

SC/55/Prog.Rep.Denmark
Ref. SN 2001-886/33-0001
2003

DENMARK
PROGRESS REPORT ON CETACEAN RESEARCH, APRIL 2002 - APRIL 2003

Ministry of Environment
Danish Forest and Nature Agency
Haraldsgade 53, DK-2100 København Ø

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This report summarises information obtained from:

- Danish Institute for Fisheries Research (DFU), Charlottenlund Slot, DK-2920 Charlottenlund, Denmark (fl@dfu.min.dk).
- Greenland Institute of Natural Resources (GN), P.O. Box 570, DK-3900 Nuuk, Greenland (larsw@natur.gl; ewb@dmu.dk).
- Greenland Home Rule Government (GHG), P.O. Box 269, 3900 Nuuk, Greenland
- (amalie@gh.gl) (kim@gh.gl).
- Center for Sound Communication (CSC), Institute of Biology, University of Odense, Campusvej 55, DK-5230 Odense M, Denmark (lee@biology.sdu.dk).
- Danish Forest and Nature Agency (SNS), Haraldsgade 53, DK-2100 København Ø (puj@sns.dk).

1. Species and stock studies

The following studies were conducted in the period:

Common name	Scientific name	Area/stock(s)	Items referred to
Minke Whale	<i>Balaenoptera acutoros-trata</i>	Denmark, West & East Greenland, North Atlantic	3.1; 4.2; 6.1; 8
Fin Whale	<i>Balaenoptera physalus</i>	Denmark, West Greenland	6.1
Humpback Whale	<i>Megaptera novaeangliae</i>	West Greenland	3.1; 4.1; 6.1; 6.2
Bowhead Whale	<i>Balaena mysticetus</i>	West Greenland	3.1; 4.1
Sperm Whale	<i>Physeter macrocephalus</i>	Norway, Denmark	9
Longfinned Pilot Whale	<i>Globicephala melas</i>	Denmark	8
Common Dolphin	<i>Delphinus delphis</i>	Denmark	8
White-beaked Dolphin	<i>Lagenorhynchus albirostris</i>	Denmark; Iceland	8; 9
Harbour Porpoise	<i>Phocoena phocoena</i>	Denmark and Greenland	4.3; 8; 9

2. Sightings data

2.1 Field work

2.1.1 Systematic

An aerial photographic based strip-survey was conducted for large cetaceans off West Greenland in the periods July 14th to August 4th, and September 9th to October 14th.

2.2 Analyses/development of techniques

No information.

3. Marking data

3.1 Field work

3.1.1 Natural marking data

No information.

3.1.2 Artificial marking data

No information.

3.1.3 Telemetry data

No information.

3.1.3 Telemetry data

3rd to 17th May. Telemetry tagging of bowhead whales in Disko Bay. 11 whales were tagged, and followed in up to 197 days.

18th May to 17th October. Telemetry tagging of minke and humpback whales in Nuuk archipelago, West Greenland. 8 humpback whales were tagged, but all tags failed to work due to technical problems with transmitter. Only two minke whales were seen.

3.2 Analyses/development of techniques

Nothing to report

4. Tissue/biological samples collected

4.1 Biopsy samples

10 biopsies were taken from bowhead whales in Disko Bay in May.

4 biopsies were taken from humpback whales in the fall.

4.2 Samples from direct catches or by-catches 2002

Species	Area/stock	Calendar year/season total	Archived (N/Y)	Tissue type(s), stomach samples	Contact person/institute
Minke Whale	Greenland	30	Y	skin	GN

4.3 Samples from stranded animals 2002

Species	Area/stock	Calendar year/season total	Archived (N/Y)	Tissue type(s), stomach samples	Contact person/institute
Harbour Porpoise	Danish waters	20	Y	20 full autopsies	DFU

5. Population and pollution studies

Nothing to report.

6. Statistics for large cetaceans

6.1 Direct catches for the calendar year 2002

Commercial, aboriginal and scientific permits						
Species	Type of catch	Area/stock	Males	Females	Total Landed	Struck and lost
Fin whale	Aboriginal	West Greenland	5	9	13	0
Minke whale	Aboriginal	West Greenland	33	88	138	1
Minke whale	Aboriginal	East Greenland	0	10	10	0

Source: GHG

6.2 Other non-natural mortality for the calendar year 2002

Species	Type	Area/stock	Males	Females	Total Landed
Minke whale	Bycatch (*)	West Greenland		1	1
Fin whale	Bycatch (*)	West Greenland		1	1
Humpback whale	Bycatch (*)	West Greenland			3

(*) Bycatch in fishing gear

Source: GHG

6.3 Earlier year's statistics

No corrections.

7. Statistics for small cetaceans

7.1 For the calendar year 2002

Concerning statistics on small cetaceans the Greenland Home Rule Government, the Directorate for Fishery, Hunt, Trade and Agriculture, and the Home Rule Government of the Faroe Islands as a matter of principles request IWC to obtain scientific and technical information on small cetaceans from the North Atlantic Marine Mammal Commission (NAMMCO), University of Tromsø, N-9037 Tromsø, Norway. Tel: +47 77 64 56 08; fax: +47 77 64 59 05.

8. Strandings

The Danish stranding network is based on a contingency plan developed and managed by the National Forest and Nature Agency in cooperation with the Zoological Museum in Copenhagen and the Fisheries and Maritime Museum in Esbjerg.

The following observations of stranded *cetaceans* are recorded in 2002:

- White-beaked Dolphin 14
- Common Dolphin 1
- Minke Whale 1
- Longfinned Pilot Whale 1
- Harbour Porpoise 107 (some are probably discard of by-caught animals)

9. Other studies and analyses

Acoustics

Since August 1997 an ongoing study of the prey capture behaviour is carried out on Harbour Porpoises in captivity at FBC, Kerteminde, Fyn. The aim is to investigate the echolocation during capture of live fishes and responses to clutter objects like artificial fishing nets. Studies are also in progress concerning the sound production mechanism of harbour porpoises. (contact person: Lee Miller (lee@biology.sdu.dk), Center for Sound Communication, Odense University).

An on-going study of hearing by harbour porpoises using a target simulator is continuing with the animals at FBC, Kerteminde, Fyn (Contact person: Lee Miller (lee@biology.sdu.dk), Center for Sound Communication, Odense University)

An on-going study of the acoustics of sperm whales in the waters off Andenes, Norway, aims to investigate the biosonar system of these whales. (Contact person: Bertel Møhl (bertel.moehl@biology.au.dk) Center for Sound Communication, Aarhus University).

An extended study on the biosonar and acoustic communication system of white-beaked dolphins in Icelandic waters aims to describe the acoustic characteristics and directionality of these signals. (Contact person: Marianne H. Rasmussen (mhr@biology.sdu.dk), Center for Sound Communication, Odense University).

Fishing gear technology

Analyses of harbour porpoise by-catch rates in relation to gear type, environmental factors and season is being continued (DFU).

Awareness programme

The public awareness programme entitled Look out for whales, dolphins, and porpoises in Denmark (Fokus på Hvaler i Danmark), a cooperation between the Fishery and Maritime Museum in Esbjerg, was concluded in 2002.

10. Literature cited

None

11. Publications

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Verfuss,U.K., Miller,L.A., and Schnitzler,H.-U. (2002): Comparing echolocation behaviour during orientation and foraging of the harbour porpoise (*Phocoena phocoena*). *ECS meeting Liege*, 13-14. (Abstract)

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