

Belgium. Progress report on cetacean research, May 2005 to April 2007, with statistical data for the calendar years 2005-2006.

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This report summarises information obtained from:

Name of agency/institute	Abbreviation (use in rest of report)	Contact e-mail address
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1. SPECIES AND STOCKS STUDIED

IWC common name	IWC recommended scientific name	Area/stock(s)	Items referred to
Harbour porpoise	<i>Phocoena phocoena</i>	NE Atlantic	2, 4.2, 4.3, 7, 8
Short-beaked common dolphin	<i>Delphinus delphis</i>	NE Atlantic	2.1
Common bottlenose dolphin	<i>Tursiops truncatus</i>	NE Atlantic	2.1
White-beaked dolphin	<i>Lagenorhynchus albirostris</i>	NE Atlantic	2.1, 4.2, 4.3, 7, 8
Humpback whale	<i>Megaptera novaeangliae</i>	NE Atlantic	4.3, 6.3
Dusky dolphin	<i>Lagenorhynchus obscurus</i>	All stocks	9
Burmeister's porpoise	<i>Phocoena spinipinnis</i>	All stocks	9

2. SIGHTINGS DATA

2.1 Field work

2.1.1 Systematic

Target species	Date	Area	No. of sightings	Contact person/institute and references
Harbour porpoise, Short-beaked common dolphin, Common bottlenose dolphin	30 May-8 June 2005	European Atlantic and North Sea (SCANS-II)	43	Jan Haelters, MUMM (Haelters <i>et al.</i> , 2005)

2.1.2 Opportunistic, platforms of opportunity

Numerous sightings of harbour porpoises were reported to MUMM in 2005, most of these between January and April, but also some in summer months. Researchers at the Institute of Nature Conservation (now INBO: Research Institute for Nature and Forest) reported, besides a large number of sightings of harbour porpoises, a sighting of two long-finned pilot whales and two sightings (resp. 2 and 3 animals) of common bottlenose dolphins during seabird surveys in 2005. INBO and others reported a few sightings of white-beaked dolphins (Haelters, 2005). Also in 2006 were numerous sightings of harbour porpoise reported, as well as a few sightings of white-beaked dolphins by INBO personnel.

Primary species	Area	Data type/method	Collected by	Platform	Contact person/institute and refs
Harbour porpoise, white-beaked dolphin	Belgian waters (southern North Sea)	Sightings	INBO	Research vessel During seabird surveys	INBO: Eric Stienen
			RBINS (MUMM)	Pollution control aircraft	RBINS (MUMM): Jan Haelters
			Various persons	Land-based bird migration research	http://www.trektellen.nl

2.2 Analyses/development of techniques

Give brief details of any analyses of data carried out, with references where appropriate. A summary table of sightings and associated effort may be included (see below).

An overview of sightings is one of the objectives of the project 'WAKO' (Evaluatie van de milieu-impact van WARrelnet- en boomKORvisserij op het Belgisch Continentaal Plat (WAKO-I)): 2006–July 2007

3. MARKING DATA

None.

4. TISSUE/BIOLOGICAL SAMPLES COLLECTED

4.1 Biopsy samples (summary only)

None.

4.2 Samples from bycatches

Species	Area/stock	Tissue type(s)	No. collected	Archived (Y/N)	No. analysed	Contact person/institute
Harbour porpoise	NE Atlantic/North Sea	Multiple (see below)	40% of stranded animals, condition permitting	Y	All	T. Jauniaux/ UOL
White-beaked dolphin	NE Atlantic/North Sea	Multiple	All stranded animals	Y	All	T. Jauniaux /UOL

Samples taken: skin, reproductive tract, teeth, blubber, muscle, liver, adrenal, lymph node, stomach and intestine, kidney, urinary bladder, pancreas, lung, myocardium, esophagus, thymus, thyroid, central nervous system, lesions

4.3 Samples from stranded animals

Species	Area/stock	Tissue type(s)	No. collected	Archived (Y/N)	No. analysed	Contact person/institute
Harbour porpoise	NE Atlantic/ North Sea	Multiple (see above)	40% of stranded animals, condition permitting	Y	All	T. Jauniaux/UOL
White-beaked dolphin	NE Atlantic	Multiple	All stranded animals	Y	All	T. Jauniaux/UOL
Humpback whale	NE Atlantic	Skin, blubber, muscle, eye	1	Y	1	T. Jauniaux/UOL

4.4 Analyses/development of techniques

None.

5. POLLUTION STUDIES

Two research projects were recently reported on. These include biological trace element research (Schnitzler *et al.*, 2006) and the binding ability of Zn, Cu, Cd and Hg to metallothioneins in harbour porpoises from the southern North Sea (Das *et al.*, 2006).

6. STATISTICS FOR LARGE CETACEANS

6.1 Corrections to earlier years' statistics for large whales

No corrections are due.

6.2 Direct catches of large whales (commercial, aboriginal and scientific permits) for the calendar years 2005-2006

None.

6.3 Anthropogenic mortality of large whales for the calendar year 2005-2006

6.3.1 Observed or reported ship strikes of large whales (including non-fatal events)

On 5 March 2006 a young, female humpback whale washed ashore, in moderately fresh condition. This was the first record of a humpback whale in Belgian waters since 1751 (Haelters *et al.*, 2006). The animal had died as a result of the injuries inflicted most probably during the collision with a ship (Jauniaux *et al.*, 2006b).

Whale species	Sex	No.	Date	Location	Vessel type	Speed	Fate	How observed	Contact person/ institute and refs
Humpback whale	F	1	05/3/06 (stranding)	Belgian coast	?	?	D	Stranded	Jan Haelters and T. Jauniaux (MUMM)

6.3.2 Fishery bycatch of large whales

None.

7. STATISTICS FOR SMALL CETACEANS

Species	Sex	No.	Date	Location	Fate	Targeted fish species	Gear	How observed	Source or contact
Harbour porpoise	-	3+	2005	IVc ICES area	D	Mixed fishery: sole, plaice, other species	Recreational beach fisheries, probably gill nets; one animal was returned alive	Indirect & direct	J. Haelters
Harbour porpoise	-	3+	2005	IVc ICES area	D	Mixed fishery, predominantly Dover sole	Professional gillnet fisheries	indirect	J. Haelters
Harbour porpoise	-	1	2005	IVc ICES area	D	Mixed fishery for demersal species	Bottom trawl (TBB)	indirect	J. Haelters
Harbour porpoise	-	11-15+	2005	IVc ICES area	D	Unknown	Unknown gear	indirect	J. Haelters
White-beaked dolphin	-	1	2005	IVc ICES area	D	Unknown	Unknown gear	indirect	J. Haelters
Harbour porpoise	-	27-31 (+)	2006	IVc ICES area	D	Mixed fishery; bottom - demersal species	Both recreational and commercial fishermen (mostly gillnets)	indirect	J. Haelters
White-beaked dolphin	-	1 (+)	2006	IVc ICES area	D	unknown	Unknown gear	indirect	J. Haelters

Comments: One of the bycaught porpoises in 2005 was voluntarily delivered to MUMM for research purposes. In order to continue the established cooperation with fishermen, reports of bycatches are not made available on MUMM's website. Stranded bycaught animals however, are reported as such in the online database.

7.1 Corrections to earlier years' statistics for small cetaceans

None.

7.2 Direct catches of small cetaceans for the calendar years 2005-2006

None.

7.3 Anthropogenic mortality of small cetaceans for the calendar year 2005-2006

7.3.1 Observed or reported ship strikes of small cetaceans (including non fatal events)

None observed or reported. Former high-speed ferry routes between Belgium and the United Kingdom have been discontinued.

7.3.2 Fishery bycatch of small cetaceans

See above statistics table and 8.

8. STRANDINGS

The Belgian coastline is covered for cetacean strandings year-round by MUMM.

Species	No. strandings	No. post mortems	Contact person(s)/ Institute(s)	Contact email address(es)
Harbour porpoise	159	most	Jan Haelters, MUMM	j.haelters@mumm.ac.be
White-beaked dolphin	3	3	Jan Haelters, MUMM	j.haelters@mumm.ac.be

The following information is taken from Haelters (2005). In 2005 a record number of (dead, stranded and bycaught) harbour porpoises was counted in Belgium:

- 79 washed ashore dead;
- 3 were found dead at sea;
- 2 washed ashore alive and transported by MUMM to the rehabilitation centre at Harderwijk, The Netherlands, where they died;
- 1 washed ashore alive and returned alive to sea;
- 1 entangled (alive) in a fishing net (recreational beach fisheries); it was returned to sea alive;
- 1 was bycaught by a bottom trawler;
- 3 were bycaught by a professional gillnet fisherman; 1 was delivered to MUMM.

In 2005 one dead juvenile white-beaked dolphin washed ashore; this animal had been bycaught in (unknown) fishing gear. Most of the carcasses were available for research, and were investigated according to the state of decomposition.

The percentage of stranded porpoises that was bycaught between 1995 and 2004 is calculated using the total number of washed ashore porpoises for which a cause of death could be determined (117 animals out of 159). In total bycatch was the cause of death of at least 27 animals, or on average 23% of all stranded animals between 1995 and 2004 for which a cause of death could be determined. The highest absolute number of bycaught animals up to 2004 was observed in 2004: 13 (or 41% of the animals for which a cause of death could be determined).

In May 2005 a relatively high number of decayed harbour porpoise carcasses washed ashore in a short period of time. The most probable cause of death of most of these animals had been determined as bycatch. A model developed at MUMM demonstrated that the most probable region where the animals had died was the southern North Sea – eastern Channel. The results of this investigation were presented at the 2006 ICES Annual Science Conference (Haelters *et al.*, 2006).

In 2006, circa 92 harbour porpoises (a record number) (live/dead stranded, bycaught, found at sea dead) were counted in Belgium. Most of the carcasses were available for research, and were investigated according to the state of decomposition.

- 4 washed ashore alive; 2 of these died and 2 were refloated;
- 3 were found dead at sea (unknown cause of death);
- 26-31 washed ashore dead, and were found to have been caught in fishing gear (26 certain, another 5 most probably); of these, a number could be attributed to recreational fisheries, especially in March and April;
- 27 washed ashore dead, and were found to have, most probably, died from natural causes;
- 27 washed ashore dead, and a cause of death could not be determined.

Post-mortem findings for 2005 and partially for 2006 have been reported (Jauniaux *et al.*, 2006a,b)

9. OTHER STUDIES AND ANALYSES

Two multiple-year population genetics research projects were completed at the Free University of Brussels. Using nine nuclear species-specific microsatellite loci and two mitochondrial gene fragments (cytochrome b and control region) of 221 individuals, Cassens *et al.* (2005) investigated the processes that have shaped the geographical distribution of genetic diversity exhibited by four dusky dolphin populations (Peru, Argentina, southern Africa, New Zealand). With mitochondrial control region sequences and 11 species-specific microsatellite loci, Rosa *et al.* (2005) assessed the genetic differentiation among 118 by-caught and stranded Burmeister's porpoises from Peru, Chile and Argentina. Both studies were conducted jointly with the Peruvian Centre for Cetacean Research (CEPEC), Pucusana, Lima. Further, Fontaine *et al.* (2006) studied the efficiency of fluorescent multiplex Polymerase Chain Reactions (PCRs) for rapid genotyping of harbour porpoises with 11 microsatellite loci.

Camphuysen and Peet (2006) described the presence of cetaceans in the southern North Sea (The Netherlands and Belgium).

10. LITERATURE CITED

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11.2 Unpublished literature

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