

ASSESSMENT OF INCIDENTAL MORTALITY

INCIDENTAL MORTALITY IN LONGLINE FISHERIES

8.1 The problem of seabird mortality associated with the longline fishery for *D. eleginoides* had been discussed in detail at the previous two meetings of the Scientific Committee (SC-CAMLR-IX, paragraphs 7.3 to 7.14; SC-CAMLR-X, paragraphs 8.1 to 8.26).

8.2 These discussions led to the Commission adopting Conservation Measures 26/IX and 29/X, which pertained, respectively, to reporting of seabird entanglement and mortality and the implementation of procedures to minimise incidental seabird mortality.

8.3 WG-FSA had reviewed the extent to which the actions specified in Conservation Measure 29/X had been effective (Annex 5, paragraphs 7.20 and 7.21). The deployment of a tori pole apparently had been effective in minimising incidental mortality of birds during Russian longline fishing operations during the past year (CCAMLR-XI/BG/5).

8.4 However, WG-FSA noted that there had apparently been some mis-interpretation of Conservation Measure 29/X (Annex 5, paragraph 7.21). Certain fishing operators had interpreted this measure to mean that a streamer line is not required if longlines were set at night. The Working Group emphasised that streamer lines should be deployed during all daylight operations, including “nautical twilight”. If this definition is used, “daylight” conditions would be present for 20 hours or more in many of the areas where longline operations are undertaken in the Convention Area.

8.5 Accordingly, the Scientific Committee recommended that the Commission consider redrafting Conservation Measure 29/X so that the use of streamer lines is requested in all deployments of longlines regardless of whether these are during daylight or darkness.

8.6 Dr T. Øritsland (Norway) noted that there have been successful experiments on reducing the incidental mortality of seabirds in association with longline fisheries in the North Atlantic Ocean. A report on reducing bait loss had been previously submitted to ICES, and will be made available to CCAMLR. A second report specifically focussed on reducing the incidental catch of seabirds will be brought forward and tabled at the 1993 meeting of WG-FSA.

8.7 The Scientific Committee agreed that it should take appropriate steps to ensure that it has access to as much relevant information as possible on this topic. In particular, papers describing the experience of longline fisheries and the results of research investigations by New Zealand and

Australia, as well as those in the North Atlantic, should be brought forward for consideration by the Scientific Committee and its Working Groups.

8.8 The Scientific Committee therefore requested that:

- (i) the Secretariat write to relevant sources of information requesting that this information be made available to CCAMLR; and
- (ii) Members bring forward information on this topic for review at next year's meetings of the Scientific Committee and Working Groups.

8.9 Dr Robertson noted that New Zealand intended to submit a document for the Scientific Committee's consideration in 1993 which described the successful use of tori poles in the New Zealand longline fishery. Deployment of tori poles decreased the overall incidental mortality of seabirds; when night-time sets were utilised, incidental mortality decreased even further.

8.10 The Scientific Committee reviewed the information available on incidental seabird mortality from longline fisheries operating within the Convention Area during the 1991/92 fishing season.

8.11 A report concerning the Chilean fishery (SC-CAMLR-XI/BG/3) indicated that one black-browed albatross was taken during the 1991/92 fishing season. Apparently tori poles, streamers or other apparatus to discourage birds from diving on baits were not deployed in fishing operations.

8.12 Russian longline fishing operations employed a variety of methods to minimise incidental mortality (SC-CAMLR-XI/BG/17). Research was also conducted to investigate ways to minimise lure attraction for birds and to determine effective methods for reducing incidental mortality. Squid was found to be a bait that was less attractive to birds than fish. The most effective method found for deterring birds from diving on baits was towing a brightly-coloured buoy behind the fishing vessel on a 200 m line.

8.13 A report from the United States (CCAMLR-XI/BG/7) described observations of four cases of giant fulmars (*Macronectes giganteus*) entangled in longline hooks and nylon line. This is the first time that this type of entanglement had been reported in the Palmer Station area, and suggests that a longline fishery is now operating within the foraging range of this population. For example, it was noted that longline fishing operations had, in 1991, moved from Chilean coastal areas to pelagic zones in the southeast Pacific Ocean (but outside of the Convention Area).

8.14 Dr Croxall noted that a small number of albatrosses of several species with longline hooks impaled in their beaks had been observed annually at Bird Island, South Georgia. Examination of these hooks revealed that they are of the type used in *D. eleginoides* longline fisheries.

8.15 An attempted inspection of a Russian longlining vessel (CCAMLR-XI/BG/5) resulted in no evidence that birds were being killed during fishing operations. A device (referred to as a “shori” or “blinker”) to deter birds from taking baits had been deployed and appeared to be effective. The shori devices had been used as an alternative to tori poles or streamers because the Russian fishing captains had felt that the latter posed a risk to safe navigation.

8.16 The Scientific Committee welcomed the report on the Russian research on minimising incidental mortality in longline fishing. It was recalled that this report had been submitted in response to a request from the Scientific Committee at its 1991 meeting (SC-CAMLR-X, paragraphs 8.10 to 8.13). The Scientific Committee noted that it looked forward to receiving a more detailed written report on the studies described in paragraph 8.15 at its next meeting.

8.17 Dr Duhamel provided an update of his 1991 report on incidental mortality (SC-CAMLR-X, paragraphs 8.4 to 8.6). Although recommended measures for reducing incidental mortality have been implemented around Kerguelen, data had not yet been received on the effectiveness of these measures. It was expected that this information would be forthcoming and reported to the Scientific Committee in 1993.

8.18 The Scientific Committee noted the evidence presented, that the use of tori poles can be very effective in reducing incidental bird mortality in longline fisheries. However, because albatrosses range very widely (including to areas outside of the Convention Area), steps should be taken to ensure an effective liaison and information exchange between CCAMLR with nations and international organisations that are active outside of the Convention Area.

8.19 It was noted that there is a major international campaign underway to reduce seabird mortality from longline fisheries. The Scientific Committee agreed that it would be desirable for CCAMLR to provide relevant organisations interested in this issue with information arising from CCAMLR’s efforts within the Convention Area.

8.20 The Scientific Committee encouraged Members to advise their scientists to be on the lookout for birds that may have been entangled in line or hooks from longline fisheries. Such occurrences may go generally unnoticed unless a special effort is made to watch for such evidence.

Advice to the Commission

8.21 The Scientific Committee recommended that the Commission consider redrafting Conservation Measure 29/X so that the use of streamer lines is requested in all deployments of longlines regardless of whether these are during daylight or darkness.

8.22 At its 1991 meeting, the Commission noted that the adoption of Conservation Measure 29/X was only one of two options identified by the Scientific Committee that could be effective in minimising incidental mortality in the longline fishery (SC-CAMLR-X, paragraph 8.26). The Commission had requested that the Scientific Committee be prepared to investigate further the other option of restricting the operation of the fishery through some combination of catch and/or effort limitation should the need arise (CCAMLR-X, paragraph 5.9).

8.23 Over the past several years, the situation concerning incidental mortality of seabirds in longline fisheries has improved substantially, due in large part to the conservation measures adopted by the Commission. Reports on this topic have been received from some Members, and additional reports are expected to be tabled for the Scientific Committee's consideration in the future. In particular, reports from the major longlining countries concerning the current status of incidental mortality are expected to provide valuable information.

8.24 The Scientific Committee agreed, however, that if the anticipated reports are not forthcoming as expected, it may be desirable to recommend that the Commission consider adopting additional measures that would allow an effective assessment of incidental mortality and further actions that might be needed to minimise such mortality.

8.25 Steps should be taken to ensure an effective liaison between CCAMLR and nations and international organisations that are active outside the Convention Area, to alert these parties to the incidental mortality of albatrosses from longline operations.

INCIDENTAL MORTALITY IN TRAWL FISHERIES

8.26 At its previous two meetings, the Scientific Committee had discussed the incidental catch of seabirds in trawl fisheries using net monitor cables (SC-CAMLR-X, paragraphs 8.27 to 8.34). In 1991 the Commission adopted Conservation Measure 30/X, which prohibited the use of net monitor cables in the Convention Area starting with the 1994/95 fishing season.

8.27 No reports on the use of net monitor cables in the trawl fishery during 1991/92 had been received by the Secretariat. It was understood that Members have already started to discontinue the use of these devices in the Convention Area.

8.28 Reports from Japan (SC-CAMLR-XI/BG11) and Korea (SC-CAMLR-XI/BG/15) stated that no incidental mortality had been observed in these Members' trawl fisheries during the 1991/92 fishing season.

8.29 Dr Ahn noted that Korea has been conducting studies on reducing incidental mortality in trawl fisheries, and that there were plans to extend these studies into the Convention Area in the future through the use of scientific observers. The Scientific Committee welcomed the plans of Korea to undertake these investigations.

MARINE DEBRIS

8.30 Members' reports on the assessment and avoidance of incidental mortality and impacts of marine debris on biota in the Convention Area had been received from Australia (CCAMLR-XI/BG/8), Chile (SC-CAMLR-XI/BG/7), Japan (CCAMLR-XI/BG/11), Korea (CCAMLR-XI/BG/15), United Kingdom (CCAMLR-XI/BG/14 and SC-CAMLR-XI/BG/9), and the United States (CCAMLR-XI/BG/7).

8.31 Dr Moreno introduced a paper describing the types and quantities of marine debris present on the beaches of Cape Shirreff, Livingston Island (SC-CAMLR-XI/BG/7). Antarctic fur seals at this site have been observed entangled in plastic packing bands, and man-made debris has been found in the nests of Dominican gulls (*Larus dominicanus*) and chinstrap penguins (*Pygoscelis antarctica*).

8.32 Results of on-going surveys of the incidence of Antarctic fur seals entangled in man-made marine debris at Bird Island, South Georgia, were summarised by Dr Croxall (SC-CAMLR-XI/BG/9). Over the past two years, the incidence of fur seal entanglement in marine debris has declined. The types of entangling debris most commonly observed (polypropylene packing straps and fishing net fragments) has remained unchanged. There are plans to continue these surveys annually.

8.33 Dr Bengtson noted that annual surveys of Antarctic fur seals at Seal Island, South Shetland Islands, continue to reveal individuals entangled in marine debris (SC-CAMLR-XI/BG/7). During the 1991/92 austral summer, four fur seals entangled or previously entangled in marine debris were observed at Seal Island. This number is similar to the number of entangled fur seals observed in the previous several seasons.

8.34 Dr K. Kerry (Australia) reported that no sightings of Antarctic wildlife entangled in marine debris had been reported by Australian scientists for the 1991/92 austral summer (CCAMLR-XI/BG/8). He noted, however, that a survey of Antarctic fur seals on Heard Island will be carried out during 1992/93 and that any observed entanglements will be reported to CCAMLR.

8.35 Mr M. Donoghue (New Zealand) drew the attention of the Scientific Committee to a newly developed bait box that does not use plastic packing bands. The 'BIO bait box' is designed to disintegrate harmlessly if discarded or lost at sea, thereby reducing the amount of persistent plastics that are added to the ocean. Information on the specifications and benefits of this product was made available to the Scientific Committee.