WHAT CCAMLR COULD DO

Over-exploitation of finfish at the current levels of fishing effort and increasing effort in the krill fishery makes it necessary to introduce controls on both as a matter of urgency. This is imperative as experience shows new fisheries are inevitably developed beyond the capacity of the fish stocks to cope. Too much fishing effort leads to over-capitalisation of the resource, decline in profitability and depletion of stocks. Decline in finfish stocks can be restored by standard, widely used control techniques with little threat to the long term stability of the Antarctic ecosystem. The depletion of krill, however, would be a much more serious problem. The key role of krill in Antarctic food chains means that collapse of the krill population could lead to ecological disaster throughout the Southern Ocean and Antarctica with little hope for amelioration using standard fisheries control techniques.

CONTROL OPTIONS

Set out below are some of the common fishery control techniques in use today. ECO reviews the suitability of these techniques for the Antarctic:

Mesh Size Control: Although most commercially exploited Antarctic fish species seem to congregate in cohorts of approximately equal size, there are some benthic concentrations which are mixed species and mixed age/size. It is not yet possible to detect the difference between even-sized and mixed-sized schools. ECO therefore advocates the introduction of mesh size controls for all finfish fisheries. This will protect immature fish in mixed-size concentrations.

Closed Areas: Excluding all exploitation from certain areas allows breeding and maturing of young to take place undisturbed, maximising recruitment rates into the exploitable fish population.

Such areas are also reserves for access by dependent animals and permit the collection of comprehensive data on undisturbed stocks of a commercial species for comparison with data from exploited stocks.

Closed Times or Seasons: The fishing season for the continental shelf around Antarctica extends from about mid-October to late March, while around the sub-Antarctic islands there is an extended season. All species of fish and krill go through sensitive stages of their breeding cycles during the fishing season. For each species it would be advantageous to avoid disturbing them whilst breeding and avoid destroying pelagic eggs for the few weeks when they are vulnerable. Although species tends to breed at different times, each species tend to be found in different places (commonly 80 or 90% of the fish in a single school will be of only one common)

Quotas: The use of quotas coupled with adequate scientific information provides the best basis for ensuring the long term survival of fish populations which not only allows the achievement of highest sustainable catches of fish but also ensures the availability of a sufficient proportion for other dependent species. Successful operation of quota systems, however, requires that catch levels be set year-by-year. This depends on rapid and reliable provision of comprehensive biological information to those responsible for setting quotas, and on the provision of regular progress reports from vessels in the fishery. ECO is impressed with the data collection system of the IWC whereby weekly whale catch reports are made by all vessels to the Bureau of International Whaling Statistics.
DATA LACKING BUT REGULATION STILL NEEDED

The third day of CCAMLR III started with the first meeting of the Ad Hoc Working Group on Fish Stocks. This group should provide the necessary forum for scientists to formulate control measures and could start a new trend in resolving awkward CCAMLR problems. The fate of any recommendations of the Ad Hoc group will be interesting. Hopefully, scientists will have the opportunity to discuss and make recommendations based on scientific criteria, not power politics. Before scientists can have serious informed dialogue, however, more data is needed. Guidelines for future data collection and handling are an urgent priority.

For fifteen years the Soviet fishing fleet has been the primary harvester of finfish in the Southern Ocean. Overwhelming evidence has been tabled at CCAMLR III indicating that some fisheries have collapsed. At the same time, the Soviets have been asked to produce catch and effort data of the type provided for catches licensed in EEZs. The French in 1978 took the very responsible step of closing the 200-mile EEZ around Iles Kerguelen for 15 months. Licensing requirements reduced effort in the area, and there is evidence to suggest that the fishery can be maintained at a sustainable level which could gradually increase. All fishing vessels must provide detailed fishing data and must adhere to other measures requested by the French. Providing data is a practice which has a sound historical base.

A total lack of regulation has resulted in a steep decline in the finfish stocks around South Georgia. It could be argued that claimant states could have instituted a 200-mile EEZ in these waters but power politics has so far prevented this. CCAMLR itself must act now to regulate finfish exploitation. A minimum ten-year moratorium is required to allow finfish stocks to build up again to ensure a healthy population. More data would still be required, however, and the area might need to be closed for longer.

The Commission must avoid a situation where fishing nations invest huge amounts of capital in fishing fleets designed to harvest Southern Ocean species before realistic sustainable yields are proven. It is up to the scientists involved with CCAMLR to come up with creative, new solutions to avoid fisheries failures.

The Governor of Tasmania, Sir James Plimsoll, set the scene well when he officially opened CCAMLR III with the comment, "One is struck by the amount of knowledge we still have to acquire."

ECO believes it would not be unreasonable for the Commission to establish the precedent of setting conservative quotas in the face of uncertain and inadequate data. This approach would also place the burden of research where it belongs - with the nations exploiting the resources. After all, is it not true that good but imperfect advice early on is better than a perfect analysis that comes too late.

Catching can be halted within a week of catch limits being filled. Such an arrangement would be well suited to the control of the krill fishery by CCAMLR.

Pulse Fishery: For krill, fishing heavily in a particular area for one season only and then moving on to a fresh area the next season is a low risk way of maintaining high catch efficiencies. Catches should be spread throughout the entire Southern Ocean ecosystem so that all populations are occasionally exploited and repeated exploitation of a single population is avoided. As understanding of krill ecology improves, we should be in a better position to set annual quotas for an area which pose little threat to long term recruitment rates.

Fishing Effort Control: By restricting the type, size and number of vessels allowed into a fishery, a maximum limit on the amount of fish which can be handled is set. Alternatively, fishing-days limits can be set which define how many days a vessel may remain within the fishery (see Closed Times). Such methods are attractive in that it is relatively easy to reliably collect the required information - it relates to the vessels used and not to the fish caught. Licensing and full reporting of technical specifications for each type of vessel is required.

Because we do not yet have the information to design the best mix of control techniques for the most effective control of finfish and krill fisheries, ECO is calling for a moratorium on finfish catch and an interim limit on krill catch.
The French government's airstrip project near their Dumont d'Urville base is continuing despite widespread criticism from scientists and environmentalists. ECO is concerned that reports pertaining to the project have still not been officially released. It seems that once again, for the third successive season, the project will be presented to the public as a fait accompli.

Over the past few months there have been some significant developments which ECO believes should have caused a serious reappraisal of the project. It seems that the French government, however, has never had any intention of abandoning the airstrip.

The establishment of the Thaler Committee was welcomed by NGO groups as an important precedent towards internationalising environmental impact assessment in the Antarctic. The Committee's report, however, has still not been made public and this is cause for grave concern. A copy of the report leaked to ECO indicates that the Thaler Committee had serious reservations about the project:

(Conclusion 2): The history of the Dumont d'Urville base shows that human activity has had negative biological effects. The planned Lion runway will increase these effects during construction and risks increasing them afterwards. The Commission is favourable to any alternative projects and/or arrangements which would result in less human activity at Pointe Geologie.

(Conclusion 4): The Committee notes that the technical plan for the runway construction is insufficiently precise and definitive; the impact study is not satisfactory in its basis and, according to the representatives of the Ministry of the Environment, in its procedures.

(Conclusion 5): The Commission demands a new impact study based on more precise technical information about the runway and its means of construction giving more importance to the biological consequences of the increase in human activity in the archipelago during the construction of the runway as well as after its construction on the basis of current levels of use and on the increase in scientific programmes which become feasible.

ECO understands that, in response to the Thaler Committee, a new environmental impact assessment has been prepared. French authorities are, however, already pressing ahead with construction plans for the next summer season. This second assessment has not yet been released for public comment. Why not?

Why has the French government also been so intent on maintaining a veil of secrecy over the project? The only possible outcome is international criticism. Many outside the Antarctic Treaty system who are currently gearing up for a debate in the United Nations will see that the Antarctic Treaty system is flawed because it cannot cope with such simple matters as environmental assessment. It is not only France's credibility that is at stake but the credibility of the entire Antarctic Treaty system - CCAMLR included.

CCAMLR is not directly involved in the French airstrip project but the organisation does have responsibility for the species whose habitat will be destroyed, damaged or endangered by the project - penguins and sea birds. It is clearly in CCAMLR's domain to ask searching questions about the project. ECO suggests that the Commission has a responsibility to act - and quickly
WHERE ARE THE KRILL?

USA looking for Krill
Summer 1984

UK looking for Krill
Winter 1983

At least two recent expeditions aiming to conduct extensive programmes on the biology and ecology of Antarctic krill were unable to locate the expected abundant swarms in their target areas.

The US scientific expedition on the R V Melville in early 1984 expected superswarms in the vicinity of Elephant Island on the basis of large patches of krill observed during previous expeditions. They managed to locate only one small krill patch in this area and also noted a decrease in populations of sea birds, penguins and marine mammals.

The British Offshore Biological Programme team carried out a winter research cruise in 1983, planning a 30-day study of distribution and abundance, swarming structure and feeding behaviour of krill around South Georgia. Krill had been found to be plentiful in 1981-82 summer observations but the British team was unable to locate any swarms in 1983. The cruise plans were revised to include Elephant Island but again krill were not to be found in the expected abundance.

One possible explanation for this is the unusually high water temperatures recorded in the area, being 1-2 degrees C higher than expected. It has also been suggested that the period of peak abundance and swarming may have occurred earlier than usual. Whatever the reason, the paucity of krill swarms in an area where previously no doubt was entertained as to their abundance highlights how little is known about krill.

Too warm for a swarm??

BROWN'S PREDICTION

Commission chairman Alan Brown shocked both scientists and environmentalists when reported as saying, on the first day of CCAMLR III, that no quotas or moratoria would be set at this year's meeting.

Most individual scientists are of the opinion that interim catch limits would be a useful management technique for the developing krill fishery and long overdue for ravaged finfish stocks. ECO feels it is certainly not the role of the Commission chairman to predict the outcome of the meeting before the Scientific Committee has even met.

ECO contacted Mr Brown to seek elucidation of his comments. While he claimed that he had been grossly misquoted, ECO notes that no retraction was made to the media concerned.

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