

BELGIUM

Progress report on cetacean research, January 2009 to December 2009, with statistical data for the calendar year 2009

Compiled by:

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This report summarises information obtained from:

Name of agency/institute	Abbreviation (use in rest of report)	Contact e-mail address
Royal Belgian Institute of Natural Sciences	RBINS	Jan Haelters, j.haelters@mumm.ac.be
Department of Pathology, University of Liège	ULg	Thierry Jauniaux, t.jauniaux@ulg.ac.be

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	2.1.1., 2.2., 4.2., 4.3., 7.1., 7.3.2.
Fin whale	<i>Balaenoptera physalus</i>	NE Atlantic	6.3.1.
White-beaked dolphin	<i>Lagenorhynchus albirostris</i>	NE Atlantic	2.1.1.
Striped dolphin	<i>Stenella coeruleoalba</i>	NE Atlantic	4.3.

2. SIGHTINGS DATA

2.1 Field work

2.1.1 Systematic

Aerial surveys in the framework of effect assessment of the construction and operation of offshore windfarms.

Target species	Date	Area	No. of sightings	Contact person/institute and references
Harbour porpoise	3 surveys between February and August 2009	Belgian territorial waters and EEZ	Approx. 75 porpoises; 10 white-beaked dolphins	RBINS (MUMM); Jan Haelters; Haelters (2010, in prep.)

2.1.2 Opportunistic, platforms of opportunity

Ad hoc sightings by the public of marine mammals reported to MUMM (www.mumm.ac.be), to www.zeezoogdieren.org and to www.waarnemingen.be and www.northseapelagics.be. Sightings of marine mammals during seabirds at sea surveys, performed by the research institute for Nature and Forest (INBO), are recorded.

2.2 Analyses/development of techniques

Data collected during aerial surveys is analysed using the line transect sampling method (Buckland et al.,

Target species	Date	Area	Methods/effort	Parameters/ factors measured	Contact person/institute; refs
Harbour porpoise	3 surveys between February and August 2009	Belgian territorial sea and EEZ	Line transect survey	Density, distribution	RBINS (MUMM); Jan Haelters; Haelters (2010, in prep.)

3. MARKING DATA

3.1 Field work

3.1.1 Natural marking data

None

3.1.2. Artificial marking data

None

3.1.3 Telemetry data

None

3.2 Analyses/development of techniques

None

4. TISSUE/BIOLOGICAL SAMPLES COLLECTED

4.1 Biopsy samples (summary only)

None

4.2 Samples from directed catches (commercial, aboriginal and scientific permits) or bycatches

Species	Area/stock	Tissue type(s)*	No. collected	Archived (Y/N)	No. analysed	Contact person/institute
Harbour porpoise (only bycaught, no directed catches)	NE Atlantic	All relevant tissues	Tissues of approx. 15 animals	Y	Some analysed, rest taken up in tissue bank	Thierry Jauniaux (ULg), Jan Haelters (RBINS)

*e.g. liver, skin, blubber ovaries, etc.

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	All relevant tissues, depending on the state of decomposition	Tissues of approx. 45 animals	Y	Some analysed, rest taken up in tissue bank	Thierry Jauniaux (ULg)
Striped dolphin	NE Atlantic	All relevant tissues	Tissues of 1 animal	Y		Thierry Jauniaux (ULg)

*e.g. liver, skin, blubber etc.

4.4 Analyses/development of techniques

A standardised methodology for necropsy and sampling is used, a.o. described in Jauniaux et al. (2002) and Kuiken & Hartmann (1991). Samples are taken up in a tissue bank, created for facilitating research; a web application will be online in 2010 (Jauniaux et al., 2009).

A necropsy workshop was organized (*3rd Cetacean Necropsy Workshop: special issue on cetaceans inner ear, including beaked whales*, Jauniaux T., André M., Dabin W., Morell M., Coignoul F.) on June 17-18 at the University of Liege (Department of Veterinary Pathology). There were 18 participants from countries in Europe and Africa, and 26 marine mammals were necropsied, mostly porpoises. The main issue was the dissection of the inner ear and a demonstration of the skull morphology of cetaceans, including beaked whales.

5. POLLUTION STUDIES

In the framework of the construction and operation of offshore windfarms in Belgian waters, impact studies were performed, amongst others to try to assess the impact on marine mammals due to an increase in underwater noise pollution. Preliminary studies, describing predominantly the methodology on noise monitoring and marine mammal monitoring, including setting the baseline, were published in Degraer & Brabant (2009).

6. STATISTICS FOR LARGE CETACEANS

6.1 Corrections to earlier years' statistics for large whales

None

6.2 Direct catches of large whales (commercial, aboriginal and scientific permits)

None

6.3 Anthropogenic mortality of large whales for the calendar year 2009

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

Whale species	Sex	No.	Date	Location	Vessel type	Speed	Fate	How observed	Contact person/ institute and refs
Fin whale	F	1	22 Sep 2009	Eastern north Atlantic, exact location unknown	LC	Cruise speed 22.5 kts	D*	While entering port	Jan Haelters (RBINS); ULg (Thierry Jauniaux); FoD Environment (Alexandre de Lichtervelde); Haelters & Kerckhof (2010)
*Animal was carried into port of Antwerp on the bulb of the vessel that had come from Colombia; it had died 2 to 3 days earlier.									

6.3.2 Fishery bycatch of large whales

None

7. STATISTICS FOR SMALL CETACEANS

7.1 Corrections to earlier years' statistics for small cetaceans

Bycatch of harbour porpoises in Belgium up to 2007 reported in Haelters & Camphuysen (2009).

7.2 Direct catches of small cetaceans for the calendar year 2009

None

7.3 Anthropogenic mortality of small cetaceans for the calendar year 2009

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

None

7.3.2 Fishery bycatch of small cetaceans

Species	Ratio of male to female (if known)	No.	No. extrapolated to fleet total (point estimate)	Date of bycatch	Location (description or lat/long)	Fate	Targeted species	Gear	How observed?	Source or contact
Harbour porpoise		15*	-	Most March to May	Belgian territorial waters	D	Flatfish (sole, plaice), cod	GTR GNS **	**	Jan Haelters (RBINS)

* Preliminary data, the figure includes stranded animals that were bycaught and discarded, and very few animals reported by fishermen

** Mostly indirect evidence from stranded animals

8. STRANDINGS

Strandings dealt with by a strandings network, covering the whole coastline, and coordinated by the RBINS (www.mumm.ac.be).

Species	No. strandings	No. post mortems	Contact person(s)/ Institute(s)	Contact email address(es)
All cetaceans	67 (includes discarded bycaught animals)	All available animals (approx 60)	Jan Haelters (RBINS) Thierry Jauniaux (ULg) www.mumm.ac.be www.marinemammals.be	j.haelters@mumm.ac.be t.jauniaux@ulg.ac.be

9. OTHER STUDIES AND ANALYSES

A web application is being developed which will contain data on strandings and sightings of marine mammals in Belgium (now available on www.mumm.ac.be), and allow for the provision of selected samples for dedicated scientific research (Jauniaux et al., 2009). The information will be available during 2010 at www.marinemammals.be.

10. LITERATURE CITED

Buckland, S.T., Anderson, D.R., Burnham, K.P., Laake, J.L., Borchers, D.L. & Thomas, L., 2001. Introduction to Distance Sampling: estimating abundance of biological populations. Oxford University Press, 432 p.

Degraer, S. & Brabant, R. (Eds), 2009. Offshore windfarms in the Belgian part of the North Sea: State of the art after two years of environmental monitoring. Royal Belgian Institute of Natural Sciences, Department MUMM, 287p., 8 annexes.

Haelters, J., 2010 (in prep.). Monitoring of marine mammals in the framework of offshore windfarm development in Belgian waters during 2009. Royal Belgian Institute of Natural Sciences, Department MUMM.

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Royal Netherlands Institute for Sea Research (NIOZ); report commissioned by the International Fund for Animal Welfare (IFAW); 56 p.

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Jauniaux, T., De Cauwer, K., De Winter, J., Haelters, J., Jacques, T.G., Scory, S. & Coignoul, F., 2009. The Belgian Marine Mammal Biobank: a tool to stimulate tissue exchange. Report submitted to the meeting of the Advisory Committee of ASCOBANS, Bruges, 20-24 April 2009. Doc. AC16/44.

Jauniaux, T., Garcia Hartmann, M., Haelters, J., Tavernier J. & Coignoul, F., 2002. Echouage de mammifères marins: guide d'intervention et procédures d'autopsie. *Annales de médecine vétérinaire* 146: 261-276

Kuiken & Hartmann, G., 1991. Proceedings of the first ECS workshop on cetacean pathology: dissection techniques and tissue sampling. *ECS newsletter* 17.

Thomas, L., Laake, J.L., Rexstad, E., Strindberg, S., Marques, F.F.C., Buckland, S.T., Borchers, D.L., Anderson, D.R., Burnham, K.P., Burt, M.L., Hedley, S.L., Pollard, J.H., Bishop, J.R.B. & Marques, T.A., 2009. Distance 6.0. Release 2. Research Unit for Wildlife Population Assessment, University of St. Andrews, UK. <http://www.ruwpa.st-and.ac.uk/distance/>

11. PUBLICATIONS

11.1 Published or 'In Press' papers only

See literature cited.

Ship strikes folder published by the Belgian Ministry of Environment; available at:

http://www.iwcoffice.org/sci_com/shipstrikes.htm

11.2 Unpublished literature

Appendix 1. FOA fishing descriptions and codes

FAO FISHING GEAR CATEGORIES:		FALLING GEAR	
SURROUNDING NETS		Cast nets	FCN
With purse lines	PS	Falling gear (not specified)	FG
One-boat operated purse seines	PS1	GILLNETS AND ENTANGLING GEAR	
Two-boat operated purse seines	PS2	Set gillnets (anchored)	GNS
Without purse lines (lampara)	LA	Driftnets	GND
SEINE NETS		Encircling gillnets	GNC
Beach seines	SB	Fixed gillnets (on stakes)	GNF
Boat seines	SV	Trammel nets	GTR
Danish seines	SDN	Combined gillnet-trammel nets	GTN
Scottish seines	SSC	Gillnets and entangling gillnets (not specified)	GEN
Pair seines	SPR	Gillnets (not specified)	GN
Seine nets (not specified)	SX	TRAPS	
TRAWLS		Stationary uncovered pounds nets	FPN
Bottom trawls	TBB	Pots	FPO
Beam trawl	OTB	Fyke nets	FYK
Otter trawls (side or stern)	PTB	Stow nets	FSN
Pair trawls	TBN	Barriers, fences, weirs, etc	FWR
Nephrops trawls	TBS	Aerial traps	FAR
Shrimp trawls (not specified)	TM	Traps (not specified)	FIX
Midwater trawls		HOOKS AND LINES	
Otter trawls (side or stern)	OTM	Handlines and pole-lines (hand operated)	LHP
Pair trawls	PTM	Handlines and pole-lines (mechanised)	LHM
Shrimp trawls	TMS	Set longlines	LLS
Midwater trawls (not specified)	TM	Drifting longlines	LLD
Otter twin trawls	OTT	Longlines (not specified)	LL
Otter trawls (not specified)	OT	Trolling lines	LTL
Pair trawls (not specified)	PT	Hooks and lines (not specified)	LX
Other trawls (not specified)	TX	GRAPPLING AND WOUNDING	
DREDGES		Harpoons	HAR
Boat dredges	DRB	HARVESTING MACHINES	
Hand dredges	DRH	Pumps	HMP
LIFT NETS		Mechanised dredges	HMD
Portable lift nets	LPN	Harvesting machines (not specified)	HMX
Boat-operated lift nets	LNB	MISCELLANEOUS GEAR	MIS
Shore operated stationary lift nets	LNS	RECREATIONAL FISHING GEAR	RG
Lift nets (not specified)	LN	GEAR NOT KNOWN OR NOT SPECIFIED	NK
		SHARK CONTROL NETS	NSC
		DERELICT FISHING GEAR	