division of the Scottish Agricultural College have investigated the apparent expansion in range of bottlenose dolphins off eastern Scotland during the last decade, using photo-identification data from surveys conducted in the inner and outer Moray Firth and in St Andrews Bay, and cause of death data from post-mortem examinations of stranded harbour porpoises. There is clear evidence that the range has expanded during the 1990s. Those animals that tend to be seen farthest out in the inner Moray Firth also travel to the outer Moray Firth and south to St Andrews Bay. And the distribution of stranded harbour porpoises that died as a result of violent interactions with bottlenose dolphins now extends

south to St Andrews Bay and beyond whereas in the early 1990s, such strandings south of the Moray Firth were rare. The implications are that the population is protected less by the inner Moray Firth cSAC than previously envisaged because many animals are now spending more time away from the area. It will be important in the future to monitor this population not just within the cSAC but also in the current expanded range and beyond.

CCW are funding, or contributing to, a number of projects examining population abundance and structure including trials on monitoring methods:

1. Cetacean sightings database for Wales.
2. Contribution to Risso's dolphin and harbour porpoise survey, Friends of Cardigan Bay and Whale and Dolphin Conservation Society. A report is due in 2002.
3. Acoustic & echo sounder studies as part of the Atlantic *Tursiops* project funded by INTERREG.
4. Improved acoustic discrimination of bottlenose dolphins of Cardigan Bay. Progress has been made with development of hardware and software for acoustic data loggers (PODs) to differentiate the sonar pulses of bottlenose dolphin from other cetacean species and boats and unknown sources. This project will be reporting in 2002.
5. Re-examination of distribution data for harbour porpoise around Wales and the UK with a view to site selection for this species.

c. Research on the effects of pollutants on cetacean health

### **Belgium**

One of the issues of the project on seabirds and marine mammals: pathology, ecology and and ecotoxicology was pollution.

Some publications:

Das K., V. Debacker & J.-M. Bouquegneau, 2000. Metallothioneins in marine mammals. *Cellular and Molecular Biology* 46: 283-294

Joiris, C.R., Holsbeek, L., Bolba, D., Gascard, C., Stanev, T., Komakhidze, A., Baumgärtner, W. and Birkun, A. 2001. Total and methylmercury in the Black Sea harbour porpoise *Phocoena phocoena relicta*. *Mar. Pollut. Bull.* 42: 905-911.

### **Denmark**

Fjord&Bælt has been cooperating with the German project led by Dr. Ursula Siebert from Kiel University, "Investigation of the influence of pollutants on the endocrine and immune systems of harbour porpoises from the German North and Baltic Seas". The porpoises held in human care at Fjord&Bælt constitute a kind of control group and a source of samples for establishing a specific in vitro-system to investigate the cellular immune response of porpoises.

The Fjord&Bælt project on reproduction continued, providing the first data on ovarian hormone levels in harbour porpoises<sup>4,5</sup> and continuing collecting testosterone data<sup>6</sup>. These long-term hormonal data series and behavioural parallels in porpoises constitute the first baseline data on sex hormones and reproductive behaviour in harbour porpoises.

The energetics study<sup>7</sup> on growth and feeding of porpoises continues at Fjord&Bælt, with a confirmation of seasonal body mass changes in relation to water temperature and food intake. A pilot study of diet composition based on stomach content analysis<sup>8</sup> of bycaught porpoises indicates that gadoid fish, gobies and sandlance – in addition to clupeid fish, are important components of the diet in free-living animals.

### ***Finland***

None.

### ***Federal Republic of Germany***

The Research and Technology Centre, Büsum carried out a project on the influence of pollutants on the endocrinium and immune system of harbour porpoise. Investigations are performed to find endocrine and immune disrupting effects on animals originating from the North and Baltic Seas and to compare these findings with observations from animals of Icelandic, Norwegian and Greenlandic waters.

So far, studies on the immune system revealed that several antibodies from other species showed a specific reaction with cells of lymphoid tissues from harbour porpoises. The lymphocyte transformation test showed a mitogen-induced proliferation of peripheral blood lymphocytes. Using RT-PCR, cDNA of different cytokines was amplified in mitogen-stimulated lymphocytes and expression of iNOS mRNA was detected in lymphoid tissue.

Adrenal glands, hypophyses and thyroid glands represent major target organs of endocrine disruptors and were therefore investigated for possible pathological changes. Minimal inter-follicular fibrosis was observed in the thyroid glands of Icelandic animals. In contrast thyroid

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<sup>4</sup> Jepsen, T. 2002. Seksuel adfærd hos et hunmarsvin (*Phocoena phocoena*) i relation til koncentration af kønshormoner i plasma og andre sekreter. (Sexual behaviour in a female harbour porpoise (*P.p.*) in relation with concentration of sex hormones in plasma and other matrices) [M.Sc. thesis] University of Southern Denmark. 123pp.

<sup>5</sup> Jepsen, T., Desportes, G., Korsgaard, B., Hansen, K. and Shephard, G. 2002. An unpredictable hormonal cycle: are female porpoises also moody or can they exhibit ovarian dysfunction or social suppression. Poster presented to the 15<sup>th</sup> Annual Conference of the European Cetacean Society, April 2002, Liège, Belgium

<sup>6</sup> Desportes, G., Kristensen, J.H., Benham, D., Wilson, S., Jepsen, T., Siebert, U., Korsgaard, B., Driver, J., Amundin, M., Hansen, K. and Shephard, G. In press. Multiple insights into the reproductive function of harbour porpoises: an ongoing study. *NAMMCO Special Publication 4*. Forthcoming.

<sup>7</sup> Lockyer, C., Desportes, G., Anderson, K., Labberté, S. and U. Siebert. 2001. Monitoring growth of harbour porpoise (*Phocoena phocoena*) in human care. Paper presented to ICES conference, 26-29 September 2001, Oslo. Document no ICES CM 2001/J:29

<sup>8</sup> Lockyer, C. and Andreassen, H. *in press*. Diet of harbour porpoise (*Phocoena phocoena*) in Danish waters. *European Research on Cetaceans*

glands from German and Norwegian harbour porpoises showed a moderate to severe interfollicular fibrosis.

In addition polychlorinated biphenyls, DDT, toxaphene and polybrominated diphenylethers were analysed in blubber samples of the harbour porpoises. The PCB concentrations ranged from 0.05 to 13 µg/g lipid, and the animals from German and Norwegian waters had higher levels.

In summary, the preliminary results suggest that thyroid glands of harbour porpoise are adversely affected by chemical endocrine disruptors, which might result in a thyroid dysfunction.

### ***Poland***

Biological and ecological research on matters such as pollution levels, parasitology, reproduction, diet as well as interaction with fishery are carried out at Hel Marine Station, University of Gdańsk.

### ***Sweden***

The Harbour Porpoise Group at the University of Stockholm is carrying out research on population structure, distribution, abundance, bycatch, effects of hazardous substances as well as life history and diet.

### ***United Kingdom***

The Institute of Zoology, in collaboration with the Centre for Environment, Fisheries and Aquaculture Science (CEFAS) laboratory, continue to investigate potential associations between persistent environmental pollutants (such as polychlorinated biphenyls (PCBs) and heavy metals) and health status in (predominantly) harbour porpoises stranded in England and Wales. A WWF-UK funded study based at the IoZ to study the effects of potential endocrine disrupting chemicals on testicular development in harbour porpoises was ongoing in 2001, with additional material supplied during this period by the SACVSD, Inverness. The study has developed (immuno-)histological techniques to generate qualitative and quantitative indices of testicular development which will be used to test for associations between these indices and individuals exposure to persistent environmental contaminants. Additional IOZ research projects (in collaboration with CEFAS) investigating potential links between pollutant exposure and health status, thymic atrophy and lung parasite burdens in harbour porpoises were due to be completed in 2001 but were delayed to allow additional contaminant data to be generated for the analyses. These analyses should now be completed in 2002.

SACVSD has provided tissues and funding from within the DEFRA project budget to the Centre for Environment, Fisheries and Aquaculture Science (CEFAS) in order that PCBs and metal levels be analysed. When available, these results will be examined for potential links between raised levels and presence of disease.

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

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

### ***Belgium***

A program on national television exclusively dealt with the autopsy and following research of stranded cetaceans (RTBf, 2 February 2001).

MUMM issues press releases in case of unusual strandings and sightings - or in case of the bycatch of marine mammals in (recreational) fixed net fisheries.

Strandings and sightings of cetaceans are published on the website of MUMM (<http://mumm.ac.be>) in Dutch, French and English.

A leaflet with information on seals in Belgium, including information on whom to contact in case of strandings of cetaceans, was published by MUMM, in co-operation with Sea Life Blankenberge. The leaflet was distributed in 20,000 copies (15,000 in Dutch, 5,000 in French).

MUMM participated to the fisheries festival (Ostend, 8 September 2001), and presented a poster on marine mammals in Belgium, and the research being undertaken.

### ***Denmark***

The project entitled "Look out for whales, dolphins and porpoises in Denmark" was commenced in 2000, partly financed by the Danish Outdoor Council, the GB Bank Foundation and The Danish Forest and Nature Agency. The project is developed and coordinated by the Fisheries and Maritime Museum, Esbjerg, and the Zoological Museum, Copenhagen

The main objectives of the project are to raise public awareness on cetaceans in Denmark (through posters, newsletters, and exhibitions) and to improve the Danish stranding network in close cooperation with the National Forest and Nature Agency, and to monitor the distribution of harbour porpoises in the Inner Danish Waters. A database and home-page has been established ([www.hvaler.dk](http://www.hvaler.dk)).

Fjord&Bælt houses harbour porpoises for research purposes and public education and awareness. It provides, through exhibitions and talks, information to the general public (62,000 visitors) and special groups (more than 1,500) on whales and harbour porpoises in general, on the status of harbour porpoises in Danish waters, the bycatch problem and the effort undertaken to mitigate it. A home-page has been established ([www.gounderwater.com](http://www.gounderwater.com)), providing information on porpoises and links to other organization dealing with small cetaceans in Europe, including ASCOBANS. Fjord&Bælt also participates in the Danish stranding and bycatch networks, thereby providing information to people reporting stranded and bycaught porpoises.

### ***Finland***

In the summer of 2001 Finland conducted a campaign to inform the public at large about harbour porpoises. A brochure was produced and distributed to stakeholders e.g. fishermen, nature conservation organisations, boatmen, border guard detachments, universities, nature conservation and fishery authorities etc. A press release informing about this campaign was also issued and a web-site concerning harbour porpoises was established.

As a result of this campaign there were seven contacts concerning new harbour porpoise sightings (1 to 3 harbour porpoises seen in one sighting) but no information on bycaught animals, only old cases. In the summer of 2002 this campaign was continued and the ASCOBANS exhibition toured Finland for three months.

### ***Federal Republic of Germany***

In Schleswig-Holstein the National Park Service distributed three available brochures, i.e. on harbour porpoises, whales and seals in general, and also on seals and whales in the Wadden Sea. At the Multimar-Wattforum Tönning the foundation stone was laid for a special building to house exhibitions on whales. It will present information on harbour porpoises, and a sperm whale skeleton will be displayed.

Public awareness and education can be improved further. Detailed suggestions on how to enhance public awareness were made at the "Workshop Aimed at Drafting a Recovery Plan for Harbour Porpoises in the Baltic Sea" in Jastarnia, Poland, on 9 - 11 January 2002 and will be part of that recovery plan.

### ***Poland***

The ASCOBANS exhibition on harbour porpoises, with a supplement dedicated to the local historical and present situation has been shown in the public facility of Hel Marine Station.

The "Blue School" project - education of schoolchildren about marine ecosystem and the role of marine mammals in the environment - continued.

### ***Sweden***

A brochure has been produced to inform fishermen, coastguards, municipalities and people living off and by the sea as to what to do if they find stranded or bycaught small cetaceans. The brochure was produced during 2001.

SEPA intends to produce another brochure for the general public with the objective of raising public awareness and gathering reports on sighted harbour porpoises. This information will also be available at the SEPA website.

The Swedish Museum of Natural History published similar information on harbour porpoises on their website during 2001.

### ***United Kingdom***

The NHM launched a National Cetacean Strandings website with background information covering 90 years of investigations, and including pages that detail current events and other research topics. This can be found at [www.nhm.ac.uk/zoology/stranding/index.html](http://www.nhm.ac.uk/zoology/stranding/index.html). The website will be expanded to allow access to limited data-sets, allowing visitors to search strandings information by county, date and species. The site provides a species identification guide and links to local wildlife trusts and other sources of relevant information.

The Irish Whale and Dolphin Group organised a national whale watching day at several sites in Ireland. At Ramore Head in County Antrim the day was hosted and promoted by Environment and Heritage Service. Over 500 people attended and were given a one hour talk on cetaceans followed by a field trip to Carrick-a-Rede where a total of nine harbour porpoises were seen during the day.

The DEFRA-funded research carried out by the Hebridean Whale and Dolphin Trust on the impact of whale-watching on the economy of rural West Scotland was published in July 2001<sup>9</sup>. The report suggests that the economic benefits of whale-watching could far outweigh those of commercial whaling, and contains details which could assist those seeking to develop whale-watching as a component of a coastal tourist industry.

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<sup>9</sup> Whale watching in West Scotland – Report for the Department for Environment, Food and Rural Affairs, July 2001

## ANNEX

**Table 1: Cetacean strandings in the United Kingdom during 2001**

	<b>ENGLAND, WALES &amp; ISLE OF MAN</b>	<b>SCOTLAND</b>	<b>NORTHERN IRELAND</b>	<b>TOTAL</b>
FAMILY BALAENOPTERIDAE				
<i>Balaenoptera acutorostrata</i>	4	9	1	14
<i>Balaenoptera borealis</i>	1	-	-	1
<i>Balaenoptera physalus</i>	-	-	-	-
<i>Megaptera novaeangliae</i>	1	1	-	2
FAMILY DELPHINIDAE				
<i>Delphinus delphis</i>	93	6	-	99
<i>D. delphis/ S. coeruleoalba</i>	2	2	-	4
<i>Globicephala melas</i>	18	7	-	25
<i>Grampus griseus</i>	1	5	-	6
<i>Lagenorhynchus acutus</i>	-	4	-	4
<i>Lagenorhynchus albirostris</i>	-	15	-	15
<i>Lagenorhynchus sp. indet.</i>	-	2	-	2
<i>Stenella coeruleoalba</i>	7	5	-	12
<i>Tursiops truncatus</i>	5	3	-	8
<i>Orcinus orca</i>	1	-	-	1
Unidentified dolphins	40	2	-	42
FAMILY PHOCOENIDAE				
<i>Phocoena phocoena</i>	191	64	1	256
FAMILY PHYSETERIDAE				
<i>Physeter catodon</i>	-	6	-	6
FAMILY ZIPHIIDAE				
<i>Hyperoodon ampullatus</i>	-	2	-	2
<i>Mesoplodon bidens</i>	-	3	-	3
Unidentified toothed whales	2	1	-	3
Unidentified cetaceans	26	2	-	28
<b>TOTALS</b>	<b>392</b>	<b>139</b>	<b>2</b>	<b>533</b>



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