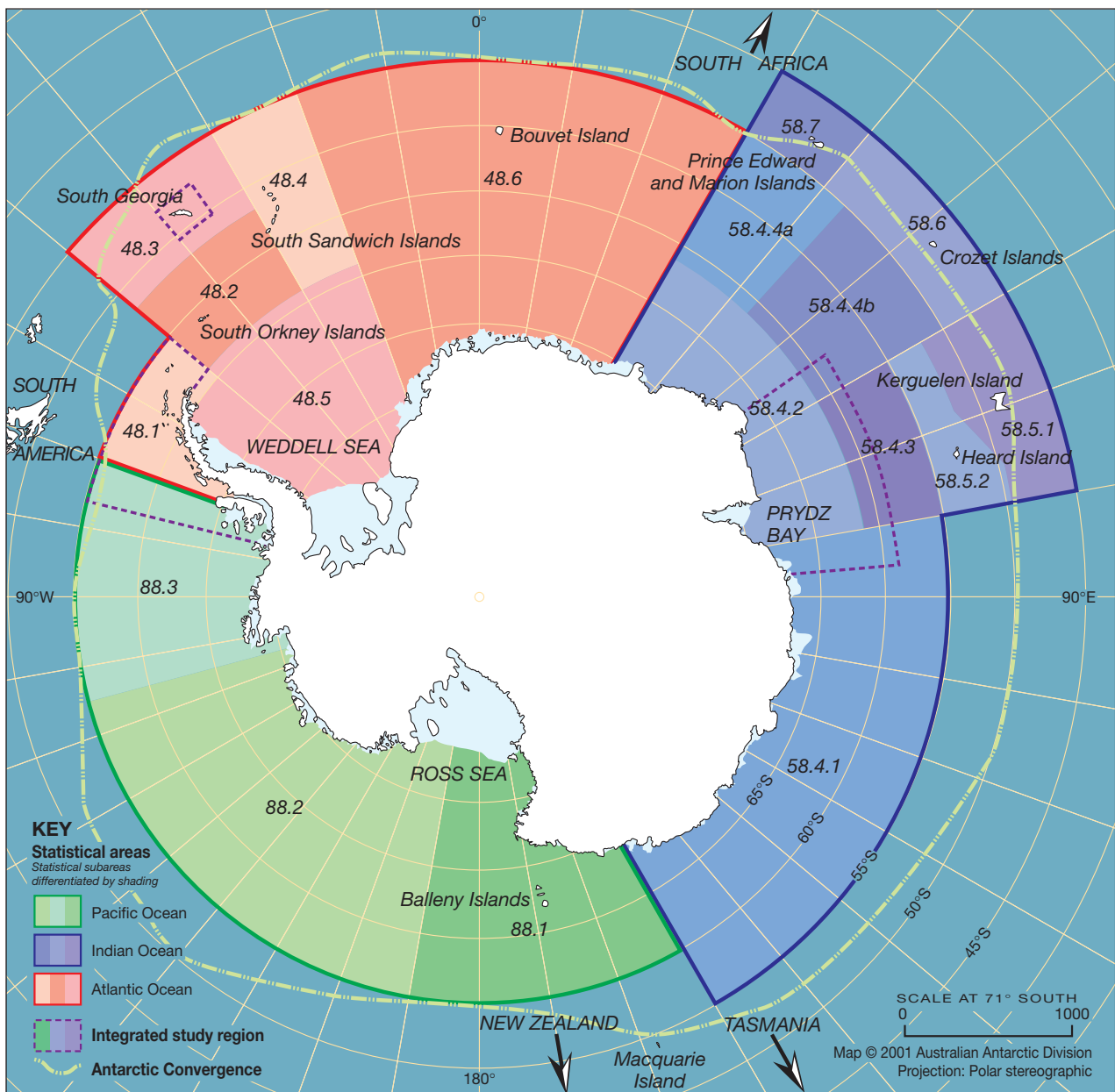
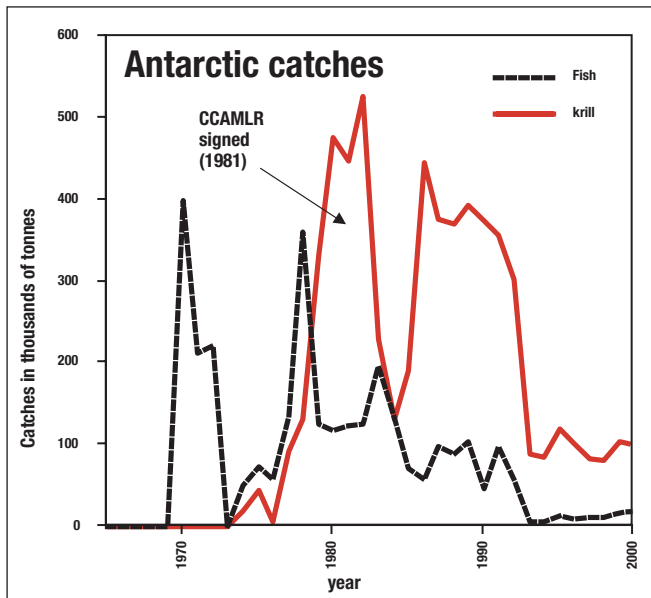


CCAMLR: the first twenty years



THE COMMISSION FOR THE CONSERVATION OF ANTARCTIC Marine Living Resources (CCAMLR) has met annually since 1982 and is tasked with implementing the Convention on the Conservation of Antarctic Marine Living Resources; the agreement which was designed to conserve fish, squid, krill and other living resources in the Southern Ocean. Over the last 20 years CCAMLR has passed through a number of phases as the Commission and its Scientific Committee have come to terms with different concepts and developments. In the initial years, 1982 to 1990, the Commission was very much finding its feet, developing procedures to manage the fisheries of the region and coping with a number of fisheries which had been seriously depleted before the Convention was signed. In the late 1980s and early

1990s there was a flurry of activity as the Commission came to terms with a management approach to its largest fishery—that for Antarctic krill. Since the middle 1990s there has been an increasing focus on developing mechanisms for managing harvesting of Patagonian toothfish, including dealing with illegal, unregulated and unreported fishing. As the 21st century began, with most of the region's fisheries operating under at least one CCAMLR Conservation Measure, there is a renewed focus on krill and on the ecosystem approach to management. Underlying these changes have been political and economic undercurrents such as the demise of the Soviet Union, once the region's largest fishing nation; the depletion of many of the rest of the world's largest fish stocks and the consequent oversupply of



deep sea fishing vessels; and the massive growth in aquaculture, which may underpin the next wave of Antarctic exploitation as new sources of fish feed are sought. Antarctica may be the most isolated continent but the fisheries of the region are driven by forces external to the region.

The Convention arose out of two major concerns. Firstly at the time of negotiation the krill fishery was expanding and was seen as a potentially very large fishery. There was a concern amongst the negotiating parties that pre-emptive management could avoid the pattern of overexploitation which had characterised seal, whale and fish exploitation in the Antarctic. There was also major concern that since krill was a key animal in the Antarctic, harvesting of krill should proceed in such a way so as not to adversely affect the ecosystems dependent on it, and in particular should not hinder the recovery of baleen whales. Secondly, some of the fish species of the Antarctic region were or had already been exploited heavily, and since these were unprotected by any fishing regulations, some mechanism was necessary to ensure

that further harvesting of fish proceeded in a rational fashion. CCAMLR broke new ground in its espousal of an ecosystem approach to management, which is enshrined in Article 2 of the Convention.

This was one of the first formalisations of the principles of what has become known as Ecological Sustainable Development (ESD). The effects of the fisheries on species other than those targeted have to be taken into account. Much of the recent work of CCAMLR has been driven by this imperative rather than by the more mundane setting of isolated allowable catches as has been the case in most other fisheries. The focus on the krill fishery has resulted from fears about the effects that a large harvest might have on krill predators rather than on the krill stocks themselves. In the case of the illegal fishing for Patagonian toothfish, in addition to concerns about depletion of the species, a major concern of CCAMLR has been the huge bycatch of endangered albatrosses on the long-lines of the illegal fishers. CCAMLR has had to develop a number of new methods and procedures to come to grips with the requirements of Article 2 and in doing so has put itself at the forefront of marine resource management.

Currently the fisheries in the Convention area are at fairly low levels. Around 20,000 tonnes of fish and around 100,000 tonnes of krill are legally caught each year. Some squid and crabs are also caught. It seems unlikely that the fish catch is going to increase markedly because stocks are relatively small and most stocks are either being exploited or are recovering from earlier exploitation. Squid may be a resource of the future but there is considerable uncertainty about the size of the stocks. Antarctic krill remains the largest exploitable stock and its exploitation also poses the greatest threat to the ecosystem. The current precautionary catch limit on krill is just over 5 million tonnes per year and this is calculated as a sustainable catch that takes into account the needs of the myriad vertebrates that feed on krill. It is likely that the krill fishery will expand in the near future to provide feed for a globally burgeoning aquaculture industry. A challenge for CCAMLR in the future will be to ensure that this huge potential catch is distributed in a way that does not adversely affect the populations of land-based krill feeding seals and seabirds. Managing large fisheries in international waters is fraught with difficulties and given the mandate of CCAMLR to use an ecosystem approach this makes the task difficult, both administratively and scientifically. The first 20 years of CCAMLR has provided a good foundation for the work that lies ahead but the task that was designed into the Convention will provide many diplomatic, administrative, scientific and practical problems for the years that lie ahead.

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Article II.

1. The objective of this Convention is the conservation of Antarctic marine living resources.

2. For the purposes of this Convention, the term "conservation" includes rational use.

3. Any harvesting and associated activities in the area to which this Convention applies shall be conducted in accordance with the provisions of this Convention and with the following principles of conservation:

(a) prevention of decrease in the size of any harvested population to levels below those which ensure its stable recruitment. For this purpose its size should not be allowed to fall below a level close to that which ensures the greatest net annual increment;

(b) maintenance of the ecological relationships between harvested, dependent and related populations of Antarctic marine living resources and the restoration of depleted populations to the levels defined in sub-paragraph (a) above; and

(c) prevention of changes or minimisation of the risk of changes in the marine ecosystem which are not potentially reversible over two or three decades, taking into account the state of available knowledge of the direct and indirect impact of harvesting, the effect of introduction of alien species, the effects of associated activities on the marine ecosystem and the effects of environmental changes, with the aim of making possible the sustained conservation of Antarctic marine resources.