

fisheries

With an expanding world population and an ever increasing demand for protein, the living resources of the sea become daily more important. To satisfy the demand, modern technology has devised highly efficient means of harvesting the oceans. Long-range "factory" fleets go to sea for months at a time, equipped with self-contained processing and freezing plants and sophisticated fish detecting equipment, hunting hundreds and even thousands of miles from their home waters.

But this expanding exploitation cannot go on. In the foreseeable future, all major fish stocks useful to man will be exploited to the maximum the stocks can bear or beyond. With unrestricted competition for these scarce resources, particularly by the gigantic distant water fleets that can move from stock to stock with devastating effects, overfishing and consequent reductions in yields would inevitably follow. Already, in some of the world's most valuable fisheries such as herring, the declines have set in. For some species of whales, overfishing has caused such a serious depletion that fifty years will be required to assure their restoration. In this light, there is an urgent need for establishment of management regimes to tailor fishing pressure to the capacity of the resources to regenerate themselves.

For the coastal fisherman, dependent on the stocks that in turn depend upon his home waters, overfishing by others can spell the end of his livelihood. This is where fisheries management comes in. The whole point of management is (ideally) to harvest the greatest yield that the complex of fish stocks in an area can replace annually. Only by applying management controls, such as quotas and seasonal

limits (for example, during spawning), can the maximum yield be available each year to coastal fishermen and long-range ships alike.

Perhaps the greatest difficulty in preventing overfishing arises from the freedom of the high seas concept. If fishing vessels can go on increasing in number, sail wherever they please, and harvest any stock to the limits of their capacity, two dangerous problems arise: conservation becomes impossible, and coastal states with foreign fleets on their doorsteps are deprived of a resource on which they depend.

Canada is affected by both these problems. With fishing communities on both its coasts, Canada must protect its fishermen's livelihood as well as the resources on which they depend. Farther from home, Canada is also concerned that proper conservation measures be applied throughout the world, or there will not be enough fish left for anyone, anywhere. This is particularly true for the tuna fisheries in the off-shore waters of both the Atlantic and Pacific where some Canadian fishermen are actively engaged.

Who should fish what?

Canada's approach to these problems is good management of fisheries, as part of the broader need for management of the whole marine environment. The application of this approach has been described as "functional" as it would bring each species under the appropriate management regime according to the species' life cycle, distribution, migratory behaviour, and conservation requirements.

To illustrate how this approach would work, Canada has grouped marine living resources into four categories, each subject to a different type of management system (see illustrated fold out on page 11).

Thus, in varying degrees, the coastal state would be delegated the authority necessary to manage all the resources referred to above—a type of custodianship—together with specific harvesting rights. In the Canadian view, this is the most functional

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