

# GERMANY, PROGRESS REPORT ON CETACEAN RESEARCH, JUNE 2003 TO MAY 2004

compiled by

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This report summarizes information on various fields of cetacean research and historical aspects of whaling .

## 1. Species and Stocks Studied

Common name	Scientific name	Area/stock	Items referred to
Harbour porpoise	<i>Phocoena phocoena</i>	Baltic Sea	2., 4.2, 4.3, 4.4, 5., 7.1, 8., 9.
Harbour porpoise	<i>Phocoena phocoena</i>	North Sea	2., 4.2, 4.3, 4.4, 5., 7., 8., 9.
Various species		worldwide	9.

## 2. Sightings data

Line transect surveys on small cetaceans, primarily harbour porpoise, were conducted in all parts of the German exclusive economic zone (AWZ) of the North Sea and the Baltic during the late spring and summer months.

Since summer 2002, a public awareness campaign was launched to yacht people in the western Baltic to report opportunistic sightings of harbour porpoise. By 2003, the programme was well established in yachting circles. Over 600 sightings were reported in 2003 which were comprised of about 1,500 animals. In addition to scientific data this information will be used in the designation of protected areas for harbour porpoise.

## 3. Marking data

### 3.1 Field Work

#### 3. 1.1 + 2 NATURAL AND ARTIFICIAL MARKING DATA

No marking using artificial marks was conducted. As a result, no photographs of whales of one of the IWC management area/stocks are currently held which can be utilized in photo ID studies.

#### 3. 1. 3 TELEMETRY DATA

No new developments were available

#### 4. Tissue/biological samples collected

##### 4.1 Biopsy samples

No biopsy samples were collected

##### 4.2 Samples from by-catches

Species	Area/stock	2003: total no. of individuals	Archived	Tissue Types(s)	Contact person
Harbour porpoise	Baltic Sea Schleswig-Holstein	1	1	all organs, central nervous system, skeletal system	U. Siebert
Harbour porpoise	North Sea Schleswig-Holstein	3	3	all organs, central nervous system, skeletal system	U. Siebert
Harbour porpoise	Baltic Sea Meckl.-Prepom.	2	2	All organs, central nervous system, skeletal system	H. Benke

##### 4.3 Samples from stranded animals

Species	Area/stock	2003: total no. of individuals	Archived	Tissue Type(s)	Contact person
Harbour porpoise	North Sea Schleswig-Holstein	76	10	Different tissues for histopathology, toxicology, genetics	U. Siebert
	Lower Saxony	5	5	Lung, liver, different tissues	M. Stede
	Baltic Sea Schleswig-Holstein	23	20	Different tissues for histopathology, toxicology, genetics	U. Siebert
	Baltic Sea Meckl.-Prepommerania	21	19	Skeleton, various tissues	H. Benke

##### 4.4 Analyses carried out

The Research and Technology Centre Büsum of the University of Kiel continued its investigations on histology, electron microscopy and anatomy of the nasal apparatus of harbour porpoise and its possible means for the production of ultrasound. A new study was started on acoustic exposure by means of pingers of harbour porpoises in 2002. Histological

and computer tomographical investigations of the inner ear of harbour porpoise of the Baltic and the North Sea was conducted.

An audiometry study has been carried out at the Ruhr-University Bochum as part of the project MINOS funded by the Federal Ministry for the Environment in 2003 on harbour seals (*Phoca vitulina*) and harbour porpoise (*Phocoena phocoena*). The aim of this study is to obtain data on the auditory sensitivity as well as the auditory capacity of the animal's hearing. The reason to conduct such measurements is the planned construction of offshore windmills and their potential noise pollution in the German parts of the North and Baltic Sea.

As part of the national monitoring funded by the State Ministry of Environment, Nature Protection and Agriculture of Schleswig-Holstein cetaceans stranded or by-caught were systematically investigated. This includes necropsies, histology, immunohistology, microbiology, serology, parasitology, virology, age determination and more.

## **5. Pollution studies**

In the framework of a Marie Curie Fellowship thyroid glands, cytokines, stable isotopes and heavy metals of harbour porpoises from different regions are analysed. Necropsies were conducted on harbour porpoise within the framework of an ongoing monitoring programme investigating small cetaceans washed ashore along the German coasts. Histology, microbiology, virology, serology and parasitology were performed on most animals. Additional samples were preserved for further investigations. Parasites found in the course of the dissections were sampled and determined. Prevalence and intensity of parasitic infestation was investigated. Pathological alterations of organs due to infestation of parasites were considered and correlated with the age of porpoises.

In cooperation with the GKSS-Geesthacht, cytokines were analyzed by real-time PCR in the blood of harbour porpoise from Danish waters as well as from animals held in captivity. Zell lines were established from organs of freshly dead harbour porpoise. The ribosomale DNS of different lung nematodes of harbour porpoise were analyzed and sequences of different regions were compared.

## **6. Statistics for large cetaceans**

### 6.1 Direct catches

Germany was not engaged in any whaling activity neither commercial, nor aboriginal nor under scientific permits

### 6.2 Other non-natural mortality for the year 2003

None

### 6.3 Earlier years' statistics (historical)

All information on historical catch data available to us have already been reviewed and have been provided to the International Whaling Commission in previous years. No further data are stored to our knowledge in Germany.

## 7. Statistics for small cetaceans

### 7.1 For the calendar year 2003

No small cetaceans were taken in a directed fishery in Germany. The 7 removals were incidental takes in gill net fisheries in the Baltic.

Species	Area/stock	Incidental Mortality			Live capture
		Reported	Estim. total	Source	
Harbour porpoise	North Sea	7	7	Observer	none
Harbour porpoise	Baltic Sea Schleswig-Holstein	1	1	gill net	none
Harbour porpoise	Baltic Sea Mecklenburg-Prepommern	2	2	gill net	none

### 7.2 Earlier years' statistics

There were no corrections to statistics presented in earlier years

## 8. Strandings in 2003

Species	Total	North Sea Lower Saxony	North Sea Schl.-Holstein	Baltic Schl.- Holstein	Baltic Mec.-Prepomm.
Harbour porpoise	150	32	76	23	19
White-beaked dolphin	1	0	1	0	0
Common dolphin	1	1	0	0	0
Fin whale	1	0	0	1	0
Sperm whale	2	2	0	0	0

## 9. Other studies and analyses

Species	Area/stock	Type of investigation	Contact address <sup>*)</sup>
Harbour porpoise	North Sea/Baltic Sea/Black Sea /North Atlantic	Stock structure, genetics	R. Tiedemann
Harbour porpoise	North Sea, Belts, Baltic Sea	stock discrimination	H. Benke
Harbour porpoise	North Sea/Baltic	Pathology, life history, toxicology, stock identity, habitat use, telemetry, Impact of sounds	U. Siebert
Harbour porpoise	North Sea	Histological, anatomical investigation of the nasal diverticula, ear pathology	S. Prahl
Harbour porpoise, other small cetaceans	North Sea/Baltic	Distribution and abundance	M. Scheidat
Harbour porpoise	North Sea/Baltic	Habitat use	A. Gilles
Harbour porpoise	North Sea/Baltic	Impact of sounds	K. Lucke
Harbour porpoise	North Sea, Baltic	Acoustic surveys, porpoise detectors (PODs)	U. Verfuss
Harbour porpoise	North Sea	Acoustic surveys, porpoise detectors (PODs)	U. Siebert M. Scheidat
Harbour porpoise	Baltic	Telemetry	R. Wilson
Harbour porpoise	North Sea/Baltic	Pathology, Immunology	S. Fonfara
Harbour porpoise	North Sea/Baltic	Pathology	I. Hasselmeier
Harbour porpoise	North Sea/Baltic	Parasitology	K. Lehnert
Harbour porpoise	North Sea/Baltic	Toxicology, Immunology	K. Das
Harbour porpoise	North Sea/Baltic	Incidental sightings, data bases	U. Siebert
Toothed whales	World Ocean	Development, morphology and evolution	S. Huggenberger
Bottlenose dolphin, short-finned pilot whale, Atlantic spotted dolphin, rough-toothed dolphin	La Gomera	Abundance, distribution, behaviour	F. Ritter
Bottlenose dolphin, short-finned pilot whale, Atlantic spotted dolphin, rough-toothed dolphin	La Gomera	Land-based estimation of abundance and distribution	F. Ritter

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## History of Whaling

Studies on the history of whaling were continued under the auspices of the 'Deutsches Schiffahrtsmuseum' and associated researchers and groups and dealt primarily with medieval whaling in northern Europe.

## 10. Literature cited

none

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Smit, V., Ritter, F., Neumann, K. 2003. Feasibility study: land-based observations of cetaceans off La Gomera. Abstr. 14th Annual Conference of the ECS, Gran Canaria, Spain

Van de Vijver, K. I., Hoff, P. T., Das, K., Van Dongen, W., Esmans, E. L., Siebert, U., Bouquegneau, J. M., Blust, R. and De Coen, W. M. (2004). Baseline study of perfluorochemicals in harbour porpoises (*Phocoena phocoena*) from Northern Europe. *Marine Pollution Bulletin* 48, 986-1008.

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