

**NETHERLANDS PROGRESS REPORT ON CETACEAN RESEARCH, MAY 2005 TO MAY 2006, WITH STATISTICAL DATA FOR THE CALENDAR YEAR 2005**

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This report summarises information obtained from: the Institute for Marine Resources & Ecosystem Studies (IMARES), the Royal Netherlands Institute for Sea Research (NIOZ), the National Museum of Natural History Naturalis (NMNH), and the Sea Mammal Research Company (SEAMARCO).

**1. Species and stocks studied**

Unidentified large fin whale	<i>Balaenoptera spec.</i>	N Atlantic	2.1.1
Minke Whale	<i>Balaenoptera acutorostrata</i>	S North Sea	2.1.1, 4.3, 8
Northern Right Whale	<i>Balaena glacialis glacialis</i>	S North Sea	2.1.1
Sei whale	<i>Balaenoptera borealis</i>	North Sea	4.3, 8
Bottlenose Dolphin	<i>Tursiops truncatus</i>	S North Sea, Mediterranean	2.1.1
Striped Dolphin	<i>Stenella coeruleoalba</i>	Mediterranean, S North Sea	2.1.1., 4.3
Common Dolphin	<i>Delphinus delphis</i>	Mediterranean	2.1.1
Risso's Dolphin	<i>Grampus griseus</i>	Mediterranean	2.1.1
Long-finned Pilot Whale	<i>Globicephala melas melas</i>	Mediterranean, S North sea	2.1.1
Beaked whale	<i>Mesoplodon spec.</i>	N Atlantic	2.1.1
White-beaked Dolphin	<i>Lagenorhynchus albirostris</i>	S North Sea	2.1.1, 8
White-sided dolphin	<i>Lagenorhynchus acutus</i>	S North Sea	4.3
Harbour Porpoise	<i>Phocoena phocoena</i>	S North Sea	2.1.1, 4.3, 8
Blainville's beaked whale	<i>Mesoplodon densirostris</i>	S North Sea	8

**2. Sightings data**

*2.1 Field work*

**2.1.1 SYSTEMATIC**

The Netherlands participated in the SCANS-II survey. Dutch observers sailed on several of the SCANS-II vessels, most notably on the RV Zirphaea that was contributed to the project by the Dutch government to the project, to work in the waters around SW England and Ireland; and on the RV Victor Hensen that worked under Dutch cruiseleadership in the southern central North Sea (IMARES).

In conjunction with TNO Defence, Security and Safety, a sightings survey was conducted, 29 June – 7 July, between Taranto (Italy), via the Strait of Gibraltar into the Bay of Biscay and towards La Coruña (final port of call, Spain). In this particular cruise, advanced acoustic devices (*Delphinus* and *CAPTAS* arrays) were

deployed to detect and record marine mammals. The observations on board were meant to identify acoustically detected cetaceans and vice versa to record and detect cetaceans that were detected visually (*cf.* Beerens *et al.* 2005). (NIOZ)

The Marine Mammal database (Nederlandse Zeevogelgroep) was maintained and received 806 submissions (i.e. reported sightings). Most sightings recorded are from the Southern North Sea, with a probable Northern Right Whale records as the most interesting case of the year.

Recent sightings are published on the internet: <http://home.planet.nl/~camphuys/Cetacea.html>

#### 2.1.2 OPPORTUNISTIC, PLATFORMS OF OPPORTUNITY

Some recordings were made during surveying seabirds and cetaceans on the Dutch Continental Shelf, particularly in proposed Natura 2000 sites. Cruises of one week each were conducted in the Frisian Front area (3-7 October 2005), the Brown Ridge / Broad Forteens area (12-15 December 2005), the coastal waters off the Dutch mainland (20-24 February 2006) and further offshore from the Dutch mainland coast (10-13 April 2006). Seabirds and cetaceans were surveyed using standard ESAS techniques for ship-based strip transect surveys. Harbour Porpoises were seen on all of these surveys (n=25, 35, 242 and 74 respectively). The only other cetaceans seen were a group of four White-beaked Dolphins seen during the December survey. The results are reported in cruise reports to the Dutch government IMARES).

Sightings data made from the ferry Hoek van Holland - Harwich have been collected. These data and earlier ones carried out by RIKZ have been jointly analysed. A report is in preparation (NMNH/Rijksuniversiteit Leiden)

#### 2.2 Analyses/development of techniques

Whale and dolphin sightings in the Southern North Sea between 1970 and 2005 were analysed and the results are currently in press (Van der Meij & Camphuysen 2006). (NIOZ).

### 4. Tissue/biological samples collected

#### 4.3 Samples from stranded animals

Species	Area/stock	Calendar year/ season total	Archive d (Y/N)	Tissue type(s)*	Contact person/institute
<i>Phocoena phocoena</i>	Dutch coast	check number	Y	Stomach contents, reproductive organs, skeletons	NMNH, Leiden, Natural History Museum Rotterdam
<i>Lagenorhynchus alibirostris</i>	Dutch coast	check number	Y	Stomach contents, reproductive organs, skeletons	NMNH, Leiden, Natural History Museum Rotterdam
<i>Lagenorhynchus (Leucopleurus) acutus</i>	Dutch coast	1	Y	Stomach contents, reproductive organs, skeleton	NMNH, Leiden
<i>Stenella coeruleoalba</i>	Dutch coast	1	Y	Stomach contents, reproductive organs, skeleton	NMNH, Leiden
<i>Balaenoptera acutorostrata</i>	Dutch coast	1	Y	Skeletal remains	NMNH, Leiden
<i>Balaenoptera borealis</i>	Dutch coast	1	Y	Skeletal remains	NMNH, Leiden; EcoMare, Texel

#### 4.4 Analyses/development of techniques

Study of stomach contents of white-beaked dolphins stranded on the Dutch coast was continued (NMNH).

### 7. Statistics for small cetaceans

#### 7.1 For the calendar year 2005

Species	Area/stock	Directed catch		Incidental mortality			Live-capture
		Reported	Est. total	Reported	Est. total	Source*	Reported
Harbour porpoise	North Sea	0	0		Appr. 150	Gillnet	0

### 8. Strandings

Strandings were recorded by National Museum of Natural History (Naturalis), Leiden. However, strandings data were computerised by C.J. Camphuysen and updated up to and including 2005. Strandings in 2005 included: 2 minke whale *Balaenoptera acutorostrata*, 1 sei whale *Balaenoptera borealis borealis*, 6 white-beaked dolphin *Lagenorhynchus albirostris*, 1 Blainville's beaked whale (first ever in The Netherlands), 294 harbour porpoise *Phocoena phocoena* and 1 unidentified dolphin. Numbers of harbour porpoises washing ashore have increased markedly over the past years (e.g. 1999 – 89, 2000 – 68, 2001 – 113, 2002 – 105, 2003 – 144, 2004 – 193, 2005 – 294 (NIOZ).

### 9. Other studies and analyses

#### *Bycatch assessment and bycatch prevention*

The study on effects of commercially-available acoustic alarms, designed to reduce small cetacean bycatch, on the behaviour of North Sea fish species, has been continued (SEAMARCO).

Research to reduce cetacean by-catches in pelagic trawls was conducted within an international EU-co funded programme “Necessity”. Two experimental cetacean barriers were designed for tests on a 4300 meshes circumference pelagic trawl. Both barriers were rigged at full scale about 50 m behind the headrope of the trawl and tested in the Bay of Biscay on board the German fisheries research vessel FRV “Walther Herwig III” in March/April 2005. The field tests showed that the rope barrier design reduced the vertical trawl opening and catch efficiency. A large amount of fish disappeared at the level of the ropes, while the tunnel barrier had less effect on the geometry of the trawl and large mackerel was caught and not observed escaping. Research will be continued in September 2006 IMARES, SEAMARCO, University of Bristol, Boudewijn Sea Park, Bruges.

The final prototype large fish excluder was developed for use in commercial trawls fishing off the Mauritanian coast to separate and discard larger non-targets from the commercial catch. The final prototype was tested on board a Dutch freezer trawler KW 172 “Maartje Theadora”. The results showed that efficiency of commercial catches was hardly affected. As the fishing was near the 12 miles fishing limit in coastal shallow waters the efficiency on the exclusion of larger non-targets could not be determined.

The acoustic characteristics of six SaveWave pingers were measured during a fishing operation of KW 172 “Maartje Theadora” fishing for sardinella off the Mauritanian coast, it appeared the acoustic pinger sounds were masked by the background noise spectrum of the trawling operation.

#### *Pathology, life history*

Autopsies were carried out on a number of stranded animals; stomach contents and other samples were collected (NMNH).

### *Pollution*

Phase I of the IWC-Research Programme to Investigate Pollutant Cause-Effect Relationships in Cetaceans – Pollution2000+, has been completed for both the bottlenose dolphin part and the harbour porpoise post mortem calibration part. One report on bottlenose dolphin immune-function in relation to blubber PCB concentrations will be presented to the 58<sup>th</sup> IWC-Scientific Committee meeting. Similarly, three papers on post-mortem changes in different variables in harbour porpoises will be presented at the same Scientific Committee meeting (IMARES, co-ordination).

### *Wind farms*

The impact assessment study on the possible effect of the construction and functioning of an offshore windfarm close to the Dutch North Sea coast has entered its next phase. The construction of the park has recently started and monitoring of the possible impact thereof on behaviour, occurrence and abundance of porpoises in the area is ongoing. Later this year, T-PODs will be deployed and boatsurveys carried out to study abundance and occurrence during the normal operation of the windpark (IMARES).

## **10. Literature cited**

- Beerens, P. & S.P. van IJsselmuide 2005. The hunt for the singing Ziphius: report on the marine mammal DCL trial 2004. TNO-DV1 2004 A 244, TNO Defence and Security, Den Haag.
- Camphuysen, C.J. 2005. Whales and dolphins observed, HNLMS Mercuur Expedition, Nemo 2005, Taranto (S Italy) - La Coruna (NW Spain), 29 June-7 July 2005 - Visual observations. Unpubl. report Royal Netherlands Institute for Sea Research, Texel, 20pp.
- Meij, S.E.T. van der & C.J. Camphuysen 2006. Distribution and diversity of whales and dolphins (Cetacea) in the Southern North Sea: 1970-2005. *Lutra* 49(1).

## **11. Publications**

### *11.1 Published*

- Camphuysen, C.J. 2005. Witsnuitdolfijnen in Nederland. *Zoogdier* 16(2): 8-12.
- Geertsen, B.M., Teilmann, J., Kastelein, R.A., Vlemmix, H.N.J. and Miller, L.A. 2004. Behaviour and Physiological effects of transmitter attachments on a captive harbour porpoise (*Phocoena phocoena*). *J. Cet. Res. & Manage* 6(2): 139-146.
- Kastelein, R. A., Janssen, M., Verboom, W. C., de Haan, D. (2005) Receiving beam patterns in the horizontal plane of a harbor porpoise (*Phocoena phocoena*). *J. Acoust. Soc. America* 118(2): 1172-1179.
- Reijnders, P.J.H., Reineking B., Abt K.F., Brasseur S.M.J.M., Camphuysen C.J., Scheidat M., Siebert U., Stede M., Tougaard J. & Tougaard S. 2005. Marine mammals. In: K. Essink, Dettmann C., Farke H. Laursen K., Lürßen G., Marencic H. & Wiersinga W. (eds), Wadden Sea Quality Status Rapport 2004: 317-330. Wadden Sea Ecosystem No. 19, Common Wadden Sea Secretariat, Wilhelmshaven, Germany ([www.waddensea-secretariat.org](http://www.waddensea-secretariat.org)).

### *11.2 Unpublished literature*

- Camphuysen, C.J. 2005. Walvissen en dolfijnen in Nederland in de tweede helft van 2004. *Nieuwsbrief NZG* 6(2): 2-4.
- Camphuysen, C.J. 2005. Whales and dolphins observed, HNLMS Snellius expedition Bay of Biscay, 17-22 September 2004, "The Hunt for the singing Ziphius", visual observations. In: Beerens P. & S.P. van IJsselmuide (eds), The hunt for the singing Ziphius: report on the marine mammal DCL trial 2004: A1-A27. TNO-DV1 2004 A 244, TNO Defence and Security, Den Haag.
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- Camphuysen, C.J. 2005. Zogen in het water. *De Water* 110: 16.