

**GERMANY, PROGRESS REPORT ON CETACEAN RESEARCH,
JULY 2004 TO MAY 2005**

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 summer – autumn of 2004 to May 2005.

Since summer 2002, a public awareness campaign had been to yachts people in the Baltic to report opportunistic sightings of harbour porpoise. Most of these sightings were confined to the western Baltic-Baltic Sea. By 2003, the programme was well established in yachting circles. Over 600 sightings were reported in 2004. They 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.

The German Oceanographic Museum in Stralsund deployed up to 26 porpoise detectors (pods) in the German part of the Baltic from west of the island of Fehmarn to the Pomeranian Bay in 2004. The purpose of the deployment was to study the habitat use of harbour porpoise more closely. Results suggest geographic differences and seasonal changes in habitat use with a prominent decline in registrations from west to east, and lower registrations in winter than in summer around Fehmarn and in the Kadet channel. This indicated geographic differences and seasonal changes in the relative porpoise density. In order to implement the ASCOBANS ‘recovery Plan for Harbour Porpoises in the Baltic’ (Jastarnia – Plan) a new project was started in April 2005 which focuses on habitat use of harbour porpoise in the central Baltic.

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	2004: 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	-	-	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	2004/05: total no. of individuals	Archived	Tissue Type(s)	Contact person
Harbour porpoise	North Sea Schleswig-Holstein	109	unknown	Different tissues for histopathology, toxicology, genetics	U. Siebert
	Lower Saxony	20	20	Lung, liver, different tissues	M. Stede
	Baltic Sea Schleswig-Holstein	26	unknown	Different tissues for histopathology, toxicology, genetics	U. Siebert
	Baltic Sea Meckl.- Prepommerania	17	17	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 tomographic 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 Research and Technology Centre Büsum of the University of Kiel as part of the project MINOSplus funded by the Federal Ministry of the Environment in 2004 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 2003/04

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

		Incidental Mortality			
Species	Area/stock	Reported	Estim. total	Source	Live capture
Harbour porpoise	North Sea	3	unknown	gill net	none
Harbour porpoise	Baltic Sea Schleswig- Holstein			gill net	none
Harbour porpoise	Baltic Sea	2	unknown	gill net	none

	Mecklenburg- Prepommerania				
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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	185	33	109	26	17
Bottlenose dolphin	1		1		
Minke whale	1				1

9. Other studies and analyses

Species	Area/stock	Type of investigation	Contact address ^{*)}
Harbour porpoise	North Sea/Baltic Sea/Black Sea /North Atlantic	Stock structure, genetics	R. Tiedemann
Harbour porpoise	Belts, Baltic Sea	Reproduction, age structure, health status	H. Benke, U. Siebert, S. Bräger, W. Dinter
Harbour porpoise	North Sea/Baltic	Pathology, life history, toxicology, stock identity, habitat use, telemetry,	U. Siebert

		Impact of sounds	
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, aerial surveys	M. Scheidat
Harbour porpoise	Baltic	Baltic Sea harbour porpoise data base	M. Scheidat U. Siebert
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 C.Honnef A. Meding
Harbour porpoise	Baltic	Creation of a management – oriented data base	Internet, S. Bräger
Harbour porpoise	North Sea	Acoustic surveys, porpoise detectors (PODs)	U. Siebert M. Scheidat J. Rye Hansen Denise Risch
Harbour porpoise	Baltic, North Sea	Telemetry	U. Siebert
Harbour porpoise	Baltic, North Sea	Telemetry	U. Siebert
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	Recovery Plan	S. Eisfeld K.-H. Kock
Harbour porpoise	North Sea/Baltic	Incidental sightings, data bases	U. Siebert M. Rademaker
Toothed whales	World Ocean	Development, morphology and evolution	S. Huggenberger
Bottlenose dolphin, short-finned pilot whale, Atlantic spotted dolphin,	La Gomera	Abundance, distribution, behaviour, Photo-ID	F. Ritter

rough-toothed dolphin			
Bottlenose dolphin, short-finned pilot whale, Atlantic spotted dolphin, rough-toothed dolphin	La Gomera	Land-based estimation of abundance and distribution	F. Ritter
Toothed whales, <i>Stenella</i>	worldwide	Morphology, development, evolution	H. Oelschläger
Harbour porpoise	North Sea, Baltic	Feeding ecology	W. Dinter

*) contact addresses see section 12

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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