Annex L

Report of the Sub-Committee on Small Cetaceans

Members: Rogan (Chair), Abel, Bass, Berggren, Bjørge, Brownell, Cipriano, Collins, Cozzi, Deimer-Schuette, Dinter, Engel, Fortuna, Funahashi, Gong, Hung, Hyeong-Il, Hyun Woo, Ilyashenko, Iñíguez, Jefferson, Jungyoun, Kasuya, Kim, Kock, Lawrence, Lee, Lens, Lovell, Magloire, Miller, Na, Northridge, Olafdottir, Palazzo, Park, Parsons, Perrin, Pinto de Lima, Porter, Punnett, Reijnders, Ridoux, Ritter, Rojas Bracho, Rosenbaum, Rowles, Sadler, Secchi, Senn, Simmonds, Smith, Soh, Sohn, Song, Suydam, Thiele, Tiedemann, Van Waerebeek, Walters, Wang, Williams, Wilson, Winship, Yao Yoo-Won, Zerbini, Zhang, Zhu.

1. ELECTION OF CHAIR

Rogan was elected Chair.

2. ADOPTION OF AGENDA

The adopted agenda is given in Appendix 1.

3. APPOINTMENT OF RAPPORTEURS

Wilson and Smith acted as rapporteurs.

4. REVIEW OF AVAILABLE DOCUMENTS

Documents relevant to the work of the sub-committee were: SC/57/SM1-18, SC/57/BC3, Anon. (2005), Dalebout *et al.* (2002), Dalebout and Baker (2002), van Helden *et al.* (2002) and Dalebout *et al.* (2004).

5. REVIEW OF THE STATUS OF FINLESS PORPOISE (MARINE POPULATIONS)

The subspecies of finless porpoise that occurs in the Yangtze River of China, was reviewed during the 2000 meeting of the sub-committee and was not addressed further during this meeting.

5.1 Distribution

Marine populations of the finless porpoise (*Neophocaena phocaenoides*) have a range that is restricted to shallow, tropical and temperate waters. Their distribution extends from the Persian Gulf eastwards along the coasts of the Indian Ocean to at least Indonesia and northward into the Pacific Ocean as far as central Japan (Fig. 1). Information on the precise distribution is limited and has been derived from strandings, bycatch, fisheries and sightings surveys and questionnaires. The sub-committee noted that, although studied intensively in some areas, there has been little or no research effort throughout much of the species' probable range. Therefore, identifying areas of high-density occurrence or distribution gaps in the species is not yet possible for most areas.

There are records of finless porpoises along the western and southern margins of the Arabian/Persian Gulf (SC/57/SM7). There is little information on occurrence along the Iranian coast in the north east of the Gulf but sightings have been made north of Queshm Island. Porpoises have been seen in the middle of the Gulf as well as near-shore. There are no confirmed records on the Arabian Peninsula side of the Gulfs of Oman and Aden, nor in the Red Sea, despite intensive sighting effort. Similarly, there are no confirmed records along the eastern or southern coasts of Africa. Reports that the type-specimen originated in South Africa are almost certainly erroneous.

Although there are no confirmed records, the availability of suitable habitat suggests that finless porpoises occur along the Makran coast of the Gulf of Oman/Arabian Sea in Iran. The species is also distributed perhaps discontinuously along the northern border of the Indian Ocean including sheltered waters of Pakistan, India and northern Sri Lanka, as well as along the rim of the Bay of Bengal (SC/57/SM1). Finless porpoises have occasionally been seen far upstream in the mangrove channels of the Sundarbans Delta in Bangladesh (SC/57/SM4). Sightings were made in the Mergui Archipelago of southern Myanmar (SC/57/SM4) and there are records further south along the Andaman Sea coast of Thailand. There are patchy records of sightings in the Gulf of Thailand and along the coast of Malaysia, especially in northern Borneo. Distribution in the Indonesian Archipelago is suspected to be more widespread than indicated by the paucity of available records due to suitable habitat in the western islands as far south as Sumatra and Java (SC/57/SM1). In contrast, there are few records for the eastern Indonesian islands and Papua New Guinea. Previously published records of species occurrence in the Philippines were based on mis-identifications (SC/57/SM1) but finless porpoises may perhaps be found in the southernmost islands adjacent to Borneo.

To the north, finless porpoises are found along the coast of Vietnam into the Gulf of Tonkin and along the Chinese coasts including waters around Hong Kong (SC/57/SM18). The species occupies waters on both sides of the Taiwan Strait (particularly in winter) but does not appear to be present off the eastern and southern coasts (SC/57/SM3). Sightings around Korea are common along the western and southern coasts (SC/57/SM15).

Despite extensive studies of finless porpoise abundance in Japan, there have been no sufficiently detailed countrywide surveys to document the precise range of the species in Japanese waters. Finless porpoises occur along the western and northern coasts of Kyushu and Shikoku Islands, inclusive of the Inland Sea, and the south-western tip and southern and eastern coasts of Honshu as far north as

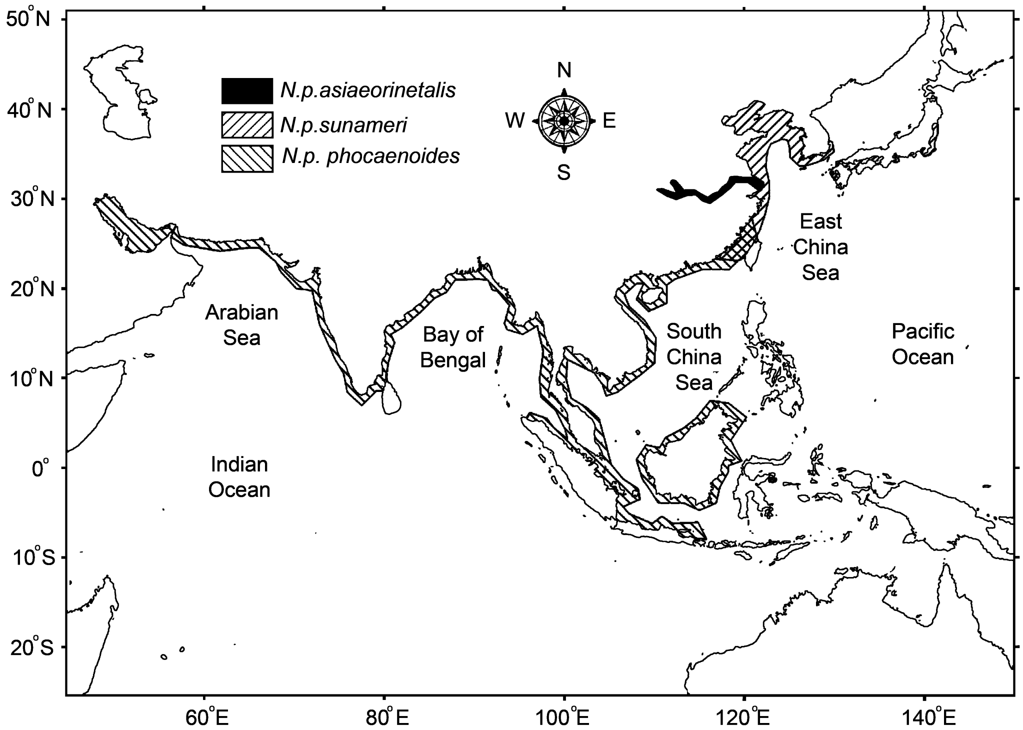

Fig. 1 The known and likely range of three sub-species of finless porpoises.

Sendai Bay (SC/57/SM11). Additional isolated and undocumented populations may well be present around the southern Japanese coast.

The sub-committee noted that information on the fine-scale distribution of finless porpoises remains severely limited and that the majority of the species' range is only understood in the broadest terms and **recommended** that surveys be carried out with particular emphasis on targeting effort to areas where the least is known (e.g. India, Indo-Malay Archipelago). The sub-committee **agreed** that predictive habitat models that recognised potential variability among populations would be useful to better target resources for field surveys and sample collection and that the collection of detailed environmental variables (as described in SC/57/SM4) during field surveys would be valuable in improving the predictive values of any habitat models.

5.2 Population structure

Knowledge of the population structure and taxonomy of finless porpoises is far from complete. Currently, three subspecies are recognized (e.g. Rice, 1998): *N. p. phocaenoides* (the tropical marine form, distributed from the Persian/Arabian Gulf eastward to at the least the Taiwan Strait area), *N. p. asiaeorientalis* (the Yangtze River form, which some researchers believe may extend outside the river into estuarine and even marine waters of the East China Sea), and *N. p. sunameri* (the northern temperate marine form, which occurs in waters off Japan, Korea, and northern and central China) (SC/57/SM1; SC/57/SM3; Jefferson and Hung, 2004). The subspecies *N. p. phocaenoides* has a wide dorsal ridge (>3.4cm), while the other two subspecies apparently have a much narrower (< 2.0cm) and higher dorsal ridge. While there is certainly morphological variation within each of the three recognised subspecies (e.g. Jefferson, 2002; Jefferson and Hung, 2004), there currently does not appear to be any evidence of intermediate types (and therefore interbreeding) in the areas where they overlap in distribution such as the Taiwan Strait. Due to this evidence, along with other suggestions of morphological differences, it has been suggested that the two major geographical forms (i.e. wide-ridged or *phocaenoides*-type and narrow-ridged or *asiaeorientalis*-type) possibly represent different species (e.g. Jefferson, 2002).

Geographically localised studies of the distribution, cranial morphology and genetics of finless porpoises have suggested that there are at least five distinct populations in Japanese coastal waters (SC/57/SM11). Despite limited coverage and sample sizes, studies elsewhere in the species' range provided evidence for additional populations (SC/57/SM1; SC/57/SM3; Anon., 2005). The sub-committee concluded that due to the presumably discontinuous distribution, finless porpoises may exhibit multiple populations over relatively small distances (as occurs off Japan), thus there are likely to be numerous small and vulnerable populations along their coastal range. The sub-committee **recommended** that genetic and morphometric studies of finless porpoises be conducted to assist in clarifying taxonomy and population structure in the genus *Neophocaena*. These studies should include analyses of exiting specimens, pooling of samples and expertise between research groups to increase analytical power and extend effort to obtain new samples from areas that have so far received little attention. Standardisation of methods for measuring the dorsal ridges was considered important. The sub-committee also acknowledged that efforts to collect and analyse samples should be continued in areas (such as off the Chinese coast) where the species taxonomy remains particularly ambiguous.

5.3 Abundance

The sub-committee reviewed the results of recent surveys to estimate abundance carried out in five areas: Japan, Korea, Hong Kong, Bangladesh and the Arabian/Persian Gulf.

In 1999, the Japanese Ministry of the Environment launched a two-year research effort to estimate the abundance of finless porpoises for the currently identified five populations in Japanese waters (SC/57/SM11). Parallel line-transect surveys were carried out by aircraft in April/May 2000 (Table 1). SC/57/SM11 detailed the Inland Sea element of the survey that covered a total of 2,183km of trackline. Overall porpoise densities were estimated at 0.54 individuals km^{-2} for the entire Inland Sea with a total population of 7,593 individuals (CI=5,794-9,950).

The surveys found that densities were lower in the central and eastern portion of the Inland Sea (0.23 individuals km^{-2}) compared to the western portion (1.4 individuals km^{-2}). This finding is in contrast to studies in the late 1970s that found similar densities across both areas and supports evidence that there has been a greater decline in porpoise abundance in the central and eastern Inland Sea (SC/57/SM11). It was further noted that the survey did not cover a minor portion of the known range of the population. The sub-committee commended the proficient design of these surveys. It also noted that for logistical purposes a $g(0)$ of 1 was assumed and the sub-committee recognised that these estimates probably underestimated the true size of the porpoise population in that area.

The sub-committee noted that more recently (2002–04) 14 aerial surveys were carried out in autumn and winter in Japanese waters (Anon., 2005). Abundance estimates were derived from seven surveys with plans for further studies in the near future.

Shipboard line-transect surveys for finless porpoises were conducted in part of the inshore and offshore waters off the west coast of Korea in 2001, 2003 and 2004 (SC/57/SM15). Sightings generally occurred in water depths between 20-50m. Population abundances for part of the inshore and offshore waters were estimated. The sub-committee expressed reservations over the reported perpendicular distances and consequent estimate of $f(0)$ for offshore estimates in 2001. The estimates from offshore surveys in 2004 did not appear to suffer from this bias and the sub-committee **agreed** that this estimate was likely to be more reliable at 21,532 (CV=38.5%) animals for the offshore survey area. The corresponding estimate for about 40% of the entire inshore area of the west coast of Korea in the same year was 5,464 (CV=19.6). The sub-committee noted that as these estimates assumed $g(0)=1$ they should be viewed as minimum estimates but otherwise warmly welcomed the studies and looked forward to their further refinement.

There have been no new estimates of abundance from Hong Kong since 2002. However, line-transect surveys have been ongoing and updated estimates should be available relatively soon. An acoustic component is also incorporated into this programme (SC/57/SM18). The population in Hong Kong waters and some adjacent waters is considered to consist of at least 220 porpoises (Jefferson *et al.*, 2002b).

Boat-based line-transect surveys were carried out along 780km in the outer Sundarbans Delta of Bangladesh during February 2004 (SC/57/SM4). Transect lines were contained within a 16,779km^2 polygon following the rim of the mangrove forest and extending about 50km offshore. Search effort was conducted along an additional 230km of trackline to the south but no finless porpoises were observed, probably due to the significantly greater depth and salinity in this area. This searching effort was not included in the abundance estimation analysis. Because finless porpoises were seen on only 11 occasions the results were pooled with sightings of Irrawaddy dolphins (n=74) (*Orcaella brevirostris*) to estimate a detection function. The study produced a point estimate of 1,382 porpoises (95% CI=475-4,020). The sub-committee discussed these results and **agreed** that pooling the sightings to determine the detection function was pragmatic and recognised the substantial logistical problems with working in this area. Though the estimate itself must be viewed as a minimum because of an unquantified $g(0)$ the sub-committee commended the authors of this study and agreed that the waters of Bangladesh support regionally important populations of finless porpoises. Tempered with this recognition, the survey also uncovered potentially unsustainable bycatch of small cetaceans in a drifting gillnet fishery for elasmobranchs. The sub-committee also recognised the long term merit of training and involving local scientists to conduct studies such as this.

There have been no dedicated systematic cetacean surveys for absolute porpoise abundance in the Arabian/Persian Gulf, along the Indian-Ocean coasts of Iran or Pakistan, or in Chinese waters (except around Hong Kong). However, opportunistic sightings made by Preen (2004) during aerial surveys for dugongs suggest that there has been a substantial decline in the relative abundance of small cetaceans (including finless porpoises) in the southern Gulf between the 1986 and 1999 (SC/57/SM6).

Given the complexity of the inshore habitat in many parts of this species range and the difficulty in surveying small cetaceans in these areas, the sub-committee **recommended** that a workshop be carried out to try to develop and standardise survey methodology, including the use of passive acoustics.

5.4 Life history

Information on the life history parameters of finless porpoises is based primarily on animals derived from Japanese and Chinese waters, although new studies have commenced in Korea (SC/57/SM15 and SC/57/SM3). Growth parameters are generally similar to those of other phocoenids, but males appear to reach longer asymptotic lengths than females. SC/57/SM1 summarised the following known growth parameters (although it should be noted that length may have been incorrectly measured in some cases):

Table 1
Abundance of Japanese finless porpoises based on surveys in 1999 and 2000.

Geographical population	Distance flown (km)	Porpoises sighted	Estimated abundance	*CV* (%)	Source
1. Ariake/Tachibana Bay	481	150	3,807	16.4	Shirakihara and Shirakihara (2002); Shirakihara (2002)
2. Omura Bay	301	55	289	19.2	As above
3. Inland Sea	2,183	233	7,593	13.9	As above
4. Ise/Mikawa Bay	397	179	3,743	24.0	Yoshioka (2002); Shirakihara (2002)
5. Chiba-Sendai Bay	685	51	3,233	33.8	Amano (2002), Shirakihara (2002)

(1) average neonatal length 72-84cm, largest known individual 168-227cm (males) and 164-206cm (females);
(2) minimum length at sexual maturity 132-150cm (males) and 132-145cm (females);
(3) minimum age at sexual maturity 4-6yr (males) and 5-5.5yr (females);
(4) gestation period 10.1-11.5 months.

Lengths of animals from Taiwan (SC/57/SM3) fall within the above range. There are only a limited number of samples from other areas but results from six carcases from Pakistan and elsewhere suggest that these animals are smaller (Harrison and McBrearty, 1974; Jefferson *et al.*, 2002c).

Although interpretation of tooth aging results are difficult, readings of growth layer groups (GLGs) from teeth suggests that finless porpoises have comparatively high maximum observed ages relative to other phocoenids. Porpoises recovered from southern Chinese waters, for example, had GLGs that suggested ages of 28 and 33 years old (SC/57/SM1) and from Korea of 20 years old (SC/57/SM16). The sub-committee noted that GLGs of finless porpoises are difficult to interpret because of the high relevance of accessory layers. As no opportunity to validate GLG counts with known age wild animals exists and information from captive animals is not necessarily reliable, the sub-committee agreed that age estimates should be treated with caution. The sub-committee also recognised the issue of inter-individual variations in reading and interpreting GLGs and **recommended** inter-calibration exercises between the different researchers working on this species.

Calving in finless porpoises occurs seasonally and the duration of this period differs between areas. Calving occurs year-round in Hong Kong with a peak between October and January (SC/57/SM1) and between April and early May in Kuwait (SC/57/SM6). There are anecdotal records in South Korea that finless porpoises have favoured breeding areas. Reports from fishermen active around Merawah Island in the Arabian Gulf suggested that porpoises enter shallow water to give birth (SC/57/SM6). Similarly, island areas to the south west of the South Korean mainland are seasonally visited for breeding.

5.5 Ecology

Finless porpoises consume a wide variety of prey species that include fish, cephalopods and crustaceans (SC/57/SM1, SM3, SM6, SM17). Gastropod and bivalve molluscs have also been recorded in some stomach samples although they could represent secondary prey. Fish consumed may be both demersal and pelagic. Age related analyses of diet from Korean bycaught animals suggest a bias towards crustaceans in the diet of young animals (SC/57/SM17). It was noted that if juvenile finless porpoises are obligate crustacean feeders, the condition of local shrimp resources may have implications for local porpoise carrying capacities and abundance. Samples collected from waters around Hong Kong suggest substantial overlap with sympatric humpback dolphins, but also indicate that there is some differentiation in diet potentially associated with fine-scale habitat preferences (SC/57/SM18). Tidal changes in the frequency of sightings of finless porpoises in coastal waters may also be associated with fine-scale foraging movements.

The distribution of finless porpoises overlaps with those of a variety of other marine mammal species including baiji (*Lipotes vexifullifer*), humpback (*Sousa* sp.), Irrawaddy and bottlenose (*Tursiops* spp.) dolphins, as well as false killer whales (*Pseudorca crassidens*) and dugong (*Dugong dugon*). Though finless porpoises may occupy similar areas, they do not appear to form mixed schools. Indeed studies in Hong Kong (SC/57/SM18), Bangladesh (SC/57/SM4) and elsewhere suggest fine-scale habitat partitioning between finless porpoises and other small cetaceans.

As with most other aspects of the ecology of finless porpoises, the diversity and impacts of natural predators are poorly understood. Porpoise remains have been found in the stomachs of sharks and killer whales but the frequency of these events is unknown. Similarly, it is clear that finless porpoises may harbour high burdens of pulmonary nematodes (SC/57/SM1), but their impacts on survival have yet to be determined.

5.6 Habitat

Finless porpoises are almost exclusively found in shallow continental shelf waters, particularly near-shore but also in offshore areas if waters depths are sufficiently shallow (i.e. <50m, SC/57/SM15). Habitats include mangrove swamps, estuaries, sheltered bays and open waters with sandy and muddy or rocky bottoms (SC/57/SM4). There is limited evidence that local distribution patterns may be modulated by the occurrence of other small cetacean species in the same area (SC/57/SM1, SM4). Because these porpoises have a range that includes a narrow coastal strip over a long coastline, they are exposed to a wide diversity of anthropogenic activities. These in turn convey a diversity of threats; many of which have been identified but their impacts at the population level remain unknown.

As a result of the short dives, small body size and shallow waters utilised by finless porpoises, they run particular risk of fatal or debilitating collisions from boats and such mortality has been documented (e.g. SC/57/SM1; Anon., 2005). Environmental contaminants may represent the most serious long-term threat to many populations. Studies have been conducted on organochlorine levels in porpoises from Japan, mainland China, Hong Kong and Taiwan (SC/57/SM1, SM3, SM18). The occurrence of relatively recent breakdown products of DDT in porpoise tissues suggests the recent introduction of this compound into waters near Hong Kong (Parsons and Chan, 1998; Jefferson *et al.*, 2002a). Mercury and butlytin concentrations in tissues of porpoises recovered from Hong Kong and contaminants in porpoise tissues from the Inland Sea of Japan are sufficiently high to be considered a potential health risk (SC/57/SM1). Lower values have been reported from other parts of the region, such as Taiwan and Korea (SC/57/SM3; Anon., 2005). In the case of Taiwan, this may have resulted from strong currents flushing contaminants clear of coastal waters or the transport of carcases from another geographical area (SC/57/SM3). Other impacts include: the introduction of sewage or agricultural runoff with associated pathogens and organic material; oil pollution; elevated levels of background noise and high intensity sounds associated with seismic surveys, naval activities and construction; direct habitat removal by dredging, land reclamations or sea bed smothering, impacts on freshwater flows; and alterations of prey availability.

The sub-committee noted that in some parts of the range of finless porpoises environmental conditions are already extreme with localised fluctuations in salinity (Arabian/Persian Gulf, 35-70%) and water temperature (Inland Sea of Japan, 5-29°C) as well as poor water circulation (SC/57/SM6). As a result, the additional impacts of anthropogenic stressors alone or in concert may have the capacity to be especially potent.

The sub-committee encouraged further work to assess the potential impacts of contaminants and other anthropogenic influences on finless porpoises in all parts of their range.

5.7 Directed takes

No large scale commercial hunts for this species have been recorded. Some local hunting has occurred in the past and probably continues to some extent today although it has shown no signs of becoming a major target species. Furthermore, a few tens of finless porpoises have been live-captured for public display and research in Japan, China and Thailand (Perrin *et al.*, 2005). For example, the Japanese Minister issued a scientific permit to catch nine finless porpoises for scientific research in Ise Bay in November 2004 (Anon., 2005).

5.8 Incidental takes

Incidental mortality is probably substantial throughout the species' range. Catches are known to occur in a broad range of fishing gears including both active (trawls, beach seines) and passive fishing gear (gillnets and other gear types) and also as a result of fishing with explosives and (in the Arabian/Persian Gulf) nets set for dugongs. There is generally very little bycatch monitoring of these fisheries and coupled with the limited information on the size of their source populations it is very difficult to quantify the population level impacts. With numerous net fisheries operating in Chinese waters (e.g. more than 3.5 million gillnets; Zhou and Wang, 1994), the bycatch level and impact on finless porpoises is likely to be considerable. As a result of interviews with fishermen, Yang and Zhou (1996) estimated that at least 2,100 porpoises are caught in nets in southern and central China each year. Official Japanese reports listed eight bycaught porpoises in 2002 (see Appendix 3) and 86 strandings, although these are likely to be under estimates. There are no bycatch estimates available for catches in waters along the Indian Coast, but the prevalence of inshore fisheries suggest that rates of bycatch are likely to be high (Lal Mohan, 1994). Around 50% of small cetacean specimens collected in Taiwan show evidence of entanglement in fishing gear (SC/57/SM3). The species is available in local markets in South Korea; the source of these animals is believed to be from bycatch in neighbouring coastal waters. Bycatch statistics issued by the Korean Ministry of Environmental Affairs and Fisheries indicate that there at least 20-50 animals bycaught per year, although the lack of awareness for fishermen to report bycatch in some areas means that these takes are likely underreported. The sub-committee welcomed efforts by the South Korean Ministry to further improve the accuracy of these statistics. Nothing is known about levels of bycatch in North Korea. Likewise, little is known about bycatch in the Arabian/Persian Gulf, but the occurrence of higher densities of carcasses on shores near human settlements indicates that bycatch is likely (SC/57/SM6).

5.9 Other

Finless porpoises are social animals, usually found in groups of 12 or fewer. The most common group size is usually two or three. Larger groups of 20 to 50 individuals do occur, but are likely aggregated because of a common food resource rather than social affiliations. Other than their grouping tendencies, little is known about their social organisation. They are shy animals that show little interest or avoidance of boats. Socialising at the surface or aerial behaviour is only rarely observed. Without a dorsal fin, they are not suitable for photo-identification studies and there have been no satellite telemetry studies. Group dive cycles for animals in Hong Kong waters usually consisted of 1-1.5min dives with inter-breathing intervals of 10-20secs. Interestingly, for groups diving in this way, at least one individual was at the surface for 60% of the time, suggesting that diving behaviour is not particularly co-ordinated (Beasley and Jefferson, 2002).

Like other phocoenids, finless porpoises produce narrow band, high frequency echolocation calls. Towed hydrophones were tested on surveys in waters around Hong Kong in 1998 to use these sounds to investigate distribution and assess relative abundance (SC/57/SM14). The sub-committee agreed that future developments in acoustic techniques might provide a useful tool to increase the coverage of sightings surveys and help quantify biases associated with visual identification techniques.

5.10 Consideration of status

The finless porpoise is listed as 'data deficient' by the IUCN. The species is in no immediate danger of extinction, but some populations for which the status has been assessed (such as in the Inland Sea of Japan) are apparently declining. Incidental mortality in fisheries is likely to be the biggest source of direct mortality but other anthropogenic influences such as chemical pollution, depletion of prey species and loss of habitat are all likely to have impacts. Throughout most of the species' range, human populations adjacent to the finless porpoise's habitat are increasing in size and becoming more industrialised so the expectation should be that anthropogenic pressures will continue and intensify.

The sub-committee **re-iterated its recommendation** that genetic and morphometric studies of finless porpoises be conducted to assist in clarifying taxonomy and population structure in the genus *Neophocaena*.

The sub-committee recognised that inadequate information exists on the distribution of this species throughout much of its range and **recommended** that surveys be carried out with particular emphasis on targeting effort to areas where the least is known. The sub-committee agreed that the northern rim of the Indian Ocean (including the Arabian/Persian Gulf) remains an extensive area where our knowledge of the status and biology of finless porpoises is severely under-represented.

The sub-committee noted that the range of this species includes areas that support intensive coastal gillnet fisheries and that large bycatches have been documented in some fisheries. The sub-committee **recommended** that the magnitude and effects of such bycatches be investigated as a matter of priority.

6. PROGRESS ON PREVIOUS RECOMMENDATIONS

6.1 Baiji

The baiji is the world's most endangered cetacean and its extinction would mean the loss of an entire mammalian family (Lipotidae). The range of the species is restricted to the Yangtze River in China and its population size is believed to number in the low tens of individuals. Due to its critically endangered status, the Commission has requested that the Government of China report progress on the conservation of the species to the SC on an annual basis. No new information was received from the Government of China. However, Gales reported that a Workshop on Conservation of the Baiji and Yangtze Finless Porpoise took place from 28 November to 3 December 2004 at the Institute of Hydrobiology, Chinese Academy of Sciences, Wuhan, China. The Workshop was attended by several international cetacean experts and participants reaffirmed the critical status of the species in the Yangtze River. The Workshop operated under the assumption that the Chinese authorities had decided to proceed with capture operations to remove some baiji from the Yangtze River and that Yangtze finless porpoises in the Shishou Tian-e-Zhou oxbow would not be removed before or after baiji were introduced there. Discussion of whether to put captured baiji in a dolphinarium at Wuhan or in the Shishou oxbow semi-natural reserve did not result in consensus. Workshop participants unanimously agreed, however, that any decision should be made on the basis of ensuring the health and safety of the individual animals and meeting the long-term conservation objective of establishing a self-sustaining *ex situ* population that can eventually help restore the baiji to its natural Yangtze environment.

The sub-committee welcomed news of this workshop but noted that recommendations made at previous international workshops on baiji conservation and those made by the sub-committee at its 2000 meeting had not commonly been followed. The sub-committee did not discuss the pros and cons of *ex situ* versus *in situ* approaches, but agreed with the conclusion of the Workshop that any captured dolphins should be placed in the oxbow under soft-release (i.e. temporarily monitored in a holding-pen (or pens) prior to their release) conditions. The sub-committee also agreed that the recommendation for a range-wide baiji survey should be implemented as a matter of urgency and any capture efforts be targeted on the most threatened areas while concomitant *in situ* conservation work should be pursued in areas ostensibly subject to lower levels of risk.

6.2 Vaquita

The sub-committee has followed with great interest the progress on conservation efforts on behalf of the vaquita *P. sinus*, a 'critically endangered' species endemic to the upper Gulf of California, Mexico. Several members of the sub-committee are members of the International Committee for the Recovery of the Vaquita (CIRVA). This year the sub-committee received information on the use of passive acoustics to study habitat use and a brief review of progress on conservation actions recommended in the third report of CIRVA (Rojas-Bracho *et al.*, 2004) presented at last year's meeting. For the acoustics study, the area of vaquita distribution was divided into six strata. Acoustical sampling was conducted in 2001-2003 for a total of 509hrs from random locations within each of the strata. Results indicated that the locations with the highest acoustical detections were distributed close to the coast and near the southern border of the Biosphere Reserve near San Felipe Bay, and that there has been a decline in the relative number of individuals inhabiting the east coast of the upper Gulf as recorded during previous studies (D'Agrosa *et al.*, 2000), or that there are unknown movement patterns that reduced the probability of detection in this area. Progress on recommendations made by the CIRVA included: (1) promotion by environmental authorities in Mexico of the polygon (closed area) submitted by CIRVA; (2) integration of CIRVA recommendations into the Priority Species Recovery Program of the Direccion General De Vida Silvestre General (Wildlife Department); (3) substantial progress on making cost estimates for the vaquita recovery plan which considers socio-economic factors; and (4) an investigation of microcredits for financing economic alternatives for gillnet fishermen potentially affected by the CIRVA gillnet free polygon. The sub-committee welcomed progress with acoustic research on vaquita distribution and on promotion of the CIRVA recovery plan and noted that results of the acoustic study provide additional evidence of the need for urgent implementation of the plan.

6.3 Harbour porpoise

The sub-committee reviewed the status of harbour porpoises (*P. phocoena*) in the North Atlantic in 1995 and agreed that reported bycatch levels justified concern about sustainability. At its meeting in 1998, the sub-committee suggested that a joint IWC/ASCOBANS Working Group provide scientific advice to the Advisory Committee of ASCOBANS on matters pertaining to the assessment of the status of harbour porpoises in the North Sea and adjacent waters (IWC, 1999, p.215). The Working Group met at St. Andrews University in March 1999 and outlined a simulation modelling approach that might allow ASCOBANS to develop algorithms to meet their conservation objectives, of which some results were presented at the 2001 meeting of the sub-committee (Pout *et al.*, 2001). The sub-committee then considered and endorsed an alternative approach suggested by Wade and Bravington for developing a relatively simple, but spatially explicit, model or models with the objective of determining bycatch levels that would allow small cetaceans to recover to, or be maintained at above, 80% of carrying capacity. This approach was then incorporated as part of the current Small Cetaceans of the European Atlantic and North Sea (SCANS) II project which will advise the European Community under its Habitats Directive and ASCOBANS. The sub-committee considered that it may be appropriate to reinstate the joint IWC-ASCOBANS Working Group, as suggested by the observer from ASCOBANS, when the results from the modelling become available.

New information presented to the sub-committee in SC/57/SM13 describes a planned project as a part of SCANS II to determine appropriate limits for small cetacean bycatch in the European Atlantic and North Sea. Initially the project will focus on harbour porpoises. Two key components of the study will be the development of an algorithm for calculating bycatch limits from population data (absolute and relative abundance) and the development and parameterisation of a simulation model of a small cetacean population using data from genetics, age structure, reproductive status, pregnancy rates, etc. Important considerations in the simulation model will be maximum population growth rate, stock structure and spatial movements. The appropriateness (and tuning) of the bycatch limit algorithm(s) for achieving conservation objectives will be assessed through performance testing using the simulation model. The sub-committee welcomed progress with this modelling approach and looked forward to receiving updates at subsequent meetings.

Gunnlaugsson reported information from Pike *et al.* (2005) on trends in the distribution and abundance of harbour porpoises in Icelandic coastal waters from aerial surveys conducted in 1986-2001. At face value these data indicated a negative trend of 4.9% (CV=47%) but this estimate was compromised by the following factors: (1) the survey was primarily designed for larger species of cetaceans and considerable (and possibly varying) parts of the survey were conducted under conditions where harbour porpoises could not be detected; (2) the apparent trend over the period results solely from the last survey in 2001; and (3) none of the observers on this survey had participated in earlier surveys so the apparent trend may be due to observer bias. Pike *et al.* (2005) noted that since 'both stock size and the levels of removal are unknown, we cannot exclude that the population of harbour porpoises around Iceland has decreased in recent years due to removals above sustainable levels'. The sub-committee noted plans for a new survey in this region in 2007.

6.4 Humpback dolphin

The genus *Sousa* was the subject of an extensive review at the sub-committee's 2002 meeting. Jefferson reported that substantial progress had been made on implementing the recommendation for a global study on the systematics of the genus using molecular techniques. More than 200 samples have been compiled from most major areas within the range of the genus. The current emphasis of the project is to investigate alternative genetic markers and improve the geographic range of samples, especially in the Bay of Bengal. Mixed progress was reported on other recommendations made by the sub-committee in 2002. The sub-committee welcomed news that the First Workshop on Conservation and Research Needs of Indo-Pacific Humpback Dolphins, *S. chinensis,* in the Waters of Taiwan was convened in early 2004 and encouraged efforts to assess the status of this threatened population (Wang *et al.*, 2004). The sub-committee received information from participants about ongoing research projects in Zanzibar (Berggren), along the western coast of Taiwan (Wang), Northern Vietnam, Northern Borneo and Northern Territories of Australia adjacent the Timor/Arafura Seas (Porter), Gabon and Madagascar (Collins), and Guinée, Benin, Ghana and Togo (Van Waerebeek).

6.5 Irrawaddy dolphin

The sub-committee addressed the status of Irrawaddy dolphins during its review of freshwater cetaceans in 2000 (IWC, 2001). It concluded that densities appeared to be low in most areas and that several populations were believed to be seriously depleted and threatened with extirpation, particularly in freshwater areas of their distribution. Since the 2000 meeting, five geographically isolated populations of Irrawaddy dolphins in Malampaya Sound (Philippines), Songkhla Lake (Thailand), and Ayeyarwady (Myanmar), Mahakam (Indonesia) and Mekong (Vietnam, Cambodia and Lao PDR) rivers have been classified in the IUCN Red List as 'critically endangered' due to small population sizes and continuing abundance declines. The primary threat to these populations is entanglement in gillnets, but other risk factors include electric fishing, gold mining operations, live captures to stock dolphinariums, and possibly mercury toxicity. During its review of freshwater cetaceans in 2000 the sub-committee recommended that given the precarious status of Irrawaddy dolphins all live captures should cease 'until affected populations have been assessed using accepted scientific practices' (Miyashita and Yoshida, 2002, p.266). During last year's meeting the sub-committee noted that a proposal to transfer Irrawaddy dolphins from CITES Appendix II to Appendix I was 'consistent with the previous assessment of this species made by the sub-committee in 2000' (IWC, 2005, p.314). The sub-committee noted that the proposal was approved at the 13th CITES Conference of Parties in October 2004.

An additional recommendation of the 2000 review of freshwater cetaceans was that comprehensive surveys be conducted to assess the abundance, distribution and habitat quality of marine Irrawaddy dolphins. Information was presented in Hammond and MacLeod (2004) on population estimates of 449 individuals (CV=17.0%; 95% CI=384-514) for mangrove channels of the inner Sundarbans Delta in Bangladesh based on double concurrent counts conducted in March 2002, and 5,383 individuals (CV=39.5, 95% CI=2,385-12,150) for the outer delta based on line-transect surveys conducted in February 2004. The sub-committee welcomed this new information and expressed concern about observations reported in the paper of potential unsustainable bycatches in a drift gillnet fishery for elasmobranchs.

Garcia-Godos *et al.* (2004) described an opportunistic survey for Irrawaddy dolphins off the Kimberley coast region of Northwest Australia in September 2004. Seven Irrawaddy dolphin groups totaling 36 individuals were observed in coastal waters near Cape Londonderry, Anjo Peninsula, Vansittart Bay, Augustus Island and Roebuck Bay in Broome. A community sighting network was established in Broome and reports of dolphin occurrence are now being regularly received from recreational fishers in the Roebuck Bay region. Future plans are to investigate abundance, habitat preferences, and threats during a three-year ecological study in the region. The sub-committee commended this study and noted that new information on the presence of Irrawaddy dolphins in this area of Australia was indicative that other unknown populations almost certainly exist within the range of the species.

Smith reported to the sub-committee that the Workshop to Develop a Conservation Action Plan for Freshwater Populations of Irrawaddy Dolphins was convened on 21-26 March 2005 in Phnom Penh, Cambodia. This Workshop was one of the 57 priority projects included in the 2002-2010 IUCN Conservation Action Plan for the World's Cetaceans (Reeves *et al.*, 2003).

6.6 Other

The sub-committee welcomed a preliminary attempt at compiling a global review of interactions between cetaceans and longline fisheries (SC/57/BC3). Although longline fishing has generally been viewed as being benign to cetaceans, a large variety of species have been incidentally hooked or entangled by this fishery. Small and medium sized cetaceans appear to be particularly vulnerable possibly because they are less likely to be able to break free from the line or hooks. Longlining for pelagic fish is now the most widespread fishing technique in the world which means that even low levels of cetacean bycatch per unit effort could result in unsustainable takes, especially for species populations that occupy a narrow ecological niche. The sub-committee noted that a large number of additional cetacean species and countries could be added to the existing compilation and commended plans by the authors of the paper to conduct a more comprehensive review in the future.

Bass reported that, though not presented direct to the IWC, information on current catch statistics are available online on the JFA website. The last reviewed abundance estimates in 1991 for Dall's porpoises affected by the Japanese harpoon fishery were 217,000 (CV=23%) for the Central Okhotsk Sea (*truei*-type) and 226,000 (CV=15%) for the Southern Okhotsk Sea (*dalli*-type). Catch statistics from the JFA website for January-December 2003 were 7,412 individuals for the *dalli*-type and 8,308 individuals for the *truei*-type, which represent 3.4% and 3.7% of the 1991 abundance estimates for both types, respectively. Directed takes of Dall's porpoise have exceeded the SC's recommended anthropogenic mortality limit of 2% of abundance (IWC, 2002, p.58) for over 15 years and the fishery remains the largest directed hunt for small cetaceans in the world. The Committee **repeated its previous recommendation** that directed takes be reduced to a sustainable level as soon as possible.

7. CONSIDERATION OF REVISION OF IWC CETACEAN LIST

The present List of Recognised Species of Cetaceans (e.g. Anon., 2003) does not include two very recent changes in cetacean taxonomy, specifically the description of a new beaked whale species *Mesoplodon perrini*, (Dalebout *et al.*, 2002) and the replacement of *M. bahamondi* (Reyes *et al.*, 1995), with the senior synonym *M. traversii* (Gray, 1874). A small group (Cipriano, Rosenbaum, Jefferson and LeDuc) examined the available information and reported back to the sub-committee. The sub-committee thanked the members of that group for their work and made the following recommendations for updating the list (presented in full in Appendix 2).

7.1 Bahamonde's beaked whale

M. traversii (Gray, 1874) was shown to be the senior synonym of the recently described Bahamonde's beaked whale, *M. bahamondi* (Reyes *et al.*, 1995), on the basis of morphological features of the skull, mandible and teeth and phylogenetic analysis of mitochondrial DNA sequences (van Helden *et al.*, 2002). Three specimens are known:

(1) a mandible and two teeth (NMNZ 546) held in the Museum of New Zealand Te Papa Tongarewa – the first material known of this species, which was named by Gray (1874) as the holotype of *Mesoplodon* [*Dolichodon*] *traversii* – collected in 1872 by H.H. Travers, from Pitt Island, Chatham Islands, New Zealand;

(2) skull (no reference number available) held in Auckland University School of Biological Sciences, MacGregor Collection – collected in the 1950s from White Island, New Zealand;

(3) skull of *M. bahamondi* type specimen (MNHNC 1156) held in Museo Nacional de Historia Natural de Chile – collected in 1986 from Robinson Crusoe Island, Juan Fernández Archipelago, Chile.

The Pitt Island specimen was shown by skull and tooth morphology, and phylogenetic analysis of mitochondrial control region sequences to be distinct from *M. layardii* and conspecific with the holotype of *M. bahamondi* and the White Island skull (van Helden *et al.*, 2002). By chronological priority, the species represented by these three specimens would take the name *M. traversii* (Gray, 1874).

No common name was suggested by Gray, so van Helden *et al.* (2002) proposed that *M. traversii* (Gray, 1874) be known as the spade-toothed whale (English), zifio de Travers (Spanish), baleine à bec de Travers (French) and spade-tand spitssnuitdolfijn (Dutch), in recognition of the shape of the tooth and the collection of the original specimen by Henry Hammersly Travers, Esq. (1844-1928).

7.2 Perrin's beaked whale

Perrin's beaked whale, *M. perrini*, was described (Dalebout *et al.*, 2002; Dalebout and Baker, 2002) on the basis of five animals stranded on the coast of California. Four of these animals were initially identified as Hector's beaked whales (*M. hectori*) and a fifth specimen was initially identified as a neonate Cuvier's beaked whale, *Ziphius cavirostris*. The specimens were first recognised as representatives of an undescribed species through phylogenetic analysis of mitochondrial DNA sequences and this was confirmed through later analysis of nuclear gene (actin intron) sequences and of nine morphological features of the mandible area, teeth and calvaria (Dalebout *et al.*, 2002; Dalebout *et al.*, 2004). Although similar morphologically to *M. hectori*, the genetic data suggest that *M. perrini* is more closely related to (but distinct from) the lesser beaked whale *M. peruvianus* (Dalebout *et al.*, 2002). To date, *M. perrini* is known only from the eastern North Pacific.

8. OTHER PRESENTED INFORMATION

The franciscana (*Pontoporia blainvillei*) may be at greater risk of extinction than any other cetacean species in the western South Atlantic and there has been increasing concern about the sustainability of bycatches (Secchi, 2002). The species was reviewed by the sub-committee during its 2004 meeting (IWC, 2005) and the Rio Grande do Sul/Uruguay population is classified as 'vulnerable' in the IUCN Red List. SC/57/SM7 reports on an investigation of seasonal, spatial and gear type vulnerability of franciscanas in southern Brazil. A small portion (about 10%) of the coastal gillnet fleet (n=105 boats) operating from Southern Rio Grande do Sul was monitored to identify areas, seasons and gear types posing the highest risk of franciscana bycatch. The probability of catching at least one franciscana in a net set was calculated for different locations, seasons and net mesh sizes. The results indicated that the species is more vulnerable to large mesh-size (14-16cm) nets targeting white croaker (*Micropogonias furnieri*) and that the risk of entanglement increases during the spring and in shallow waters of the northern portion of the study area. The sub-committee noted the usefulness of this study for guiding franciscana bycatch mitigation efforts targeting the Rio Grande do Sul/Uruguay population.

SC/57/SM8 reported that time series data of strandings have suggested a recent marked increase in the mortality of bottlenose dolphin in Rio Grande do Sul, Southern Brazil, due to entanglements in fishing nets. This population was estimated to number about 80 individuals (Dalla Rosa, 1999). An analysis of removals based on the Potential Biological Removal (PBR) model of Wade (1998), termed Maximum Allowable Fishing Related Mortality in this study, showed that the population is likely declining even under the most optimistic scenarios. The sub-committee **recommended** that a rigorous investigation be conducted to assess the status of this population.

A number of papers submitted to the sub-committee were not reviewed extensively, but are summarised below. SC/57/SM5 reported on a study in 1985-1999 of the socioecology of killer whales (*Orcinus orca*) in northern Patagonia, Argentina, using photo-identification techniques. Thirty killer whales were identified in the study area but a core group of 17 returned to the area each year. An association index showed that the majority of associations among individuals were long-term. Dispersal of both sexes from groups larger than three individuals was observed. This may be related to foraging and provisioning strategies. SC/57/SM9 reported information on the stomach contents of 11 bottlenose dolphins stranded along the southern coast of Rio Grande do Sul, Brazil. The contents were analysed and compared with studies conducted in the early 1980s. The diet was composed of 10 species of teleosts belonging to five families. Only one beak of a coastal squid (family Loliginidae) was found. White croaker was the most frequently occurring species (71.4%) in the diet, followed by cutlass fish, *Trichiurus lepturus* (57.1%). The cutlass fish appeared to be more important than recorded in the past. This may be related to the decline of white croaker stocks which have been heavily exploited by gillnet and trawl fisheries for more than three decades. A preliminary evaluation of individual and ontogenetic variation in the colouration pattern of the southern bottlenose whale, based on new sighting and stranding data was presented in SC/57/SM12. Contrasting, light-coloured nuchal band and facial fields, and dark blowhole stripe and eye patches seem to be diagnostic for neonate/juvenile individuals, distinct from the pattern found in *Tasmacetus shepherdi.* A cursory overview of available information suggests significant levels of morphological variation in *H. planifrons*, warranting a comprehensive study.

9. TAKES OF SMALL CETACEANS

Information was provided to the sub-committee on small cetacean catches in 2001-04 (Appendix 3) and it was noted that the data were incomplete. The sub-committee **urged** governments to ensure that complete figures are reported to the Commission in a timely manner. The sub-committee also **recommended** that a column be added to bycatch reporting tables in the Progress Reports to indicate the responsible fishing gear type.

Baker provided information to the sub-committee on the potential use of market proportions to evaluate reported bycatch of small cetaceans using molecular taxonomic identification. An initial study was conducted of 108 products from 'small' cetaceans purchased in whale-meat markets in Busan, Ulsan and Pohang, Korea. Of these samples, 17 were found to be derived from North Pacific minke whales and 12 could not be identified to species. The remaining 79 products were derived from 11 odontocete species. By comparison, nine odontocete species were reported in the 2003 and 2004 Progress Reports from Korea, of which eight of these were identified in the market survey. A single Baird's beaked whale reported in 2004 was not found in the market survey, whereas two beaked whale species and a false killer whale were identified in the market survey that were apparently not reported to fishery authorities. Although there were significant differences in the species' proportions sampled during the market survey versus those in the Korean Progress Reports, especially for finless porpoise samples which were much higher (despite their small size) in the market survey, the sub-committee noted that the discrepancies were relatively minor and some could be accounted for by species mis-identifications. Kim noted that two Stejneger's beaked whales *M. stejnegeri* were included in the Progress Report and admitted that one false killer whale was omitted due to clerical error. The sub-committee **recognised** the potential utility of market surveys for cross-validating official bycatch reports and **agreed** on the need to address potential biases of the technique.

10. WORK PLAN

The sub-committee reviewed its schedule of priority topics. Those currently held by the sub-committee are as follows:

(1) status of small cetaceans in the Caribbean;
(2) systematics and population structure of *Tursiops spp.*;
(3) status of Ziphiids in the Southern Ocean;
(4) population structure and systematics of killer whales;
(5) status of common dolphin (*Delphinus* spp.).

Last year, the sub-committee noted that work is still on-going in relation to *Tursiops* spp. and killer whales and agreed to delay a review of these topics until this new information becomes available. The sub-committee also recommended last year that a review of common dolphins be the priority topic for 2006 given the then anticipated location of the meeting (France), the likely availability of local expertise and the considerable amount of new information on abundance, population structure, life history and bycatch in the Atlantic. It was also noted that the Small Cetacean Fund was almost entirely exhausted, and agreed that support for Invited Participants should be carefully optimised at future meetings and that the choice of a priority topic that would involve local expertise would be prudent.

Given that small cetaceans of the Caribbean has been a priority topic of the small cetacean sub-committee for a number of years (justification: lack of previous assessment; continuing catches and bycatches (IWC, 1999), the continued poor state of the Small Cetacean Fund and the venue for the next meeting (St. Kitts and Nevis instead of France)) it was **agreed** that this was an appropriate and locally focussed topic that would benefit from a thorough review. In discussion, the sub-committee noted that while encompassing a large number of species, that priority would be given to those for which most information is available. It also noted it is likely that for many species, their range extends further south and so it was **agreed** to extend the geographical coverage into the adjacent tropical western Atlantic (and to exclude the Gulf of Mexico). The priority topic for next year will therefore be a review of small cetaceans of the Caribbean and western tropical Atlantic.

The sub-committee also considered the inclusion of small cetaceans of the eastern tropical Atlantic (tropical western Africa) in its review for next year, agreed that this was an important topic, but that it would be too difficult to cover at the 2006 meeting and **agreed** to add it to the priority list.

11. ADOPTION OF REPORT

The report was adopted at 12:15 on 6 June 2005. On behalf of the sub-committee Rogan thanked the rapporteurs for their excellent work and expressed her thanks to the invited experts and local scientists for their important contributions to the review of finless porpoises.

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Appendix 1

AGENDA

1. Election of Chair
2. Adoption of Agenda
3. Appointment of rapporteurs
4. Review of available documents
5. Review of the status of finless porpoise (marine populations)
   - 5.1 Distribution
   - 5.2 Population structure
   - 5.3 Abundance
   - 5.4 Life history
   - 5.5 Ecology
   - 5.6 Habitat
   - 5.7 Directed takes
   - 5.8 Incidental takes
   - 5.9 Other
   - 5.10 Consideration of status
6. Progress on previous recommendations
   - 6.1 Baiji
   - 6.2 Vaquita
   - 6.3 Harbour porpoise
   - 6.4 Humpback dolphin
   - 6.5 Irrawaddy dolphin
   - 6.6 Other
7. Consideration of revision of IWC cetacean list
   - 7.1 Bahamonde's beaked whale
   - 7.2 Perrin's beaked whale
8. Other presented information
9. Takes of small cetaceans
10. Workplan
11. Adoption of report

[*Appendix 2 on following page*]

Appendix 2

PROPOSED IWC LIST OF RECOGNISED SPECIES OF CETACEANS

Scientific name	IWC common name	Scientific name	IWC common name
SUBORDER MYSTICETI (BALEEN WHALES OR MYSTICETES)		**Family Delphinidae (cont.)**	
Family Balaenidae		*Lagenorhynchus obscurus*	Dusky dolphin
Eubalaena australis	Southern right whale	*Lagenorhynchus obliquidens*	Pacific white-sided dolphin
Eubalaena glacialis	North Atlantic right whale	*Lagenorhynchus cruciger*	Hourglass dolphin
Eubalaena japonica	North Pacific right whale	*Lagenorhynchus australis*	Peale's dolphin
Balaena mysticetus	Bowhead whale	*Grampus griseus*	Risso's dolphin
Family Neobalaenidae		*Tursiops truncatus*	Common bottlenose dolphin
Caperea marginata	Pygmy right whale	*Tursiops aduncus*	Indo-Pacific bottlenose dolphin
Family Eschrichtiidae		*Stenella frontalis*	Atlantic spotted dolphin
Eschrichtius robustus	Gray whale	*Stenella attenuata*	Pantropical spotted dolphin
Family Balaenopteridae		*Stenella longirostris*	Spinner dolphin
Balaenoptera acutorostrata	Common minke whale	*Stenella clymene*	Clymene dolphin
Balaenoptera bonaerensis	Antarctic minke whale	*Stenella coeruleoalba*	Striped dolphin
Balaenoptera borealis	Sei whale	*Delphinus delphis*	Common dolphin
*Balaenoptera edeni**	Bryde's whale	*Delphinus capensis*	Long-beaked common dolphin
Balaenoptera musculus	Blue whale	*Lagenodelphis hosei*	Fraser's dolphin
Balaenoptera physalus	Fin whale	*Lissodelphis borealis*	Northern right whale dolphin
Megaptera novaeangliae	Humpback whale	*Lissodelphis peronii*	Southern right whale dolphin
SUBORDER ODONTOCETI (TOOTHED WHALES/ODONTOCETES)		*Cephalorhynchus commersonii*	Commerson's dolphin
Family Physeteridae		*Cephalorhynchus eutropia*	Black dolphin
Physeter macrocephalus	Sperm whale	*Cephalorhynchus heavisidii*	Heaviside's dolphin
Family Kogiidae		*Cephalorhynchus hectori*	Hector's dolphin
Kogia breviceps	Pygmy sperm whale	*Peponocephala electra*	Melon-headed whale
Kogia sima	Dwarf sperm whale	*Feresa attenuata*	Pygmy killer whale
Family Platanistidae		*Pseudorca crassidens*	False killer whale
Platanista gangetica	South Asian river dolphin	*Orcinus orca*	Killer whale
P. g. gangetica	Ganges river dolphin	*Globicephala melas*	Long-finned pilot whale
P. g. minor	Indus river dolphin	*Globicephala macrorhynchus*	Short-finned pilot whale
Family Lipotidae		*Orcaella brevirostris*	Irrawaddy dolphin
Lipotes vexillifer	Baiji	**Family Ziphiidae**	
Family Pontoporidae		*Tasmacetus shepherdi*	Shepherd's beaked whale
Pontoporia blainvillei	Franciscana	*Berardius bairdii*	Baird's beaked whale
Family Iniidae		*Berardius arnuxii*	Arnoux's beaked whale
Inia geoffrensis	Boto	*Mesoplodon pacificus*	Longman's beaked whale
Family Monodontidae		*Mesoplodon bidens*	Sowerby's beaked whale
Delphinapterus leucas	White whale	*Mesoplodon densirostris*	Blainville's beaked whale
Monodon monoceros	Narwhal	*Mesoplodon europaeus*	Gervais' beaked whale
Family Phocoenidae		*Mesoplodon layardii*	Strap-toothed whale
Phocoena phocoena	Harbour porpoise	*Mesoplodon hectori*	Hector's beaked whale
Phocoena spinipinnis	Burmeister's porpoise	*Mesoplodon grayi*	Gray's beaked whale
Phocoena sinus	Vaquita	*Mesoplodon stejnegeri*	Stejneger's beaked whale
Phocaena dioptrica	Spectacled porpoise	*Mesoplodon bowdoini*	Andrews' beaked whale
Neophocaena phocaenoides	Finless porpoise	*Mesoplodon mirus*	True's beaked whale
Phocoenoides dalli	Dall's porpoise	*Mesoplodon ginkgodens*	Ginkgo-toothed beaked whale
Family Delphinidae		*Mesoplodon carlhubbsi*	Hubbs' beaked whale
Steno bredanensis	Rough-toothed dolphin	*Mesoplodon peruvianus*	Pygmy beaked whale
Sousa chinensis	Indo-Pacific hump-backed dolphin	*Mesoplodon traversii*	Spade-toothed whale
Sousa teuszii	Atlantic hump-backed dolphin	*Mesoplodon perrini*	Perrin's beaked whale
Sotalia fluviatilis	Tucuxi	*Ziphius cavirostris*	Cuvier's beaked whale
Lagenorhynchus albirostris	White-beaked dolphin	*Hyperoodon ampullatus*	Northern bottlenose whale
Lagenorhynchus acutus	Atlantic white-sided dolphin	*Hyperoodon planifrons*	Southern bottlenose whale

*Includes more than one species, but nomenclature is still unsettled.

Appendix 3

SMALL CETACEAN CATCHES 2001-2004

All information was taken from National Progress reports unless otherwise stated. Catches are presented by nation, rather than ocean area, except in the case of the data submitted by the IATTC for the eastern tropical Pacific (ETP). In this case, the submitted estimated catches are not broken down by country and a summed total incidental catch for the participating countries is given. The reported catch columns include catches reported by observer programmes, from interviews with fishermen and incidental reports (e.g. stranded whales determined to have died in nets). Catches are tabled according to the calendar year in which they were taken. All direct and incidental removals (including live captures) are recorded but not stranded animals.

	2001					2002					2003					2004				
	Direct		Indirect		Live	Direct		Indirect		Live	Direct		Indirect		Live	Direct		Indirect		Live
Species	Rep.	Est. total	Rep.	Est. total	Rep.	Rep.	Est. total	Rep.	Est. total	Rep.	Rep.	Est. total	Rep.	Est. total	Rep.	Rep.	Est. total	Rep.	Est. total	Rep.
Argentina																				
Franciscana	-	-	28[a]	160-306	1	-	-	52[c]	215[c]	1[c]	-	-	102[a]	893[a]	2[a]	-	-	>250[c]	>900[c]	4
Commerson's dolphin	-	-	37[b]	-	-	-	-	1[e]	-	-	-	-	-	-	-	-	-	-	-	-
Burmeister's porpoise	-	-	-	-	-	-	-	1[d]	-	-	-	-	9[a]	-	-	-	-	0[a]	-	-
Australia																				
Pygmy sperm whale	-	-	-	-	-	-	-	-	-	-	-	-	2[p]	-	-	-	-	-	-	-
Dwarf minke whale	-	-	-	-	-	-	-	-	-	-	-	-	1[q]	-	-	-	-	-	-	-
False killer whale	-	-	1[e]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bottlenose dolphin	-	-	9[a]	9[a]	-	-	-	8[f]	8[f]	-	-	-	-	-	-	-	-	4[r]	4[r]	-
Bottlenose dolphin sp.	-	-	3	3[d]	-	-	-	-	-	-	-	-	-	4[n]	-	-	-	-	-	-
Indo-Pacific bottlenose dolphin	-	-	-	-	-	-	-	1[g]	1[g]	-	-	-	-	5[o]	-	1[s]	-	2[t]	-	-
Common dolphin (?sp.)	-	-	7[b]	7[b]	-	-	-	15[h]	15[h]	-	-	-	-	11[l]	-	-	-	10[u]	10[u]	-
Indo-pacific humpback	-	-	2	2[c]	-	-	-	6[i]	6[i]	-	-	-	6[o]	-	-	-	-	1[v]	1[v]	-
Spinner dolphin	-	-	-	-	-	-	-	-	-	-	-	-	-	4[jk]	-	-	-	-	-	-
Short beaked common dolphin	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2[w]	-	-
Long beaked common dolphin	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2[x]	2[x]	
Unidentified dolphin	-	-	2	2	-	-	-	-	-	-	-	-	-	1[km]	-	-	-	19[y]	19[y]	-
Belgium																				
Harbour porpoise	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10-17[a]	-	-
Brazil																				
Bottlenose dolphin	-	-	-	-	-	-	-	-	-	-	0	0	2[ij]	-	-	-	-	6[n]	-	2[nw]
Franciscana	-	-	19[b]	-	-	-	-	60[e]	60[e]	-	-	-	101[im]	10[im]	-	-	-	61[o]	15[o]	2[p]
Marine tucuxi	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8[q]	40[q]	-
Tucuxi	-	-	4[c]	-	-	-	-	18[f]	18[f]	-	0	0	47[l]	50[i]	-	-	-	18[r]	-	-
Pantropical spotted dolphin	-	-	-	-	-	-	-	1[g]	1[g]	-	-	-	-	-	-	-	-	-	-	-
Rough-toothed dolphins	-	-	-	-	-	-	-	1[h]	1[h]	-	0	0	1[ik]	-	0	-	-	-	-	-
Striped dolphin	-	-	-	-	-	-	-	-	-	-	0	0	1[ik]	-	0	-	-	-	-	-
Inia geoffrensis	-	-	-	-	-	>50[d]	>50[d]	-	-	-	Ca.50[em]	>150[ai]	3[ai]	-	0	Ca. 35[s]	> 150[s]	4[t]	-	-
Clymene dolphin	-	-	-	-	-	-	-	1[g]	1[g]	-	0	0	6[gi]	-	0	-	-	1[u]	-	1[u]
Estuarine dolphin	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3[v]	-	-

Cont.

	2001					2002					2003					2004				
	Direct		Indirect		Live	Direct		Indirect		Live	Direct		Indirect		Live	Direct		Indirect		Live
Species	Rep.	Est. total	Rep.	Est. total	Rep.	Rep.	Est. total	Rep.	Est. total	Rep.	Rep.	Est. total	Rep.	Est. total	Rep.	Rep.	Est. total	Rep.	Est. total	Rep.
Canada																				
Narwhal	559[b]	-	-	-	-	-[a]	-	-	-	-	-[a]	-	-	-	-	-[a]	-	-	-	-
White whale	375[c]	-	-	-	-	-[a]	-	-	-	-	-[a]	-	-	-	-	-[a]	-	-	-	-
Denmark																				
Harbour porpoise	-	-	-	3,887[a]	-	-	-	-	-[b]	-	-	-	-	-[b]	-	-	-	-	-[b]	-
ETP																				
Bottlenose dolphin	-	-	-	1	-	-	-	-	10	-	-	-	-	4	-	-	-	-	-	-
Pantropical spotted dolphin	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northeastern[a]	-	-	-	592	-	-	-	-	442	-	-	-	-	290	-	-	-	-	252	-
Western-southern[a]	-	-	-	311	-	-	-	-	204	-	-	-	-	341	-	-	-	-	255	-
Coastal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Spinner dolphin (? stock)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Eastern[b]	-	-	-	469	-	-	-	-	405	-	-	-	-	289	-	-	-	-	220	-
Whitebelly[b]	-	-	-	372	-	-	-	-	186	-	-	-	-	171	-	-	-	-	214	-
Central	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-	7	-
Striped dolphin	-	-	-	3	-	-	-	-	2	-	-	-	-	11	-	-	-	-	5	-
Common dolphin (?sp.)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Northern	-	-	-	94	-	-	-	-	69	-	-	-	-	133	-	-	-	-	159	-
Central	-	-	-	203	-	-	-	-	155	-	-	-	-	140	-	-	-	-	100	-
Southern	-	-	-	46	-	-	-	-	4	-	-	-	-	99	-	-	-	-	222	-
Rough-toothed dolphin	-	-	-	-	-	-	-	-	5	-	-	-	-	-	-	-	-	-	1	-
Short fined pilot whales	-	-	-	-	-	-	-	-	1	-	-	-	-	2	-	-	-	-	-	-
Unspecified dolphins	-	-	-	40	-	-	-	-	29	-	-	-	-	22	-	-	-	-	34	-
Faroes																				
Long-finned pilot whale	918[a]	-	-	-	-	626[a]	-	-	-	-	503[a]	-	-	-	-	-[b]	-	-	-	-
Atlantic white-sided dolphin	546[a]	-	-	-	-	774[a]	-	-	-	-	186[a]	-	-	-	-	-[b]	-	-	-	-
Bottlenose dolphin	6[a]	-	-	-	-	18[a]	-	-	-	-	3[a]	-	-	-	-	-[b]	-	-	-	-
Northern bottlenose whale	2[a]	-	-	-	-	6[a]	-	-	-	-	-	-	-	-	-	-[b]	-	-	-	-
France[a]																				
Long-finned pilot whale	-	-	2[b]	-	-	-	-	2[i]	-	-	-	-	1[i]	-	-	-	-	1[i]	-	-
Bottlenose dolphin	-	-	10[c]	-	-	-	-	13[f]	-	-	-	-	13[l]	-	-	-	-	8[i]	-	-
Striped dolphin	-	-	15[d]	-	-	-	-	23[g]	-	-	-	-	21[m]	-	-	-	-	9[i]	-	-
Short beaked common dolphin	-	-	118[i]	-	-	-	-	207[i]	-	-	-	-	62[i]	-	-	-	-	94[i]	-	-
Harbour porpoise	-	-	12[i]	-	-	-	-	9[i]	-	-	-	-	16[i]	-	-	-	-	32[i]	-	-
Spotted dolphin	-	-	1[e]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tucuxi	-	-	-	-	-	-	-	1[k]	-	-	-	-	3[k]	-	-	-	-	1[k]		
Unidentified dolphin	-	-	15	-	-	-	-	18	-	-	-	-	8	-	-	-	-	3	-	-
Germany																				
Harbour porpoise	-	-	8[a]	8[a]	-	-	-	8[b]	8[b]	-	-	-	10[c]	10[c]	-	-	-	5[d]	-	-

Cont

	2001					2002					2003					2004				
	Direct		Indirect		Live	Direct		Indirect		Live	Direct		Indirect		Live	Direct		Indirect		Live
Species	Rep.	Est. total	Rep.	Est. total	Rep.	Rep.	Est. total	Rep.	Est. total	Rep.	Rep.	Est. total	Rep.	Est. total	Rep.	Rep.	Est. total	Rep.	Est. total	Rep.
Greenland																				
Narwhal	609[a]	-	-	-	-	488[a]	-	-	-	-	666[bc]	-	-	-	-	550[bd]	-	-	-	-
White whale	398[a]	-	-	-	-	399[a]	-	-	-	-	430[bc]	-	-	-	-	196[bd]	-	-	-	-
Harbour porpoise	1,946[a]	-	-	-	-	1,373[a]	-	-	-	-	2,320[bc]	-	-	-	-	2,238[bd]	-	-	-	-
Long-finned pilot whale	45[a]	-	-	-	-	24[a]	-	-	-	-	195[bc]	-	-	-	-	208[bd]	-	-	-	-
Killer whale	-	-	-	-	-	13[a]	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iceland																				
Harbour porpoise	-	-	128[b]	-	-	-	-	167[b]	-	-	-	-	-[a]	-	-	-	-	-[a]	-	-
White-beaked dolphin	-	-	4[b]	-	-	-	-	-	-	-	-	-	-[a]	-	-	-	-	-[a]	-	-
Unidentified	-	-	2[b]	-	-	-	-	3[b]	-	-	-	-	-[a]	-	-	-	-	-[a]	-	-
Ireland																				
Common dolphin	-	-	1[a]	-	-	-	-	16[c]	-	-	-	-	7[b]	-	-	-	-	5[d]	-	-
Harbour porpoise	-	-	1[a]	-	-	-	-	5[a]	-	-	-	-	-	-	-	-	-	1[ae]	-	-
Risso's dolphin	-	-	-	-	-	-	-	-	-	-	-	-	1[c]	-	-	-	-	-	-	-
Bottlenose dolphin	-	-	-	-	-	-	-	1[a]	-	-	-	-	-	-	-	-	-	-	-	-
Atlantic white-sided dolphin	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1[ae]	-	-
Italy																				
Striped dolphin	-	-	-	-	-	-	-	-	-	-	-	-	6[a]	-	-	-	-	-	-	-
Japan																				
Baird's beaked whale	62	-	-	-	-	62	-	1	-	-	62	-	-	-	-	-	-	-	-	-
False killer whale	26	-	-	-	11	7	-	-	-	-	16	-	-	-	5	-	-	-	-	-
Short-finned pilot whale[a]	389	-	-	-	2	176	-	5	-	-	160	-	-	-	-	-	-	-	-	-
Pacific white-sided dolphin	-	-	-	-	6	-	-	2	-	7	-	-	1	-	8	-	-	-	-	-
Bottlenose dolphin	247	-	-	-	12	729	-	-	-	72	164	-	1	-	16	-	-	-	-	-
Pantropical spotted dolphin	10	-	-	-	-	418	-	1	-	-	132	-	-	-	-	-	-	-	-	-
Striped dolphin	484	-	-	-	-	642	-	-	-	-	450	-	-	-	-	-	-	-	-	-
Risso's dolphin	474	-	1	-	3	386	-	1	-	1	373	-	-	-	6	-	-	-	-	-
Dall's porpoise	16,650	-	-	-	-	15,949	-	-	-	-	15,720	-	-	-	-	-	-	-	-	-
Finless porpoise	-	-	8	-	1	-	-	8	-	-	-	-	9	-	-	-	-	-	-	-
Harbour porpoise	-	-	1	-	-	-	-	2	-	3	-	-	-	-	-	-	-	-	-	-
Dwarf sperm whale	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Unidentified dolphin	-	-	1	-	-	-	-	1	-	-	-	-	1	-	-	-	-	-	-	-
Korea																				
Baird's beaked whale	-	-	1[b]	-	-	-	-	1[bk]	-	-	-	-	1[bc]	-	-	-	-	-	-	-
Pacific white-sided dolphin	-	-	41[bd]	-	-	-	-	53[bl]	-	-	-	-	18[bt]	-	-	-	-	20[bB]	-	-
Common dolphin		-	62[be]	-	-	3[b]	-	76[bm]	-	-	-	-	113[bu]	-	-	3[C]	-	89[D]	-	-
Risso's dolphin	-	-	25[bf]	-	-	-	-	2[bn]	-	-	-	-	2[v]	-	-	-	-	3[bE]	-	-
Harbour porpoise	-	-	87[bg]	-	-	-	-	34[bo]	-	-	-	-	104[bw]	-	-	-	-	22[bF]	-	-
Finless porpoise	-	-	107[h]	-	-	-	-	67[p]	-	-	-	-	132[x]	-	-	-	-	37[G]	-	-
Stejneger's beaked whale	-	-	-	-	-	-	-	2[bq]	-	-	-	-	2[by]	-	-	-	-	-	-	-
Killer whale	-	-	-	-	-	-	-	3[bc]	-	-	-	-	-	-	-	-	-	1[ab]	-	-
Bottlenose dolphin	-	-	3[bi]	-	-	-	-	4[br]	-	-	-	-	1[z]	-	-	-	-	4[H]	-	-
Dall's porpoise	-	-	2[bj]	-	-	-	-	1[ab]	-	-	-	-	-	-	-	-	-	1[bc]	-	-
Unidentified dolphin	-	-	-	-	-	-	-	4[bs]	-	-	-	-	7[bA]	-	-	-	-	1[ab]	-	-

Cont.

	2001					2002					2003					2004				
	Direct		Indirect		Live	Direct		Indirect		Live	Direct		Indirect		Live	Direct		Indirect		Live
Species	Rep.	Est. total	Rep.	Est. total	Rep.	Rep.	Est. total	Rep.	Est. total	Rep.	Rep.	Est. total	Rep.	Est. total	Rep.	Rep.	Est. total	Rep.	Est. total	Rep.
Mexico[a]																				
Vaquita																				
Gulf of California	-	-	2[b]	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bottlenose dolphin																				
Baja California Pacific	-	-	-	-	-	1[c]	-	1	-	-	-	-	-	-	-	-	-	-	-	-
Gulf of California	-	-	1	-	15	-	-	-	-	0	-	-	-	-	-	-	-	-	-	-
Gulf of Mexico	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Risso's dolphin	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Netherlands																				
Harbour porpoise	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100[a]	-	-	-
New Zealand																				
Long-finned pilot whale	-	-	-	-	-	-	-	1[d]	-	-	-	-	-	-	-	-	-	6[j]	-	-
Common dolphin (?sp.)	-	-	3[a]	-	-	-	-	2[c]	-	-	-	-	33[c]	-	-	-	-	23[k]	-	-
Hector's dolphin	-	-	13[b]	-	-	-	-	6[e]	-	-	-	-	+[h]	-	-	-	-	2[j]	-	-
Dusky dolphin	-	-	3[c]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Killer whale	-	-	-	-	-	-	-	1[f]	-	-	-	-	-	-	-	-	-	-	-	-
Maui's dolphin	-	-	-	-	-	-	-	2[g]	-	-	-	-	+[i]	-	-	-	-	-	-	-
Oman[a]																				
Indo-Pacific humpback dolphin	-	-	6	-	-	-	-	1	-	-	-	-	1	-	-	-	-	-	-	-
Bottlenose dolphin	-	-	8	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
Common dolphin	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Spinner dolphin	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dwarf sperm whale	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
False killer whale	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Unidentified dolphin	-	-	1	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
Peru																				
Dusky dolphin	-	-	2[a]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Long-beaked common dolphin	-	-	7[a]	-	-	-	-	161[c]	-	-	-	-	-	-	-	-	-	-	-	-
Common dolphin	-	-	-	-	-	-	-	1[c]	-	-	-	-	-	-	-	-	-	-	-	-
Bottlenose dolphin	-	-	1[a]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Burmeister's porpoise	-	-	14[a]	-	-	-	-	125[c]	-	-	-	-	-	-	-	-	-	-	-	-
Unidentified dolphins	-	-	-	-	-	-	-	17[d]	-	-	-	-	-	-	-	-	-	-	-	-
Unspecified species	-	-	12[ab]	-	-	-	-	70[c]	-	-	-	-	-	-	-	-	-	-	-	-
Russian Federation																				
White whale	7[a]	-	-	-	-	20[ab]	-	-	-	-	66[ac]	-	-	-	-	-	-	-	-	-
South Africa																				
Indian Ocean bottlenose dolphin	-	-	22	-	-	-	-	35	35	-	-	-	36[ab]	36[ab]	-	-	-	27[ab]	27[ab]	-
Long-beaked common dolphin	-	-	13	-	-	-	-	32	32	-	-	-	31[ab]	31[ab]	-	-	-	40[ab]	40[ab]	-
Indo-Pacific humpback dolphin	-	-	2	-	-	-	-	9	9	-	-	-	3[ab]	3[ab]	-	-	-	10[ab]	10[ab]	-
Unidentified dolphins	-	-	-	-	-	-	-	2	2	-	-	-	-	-	-	-	-	-	-	-

Cont.

	2001					2002					2003					2004				
	Direct		Indirect		Live	Direct		Indirect		Live	Direct		Indirect		Live	Direct		Indirect		Live
Species	Rep.	Est. total	Rep.	Est. total	Rep.	Rep.	Est. total	Rep.	Est. total	Rep.	Rep.	Est. total	Rep.	Est. total	Rep.	Rep.	Est. total	Rep.	Est. total	Rep.
Spain																				
Common dolphin (?sp.)	-	-	4	-	-	-	-	8[l]	-	-	-	-	80[p]	77[p]	-	-	-	45[t]	64[t]	-
Cuvier's beaked whale	-	-	-	-	-	-	-	10[gm]	-	-	-	-	-	-	-	-	-	2[bg]	-	-
Blainville's beaked whale	-	-	-	-	-	-	-	1[fg]	-	-	-	-	-	-	-	-	-	-	-	-
Gervais' beaked whale	-	-	-	-	-	-	-	1[fg]	-	-	-	-	-	-	-	-	-	-	-	-
Beaked whale	-	-	-	-	-	-	-	1[bh]	-	-	-	-	-	-	-	-	-	-	-	-
Harbour porpoise	-	-	1	-	-	-	-	-	-	-	-	-	5[iq]	-	-	-	-	3[u]	6[u]	-
Bottlenose dolphin	-	-	2	-	-	-	-	7[n]	-	-	-	-	3[r]	8[r]	-	-	-	3[v]	14[v]	-
Long-finned pilot whale	-	-	-	-	-	-	-	4[ah]	-	-	-	-	-	-	-	-	-	1[di]	-	-
Short-finned pilot whale	-	-	-	-	-	-	-	1[bg]	-	-	-	-	-	-	-	-	-	-	-	-
Atlantic spotted dolphin	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2[ag]	-	-
Striped dolphin	-	-	1	-	-	-	-	12[ah]	-	-	-	-	20[s]	53[s]	-	-	-	7[w]	58[w]	-
Pygmy sperm whale	-	-	1	-	-	-	-	1[bg]	-	-	-	-	-	-	-	-	-	1[bg]	-	-
White sided dolphin	-	-	1	-	-	-	-	-	-	-	-	-	1[dj]	-	-	-	-	-	-	-
Risso's dolphin	-	-	-	-	-	-	-	-	-	-	-	-	3[iy]	-	-	-	-	5[x]	1[x]	-
Dwarf sperm whale	-	-	-	-	-	-	-	1[ag]	-	-	-	-	-	-	-	-	-	-	-	-
Killer whale	-	-	-	-	-	-	-	1[o]	-	-	-	-	-	-	-	-	-	-	-	-
False killer whale	-	-	-	-	-	-	-	-	-	-	-	-	1[ek]	-	-	-	-	-	-	-
Unidentified dolphin	-	-	1	-	-	-	-	1[ah]	-	-	-	-	3[g]	52[g]	-	-	-	1[ah]	59[ah]	-
Sweden																				
Harbour porpoise	-	-	3[a]	-	-	-	-	3[b]	-	-	-	-	5[c]	-	-	-	-	1[d]	-	-
Tanzania, Zanzibar																				
Common bottlenose dolphin	-	-	-	-	-	-	-	1	-	-	-	-	1[a]	-	-	-	-	-	-	-
Indo-Pacific bottlenose dolphin	-	-	12	-	-	-	-	11	-	-	-	-	15[a]	-	-	-	-	6	-	-
Risso's dolphin	-	-	11	-	-	-	-	-	-	-	-	-	1[a]	-	-	-	-	1	-	-
Indo-Pacific humpback dolphin	-	-	5	-	-	-	-	1	-	-	-	-	4[a]	-	-	-	-	1	-	-
Spotted dolphin	-	-	4	-	-	-	-	-	-	-	-	-	2[a]	-	-	-	-	1	-	-
Spinner dolphin	-	-	18	-	-	-	-	-	-	-	-	-	10[a]	-	-	-	-	3	-	-
Turkey																				
Harbour porpoise	-	-	-	-	-	-	-	20	-	-	-	-	-	-	-	-	-	-	-	-
Unidentified dolphins	-	-	-	-	-	-	-	80	-	-	-	-	-	-	-	-	-	-	-	-
UK																				
Common dolphin (?sp.)	-	-	72[a]	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Shortbeaked common dolphin	-	-	-	-	-	-	-	37[b]	-	-	-	-	120[d]	-	-	-	-	217[f]	439(379-512)	-
Harbour porpoise	-	-	11	-	-	-	-	29[c]	-	-	-	-	22[e]	-	-	-	-	53[g]	-	-
Bottlenose dolphin	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1[h]	-	-
Striped dolphin	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Risso's dolphin	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1[i]		

Cont.

	2001					2002					2003					2004				
	Direct		Indirect		Live	Direct		Indirect		Live	Direct		Indirect		Live	Direct		Indirect		Live
Species	Rep.	Est. total	Rep.	Est. total	Rep.	Rep.	Est. total	Rep.	Est. total	Rep.	Rep.	Est. total	Rep.	Est. total	Rep.	Rep.	Est. total	Rep.	Est. total	Rep.
USA																				
White whale	463[a]	-	-	-	-	394[n]	-	-	-	-	271[x]	-	-	-	-	262[x]	-	-	-	-
Killer whale	-	-	2[b]	2[b]	-	-	-	1[p]	1[p]	-	-	-	-	-	-	-	-	-	-	-
Atlantic pilot whale	-	-	16[c]	94[c]	-	-	-	4[q]	54[q]	6[q]	-	-	-	-	-	-	-	-	-	-
(*Globicephala* sp.)																				
Pacific pilot whale	-	-	-	-	-	-	-	-	-	-	-	-	1[o]	5[o]	-	-	-	-	-	-
(*Globicephala macrorhynchus)*																				
Atlantic white-sided dolphin	-	-	3[d]	28[d]	-	-	-	2[r]	30[r]	-	-	-	-	-	-	-	-	-	-	-
Pacific white-sided dolphin	-	-	2[e]	6[e]	-	-	-	1[s]	5[m]	-	-	-	-	-	-	-	-	-	-	-
Atlantic bottlenose dolphin	-	-	-	-	-	-	-	4[t]	83[t]	-	-	-	-	-	-	-	-	-	-	-
Pacific short-beaked common dolphin	-	-	7[e]	22[e]	-	-	-	10[s]	49[m]	-	-	-	17[o]	84[o]	-	-	-	-	-	-
Pacific long-beaked common dolphin	-	-	-	-	-	-	-	3[s]	15[m]	-	-	-	-	-	-	-	-	-	-	-
Atlantic common dolphin (sp.)	-	-	2[f]	126[f]	-	-	-	1[u]	-	1[q]	-	-	-	-	-	-	-	-	-	-
Pacific common dolphin (sp.)	-	-	0[g]	3[g]	-	-	-	-	3[l]	-	-	-	-	-	-	-	-	-	-	-
Northern right whale dolphin	-	-	5[e]	9[e]	-	-	-	3[s]	15[m]	-	-	-	1[o]	5[o]	-	-	-	-	-	-
Atlantic Risso's dolphin	-	-	4[h]	26[h]	-	-	-	-	-	6[q]	-	-	-	-	-	-	-	-	-	-
Pacific Risso's dolphin	-	-	-	-	-	-	-	-	-	-	-	-	4[o]	20[o]	-	-	-	-	-	-
Atlantic harbour porpoise	-	-	5[i]	79[i]	-	-	-	10[v]	483[w]	-	-	-	-	-	-	-	-	-	-	-
Pacific harbour porpoise	-	-	1[j]	5[j]	-	-	-	-	16[l]	-	-	-	-	-	-	-	-	-	-	-
Dall's porpoise	-	-	2[k]	3[k]	-	-	-	1[p]	1[p]	-	-	-	-	-	-	-	-	-	-	-

Argentina: (a) Buenos Aires coast - gillnet; (b) figure composed as follows: 31 Tierra del Fuego - gillnet + 6 Santa Cruz; (c) Buenos Aires coast - gillnet-driftnet; (d) Buenos Aires coast; (e) Santa Cruz coast – gillnet.

Australia: In the following notes the estimated catch is given, followed by observed catch in brackets: (a) figure composed as follows: 1 (0) Sunshine Coast, Queensland + 2 (0) Gold Coast, Queensland + 1 (0) gillnet fishery, Gulf of Carpentaria, Queensland + 1 (0) Mackay, Queensland + 0 (2) probable entanglement SA coastline + 0 (1) euthanased, SA coastline + 1 (0) salmon farm net, Southern Australia; (b) figure composed as follows: 3 (0) Sunshine Coast, Queensland + 2 (0) Gold Coast, Queensland + 0 (2) SE Australia; (c) figure composed as follows: 0 (1) Sunshine Coast, Queensland + 0 (1) Cairns, Queensland; (d) Gulf of Carpentaria, Queensland; (e) SE Australia (NSW) - net entanglement; (f) figure composed as follows: 2 (2) QDPI SCP net, Gold Coast, Queensland + 5 (5) QDPI SCP net, Sunshine Coast, Queensland + 1 (?) entangled in salmonid farm net, SE TAS; (g) probable entanglement, SA coastline; (h) figure composed as follows: 1 (1) shark control net, Sydney, NSW + 6 (6) QDPI SCP net, Gold Coast, QLD + 4 (4) QDPI SCP net, Sunshine Coast, QLD + 2 (2) probable entanglement SA coastline + 2 (?) SE TAS; (i) figure composed as follows: 1 (1) NT PWC + 1 (1) QDPI SCP net, Mackay, QLD + 4 (4) QDPI SCP net, Sunshine Coast, QLD; (j) figure composed as follows: 1 Gold Coast, Queensland (Burleigh Heads) - June + 2 Gold Coast, Queensland (Surfers Paradise and Burleigh Heads) - October + 2 Gold Coast, Queensland (Currumbin) - December; (k) shark control program; (l) figure composed as follows: salmonid farm net: 2 Tasmania + shark control program: 3 Gold Coast, Queensland (Currunbin, Main beach and Burleigh Heads) - November + 2 Sunshine Coast, Queensland (Wurtulla) - March + 1 Sunshine Coast, Queensland (Marcoola) - September + shark control net: 1 Sunshine Coast + 2 Sydney; (m) Sunshine Coast, Queensland (Rainbow Beach) - September; (n) figure composed as follows: salmonid farm: 1 Tasmania + shark control program: 2 Sunshine Coast, Queensland - January + 1 Gold Coast, Queensland - April; (o) figure composed as follows: 3 SA coastline - propeller strike + 3 SA coastline; (p) SA - OU (probably boat strike); (q) East coast - ship strike; (r) figure composed as follows: 3 (3) Trawl OTW (40°S; 149°E) + 1 Boat strike, SEQLD, Fraser Island; (s) shot; (t) possible entanglement, possible propeller strike, SA; (u) figure composed as follows: 1 (1) Shark control net, NSW + 1 (1) fish farm net, TAS + 1 (1) washed up with tail flukes cut off, TAS + 2 (2) Shark safety program, QLD – Kirra, God Coast + 1 (1) Shark safety program, QLD- Bilinga, Gold Coast + 2 (2) Shark safety program, QLD – Tallebudgera, Gold Coast + 1 (1) Shark safety program, QLD – Main Beach, Gold Coast + 1 (1) Shark safety program, QLD – Currumbin, Gold Coast; (v) shark safety program, QLD – Rainbow Beach, Sunshine; (w) possible entanglement – SA; (x) figure composed as follows: 1 (1) Shark safety program, QLD – Surfers Paradise, Gold Coast + 1 (1) Shark safety program, QLD – Main Beach, Gold Coast; (y) figure composed as follows: 17 (17) mid water trawler Ellidi T253, TAS + 1 (1) shark safety program, QLD – Main Beach, Gold Coast + 1 (1) shark safety program, QLD – Mermaid Beach, Gold Coast.

Belgium: (a) Southern North Sea. Figures composed as follows: 7 caught in gillnets + 3-10 cause of death unknown.

Brazil: In the following notes the estimated catch is given, followed by the observed catch in brackets: (a) caught from Central Amazon; (b) figure composed as follows: 1 Northern Rio Grande do Sul, gillnets + 18 northern, gillnets; (c) northern; (d) central and high Amazon reports of more than 50 dolphins being caught during October/November to be used as bait to catch one species of catfish, to export to Colombia and Peru; (e) figure composed as follows: 39 from Rio Grande do Sul - gillnet + 12 from São Paulo - gillnet + 9 from Santa Catarina - gillnet; (f) figure composed as follows: 13 from Bahia + 5 from Ceará - trawl net (2); gillnet (3); (g) Bahia; (h) from Rio Grande do Norte - gillnet; (i) gillnet; (j) figure composed as follows: 1 from Bahia + 1 from São Paulo; (k) São Paulo; (l) figure composed as follows: 4 from Ceará unknown source + 1 from Ceará bottom gillnet + 1 sergipe gillnet + 5 from Espírito Santo gillnet + 4 from Espírito Santo and Bahia - gillnet + 16 from Bahia - gillnet + 10 from Rio de Janeiro - gillnet + 6 from São Paulo - gillnet; (m) figures composed as follows: 10 (2) Rio de Janeiro + (22) São Paulo + (77) Rio Grande do Sul; (n) Patos Lagoon; (o) figure composed as follows: (28) from Rio Grande do Sul/Franciscana Management Area III + (28) from Rio Grande do Sul + (2) from Southern Sao Paulo State + 15 (3) from W. S. Atlantic; (p) figure composed as follows: 1 killed by a fisherman with blows to the head in Southern Sao Paulo State + 1 from W. S. Atlantic; (q) W. S. Atlantic; (r) figure composed as follows: 15

from Bahia + 3 from Sergipe; (s) from Manaus to Fonte Boa – illegal catches using nets or harpoons for use as bait; (t) from Amazon River and Madeira River; (u) from Bahia; (v) from Southern Sao Paulo State; (w) free-swimming dolphins with net fragments entangled in their bodies.

Canada: (a) no information; (b) figure composed as follows: 451 High Arctic + 108 Hudson; (c) figure from Nunavut. Figures from Northwest Territories - Beaufort Sea were not available at the time of the report.

Denmark: (a) Vinther and Larsen (2002) - bycatch is overestimated, as the effect of the use of pingers has not been taken into account; (b) no information.

ETP: (a) includes prorated unidentified spotted and coastal spotted; (b) includes prorated unidentified spinner.

Faroes: (a) NAMMCO; (b) no information.

France: (a) the indirect catch includes those found stranded with marks indicating that they had been most probably caught in fishing gear. The compilation of data for 2004 is uncompleted at this date. Data are provided by the CRMM-La Rochelle, France; (b) figure composed as follows: 1 Atlantic/Channel (CRMM) + 1 Mediterranean (GECEM); (c) figure composed as follows: 9 Atlantic/Channel (CRMM) + 1 Mediterranean; (d) figure composed as follows: 9 Atlantic/Channel + 6 Mediterranean; (e) Caribbean; (f) figure composed as follows: 10 Atlantic/Channel (CRMM) + 3 Mediterranean (GECEM); (g) figure composed as follows: 16 Atlantic/Channel (CRMM) + 7 Mediterranean (GECEM); (i) Atlantic/Channel (CRMM); (j) Mediterranean (GECEM); (k) French Guyana; (l) figure composed as follows: 5 Atlantic/Channel (CRMM) + 8 Mediterranean (GECEM); (m) figure composed as follows: 5 Atlantic/Channel (CRMM) + 16 Mediterranean (GECEM).

Germany: (a) figure composed as follows: 5 from Schleswig-Holstein, Baltic Sea - gillnet + 3 from Mecklenburg-Prepommerania, Baltic Sea - gillnet; (b) figure composed as follows: 1 from North Sea + 4 from Schleswig-Holstein, Baltic Sea + 3 from Mecklenburg-Prepommerania, Baltic Sea - gillnet; (c) figure composed as follows: 7 from North Sea - observer + 1 from Schleswig-Holstein, Baltic Sea + 2 from Mecklenburg-Prepommerania, Baltic Sea – gillnet; (d) Figure composed as follows: 3 from North Sea + 2 from Mecklenburg-Prepommerania, Baltic Sea – gillnet.

Greenland: (a) NAMMCO; (b) from FAO; (c) the numbers from October to December are based on reports of 80% of the registered hunters; (d) the numbers for 2004 include catches from January to September only.

Iceland: (a) no information; (b) NAMMCO - reported from 15 of the 331 (4.5%) boats operating with sink nets.

Ireland: (a) bycatch determined from post-mortems; (b) figure composed as follows: 1 (BIM) + 1 drift nets + 5 diagnosed as bycatch during post-mortem examinations (UCC); (c) bycaught in a pelagic trawler; (d) figure composed as follows: 2 pair trawl (BIM) + 1 drift gillnet (UCC) + 1 stranded (diagnosed as bycatch during post-mortem) UCC; (e) UCC.

Italy: (a) caught in the Tyrrhenian Sea - gillnet.

Japan: (a) Northern and Southern forms; (b) figures obtained from the Japanese website *www.jfa.maff.go.jp/whale/document/2001progressreport.pdf* - table 9; (c) figures obtained from the Japanese website *www.jfa.maff.go.jp/whale/JapanProgrep.SM2003.pdf* table 9; (d) *www.jfa.maff.go.jp/whale/JapanProgrep.SM2004* (e) no information.

Korea: (a) drift gillnet; (b) East Sea; (c) gillnet, not specified; (d) figure composed as follows: 21 gillnet + 14 set net + 3 trap net + 3 unidentified; (e) figure composed as follows: 18 purse seine + 1 long line + 8 gillnet + 32 set net + 3 trap net; (f) figure composed as follows: 4 purse seine + 5 gillnet + 4 set net + 1 long line + 2 trap net + 9 unidentified; (g) figure composed as follows: 1 long line + 57 gillnet + 29 set net; (h) figures composed as follows: 5 gillnet + 2 set net – East Sea + 100 Yellow Sea not specified; (i) figures compose as follows: 1 gillnet + 1 set net + 1 trawl; (j) figures composed as follows: 1 gillnet + 1 set net; (k) drifted; (l) figure composed as follows: 2 long line + 6 driftnet + 11 gillnet + 31 set net + 1 trap net + 2 drifted; (m) figure composed as follows: 4 long line + 3 drift gillnet + 11 gillnet + 47 set net + 2 squid zigging + 2 drifted + 4 unidentified + 3; (n) figure composed as follows: 1 gillnet + 1 unidentified; (o) figure composed as follows: 8 drift gillnet + 8 gillnet + 14 set net + 4 drifted; (p) figure composed as follows: 1 South Sea - unidentified + 3 East Sea - gillnet + 1 East Sea - set net + 2 East Sea - drifted + 60 Yellow Sea - unidentified; (q) figure composed as follows: 1 gillnet + 1 drifted; (r) figure composed as follows: 2 trawl + 2 drifted; (s) figure composed as follows: 2 drift gillnet + 1 gillnet + 1 drifted; (t) figure composed as follows: 3 set net + 11 gillnet + 3 trap net + 1 drifted; (u) figure composed as follows: 59 set net + 29 gillnet + 14 trap net + 1 zigging + 3 drifted + 7 unidentified; (v) figure composed as follows: 1 East Sea unidentified + 1 South Sea gillnet; (w) figure composed as follows: 48 set net + 54 gillnet + 1 long line + 1 drifted; (x) figure composed as follows: 2 South Sea unidentified + 2 East Sea gillnet + 1 East Sea unidentified + 127 Yellow Sea unidentified; (y) figure composed as follows: 1 set net + 1 gillnet; (z) South Sea - unidentified; (A) figure composed as follows: 1 set net + 1 trap net + 1 drifted + 4 unidentified; (B) figure composed as follows: 1 boat seines + 6 drift gillnets + 8 gillnets, not specified + 3 stationary uncovered pound nets + 2 pots; (C) Korea Strait – stationary uncovered pounds nets; (D) figure composed as follows: Korea Strait - 1 stationary uncovered pound nets + East Sea 1 stationary uncovered pound nets + 1 boat seines + 2 longlines, not specified + 18 drift gillnets + 8 gillnets, not specified + 44 stationary uncovered pound nets + 14 pots + 1 other trawls, not specified; (E) figure composed as follows: 1 aquaculture rope + 1 drift gillnets + 1 unidentified; (F) figure composed as follows: 10 gillnets, not specified + 12 stationary uncovered pound nets; (G) figure composed as follows: Korea Strait, 2 stow nets + 1 longlines, not specified + 1 gillnets, not specified + East Sea, 3 drift gillnets + 2 gillnets, not specified + 2 stationary uncovered pound nets + Yellow Sea, 1 stow nets + 1 drift gillnets + 24 Yellow Sea - not specified; (H) figure composed as follows: 1 Korea Strait – drift gillnet + 2 Korea Strait – other trawls not specified + 1 East Sea – drift gillnet.

Mexico: (a) see the ETP table for catches taken in the Eastern Tropical Pacific - they are not included here; (b) gillnet; (c) illegal takes for shark bait.

Netherlands: (a) North Sea – gillnet.

New Zealand: (a) gillnet/trawl; (b) figure composed as follows: gillnet - 3 North Island, west coast + 6 South Island, west coast + 4 South Island, east coast; (c) trawl; (d) bottom long line; (e) figure composed as follows: gillnet – 3 South Island, west coast + 3 South Island, east coast; (f) long line - Bay of Plenty; (g) gillnet – North Island, west coast; (h) South Island – no reports received but bycatch is known to have occurred; (i) North Island, west coast - no reports received but bycatch is known to have occurred; (j) trawl, figures provided by D. Fairfax, DOC; (k) gillnet, figure provided by A. Hutt, DOC.

Oman: (a) there is no standardized observer or survey programme and number of records are directly related to beach survey effort, which was lower in 2002 than in 2001. Records are taken from the Oman Cetacean Database, maintained by the Oman Whale and Dolphin Research Group. Records all result from examination of carcasses encountered during beach or small boat survey showing clear evidence of fisheries interaction (rope or net on body, clear rope or net burns/scars, flensed carcasses).

Peru: Figures are a mixture of direct and incidental catches: (a) figures are taken from Van Waerebeek *et al.* (2002). All catches taken from Table 1 have been tabled as incidental because it is not clear which were direct and which were incidental; (b) mostly meat samples; (c) taken from Salverrry port - pers. comm. K. Van Waerebeek (Source: Peruvian Centre for Cetacean Research (CEPEC) and Asociacion ProDelphinus); (d) taken from San Jose between 14 January 2002 and 27 March 2002 - pers. comm. K. Van Waerebeek (Source: Peruvian Centre for Cetacean Research (CEPEC) and Asociacion ProDelphinus).

Russian Federation: (a) figures taken from FAO tables; (b) figure composed as follows: 15 Pacific, northwest + 5 Atlantic, northeast; (c) figure composed as follows: 39 Pacific, northwest + 27 Pacific, northeast.

South Africa: (a) KwaZulu-Natal; (b) shark nets.

Spain: In the following notes the estimated catch is given, followed by the observed catch in brackets. The numbers for 2000 have been updated according with the information given in Lens (2003). The numbers for 2002 have been updated according with the information given in Lens *et al.* (2004). (a) fishing interaction; (b) collision with ship; (c) gillnet; (d) trawl; (e) longline; (f) military manoeuvres; (g) Canary Islands; (h) South Spain; (i) Galicia (N Spain); (j) NE Atlantic; (k) Indian Ocean; (l) figure composed as follows: (36) Galicia (N Spain) – gillnet/trawl + 77 (6) Andalucia (S Spain) – fishing interaction + (1) Indian Ocean – longline; (m) figure composed as follows: (9) military manouvres + (1) collision with ship; (n) figure composed as follows: fishing interaction: (3) Canarias + (1) South Spain + (3) Baleares (E Spain); (o) N Spain – shot; (p) figure composed as follows: (36) Galicia (N Spain) – gillnet/trawl + (37) Galicia (N Spain) – diagnosed as captures by gears + 77 (6) Andalucia (S Spain) - fishing interaction + (1) Indian Ocean – longline; (q) figure composed as follows: 3 gillnet + 2 diagnosed as captures by gears; (r) figure composed as follows: fishing interactin: (1) Asturies + 8 (1) South Spain + (1) Valencia region (E Spain) + (2) diagnosed as captures by gears - Galicia (N Spain); (s) figure composed as follows:

fishing interaction: (1) Asturies + 53 (6) Malaga (S Spain) + (5) Catalonia (NE Spain) + (4) S Spain + (4) diagnosed as captures by gears – S Spain; (t) figures composed as follows: (37) gillnet (G) – Galicia (N Spain) + fishing interaction: 64 (7) S Spain + (1) Cataluña (NE Spain); (u) figures composed as follows: 6 (1) S Spain - fishing interaction + (2) Galicia (N Spain) – gillnet (G); (v) figures composed as follows: 14 (1) S Spain - fishing interaction + (2) Galicia (N Spain) – gillnet (G); (w) figures composed as follows: 58 (5) S Spain - fishing interaction + (2) Cataluña (NE Spain); (x) figures composed as follows: 1 (1) S Spain - fishing interaction + (3) Galicia (N Spain) – gillnet (G) + (1) Canary Islands – fishing interaction; (y) diagnosed as captures by gears.

Sweden: (a) figure composed as follows: 1 Baltic Sea - gillnet + 2 Swedish Skagerrak Sea (1 gillnet + 1 trawl); (b) figure composed as follows: 1 Baltic Sea - gillnet + 2 Skagerrak and Kattegat Seaa, and Öresund - fishing gear; (c) figure composed as follows: 1 Baltic Sea - vessel strike + 4 Skagerrak and Kattegat Seaa, and Öresund – gillnet; (d) Swedish Skagerrak Sea – gillnet.

Tanzania, Zanzibar: Data supplied by P. Berggren, Sweden. (a) Zanzibar - driftnet.

Turkey: Radu *et al.* (2003) - incidental catches by Turkish trawlers in the Romanian Exclusive Economic Zone.

UK: (a) pelagic trawling; (b) 29 UK - stranded /necropsy + 8 Channel - pair trawl fishery; (c) figure composed as follows: 24 UK - stranded/necropsy + 5 skate tangle net fishery, North Sea; (d) figure composed as follows: 25 stranded/necropsy + 95 observed bycatch; (e) figure composed as follows: 11 stranded/necropsy + 11 observed bycatch; (f) figure composed as follows: 32 UK – stranded/necropsy + 185 NE Atlantic, UK – bass pair trawl fishery; (g) figure composed as follows: 37 UK – stranded/necropsy + 11 North Sea, North Sea, UK - tangle nets + 5 Firth of Clyde, UK; (h) Galicia, NE Atlantic - fishery interaction; (i) UK - stranded/necropsy; (j) bass pair trawl fishery – estimate based on fishery observer records and preliminary assessment of total effort for the 2003-2004 season.

USA: The reported catch columns include catches reported by observer programs, from interviews with fishermen and incidental reports (e.g. stranded animals determined to have died in nets). There are no live captures to report. All information is taken from published USA National Marine Fisheries Service Annual Marine Mammal Stock Assessment Reports (SAR) unless otherwise indicated. U.S. Marine Mammal Stock Assessment Reports are available at the following website: *http://www.nmfs.noaa.gov/pr/PR2/Stock_Assessment_Program /sars.htm.* Stranded animals are not included. In the following notes the estimated catch is given, followed by observed catch in brackets: (a) figure includes 51 struck and lost - does not include figures for Cook Inlet; (b) Bering Sea, animals hit trawl vessel propellers; (c) figure composed as follows: 11(11) NW and Mid-Atlantic herring trawl and 29(1) NW and Mid-Atlantic pelagic long line + 54 (4) Atlantic pelagic long line; (d) figure composed as follows: 26(1) northeast sink gillnet and 2(2) herring trawl; (e) California swordfish/thresher shark drift gillnet fishery; (f) south New England *Loligo* squid trawl; (g) California halibut/angel shark set gillnet; (h) figure composed as follows: 26 (4) Atlantic pelagic long line; (i) figure composed as follows: 53(4) NE sink gillnet, 26(1) Mid-Atlantic coastal gillnet; (j) figure composed as follows: 2(1) Bering Sea trawl, 3(0) California halibut/angel shark set; (k) Bering Sea trawl; (l) Carretta and Chivers, 2003 - California set gillnet fishery; (m) Carretta and Chivers (2003) - California drift gillnet fishery; (n) figure includes 30 struck and lost - does not include figures for Cook Inlet; (o) Carretta and Chivers (2004) - preliminary estimates of marine mortality in California gillnet fisheries; (p) SC/57/ProgRepUSA: Bering Sea – trawl; (q) SC/57/ProgRepUSA: Atlantic – pelagic longline; (r) SC/57/ProgRepUSA: figure composed as follows: 30 (1) NW Atlantic – northeast sink gillnet + ? (1) North Atlantic bottom trawl; (s) SC/57/ProgRepUSA: CA - drift gillnet; (t) figure composed as follows: 69 (2) coastal stock – coastal gillnet + 7 (1) coastal stock – S. Atlantic shark gillnet + 7 (1) Atlantic – pelagic longline; (u) SC/57/ProgRepUSA: NW and mid-Atlantic – North Atlantic bottom trawl; (v) SC/57/ProgRepUSA: Gulf of Maine/Bay of Fundy and Mid Atlantic – northeast sink gillnet; (w) SC/57/ProgRepUSA: figure composed as follows: 444 Gulf of Maine/Bay of Fundy and Mid Atlantic – northeast sink gillnet + 39 (5 year average) Gulf of Maine/Bay of Fundy and Mid Atlantic – Mid-Atlantic coastal gillnet; (x) pers. comm. Robert Suydam - figures do not include any struck and lost.

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