

MARINE MAMMALS AND BIRDS

STATUS AND TRENDS OF POPULATIONS

7.1 In response to a request from the Scientific Committee, the SCAR Group of Specialists on Seals and the SCAR Bird Biology Subcommittee had reported in 1988 on the abundance and trends of Antarctic pinniped and seabird populations (SC-CAMLR-VII/9 and SC-CAMLR-VII/12). The Scientific Committee had requested that SCAR continue to review available information and to update its report on status and trends every five years.

7.2 The relevant SCAR groups met in Bariloche, Argentina, from 8 to 12 June 1992, at which time their reports for CCAMLR were finalised.

7.3 In responding to the Scientific Committee's request, both SCAR groups had considered the most effective procedure for providing information on status and trends. Although the Secretariat had prepared and distributed standardised forms for reporting abundance data to CCAMLR, the SCAR scientists agreed that it would be difficult to enter in a database all of the relevant background information and judgements necessary to estimate population trends.

7.4 Because census data for some sites are incomplete, survey methods vary among sites, and assumptions or conditions peculiar to individual censuses directly affect the estimated populations, some of the descriptions of increasing or decreasing trends are based on professional judgements arising from combined technical expertise.

7.5 The Scientific Committee agreed with the view of the relevant SCAR groups that the Scientific Committee would be assisted most effectively in considering marine mammal and bird population trends by SCAR providing it with analyses, interpreted judgements, and summaries of available population data.

7.6 The Scientific Committee thanked the SCAR Group of Specialists on Seals and the SCAR Bird Biology Subcommittee for their assistance in providing the updated summaries of marine mammal and bird populations. Given the value of information synthesised in the reports from SCAR, it was agreed that both reports should be appended to the Scientific Committee's report (Annexes 9 and 10).

7.7 It requested that SCAR provide an update of available information for the Scientific Committee's review in 1997. Recognising that the reviews provided by SCAR in 1992 had been quite comprehensive, it was noted that because over the next five years sufficient additional data may

not become available on some populations, a full assessment for all species may not be possible. Therefore, it was agreed that SCAR through its Group of Specialists on Seals and the Bird Biology Subcommittee, be requested to provide, prior to the 1997 meeting of WG-CEMP, information on those species or populations for which there is evidence of change in population status.

PINNIPED POPULATIONS

7.8 The report from the SCAR Group of Specialists on Seals concerning the status and trend of pinniped populations was introduced by Dr Bengtson (Annex 10). Tables 2, 3, 4, and 5 of that report summarised the most recent population information for Antarctic pinnipeds.

7.9 Antarctic fur seal (*Arctocephalus gazella*) populations continue to increase in most areas. Fur seal abundance at South Georgia and in the South Shetland, Macquarie, Heard, and Marion Islands appears to be increasing, while the breeding population in the South Orkney Islands has been relatively stable since about 1973.

7.10 Sub-Antarctic fur seal (*A. tropicalis*) populations are increasing rapidly, and a small population appears to be establishing itself at Macquarie Island together with Antarctic fur seals and New Zealand fur seals (*A. forsteri*).

7.11 The status and trends of southern elephant seal (*Mirounga leonina*) populations had been reviewed in detail at the SCAR Southern Elephant Seal Workshop held in 1991 and sponsored by CCAMLR (SC-CAMLR-X/BG/3). It was noted that in response to some of the recommendations from that workshop, the Group of Specialists on Seals in 1992 established a coordinated study to estimate and monitor the weaning mass of pups. It was felt that this cooperative effort would facilitate comparing data from various localities within the three stocks of southern elephant seals.

7.12 In general, southern elephant seal populations are declining in the Indian and Pacific Ocean sectors of the Antarctic, while the status of the South Georgia stock is uncertain. This uncertainty is mainly due to the long period between censuses and their limited number. However, there is no indication that the South Georgia population has experienced either a large decline or a large increase in recent years.

7.13 Although declines in the numbers of southern elephant seals are continuing at some localities, on the basis of stocks in all regions, there is a suggestion that the decline is slowing.

7.14 In contrast to the land-breeding Antarctic pinnipeds, there are relatively few data available for estimating the size or trends of ice-breeding seal populations. Because the SCAR Group of Specialists on Seals felt that it was unable to make meaningful assessments of potential trends in population abundance based on these limited data, the importance of acquiring additional census data for the pack-ice seals was once again emphasised.

SCAR RESEARCH INITIATIVE ON SEALS IN THE ANTARCTIC SEA -ICE ZONE

7.15 Recognising the pressing need for obtaining more information about ice-breeding Antarctic seals, the SCAR Group of Specialists on Seals is developing an international program of research on pack-ice seals (SC-CAMLR-XI/13). The aim of such a project would be to carry out studies of the behaviour, abundance, and distribution of Antarctic pack-ice seals in relation to food and the pack-ice.

7.16 A planning workshop to develop a full description and plan of the program is provisionally scheduled for May or June, 1993.

7.17 The Scientific Committee welcomed the SCAR research initiative, and agreed that the information expected to be forthcoming from such an initiative would provide valuable information of relevance not only to CCAMLR's interest in the status and trends of Antarctic pinniped populations, but also to the work of WG-CEMP.

7.18 Therefore, the Scientific Committee agreed that the SCAR research initiative on ice seal research be supported. Specifically, the Scientific Committee recommended that the following steps be taken:

- (i) Members are encouraged to accord a high priority to having their scientists participate in the SCAR research initiative;
- (ii) Members are encouraged to allocate sufficient financial and logistic support to enable the ice seal initiative to succeed;
- (iii) Members are encouraged to provide funds for their relevant scientists to participate in the planning workshop to be held in 1993; and
- (iv) the Commission should be requested to provide financial assistance to SCAR to facilitate the 1993 planning workshop.

CETACEAN POPULATIONS

7.19 No additional information on the status and trends of Antarctic whales was considered by the Scientific Committee. It was noted, however, that the IWC Scientific Committee is undertaking a Comprehensive Assessment of baleen whales in the Southern Hemisphere, to be completed in 1993.

SEABIRD POPULATIONS

7.20 Dr Croxall introduced the report of the SCAR Bird Biology Subcommittee regarding the status and trends of Antarctic and sub-Antarctic seabirds (Annex 9). The main data reviewed by the Subcommittee are summarised in detail, by species and site or area, in Table 1 and Annex 3 of their report.

7.21 It was emphasised that most available population data, even from exactly the same site, derive from a few counts widely separated in time. Given the substantial natural fluctuations in most, if not all, seabird populations, "changes" indicated in the tabulations should not necessarily be interpreted as evidence of systematic population change. Furthermore some apparent population increases, especially relating to petrels, simply reflect improvements in census techniques.

7.22 For many species of Antarctic and sub-Antarctic seabirds, data are generally inadequate to make any accurate assessment of population trends at any site in the region. For most other species, adequate data exist for only one or two sites. Only commitments of continuous longterm studies will remedy this situation.

7.23 Of species for which adequate data exist for at least one site, most are currently fluctuating appreciably but without any discernable trend, or increasing slightly.

7.24 The king penguin is the only species for which significant population increases are currently taking place at most, if not all, breeding localities. These increases are likely to reflect changes in the species' biological environment, presumably involving their main prey, myctophid fish.

7.25 Adélie penguins have increased steadily in the Ross Sea since 1982. Populations are generally stable elsewhere including at sites where significant population increases occurred between the 1950s and 1970s.

7.26 Chinstrap, and possibly macaroni, penguins, which showed substantial local or regional population increases in the 1950s through 1970s are now stable or, at most, slightly increasing.

7.27 There is less evidence than previously that species are continuing to increase in numbers because of increased availability of refuse in the vicinity of stations. Treatment of human refuse, although much improved, still needs attention, especially when the potential main beneficiaries are predatory species whose population increases will be to the likely detriment of other birds.

7.28 The southern giant petrel and nearly all albatrosses for which adequate data are available are decreasing at most or all sub-Antarctic islands. The southern giant petrel has decreased significantly at all breeding sites on the Antarctic continent but the situation in the Antarctic Peninsula area is more complex. The declines are most likely related to incidental mortality associated with longline fisheries but better data, especially for grey-headed albatrosses and giant petrels, are urgently needed.

7.29 There is less evidence than previously that species are continuing to decrease because of human disturbance though better data are needed on populations in the vicinity of bases.

7.30 Burrowing seabirds at most sub-Antarctic islands continue to be seriously affected by introduced animals; the example of South Africa in probably having eradicated cats from Marion Island needs to be emulated as widely and as rapidly as possible.

7.31 There is still only circumstantial evidence that decreases in any seabird population can be attributed to decreases in food availability at sea. There is no evidence that any population decline reflects effects of commercial fishing except for those species referred to above in paragraph 7.28.

7.32 There is increasing evidence of the importance of the physical environment (e.g., ice, climate, oceanographic variables) in influencing reproductive performance and even population dynamics of Antarctic seabirds, especially species of high latitudes. It is crucial that all seabird monitoring studies should record physical variables as an integral part of the CEMP program.

7.33 Despite numerous examples of changes in abundance of seabird populations that correlate with previous or simultaneous changes in characteristics of the biological or physical environment, we have only a very poor knowledge of how such environmental factors operate and interact, or of how seabird populations are regulated. These remain vital fields for enhanced research.