



Convention on the Conservation of Migratory Species of Wild Animals

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OBSERVER'S REPORT ON THE 2008 MEETING OF THE IWC SCIENTIFIC COMMITTEE

(Submitted by William F. Perrin, Conference appointed Councillor for Aquatic Mammals)

Due to family illness, I was unable to attend the meeting in June in Santiago, Chile. Below is information abstracted from the Report of the Scientific Committee on the cetacean species currently designated by CMS for Concerted Action or Cooperative Action.

I. Concerted Action Species (Appendix I)

***Pontoporia blainvillei* (franciscana)**

1. The Committee reviewed information on the species in the Babitonga Bay estuary in Brazil. Differences between franciscanas inside and outside the estuary exist in feeding ecology, parasite prevalence and stable isotope signatures, indicating distinct populations. The estuarine population is subject to risks from harbor developments; a wildlife reserve has been proposed by the Brazilian government to mitigate the risks.

2. In northern Argentina, recent genetics research by an international team suggests the existence of at least two distinct populations within one Franciscana Management Area (FMA), both declining due to bycatch in gillnets. Genetic differences between Argentine populations and those in Brazil and Uruguay were also confirmed.

***Balaenoptera physalus* (fin whale)**

3. Iceland earlier declared intent to exploit fin whales in the North Atlantic. Implementation of the Revised Management Procedure (RMP) for North Atlantic fin whales continued, including review of the results of *implementation simulation trials* under seven hypotheses of stock structure. Six hypotheses were assigned high plausibility one hypothesis medium plausibility. A proposal was developed for research to reduce the number of plausible hypotheses. Still needed before application of the *catch limit algorithm* are catch histories and current estimated of abundance. It is assumed that the future commercial catches will come from the West Iceland sub-area. The Committee accepted a new estimate of abundance of fin whales off Greenland of 4,656 (confidence interval = 1,890-11.470) as adequate for purposes of assessment. Ten fin whales were landed and two struck and lost in 2007. Based on the estimate of abundance, it was agreed that a 5-year subsistence quota of 19 fin whales would be recommended to the Commission.

***Balaenoptera borealis* (sei whale)**

4. The Committee reviewed progress toward a proposal for an in-depth assessment of North Pacific sei whales preparatory to implementation of the RMS. Various tasks were assigned to individuals: work on catch history, stock structure, abundance and trends, and biological

parameters. Data from Japan's whaling under scientific permit are expected to be submitted at an upcoming review of their JARPN program. A decision on when to initiate the assessment will be made at the 2009 meeting.

***Physeter macrocephalus* (sperm whale)**

5. Not considered.

***Eubalaena australis* (southern right whale)**

6. New estimates of demographic parameters for South Australia were presented: mean calving interval 3.38 years, mean age at first calving 9.1 years, minimum age at attainment of sexual maturity in females 6 years. The number of whales recorded in aerial surveys in 2007 was 286, including 57 cow-calf pairs; total population is estimated at about 2400, with an annual rate of increase of about 8%.

7. In South Africa, 21 whales were tagged with satellite transmitters and most tracked to their feeding grounds offshore and to the south at the edge of the Antarctic Polar front.

8. In eastern South America, an increasing number of right whales have been recorded in the Golfo San Jorge in Patagonia; between 2004 and 2006, 122 whales were seen, including 10 calves. At Peninsula Valdez, efforts continue to determine the cause of a mass mortality in 2007 (60 calves and one adult); a harmful algal bloom (HAB) is suspected.

9. In western South America, the Chile-Peru stock is small and judged to be in critical danger (IUCN listing is Critically Endangered – CR) and threatened by potential habitat loss. The Committee received a report on its historical exploitation and emphasized the need for more data on distribution and collection of photos and tissue samples for individual identification and genetic analyses.

10. In summary, the species is doing well in most parts of its distribution but one or more populations are under threat. An intersessional group was appointed (headed by R. L. Brownell) to plan an assessment of southern right whale population and report to next year's meeting.

***Balaenoptera musculus* (blue whale)**

11. Assessment of southern-hemisphere blue whales continued. The Committee received the report of a workshop in Cape Town late last year that reviewed biology, identified a number of threats and recognized several priority topics for research. A number of reports were presented at this year's meeting.

12. A Bayesian analysis of catches, including data on ovarian corpus count vs. body length, yielded estimates of proportions of true blue and pygmy blue whales (two subspecies): 99.2% true blues south of 52° S latitude and 99.9% pygmy blues to the north between 35 and 180° E longitude. Another analysis, of genetic data, indicates that pygmy blue whales are differentiated between the southeast Pacific Ocean and the Indian Ocean.

13. The 2007/2008 JARPA (Japanese program under scientific permit in the Antarctic) cruise sighted 49 schools and collected biopsy samples and photo-identification data. A photo-identification study (over 21,000 photographs) of Antarctic blue whales yielded a minimum estimate of 311 whales, but a large number of photos from several portions of the range have not yet been accessed or analyzed. Pre-exploitation abundance is estimated to have been 256,000

(235,000-307,000), decreasing to 395 (235-804), only 0.0015 of the original size. Present abundance is estimated at 2,280, suggesting an annual rate of increase of 6.4% (2.4-8.4%). Based on likely vital parameters, a plausible estimate of mean annual growth rate for the species is 4.1%; the maximum upper bound is 8.5%.

14. Acoustic recordings suggest that the blue whales in Chile may belong to a separate population or subspecies; photo-identification research is underway to estimate abundance. So far, 250 individuals have been identified.

15. Analysis of ovarian data from whaling logbooks suggests that the pygmy blue whales in the northern Indian Ocean also belong to a separate population or subspecies. Growth in the 1960s is estimated to have been less than 2% per year.

16. An estimate of pygmy blue whales in Western Australia is 791 (CI = 569-1.147).

17. The assessment will continue next year.

***Megaptera novaeangliae* (humpback whale)**

18. New study of demographic parameters in humpbacks suggests that the upper limit of annual rate of increase may be 11%. Data from eastern Australia suggest about this rate of growth.

19. The Committee agreed that the appropriate management unit when formulating advice for subsistence takes by Greenland is the feeding aggregation off West Greenland that mixes with other feeding aggregations on the southern breeding grounds. A corrected 2007 estimate of abundance of 3,039 whales was accepted for purposes of assessment, as was an estimate of rate of increase of 9.2% per year. The Committee agreed that up to 10 whaling strikes per year would not harm the stock and gave this advice to the Commission. [However, the Commission voted the quota down after extensive debate.]

20. For humpback whales off St. Vincent and the Grenadines in the Caribbean, the Committee agreed that the block catch for 2008-2012 previously established by the Commission would not harm the stock.

21. For humpback whales in the southern hemisphere, the Committee reviewed new information for two breeding stocks: B off western Africa (with substocks B1 off Gabon and Angola and B2 off Namibia and South Africa, with each possibly containing more than one sub-region) and C off east Africa (with 4 substocks). New mtDNA data do not reveal maternal differentiation between breeding areas for B and C, nor between C and D to the east, but they did indicate differences between the putative feeding grounds for B to the south and the breeding grounds B1, C2 and C3 (but not for B1 and C1). These results suggest a complex pattern of mixing across the breeding and feeding grounds. This complexity is further supported by results of temporal analyses of DNA. There was agreement that the stock and substock boundaries need serious re-examination. Abundance estimates for B were similarly questioned and will be considered in depth next year. A Bayesian stock assessment model suggests that B1 is at 65—90% of its pre-exploitation size, but the Committee recommended that additional information on catches and stock structure should be included and additional alternative population dynamic models explored (including dispensation).

22. For breeding stock C on the eastern side of Africa, C2 and C3 were considered as a unit due to availability of only limited information on differentiation between the two. It was also agreed that more data are needed to adequately quantify the degree of mixing among C1, C2 and C3. For C3, abundance estimates ranging from 4,610 to 7,715 were presented, with 6,737 as the "best" estimate. It was agreed that further discussion and analyses would be required before adequate assessments could be carried out for the C substocks.

23. In Oceania, documented movements from photos suggests that the whales occurring in New Zealand, New Caledonia and Polynesian islands just to the east may be part of a small population discrete from that in eastern Australia. In mixed-stock analysis of whales in Antarctic feeding areas, those from Area IV were equally portioned to Western Australia and New Caledonia, those in VI mainly to Tonga, and those in I mainly to Colombia. The Committee agreed this work has promise and should be continued.

24. New evidence from photo-identification research off Oman supports the existence of a discrete population of humpbacks in the northern Indian Ocean (range states Yemen, Oman, Iran, Pakistan and India).

25. Abundance off eastern Australia (breeding stock E) is currently estimated at 9,683 (8,556-10,959). Assessments of this and stock F to the east are currently underway. For stock G, a new abundance estimate of 6,118 has led to an estimate of annual growth rate of 10% and current depletion level of 0.65 from original population size.

Comment

26. As for the southern right whale, trends in abundance suggest prospects are good for recovery of most southern hemisphere stocks of humpback whales, but some remain badly threatened (Oceania and northern Indian Ocean are classified by IUCN as Critically Endangered). Both species are now listed globally by IUCN as Least Concern (LC), and focus has shifted to the threatened subpopulations. CMS may wish to consider a parallel shift in attention.

27. For all of the great whales, implementation of the highly precautionary Revised Management Procedure in advance of determining quotas for sustainable consumptive use could be considered a concerted international conservation action and thus qualify as Concerted Action, as many of the parties to the IWC are also parties to CMS.

II. Cooperative Action species (Appendix II)

***Lagenorhynchus australis* (Peale's dolphin)**

28. The biology and conservation status of this species in the south-eastern Atlantic were reviewed, together with those of other Appendix II small cetaceans of the region: *L. australis*, *Phocoena spinipinnis*, *Cephalorhynchus commersonii*, and *C. eutropia*. There is little information on distribution and abundance of Peale's dolphin, and the Committee recommended that research increase to document populations, which may be small and disjunct. The species inhabits shallow inshore waters and is potentially threatened by increasing salmon and shellfish farming that encroaches on its habitat. It was taken for crab bait in the past, but this has not been reported recently. Increased mortality in fishing gear has been reported, but systematic data do not exist. These threats extend to the southern Atlantic waters of Argentina.

***Lagenorhynchus obscurus* (dusky dolphin)**

29. This species was documented formerly to be taken in large numbers as bycatch and directed catch in Peru. The directed catch and the utilization of bycatch have been banned but likely continue, making assessment of impact problematic.

***Phocoena spinipinnis* (Burmeister's porpoise)**

30. Burmeister's porpoise is subject to the same threats as the other inshore small cetaceans of the southeastern Pacific: mainly habitat encroachment by mariculture and bycatch in fisheries. It too has been heavily involved in the Peruvian bycatch and directed catch, and its assessment and conservation also suffer from the lack of information on distribution and abundance.

***Phocoena dioptrica* (spectacled porpoise)**

31. Not a species of the southeastern Pacific and not considered at this meeting. Some bycatch occurs in Argentine fisheries.

***Cephalorhynchus commersonii* (Commerson's dolphin)**

32. This dolphin occurs in waters at the tip of South America and up into the southwestern Atlantic and east to the Falkland Islands and the Kerguelen Islands. It was formerly taken for crab bait in South America and is subject to bycatch in Argentina. No new information was presented at this meeting.

***Cephalorhynchus eutropia* (Chilean dolphin)**

33. Restricted to the fjords and close-inshore waters of Chile, this species may be under the most threat in comparison with other small cetaceans of the region. Participants in the meeting expressed concern about its apparent rarity and lack of population information. It is listed by IUCN as Near Threatened (NT). Bycatch in nets has been reported from most areas where it is under study. Other threats include exclusion from critical habitat by salmon farming, port development, pollution and increased maritime traffic.

Note

34. The Committee recommended strongly that collaborative research projects in the southeastern Pacific region with on-going or planned regional programs consider the inclusion of small cetaceans as appropriate. It noted an upcoming CPPS meeting for the regional implementation of integrated coastal area management of IOC/UNESCO that has among its objectives to develop both national and regional data and information systems and indicator-based assessments as a backbone to prioritize issues in coastal management. This type of approach should incorporate small cetaceans and would probably require spatially explicit data on the presence, abundance and conservation of coastal species, data which are presently badly inadequate.

***Neophocaena phocaenoides* (finless porpoise),**

***Sousa chinensis* (Indo-Pacific humpback dolphin),**

***Tursiops aduncus* (Indo-Pacific bottlenose dolphin),**

***Stenella attenuata* (pantropical spotted dolphin),**

***Stenella longirostris* (spinner dolphin),**

***Lagenodelphis hosei* (Fraser's dolphin),**

***Orcaella brevirostris* (Irrawaddy dolphin)** - These species were listed in Appendix II due to concern about their conservation status in Southeast Asia. They were not considered at the 2008 meeting of the IWC Scientific Committee.