Proposal for Inclusion of Species on the Appendices of the Convention on the Conservation of Migratory Species of Wild Animals

A. Proposal: Inclusion of Hyperoodon ampullatus in Appendix II.

B. Proponent:

C. Supporting Statement

1. Taxon

1.1. Classis	Mammalia
1.2. Ordo	CETACEA
1.3. Familia	Ziphiidae
1.4. Genus/Species/Subspecies	Hyperoodon ampullatus (Forster, 1770)

1.5. Common Name(s)

English:	northern bottlenose whale
Spanish:	ballena morro de botella
French:	hyperodon
Norwegian:	nebbhval
Danish:	doglin
Icelandic:	andarnefja
Greenlandic:	anarnaq
Russian:	vysokolobyi butylkonosy
Dutch:	butzkopf
Swedish:	nabbad gomtand

2. Biological data

2.1. Distribution (current and historical)

Northern bottlenose whales are distributed in the North Atlantic, from Nova Scotia to about 70°N in Davis Strait, along the east coast of Greenland to 77°N and from England to the west coast of Spitsbergen. In the western Atlantic there are two main centers of distribution, one in the area called "The Gully", just north of Sable Island, Nova Scotia, and the other in Davis Strait off northern Labrador. There are no confirmed records from Novaya Zemlya, the Barents Sea or the coast of Finnmarken (Mead, 1989). There are few records east of the Norwegian Sea and from the Mediterranean.
One specimen was reportedly caught in the North Sea during the period 1938-1972 (Benjaminsen and Christensen, 1979). The species has not been further sighted in the North Sea, but strandings are reported from the coasts of Belgium, Denmark, France and England (Mead, 1989). Strandings have been reported from as far south as Rhode Island (Mitchell and Kozicki, 1975; Mead, 1989).

2.2. Population (estimates and trends)

There is no evidence to date about the existence of stocks within the species (IWC, 1989). A minimum population size of 25,796 individuals was provided by Mitchell (1975) based on cumulative catch estimates. Christensen (1976) gave a minimum initial stock size of 40-50,000, taking into account a loss rate of 25-35% which could have occurred during the first years of the fishery. This last statement was criticized by Mitchell (1977) based on the observed behaviour of the whales and the evolution of hunting techniques. A further study by Christensen and Ugland (1984) resulted in an estimated initial size of about 90,000 whales, reduced to some 30,000 by 1914. The population size by the mid-1980s was said to be about 54,000, nearly 60% of the initial stock size (Christensen and Ugland, 1984).
Recent estimates for Icelandic and Faroese waters are 3,142 and 287 whales respectively, although allowance was not made in the surveys for animals not observed because of their long dives (IWC, 1989).

2.3. Habitat (short description and trends)

Northern bottlenose whales seem to prefer waters over 1000 m deep. This is supported by information from catches. Few whales were caught over the continental shelf off Labrador and in waters less than 1000 m deep off the west coast of Norway. In the surrounding waters of Iceland, the whales were sighted in waters with surface temperature between -1.3°C and +0.9°C. (Benjaminsen and Christensen, 1979).

Squids are the main prey, in particular Gonatus fabricii. Deep water fishes and invertebrates are also reported (Benjaminsen and Christensen, 1979; Mead, 1989).

2.4. Migrations (kinds of movement, distance, proportion of the population migrating)

A southward migration, better known in the eastern North Atlantic, begins in July, when animals are moving south from the Norwegian Sea, and continues to September. The increase of strandings on the British coasts and on the North Sea coasts probably reflects part of this summer migration, which remains unknown in the northwest Atlantic (Mitchell and Kozicki, 1975; Mitchell, 1977; Benjaminsen and Christensen, 1979). There is evidence from the distribution of catches that a northward migration occurs in the eastern North Atlantic in April-July (IWC, 1989). Mitchell (1977) suggested that in the western North Atlantic bottlenose whales may forage into the Northeast Channel and the Gulf of Maine in winter months.

3. Threat data

3.1. Direct threats to the population (factors, intensity)

Northern bottlenose whales have a long history of being hunted. The first catches of this species date back to 1852, but commercial exploitation began in 1877 by the Scots and was continued by the Norwegians, who dominated the captures after 1880. The development of the fishery was due to the discovery that bottlenose whales contained spermaceti. By 1891 there were 70 ships taking 3000 whales per year. During this period the main product obtained from bottlenose whales was oil. This fishery stopped by the end of the 1920s, with about 60,000 whales taken during the whole period (Christensen, 1975; Mead, 1989). The modern period of the bottlenose whale fishery began in the 1930s. At this time the whalers were required to obtain a license and report biological data on their catch. Initially the Norwegian catches centered off More and Ardenes, Norway and the coast of Spitsbergen. In 1962 the fishery shifted to Iceland and in 1969 expanded to the Davis Strait. A total of 5,043 whales was taken during the period 1938-1969 (Mead, 1989). The fishery ceased in 1972, when a single ship operated. Only three bottlenose whales were caught in 1973 and none in subsequent years; the reason for the closure of the fishery was said to be entirely due to economic factors (Christensen et al., 1977; Jonsgard, 1977), but Mitchell (1977) considers that the population was severely depleted in both the early and modern periods. At present there is not a direct catch for the species. Incidental catch has not been reported (Northridge, 1984).

3.2. Habitat destruction (quality of changes, quantity of loss)

There are no major fisheries for squids in the Northeast Atlantic, but future developments could represent some threat for populations as heavily depleted as that of the bottlenose whale.

3.3. Indirect threat (e.g. reduction of breeding success by pesticide contamination)

Pollutant levels in this species are usually low (Harms et al., 1977). No studies have addressed the effects of pollutants on the vital cycle of this species.

3.4. Threats connected especially with migrations

Bottlenose whales are found on a seasonal basis off the Faroe Islands, and some are taken in these times (D. Bloch, pers. comm.)

3.5. National and international utilization

The products obtained from bottlenose whales were mainly oil and spermaceti. On average up to 1 ton of oil could be extracted from a single animal, while large males may yield 3 or 4 tons (Mead, 1989). A market for bottlenose whale meat as pet food existed in United Kingdom, and in Norway the meat was fed to fur animals (Jonsgard, 1977).

4. Protection status and needs

4.1. National protection status.

The species is protected through general marine mammal legislation in these countries (Klinowska, in press).

4.2. International protection status

This species is listed on Appendix I of CITES, and categorized as "Vulnerable" by the IUCN (Perrin, 1989, Klinowska, in press). The bottlenose whale was included in the IWC Schedule in 1977 and classified as a provisional Protected Stock with zero catch limits (IWC, 1989b).

4.3. Additional protection needs

Recommended actions for conservation include definition of populations and/or stocks. In addition, estimations of both initial and present abundance should be assessed, as well as the nature and levels of present catches.

5. Range States

Canada, Denmark (Faroe Islands), Denmark (Greenland) Iceland, Ireland, Norway, United Kingdom and the USA.

6. Comments from Range States

7. Additional remarks

8. References

Benjaminsen, T. and I. Christensen. 1979. The natural history of the bottlenose whale, Hyperoodon ampullatus (Forster). Pp. 143-164 in: H.E. Winn and B.L. Olla (Eds). Behaviour of Marine Animals, Vol. 3: Cetaceans. Plenum Press, New York. 438 pp.

Christensen, I. 1975. Preliminary report on the Norwegian fishery for small whales; expansion of Norwegian whaling to Arctic and northwest Atlantic waters, and investigations of the biology of small whales. J. Fish. Res. Bd. Canada 32(7):1083-1094.

Christensen, I. 1976. The history of exploitation and the initial status of the northeast Atlantic bottlenose whale (Hyperoodon ampullatus). FAO.ACMRR/MM/SC/22. 74 pp. (unpublished).

Christensen, I. and K.I. Ugland. 1984. The history of exploitation of the northeast Atlantic bottlenose whale (Hyperoodon ampullatus). Rep. Int. Whal. Commn 34:745-746.

Christensen, I., A. Jonsgard and C.J. Rovik. 1977. Some notes concerning the bottlenose fishery in the North Atlantic after the Second World War, with particular reference to the westward expansion. Rep. Int. Whal. Commn 27:226-227.

Harms, U., H.E. Drescher and E. Huschenbeth. 1977. Further data on heavy metals and organochlorines in marine mammals from German coastal waters. Meeresforschung 26(3-4):153-161.

IWC 1989. Report of the Scientific Committee, Annex H. Report of the sub-committee on small cetaceans. Rep. Int. Whal. Commn 39: 117-129.

Jonsgard A. 1977. A note on the value of bottlenose whales in relation to minke whales and the influence of the market situation and the prices on Norwegian whaling activity. Rep. Int. Whal. Commn 27:502-504.

Klinowska, M. (In press). Whales, Dolphins and Porpoises of the World. The IUCN Cetacean Red Data Book. IUCN, Gland, Switzerland.

Mead, J.G. 1989. Bottlenose whales Hyperoodon ampullatus (Forster, 1770) and Hyperoodon planifrons Flower, 1882). Pp. 321-348 in: S.H. Ridgway and R. Harrison (Eds). Handbook of Marine Mammals. Vol. 4: River dolphins and the larger toothed whales. Academic Press, London. 442 pp.

Mitchell, E.D. 1975. Porpoise, Dolphin and Small Whale Fisheries of the World. Status and Problems. IUCN Monograph no. 3. IUCN, Switzerland. 129pp.

Mitchell, E.D. 1977. Evidence that the northern bottlenose whale is depleted. Rep. Int. Whal. Commn 27:195-203.

Mitchell, E.D. and V.M. Kozicki. 1975. Autumn stranding of a northern bottlenose whale (Hyperoodon ampullatus) in the Bay of Fundy. J. Fish. Res. Bd. Canada 32(7):1019-1040.

Northridge, S. 1984. World review of interactions between marine mammals and fisheries. FAO Fish. Tech. Paper 251. 190 pp.

Perrin, W.F. 1989. Dolphins, Porpoises, and Whales. An Action Plan for the Conservation of Biological Diversity:1988-1992. IUCN, Gland. 27 pp.