

MARINE MAMMAL AND BIRD POPULATION ASSESSMENT

8.1 In fulfilling the provisions of Article II, there are two general categories within which marine mammal and bird issues may arise:

- (a) Ecosystem monitoring - which includes the evaluation of natural variation and the numerical and functional relationships between marine mammals, birds, and other components of the ecosystem of which they are a part; and
- (b) Population assessment - which includes characterisation, detection, and monitoring of trends in abundance in the populations themselves, especially those which are depleted, declining, or recovering.

8.2 The Scientific Committee has established a process for addressing selected marine mammal and bird issues within the context of its Ecosystem Monitoring Program. To accomplish the goals of this program, a small group of key 'indicator' species was identified for further study. This group includes crabeater seals, Antarctic fur seals, minke whales, adelié, chinstrap, macaroni, and royal penguins, Antarctic and cape petrels, and black-browed albatrosses. Within the context of the Ecosystem Monitoring Program, this limited group of species will be the focus of baseline characterisation studies, monitoring, and directed research efforts designed to detect and quantify changes in the behaviour, reproduction, growth and condition, and demography of these krill predators in relation to changes in their biological and physical environment.

8.3 Whereas most of the marine mammal and bird issues that are currently under discussion within the Scientific Committee relate to the Ecosystem Monitoring Program, it is clear that there are additional marine mammal and bird issues that require attention. Two examples of such issues that have recently been raised within the Scientific Committee are:

- a) The request to the IWC Scientific Committee for advice on the methods by which the recovery of depleted whale stocks (e.g., blue, fin, sei, and right whales) might best be assessed (SC-CAMLR-VI, paragraph 7.6); and
- b) The apparent decline in southern elephant seal populations in several areas of the Antarctic over the past several decades (SC-CAMLR-VI, paragraph 14.1).

8.4 These topics were raised peripherally within the Scientific Committee under 'ecosystem monitoring' and 'other business'. Although neither topic pertains directly to the

Ecosystem Monitoring Program, both are relevant to the Scientific Committee's consideration of issues bearing upon fulfilment of Article II. Therefore, a mechanism is needed outside the context of the Ecosystem Monitoring Program to facilitate discussion of the status of marine mammal and bird populations, particularly for depleted, declining, and recovering populations. The inclusion of a marine mammal and bird item on the Scientific Committee's agenda would provide an orderly forum in which to address such issues.

Population Status

8.5 The Chairman noted that several background papers dealing with the population status of marine mammals and birds had been tabled. These papers pertained to seabirds (SC-CAMLR-VI/BG/15 and SC-CAMLR-VI/BG/19), Antarctic fur seals (SC-CAMLR-VI/BG/14, SC-CAMLR-VI/BG/15, SC-CAMLR-VI/BG/18, and SC-CAMLR-VI/BG/42) and southern elephant seals (SC-CAMLR-VI/BG/28 and SC-CAMLR-VI/BG/36).

8.6 It was agreed that it would be useful for the Scientific Committee to periodically review the status of all marine mammal and bird populations in the Antarctic, with particular attention to identifying those species whose populations have experienced or are currently experiencing a significant change in abundance. It was agreed that Dr Chittleborough (Australia) should consult with appropriate specialists, particularly the SCAR Group of Specialists on Seals, the Subcommittee on Bird Ecology, and the International Whaling Commission, to produce a list of such species during the intersessional period.

8.7 It was agreed that a comprehensive evaluation and revision of the list described above should be undertaken by the Scientific Committee approximately every 3–5 years. During the interim periods, issues regarding populations of particular concern may be raised under this agenda item.

8.8 Mr D. Miller (South Africa) noted that southern elephant seal populations on Marion and Prince Edward Islands (SC-CAMLR-VI/BG/28), as well as Kerguelen, Possession, and Heard Islands have experienced a clear decline in abundance over the past 12–15 years. It is as yet not known what is causing this decline. Possibilities include inter- or intra-specific competition, interactions with fisheries, habitat changes, or altered movement patterns of the seals. Data on elephant seals during their marine phase should be emphasised as an important research topic.

8.9 Dr J.-C. Hureau (France) noted that the Scientific Committee should be concerned about the declining population of southern elephant seals at Kerguelen Province. It would be desirable to pursue multi-national co-operative research efforts to investigate the reasons for the elephant seal decline. France and South Africa are currently undertaking joint work on this problem.

8.10 Dr R. Chittleborough (Australia) stated that Australian research has shown that southern elephant seal populations are declining at Heard and Macquarie Islands. Ongoing research on this topic will be carried out at Heard Island in 1987/88 and at Macquarie Island in 1988/89.

8.11 The Chairman reported that whereas elephant seal populations were apparently declining in other sectors of the Antarctic, recent surveys at South Georgia indicate a population level similar to the abundance at that island in the 1950's.

8.12 Dr D. Vergani (Argentina) summarised his paper (SC-CAMLR-VI/BG/36) regarding southern elephant Seal abundance at Patagonian and Antarctic research sites. The decline of seals in 1982 and subsequent recovery is thought to have been related to possible El Niño effects that may have produced changes in seal migration patterns. He stressed the importance of attempting to interpret changes in abundance in relation to potential changes in habitat or interactions with fisheries.

8.13 Dr T. Lubimova (USSR) noted that one must exercise caution in inferring causal relationships between elephant seals, the marine environment, and fisheries. The changes identified in Dr Vergani's work had mainly occurred outside the Antarctic.

8.14 Regarding Antarctic fur seals, it was noted that although this species has recovered dramatically from previous commercial exploitation in the South Georgia area, recovery in other areas has been slower. Dr J.L. Bengtson (USA) stated that a recent survey in the South Shetland Islands (SC-CAMLR-VI/BG/18) indicated that although the breeding fur seal population in that area is still below pre-exploitation levels, it is continuing to recover and rookeries are being re-established at some sites.

8.15 Dr J. Croxall (UK) described the status of declining wandering albatross populations throughout the Antarctic. Studies by France in the Indian Ocean, Australia at Macquarie Island, and the United Kingdom at South Georgia indicate a 1–2% annual population decline over the past 20–30 years.