

Denmark.

Progress report on cetacean research, March 2008 to March 2009, with statistical data for the calendar year 2008.

COMPILED BY MAGNUS WAHLBERG

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This report summarises information obtained from:

Name of agency/institute	Abbreviation (use in rest of report)	Contact e-mail address
Agency of Fisheries, Hunting and Agriculture	AFHA	apna@gh.gl
Fernando, Ugarte, Greenland Institute of Natural Resources	GINR	feug@natur.gl
Lasse Fast Jensen, Fisheries and Maritime Museum	FoS	lfj@fimus.dk
Mads Peder Heide Jørgensen, Greenland Institute of Natural Resources	GINR	mhj@ghsdk.dk

1. SPECIES AND STOCKS STUDIED

IWC common name	IWC recommended scientific	Area/stock(s)	Items referred to
Bowhead whale	<i>Balaena mysticetus</i>	Baffin Bay-Davis Strait	3.1.3, 9
Bowhead whale	<i>Balaena mysticetus</i>	Bering-Chukchi-Beaufort	3.1.3
Humpback whale	<i>Megaptera novaeangliae</i>	West Greenland	2.1.1, 3.1.1, 3.1.3, 4.1, 6.3.2, 8
Humpback whale	<i>Megaptera novaeangliae</i>	Iceland	3.1.3
Fin whale	<i>Balaenoptera physalus</i>	West Greenland	6.2, 9
Minke whale	<i>Balaenoptera acutorostrata</i>	East Greenland	6.2
Minke whale	<i>Balaenoptera acutorostrata</i>	West Greenland	6.2, 6.3.2
Minke whale	<i>Balaenoptera acutorostrata</i>	Denmark, North Sea	8
Right whale	<i>Eubalaena japonica</i>	Alaska	3.1.3
Harbour porpoise	<i>Phocoena phocoena</i>	Denmark, North Sea	4.1, 4.3, 8, 9
Striped dolphin	<i>Stenella coeruleoalba</i>	Denmark, North Sea	4.1, 4.3, 8
Whitebeaked dolphin	<i>Lagenorhynchus albirostris</i>	Denmark, North Sea	8
Whitesided dolphin	<i>Lagenorhynchus acutus</i>	Denmark, North Sea	8

2. SIGHTINGS DATA

2.1 Field work

2.1.1 Systematic

Target species	Date	Area	No. of sightings	Contact person / institute and references
Humpback whale	May- Sept. 2008	Nuuk, land based	Not available	Malene Simon/GINR – Boye 2009

2.1.2 Opportunistic, platforms of opportunity

2.2 Analyses/development of techniques

3. MARKING DATA

3.1 Field work

3.1.1 Natural marking data

Species	Feature	Area/stock	No. photo-id'd	Catalogue (Y/N)	Catalogue total	Contact person/institute; refs
Humpback whale	fluke	West Greenland	20 ind. (126 enc.)	Y	58	Malene Simon/GINR

3.1.2. Artificial marking data

3.1.3 Telemetry data

Species	Tag type	No. successfully deployed	Maximum time transmitting	Contact person/institute; refs
Bowhead whale	SPOT5, FastLoc	13	6 mths	Mads Peter Heide-Jørgensen
Bowhead whale	SPOT5, SPLASH	18	8 mths	With Lori Quackenbush, Alaska Dept. of Fish and Game
Bowhead whale	D-TAG	8	3 hrs	Malene Simon/GINR
Humpback whale	SPOT5	11	4 mths	Mads Peter Heide-Jørgensen/GINR
Humpback whale	SPOT5	2	2	With Gisli Vikingsson, Marine Research Institute, Iceland
Humpback whale	D-TAG	7	8 hrs	Malene Simon/GINR
Right whale	SPOT5	1	2 mths	With Alex Zerbini, National Marine Fisheries Service

3.2 Analyses/development of techniques

4. TISSUE/BIOLOGICAL SAMPLES COLLECTED

4.1 Biopsy samples

Species	Area/stock	Calendar year/season - no. collected	Archived (Y/N)	No. analysed	Total holdings	Contact person/institute
Bowhead whale	Baffin Bay-Davis Strait	2008	Y	64	64	Mads Peter Heide-Jørgensen/GINR
Humpback whale	West Greenland	2008	Y	5	5	Mads Peter Heide-Jørgensen/GINR
Harbor porpoise, stranded	Wadden Sea	2008	Y	1	1	Lasse Fast Jensen/ FoS
Striped dolphin stranded	Wadden Sea	2008	Y	1	1	Lasse Fast Jensen/ FoS

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

4.3 Samples from stranded animals

Harbor porpoise, bycaught, Wadden Sea 2008, 1 individual

Striped dolphin, Wadden Sea 2008, 1 individual

4.4 Analyses/development of techniques

5. POLLUTION STUDIES

6. STATISTICS FOR LARGE CETACEANS

6.1 Corrections to earlier years' statistics for large whales

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

Species	Type of catch	Area/stock	Males	Females	Total landed	Struck and lost
Fin Whale	ASW	West Greenland	8	3	11	3
Minke Whale	ASW	West Greenland	86	55	146*	5
Minke Whale	ASW	East Greenland		1	1	

* Including 5 of unknown gender (hereof 2 from known, but still unreported catches). Gender data for catches from from Greenland May be adjusted later on, as all reports are not confirmed at this date. Catches from Faroe Islands (pilot whales only) are reported separately to IWC.

6.3 Anthropogenic mortality of large whales for the calendar year 2008

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

6.3.2 Fishery bycatch of large whales

- Two humpback whales entangled in pond nets for cod, euthanized.
- One humpback whale entangled in gill nets for cod, euthanized.
- One minke whale (female with a length of 5,6 m) entangled in driftnets for salmon, euthanized.

7. STATISTICS FOR SMALL CETACEANS

7.1 Corrections to earlier years' statistics for small cetaceans

No corrections needed

7.2 Direct catches of small cetaceans for the calendar year 2008

No data available

7.3 Anthropogenic mortality of small cetaceans for the calendar year 2008

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

7.3.2 Fishery bycatch of small cetaceans

No data available (however see ASCOBANS rapport)

8. STRANDINGS

Species	No. strandings	No. post mortems	Contact person(s)/ Institute(s)	Contact email address(es)
Minke whale	1		Lasse Fast Jensen/ Fisheries and Maritime Museum	lfj@fimus.dk
Humpback Whale	2	0	Ole Heinrich Agency of Fisheries, Hunting and Agriculture	oleh@gh.gl
Harbor porpoise	94	1	Lasse Fast Jensen/ Fisheries and Maritime Museum	lfj@fimus.dk
Striped dolphin	1	1	Lasse Fast Jensen/ Fisheries and Maritime Museum	lfj@fimus.dk
Whitebeaked dolphin	5		Lasse Fast Jensen/ Fisheries and Maritime Museum	lfj@fimus.dk
Whitesided dolphin	2		Lasse Fast Jensen/ Fisheries and Maritime Museum	lfj@fimus.dk
Unknown whale, 4 m long	1		Lasse Fast Jensen/ Fisheries and Maritime Museum	lfj@fimus.dk

9. OTHER STUDIES AND ANALYSES

Acoustic monitoring in Davis Strait: moored recorders with 12 months continuous data were collected. Ongoing analysis of fin whale and bowhead whale calls. Contact: Malene Simon/GINR and Kate Stafford/APL University of Washington.

Ph .D. study on the acoustic behaviour of bowhead whales in Disko bay. Contact: Outi Tervo/University of Copenhagen, Arctic Station.

Studies on Danish harbour porpoise interaction with fishing gear (contact person: Magnus Wahlberg, Fjord&Bælt.

10. LITERATURE CITED

11. PUBLICATIONS

11.1 Published or 'in Press' papers only

Blanchet, M.-A., T. Nance, C. Ast, M. Wahlberg, M. Acquarone (2008). First case of a monitored pregnancy of a harbour porpoise (*Phocoena phocoena*) under human care. *Aquatic Mammals* 34(1): 9-20.

Hansen, M., M. Wahlberg, P. T. Madsen (2008). *Low-frequency components in harbor porpoise (Phocoena phocoena) clicks for echolocation and communication - facts or artefacts?* *Journal of the Acoustical Society of America*: 4059-4068.

- Heide-Jørgensen, M. P., D. L. Borchers, L. Witting, K. L. Laidre, M. J. Simon, A. Rosing-Asvid, D. G. Pike. 2008. Estimates of large whale abundance in West Greenland from an aerial survey in 2005. *Journal of Cetacean Research and Management* 10(2): 119-129.
- Kyhn, L. A., J. Tougaard, J. Teilmann, M. Wahlberg, P. B. Jørgensen, N. I. Bech (2008). Harbour porpoise (*Phocoena phocoena*) static monitoring: laboratory detection thresholds of T-PODs are reflected in field sensitivity. *Journal of the Marine Biological Association U. K.* 88(6): 1085-1091
- Laidre, K.L., I. Stirling, L.F. Lowry, Ø. Wiig, M.P. Heide-Jørgensen, S.H. Ferguson. 2008. Quantifying the sensitivity of Arctic marine mammals to climate-induced habitat change. *Ecological Applications* 18(2): S97-S125.
- Stafford, K., S. E. Moore, K. L. Laidre, and M. P. Heide-Jørgensen. 2008. Bowhead whale springtime song offshore West Greenland. *Journal of the Acoustical Society of America* 124(5): 3315-3323.

11.2 Unpublished literature

- Boertman, D., K. Johansen, L. M. Rasmussen, D. Schiedek, F. Ugarte, A. Mosbec, M. Frederiksen, M. Bjerrum (2008). Preliminary strategic environmental impact assessment of hydrocarbon activities in the KANUMAS East assesment area. National Environmental Research institute and Greenland Institute of Natural Resources. Draft report.
- Boertmann, D., L. M. Rasmussen, F. Ugarte, A. Mosbech, K. Johansen, D. Schiedek, M. Frederiksen, M., M. Bjerrum (2008). Preliminary strategic environmental impact assessment of hydrocarbon activities in the KANUMAS West assesment area. National Environmental Research institute and Greenland Institute of Natural Resources. Draft report.
- Boye, T., 2009. Home Sweet home? Habitat use of humpback whales (*Megaptera Novaengliae*) in Nuuk fjord, Greenland, with implications for commercial exploitation. M.Sc. thesis, Univ. of Århus.
- Kindt-Larsen, L., C. Krog, M. Wahlberg (2008) Udvikling af afprøvning af foranstaltninger til afværgning af bifangst af småvaler i garnfiskeriet. Rapport til Fødevareministeriet, oktober 2008.
- Ottosen, K. M. (2008). Detection of high-density and conventional gillnets in harbor porpoises (*Phocoena phocoena*) assessed electrophysiologically. M. Sc. Thesis, University of Southern Denmark.
- Simon, M. 2008. Sounds of whales and their food, baleen whale movements, foraging behaviour and ecology in an Arctic habitat. Part-A report of a PhD study. University of Aarhus.

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	