

**Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)**

**Eleventh Meeting of Conference of the Parties (COP11)  
(Nairobi, Kenya, 10 to 20 April 2000)**

**Proposal from Japan to transfer Minke Whales  
*Balaenoptera acutorostrata*  
Southern Hemisphere stock  
from Appendix I to Appendix II**

**A PROPOSAL**

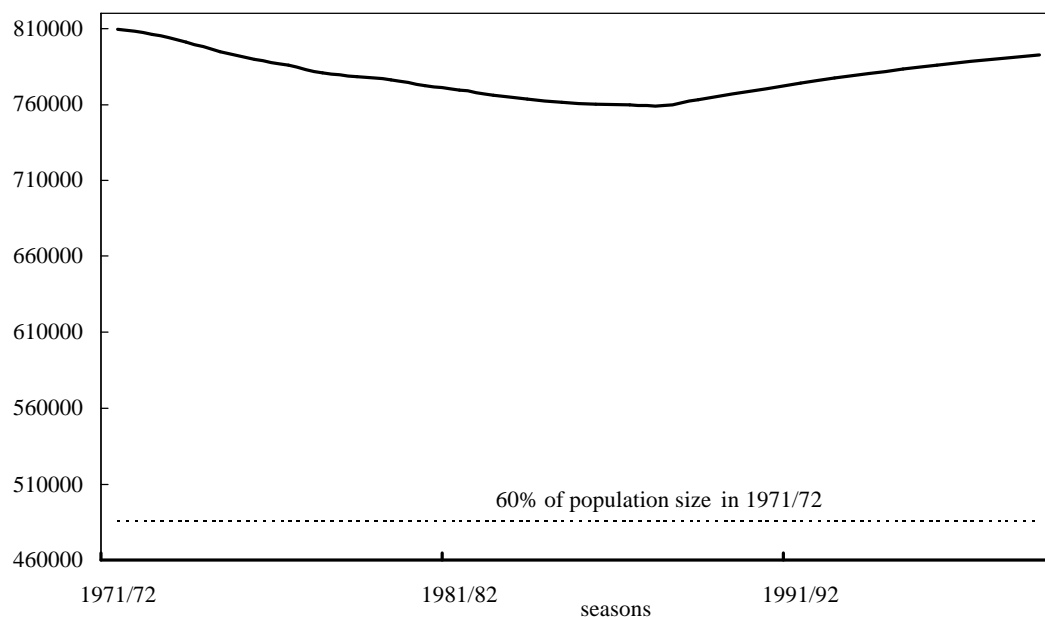
Japan proposes, in accordance with the provisions of Article XV 1. (a) of the Convention, to transfer the Southern Hemisphere stock of minke whales, *Balaenoptera acutorostrata*, from Appendix I to Appendix II of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).

This proposal is presented in accordance with Resolution Conf. 9.24 with particular emphasis on the following:

- (1) The biological criteria (cf. Annex 1, Res. Conf. 9.24) for Appendix I stocks are not met for this stock.
- (2) Precautionary measures (cf. Annex 4, Res. Conf. 9.24) are fulfilled through national conservation and management measures and establishment of a trade control system based on DNA analysis techniques.

Minke whales are well known as the most robust and healthy whale stocks. The Scientific Committee of the International Whaling Commission (IWC, 1999a; b) endorsed population estimates of 761,000 for the Southern Hemisphere stock. This is well above the optimum and sustainable stock level for this stock of minke whale as shown below. Therefore, from a biological perspective there is no reason to retain this stock in Appendix I, which is to include species threatened with extinction.

Population size



Historical trend of the size of the Southern Hemisphere minke whale stock (Hakamada, unpublished)

Furthermore, downlisting of the Southern Hemisphere minke whale stock to Appendix II will not endanger the stock.

A quota system will be established in order to control and limit the amount of whales to be taken and traded within levels prescribed by the Revised Management Procedure (RMP) established by the IWC<sup>1</sup>. DNA analysis techniques advanced enough to distinguish individual whales are already available and will be used to track and control the movements of the whale specimens. Introduction from the sea, currently in the form of the scientific takes of the Southern Hemisphere stock, has been and will be conducted well within the limits calculated by the RMP.

Although the IWC currently imposes a moratorium for commercial harvest of whales and maintains a southern ocean sanctuary to prohibit whaling, it should be noted that the IWC Scientific Committee has never provided scientific advice to support these measures. As a matter of fact, the Schedule of the International Convention for the Regulation of Whaling (ICRW) specifically says, “[t]his prohibition (Southern Ocean Sanctuary) applies irrespective of conservation status of baleen and toothed whale stocks in this Sanctuary” (Schedule 7(b)).

Therefore, it is critically important for the CITES to support this downlisting proposal in order to demonstrate that the CITES makes its decisions on the basis of scientific and objective information, not for political reasons.

## **B PROPONENT**

Japan

## **C SUPPORTING STATEMENT**

### **1. TAXONOMY**

#### **1.1 Class**

Mammalia

#### **1.2 Order**

Cetacea

#### **1.3 Family**

Balaenopteridae

#### **1.4 Species**

*Balaenoptera acutorostrata* (Lacépède 1804)

#### **1.5 Scientific synonyms**

*Balaena rostrata* (Fabricius 1780)

*Balaenoptera bonaerensis* (Burmeister 1867)

#### **1.6 Common names**

English: Minke Whale, Pied whale, Pike-head whale, Sharp-headed finner whale, Bag whale, Sprat whale, Least rorqual, Little finner, Bay whale, Summer whale, Lesser finback, Davidson’s whale

Norwegian: Vagehval, minkehval, minke, rebbehval, vaaghval

Russian: Malzi, karlikovji polosatik, zalivov, ostromordyi, ostrogolovyi polosatik

Japanese: Koiwashi kujira, minku kujira

French: Rorqual à museau pointu, rorqual à rostre, petit rorqual, baleine d’este a bec

German: Zwerghval

Swedish: Vinkhval, Vikarehval, Vikhval, Spetsnabbad finnfisk

Danish: Sildeskipper

Icelandic: Hrefna, hrafneyour

Spanish: Rorcual enano

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<sup>1</sup> The Revised Management Procedure is a method to calculate biologically sustainable harvest levels of whales without endangering their stocks. High levels of safety margin are incorporated in this method in order to avoid over-harvest which might be caused by environmental factors and miss-reporting of harvest. The RMP was crafted by the Scientific Committee of the IWC in 1994 after several years of discussions and work.

## 1.7 Code numbers

The code number of minke whale, *Balaenoptera acutostrata*, in the CITES Identification Manual is Code A-111.007.001.001 (1987(I)).

## 2. BIOLOGICAL PARAMETERS

### 2.1 Distribution

Minke whales are well known as one of most cosmopolitan cetacean species and widely distributed from the tropics to the ice edges in both hemispheres all over the world's oceans (Fig. 1). As in other balaenopterids, they are known to seasonally shift their habitats in accordance with their life cycle moving to higher latitudes for feeding in summer and to lower latitudes for breeding in winter.

Although they can be seen offshore as well, minke whales are often seen in coastal and inshore areas.

The Japanese proposal includes the continental population defined as the Southern Hemisphere stock of minke whales. This stock has been the subject of extensive research activities by Japan and the IWC and a large amount of scientific data and analysis are available.

These research activities are the most extensive research conducted on whales and include such projects as IWC/IDCR (International Decade of Cetacean Research) and SOWER (Southern Ocean Whale and Ecosystem Research). Generally speaking, minke whales are in middle to lower latitudes in winter probably due to breeding while they move to Antarctic for feeding in summer. In the Antarctic their distribution is circumpolar. Observations of whales between 35-50°S suggested that the major proportion of animals from the breeding grounds migrated south from October - November towards to feeding areas in the Antarctic and arrive by January (Ohsumi *et al.*, 1970; Kato, 1990; Kasamatsu *et al.*, 1995).

At the Comprehensive Assessment (CA) for Southern Hemisphere minke whales by the Scientific Committee of IWC in 1990, it was suggested five breeding grounds exist between 10 – 20°S zone in 40-50°E (group a), 80-100°E (b), 130-170°W (c), 110-120°W(d) and 20-40°W (e) (IWC, 1991; Kasamatsu *et al.*, 1995). Respective breeding groups certainly migrate to Antarctic in summer but little is known about their migration routes and dispersion range. As in Fig. 2 by IWC (1991), it was tentatively assumed that group (a) from the Western Indian Ocean migrate to Antarctic waters between 10°W and 60°E and group (b) from the Eastern Indian Ocean to Antarctic waters of 40°-140°E, group (c) from the Central South Pacific to Antarctic waters of 130°E - 120°W, group (d) from the eastern South Pacific to Antarctic waters between 130°- 60°W and group (e) from South Atlantic to Antarctic waters between 70°W- 0°.

The five breeding grounds indicated above were proposed basically on the information on sighting data distribution. The Japanese research program under special permit in the Antarctic (JARPA) started in 1987 in accordance with Article VIII of the Convention for the Regulation of Whaling (ICRW), and since then biological tissues have been collected systematically for studies on taxonomy and stock identity.

Genetic analysis based on JARPA material confirmed the fact that there are two forms of minke whale in the Antarctic, the most abundant or ordinary form minke whale and the less abundant or dwarf form minke whale (Pastene *et al.* 1994). The genetic distance between the forms is similar to that reported between different species of cetaceans.

Studies on stock identity have been concentrated on the ordinary form minke whale. These studies are conducted in the feeding grounds in summer mainly south of 60°S. Both genetic and non-genetic approaches are being used with for this purpose.

The genetic approach has been based largely on the maternally inherited mtDNA but recently the use of a nuclear DNA-based marker (microsatellite) has started. The mtDNA analysis has involved the use of over 2,000 samples from Areas IV (70°E-130°E) and V (130°E-170°W) (Pastene *et al.* 1996). The main findings of the mtDNA analysis are summarized as follow:

- a) There is a high diversity of mtDNA haplotypes in the Antarctic minke whale, which is not surprising given the large population size of the southern ordinary form minke whale.

- b) There is a significant source of mtDNA heterogeneity in the western part of Area IV, which is attributed to temporal (early and late period of feeding season) and geographical (longitudinal and distance from the ice-edge) components.
- c) The temporal mtDNA heterogeneity in the western part of Area IV could be explained by either i) different breeding groups occupy different longitudinal sectors in different periods of the feeding season or ii) there is a mix of breeding groups in some sectors of the Antarctic, with their proportion changing with progress of the feeding season. This latter explanation is in agreement with the results of sighting distribution data, which suggested that different stocks share longitudinal sectors in the Antarctic.

The historical distribution of the Southern Hemisphere stock is assumed to be similar to the present distribution. Range states are Argentina, Australia, Brazil, Chile, Comoro, Congo, Ecuador, Fiji, France, Gabon, Indonesia, Kenya, Madagascar, Mauritius, Mozambique, Namibia, New Zealand, Papua New Guinea, Peru, Seychelles, South Africa, Tanzania, the United States, the United Kingdom, Uruguay, and Vanuatu.

## **2.2 Habitat availability**

As mentioned in 2.1 above, the minke whale is a cosmopolitan species, widely distributed in the tropical, temperate, and polar waters of both hemispheres. This species has been the subject of a series of sighting surveys, and no large changes in their habitats have been observed. As a result, habitat availability is not regarded as a crucial issue for this species.

## **2.3 Population status**

The total number of minke whales throughout the world is estimated to be around one million animals (IWC, 1999c), but this estimate by the IWC doesn't cover all of minke whale stocks over the world thus the true number could possibly be much higher. The largest populations of minke whale are found in the Southern Hemisphere stocks. In addition, there are also population abundance estimates for the Okhotsk Sea – West Pacific stock, the Northeast Atlantic and North Atlantic Central stocks.

Since 1978/79 austral summer, the IWC has been conducting systematic whale sighting cruises as its own international research program of IWC/IDCR and IWC/SOWER for obtaining population estimates of the Southern Hemisphere minke whales by incorporating a line transect theory (Best and Butterworth, 1980; Kato 1999). These surveys have made the stocks one of the best known wild animals in terms of its population abundance. The surveys have been usually conducted for about 40 – 45 days in the Antarctic (south of 60°S) in mid summer and covered about a 60° sector each year in 1978/79 - 1987/88 and a 40-30° sector in 1988/89 – 1998/99.

The Scientific Committee of IWC completed its Comprehensive Assessment on Southern Hemisphere minke whales in 1990. The population assessment was made using the survey data above and produced an agreed estimate of 761,000 animals (95%CL.; 510,000 – 1,140,000) for all Southern Hemisphere stocks (IWC, 1991; 1999b). However, it is important to pay attention to the fact that this abundance estimate is likely an underestimate because the surveys did not cover waters north of 60S and the sea-ice area in which it is known minke whales are distributed in mid summer. Further, it was assumed that the probability of detection on the track line  $[g(o)] = 1$ . This also leads to an underestimate of the abundance.

Clearly, the abundance of Southern Hemisphere minke whales is far from any protection level from a view point of stock management and does not meet the biological criteria for listing on Appendix I of CITES.

## **2.4 Population trends**

At the Comprehensive Assessment meeting on Southern Hemisphere minke whales by the Scientific Committee of IWC in 1990, population trajectory for this stocks was calculated using available information under two assumptions: that minke whales had increased before exploitation due to the decrease of other krill feeding balaenopterids such as blue whale and, that no such increase occurred.

Although the trajectories were conducted under several different conditions, the current population level (at 1990) was 70% to 97% of initial stock level (MSYR=4%) or 62% to 92% (MSYR=0%) under the assumption the population was constant before exploitation (IWC, 1991). If the population had increased before exploitation, the

current population level is much higher than these figures.

After cessation of commercial whaling in 1987, the population is obviously expected to have increased. Only 300 – 400 animals have been taken for scientific purposes under special permit since 1987 while about 6,000 animals a year were taken commercially during the period of 1971 to 1986. The scientific take represents 0.05% of the estimated stock size and has negligible effects on any population trend.

## **2.5 Geographic trends**

As mentioned in 2.1, minke whales shift their habitat seasonally to middle to lower latitudes in winter probably for breeding while they move to the Antarctic for feeding in summer where they have a circumpolar distribution. Due to insufficient information, winter distribution is still unclear but available information suggests they are in a zone between 10S to 40S in winter (current information suggests some minke whales still remain in the ice edge zone even in winter – Nicol *et al.* (1999)). Among balaenopterids, the minke whale is known as species migrating to the most southern latitudes in summer (Laws, 1977). They move to Antarctic region for feeding especially near to the ice edge zone. There is sexual and reproductive segregation among minke whale within the Antarctic region, in which mature females are dominant in the ice edge area (Kato *et al.*, 1991; Fujise *et al.*, 1999).

## **2.6 Role of the species in its ecosystem**

Whales are top predators in the ocean ecosystem. In the Antarctic Ocean, prey species of minke whales were mostly Antarctic krill (*Euphausia superba*) (Kawamura, 1980; Ichii and Kato, 1991), and minke whales are estimated to consume 95% of the total biomass of Antarctic krill consumed by whales in the Antarctic (Armstrong and Siegfried, 1991).

Tamura and Osumi (1999) reported that the annual consumption by minke whale in Southern was calculated to be 1.44 – 2.69 hundred million tons. Thus, minke whales are considered one of the key species and play an important role in the ecosystem in the Antarctic ocean.

## **2.7 Threats**

Although adult minke whales are known to be eaten by Killer whales, there are at present no serious threats to the survival of minke whales in the Antarctic Ocean.

# **3. UTILIZATION AND TRADE**

## **3.1 National utilization**

The meat from minke whales hunted in the Antarctic for research purpose under Article VIII of the ICRW is consumed in Japan after obtaining scientific data and sample tissues as required by Article VIII (2) of the ICRW and the proceeds from the sale are used to conduct the research of the following year. As DNA analysis technology to distinguish individual minke whales is available, DNA of all the minke whales taken by the research are analyzed and registered. DNA analysis on whale meat sold in the Japanese markets was conducted sporadically in the past, but more regular market monitoring program is in the process of development.

## **3.2 Legal international trade**

At present there is no international trade in minke whale products. In case of resumption of international trade in whale products under Appendix II listing, import into Japan would be subject to stringent control mechanisms. Specifically, the importation of Appendix II specimens will be allowed only when all the CITES requirements described under Article IV of the CITES are met.

Furthermore, under Japan's Decree of Import Trade Control, all imports from non-IWC member nations are prohibited. Importation from IWC member nations is not allowed unless the Japanese Government confirmed the authenticity of the certificate of origin by way of its diplomatic channels or other means. Imported products will also be subject to a DNA monitoring and control system in order to prevent possible illegal trade.

## **3.3 Illegal international trade**

Under the strict trade control mechanism and effective enforcement activities, Japan has successfully prevented attempts of illegal imports of whales into Japan in the past. Monitoring and enforcement capability will be further strengthened with the extensive utilization of DNA sampling.

In 1993 an attempt of unlicensed export of whale meat from Norway to Japan was detected. Charges have been brought and, according to official sources, the matter will be dealt with in Norwegian courts this autumn.

Report of one seizure of 10 tons of whale meat allegedly smuggled from Norway to Japan in 1996 is under police investigation in both Japan and Norway.

Pursuant to Resolution Conf. 9.12, the Secretariat will be kept continuously updated with regard to any development in these cases as well as on any other developments regarding illegal trade in whale products.

### **3.4 Actual or potential trade impacts**

Minke whale stocks will not be threatened by trade because

- (a) the Revised Management Procedure completed by the Scientific Committee of the IWC will be used for the quota calculations;
- (b) the control of the hunting is closely observed, both at sea and at landing sites, so that the quota is not overfished;
- (c) the control of export of marine products from the exporting country is supervised closely and attempts of illegal export are prosecuted (see 3.3); and
- (d) an importing country of minke whale products ensures that it has sufficient import control to separate legal trade from attempts of illegal trade.

The catch quotas set by whaling nations are (and would continue to be) conservative and well within the scope recommended by the Scientific Committee of the IWC.

Hunting of whales requires vessels with special equipment. It is, therefore, unlikely that catch and subsequent landing from national waters or the open sea could be made unnoticed. Since 1993 officially appointed inspectors have been on board Japanese whaling vessels. The Ministry of Agriculture, Forestry and Fisheries, together with the Ministries of Finance and of International Trade and Industry are responsible for controlling the import of marine products in Japan, and consequently also for the legality of exporting the products in question. Import of minke whale products requires an import license. No import of minke whale products into Japan will be permitted unless there is sufficient control in a possible country of exportation.

It is now widely recognized that prohibition of utilization of highly abundant wild - either terrestrial or marine - species has resulted in increase of illegal attempts to trade in such species: a limited and well controlled legal international trade could be instrumental in reducing or eliminating attempted illegal trade (e.g. Moyle, B. (1998). *The Bioeconomics of Illegal Wildlife Harvesting: An Outline of the Issues*. *Journal of International Wildlife Law & Policy* 1(1): 95-112.).

### **3.5 Captive breeding or artificial propagation for commercial purposes (outside country of origin)**

Although some minke whale have been held in captivity in Japan for short periods, captive breeding is not thought to be feasible from a practical point of view or even useful for conservation purposes.

## **4. CONSERVATION AND MANAGEMENT**

### **4.1 Legal status**

#### **4.1.1 National**

Under the Japanese domestic laws, all the whale species are either protected or utilized under strict conservation and management measures. Unless a license is issued by the Ministry of Agriculture, Forestry and Fisheries, no whaling for minke whales can be conducted (Fisheries Law, Article 52). Currently, only research permits for catching are issued by the government in accordance with the provisions of the ICRW. The research is conducted by the Institute of Cetacean Research (ICR), a non-profit organization. No commercial harvest for minke whales has been conducted since the 1987/88 season.

The scientific research in the Southern Hemisphere (JARPA: the Japanese research program under special permit in the Antarctic) has been conducted in the Antarctic Ocean since 1987/88. Currently, 400±10% whales are taken annually in order to study such items as stock structure, abundance and its trend, and feeding ecology. Each participating vessel is given a research license and the right to hunt a certain number of whales. The research is supervised by scientists from both the Government of Japan and the Scientific Committee of the IWC, and by an officially appointed inspector. The meat, blubber and other edible parts landed were certified by the health authorities before human consumption.

#### **4.1.2 International**

Presently, the IWC is the international body responsible for management of the minke whale stock. According to the International Convention for the Regulation of Whaling of 1946 (ICRW), the objective is to ensure “increases in the numbers of whales which may be captured without endangering these natural resources”(Preamble). Moreover, the Convention lays down that the harvesting level shall “be based on scientific findings”(Article V), shall provide for “the conservation, development and optimum utilization of the whale resources... and... shall take into consideration the interests of the consumers of whale products”(Article V). In other words, the objective of the Convention is not to protect the whales for their own sake, but to regulate catches of whales for the benefit of mankind both now and in the future. .

In 1982 the International Whaling Commission (IWC) adopted a moratorium on commercial whaling, which entered into effect in 1986. The moratorium was not based on scientific data as stipulated in the Convention, and furthermore entailed a departure from the management procedures set out in the Convention. The moratorium was passed at a time of some uncertainty concerning the size of most whale stocks. Today much more is known about whale stocks, especially the minke whale stock as described in the previous sections of this proposal. The general moratorium, therefore, is now even more in contradiction with the management objectives of the ICRW. This reflects the fact that the IWC neither functions according to scientific advice nor adheres to its own legal basis. The IWC moratorium on commercial whaling is now maintained due to political considerations.

In resolution 1994-5, the Commission at its 46<sup>th</sup> meeting in May 1994 accepted the Revised Management Procedure (RMP). The RMP would give quotas for minke whale stocks with a large margin of safety, but the IWC has shown no willingness to actually implement the RMP because of strong oppositions from anti-whaling interests. They publicly claim that no commercial whaling should be allowed even when whale stocks are scientifically proved to be abundant and robust.

The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) decided in 1983 to place the Minke Whale on Appendix I to be effective in 1986. In accordance with Article XXIII of the Convention, Japan registered a Reservation on that decision and is consequently not bound by that decision. However, Japan has never used the possibilities for international trade of minke whales existing under this Reservation.

In 1979 CITES adopted a Resolution (Res. Conf. 2.9) recommending the Parties not to issue any import or export permit for species or stocks protected from commercial whaling by the IWC. Based *inter alia* on this Resolution, CITES decided in 1983 to list all whale species covered by the IWC moratorium on Appendix I<sup>2</sup>. As the scientific basis and abundance estimates for minke whale stocks have been clarified by the IWC Scientific Committee since that time, it is therefore not appropriate to make a reference to this Resolution when considering the present proposal to transfer the minke whale stocks to Appendix II.

## **4.2 Species Management**

### **4.2.1 Population monitoring**

As stated above (section 2.3 (a)), the stock of Southern Hemisphere of minke whales has been the subject of the most extensive research surveys conducted on whales. Since the 1978/79 austral summer, the IWC has been conducting systematic whale sighting cruises as its own international research program of IWC/IDCR and IWC/SOWER for obtaining population estimates of the Southern Hemisphere minke whales by incorporating the line transect theory (Best and Butterworth, 1980; Kato 1999).

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<sup>2</sup> Cf. Resolution Conf 2.9 on “Trade in certain species and stocks of whales protected by the International Whaling Commission (IWC) from commercial whaling”.

Japan has conducted research catch for scientific purpose under special permit of IWC since 1987/88 mainly to estimate biological parameters necessary for stock management. This program has also included a sighting survey component which can be used for population monitoring purpose. Biological parameters such as age distribution, age and body length at sexual maturity, sexual maturity rate, apparent pregnancy rate, sex ratio in the catch, ovulation rate and recruitment can be used for monitoring by observing changes in value of these parameters as in studies under JARPA program (Butterworth et al., 1999a, b; Fujise et al., 1999; Polacheck et al., 1999; Tanaka and Fujise, 1997; Zenitani et al., 1997)

These survey programs will be continued in the future.

#### **4.2.2 Habitat conservation**

Some studies have suggested that the growth rate of the Southern Hemisphere minke whales has increased from that of the 1940's to 1970's, which is supported by a decrease of the age at sexual maturity (Kato and Sakuramoto, 1991; Cooke *et al.*, 1997; Thomson *et al.*, 1999). It was also suggested that favorable environmental conditions have allowed for this growth. To maintain the favorable conditions in the habitats of minke whales, it is important to conserve the marine environment, which requires extensive international cooperation. In that sense, Japan has been contributing to that cause by being active in many of the international arrangements for the conservation of the marine environment such as the Protocol of 1978 relating to the International Convention for the Prevention of Pollution from Ships, 1973 (MARPOL).

Furthermore, Japan places great emphasis on the conservation and sustainable use of other marine living resources in the world's oceans. In recent years, increased attention has been paid to interactions between commercial fisheries and cetaceans (e.g. Folkow et al. 1997). Tamura and Ohsumi (1999) reported that consumption in the Southern Hemisphere was calculated to be 1.44 - 2.69 hundred million tons. Total food consumption by cetaceans was 2.8 - 5.0 hundred million tons, equivalent to roughly three to six times the total estimated recent worldwide marine commercial fisheries catch<sup>3</sup>. These results indicate the significance of food consumption by cetaceans to commercial fisheries of the world's oceans. Minke whales consume large amounts of fishes and crustaceans, are top predators in the marine ecosystems and play an important role in the food web in the world's oceans. For the conservation and sustainable use of the marine resources, the foraging of marine mammals including minke whales should also be considered.

#### **4.2.3 Management measures**

See below

### **4.3 Control Measures**

#### **4.3.1 International trade**

Trade regulations under CITES and the Agreement Establishing the World Trade Organization (WTO) are the relevant legal instruments regarding international trade in marine species.

#### **4.3.2 Domestic measures**

##### *Hunting*

Hunting of minke whales of the Southern Hemisphere stock is conducted under research permit only. Quotas are lower than would be provided by the RMP for commercial whaling. For the research program, governmental officers are on board the research vessels to inspect all of the activities which take place on the research fleets.

##### *DNA-register*

DNA analysis allows us to identify species (a commonly accepted method is the analysis of mtDNA control region sequences), identify individuals (a commonly accepted method is the use of a set of microsatellite primers) and determinate the gender of the individual whale (using analysis of the SRY gene). In some cases the stock of origin can be determined as well. On the basis of these methods, Japan has now developed a control system that

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<sup>3</sup> This estimation of food consumption by cetaceans is underestimated because only 35 species of cetaceans out of approximately 80 species known are included in this estimate.



distinguishes between species, different stocks of minke whales (e.g. minke whales from the North Pacific, North Atlantic, Southern Hemisphere ordinary and dwarf forms minke whales and also between Sea of Japan and eastern side of Japan animals), and between individual minke whales.

This control system, thus, will be able to detect any illegally traded whale products. The key element in this control system is a tissue sample taken from each minke whale of the Japanese harvest. Genetic analysis (e.g., DNA sequence analysis and polymorphic microsatellite analysis) is performed for each individual whale and the information is registered in a searchable database in the Institute of Cetacean Research, Japan.

Norway has also instituted a DNA register system and sampling program. These programs will allow authorities to detect any illegal trade. The original Norway plan for the register was presented to the IWC Scientific Committee (Document SC/49/NA1) and also a workshop was carried out with the participation of international experts to discuss further details of this project, specifically on the techniques used (the workshop was held in Oslo on 20 March 1998).

## **5 INFORMATION ON SIMILAR SPECIES**

### *Hunting*

Minke whales cannot be confused with other species of whales at sea because of its size and other characteristics. Furthermore, supervision and control systems will ensure that only the target species of whale will be taken.

### *Trade/commerce*

As in most cases involving CITES species, there is a need for mechanisms to ensure that the removal of species from Appendix I does not jeopardize the control of trade in other Appendix I species, cf. also Annex 4 to Resolution Conf. 9.24.

By visual inspection it is difficult to distinguish between whale meat and blubber from different species of baleen whales and between different populations of a species. The mtDNA sequence analysis of meat and blubber make it possible to identify the species and sometime the stock of origin. By using the currently available genetic technique of microsatellite analysis of market samples, it is possible to identify individual whales. These techniques are used on a routine basis by several commercial and non-commercial laboratories in many countries and can be carried out at relatively low costs. It is therefore possible, on a routine basis, to use DNA analysis as a trade control measure to distinguish the tissues of legally caught minke whales from other whales.

## **6 OTHER COMMENTS**

Japan consulted with the IWC Secretariat and 26 range states about this proposal on October 13, 1999 in accordance with the Conf. 8.21 and Conf 9.24 of the CITES. The IWC Secretariat did not provide any additional scientific information but informed Japan that IWC had not yet completed a revised management scheme and that zero catch limits were still in force for whale species managed by the IWC. Although the United States, the United Kingdom and Australia indicated their opposition to this proposal mainly because of the IWC moratorium on commercial whaling and Vanuatu also opposed this proposal, other range states either demonstrated their favorable attitude to this proposal or did not respond.

## **7 ADDITIONAL REMARKS**

Japan has below included a brief summary of the proposal to transfer the Southern Hemisphere stock of minke whales from Appendix I to Appendix II in relation (1) to the relevant provision of the Convention and (2) to the criteria for amendment of appendices I and II, cf. Resolution Conf. 9.24.

According to Article II of the Convention, the following fundamental principles are laid down with regard to species to be included in Appendices I and II.

“1. Appendix I shall include all species threatened with extinction which are or may be affected by trade.

Trade in specimens of these species must be subject to particularly strict regulation in order not to endanger further their survival and must only be authorized in exception circumstances.

2. Appendix II shall include: a) all species which although not necessarily now threatened with extinction may

become so unless trade in specimens of such species is subject to strict regulation in order to avoid utilization incompatible with their survival; and b) other species which must be subject to regulation in order that trade in specimens of certain species referred to in subparagraph a) of this paragraph may be brought under effective control.”

Regarding the criteria for determining what species are to be listed in which Appendices, these are contained in Resolution Conf. 9.24 on criteria for amendment of Appendices I and II. The biological criteria for Appendix I are listed in Annex I of this resolution.

Present scientific knowledge shows that Southern Hemisphere minke whales are indeed not threatened with extinction and for that reason, listing on Appendix I is not consistent with the fundamental principles of Article II of the Convention.

It should be underlined that the lack of information was used to support the placing of the minke whale on Appendix I in 1983. However, scientific information is now available that clearly indicates the Southern Hemisphere stock of minke whales does not conform to the Resolution Conf. 9.24 criteria for continued listing in Appendix I. The Southern Hemisphere stock has been proved to be robust and abundant.

Compared to criteria listed in Annex I of Resolution Conf. 9.24, the Southern Hemisphere stock of minke whales does certainly not qualify for Appendix I and should rather be placed on Appendix II.

## 8 REFERENCES

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Fig. 1. Approximate distribution of Southern hemisphere stocks of minke whales (hatched area).

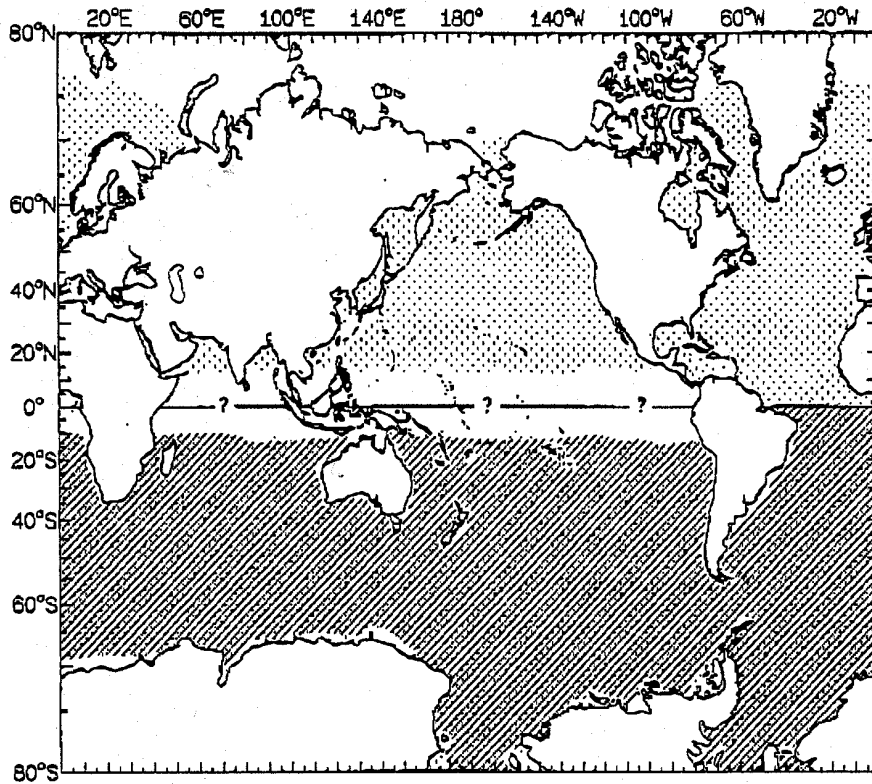


Fig. 2. Possible locations of breeding grounds and range of Antarctic feeding areas of Southern hemisphere minke whales. After IWC (1991).

