

In time, the stocks responded. The northern cod stock near Newfoundland rebounded dramatically. In 1977, Canadian trawler landings of northern cod were only 7 000 t; by 1986, they were more than 120 000 t. This salvage operation is one of the industry's biggest success stories.

But in stark contrast, on the nearby Flemish Cap in international waters, cod stocks have continued to decline over the past decade. Scientific advice has been ignored in favour of a strategy of short-term gain. Cod catches have plummeted from 30 000 t in 1979 to a mere 10 000 in 1980. And in 1987, two of the countries most involved in fishing the stock — the Faroe Islands (Denmark) and Norway — were forced to ask NAFO for a moratorium on the stock. NAFO complied, and the EC, with some reluctance, redirected its fishing effort to other NAFO stocks it was already overfishing. The moratorium has been in place for the 1988 and 1989 fishing seasons. If the moratorium is not respected, prospects for the future are bleak: low catches of mainly small, young fish.

The dispute between the European Community and NAFO about the total levels of catch to be allowed for each stock has centred on the difference between two management concepts. The EC supports a level of fishing intensity that attempts to maximize catch at the expense of catch rates and stability.

The target used by Canada and NAFO leaves more fish in the water than the European concept with more of each age group. This produces an economically more valuable resource and also builds in a cushion against error or natural hazards.

But errors will happen. In 1988, Canadian scientists realized they had seriously overestimated the abundance of Canada's largest fish

stock, the northern cod. This discovery shocked both the fisheries managers and the fishing industry, since the resulting total allowable catch (TAC) recommendation was half the previous year's. However, because of the margin for error built into the original TACs, the fish stocks has not been depleted past the figure for previous years. There was no danger of disaster.

For their part, the Europeans are no less fallible. Events in late 1988 and 1989 have clearly shown that the EC's management strategies have been inadequate within its own waters. The European Council of Fisheries Ministers last December was compelled to suddenly reduce the total allowable catch for a variety of Community fish stocks.

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Assessing fish stocks anywhere in the world is by nature difficult, because of two variables: the survival rate of a "year class" (i.e., classified by age) of young fish and the growth rate of the fish. Neither can be estimated with great accuracy and each is influenced by weather, water temperatures, and other environmental conditions, in addition to fishing pressure.

What does it mean to be responsible in managing a natural resource? For answers, the world has increasingly turned to the Brundtland Commission report with its notion of sustainable development: "Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs."

By reducing effort now, catch levels will, over time, allow the rebuilding of stocks for future generations. In eastern

Canada, some 60 000 people rely directly on the fishery for their livelihood. The industry also provides one of Canada's major export commodities.

The crux of the world fishery dilemma is stated by Dr. John Beddington, director of the Renewable Resources Assessment Group at Imperial College in London, England: "The short-term goals of fishermen are incompatible with the long-term goals of a society that wants to manage the resource." In other words, free access equals over-exploitation.

Clearly, excessive fishing in NAFO waters will hurt all NAFO members. Managing the resource responsibly, on the other hand, will bring benefits to all parties involved. Solutions will only be achieved when all countries come to the realization that the environment and its resources can only sustain so much exploitation. We ignore the cliff edge at our peril. 🍁



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