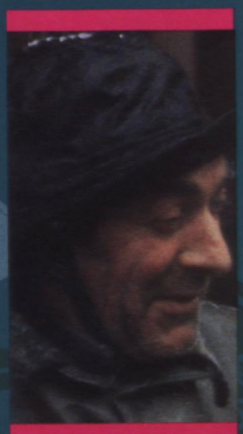
The Fragile Fishery

Sustainable Development and the Northwest Atlantic Fishery



Canada

External Affairs and International Trade Canada

Courtesy of DFO

As the deterioration of the northwest Atlantic fishery continues, fishermen face a future of more empty nets.

The Fragile Fishery

In the northwest Atlantic, the time for sustainable development is *now*

A Threatened Resource

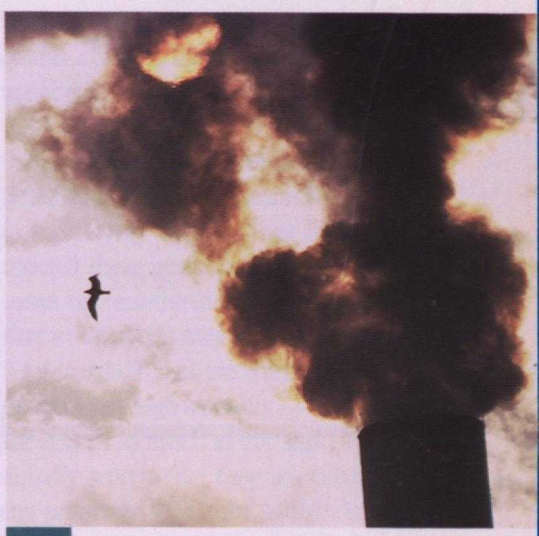
Human society is becoming sharply aware that there are environmental limits to its growth. We are learning too well the terrible consequences of acid rain, of deforestation, and of other such abuses. The capacity of our world to absorb poison is not boundless, and our natural resources are not unlimited.

Society is learning that renewable resources such as fish are not just inherited from our ancestors for our own use; rather, they are held in trust for our descendants.

The conflict between the needs of the environment and economic development has an increasingly widely recognized solution: the strategy of sustainable development. The European Community (EC) subscribes to the concept of environmentally sustainable economic development — conserving natural resources and environmental quality for future generations.

Yet, in one specific area, the EC is out of step with current environmental thinking. The EC has yet to embrace the sustainable-development concept as it applies to the great fishery in the northwest Atlantic Ocean, adjacent to Canadian waters. There, the EC's fishing activity shows little regard for the rational management of this vital resource.

As a result, the world is witnessing a steady decline in this food resource. There are two problems arising out of EC fishing practices. One is that EC vessels are taking too many fish. Already, some stocks of fish in these waters have been overfished so severely that their numbers are at the lowest point ever recorded. Secondly, many EC ships fish heavily in "nursery" areas, where the fish are mostly small and have not reached spawning age. In some nurseries, almost half the EC catches are made up of such young fish. The consequences for the future of the fishery there are as ominous as they are obvious.



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The world over, pollution is a threat to the sustainability of the world's environment. Overfishing is a lesser-known threat to the world's resources.

Generations of fishing families have depended on one of the world's great food sources.

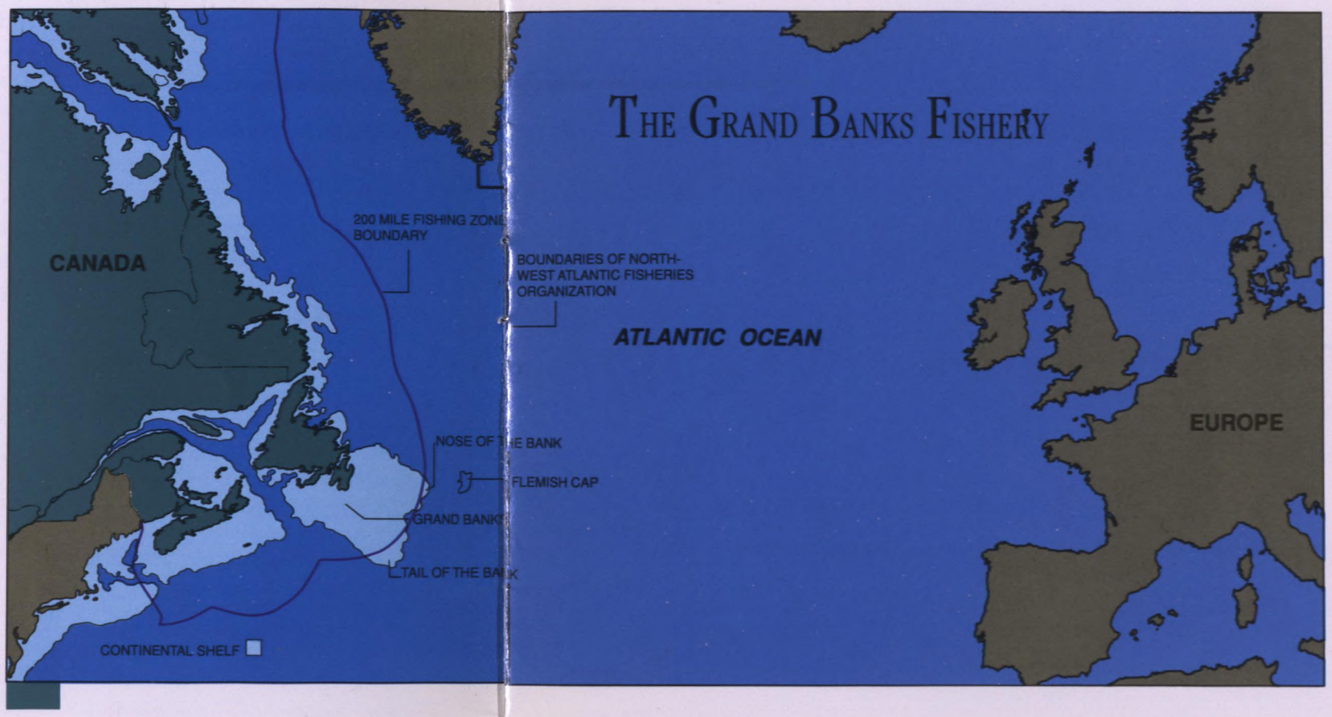
Photo Section EAITC

The Route to Destruction

The phrase "Grand Banks of Newfoundland" resonates in European and Canadian ears alike. The nourishing seas of this great underwater plain off Canada's east coast have supported enormous stocks of valuable fish over the centuries.

The fishing industry in these waters provides a livelihood to hundreds of communities on both sides of the ocean. The fishery pervades their way of life, maintains their social ties, and is one of the key links to their histories and traditions.

These waters could sustain their precious food resource indefinitely, if fishing in these waters were managed with care and restraint.



Full trawls such as this one have become only a memory in many of the Grand Banks' important fisheries.

Courtesy of DFO

But the fish resource is as vulnerable as it is valuable. It can easily be undermined and destroyed through reckless fishing methods that seize too many fish. Short-sighted fishing nations that consider only their own, immediate opportunities threaten to destroy the underpinnings of whole communities and their economies.

Vital fish stocks are being damaged in two fishing areas just beyond Canada's 200-mile limit. These two areas are known as the Nose and Tail of the Grand Banks.

EC vessels, mainly Spanish and Portuguese, are taking their catches without meaningful limits on the size, age and number of fish taken. In the breeding areas of several valuable species, located just outside the Canadian 200-mile limit, they are vastly exceeding the international quotas accepted by all other NAFO members, proposed for them by the Northwest Atlantic Fisheries Organization (NAFO), the international management organization to which they belong. They have rejected these quota limits, which are based on recommendations by scientists of all NAFO members, through a legal loophole and are overfishing by destructively high amounts — exceeding the quotas as much as 10- and 12-fold. Equally worrisome, they are catching primarily immature flatfish, on average *one-quarter* the size of the fish caught inside the Canadian zone.

The EC fleets take as many fish as they can catch, ignoring the international NAFO quota limits that are the very bedrock of long-term conservation policies. The result: some of the most important fish stocks are rapidly becoming endangered.

The damage is felt on both sides of Canada's 200-mile limit, hurting fishing communities in Europe as well as in Canada.

The recent history of the international fishery elsewhere has bitter lessons to teach: grim object lessons in how overfishing can destroy whole fishery industries. It is clear that in the northwest Atlantic Ocean, as well, such practices could destroy the commercial viability of important industries.

Courtesy of DFO

As their livelihood in the fishery crumbles, fishermen must deal with the end of their traditional lifestyle.

The Plain Facts of Overfishing

The significant international fishery in the waters just outside Canada's 200-mile limit is regulated by the Northwest Atlantic Fisheries Organization, a multinational body made up of 12 contracting parties (Bulgaria, Canada, Cuba, Denmark in respect of the Faroe Islands and Greenland, the European Community, the German Democratic Republic, Iceland, Japan, Norway, Poland, Romania and the U.S.S.R.).

NAFO establishes quotas on a scientific, sustainable basis consistent with Canada's own management policies inside Canada's zone. However, NAFO has no power to enforce its allocations. It depends on the voluntary compliance of its members.

In the northwest Atlantic, since the mid-1970s, the fisheries have been regulated through Total Allowable Catch limits based on the size and growth rates of the fish stocks. Quotas for NAFO members have been established annually by NAFO in accordance with the level of their traditional proportional shares. Until 1986, the EC complied with the quotas established for it in NAFO's Regulatory Area. Since 1986, the EC has refused to comply.

This is a picture of an industry sailing willfully into danger, destroying its own future for short-term gain.

The stocks of these yellowtail flounder have dropped to the lowest levels ever observed.

Courtesy of DFO

Provincial Airlines

Many European trawlers on the Grand Banks overfish their NAFO quotas by enormous amounts.

Greg Locke

Provincial Airlines

Courtesy of DFO

Abandoned hulls show the price Atlantic Canada fishermen pay when too many fish are taken by international fleets outside the 200-mile limit.

In 1986 Spain and Portugal joined the EC. NAFO incorporated the traditional Spanish and Portuguese shares into the EC's shares, increasing the EC's quotas accordingly. However, in that year, the EC abruptly ended its compliance with NAFO's quotas, taking advantage of a legal technicality in the NAFO convention to reject them and to set its own quotas, significantly higher than NAFO levels.

The EC's catches suddenly soared to unprecedented levels:

- In 1986, the EC fleet caught 172 000 tonnes (t). This was more than seven times higher than the total of quotas allotted by NAFO.
- In 1987, EC vessels caught 141 000 t, more than six times the NAFO quotas.
- By 1988, such catches were already weakening the fishing stocks, and EC boats were only able to catch 66 000 t.
- Rather than heeding this warning, in 1989 the EC continued on its surprising course, setting its unilateral quotas 12 times higher than those adopted by NAFO.
- In a major fishing area designated 3L, to the east of Newfoundland, NAFO has placed a moratorium on fishing for cod, in effect a prohibition on fishing. The EC disregards the moratorium, and between 1986 and 1988 it took 116 454 t.

NAFO Members

Bulgaria
Canada
Cuba
Denmark in respect of the Faroe Islands and Greenland
European Community
German Democratic Republic
Iceland
Japan
Norway
Poland
Romania
U.S.S.R.

- The 1989 NAFO Scientific Council report, accepted by all NAFO members, reveals worrisome declines in the fish stocks. The cod stock biomass in the large, southern (3NO) region has declined 33 per cent between 1986 and 1988. The American plaice stock is near the lowest level ever observed, and the spawning stock of the yellowtail flounder is also at an extremely low level.
- The stocks of two major flatfish species are declining so rapidly that NAFO has had to reduce its total quotas for NAFO members by about 60 per cent in only four years: from 75 000 t in 1986 to 29 900 t for 1990.
- In 1986 alone, the EC fished the two latter stocks at 27 times the EC's traditional NAFO quotas. Is it surprising that these stocks are now in trouble?

The serious reduction in the overall fish resource has occurred despite the relatively small proportion of the total fish stock that migrates into NAFO's Regulatory Zones. This small proportion, which extends beyond the 200-mile limit, is fished so intensively outside the limit that the effects are felt inside the Canadian limit.

Any breeder knows it's economic suicide to kill off the young stocks that support a business. Yet, EC vessels fish without restraint in vital nursery areas of the Grand Banks outside Canada's 200-mile limit. Young fish that have not reached spawning age represent almost half the EC's flatfish catch in NAFO nursery areas. By contrast they make up only 2.3 per cent of Canada's annual catches.

Small, young fish bring a lower price at market, but they are critically important in regenerating fish stocks. Therefore, stripping them away inflicts the twin injuries of making catches commercially less valuable and endangering the future of an entire industry.

To make the overfishing picture even bleaker, vessels from several non-NAFO countries fish heavily in NAFO waters. This is a picture of an industry sailing willfully into danger, destroying its own future for short-term gain.

Flatfish such as these, being hauled onto the deck of a trawler, are among the main victims in the overfishing tragedy.

Courtesy of DFO

A Vital History

The notebooks of John Cabot reflect a long-lost world. The Italian explorer reached the Grand Banks in 1497, where he wrote that the cod were so abundant they could be scooped up in baskets lowered over the side of his ship. The fishing that followed, from the 16th century onwards, was so vigorous and lucrative that writers labelled the area the "cod mines."

In the modern era, the Grand Banks' fishing industry peaked in the late 1960s, with massive catches by large fleets of highly efficient factory-freezer ships. These catches depleted the stocks and devastated the large international fishery that relied on the Banks' supply of fish.

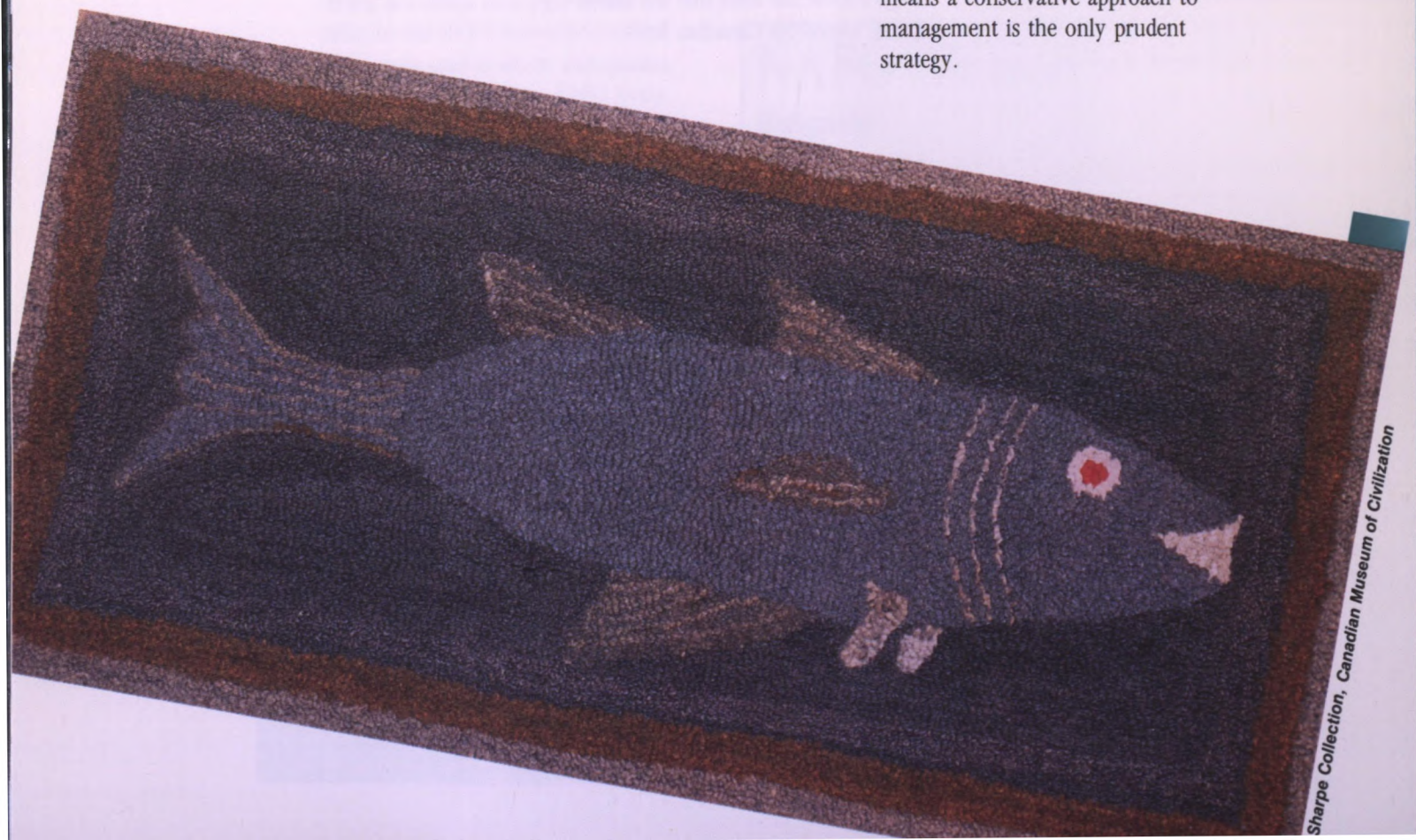
By the mid-1970s, the fish stocks had been reduced to a minuscule fraction of the glut of fish that John Cabot beheld. The destruction of the fishery seemed near.

The nursery areas of valuable species are located just outside the Canadian 200-mile limit.

A historic corner was turned in 1977. Canada, along with many other countries, declared a 200-mile fishing zone in accord with the emerging Law of the Sea Convention. Then Canada began the long process of reviving the fish stocks.

Canadian fishery managers established a strict conservation program to rebuild the stocks inside Canada's zone and enforced regulations and quota controls on Canadian fishermen. The northwest Atlantic seas are colder than the waters of Europe, so stocks grow relatively slowly. This means a conservative approach to management is the only prudent strategy.

For centuries, the fishery has been central to Atlantic Canada's social and artistic life.



Sharpe Collection, Canadian Museum of Civilization

The fishing fleet, picturesque to the tourist, is indispensable to hundreds of fishing communities.

SSC Photo Centre

Some stocks have, to date, shown signs of recovery from the years of destruction, and the recovery of a number of stocks since 1977 has created a prosperous international fishery on the Nose and Tail of the Banks in recent years. This fishery owes its existence largely to Canada's responsible and wary management within its own waters.

Today, the industry is vital to the economic and social health of eastern Canada (notably the provinces of Newfoundland, Nova Scotia, Prince Edward Island and New Brunswick).

- In 1988, 1300 communities in Atlantic Canada participated directly in the fishing industry.
- The industry involves 65 000 registered commercial fishermen and almost 30 000 fishing vessels.
- There are 890 fish-processing plants and about 30 000 fish-plant workers in the five eastern provinces.
- The fishing industry represents significant portions of the local economies: 25 per cent of the labour force in Newfoundland and 11 per cent of the gross provincial product in Nova Scotia.

Within the 200-mile zone, Canadian fishery conservation officers board the fishing boats of many nations, to examine catches and to see whether approved fishing gear is used.

Courtesy of DFO

Sustainable Development in the Fishery

What is sustainable development? For an answer, many leaders in the world community have turned to the landmark report of the Brundtland Commission, *Our Common Future*. It defined sustainable development as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs."

Sustainable development is a strategy ideally suited to a renewable resource such as the fishery. It calls for a meaningful degree of restraint in today's exploitation, so that tomorrow's fishermen and consumers will also benefit from the resource.

In short, sustainable development means living off the interest of the resource, and not running down its capital.

The concept of sustainable development has been the basis of Canada's long-term policy for the management of the fish stocks within its own waters. However, fish obviously are unconstrained by boundaries. They cross the Canadian 200-mile limit during their seasonal migrations and move into the international fishing zones.

Photo Section EAITC

Marine scientists play a vital role in assessing the condition and size of fish stocks on the Grand Banks.

The management of a fishery is highly challenging. It begins with estimates of fish populations and growth rates. However, these estimates are affected by a wide range of complex, changing variables, such as oceanographic conditions, unreported catches, and varying levels of fishing intensity of the trawler fleets.

In short, fisheries managers must rely on information they know to be imprecise. Still, they must use this information as their guide in walking a narrow line: setting quotas that allow fishermen to take a maximum permissible catch, but that do not expose future harvests to risk.

This balancing act can only be achieved by erring on the side of caution. Fish populations rise and fall through natural causes, either regular cyclical swings or in reaction to

Canadian surveillance teams plot the fishing effort on the Grand Banks.

Photo Section EAITC

oceanographic conditions. If fishermen take too many fish, the stocks become vulnerable to destruction, from man-made or natural causes or a combination of both.

Sustainable development means living off the interest of the resource — not running down its capital.

Consequently, both NAFO and Canada subscribe to the strategy of allowing for margins of error in the total allowable catch limits that are set. Fisheries managers, both within Canada and NAFO, set aside a safe portion of the total catchable stock for commercial harvesting each year. This approach, if carefully followed, should guarantee healthy and growing fish stocks, permitting a gradual increase in the total allowable catch from year to year until optimal sustainable limits are reached.

For its part the EC has refused to accept the NAFO regulations and has conducted what has amounted to a virtually unrestrained fishery on the Grand Banks.

The history of the fisheries proves beyond any doubt that unrestrained catches can destroy an industry. A tragic example occurred in Europe's own North Sea waters. European fleets ruined their own herring fishery there, following enormous annual catches of more than 1.2 million t in the mid-1960s. By the late 1970s, North Sea herring fishing was banned in order to let the stocks revive, at a cost of severe economic and social dislocation in many traditional fishing communities.

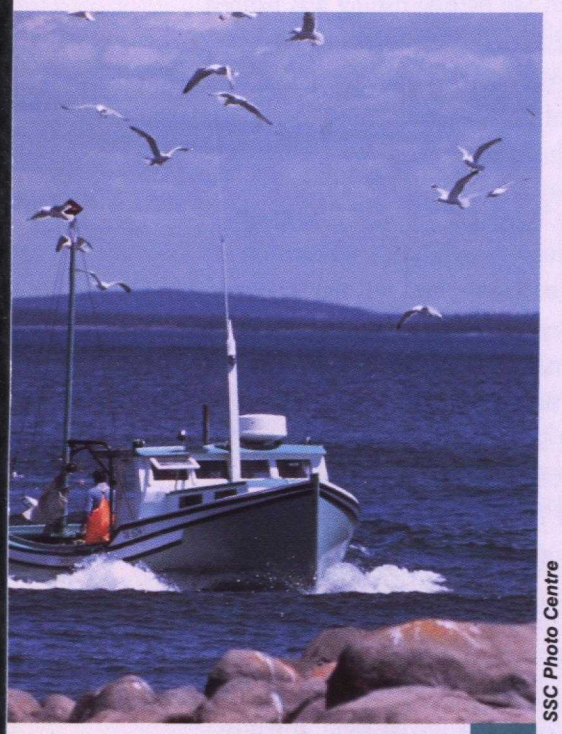
The EC says it uses a management strategy that ensures conservation of the resource. However, the EC considers it appropriate to set for itself quotas 12 times higher than those set for the EC by NAFO, despite the fact that the EC's — and all other NAFO members' — catches are declining year by year as a consequence of this approach.

As matters stand now, the northwest Atlantic fishery may join the doleful list of victims of overfishing, unless the EC makes the decision to return to a strategy of conservation.

The Canadian government is committed to a sound conservation policy for the northwest Atlantic fishery. But international co-operation in adhering to NAFO's quotas is required by all parties if the principle of sustainable development is to take hold.

Former Norwegian Prime Minister Gro Harlem Brundtland's landmark report, *Our Common Future*, stressed the urgency of adopting environmentally sustainable economic development.

Ray W. Zwicker



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The future of the Grand Banks fishery depends on strict adherence to the principles of conservation in international, as well as Canadian, waters.

Article 63

2. Where the same stock or stocks of associated species occur both within the exclusive economic zone and in an area beyond and adjacent to the zone, the coastal State and the States fishing for such stocks in the adjacent area shall seek, either directly or through appropriate subregional or regional organizations, to agree upon the measures necessary for the conservation of these stocks in the adjacent area. (From the official text of the *United Nations Convention on the Law of the Sea*, 1982.)

Ensuring Broad Horizons

Canada and the other NAFO members have legitimate concerns about excessive fishing in NAFO's Regulatory Area. Further, because of the close inter-relationship between the areas inside the Canadian 200-mile limit and the NAFO area outside, Canada has a special interest and role in preventing overfishing in the NAFO Regulatory Area. This special interest is reflected in international law, including the Convention on the Law of the Sea of 1982.

At heart, the overfishing dispute revolves around one simple question: When a food resource could be renewable indefinitely, is it sensible to allow today's harvest to diminish or even eliminate that of tomorrow?

Canada maintains that fish stocks should be managed in a sustainable fashion, enabling the core fish supply to grow over the long term. What's more, Canada has shown that this can be done. Since 1977, some stocks have been brought back from the brink of disaster. Canada's experience has shown that the fishing industry can catch more in the future than in the present, through a reasonable exercise of restraint.

To understand Canada's concern over the EC's fishing practices, one has only to look at the plight of the cod fishery on the Flemish Cap. This is an underwater plateau in NAFO waters, well beyond Canada's 200-mile limit and not subject to Canadian fisheries management. For years, this NAFO zone was fished heavily by non-Canadian fleets.

NAFO made a classic error in managing the cod fishery on the Flemish Cap: it allowed fishermen to take the high catches they wanted, ignoring scientific advice that such harvests could not be sustained. The result was the serious depletion of the cod fishery in the area. After catches plummeted from an overfishing high of 30 000 t in 1979 to about 8 000 t in 1987, an international moratorium was declared. No cod fishermen make a living on the Flemish Cap today — an object lesson in the folly of short-sighted fishing.

Canada believes it is necessary to employ the principles of husbandry rather than the instincts of hunting, to achieve a steady rate of growth in fish stocks to the optimal sustainable level — in short, sustainable development.

"An horizon is nothing save the limit of our sight," wrote the English poet John Donne. In managing the fishery, NAFO is trying to set its horizons well into the future. But NAFO's success depends on compliance by all the participants in the industry.

Only this far-sighted approach will ensure broad horizons for future generations of Canadians, Europeans and fishermen of other members of NAFO, who depend on the renewable resources of the northwest Atlantic fishery.

Courtesy of DFO

"An horizon is nothing save the limit of our sight." (John Donne)

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