

# **BREAKING NEW GROUND**

## **An Action Plan for Rebuilding The Grand Banks Fisheries**

**Report of the Advisory Panel on the Sustainable Management of  
Straddling Fish Stocks in the Northwest Atlantic**

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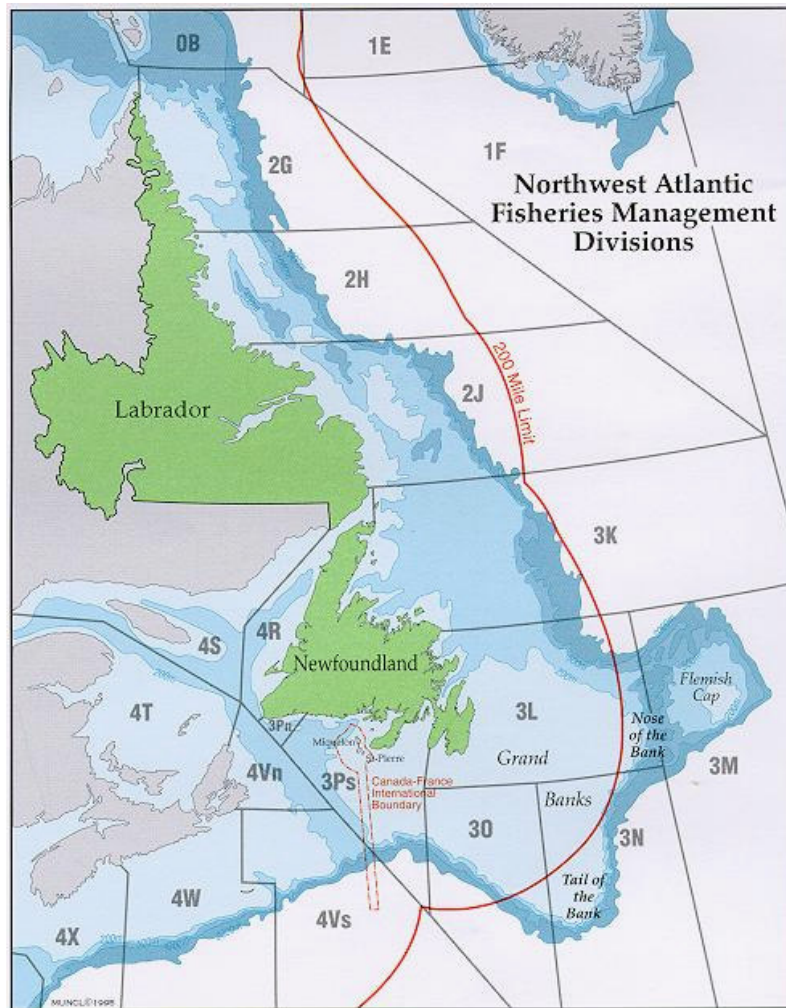
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## MAP OF NAFO CONVENTION AREA



## 1. INTRODUCTION

The international management arrangements for groundfish stocks off Canada's Atlantic coast have long been a source of controversy for members of the fishing industry, governments and the public. Even before extension of jurisdiction to 200 nautical miles, the lack of control over fishing outside Canada's national limits was a hot button issue. Fish stocks were declining in advance of the creation of the 200-mile limit. The decline was arrested in the late 1970s, but the improvement following the 200 mile extension was short-lived and just five years after its creation the federal government was again being urged to take measures to combat foreign overfishing on the Grand Banks. This dissatisfaction with the management of straddling stocks in that area has not abated. The federal government continues to be under pressure to deal more effectively with this issue, especially in the last decade or so when several of the more lucrative of these stocks have come under moratoria and others seem headed for the same fate.

The Minister of Fisheries and Oceans, the Honourable Geoff Regan, announced the establishment of an ***Advisory Panel on the Sustainable Management of Straddling Fish Stocks in the Northwest Atlantic*** (APSS), on December 13, 2004. The Panel consisted of three members: Dr. A. W. May as Chair; Professor Dawn Russell and Mr. Derrick Rowe. It was mandated to carry out the following:

- Provide advice to the Government of Canada on how to reduce overfishing and avoid ecological destruction of straddling stocks in the Northwest Atlantic Fisheries Organization (NAFO) Regulatory Area (NRA) and achieve sustainable use of the oceans.
- Present recommendations on how to strengthen coastal state rights on management of straddling fish stocks off Canada's East coast.
- Assess the effectiveness and identify the shortcomings of the current international fisheries management regime in the Northwest Atlantic.
- Propose elements of a strategy to overcome barriers and identify the essential elements required to ensure an effective international fisheries governance regime, including a full assessment of governance options.
- Develop a strategy to establish an international fisheries governance regime that provides a greater role and rights for coastal states regarding the conservation and management of straddling fish stocks and their ecosystems on the high seas.
- Develop a shared understanding of the meaning of "custodial management" and provide an assessment of implications (*inter alia*, legal, political, scientific, economic, practical) and the steps entailed in

any attempt to make this understanding a reality on the Nose and Tail of the Grand Banks and the Flemish Cap (DFO, 2004a).

The Panel was initially given a three-month timeframe to carry out its study and deliberations and prepare a report for the Ministers of Fisheries and Oceans and of Foreign Affairs. This was later extended to avoid conflict with the International Conference on the Governance of High Seas Fisheries and the United Nations Fish Agreement, held in St. John's, May 1-5. The Panel received extensive briefings from officials of the Departments of Fisheries and Oceans and Foreign Affairs on January 5 and 6, 2005. The Panel then set up a small Secretariat Office in St. John's that, under the direction of Eric Dunne, provided all required research and administrative support for its activities. Consultations with the appropriate government, industry and other stakeholders were conducted in January, 2005.

In the latter part of January and early February, the Panel commissioned a number of external reviews which are listed in Appendix I. These covered such areas as the scientific, institutional and legal considerations; Canada's foreign allocations policy and the role of European Union (EU) fisheries policies and related factors. John Pope, a leading international fisheries scientist, conducted a review of the scientific basis for managing these straddling stocks. Dr. Scott Parsons, a former senior fisheries executive, undertook an operational evaluation of NAFO's performance over the past 27 years. The Marine and Environmental Law Institute (MELI) of Dalhousie University in Halifax examined the legal aspects of marine governance options. Joseph Gough, an experienced fisheries writer and historian, conducted an assessment of the policies for foreign quota allocations and bilateral fisheries agreements over the past 30 years. Alastair O'Rielly, a senior fisheries executive and administrator reviewed the various internal and other forces affecting EU fisheries policies. ORCA Consulting Inc., a St. John's-based group with experience in EU affairs, analyzed the decision-making processes for fisheries matters in the EU. The results of these external reviews were received by the Panel over the first three weeks of March. In addition, the Panel Secretariat assembled an extensive Reference File of documents covering a wide range of articles on ocean governance issues and initiatives that provided useful background information for identifying and assessing possible solutions to the problems of straddling stock management.

As well, the Panel invited public input in a series of notices in 23 newspapers throughout Newfoundland and Labrador and Nova Scotia. A website was also launched to solicit additional input (APSS, 2005). The latter also provided access to a wide range of background information on the topics being examined by the Panel. Industry members and other interested stakeholders were offered the opportunity to provide written comments if they wished. In

total, the Panel met with some 25 groups, organizations or individuals but received only three written submissions, as well as two electronic comments through the website. A listing of the individuals, groups and organizations that met with the Panel and of those that provided written submissions are given in Appendices II and III.

Report-writing commenced in early March. The first full draft was completed by April 1 and several iterations were prepared over the following weeks leading to the final product in June. The Panel gave the Minister and officials of the Department of Fisheries and Oceans and officials of the Foreign Affairs department interim verbal briefings of our findings and advice on April 11 and 12, 2005. On April 29, the Minister of Fisheries and Oceans announced funding for a series of new initiatives to combat overfishing and strengthen international fisheries governance (DFO 2005f). Several of these reflect suggestions made by the Panel in its interim verbal reporting.

The problem of straddling stock management on the Grand Banks will be defined in general terms in the next section. Some current views and positions regarding this issue will be outlined and assessed in Section 3. The following Section will review the various scientific aspects of straddling stocks management, while the current legal framework will be reviewed in Section 5. Some economic and cultural considerations will be covered in Section 6, followed by an assessment of the present management arrangements for straddling stocks in the Northwest Atlantic in Section 7. Some options for governance will be assessed in Section 8. The final two Sections will contain the Panel's major conclusions and advice.



## 2. THE ISSUE

The issue of straddling fish stock management in the Northwest Atlantic has a longer history than that of exclusive fishing zones themselves. In the early 1950s, the rise of powerful distant water fleets first created concerns about the level of fishing taking place outside the then 3 nautical mile limit of most territorial seas. The extension of these to 12, and later to a 200 nautical mile exclusive fisheries zone in 1977, did not solve this problem, especially on the Canadian Atlantic coast. The optimism generated by the extension of fisheries jurisdiction was soon dashed, as the realisation that these extended fishing zones (which became Extended Economic Zones (EEZs) in 1982) did not provide effective conservation of straddling stocks that migrate across the limits of coastal state EEZs into adjacent high seas.

### 2.1 THE STRADDLING STOCKS

The creation and international acceptance of 200 mile EEZs brought a new categorisation of fish stocks to the lexicon of international ocean governance. The concept of shared stocks now refers to all fish stocks not under the complete control of one nation in its EEZ; and is considered to include the following four categories:

- Those that move across the boundaries of one EEZ into another country's zone are termed "trans-boundary stocks".
- Those that move across the boundaries of one or more EEZs into the high seas waters adjacent to the EEZs of the same coastal states are termed "straddling stocks".
- Those that move great distances across the open ocean and also through one or more EEZs are called "highly migratory stocks".
- Finally, the stocks that reside in one specific area and remain completely outside all EEZs are now termed "high seas stocks".

The various finfish and shrimp stocks that inhabit, and are fished in, the NRA in Divisions 3LNO and the Greenland Halibut (turbot) stock that crosses from 3L into 3M are defined in the Regulations under the Canadian ***Coastal Fisheries Protection Act*** (CFPA) as straddling stocks (DFO, 1994). The effective management and conservation of these stocks is the focus of this Panel's attention. The other stocks in 3M do not cross Canadian boundaries and, therefore, are not directly involved in the issues that were examined by the Panel.

The listing of straddling stocks in 3LMNO in the Regulations under the CFP is as shown in the tables below.

**TABLE I  
GROUND FISH STRADDLING STOCKS LOCATED IN DIVISIONS 3L, 3N OR 3O**

	<b>Common Name</b>	<b>Scientific Name</b>
1.	American angler	<i>Lophius americanus</i>
2.	American plaice	<i>Hippoglossoides platessoides</i>
3.	American sand lance	<i>Ammodytes americanus</i>
4.	Atlantic argentine	<i>Argentina silus</i>
5.	Atlantic cod	<i>Gadus morhua</i>
6.	Atlantic halibut	<i>Hippoglossus hippoglossus</i>
7.	Atlantic redfish (Acadian, Golden, Deepwater)	<i>Sebastes fasciatus, Sebastes marinus and Sebastes mentella</i>
8.	Atlantic wolfish	<i>Anarhichas lupus</i>
9.	Barndoor skate	<i>Raja laevis</i>
10.	Greenland halibut	<i>Reinhardtius hippoglossoides</i>
11.	Haddock	<i>Melanogrammus aeglefinus</i>
12.	Pollock	<i>Pollachius virens</i>
13.	Red hake	<i>Urophycis chuss</i>
14.	Roughhead grenadier	<i>Macrourus berglax</i>
15.	Roundnose grenadier	<i>Coryphaenoides rupestris</i>
16.	Silver hake	<i>Merluccius bilinearis</i>
17.	Spotted wolfish	<i>Anarhichas minor</i>
18.	Thorny skate	<i>Raja radiata</i>
19.	White hake	<i>Urophycis tenuis</i>
20.	Witch flounder	<i>Glyptocephalus cynoglossus</i>
21.	Yellowtail flounder	<i>Limanda ferruginea</i>

**FISH OTHER THAN GROUND FISH**

<b>Common Name</b>	<b>Scientific Name</b>
1. Capelin	<i>Mallotus villosus</i>
2. Dogfish	<i>Squalus acanthias</i>
3. Greenland cockle	<i>Serripes groenlandicus</i>
4. Northern sand lance	<i>Ammodytes dubius</i>
5. Northern shrimp	<i>Pandalus borealis</i>
6. Sharks	<i>Squaliformes</i>
7. Short-finned squid	<i>Illex illecebrosus</i>

**TABLE II  
STRADDLING STOCKS IN DIVISION 3M**

<b>Common Name</b>	<b>Scientific Name</b>
1 Greenland halibut	<i>Reinhardtius hippoglossoides</i>

It is interesting to note that NAFO and the Northeast Atlantic Fisheries Commission (NEAFC) share management of the oceanic redfish stock that is found in the Convention Area waters of both these Regional Fisheries Management Organizations (RFMOs). This species can be fished in NAFO Division 1F and in 2GHJ (outside the Canadian Zone). Both RFMOs have agreed on the portion of the TAC, which is set by NEAFC, that will be fished in, and reported from, the NAFO Regulatory Area. NAFO allocates that part of the TAC among its Contracting Parties.

**2.2 The Recent Management Record**

The management of the Grand Banks straddling stocks in nearly 30 years of extended Canadian jurisdiction has been characterised by varying degrees of non-compliance with NAFO decisions by NAFO members and non-members. Compliance by non-members has not been a serious problem since the introduction of Bill C-29<sup>1</sup> to amend the CFPA in 1994 but was a significant issue in the late 1980s and early 1990s. The period from 1977 to 1985 was characterised more by attempted incursions into the Canadian zone, than by the outright flouting of conservation rules established by NAFO after its founding in 1979. Spain was an exception, as it did not join NAFO until 1983 and then objected to most of its quota allocations for several years. The lead-

<sup>1</sup> Bill C-29 provided the authority to enforce specified fishing regulations related to straddling stocks (including outside 200 miles) against vessels flying the flags of listed nations. This amendment was used to list Flags of Convenience (FOC) vessels (in the regulations under CFPA) in May of 1994 and to list Spain and Portugal in 1995 prior to the Canada-EU dispute (“turbot war”). These two countries were removed from the regulations after the Canada/EU agreement ended that dispute. The regulations remain in effect for FOC vessels.

up to the 1986 accession of Spain and Portugal to the EEC was marked by increased disregard of NAFO conservation rules by these two countries and, then, by the EEC/EU itself for almost a decade after that enlargement.

Faced with a dramatically expanded fleet and limited alternative fishing opportunities, the EEC/EU in the 1985-95 period objected to NAFO measures and the setting of higher autonomous quotas. Compliance improved for a short period after the "turbot war" of 1995, as new NAFO enforcement measures were adopted by the Contracting Parties to the NAFO Convention. However, by the end of the 1990s and the beginning of 2000, non-compliance had again increased to, and remained at, a level that Canada deemed unsatisfactory. This latter period of non-compliance has been marked more by ineffectual monitoring and enforcement by flag states than by the outright rejection of NAFO quotas.

Over the last 20 years, Canadian enforcement officers have issued 504 citations to foreign vessels for alleged infractions in the NRA. While in some years these may often relate more to the level of enforcement effort than to compliance levels, they are indicative of the continuance of this problem of straddling stocks management. The annual numbers are shown in Appendix VII.

Concern about the scale of Illegal, Unregulated and Unreported (IUU) fishing in the NRA has increased to the point that Canada augmented its enforcement regime in 2004. Three enforcement vessels now back up frequent aerial surveillance to maintain a constant presence in the area. The numbers of non-Canadian vessels fishing in the NAFO area in the first quarter of 2005 has declined by 50% from the same period in 2004, apparently as a consequence of the increased enforcement (Parsons, 2005).

The overfishing on the Grand Banks is part of the global problem of IUU fishing that is resulting in depleted fish stocks throughout the world's oceans. This issue was flagged in ***The State of World Fisheries and Aquaculture 2002*** (FAO, 2002a), which indicated: "An estimated 25 percent of the major marine fish stocks are underexploited or moderately exploited. About 47 percent of the main stocks or species groups are fully exploited while 18 percent of stocks or species groups are reported as overexploited. The remaining 10 percent have become significantly depleted, or are recovering from depletion." The stocks in the Northeast Atlantic and the Mediterranean and Black Seas were considered as having the greatest need for recovery, followed by the Northwest Atlantic, the Southeast Atlantic, the Southeast Pacific and the Southern Ocean areas.

FAO's 2004 report on *The State of World Fisheries and Aquaculture* confirms the general trend observed in previous years (FAO, 2004): "It is estimated that in 2003 about one-quarter of the stocks monitored were underexploited or moderately exploited (3 percent and 21 percent respectively) and could perhaps produce more. About half of the stocks (52 percent) were fully exploited and therefore producing catches that were close to their maximum sustainable limits, while approximately one-quarter were overexploited, depleted or recovering from depletion (16 percent, 7 percent and 1 percent respectively) and needed rebuilding. From 1974 to 2003 there was a consistent downward trend in the proportions of stocks offering potential for expansion. At the same time there was an increasing trend in the proportion of overexploited and depleted stocks, from about 10 percent in the mid-1970s to close to 25 percent in the early 2000s".

The groundfish stocks on the northern and southern Grand Banks enjoyed a short recovery immediately after 1977, almost certainly because of conservative management by Canadian authorities. This recovery ended in the 1980s and by the early 1990s the major traditionally fished stocks in that area and on the Flemish Cap had been so reduced that they came under fishing moratoria. NAFO, which was established in 1979 to manage the stocks that straddled Canada's EEZ and the high seas beyond 200 miles and those on the Flemish Cap, has been ineffective in achieving conservation of these internationally fished groundfish stocks. To date, the emerging international arrangements of the last two and a half decades have not permitted nor mandated an effective conservation regime in the area, as evidenced by the severe decline of most of the groundfish stocks.

**The Panel quickly became aware that the ineffective management of straddling stocks on the Grand Banks is a direct consequence of the limitations placed on coastal states and the maintenance of a global commons on the high seas by the current provisions of the law of the sea and the inadequacies of the RFMO for the area. In the first instance, coastal states are forced to rely on cooperation from Distant Water Fishing Nations (DWFNs) to manage fish stocks that cross their EEZ boundaries. This has not been generally forthcoming. In the second case, RFMOs are the only vehicle the law of the sea provides for management of straddling stocks but they really have been given no effective powers to attain conservation in the absence of cooperation. The RFMO for the Northwest Atlantic, NAFO, has been particularly ineffective in managing the stocks under its aegis; this to the point that the Panel views its replacement by a more modern organization as a minimum requirement for achieving sustainability of groundfish resources in the Grand Banks area. This**

**assessment will be developed in more depth in the following sections of this report.**

### 3. CURRENT VIEWS AND POSITIONS

The issue of overfishing of straddling stocks is one on which many groups and individuals have a variety of strongly held views. We consider that a short review of these various perspectives is useful to put this contentious subject in proper context.

#### 3.1 PUBLIC VIEWS IN CANADA OF THE ISSUE

The most prevalent public view of this issue in Newfoundland and Labrador is that the federal government is not doing enough about extensive overfishing by foreign fleets on the Grand Banks. There is widespread support for, though not necessarily a shared understanding of, the concept of “custodial management”. There is a belief that adoption of this policy would end the problem quickly and completely. The perceived lack of action on overfishing is widely viewed as an example of federal disregard of Newfoundland and Labrador’s fisheries problems and another clear case of the province’s not faring well in the Canadian Confederation. These views are summed up in the statement of the ***Royal Commission on Renewing and Strengthening our Place in Canada***: “This environmental, social and economic tragedy occurred on the federal government’s watch and as a result of its failure to manage the resource properly” (Government of NL, 2003a). This expresses the popular conclusion that the federal government must solve this problem or it is failing the people of this province who consider these resources a part of their contribution to Canada and the very foundation of their heritage, livelihood and future. The fact that the Government of Canada does not have jurisdiction outside 200 miles, and therefore does not have the means of managing straddling stocks, is lost in the general frustration with the situation.

The overfishing issue was the subject of several focus group discussions conducted across the country for DFO in late 2004. Some predictable and some unexpected views emerged from these sessions. The rest of Canada does not appear to be as seized of this issue as is the Newfoundland and Labrador public. The concern and understanding decreases with distance from the Atlantic coast. Nonetheless, learning more about the matter invokes feelings of sympathy because it is then perceived that an environmental wrong is being committed (DFO, 2005c and 2005d).

Some other significant overall conclusions which emerged from the Canadian focus groups are as follows:

- Diplomacy was the preferred response of participants to the global overfishing problem including stakeholders and fishing communities, - the lone exception having been the St. John's group which favoured and understood unilateral action.
- Widespread support was expressed for making the fight against overfishing a signature issue for Canada.
- A caution was expressed that domestic rigor is essential to ensure international credibility. Canada must set the example.
- Participants called on government to promote the issue, to focus on policing and punishment efforts, to work with allies to broaden the focus from NAFO, and to lead international advocacy.
- Sustainable development and conservation should be the key drivers of Canada's strategy; Canada is seen as leading by example and is a world leader on this issue.
- Canada is not working in isolation – our strategy requires allies (support and co-operation with other countries).
- There was universal support for making the principle of sustainable development the centrepiece of Canada's global strategy on international overfishing. Participants agreed that Canada must be seen to be acting out of concern for the global fishery and not just out of self-interest.

### **3.2 VIEWS IN OTHER COUNTRIES**

Focus groups on overfishing were also held for DFO in Spain, Portugal, France, and Sweden in early 2005 (DFO 2005c). These produced the following main points of view. The fishery is an important resource that should be protected by the world community where Canada is often viewed as a leader on this issue. There was some distrust of Canada's intentions, most notably in Portugal, as being really about extending jurisdiction and keeping more fish than it already has for itself. However, some respondents expressed disappointment with their own national governments' lack of action on this issue or with their perceived condonation of irresponsible fishing.

Some viewed an international framework and system to ensure the rules are followed correctly as being a necessity. "It would be good to have true, international co-operation". Some participants believed that all countries are to blame for overfishing and there is too little awareness or concern by governments or the public about the necessity of corrective action. Participants in the Portuguese group believed NAFO to be the most advanced RFMO in the world, but that the problem was getting flag states to take responsibility for the actions of their fleets without surrendering a degree of sovereignty to the RFMO. There was also a view that Canada controlled



NAFO. Otherwise, Canada was widely seen as a progressive country on fisheries matters and was considered a leader on the issue of overfishing (DFO, 2005c and 2005d).

There was also a more negative perception of Canada's fishery record at the industry and government level in Europe. This view holds that Canada's domestic fishery management record is far from sterling and the general tendency is to blame foreign fleets for domestic mismanagement of fish stocks. Many European industry members view Canada's strategy to reduce overfishing as an attempt to garner all the fish resources of the Grand Banks for itself.

### 3.3 PROVINCIAL GOVERNMENT VIEWS

**Newfoundland and Labrador** Dissatisfaction with lack of progress on the issue of overfishing has long been a hallmark of provincial administrations in Newfoundland and Labrador. The province suggested a "custodial management" approach in February 2003 at *The Roundtable Forum on Improving the Management of Straddling Fish Stocks* held in St. John's. Under that arrangement, Canada would assume management control of straddling fish stocks in 3LMNO, thereby displacing most of NAFO's functions. This would include Canada's setting the TACs and enforcing them, while providing the traditional shares of current fishing countries to NAFO which would allocate these shares and manage the non-straddling stocks. How this would actually be done without the acquiescence of other countries was not explained.

The present provincial government pronounced itself on support of custodial management at the International Conference on the Governance of High Seas Fisheries and the United Nations Fish Agreement of May 1-5, 2005. Meanwhile, it has been as concerned as previous provincial governments about the lack of progress in solving this overfishing problem through the normal route of international governance regimes and diplomatic measures. It has stated that finding a solution to this issue is a "final litmus test for Canada's involvement in NAFO" (Government of NL, 2004a, 2004b and 2004c).

**Nova Scotia** While this province now has less of a direct interest in the groundfish fisheries on the Grand Banks, the government of Nova Scotia does share the general view that the overfishing situation is one that should not be allowed to continue. It sympathises with the positions of industry and others and appreciates the difficulties of solving this issue given the present state of international law. The government also indicated to the Panel that a

concerted, long-term and multi-faceted initiative is required to ensure progress on this file.

### **3.4 VIEWS OF THE FISHING INDUSTRY**

**Newfoundland and Labrador** The Newfoundland and Labrador industry is frustrated by past failures to achieve effective results on this issue and is cynical about current efforts to combat illegal fishing in the NRA. There is an understanding that custodial management cannot be achieved as long as it is considered by the international community to be a unilateral action to extend control. Some industry representatives have concluded that progress can only be achieved in the context of the current RFMO arrangements. One view in the industry is that changes should be made in the existing arrangements to reflect some fundamental current facts about NAFO. For example, under the NAFO Convention the two main players have only one vote each in a total of 13, even though they hold between them 80 percent of the quota allocations for straddling stocks (See Appendix VI). Existing quotas shares are not enshrined in the Convention, thus creating a certain degree of insecurity. In addition, industry feels individual flag state enforcement is not working, and will not work, under the current state of international law. They argue that international law must change to permit coastal states to apply their conservation measures to straddling stocks on the high seas outside the 200 mile limit. Further, they see obligations in the law of the sea for flag state cooperation with coastal state conservation regimes as unworkable, and therefore meaningless.

**Nova Scotia** While the involvement of the Nova Scotia industry in the groundfish fisheries of the Grand Banks is now minimal, its interest in this issue is not. The industry has long been present at the NAFO table and its members are aware of the problems and the difficulties in solving them. They share many of the same views as those of Newfoundland and Labrador interests. A specific concern was expressed that the current concentration of enforcement efforts on the Grand Banks should not reduce attention to the monitoring and surveillance of domestic fisheries within Canada's 200 nautical mile EEZ. Additionally, the growing relationship between the government and non-governmental organizations (NGOs) on the issue of overfishing was described as worrisome.

### 3.5 SOME MYTHS, LEGENDS and REALITIES

There is a wide range of uninformed views, opinions and positions on the subject of overfishing in the Northwest Atlantic. The persistence of these, and the unproductive conclusions and unrealistic expectations they generate, requires some commentary. We have selected the following as the most representative examples of misinformed debate and conclusions regarding overfishing. We thought it important to articulate them and to respond to them.

**Foreign Vessels Inside 200 Miles** Some mistakenly believe that the foreign fleets which are overfishing are operating inside the Canadian 200 mile limit on the Grand Banks and, furthermore, that hundreds of vessels are involved. The facts are that the overfishing of straddling stocks takes place in those portions of NAFO Divisions 3LNO that are outside the Canadian zone and in the Northwestern parts of Division 3M (which also includes separate fishing grounds on the Flemish Cap). There are now less than half the numbers of groundfish vessels annually fishing in these areas than there were ten years ago (96 in 2003 compared to 213 in 1993. Parsons, 2005). Incursions into the Canadian zone have rarely occurred since the institution of armed boarding capability in the mid-1980s and the subsequent adoption of mandatory Vessel Monitoring Systems (VMS) by NAFO and the moratoria on several attractive straddling stocks.

**Foreigners Out, Fish Back, Plants Re-Open** Many believe that when foreign vessels are removed from the Grand Banks, the fish stocks will quickly recover and many inshore plants will re-open. This belief is based on erroneous assumptions about the presence of foreign vessels on the Grand Banks, the recovery rate of fish stocks and the potential for plants to be re-opened. These assumptions produce unrealistic expectations. The first erroneous assumption is that Canada could legally exclude foreign vessels from the Grand Banks. A unilateral extension of jurisdiction by Canada would be in violation of international law and would be widely opposed by other states. The current law of the sea allows for freedom of fishing on the high seas, unless fishing nations agree to be bound by the management measures of a RFMO. Even if foreign vessels were removed from the Grand Banks, it is by no means certain these over-exploited stocks will rebound quickly. The scientific community has emphasized that the cessation of fishing alone will not guarantee the rebuilding of some stocks. Furthermore, even if the fish did return, the assumption that all the fish plants in Newfoundland would re-open may also be false. The plants that will benefit will be those operated by the holders of offshore groundfish enterprise allocations in these Grand Banks stocks. Over 90 percent of the Canadian share is held by two companies in Newfoundland and Labrador; the remaining portion is held in very small

individual amounts by some five other offshore companies, only two of which operate in Newfoundland and Labrador. Moreover, the economics of the fisheries have changed in the last decade with significant implications for the cost effectiveness and competitiveness of processing whitefish in plants in Atlantic Canada.

**Foreigners Out, Northern Cod Back** The expectation that ending foreign overfishing would mean the certain return of the 2J3KL cod stock, is also based on a number of incorrect assumptions. As just outlined, the future absence of foreign vessels is unlikely and the current catch of cod outside the zone in 3L is so low, (less than 100 metric tonnes per year), that eliminating it completely would hardly influence the recovery of Northern Cod. There are so few fish now in the offshore areas of 2J3KL that zero foreign catches would have an irrelevant impact on stock recovery. Virtually none of the cod in all offshore parts of 2J3KL survive beyond age five; this is a far greater obstacle to recovery than an annual catch of less than 100 mt. in the NRA.

**Allocations for Trade Deals** There is a widespread misbelief that Canada has repeatedly given foreign fishing countries allocations of Canadian quotas (or condoned overfishing) in return for trade deals for industries in other parts of the country. This is one of the most often repeated, unsubstantiated and untrue convictions regarding the government's approach to the presence of foreign fleets. Two of the most repeated examples have been allocations to South Korea for a Hyundai car plant in Quebec and to Russia for purchase of Western wheat. A more recent one was the claim of allocations being given to Spain (in the 1980s) for landing rights in that country for CP Air. The review of foreign allocation policy and bilateral fisheries agreements conducted for the Panel concluded **that no such deals were ever considered, let alone concluded.** (Gough, 2005).

Nonetheless, this idea is now so embedded in the collective consciousness of Newfoundland and Labrador that it has entered the category of "urban legend". The absence of evidence for its veracity will not deter those who believe; but it is such a serious "black eye" for the Government of Canada that we feel every opportunity should be taken to set the record straight whenever such allegations are made.

The closest that government policy ever came to using quota allocations to acquire commercial concessions was during the "markets access for allocations" period when bilateral fisheries agreements with a number of countries included commitments to purchase Canadian fish products in exchange for quota allocations. The commitments to purchase Canadian fish products under these arrangements were so unsuccessful overall that the policy lasted for only a very short period. In any event, they involved "fish

purchases for fish allocations”. Furthermore, Canada has never had a quota allocation agreement with South Korea nor have any allocations to Russia been tied to wheat purchases. The overall level of bilateral relations with Spain was so poor in the 1980s (even before its accession to the EEC) that a satisfactory fisheries relationship never developed. Indeed, during the Estai affair some Spanish officials threatened dire consequences for a pending sale by Bombardier but the deal proceeded anyway (Gough, 2005). Also, officials of the federal fisheries department, operating under the authority of the fisheries minister, negotiated all these various fisheries bilateral agreements; not foreign affairs or trade officials. All allocations of Atlantic Coast quotas to foreign nations ended in 1998 when no surpluses of any species could be identified in the Canadian zone (Gough, 2005).

**Custodial Management** While custodial management is a concept that is neither clearly defined nor fully understood, it has widespread adherence nonetheless. The general view is that this unilateral approach can be easily taken by Canada but that the Government really does not want to act. There is a general feeling that this type of unilateral action must be taken; and that there are no good reasons as to why it should not be. The fact that this would be viewed as a clear extension of Canadian jurisdiction in violation of the law of the sea and in the face of widespread opposition is neither appreciated nor accepted as a reason for lack of action.

Perhaps the more pertinent point regarding this adherence to custodial management is the public perception that this arrangement would produce the ideal outcomes and results desired in the management of these straddling stocks, and the perception that it is the only way in which effective conservation of these fish resources can be achieved because all other efforts have failed. The Panel believes, however, as discussed later, that the same objectives can be achieved within the bounds of international law through the replacement of NAFO by a new RFMO. (A more detailed discussion and assessment of custodial management follows in Section 8.3.)

### **3.6 RECENT FEDERAL INITIATIVES**

After the settlement of the 1995 “turbot war” and the ensuing adjustments to NAFO regulatory requirements (Observer Program, Vessel Monitoring System (VMS), etc), a lull occurred in the Government of Canada’s focused attention on this issue. An improvement in compliance with NAFO regulations was apparent and the problem of fishing by non-member vessels had ended by then as well. This improved state of affairs remained until about 1999/2000 when enforcement officials began to notice an increase in cases of non-

compliance by NAFO members. The initial response was to bring this matter to the attention of the NAFO Fisheries Commission at the Annual meeting of 2002 and again in 2003. Canadian government attention to this issue has increased considerably since then.

The varying attention given this file is evident from changes in the number of DFO press releases addressing the topics of NAFO and overfishing in the Northwest Atlantic. After the 1995 turbot dispute, the number of public statements on these subjects declined to very low levels until 2002, when more than a dozen were made about the issue of overfishing. This level of activity continued in 2003, but really gained momentum in 2004 when a variety of new initiatives to combat overfishing were announced and undertaken. These include increased resources for offshore enforcement and air surveillance, the DFO Minister joining the High Seas Task Force (see p. 39 below), increased bilateral ministerial and official-level discussions with key NAFO members (DFO, 2005e), the organization of a major international conference on the issues in St. John's in May, 2005 and the appointment of this Panel. A chronology of the federal government's activities in recent years to combat overfishing and to improve ocean governance is contained in Appendix IV. A new website on overfishing and ocean governance has been recently launched (DFO 2005a). In March 2005 DFO released Canada's National Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing (NPOA-IUU) (DFO 2005e). Additional funding for scientific, policy and legal initiatives to improve governance of straddling stocks was announced on April 29, 2005 (DFO, 2005f). The February 2005 federal budget declared "The Government will also move forward on its Oceans Action Plan by maximizing the use and development of ocean technology, establishing a network of marine protected areas, implementing integrated management plans, and enhancing the enforcement of rules governing oceans and fisheries, including rules governing straddling stocks".

In addition to this increased departmental attention, the Prime Minister has raised the problem with heads of world governments. In September 2004 the federal government reiterated its commitment to take action against overfishing. Furthermore, the February 2005 federal budget committed a continuing increase in funding for the initiative to combat overfishing (Government of Canada, 2005).

**The matters reviewed in this Section indicate to the Panel the depth and breadth of feelings and views that exist around this issue of inadequate management of straddling stocks on the Grand Banks. This is true both in this country and in parts of Europe. We feel that these views and preferred solutions make quick and lasting solutions**

**to this matter difficult to identify and to implement. However, some new approach must be found before it is too late for the fleets, for plants and for communities, both here and abroad, that have benefited from these resources for a long period of time.**

**Public opinion in Canada generally places the blame for this situation on the federal government, on foreign fleets and on NAFO. On the other hand, within NAFO countries, there is resentment of Canada's lack of acceptance of its own fishery management failings and suspicion that the current strategy is really to take over all the fish resources on the Grand Banks. Opening a Canadian inshore fishery for the 2J3KL cod when that fishery was under NAFO moratorium in the NRA only fuelled this cynicism about Canadian intentions. It is clear that domestic management rigor is essential to Canada's international credibility. Canada must lead by example. Moving forward on Canada's own Oceans Action Plan will help. Meanwhile, increased federal government surveillance and enforcement initiatives have had a positive impact in reducing illegal, unreported and unregulated fishing.**

**Canada cannot, however, put an end to overfishing on its own. It must make the principle of sustainable development the centerpiece of its global strategies on international overfishing, and seek cooperation and support from other countries. The increased bilateral and official level discussions with key NAFO members that have taken place in the last year are a step in the right direction.**

## 4. BIOLOGICAL/ECOSYSTEM ASPECTS

The overfishing problems in the NRA in 3LMNO have resulted in significant change in the abundance of fish species from continual fishing pressures over decades by increasingly efficient fleets. The biological and ecosystem aspects include what has happened to fish stocks in 3LMNO over the past several decades, the scientific basis for past and future management and the potential for the longer-term sustainability of these stocks. This section will briefly examine these aspects and offer some views as to the future prospects for these resources. Much of this section is based on the external review “**NAFO Straddling Stocks-Scientific Basis For Management,**” conducted for the Panel by John Pope (Pope, 2005) and often borrows from it verbatim.

The fishable area of the Grand Banks extends beyond the 200 mile EEZ of Canada. Fishable areas outside the 200 mile limit are a relatively modest proportion of the total area (about 20%) but in practice they have a greater significance. This is because of the topography and hydrographic regime of the area. The cold intermediate layer (CIL) can extend beyond 200 miles from shore and to a depth of about 200 metres. It influences much of the shallower waters of which approximately 90% are within the Canadian EEZ. Thus, the slope areas (>200m) have significance both as a thermal refugia for many species and are part of the normal habitat of the deeper living species. Areas beyond 200 nm. cover a significant (approximately 40%) proportion of these fishable slope waters which lie at depths below 200m. Waters outside of the Canadian EEZ also cover approximately 50% of the area of the South East Shoal.

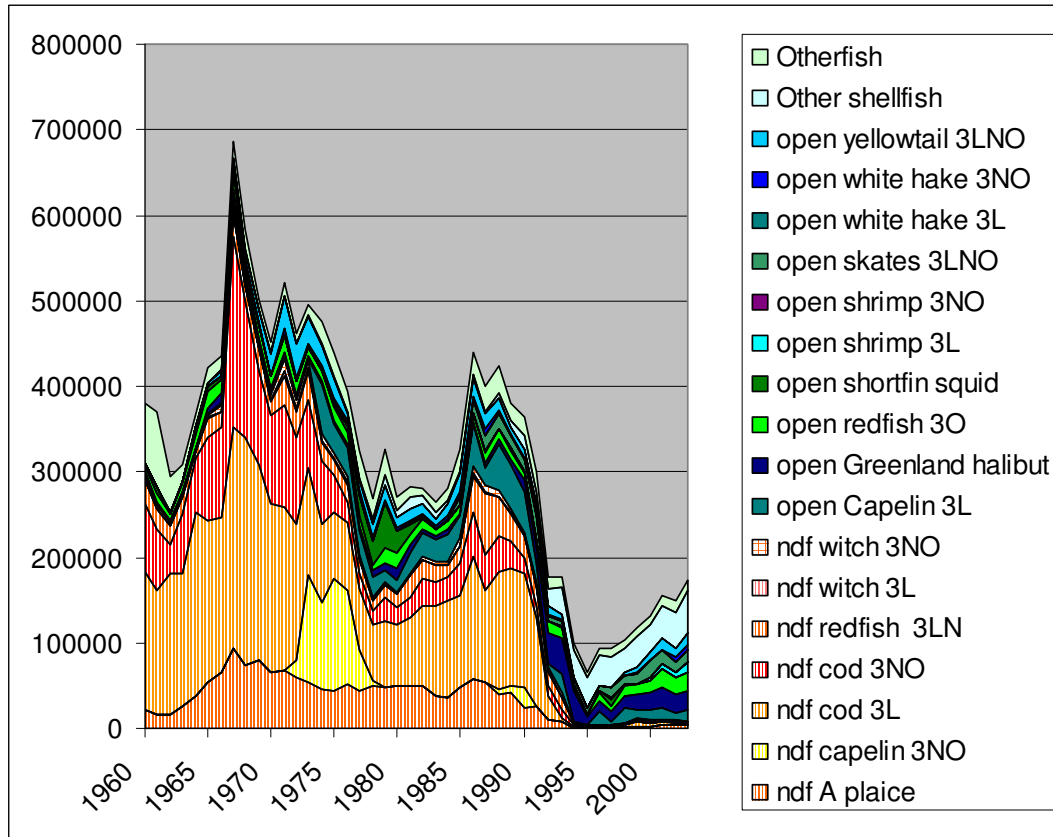
### 4.1 CHANGES IN STATUS OF THE STOCKS

**The groundfish resources of the Grand Banks, with the exception of yellowtail flounder, have been decimated; reduced to levels that may not be reversible. There can be no doubt that this has been due to excessive fishing, whether legal or illegal inside Canada’s zone and beyond it on the high seas.**

For several centuries these groundfish fisheries supported hook and line fishing from France, Portugal and Spain, as well as from New England, Nova Scotia and Newfoundland. With the introduction of the otter trawl, factory vessels and the expansion of the fisheries after WW II, catches increased to a peak of about 700,000 mt. in 1969, as shown in Figure 1 below (Pope, 2005).



**Figure 4.1 Total catches in Sub-Divisions 3LNO**



ndf = no directed fishery

As declines in biomass resulted, total allowable catches and quota sharing were introduced in an attempt at conservation. These initiatives were generally too little, too late. Meanwhile, the international management regime was ineffective in enforcing quotas and the inevitable result was the decline of stock abundance and fishing success, to a point where NAFO eventually imposed moratoria on some fisheries. The reduced fishing success has meant that European-based fisheries now appear to be viable only by fishing outside the regulatory framework and/or by relying on considerable subsidies (O’Rielly, 2005). Directed fisheries for some species are conducted essentially to get the permitted amount of bycatch of more desirable species which are closed to directed fishing.

**Harvesting records show that catches increased up to 1969 as fishing intensity grew and the large standing biomasses were fished down. Stocks then declined until 1977 when extension of the Canadian zone reduced foreign fishing effort and allowed some recovery of stocks in a period of apparently high productivity. This recovery, however, ended abruptly as fishing pressure increased again and the oceanographic regime became less productive after**

**the mid 1980s. Although the harsh temperature regime seems to have ameliorated after the mid 1990s, the combination of heavy fishing in the late 1980s and poor productivity had reduced many stocks to low levels of spawning biomass. Lack of spawning stock seems to have been sufficient to reduce recruitment even when oceanographic conditions returned to more normal states during the late 1990s. High levels of by-catch mortality have also hampered recovery in some cases. It is also possible that poor productivity continues in some stocks because of an apparent lack of capelin, which is the predominant forage fish for species such as cod.**

There are a few exceptions to this general scenario. The Greenland halibut fishery increased in the 1990s, but was based on good year-classes spawned during the 1980s, which are now largely fished out. This species is subject to what is called a "recovery program" that, on current analysis, seems unlikely to achieve its objectives. Redfish fisheries are also based upon year classes spawned before the cold period. The fisheries on skates and white hake seem also to be on potentially vulnerable species.

Yellowtail flounder does seem to have recovered from a depressed state in the early 1990s. It increased after a moratorium and is currently considered to be at recovered stock levels. The fishery for yellowtail flounder takes place almost entirely within 200 miles and the allocations are more than 90 per cent Canadian. Shrimp in 3L is a new and increasing stock. These latter two species feed on small benthic organisms and may have benefited from the reduction of predation by species such as cod and American plaice. The status of 3NO capelin is uncertain but it is generally thought to be depressed and does not appear to have benefited from the current reduction in predation and a closed fishery.

A number of the NAFO straddling stocks are collapsed and currently under moratorium. Similar collapses were observed in adjacent areas. This suggests that they were caused by a wide scale phenomenon. Fishing effort, water temperature and seal predation all act over wide geographical areas. **It is likely that the former harvest levels applied to these stocks were always unsustainable and that the resulting problems came suddenly to a head in the late 1980s.** It is worth noting in this respect that a number of East Atlantic stocks were in poor shape at about the same time.

While fishing fleets are more constrained than they once were, the technology which fuels increased efficiency is universal. It is thus not entirely unreasonable to imagine that harvest levels in the whole North Atlantic have been creeping higher. Moreover, high harvest rates have now had a long period to grind stocks down since the enforced rest many fish stocks had

during WW II. Hence, fishing pressure may have brought many stocks close to the edge of the cliff. However, given the similar time frame of the collapses in the Northwest Atlantic during the early 1990s, it does seem more likely that the final push over the cliff edge was delivered by an environmental or ecosystem change. Thus it seems that the combination of harvest rates, that appeared sustainable in the more productive 1970s and early '80s, proved not so in the unproductive 1990s. By the time this was realised and acted upon the stocks were well down the cliff. The difficulty of reducing TACs fast enough to stabilize, let alone reduce harvest rates, then came in to play.

## 4.2 THE SPECIAL CASE OF NORTHERN COD

The northern cod stock consisted of a large biomass that inhabited the area from mid-Labrador to the northern Grand Banks. The stock was migratory (mainly onshore in a feeding migration, offshore for spawning) with a generalized east/west migratory pattern overlaid by a weaker north/south one. The post WWII fisheries built to a peak catch of some 800,000 tonnes in 1968. In hindsight (stock assessment methodology and data at the time were inadequate), this level of catch was far above what the stock could sustain (perhaps by a factor of 3). In any case, total allowable catch regimes were not in place at that time. **Subsequent analyses pinpoint the fisheries of the late 1960s as the key to the eventual near disappearance of this stock. It reached a very low level, recovered slightly in the late 1970s and early '80s because of Canadian management actions and collapsed completely during the 1990s. In retrospect, all annual allowable catches have been proven to have been set too high.**

The ultimate collapse appears to have resulted from a combination of low abundance, adverse environmental conditions and unregulated fishing at a very high level relative to the existing stock size. Fishing outside 200 miles in the late 1980s played a significant part in the decline of the northern cod (some 207,000 mt were reported to NAFO by the EEC from 1986 to 1991 (Parsons, 2005)), but cessation of fishing in this area will not by itself result in rebuilding. The northern cod stock is so low in abundance now that only a total cessation of fishing for the foreseeable future provides any hope for rebuilding.

## 4.3 DEVELOPMENTS IN FISHERIES SCIENCE

The stock assessment methodology developed and used by NAFO scientists in the Scientific Council is identical to that used at other international fisheries

advisory bodies such as ICES, ICCAT and FAO. New developments in the mathematical and statistical analysis of fisheries information have been reviewed by NAFO's Scientific Council, discussed and used for the assessment of the stocks when appropriate. Alternative assessment models have been run in parallel in order to compare outputs and examine sensitivities to different assumptions, a procedure commonly used in other arenas.

The development of mathematical models for reconstructing historic populations from catch data began in the 1960s and '70s. The stock assessment process is a trade-off between modelling noisy (or hard to interpret) data from surveys and potentially biased information from commercial sources.

Two "schools" of computer-based stock assessment model development arose during the 1970s, located in Europe and North America. The European school developed simple algorithmic approaches for estimating parameters. The methods provided approximations to mathematical solutions and the parameters and their standard errors that were considered sufficiently close to manage stocks. In North America more "formal" statistical approaches were developed that provided more refined estimates. However, the algorithmic approaches could be run in an hour on the computers available at that time, whereas the statistical approaches could take days.

The two approaches have been tested against each other and against simulated data in numerous "shootouts" within the scientific literature. There have been subsequent refinements and the development of new algorithms with the advent of greater computing power. These developments have refined rather than dramatically changed the original programmes; and the older methods, used by NAFO in the 1970s and '80s, could still be applied today. Given good data to model, the models are equally as efficient for providing management advice and both are still in use today. As the quality of the data deteriorates, in terms of random noise, the statistical methods are slightly more robust but it is not a major difference.

NAFO scientists have followed the North American "school" in adopting the statistical model for fitting stock assessments, but have also run the algorithmic approaches for comparison. Assessment methodology workshops have been held to introduce the assessment scientists to new approaches and the practitioners have kept up with methodological developments. The history of modelling and analysis within NAFO scientific meetings matches any of the other international fisheries bodies. Unfortunately, the quality of the data to be analysed does not meet the same high standards.

#### **4.4 APPLICATION OF ECOSYSTEM APPROACHES**

The concept of Ecosystem Based Fisheries Management (EBFM) is still an idea in its infancy. Often it seems to be advocating not much more than “good management” that is precautionary, consensual and adaptive. Applied to the Grand Banks ecosystem and the NAFO straddling stocks, the ecosystem functions that most obviously need restoring are:

- the link that capelin provide between the pelagic and the demersal systems; and
- the predation control that cod likely exerted on the demersal fish ecosystem when it was present in abundance.

Some of the changes in the system might partly result from the apparent lack of capelin or other oily forage fish (e.g. the poor growth and condition of cod and of American plaice) while the expansion of shrimp and of yellowtail might be partly the result of reduced predation pressure. It is also possible that the increased abundance of seals results from their being competitors with cod for small fish prey. Certainly then, EBFM would advocate the restoration of the moratorium species with particular emphasis on capelin and cod. Capelin in 3NO appears to be at low biomass levels compared to the past, although the lack of acoustic surveys on this species makes this difficult to establish.

A more general idea might be to re-establish the traditional feeding pyramid of this area. In other heavily eroded systems, such as the North Sea, there was a tendency for the large predatory fish to become greatly reduced in abundance. Smaller (and often less valued species, for example dab (a relative of yellowtail flounder) and gurnards (sea robins) seemed to have flourished in their absence. It may be that the development of a gauntlet of smaller species that the young of larger species have to run may put an additional brake on the recruitment of larger species. Hence, there may be a need to arrange fishing mortality so that larger species remain very lightly fished until the pyramid is re-established.

#### **4.5 PROSPECTS FOR FUTURE BENEFITS FROM STOCK RECOVERY**

The once prolific Grand Banks ecosystem has been altered in ways that may be irreversible. It may not be possible to restore it to the conditions of 25 or 30 years ago, when it was probably fully exploited, but still “balanced”, at least in terms of relative abundance of species. The attempt to maximize production from all fisheries simultaneously through single species management models almost certainly cannot be achieved. Meanwhile, the

knowledge to manage single species fisheries in ways that minimize the possibility of irreversible changes to the system as a whole does not exist.

Environmental factors are critical in the Grand Banks ecosystem. A number of these straddling stocks are at the cold end of their geographic range in this area. Growth rates are generally slow compared to those achieved elsewhere. Hence, good management of this area needs to restrict harvests to small proportions of large standing stocks. This clearly did not happen in the past and the recovery process, if there is to be one, will inevitably take a long time to achieve. This need for low harvest rates makes the tasks of science and management more complicated. Harvesters are always tempted by the existence of any stocks that they can still catch. Scientists find it more difficult to give absolute stock estimates when harvest rates are low. Managers (particularly those familiar with warmer systems with higher turnover rates) may not always fully appreciate the need for restraint.

The system appears to be subject to environmental changes over sufficiently long periods (something like a decade) that do not average out over the lifecycle of the important fish stocks in the area. In times of poor productivity harvest rates have to be even lower; it would also seem important to enter a lean period with high stock sizes to buffer the effects of low productivity. Since lean years cannot yet be predicted with any certainty good management of this area has to allow for the possibility of a series of lean years and make provision for these in the fat years. As well, in poor years, stocks become concentrated in the reduced areas of favourable temperature and are then more vulnerable to fishing and by-catch just when they are least able to sustain it. Clearly, there is a need to better understand the effect of the marine climate on fish stocks and to develop management that is tuned to climate variation.

**Traditionally, cod and capelin dominated the Grand Banks fish ecosystem. Capelin was a major food source for a number of other species while cod was a major predator. The low level of both species in the area is a major disruption to the fish ecosystem and consequences to other stocks may flow from this. Seals are also an important predator and need to be considered in any ecosystem plan. Currently, multi-species effects in this area are not well understood.**

## 4.6 NECESSARY MEASURES

### The Precautionary Approach

The major task of precautionary management for the NRA straddling stocks is the recovery of the depleted stocks. This should certainly include recovery of the once important 3NO cod and 3LNO American plaice stocks. Their recovery has not been addressed by NAFO but will clearly need very robust measures to deter by-catch if this goal is to be achieved. **Currently, they are suffering from by-catch generated exploitation rates that might be considered too high even if these stocks were fully recovered.** Shelton and Morgan (2004) find there to be little chance of these stocks reaching their limit reference points for spawning stock biomass by 2020, unless by-catch induced fishing mortality rate is reduced substantially from its recent average.

The fisheries for Greenland halibut, yellowtail flounder and skates are major contributors to the by-catch problem that is driving this decline. Despite this, very little in the way of precaution seems to have been applied to the management of these open fisheries. As a result, some of these fisheries (e.g. Greenland halibut) now appear to be suffering and need a recovery plan, while others (e.g. the skate fishery) seem predestined to suffer in the future due to an exploitation rate which is unlikely to prove sustainable. Moreover, there seems to have been no clear action to prevent the evident undesirable by-catch fishing mortality that these fisheries have imposed on moratorium stocks or to propose additional measures that might mitigate by-catch.

The impoverished state of the stocks in 3LNO and the other evidence strongly suggests that harvest rates during the historic period were too high and spawning stocks too depressed to allow them to cope with environmental change when it occurred. The important thing is to learn from these past mistakes. Subsequent management does not seem to have fully learned these lessons, as high exploitation rates are allowed on the available stocks and quite high by-catch mortality goes unchecked on important moratorium stocks such as the 3NO cod and the 3LNO American plaice. Hence, before going forward, it will be necessary for everyone involved to recognise that the present management has, for the most part, failed to forward the goal of stock rebuilding or even the adequate conservation of all of the open fisheries. **It must be realised that the catches of the 1960-1980s were a binge, financed by spending the capital of the fish stocks rather than by the interest they could provide. The fisheries of this area cannot support now, nor in the future, fishing effort or employment at levels seen in the past. There is a need to recognise that a more robust and risk adverse approach is needed in fisheries science and management. It**

**is also necessary for everyone involved to recognise the lengthy time frame involved in recovery and that its timing is highly dependent on the future environment. Without the recognition of these problems, it is likely scientific advice will continue to measure a continual decline.**

### By-catch Reductions

Relatively high fishing mortality levels on the remaining fisheries on the NAFO straddling stocks suggest that fishing capacity in this area is still too high and needs to be substantially decreased if the pressure on stocks and management is to be reduced. Moreover, the existence of high levels of by-catch mortality on some moratorium species indicates that, at best, the by-catch rules are failing to protect these species and at the worst they are providing the cover for what are, in reality, directed fisheries on moratorium stocks. There seem to be few rules to protect what may be sensitive habitat or to protect stocks at time when they are most vulnerable to fishing (e.g. spawning aggregations). Rather stringent fishing effort limits and closed areas/closed seasons might help. These have been proposed as ways of limiting fishing mortality, reducing by-catch and providing refugia. Another possibility that might be considered would be a second tier TAC. Such a measure was used on Georges Bank in the 1970s to try to reduce by-catch problems. However, given doubts about utility of the TACs now used, this might not be effective in the NAFO area. Another possibility is simply to close all fisheries when strict by-catch limits are exceeded.

### Eliminating Overcapacity in Fleets

Clearly, there is over-capacity in most fleets fishing in the 3LNO area. Reductions in fleet size would readily ease the management problem. The problems with applying effort management tend to be those of agreeing on the percentage reduction appropriate to each fleet. Unless this is an arbitrary choice (e.g., halve all fleets), then effective ways are needed for comparing the current capacity of each fleet to what is required. Hence, the scientific challenge is to develop effective and agreed ways of measuring the fishing effort that is applied by different gears to different mixes of species.

Technological progress is generally thought to have improved fishing vessel efficiency by at least 2% per year during the whole of the 20th Century. Similar increases in fishing vessel efficiency seem likely to continue for a while yet. Moreover, imposing effort controls would certainly create pressures to improve catching efficiency. Thus, any effort management approach would



need to anticipate the need to make further cuts as catching efficiency increased. Measuring the increases in effort efficiency that would follow an effort restriction would need to be given a high scientific priority.

**The Panel draws two conclusions from this survey of the biological and ecosystem state of the Grand Banks. The first is that the management measures adopted by NAFO have been generally insufficient to prevent stock decimation or to initiate any effective recovery regime. The second is that inadequate knowledge exists as to the requirements for a proper ecosystem approach to management of these once lucrative fish stocks.**

**A more modern sustainability-based approach to management of this ecosystem ought to be adopted by NAFO, or by a replacement RFMO. A scientific review of Grand Banks fisheries management in an ecosystem context is urgently needed. Its objective should be to define conservative management practices designed to restore and preserve this unique system. The review should contemplate the possibility of low or no fishing for some species and such other measures as may be necessary to achieve this.**

## 5. THE LEGAL FRAMEWORK

A fuller appreciation of the overall international legal framework and associated supporting instruments are central to understanding straddling stocks management problems. This requires a review of the various factors involved in this global problem. The law of the sea and related arrangements and initiatives represent both the obstacles to, and the opportunities for, an acceptable solution.

The last 50 years have seen a series of significant developments in the international legal framework under which oceanic fisheries are managed. The most significant of these are the various provisions contained in the *United Nations Convention on Law of the Sea* (1982 LOS Convention). Additional measures were formulated in the *United Nations Agreement on Management of Straddling and Highly Migratory Fish Stocks* (UNFA, signed in 1995). A number of FAO initiatives have produced other agreements to increase the attention states give to the continuing problems of managing fish stocks that are fished, in whole or in part, in international waters. A number of other conventions and declarations also address the issue of overfishing directly or indirectly. Notwithstanding these developments, there is a lack of real progress in achieving improved conservation and sustainable use of fish resources. This lack of progress has raised the global awareness and interest in ocean conservation issues, especially in the past few years.

### 5.1 LAW OF THE SEA

Up until the middle of the 1970s, coastal states exercised jurisdiction over fisheries in only a narrow zone of water called the territorial sea which generally did not exceed twelve nautical miles.

The coastal state could regulate fisheries within its territorial sea and its domestic fisheries legislation could be applied fully to any person engaged in fishing in its territorial sea. However, more than 90 percent of the world's commercially valuable fish stocks fell not under the regime of the territorial seas of coastal states, but rather under the regime of the high seas. On the high seas, customary international law recognized the freedom of fishing. All states were free to fish and no state could interfere with any vessel other than those vessels flying its flag. A state could enforce its fisheries regulations against its own flag state vessels on the high seas, but not against a foreign vessel. In 1974 the International Court of Justice in the **Fisheries Jurisdiction Case (Merits), United Kingdom v. Iceland** (I.C.J. Reports,

1974, p. 3), recognized certain preferential rights of the coastal state in areas of the high seas adjacent to its coast in circumstances where the population of the coastal state was particularly dependent on fishing for their livelihood, but did not recognize the validity of an exclusive fisheries zone of any specified breadth.

In 1958 the First United Nations Conference on the Law of the Sea (UNCLOS I) adopted the ***Convention on Fishing and Conservation of the Living Resources of the High Seas***. This Convention embodied the principle of conservation and recognized, in Article 6, paragraph 1, that a coastal state has a special interest in the living resources in any area of the high seas adjacent to its territorial sea, but the content of this special interest was very limited. Article 7 of the Convention allowed coastal states to unilaterally adopt conservation measures in any area of high seas adjacent to its territorial sea, but only if: negotiation with other states concerned had not led to an agreement within six months; there was an urgent need for such measures; the measures were based on scientific findings; and they did not discriminate in form or fact against foreign fishermen. Furthermore, the Convention did not permit the coastal state to enforce such conservation measures directly against foreign vessels on the high seas. Thus, it did not overcome the drawbacks of the high seas regime, provided little incentive for coastal states to act unilaterally, and was largely ineffective for conservation purposes.

As Albert Koers explains, “from the point of view of conservation, freedom of fishing is a questionable concept. Essentially it allows States not only to fish, but also to overfish”.<sup>2</sup> In addition to overfishing, another common consequence of freedom of fishing on the high seas was that more vessels engaged in fishing than was economically justifiable, with the result that fishing was carried on at a level which was economically inefficient. Another drawback of the pre-mid 1970s law was that the freedom of access of all states to the fish stocks of the high seas clearly benefited most those states that had the capital and technology to take advantage of it, that is, in the main, developed distant water fishing nations.

In order to try to overcome some of the drawbacks of flag state jurisdiction on the high seas and narrow coastal state jurisdiction, some twenty or more international fisheries organizations emerged, most of them after 1945. As Koers points out, these organizations “differed greatly from one another in their terms of reference, their powers and their accomplishments”. However, one thing they all had in common was that they did not attempt to change the basic nature of jurisdiction enjoyed by coastal states and flag states or the distribution of enforcement jurisdiction between them.

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<sup>2</sup> Koers, 1973, p. 77.

In 1960, another attempt at UNCLOS II to reach agreement on establishing an increased breadth for the territorial sea of coastal states failed. By the middle of the 1970s there was considerable dissatisfaction with the regime for fisheries which international fisheries law had established. Most developing coastal states were resentful of the fact that the vessels of distant developed states, equipped with the latest technology, were catching fish relatively short distances away from their coasts. Even if the states did not have adequate vessels of their own to fish the waters off their shores, they wanted to be able to control the activities of foreign fishers and to be able to obtain some revenue through licence fees and to gain access to technological know-how. At the same time, coastal states like Canada were not happy with the existing regime because they wanted greater access to and control over offshore fishery resources. Further, they were also skeptical of the ability of international fisheries commissions, such as the International Commission for the Northwest Atlantic Fisheries (ICNAF), to effectively regulate fishing in the face of the increasing pressure on stocks resulting from more intensive methods of fishing. Many coastal states, therefore, seized the opportunity presented by the decision to convene the Third United Nations Conference on the law of the sea (UNCLOS III) to press for revolutionary changes in the international legal regime governing fisheries.

UNCLOS III was officially opened in New York on December 3, 1973. After nine years of negotiation, the Conference adopted the 1982 Convention on the Law of the Sea (1982 LOS Convention). The Convention came into force on November 16, 1994, but even before it came into force it was regarded as representing the best available evidence of the present state of customary international law on most matters relating to the oceans and their resources, because of the widespread adoption of its provisions in the practice of states.

The 1982 LOS Convention reaffirms the sovereignty of coastal states over their internal waters and territorial sea and their sovereign rights over the continental shelf. **As a consequence, a coastal state has the exclusive right to exploit all living marine resources within its internal waters and territorial sea and the exclusive right to explore and exploit sedentary species of the continental shelf within 200 miles and beyond.** Article 77 of the new Convention, which relates to the continental shelf provides:

The natural resources referred to in this Part consist of the mineral and other non-living resources of the sea-bed and subsoil together with living organisms belonging to sedentary species, that is to say, organisms which, at the harvestable stage, either are immobile on or under the sea-bed or are unable

to move except in constant physical contact with the sea-bed or the subsoil.

The Convention also establishes an exclusive economic zone (EEZ) extending seaward beyond the limits of the territorial sea. It institutes a special regime for anadromous and catadromous species and recognizes the special interest of coastal states of origin or destination over those species.

The Convention resulted in a revolutionary change with respect to the law of fisheries and jurisdiction over living resources. Whereas areas under national jurisdiction were, for a long time, only constituted by the narrow strip of water adjacent to the coast that formed the territorial sea, the new regime, by according coastal states sovereign rights for the purposes of exploring, exploiting, managing and conserving living resources within 200 nautical miles of their coasts, brought under the jurisdiction of coastal states more than half of the total areas of the world's oceans and seas. At the same time, more than 90 percent of the world's marine living resources came under the jurisdiction of coastal states. As a consequence, coastal states now enjoy a monopoly over the exploitation, management and conservation of living resources in their jurisdiction, as well as over scientific research concerning these resources. They can, under articles 61-62 of the Convention, establish the total allowable catch for all stocks occurring in their area of jurisdiction, determine their own harvesting capacity and allocate any surplus to other states. If they allow other states to fish in their EEZ, they are entitled to regulate the fishery and enforce these regulations.

As a corollary to these rights, coastal states have the obligation under article 61 to conserve and manage resources under their jurisdiction and under article 63 to co-operate with other states in the conservation and management of shared stocks.

Given the fact that more than 90 percent of the world fisheries resources now fall under the jurisdiction of coastal states like Canada, one might have thought that any concerns which Canada had about the conservation of the fishery resources in the waters adjacent to its shores under the pre-mid 1970s law, or about the inability of an international organization like ICNAF to assist in the conservation of those resources, would now be eliminated. However, as noted earlier, several fish stocks which are crucial to the livelihood of Canada's fishing industry either straddle the boundary between Canada's 200 nautical mile zone and the high seas, or remain outside its 200 mile zone.

With respect to the high seas, although the area of the high seas has been greatly reduced, the 1982 LOS Convention still retains the same basic

framework that existed under the pre-mid 1970s law. The high seas are defined in article 86 as all parts of the sea that are not included in the EEZ, in the territorial sea or in the internal waters of a state, or in the archipelagic waters of an archipelagic state. The high seas are open to all states. Freedom of the high seas still includes the freedom of fishing and enforcement on the high seas is still based on the principle of flag state jurisdiction. Accordingly, all the problems which existed under the pre-mid 1970s regime as a consequence of high seas regime still remain under the new regime as far as the exploitation, management and conservation of high seas fisheries resources are concerned.

The 1982 Convention recognizes the importance of co-operation between coastal states and other fishing states wherever several states are engaged in the exploitation of the same stock. Article 63(2) provides that the coastal state and the states fishing for stocks occurring within the EEZ of the coastal state, and in an area beyond and adjacent to it, shall seek to agree upon the measures necessary for the conservation of these stocks in the adjacent area. In the case of the Northwest Atlantic where this straddling stock situation exists, Article 63(2) might be said to impose a duty on Canada, as the coastal state, to negotiate cooperative arrangements with an organization like NAFO, under whose auspices fishing in adjacent areas is brought under some degree of international management control. However, this provision does not purport to specify the scope or nature of arrangements to be negotiated.

As Juda (2001) notes, this article merely obligates states to “seek” agreement for management of such stocks but does not give coastal states any right to take unilateral action against high seas fishing adjacent to its EEZ. The underlying assumption that coastal states and distant-water fishing nations have a common interest in, and will agree on, conservation methods has proved false.

Article 118 requires states involved in the exploitation of high seas fisheries to cooperate in the management and conservation of those resources. More specifically, states whose nations exploit identical resources, or different resources in the same area, must enter into negotiations with a view to adopting the means necessary for the conservation of the resources concerned. This provision might be said to impose on states involved in fishing on the high seas of the Northwest Atlantic a duty to negotiate a convention establishing an organization, such as NAFO, as a means of facilitating cooperation in the conservation of the fisheries resources of the high seas.

The convention does not specifically provide for the establishment of new international organizations as a vehicle to facilitate such cooperation.

Instead, it relies either on existing organizations or on organizations to be created in the future, to deal with all those aspects of conservation of living resources where international co-operation is essential. No detailed indications are given on such matters as the competence, functions or financing of these organizations. Decisions on these matters are left to the states concerned at the time that individual agreements are negotiated.

The law and practice relating to fishing on the high seas (i.e. outside EEZs) that developed from UNCLOS III has remained largely unsatisfactory. While the creation of 200 mile EEZs reduced the size of the high seas, it still left large expanses of ocean and the fish species found in them under no-one's control and largely unprotected from excessive fishing, in spite of efforts to the contrary. In fact, harvesting in areas adjacent to most coastal states has continued largely unabated while high seas fishing has also increased. **"The boundaries of the EEZ are politically rather than ecologically determined; that is, they represent political decisions but fail to encompass the entire ecosystem that sustains the living resources and mark the limits of their migration"** (Juda, 2001). As well, the vague and often ambiguous UNCLOS III provisions for management of straddling stocks and highly migratory species are weak and difficult to enforce. In summary, the Law of the Sea as it applies to marine living resources has variable relevance to the "Laws of Nature" and, consequently, little effective application for the management of straddling stocks.

The general result of UNCLOS III in terms of high seas fishing is summarized by Munro et. al., as a classic case of the international duty to cooperate being "the duty to notify, to consult and to negotiate" but not including the duty to reach an agreement so long as the negotiation was carried out in good faith (Munro, et. al., 2004) . "Possibly its greatest shortcoming is its heavy reliance on flag states for enforcement of environmental and maritime protection provisions, when it has become evident that some flag states have neither the capacity nor the intention of exercising that control" (Riggs, et. al., 2003).

Dissatisfaction with this non-obligatory and "best efforts to agree" approach increased during the 1980s and especially during the early 1990s. Distant water fishing nations continued to increase pressures on fish resources on a worldwide basis. The level of illegal, unregulated and unreported (IUU) fishing grew, since the global commons outside 200 miles remained open to all. This growing disillusionment led to a variety of attempts to find solutions to the global problem of overfishing. The most significant of these was the 1995 UN Agreement on the Management of Straddling and Highly Migratory Fish Stocks (commonly referred to as UNFA).

## 5.2 UNFA

The 1992 FAO Cancùn Conference on Responsible Fisheries, hosted by the government of Mexico, provided the impetus for the 1992 U.N. Conference on Environment and Development (UNCED), or "Earth Summit". The latter, in turn, led to the convening of the UN conference in 1993 that resulted in UNFA.

This Agreement, which was developed to more effectively implement the fisheries management provisions of UNCLOS III, represents the latest in the development of "hard law" in respect of fisheries outside EEZs. The various "soft law" developments of the last decade or so will be reviewed later in this section.

The intention of UNFA was to advance the state of accepted international law as it applied to the management of fisheries on stocks that straddle national EEZs and also those that roam the world's oceans after passing through some EEZs. Some (Zackrisson and Meason, 1997) claim that these negotiations, which began in 1993, would not have succeeded had it not been for Canada's actions in the "turbot war" of early 1995. This is claimed to have focused international attention on these issues and led to an agreement that favoured conservation efforts. On December 4, 1995, the new UN agreement on the conservation and management of straddling and highly migratory fish stocks was opened for signature. Following Malta's accession as the thirtieth state party, the UNFA came into force on December 11, 2002. Canada, a strong supporter, had already ratified the agreement on August 3, 1999.

The Agreement goes beyond UNCLOS III and calls on states to adopt measures **to ensure the long-term sustainability** of straddling stocks and highly migratory species through a series of measures. The more relevant of these include: the establishment of regional fisheries management organizations; a right to board, inspect, seize, and prosecute fishing vessels for high seas violations under special conditions; exclusion of non-members and those not following regional standards from "access to the fishing resources to which those measures apply"; options for compulsory and binding third-party dispute settlement arrangements; and the use of the precautionary principle in setting conservation measures.

The particular provision for enforcement on the high seas by the coastal state (or any other RFMO member) has been described as follows: "When violations are detected, evidence is to be secured and the flag state promptly notified. The flag state is then obligated within three working days to respond, indicating that it will take enforcement action itself, keeping the inspecting state informed, or it is to authorize the inspecting state to take such action while keeping the flag state informed" (Juda 2001). The follow-up action



could include the flag state's agreeing that its vessel is brought to a port for further investigation. However, the flag state can request that the vessel be released to its control at any point in the proceedings. There is no provision for the inspecting state to lay charges for offences committed outside its zone.

This provision could be argued to be more a statement of existing flag state supremacy over its vessels than any enlargement of enforcement powers for coastal states. Johnston, et. al., (2003) assert that: "The usefulness of these provisions (on enforcement by non-flag states) lies in the deterrent effect of the possibility of taking a fishing vessel from the fishing grounds for an undefined period". They also point out a potential problem with adopting UNFA enforcement provisions may exist when a RFMO is deemed to have an effective "alternative mechanism" in place. This may provide grounds for limiting the UNFA provisions but not for their complete exclusion.

Considerable hopes have been placed on UNFA; it is considered by many to be a very progressive international instrument. Nonetheless, it is still a very young and essentially untried international convention. By 2004, it had been ratified by 52 countries compared to the 148 that have accepted the Law of the Sea Convention itself. Only three of the 13 NAFO Contracting Parties have not ratified UNFA. Still, it has not been implemented to any significant degree or even seriously tested by state and regional fishery practices. It is already obvious that effective implementation of the agreement will require cooperative positions to be adopted by states and translated through their similar participation in RFMOs. In this context, the reservation filed by the EU when it ratified UNFA stresses the supremacy of its member flag states for control of their vessels, as compared to the more general policy competencies of the Union itself. **This clearly indicates that co-operation on enforcement cannot be guaranteed in implementing the provisions of the Agreement in any arena in which the EU is involved.**

In the final analysis, RFMOs are the organizations that must bring about any beneficial results that may be possible under UNFA, unless or until state practice or a new law of the sea agreement creates some as yet unaccepted increased powers or rights of coastal states. In essence then, UNFA is an attempt to remedy certain shortcomings of UNCLOS III in relation to straddling stocks and to facilitate implementation of modern principles and measures for sustainable use of fish resources. It proposes significant new principles of sustainable development and international fisheries management and conservation. Some of the more important of these more modern concepts include: the objective of long-term sustainability and optimum utilization; the precautionary approach; protection of biodiversity and the prevention or elimination of over-fishing and excess fishing capacity (Johnston, et. al., 2003). These notions are departures from the concept of

the inexhaustibility of the oceans which pervaded law of the sea agreements up to and including UNCLOS III. However, the slowness and the restricted extent of the acceptance and utilisation of these more rational principles indicates that there is no sense of urgency in all too many situations.

### 5.3 AGREEMENTS, CODES and DECLARATIONS

In addition to these “hard law” conventions for management of fisheries, a number of other supporting initiatives have emerged over the last decade or so. These all contribute to moving the concept of ocean governance away from the traditional mode of freedom of the high seas for all uses (including fishing), away from the unfettered supremacy of the flag state, and away from the notion of the inexhaustibility of the oceans’ fish resources.

The first examples of these are two important instruments that the FAO achieved in 1993 and 1995 respectively: the ***Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas*** (The FAO Compliance Agreement) and the voluntary ***Code of Conduct for Responsible Fisheries*** (The FAO Code of Conduct).

#### The FAO Compliance Agreement

This new agreement specifies the responsibilities of a state for ships flying its flag when fishing on the high seas. It requires flag state authorization for such fishing and obligates a state to ensure that fishing by vessels under its flag does not undermine international conservation and management efforts. A state is not to allow the use of its flag unless it can effectively exercise its Compliance Agreement responsibilities. This requirement constitutes a response to problems associated with the re-flagging of fishing vessels under the flag of a state that is either unwilling or unable to enforce fisheries regulations (Juda, 2001). It is an integral component of the 1995 FAO Code of Conduct for Responsible Fisheries. The FAO Compliance Agreement entered into force on April 24, 2003, when the 25th country (Republic of Korea) deposited its instruments of acceptance. At the end of 2004, this treaty had been accepted by 29 nations; however, five of the 13 members of NAFO have not ratified it. It was the first international legally-binding instrument to deal directly with re-flagging and other Flag Of Convenience (FOC) issues, focussing on flag state compliance issues and in particular on strengthening flag state responsibility (Riggs, et. al., 2003).

## **The FAO Code of Conduct**

Concluded in 1995, this Code is a sweeping statement of principles and approaches intended to promote the sustainable use of world fisheries and addresses its technical, economic, ecological, legal, and management aspects (Juda, 2001). It has resulted in four International Plans of Action (IPOAs) to address specific issues raised by the Code of Conduct. These IPOAs deal with the management of fishing capacity, management of sharks, interaction between seabirds and longline fisheries and IUU fishing. FAO members are encouraged to implement these IPOAs through national plans of action. Progress by countries towards implementation has varied. The Compliance Agreement was described by the FAO to be an integral part of the Code. The Code is to be interpreted as consistent with UNCLOS III and UNFA but is voluntary or 'soft' law. Canada ratified the agreement on May 20, 1994, and has supplied the FOA with vessel information as required.

## **IPOA – Management of Fishing Capacity**

The International Plan of Action on Management of Fishing Capacity (IPOA-Capacity) was negotiated during 1998 and endorsed by the FAO Council in June, 1999. It is a voluntary agreement aimed at achieving a world-wide system for management of fishing capacity. The Plan outlines four major strategies for doing so:

1. Conducting assessments of capacity and improving the monitoring of fishing capacity;
2. National plans of capacity management and immediate actions where urgent measures are required;
3. Strengthening regional and global organizations and related mechanisms for improved management of fishing capacity;
4. Taking immediate actions for major transboundary, straddling, highly migratory and high seas fisheries requiring urgent measures.

## **IPOA on IUU Fishing (IPOA-IUU)**

The International Plan of Action on Illegal, Unregulated and Unreported Fishing (IPOA- IUU) was adopted by the FAO Committee on Fisheries (COFI) on March 2, 2001, and endorsed by the FAO Council on June 23, 2001. The objective of the IPOA-IUU is to prevent, deter and eliminate IUU fishing, and

to address the problem of FOCs particularly in relation to RFMOs. This Plan goes further and is more detailed than the Compliance Agreement by calling on States to take measures to ensure that their nationals do not support or engage in IUU fishing. However, it is still soft law and not legally binding.

As a matter of priority, states are encouraged to join the 1982 LOS Convention, the UNFA and the FAO Compliance Agreement; and are reminded to implement fully and effectively all relevant international fisheries instruments to which they already are a party. States are also expected to fully and effectively implement the Code of Conduct and its associated IPOAs. In addition, states, whose nationals participate in the high seas fisheries not regulated by a regional fisheries management organization, should fully implement their obligations under Part VII of the 1982 LOS Convention to take measures with respect to their nationals as may be necessary for the conservation of the living resources of the high seas. States are further encouraged to cooperate by exchanging information and to develop responses to deter IUU fishing (Riggs, et. al., 2003).

### **The High Seas Task Force**

The High Seas Task Force (HSTF) is an initiative of the Organization for Economic Cooperation and Development (OECD). The decision to form the Task Force was taken following a meeting of the OECD Round Table on Sustainable Development on June 6, 2003. The specific focus of that meeting was on minimizing IUU fishing on the high seas and providing for orderly management of high seas fisheries. The HSTF was launched on December 1, 2003, and its members include fisheries ministers from the United Kingdom, Australia, Canada, Chile, Namibia and New Zealand. The goal of the HSTF is to set priorities among a series of practical proposals for confronting the challenge of IUU fishing on the high seas. The end result is to be "a pragmatic and prioritized action plan that is both analytically sound and politically saleable and will act as a catalyzer" (OECD, 2004a). In addition to Ministers, other key stakeholders from NGOs, philanthropic foundations, institutes and business have been invited to join the Task Force. Members include the Earth Institute, IUCN-World Conservation Union, WWF International, and the Marine Stewardship Council.

At the first ministerial meeting on March 9 and 11, 2005, Task Force members discussed how to advance six priority areas which included: sharing intelligence and better coordination of monitoring, control and surveillance (MCS); developing a global register of high seas vessels; preparing guidelines on the performance of flag states regarding their high seas vessels; strengthening in-port measures and control over nationals; analyzing trade-

related measures; and RFMO-based initiatives and governance issues. The HSTF also made a presentation to the "Moving from Words to Actions" Conference held in St. John's, May 2005.

A number of other global conventions or declarations have emerged in recent years that signify a growing concern about and an increasing commitment to, improved management of the world's resources. In their own context, all these call on world governments to be more responsible in the use of natural resources. A short review of the particular ones that apply to fisheries follows.

### **The Johannesburg Plan of Implementation**

The 2002 World Summit on Sustainable Development (WSSD) adopted the Johannesburg Plan of Implementation. The plan sets deadlines for completing certain actions, including setting 2015 as the target date for the restoration of depleted fish stocks. Apart from providing goals for achieving certain outcomes, the plan presses the international community to move towards greater responsibility and sustainability in fisheries. The FAO is expected to play a key role in this process.

### **The Convention on Biological Diversity**

At the 1992 "Earth Summit" in Rio de Janeiro, world leaders agreed on a comprehensive strategy for "sustainable development". One of the key agreements adopted there was the Convention on Biological Diversity (CBD, 2004). Endorsed by the majority of the world's governments, this pact sets out commitments for maintaining the world's ecological underpinnings in the conducting of economic development. The Convention establishes three main goals: the conservation of biological diversity, the sustainable use of its components and the fair and equitable sharing of the benefits from the use of genetic resources (CBD, 2004). By 2002, this Convention had 188 parties including Canada that have accepted, acceded to, approved or ratified it. A Strategic Plan was adopted in 2002 to guide implementation of the Convention at the national, regional and global levels.

### **The Emergence of NGOs**

Non-governmental organizations have begun playing an increasing role in the area of oceans' governance. Some authorities have encouraged this as indicated by the following excerpt from the Report of the Workshop on the Implementation of the 1995 FAO Code of Conduct: "The Workshop considered

the role of NGOs in promoting the implementation of the Code of Conduct. Participants noted that most fishery administrations in the Pacific Islands took a positive stand with respect to NGOs and their involvement in the fisheries sector, encouraging their constructive engagement in review processes and decision-making. Participants expressed the view that policy, administrative and legislative frameworks should be reviewed and enhanced to ensure an appropriate level of participation by NGOs" (FAO 2003).

Some of the areas of interest being pursued by some NGOs is evident from the November 2003, *Summary Report Of The Global Conference On Oceans, Coasts, And Islands: Mobilizing For Implementation Of The Commitments Made At The 2002 World Summit On Sustainable Development* (Global Forum, 2003). These include interest in the following matters: Marine Protected Areas (MPA), Integrated Coastal Management (ICM), developing partnerships, focusing on biodiversity conservation, and the ecosystem approach.

#### 5.4 COMMENTARY

All of these initiatives are part and parcel of a growing interest in improving the governance of the high seas which includes addressing the problems of overfishing on straddling, highly migratory and discrete high seas stocks. In spite of all this, overfishing continues and fish resources are still declining. The reason is that much of the hard international law that applies outside 200 miles does not take account of ecosystem realities, relies on cooperative relations, continues to uphold freedom of fishing on the high seas (even when part of a RFMO regulatory area) and preserves the rights of flag states to be the final and sole controllers of their fleets and nationals.

**It appears to the Panel that the problems of management of straddling stocks on the Grand Banks centre on two sets of circumstances. The first is that while the currently accepted law of the sea obligates DWFNs to cooperate with coastal states in management of straddling stocks there is no real recourse if they do not actually do so. Secondly, in the absence of cooperation on conservation of such resources, the law of the sea simply reverts back to maintaining the supremacy of the flag state and the freedom of the high seas. The obligation to cooperate is easily thwarted by DWFNs through the simple resort of lax monitoring and surveillance of their fishing enterprises and haphazard and slow enforcement efforts.**

**The ineffectiveness of RFMOs in attaining conservation of straddling stocks is testimony to these inadequacies in the legal framework. As we will see later, when the RFMO itself is outdated and has not adopted any of the modern sustainability-based approaches in its fisheries management measures, the situation becomes even more frustrating and unacceptable.**

**Overall, the current law of the sea is not sufficiently informed by basic ocean science. The law of the sea evolves from diplomatic compromises rather than as a direct reflection of all the relevant scientific or biological facts. The result on the Grand Banks has been the delineation of an outer maritime boundary that results in very different legal regimes on each side, while the fish move freely back and forth across an artificial line. The cracks in law of the sea are papered over with words such as “special interest of the coastal state” or states “shall seek to agree”. These are weak obligations which are difficult to enforce and have little practical effect on conservation.**

**UNCLOS III provided for different legal regimes for certain species groups based on their biological/ecological characteristics. Thus, there are special provisions for anadromous and catadromous species and sedentary species. However, for coastal species, such as Grand Banks groundfish, the regime is the 200-mile limit. This is the least logical since it does not take account of the reality of species distribution (beyond the implicit assumption that 200 miles is enough). In the NAFO area, this has resulted in an abysmal failure of international management arrangements and a marine ecosystem catastrophe of epic proportions.**

**The most effective of these management regimes, from the perspective of coastal states, has proven to be that for sedentary species because these are subject to the exclusive jurisdiction of the state whose continental shelf they occupy. While groundfish are equally “creatures of the shelf” in every ecological sense, they are not in law. Here, the law of the sea and the law of nature are at odds.**

**Nevertheless, UNFA, the FAO Compliance Agreement, the FAO Code of Conduct, the International Plan of Action on Management of Fishing Capacity, the International Plan of Action on Illegal, Unregulated and Unreported Fishing, the High Seas Task Force, the Johannesburg Plan, and the Convention on Biological Diversity all provide evidence of increased international concern to put an end to**

**unsustainable fishing practices. These conventions, codes, and declarations suggest that the time is ripe for change and that the international community may be ready to support the creation of new and more effective RFMOs.**



## **6. ECONOMIC AND CULTURAL FACTORS**

There are commercial and economic aspects to the straddling stocks issue that influence the types and levels of overfishing, but also offer possible approaches to solutions. Many of these economic and commercial factors can have a direct and significant influence on the degree and persistence of overfishing. The social and cultural dimensions underpins the attachment to the past, present and future dependence on these Grand Banks fisheries.

### **6.1 ECONOMIC FACTORS**

Underlying commercial and economic factors shape the manner in which fishing is carried out and the degree to which it continues as a vibrant sector of the economy. For most fishing fleets, conservation does not pay in the short term as operating expenses have to be covered and capital investments need to be paid off sooner rather than later. If the normal market forces are distorted by financial intervention from the state, pressures to overexploit fish stocks are even greater.

The economic drivers of overfishing are simply those factors that determine whether a profit will be realised and the extent to which it can be maximised in the context of the existing management regime. The individual tendency in fisheries is for each enterprise operator to attempt those actions that maximise his net returns; to do otherwise means he will be out-done by someone else. This is the classic "tragedy of the commons" scenario that applies equally to the multi-nation case of the Northwest Atlantic straddling stocks fisheries as it does to a single species domestic fishery. This tendency to overexploit may be constrained if individual states have adopted behaviour-changing fisheries management measures such as Individual Transferable Quotas (ITQs), as compared to behaviour-restricting measures such as licence limitation or even open-entry.

Reaction to the actual regulatory arrangements can be exacerbated by the level of state financial intervention and other market-distorting measures, the general level and trends in market demand and prices, and the calculated likelihood of being apprehended and penalised. All of these influence the tendency to squeeze a little more out of available allocations or fishing times. It is a widely held view that the general tendency of any quota holder, individual, corporate or national, is to maximise the total returns that can be achieved from fishing any available allocation including misreporting, underreporting, discarding and high-grading. Only a few holders of NAFO allocations (e.g., Canada, Portugal and Iceland) are known to use ITQs to

allocate their national shares to fishing enterprises. Canadian ITQ holders are constrained in attempts to maximise results by domestic at-sea observers and mandatory dockside monitoring at the time of landing.

In this overall context, the following are some of the major forces that further drive overfishing generally and more particularly in the Northwest Atlantic. The factors that will be highlighted are among those also discussed in more detail in the OECD publication on IUU fishing: **"Fish Piracy: Combating Illegal, Unreported and Unregulated Fishing"** (OECD, 2004b).

### Over-Capacity of Fleets

One of the primary drivers of overfishing is the amount of national and global fishing capacity. The FAO has estimated the level of overcapacity in the world's fishing fleets to be at least 50 percent more than is needed to take current levels of harvests. This is the worldwide average; the level may be higher in the Northwest Atlantic because of the presence of one of the world's largest fishing nations in the NRA fishery and the numbers of vessels operating annually compared to available allocations. It has long been an accepted fact that the fishing capacity in EU countries is a source of major difficulty for the functioning of its Common Fisheries Policy (CFP). The accession of Spain and Portugal in 1986 severely added to this excess capacity problem. The addition of four other fishing nations since then certainly has not helped this situation. One of the results of this excess catching capability has been a clear and continuing policy by the EU to seek fishing opportunities in other areas of the world for its member fleets. One of these has been the Northwest Atlantic, which has been a traditional harvesting area for Spanish and Portuguese fishermen for some centuries. There are no real signs that the pressures to accommodate some of that fishing capability in the NRA has lessened. While national allocations and the numbers of vessels fishing there have decreased, newer and more efficient vessels are appearing on the scene.

The relative overcapacity of other countries' fleets in the NRA may not be as severe as that of the EU because other fleets are smaller and have benefited from replacement investment in recent years. This appears to be especially true of former Soviet bloc countries and of Russia. The latter may be about to begin to modernise its fishing fleet, which has deteriorated especially in the last decade or so. The recent objections by Iceland and the Faroe Islands to NAFO allocations of 3L shrimp are an indication that the equal sharing of that quota bears no resemblance to the relative levels of catching capability or fishing economics of NAFO members.

## Market Demand for Fish

The world supply of fish from capture fisheries has at best been stable for some time, while demand for fish as a healthy and wholesome food is increasing in virtually all parts of the world. The result is a tendency for the market price of fish to rise in direct relation to the reduction in supplies. This creates the obvious added incentive to maximise catches of those species most constrained by catch limits and outright fishing closures. In the case of the Northwest Atlantic this situation applies to almost all traditional groundfish species because allowable catches are well below historical levels and in most cases outright fishing moratoria apply.

Spain and Portugal have two of the highest levels of per capita consumption of fish amongst EU countries. The supply from their national fisheries has been declining and imports have been increasing with an upward pressure on domestic market prices. (A similar situation is repeated across most EU countries.) This is a favourable situation for any fishery for species in demand in those countries and would tend to increase the inclination to maximise catches.

## The Role of State Subsidies

The tendency to overfish also can be increased by the presence of operating or capital subsidies. These interventions make the costs of fishing lower than they would be otherwise, thus maintaining fishing effort in cases where normal market forces would not permit it to continue. The general result is that more vessels can afford to fish for longer periods and fleet reductions (which are clearly needed worldwide) do not occur.

Fishing subsidies in other NAFO member countries do not appear to approach those available in the EU, where, for some time, assistance has been available for various forms of fisheries adjustment, including support for vessel replacement and modernisation (Nerheim, 2004). These incentives have taken place under the Multi-Annual Guidance Program (MAGP) up to 2002 and continue to take place through the successor Financial Instrument for Fisheries Guidance (FIFG). Assistance to vessels over 400 tons ended in 2004 and is proposed to cease for all vessel replacement under the next assistance program, the European Fisheries Fund (EFF), beginning after FIFG ends in 2006. The financial assistance available under the CFP has been cited as the reason EU fisheries policies do not rate highly on the economic principles defined by the OECD (Nerheim, 2004). The recent first-time appearance of new EU member vessels in the NRA seems to confirm that these various forms of financial assistance (despite of being aimed at fleet reduction) have

resulted in the acquisition of new vessels for the NRA fishery. The EU also has a price support system for fishery products that maintains prices at stable levels in domestic markets. Individual member countries also provide a variety of specialized assistance including gear and fuel subsidies (ORCA, 2005).

This situation is in stark contrast to the current one in the Canadian Atlantic fishery. Capital and operating subsidies are now virtually extinct in the primary sector; stringent vessel replacement rules and individual harvest shares have reduced the Canadian Atlantic offshore groundfish fleet to a small fraction of its former size. Only one coastal cod stock around the Island of Newfoundland now supports a sizeable commercial fishery. There are now more deep-sea shrimp factory trawlers than large groundfish vessels in Newfoundland and Labrador (DFO, 2005b). The largest Atlantic Canadian offshore fishing company, FPI, accounts for approximately half the Canadian groundfish TAC and it has only six boats fishing for groundfish. No direct financial assistance is available for fish processing activities and various industry support mechanisms such as fisheries price support programs are of the distant past.

### **The Role of Opportunity Costs**

Capital invested in a fishing enterprise tends to be not easily, if at all, convertible into other uses. This non-malleability of capital means participants in fishing ventures tend to have fewer exit opportunities and movement to other activities is slow. When such capital investments have become "sunk", their prospects for use in other ventures are decreased as are the effective opportunity costs of the assets remaining in the fishery. This often explains the rigidity in fishing sectors and the long time-frames usually needed to achieve any significant adjustment to changing circumstances. Changes do occur but often over more protracted periods than in some other economic activities. When certain capital and operating costs are offset by any form of state assistance, the normal effects of opportunity costs are lessened and fishing activities continue at levels that would not normally occur.

When labour has few available alternative opportunities the real cost of remaining in an activity such as fishing is diminished with two consequences. The available pool of labour remains high with resulting pressures on authorities to maintain inefficient or over-capacitated fishing sectors. The other consequence is that labour costs for fishing enterprises are lower than they would otherwise be, thus slowing the reduction in operating levels as resources or markets decline. Some elements of both of these have no doubt played a role in most fisheries of the Northwest Atlantic. However, the recent

appearance of non-EU nationals in the crews of some vessels in the NRA suggests that opportunity costs in domestic labour markets may now be deterring entry into distant water fishing jobs and causing operators to look for lower cost labour in other countries. It may also signal a declining preference for distant water fishing employment; this is reported to be the case in Spain, in particular, where the economy has become more diversified since accession to the EU. Spain has received more EU regional development assistance than any other member state and most of this has gone to Galicia (Europa, 2004).

The groundfish fishery of the NRA is conducted generally by technologically efficient vessels operated by fishing enterprises, many of which are also international traders and investors. These produce seafood products that must compete in the changing global marketplace. The emergence of China as both a low cost processor of quality commodity fish products and a consumer of seafood has put new stresses on the conduct of wild fish harvesting and processing. On one hand, traditional western processors of commodity fish products are increasingly unable to compete against China's cost advantage in processing activities. On the other, the demand by China's processing capacity has raised world costs of raw material. One of the reactions to these dynamics has been to engage in production of more market-ready products at sea rather than on land. This means increasing amounts of higher value-added output now comes from harvesting vessels as opposed to on-shore plants. The success of these activities is based on producing the products most in demand in the marketplace, which, in the case of NRA fisheries, tend to be those species under moratorium.

**Since fishing is an internationally competitive business the fishing enterprises in all NAFO member countries face similar procurement, processing and marketing pressures. They would, therefore, have similar interests in attaining and maintaining long-term increased harvesting opportunities in the NRA. These similar interests might be the basis for some resolution of the non-sustainable approaches to fisheries management that have characterised this area over the past 30 years. The commercial and business aspects of fishing in the NRA and their potential to contribute to a resolution of international fisheries management problems have never been fully explored and analysed. The Panel believes that there might well be business-to-business solutions to some of these problems which could cut through the knots that tie up processes at the government level. The Panel views this as an opportunity that governments should encourage commercial interests to pursue.**

## 6.2 CULTURAL FACTORS

The fishing sector in every country seems to garner some mystique that accords it a special place in the hearts and minds of its members and the general public. This is true of most of the major fishing nations whose fleets now fish in the NRA. Atlantic Canadians have a long attachment to the fisheries generally and, for many, to the Grand Banks in particular. For residents of Newfoundland and Labrador this connection goes back over several centuries to when the Island was settled, became a Dominion and then a province of Canada. The fish resources found all around the shores of the Island and along the coast of Labrador were a predominant reason for the emergence of this society. The history of the province has been shaped by the development of the fishing industry from the early days of discovery, through the migrant fishery phase, during the colonisation period and in the days of independence and finally provincial status. Much of the pattern of past and present settlement evolved from the ways in which the fishery has been prosecuted from the early labour-intensive centuries of the salt fish trade to the more recent decades of declining groundfish resources and the capital-intensive shellfish industry of today. The almost complete disappearance of labour-intensive groundfish plants has caused a "silent migration" from small coastal villages to larger centres within and outside the province. The younger generations are no longer willing to stay in small centres that lack the normal modern amenities and the usual general and social services, especially when the only employment is low-income seasonal work in a processing plant.

While the fishing industry has moulded this place, it has never been the sole preserve of Newfoundlanders and Labradorians. In many ways, the ancestors of most of the current inhabitants were late-comers to the scene, having been preceded by First Nation groups, Basque, Portuguese and French explorers and fishermen. The latter groups were present at least by the beginning of the 1500s and some of them may have preceded John Cabot's arrival. The Spanish and Portuguese fisheries were certainly under way before those of the English, who did not get seriously interested in this activity until late in the 16th century. After that, various European wars effectively eliminated the Spanish and Portuguese fisheries for several centuries until they resumed again between World War I and II (Sullivan, 1989).

Largely as a consequence of being the other dominant power in Europe throughout the 18th and 19th centuries, France maintained a significant presence in the history and fishery of this province until the 1990s when the maritime boundary in 3Ps was settled. The French had treaty rights to process their catch on parts of the Island until 1904 and retained rights (through St. Pierre and Miquelon) to fish in the Gulf of St. Lawrence and

elsewhere along the Atlantic coast after the 1972 creation of an exclusive Canadian fishing zone in the Gulf and the 1992 boundary settlement in 3Ps.

This long association with fisheries continues to shape much of the public perception of what is deemed right and wrong in the management of these resources. While some of the historical record is no longer remembered, the attachment, both emotionally and economically, to this industry is real and enduring. Individuals leave the fishery reluctantly because of this attachment or because few other employment opportunities exist for which they are qualified. In this scenario, governments are always perceived as paying inadequate attention to the needs of the industry and coastal communities.

The situation is little different in the fishing areas of other countries that have fished this area of the Atlantic for long periods of time. In the coastal areas of France, Spain and Portugal, from which vessels sailed (and in the latter two cases still sail) to the Northwest Atlantic, the same attachment to the fishery can be seen. This was evidenced in the focus group discussions held for the Department of Fisheries and Oceans in these countries in the recent months (DFO, 2005c and 2005d). While centered on the overfishing issue, these did bring forth similar views about fish, fishing and fishermen that exist also in Canada and in Newfoundland and Labrador.

In all these areas, as in Newfoundland and Labrador, the fishery now is usually a small proportion of the national economy in terms of value of output but employs a relatively higher percentage of individuals than other industries. The various fishing areas also tend to be among the lesser developed parts of most countries. In all cases, the fishery seeks and gets political attention out of proportion to its economic importance because of these historical and social factors. While this is good for industry participants, it makes change difficult to achieve because of pressures for the status quo. The economies of some European members of NAFO are becoming more diversified, especially those of Spain which has availed itself of generous EU regional assistance funding to decrease the centuries-old dependence of its fishing areas on wild fisheries.

The Grand Banks fishery has long been part of Newfoundland and Labrador's deep-sea fishery sector. For many decades into the 1900s, this was a banking schooner activity that salted the catch of cod at sea for finishing on land. The rise of otter trawl vessels is a more recent occurrence that was tied to the invention of commercial freezing equipment and the household refrigerator. This permitted the landing of cod and other groundfish species in iced form for filleting and freezing in onshore plants. After World War II, this fresh frozen sector expanded and became the basis of all offshore fishing activity by the late 1950s. Much of the initial deep-sea otter trawling was in the Gulf of St. Lawrence, along the South Coast, on the Scotian Shelf and the western Grand

Banks. The flounder fisheries on the Grand Banks are a more recent occurrence and the otter trawl fisheries for cod and other species in 2J and 3K are even later developments. Until the late 1960s, almost all the deep-sea trawler ports in Newfoundland were found from St. Johns south and west to Burgeo. The few other such ports that did arise on the Northeast coast were the product of provincial fisheries expansion efforts of the 1960s and '70s. In reality, the Newfoundland areas most dependent on the Grand Banks groundfish fisheries were those from the Burin Peninsula to St. John's, with a shorter involvement by two plants in the Bonavista/Catalina area. Several offshore ports in Nova Scotia also had a long history in this fishery.

**The Panel believes that a number of economic and cultural factors are significant to understanding the depth of the Northwest Atlantic straddling stocks problem and the possibilities for finding solutions to it. On the economic side, the normal rigidity of movement out of the fishing sector is aggravated by the level of subsidisation especially in the EU. Closed fisheries create supply shortages which make moratorium species even more attractive, especially when the likelihood of being prosecuted and penalised is low or easily thwarted. These increasingly unsustainable fisheries are conducted by international commercial entities that require profits to survive; and who would be expected to benefit from a rebuilding of the more lucrative fish stocks in this area. We believe this is an avenue that governments should encourage commercial interests to pursue. Finally, the long-term dependence that many areas of Atlantic Canada and parts of Europe have on these Grand Banks fisheries underlies the emotion that exists around possible solutions. In all these areas, these activities have been a longstanding source of employment and incomes and could, once more, with sustainable international management.**



## **7. THE PRESENT MANAGEMENT ARRANGEMENTS**

The present management responsibilities for straddling stocks in the Northwest Atlantic are vested in the RFMO for that area, NAFO, which replaced ICNAF in 1979. It was one of the first RFMOs to arise after extension of jurisdiction. Consequently, it reflected the state-of-the-art in international conventions at that point in time. In the atmosphere of the pending conclusion of UNCLOS III (in 1982), no insurmountable difficulty was expected with this RFMO's capacity to effectively manage the stocks that straddled the Canadian zone, given the relative size of those parts of the shelf inside and outside Canadian jurisdiction.

However, the difficulties and shortcomings of the UNCLOS III approach to international management of straddling stocks became obvious in a few short years. When cooperation ceased to exist, it quickly became apparent to all, especially the various fishing fleets, how ineffectual such an organization really is when the international law under which it must function largely relies on voluntary compliance by its members. This is exacerbated by the fact that supremacy of flag state control of fishing fleets results in little or no adherence to conservation, unless a willingness and a capacity to enforce management measures exists.

The current specialised and professional literature on IUU fishing concentrates to a large degree on the problem of flags of convenience (FOC) or flags of non-compliance (FONC) and on the difficulties of some developing countries in combating illegal fishing within their EEZs. Neither of these situations really applies in the NRA, although the FOC problem has existed in the past. Bill C-29 in 1994 (see page 6) created a real deterrent to this type of activity, as did some complementary in-port actions by NAFO members in the same time frame. However, catches taken outside, or in contravention of, the management regime of a RFMO by vessels of its members are still a form of IUU fishing and the relative impunity of doing so is a deficiency in the current law of the sea. Therefore, Canadian authorities ought to take care that international attention is not drawn away from this type of IUU fishing problem, which exists in the NRA in 3LMNO.

NAFO performance was considered satisfactory until cooperative approaches disappeared in the mid-1980s. Lack of cooperation exposed all of the problems that continue to exist in this type of RFMO and which result in inadequate conservation of straddling fish stocks. These problems are as follows.

## 7.1 THE ROLE OF SCIENTIFIC ADVICE

The use of scientific advice in NAFO has been re-active rather than pro-active. The Scientific Council works primarily at the request of the Fisheries Commission. While it can give unsolicited advice, most of its input to the management decisions of the organization is in response to questions referred to it by the Fisheries Commission. Decisions on the use of scientific advice are taken by consensus or majority vote in the Fisheries Commission. The Fisheries Commission is not bound to accept advice from the Scientific Council and in the past the Commission often has not followed advice on levels of allowable catches or other conservation measures. The Scientific Council is therefore seen as subservient to the Fisheries Commission. It is also viewed by some as being less than entirely independent because members of the Scientific Council also attend meetings of the organization as part of national delegations.

Pope (2005) considers the type and quality of science used by the NAFO Scientific Council to be as up-to-date as any used by other similar bodies. The Council is credited for being well ahead of its counterparts in other RFMOs in developing a methodology for utilising the precautionary approach in NAFO. That approach is simply one where management measures leave a buffer between the maximum catch a stock can yield and what is authorised to be fished. It also necessitates the use of safety limits for parameters such as spawning stock biomass. It can also involve the use of pre-set management rules that automatically trigger certain actions when specified stock parameters exceed certain bounds. However, it was not until the last annual meeting of NAFO that the Fisheries Commission adopted the Scientific Council's Framework for a Precautionary Approach and accepted a proposal from Canada for testing this Framework on two stocks (Yellowtail Flounder in 3LNO and Shrimp in 3M) before applying it in other stocks (NAFO, 2004). The exact action that will flow from these decisions will not be known until the next Annual Meeting in September, 2005. The attention of the Fisheries Commission was also drawn by the Executive Secretary to the provisions of the Johannesburg Declaration at the 2004 Annual Meeting. "The Executive Secretary was applauded for this initiative that helps Contracting Parties to evaluate NAFO's performance and maintain NAFO's leadership role in fisheries management, and Contracting Parties were asked to contribute to this task. The Secretariat was encouraged to perform similar evaluations for other important international agreements" (NAFO 2004).

## **7.2 DECISION-MAKING ARRANGEMENTS**

The general provision in the NAFO Convention for decision-making in the Fisheries Commission is by majority vote when consensus does not exist, or when a recorded vote is called. Every Contracting Party entitled to vote in the Fisheries Commission has one vote regardless of the level of its fishery in the NRA. Votes (when called) are usually on the proposed conservation measures for each individual species managed by NAFO. This means that a Contracting Party with only a few hundred tonnes of allocation (or none at all) has the same voting power as one that may hold 90 percent of the allocation of an individual species. This type of voting arrangement means decisions are usually influenced by considerations other than the conservation measures needed for individual species or for more general application, such as mesh sizes. Decisions are therefore seldom made based on conservation needs alone but are determined by other factors and dynamics that are in play. They may or may not have anything to do with fisheries issues.

### **The Objection Procedure and the Absence of Binding Dispute Settlement**

Article XII of the NAFO Convention embodies the “objection procedure”, which is one of the most frustrating provisions in the NAFO Convention. In its simplest terms, this provision allows any Contracting Party that does not support, or agree with, a conservation measure adopted by the Commission to object to it within a specified time, in which case it is not bound to observe it. When quotas, or a national share of them, are deemed unsatisfactory by a member state and objected to, the objecting party usually sets its own level of catch which it then fishes quite “legitimately”. This is a fairly common feature of the older RFMOs. NAFO has not adopted any dispute settlement mechanism to resolve these types of disagreements in a timely manner that is binding on all parties. Discussions were started in the organization in the early 1990s to develop such procedures but no agreement has been achieved among Contracting Parties.

### **Compliance and Enforcement**

Under the NAFO Convention, as under current law of the sea, individual flag states have the sole right to enforce measures adopted for fisheries in the NRA. While boarding and inspections are permitted, albeit under strict and agreed guidelines, the inspecting state can take no direct enforcement action; only the flag state can prosecute its vessels for violations. Even under the new provisions of UNFA, one member cannot actually lay charges against another state’s vessels found in violation of a RFMO rule when it occurs on the

high seas. A vessel found in violation of agreed rules can be brought into port (for further investigation but not charges) by the inspecting nation if the flag state takes no action within three days of being notified, or agrees to it being done by the boarding nation.

Some of the other shortcomings of NAFO include such matters as:

- The Convention contains no definition of overfishing.
- Quota “sharing keys” have been agreed to by members of the Fisheries Commission but are not protected in the Convention.
- The Fisheries Commission only recently adopted and has not yet utilised the Precautionary Approach in its conservation measures.
- Apart from the newly adopted precautionary approach NAFO has not implemented any of the other new modern approaches to, and principles of, fisheries management for RFMOs provided for in UNFA, in United Nations General Assembly (UNGA) resolutions and in other international declarations.
- It is still an open convention although it has adopted a formal position that prospective new members must understand that its stocks are fully subscribed.

### **7.3 THE OVERALL PERFORMANCE**

Parsons (2005) has detailed the reasons why NAFO has not been able to meet its objectives:

“The main reasons why NAFO is ineffective are inherent to the nature and powers of Regional Fisheries Management Organizations (RFMOs) like NAFO. NAFO could only function effectively if there were: (1) a political will to put conservation ahead of social and economic considerations, (2) consensus (or at least majority agreement) on the conservation measures that are needed, (3) measures that are binding on all parties, (4) backed up by an effective enforcement regime.

In a sense, the current NAFO Convention and decision-making and compliance processes make it inevitable that it will fail. A coastal state like Canada (with a “special interest” in the straddling stocks), a large fishing party like the EU (with many diverse fleets that it seeks to accommodate), and the players who send only one vessel per year to the regulatory area, each have one vote at the negotiating table. The net effect in recent years is that Canada, the major coastal state adjacent to the

Regulatory Area, has often found it difficult to secure sufficient votes to support its conservation and enforcement proposals.

A second major problem is the objection procedure. If a member disagrees with the proposals which NAFO has adopted, it has the right to use the "objection procedure" under Article XII and object, in which case it can set its own quotas and fish freely.

Even if there is agreement on TACs, national allocations and other conservation measures by NAFO, and there is no objection by any Contracting Party, there is still the need to rely on flag states for enforcement. Even though the capability to detect what is happening in the NAFO area has increased substantially in recent years, there is still a large gap between detecting a pattern of violations and ensuring compliance. The ability to apprehend violators and then levy appropriate sanctions/penalties is still regrettably lacking. In the case of the EU, the byzantine relationship between the limited fisheries jurisdiction of the EU and the enforcement powers of the flag states makes it easy to spread the blame and renders it difficult to achieve effective deterrence even if the will to do so existed.

No matter what is decided at the NAFO table, the fundamental problem of controlling what happens on the water remains unresolved.

In its 2004 **Report on the State of the World's Fisheries and Aquaculture**, the FAO made the following observations about the general shortcomings of RFMOs or Regional Fisheries Bodies (RFBs): "Regrettably, assessments show that strengthened governance of RFBs (through UNFA) does not always translate into more effective fisheries management. One of the main constraints faced by RFBs is a lack of willingness on the part of member countries to delegate sufficient decision-making power and responsibilities to RFBs, combined, in some cases, with an inability or reluctance to implement decisions taken by them."

UNCLOS III sanctioned the existence of RFMOs and UNFA further encouraged and bolstered them as the means of applying fishery management measures in waters outside national jurisdictions. However, neither of these instruments lays down hard and fast rules as to how these entities must function or gives them any concrete powers. The RFMOs are created by negotiated instruments with such functions and powers as can be arrived at through the usual diplomatic approaches. The FAO Code of Conduct outlines a variety of

responsible practices and principles that RFMOs should follow; but this Code is not obligatory. In the final analysis, and over the long term, these organizations are only able to do what the majority of their members want them to do. **Some of the common faults of RFMOs worldwide include inadequate adherence to scientific advice, non-binding decision-making arrangements, no intrinsic enforcement capability and the absence of binding dispute resolution mechanisms.**

**The above captures the essence of the current management arrangements for straddling stocks through RFMOs. RFMOs are the instruments through which states are expected to make an attempt to cooperate, while not surrendering their sovereignty to such entities. As well, freedom of the high seas still prevails and flag state supremacy is still a prime principle. These provisions and the general lack of real cooperation have produced an arrangement in the Northwest Atlantic that has failed to protect valuable fish stocks. While many members of NAFO hail it as an effective international organization, its record on stock management and lack of any real stock recovery tell a different story. It is clear to the Panel that this situation should not be allowed to continue and that changes are needed to this institutional arrangement.**

## **8. SOME GOVERNANCE OPTIONS**

Based on its mandate, the views expressed to us in our consultations, the external reviews and other research, the Panel considered four options to improve the management of straddling stocks in the Northwest Atlantic. The overall feasibility of these was considered in terms of whether they would advance the state of governance, enhance the rights of Canada as a coastal state in the area and are achievable. These options are the following:

- Reform of NAFO as it now exists.
- Replacement of NAFO with a new Convention.
- Imposition of custodial management.
- Use and improve the provisions of UNFA and UNCLOS.

The various possibilities and the associated problems of each of these options will be examined in turn.

### **8.1 REFORM OF NAFO**

Some industry members felt that possibilities for improvement of the current arrangements may exist by reforming NAFO through certain changes to the Convention. These included entrenching the quota keys in the Convention, adopting a weighted voting procedure, limiting the application of the objection procedure, or eliminating it completely and establishing an UNFA-type dispute settlement procedure. MELI suggested changing the rules of procedure under the Convention to alter the way in which the organization functions through its constituent bodies (MELI, 2005). This proposal is aimed at changing the decision-making powers of the Scientific Council, the Fisheries Commission and the General Council to increase the force of decisions made in the first two bodies in particular. For example, the Fisheries Commission is now viewed as only approving proposals for later acceptance or rejection by Contracting Parties. This is unlike some of the newer Commissions where the management body actually makes decisions on behalf of the Contracting Parties.

Some of the advantages of reforming NAFO from within include that it is an existing organization with an established administrative structure and an operational history of some 27 years. Changes under this approach might be achievable in a short period of time and could be seen as a pro-active initiative to modernise NAFO, which was the first RFMO post-extension of jurisdiction in 1977. The provisions and principles of UNFA represent more up-to-date international standards of management objectives and processes for RFMOs,

as well as expanded obligations of states to cooperate in the pursuit of conservation and sustainable use of ocean resources. Seeking to have these modern attributes adopted by such a venerable institution could be seen as an attempt to enhance an existing organization from within and would not have the drawbacks associated with more aggressive attempts to change management arrangements for straddling stocks.

However, there are some perceptual and concrete concerns with accomplishing the substantive changes that should be made to NAFO. First, the organization is viewed as “having too much baggage” and entrenched behaviour patterns to recover any credibility. This would be a particular problem with much of industry, with the provincial government of Newfoundland and Labrador and with the general public. As Parsons (2005) put it: “In my view NAFO is broken. Its image/brand name is severely tarnished. Nothing short of radical reform will suffice”. MELI (2005) points out that a concrete problem with any attempt to undertake substantive changes to NAFO is that amendments to the Convention require a three-fourths majority vote of all Contracting Parties, and if one Party objects, the amendment would have no effect on any Party. While this would not mean amendments are impossible, it would seem to make the chances of achieving major changes extremely difficult, especially when other Contracting Parties do not share Canada’s concerns about the operations of the Convention. Nevertheless, this option for significant change in NAFO may have to be proven impossible before it can be dismissed out of hand. NAFO may have to first be seen as unwilling to modernise and update itself before creation of a new entity can be attempted.

## 8.2 REPLACEMENT OF NAFO

Many of those disaffected with the current Convention argue for a complete make-over of NAFO that leaves the old arrangement to the side and replaces it with a newly designed organization that incorporates all the features now encouraged by accepted law of the sea and associated agreements, codes and declarations. The incorporation of these new principles, objectives and mandates would move the new organization away from the mode of a “fishing opportunities” and “quota allocation” organization to one that focuses on sustainable fishery management in an ocean conservation context.

MELI (2005) suggested a compendium of features that could be part of a new RFMO in the Northwest Atlantic. These are described as follows: **“Key areas for recasting NAFO include: expanding the overall objectives of the Convention; incorporating sustainable development principles; revisiting organizational structures and clarifying mandates and**



**functions; strengthening the rules for decision-making; enhancing the participation of non-governmental and other groups; recognizing special coastal state interests and the need for management compatibility; addressing the protection of endangered and threatened marine species; committing to strengthen enforcement and compliance; tackling non-member fishing; facilitating cooperation with other regional and international organizations; providing for a periodic review of treaty implementation; and establishing dispute prevention and resolution mechanisms”.**

Atlantic Canadian interests would certainly view such a modernized organization positively. If the support of the EU and of the other coastal states in the area could be obtained, the development of this new entity could be achievable. A key consideration in creating this improved RFMO is that existing participants would have to be assured that their present status would be protected in future allocations.

### **8.3 THE CUSTODIAL MANAGEMENT OPTION**

This has long been the preferred approach in Newfoundland and Labrador. It is seen by other nations as a proxy for unilateral extension of jurisdiction, as a form of the jurisdiction provided to coastal states through EEZs or some more limited duties and authorities that apply only to coastal fisheries resources. The Panel was asked specifically to “develop a shared understanding of the meaning of “custodial management” and (to provide) the assessment of implications (*inter alia*, legal, political, scientific, economic, practical) and the steps entailed in any attempt to make this understanding a reality on the Nose and Tail of the Grand Banks and the Flemish Cap.” The following analysis responds to this request.

To begin with and, as noted earlier, the stocks on the Flemish Cap are not straddling but are discrete stocks found on or around the Cap, which is on the eastern side of the Flemish Pass. The turbot that crosses from 3L into the northwestern areas of 3M is a straddling stock. The straddling stocks of 3LMNO are those listed in the Regulations under the Coastal Fisheries Protection Act, Tables I and II (see pp. 5-6).

The concept of custodial management has recently become a much-touted solution to the problems of management of the straddling stocks in 3LMNO. The degree of support for this approach has grown in the last several years, especially as the non-recovery of these groundfish stocks continues and international cooperation to achieve conservation remains elusive. While this concept has widespread support in Newfoundland and Labrador, and in other

parts of Canada, it is not a well-defined nor understood notion. Its interpretation varies with its various proponents, including federal and provincial elected representatives, a variety of public and private institutions, industry participants, and members of the public.

The first formulation of this concept actually appeared in Canada's initial negotiating position at UNCLOS III more than 30 years ago. Parsons (1993) reports that Canada initially favoured a substantial increase in the powers of the coastal state over fisheries adjacent to its coasts, including areas of the continental shelf outside 200 miles where fish distributions overlapped the area. It argued for preferential rather than exclusive rights under an approach described as "functional management". The coastal state would have authority to carry out limited and specialised management functions outside 200 miles but would not exercise sovereignty. The approach was described as one of "custodianship" through the delegation of these management powers to the coastal state. This position was based on the view that 200-mile limits would not be sufficient to provide for proper management of certain fish stocks. It provided an explicit recognition of the differing biology and ecology of various species groups: sedentary, coastal, anadromous and wide-ranging. In the end, the consensus of the conference was for exclusive economic zones of 200 miles, without the preferential rights approach that would have included management of all fish resources inhabiting continental shelves. UNCLOS III did provide special provisions for anadromous species (salmon) and catadromous species (such as eels); and awarded ownership of sedentary species to the coastal states under the provision for jurisdiction over *the resources of the continental shelf*. **This left "coastal species" that swam above the continental shelf under national jurisdiction only for that part of their range that fell inside 200 miles.** This is the essential basis for the current issue of straddling stocks management on the Grand Banks.

The Newfoundland government resurrected and developed the custodial management approach as the impending, and then the actual, decline of groundfish resources became obvious in the late 1980s. This concept was then elaborated in the case of one specific stock and was later transformed to cover the problem of all straddling stocks.

In a 1986 paper, "**The Problem of Foreign Overfishing Off Canada's Atlantic Coast**", the provincial government called for "a limited functional extension of Canada's fisheries jurisdiction to include the "Nose and "Tail" of the Grand Banks" (Government of Nfld, 1986). This type of extension was argued to fill the gap in jurisdiction over marine resources and "would bring under a single jurisdiction virtually all of the important marine resources on which the Atlantic fishery depends". The paper claimed this "Extended functional jurisdiction for fisheries conservation purposes is the preferred solution to the foreign

overfishing problem by the Province of Newfoundland and the Canadian fishing industry" (Government of Nfld, 1986).

In 1987, a paper prepared by the Fisheries Council of Canada declared: "Overfishing by foreign fleets of Canada's straddling stocks has reached the point where their long-term viability to the Canadian fishing industry is in jeopardy. The current approach is not working. The Northwest Atlantic Fisheries Organization (NAFO) is proving itself to be ineffective as a mechanism to adequately protect Canada's interests. NAFO participants such as Spain and Portugal and non-NAFO fleets from South Korea, Mexico, and the U.S.A. are overfishing important cod and flatfish stocks by 110,000 to 130,000 tonnes. The quantity of transboundary fish caught by foreigners outside our 200-mile limit in 1985 represents an annual market value of about \$150 million. There is obviously a strong incentive for these fleets to continue to escalate their fishing efforts outside the Canadian zone, if uncontrolled, this activity by the foreign fleets will threaten the livelihoods of thousands of fishermen and plant workers dependant on these fish stocks. In view of the magnitude of the problem, the Fisheries Council of Canada calls on the direct participation of the Prime Minister of Canada and the Secretary of State for External Affairs to develop with the Minister of Fisheries and Oceans, a concerted action plan to eliminate the foreign overfishing of these stocks which are vital to the Canadian industry and to the many fishing communities in Atlantic Canada. In addition, the Government of Canada should now embark on a long-term strategy to enable Canada to gain **functional fisheries jurisdiction on the nose and tail of the Grand Bank**" (FCC 1987).

**It is significant that the issue of overfishing emerged less than 10 years after extension of fisheries jurisdiction, and over a further 20 years remains unresolved.**

The next public exposition of the concept was in the April 1989 paper by Karl Sullivan: "***Conflict in the Management of a North Atlantic Transboundary Cod Stock***" (Sullivan, 1989). That paper addressed the emerging problem of managing the cod stock in 2J3KL when it became known that this stock was available to be fished in the NAFO Regulatory Area (NRA) to a greater degree than previously thought. At that time, the EEC rejected the agreement that had existed in NAFO up to the mid-1980s that this stock would be managed by Canada because so little of it was present outside 200 miles. In the context of that approach, NAFO had agreed to a moratorium on fishing cod in the Regulatory Area of 3L in 1986. This was opposed by the EEC, which then used the objection procedure to set autonomous quotas for 3L cod, thereby exposing the shortcomings of the NAFO regime in the absence of unanimity. This was a very unfortunate outcome of this particular situation

and set the stage for much worse to come. It marked the beginning of the end for NAFOs effectiveness in the management of straddling stocks.

In retrospect, this “management breakdown” occurred at the worst possible time. This cod stock was smaller than estimated at the time and changing oceanographic conditions caused a large part of it to be present outside 200 miles in 3L in the latter half of the 1980s. The catches taken there by those countries objecting to NAFO management measures were well above amounts that could be sustainable.

In listing options to solve this straddling stock management problem, Sullivan re-introduced the term “functional management”. He selected this option after rejecting multi-lateral cooperation through NAFO, bilateral cooperation with the EEC and appeal to the dispute settlement provisions of UNCLOS III as possible sources of a solution. He judged the NAFO route to be ineffective because the objection procedure allowed the EEC to legitimately do what it was doing in 3L outside 200 miles. There was no bilateral agreement at that time with the EEC; the multi-year agreement on quota allocations and corresponding tariff reductions under the Canada/EEC Long Term Agreement had not been renewed in 1988. The demands of the EEC for quota allocations could not be met at a time of declining resources, and the tariff concessions promised under the previous arrangements had not been fulfilled (Gough 2005). The provisions of UNCLOS III in respect of binding dispute arrangements were not in effect at that time, as the required number of countries had not yet ratified it.

The functional approach was described as one where Canada would be given the management authority for the entire 2J3KL cod stock. This authority was described as that which UNCLOS III provided to coastal states for management of stocks in national zones, i.e. the setting of the TAC and allocating shares of it. The “rights to that part of the stock outside 200 miles would have to be established by NAFO or an arbitral process...” (Sullivan, 1989). Canada would carry out surveillance and enforcement in “the zone”, while foreign vessels could fish their allocations outside 200 miles with observers on board. All participants in this fishery would pay a share of the management costs. Two specific provisions of UNCLOS III were argued as supporting these arrangements. One was Article 116, which calls on flags states to take account of the rights of coastal states when conducting their fisheries on the high seas. The other was Article 63 (2), which calls on coastal states and fishing states to seek to agree on conservation measures for stocks found inside and outside national zones. Canada would still try to seek this cooperation through bilateral and multilateral consultations but these could not be expected to continue indefinitely without results. Canada would then have no choice but to “explore all legal remedies” (Sullivan, 1989).

The concept was next mentioned publicly (once more under the title of functional management) in the Oceans Institute's 1990 paper prepared for the Fisheries Council of Canada (Lamson et. al., 1990). It listed this as an option for solving the problems of NAFO by giving Canada "functional management jurisdiction over (all) straddling stocks within the Regulatory Area". It then repeated Sullivan's description of the approach and indicated it was unlikely to be acceptable to the EEC and other NAFO members. They would not accept Canada's determining shares in the Regulatory Area and the EEC would not agree to the management objective of  $F_{0.1}$ <sup>3</sup>, which Canada had adopted.

In the meantime, the provincial administration of Premier Clyde Wells in late 1989 and early 1990s had begun using the term "custodial management" as an option for dealing with the overfishing problem on the Grand Banks (Dean, 2005 Pers. Comm.). This approach envisaged Canada exerting "custodial management" authority over all straddling stocks as part of its preferential status as a coastal state. Premier Wells and his fisheries minister called for imposition in various speeches over the early 1990s (Noseworthy, 2005 Pers. Comm.). Various Throne Speeches of that administration urged the federal government to end overfishing on the Grand Banks. However, only that of 1992 referred to Custodial Management and in the following manner: "It is now clear that the only effective manner to address this totally unacceptable situation is to exert custodial management over the "Nose" and "Tail" of the Grand Banks on behalf of and for the benefit of the international community" (Government of Nfld., 1992a). In a paper distributed to all householders in March 1992 the provincial government stated: "Fish stocks are doomed unless foreign overfishing is stopped. Diplomatic action to date has failed to protect fish stocks, as people and communities watch with despair and helplessness. Canada must now take steps to become a protective custodian for the fish stocks of the Grand Banks. Extending custodial protection of the fish stocks on the Nose and Tail of the Grand Banks will enable Canada to stop foreign overfishing and allow threatened fish stocks time to rebuild. Custodial management will not only protect Canada's interests, but also the interests of the international community" (Government of Nfld., 1992b).

In its March 1993 Green Paper "***Changing Tides***" the provincial government concluded: "*In the absence of any marked improvement in the conduct of NAFO and non-NAFO fleet activity on the Nose and Tail of the Grand Banks, Canada should implement a custodial management regime in order to ensure the rebuilding of key straddling stocks*" (Government of Nfld., 1993). The document did not define the term.

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<sup>3</sup>  $F_{0.1}$  The level of fishing mortality at which another unit of fishing effort produces 10% of what would have been produced if that unit were added at the beginning of the fishery.

In an address to the ***Conference of Like-Minded States on High Seas Fisheries*** (St. John's, January 22, 1993), Premier Wells addressed the issue as follows: "In the view of the Government of Newfoundland and Labrador and the view of a growing majority of Canadians, Canada must formally consider the imposition of a custodial management regime for straddling fish stocks if speedy and effective multilateral action is not forthcoming. Under custodial management Canada, would, on behalf of the international community, effectively manage the resources of the "nose" and "tail" of the Grand Banks. Custodial management would only provide Canada with a right to manage the resource, not to assume its ownership. When faced with the consequences of intransigence on the part distant water fishing nations, the adjacent coastal state is not only justified in taking unilateral action to protect its own interests, but I do believe it has a responsibility to take such action in order to protect the rights of all international users of the resource."

The next provincial administration (1996-2000) under Premier Brian Tobin, generally considered the overfishing issue to be under control as a result of the Canada-EU agreement following the "turbot war," and the ensuing additions to the NAFO management measures. As well, UNFA had been signed in 1995 and was viewed as part of the solution to overfishing by providing coastal states with more powers to enforce regulations outside their EEZs. It was towards the end of the Tobin administration that the increase in non-compliance in the NRA was becoming evident again.

As the level of non-compliance in the NRA became increasingly public knowledge in the early 2000s, the concept received increased attention from a variety of interests. The 2002 Report of the Standing Committee (of the House of Commons) on Fisheries and Oceans (SCFO) called on the Government of Canada to: "... amend the *Coastal Fisheries Protection Act* to empower it to implement Custodial Management of fisheries resources on the Nose and Tail of the Grand Banks and on the Flemish Cap; and to... inform NAFO and its contracting parties that Canada will withdraw from NAFO and proceed with the implementation of custodial management on the Nose and Tail of the Grand Banks and on the Flemish Cap no later than one year following the September 2002 NAFO meeting" (Government of Canada., 2002). Its view of custodial management was that "...Canada would assume sole responsibility for the management and conservation of the areas of our continental shelf beyond the 200-mile limit: the Nose and Tail of the Grand Banks and the Flemish Cap". As well, "Under such a regime, Canada would conduct the science, set the TACs, and implement and administer a conservation-based management system that would include monitoring and enforcement" (Government of Canada., 2002). In extending its recommendation to the Flemish Cap, the Committee was going beyond the issue of straddling stocks.

SCOFO repeated its recommendations almost verbatim in its 2003 report, except for a later implementation date of not later than December 31, 2004 (Government of Canada., 2003b). The Minister of Fisheries and Aquaculture for Newfoundland and Labrador, Mr. Gerry Reid, had appeared before the committee, supporting custodial management. In both instances, the federal government rejected these recommendations for much the same reasons; these proposals could not be implemented under the existing law of the sea. The government stated its intention to work within existing multilateral structures to improve management of straddling stocks.

The Senate Standing Committee on Fisheries and Oceans in June 2003 reviewed the various proposals and arguments for custodial management over the Nose and Tail of the Grand Banks. It concluded: "...having a central authority (custodian or trustee) to manage fisheries on behalf of all participants would lead to more effective fisheries management". However, it also concluded: "the objectives of custodial management can best be achieved within the existing international framework" (Government of Canada., 2003a). It did not add to such definitions of custodial management as existed at that time.

In 2003, the Newfoundland and Labrador All-Party Committee on the 2J3KL and 3Pn-4RS Cod Fisheries called for "the establishment of a Canadian-based fisheries management regime" that would place Canadian observers on all vessels and include "implementation of a custodial management regime for straddling fish stocks on the nose and tail of the Newfoundland Grand Banks".

In that same year, the ***Royal Commission on Renewing and Strengthening Our Place in Canada*** made the following recommendation related to this matter: "A comprehensive plan is needed to enhance the management and conservation of straddling stocks outside 200 nautical miles, and to commit the resources necessary to achieve this objective. This plan would involve Canada making one last determined effort at strengthening NAFO, while at the same time preparing itself and the international community for the reality that strong unilateral action, such as custodial management, may be necessary should efforts within NAFO fail" (Government of NL., 2003a).

The provincial Throne Speeches of March 2003 and March 2004, mentioned the concept of custodial management; suggesting the federal government consider implementing it. Neither document, however, provided details of the approach.

The first detailed public description of the concept appeared in the presentation of the provincial Department of Fisheries and Aquaculture to the

**Roundtable Forum on Sustainable Management of Straddling Stocks** held in St. Johns in February 2003. The approach presented was described in the report on that forum as including the following basic principles:

*The Province's proposal is that Canada, as the coastal State, will assume responsibility for: management of straddling stocks (which excluded Flemish Cap stocks), TACs, and conservation measures; and that it will enforce the consistent application of measures inside and outside 200M, including monitoring and surveillance. However, it was also proposed that Canada would respect the historical shares of other nations.*

*Under this proposal, NAFO would retain responsibility for the Scientific Council, stock assessments, coordination of research and the provision of advice. It would also continue to deal with access and allocation issues and to manage (the other) stocks in the NAFO Regulatory Area, as well as developing and levying sanctions (McRae 2003).*

Under this view of a custodial management regime, the coastal state (Canada) and NAFO would have a division of responsibilities for straddling stocks and for the NRA generally. Canada would set the TACs and associated management measures for the straddling stocks (with advice from the Scientific Council) and carry out the surveillance and enforcement of them. It is unclear what would happen if violations were detected; there is no mention of the laying of charges although NAFO was described as developing and levying sanctions. NAFO would continue to allocate the historical shares of straddling stocks (from the TAC set by Canada) to its members and would manage the discrete stocks in 3M.

In the April 2003 paper, **"Straddling Stocks in the Northwest Atlantic: Conservation Concerns and Options"**, prepared for the FCC by Johnston et al., the authors described the provincial proposal as a "more moderate, version of "custodial management," a version described by one commentator as "more sophisticated," and certainly more flexible than the House of Commons Standing Committee's version". They cautioned, however, "that such a policy of NAFO reform, through the proposed reallocation of roles within the Organization, might be implemented by the Canadian government more successfully if it is not accompanied by the terminology of "custodial management," which is open to the objection that "custodial" sounds unduly possessive and "management" implies an assertion of jurisdiction. In short, the two words taken together could be construed as an assertion of rights rather than acceptance of responsibility. A proposal for institutional reform is weakened, not strengthened, by terminology that is likely to feed suspicion



that Canada has embarked on a crusade of “creeping jurisdiction,” which could be joined by other, less careful, coastal states in other regions.”

In that same paper the authors, in addition to the notion of “custodial manager”, also suggested the following concepts as other possible options for increasing the exercise of the coastal state’s “special responsibility:

- Guardian
- Steward
- Trustee

These proposed concepts are based on the argument that a coastal state has a special responsibility for the conservation of the straddling stocks in the high seas adjacent to its EEZ. This would be in addition to those responsibilities it has accepted in common with the other members of NAFO. They suggest it can be argued, in the context of emerging hard and soft international law, that more consideration needs to be given the whole of the ecosystems of these stocks, their habitat areas and the bio-diversity of the region.

In March 2004, the House of Commons passed a private members bill, sponsored by a Newfoundland and Labrador MP, calling on the federal government to extend custodial management over the Nose and Tail of the Grand Banks and the Flemish Cap (Government of Canada 2004). While this is not a binding motion, it indicates the degree to which this concept has taken hold.

Throughout 2004 the present provincial government did not specifically endorse any detailed description of custodial management. However, in a press release of December 2, 2004, the government declared: “It is the position of the Government of Newfoundland and Labrador that, given the repeated failure of diplomacy, the Government of Canada must become the custodial manager of fish stocks straddling the 200-mile limit” (Government of NL., 2004b).

A similar release from the Minister of Fisheries and Aquaculture stated: “Foreign vessels are still directing on moratoria species, exceeding quotas and using illegal gear. In the face of the continued ineffectiveness of the various international regimes, the federal government should propose the need for Canadian custodial management of straddling stocks” (Government of NL., 2004a).

In addition to these official calls for custodial management, numerous others have come from special interest groups in the last few years. These include groups as diverse as the Fisheries Crisis Alliance, the St. John’s Board of Trade

and the Canadian Chamber of Commerce. The latter has called for a “negotiated arrangement” for custodial management so that it would be an endorsed initiative. While this is being sought, increased pressure would be maintained through surveillance and enforcement (Canadian Chamber of Commerce 2002).

In his address to the 2005 *International Conference on the Governance of High Seas Fisheries and the United Nations Fish Agreement*, Premier Danny Williams issued a call for the international community to permit custodial management of the Grand Banks straddling stocks. He advocated that: “Canada should take custody over fishing grounds outside our 200-mile limit. Historical fishing rights would be fully established. However, our federal government would be responsible for management and enforcement of that area, so offenders are identified and prosecuted in a manner which would effectively deter those parties from reckless, irresponsible fishing practices” (The Telegram, May 2, 2005). The provincial Minister of Fisheries and Aquaculture, Trevor Taylor, also addressed delegates at this conference and presented a detailed case for this concept. He spelled out that Canada would act as a steward of the straddling stocks and that NAFO would remain as part of the management arrangements for the Grand Banks (Government of NL., 2005).

The foregoing summarizes the history and development to date of the concept of custodial management. While it has received a good deal of commentary and political and public support, detailed public descriptions of it were sparse until recently. The few efforts to explain it have not come from legal experts. When analyzed in light of the principles and rules of international law, it becomes clear that the concept of custodial management has no meaning in international law and that it encounters a number of legal difficulties.

The MELI Strategic Brief notes, as acknowledged by SCOFO, that this assertion of jurisdiction would be accompanied by withdrawal from NAFO. It would violate the duty to cooperate under Art. 63(2) of the 1982 Convention on the Law of the Sea, as well as the provisions of Art. 87(1) of the Convention, which recognizes fishing as a freedom of the high seas, and Art. 92, which provides generally for exclusive flag state jurisdiction on the high seas. Moreover, Canada is a party to both the 1982 Convention on the Law of the Sea and UNFA and is subject to the mandatory dispute settlement procedures embodied in those treaties, at least in relation to a dispute which involves another party, like the EU. MELI states in its brief that “this means that Canada would in all likelihood be forced into some form of arbitration, and that it would lose”. MELI sums up the feasibility problems with the concept of custodial management as follows:

First, the assertion of custodial management as envisaged in the SCOF0 reports would necessarily entail a withdrawal from NAFO, in that it would violate the entire purpose of the NAFO Convention. If NAFO is abandoned, without replacement, as discussed sub-brief 2, *infra*, there is a real possibility of a “free for all”, with completely unregulated fishing, unless Canada can quickly and successfully enforce its new jurisdiction. Second, this ability to enforce would have to confront significant legal challenges which, as suggested above, could not be avoided and which would likely go against Canada, at least on the current state of the law. It is also likely that claimant States would be seeking provisional or interim measures to forestall Canadian action, given the seriousness of the violations of the Convention regime. Third, there does not appear to be sufficient international support for the further extension of coastal State jurisdiction, so that the prospect of advancing the law solely through state practice is unlikely to come about. Finally, even the most optimistic projection for a successful implementation of custodial management would involve a transition of a number of years, assuming legal and other opposition by fishing nations. This eliminates one of the perceived advantages of this approach over other diplomatic measures, which is the speed with which it could be put in place (MELI, 2005).

**The Panel finds that there is not a generally shared understanding of the concept of custodial management by various proponents who have adopted it as the solution to management of straddling stocks. Consequently, there is not a single description that can be taken as representing what different proponents understand by the concept.**

**Any form of a custodial management regime, as proposed to date, involves Canada’s exercising the same types of management rights on the adjacent high seas as it exercises in its EEZ. The idea that Canada would enforce these decisions outside its own 200 mile EEZ is particularly difficult to envisage, given the jealously guarded principle of flag state enforcement. In any case, the international community and international law do not accept any of these types of expanded coastal state rights.**

**Short of unilateral action (which would be hotly disputed), the adoption of a custodial management approach to straddling stocks is not possible unless advances in international law either reduce the extent of the high seas or remove flag state authority over a**

**country's vessels when they are fishing in the regulatory area of a RFMO. Neither of these changes is in the immediate offing.**

**All of this being said, the Panel notes that the conservation issues on the Grand Banks have been urgent for some 20 years. If not addressed very soon, the international climate for unilateral action could well improve.**

#### **8.4 UNCLOS/UNFA OPTIONS**

There are some legal options that could be pursued in the case of UNCLOS and UNFA. The first of the instruments was open for review as of its 10<sup>th</sup> anniversary on December 31, 2004, and the first review of UNFA is set for 2006, which is four years after its first coming into force. Both have serious shortcomings in their provisions for management of straddling stocks; neither provide effective management because most of their provisions calling for cooperation are weak and difficult to enforce and because enforcement is left solely to flag states.

**UNCLOS III** There are several areas in UNCLOS III that could be listed as priorities for amendment to improve straddling stocks management. These include changing the ambiguous wording of Article 63 regarding the coastal state's interest in straddling stocks, expanding the provisions for inspection and enforcement by coastal states and more specific requirements for the exercise of flag state duties to contribute to conservation (MELI 2005).

**However, the prospects of advancing any of these through amendment to UNCLOS III are hindered by the requirement for one-half of the signatories to the Convention having to agree before a review conference can even be convened. The provisions guarding flag state supremacy and preventing coastal state enforcement on the high seas are not likely to be easily altered if such a conference could be achieved. This avenue would also be a time-consuming one that would have to involve a significant investment of expertise. In the long term it should not be fully discounted; in fact, it should be pursued. However, it will not provide the needed solution to the straddling stocks issue in any acceptable time frame.**

**UNFA** It may be possible to achieve some changes under UNFA because fewer countries are involved and the review conference is required by the Agreement itself. The overall purpose of UNFA was to fill gaps in the provisions of UNCLOS for management of straddling stocks and highly

migratory species. To that end it called for increased use of RFMOs, the use of precautionary approaches and advocated long-term sustainability of fish resources. It also called upon states to adopt the dispute settlement provisions of UNCLOS III and allowed for the establishment of RFMO-specific arbitration arrangements. It made some provision for more cooperative international enforcement if flag states are willing; but they still are in control in the final analysis and are not obliged to permit arrest and prosecution of their vessels by other states. The reliance is still on flag state enforcement and compliance and on the use of RFMOs to achieve conservation. None of these approaches will work unless there is a continuing commitment by all states to cooperate to achieve conservation. This itself is not a binding commitment under the law of the sea (MELI, 2005).

Two areas of improvement that could be pursued include the enhancement of enforcement powers for states when administering rules set by the RFMO; and the incorporation of more ecosystem and habitat protection principles. The first is considered by the Panel to be a key area to pursue as it addresses the main shortfall in current management provisions. As mentioned earlier, lax or no enforcement is as much a way around management measures as is the NAFO objection procedure.

**The likelihood of achieving some needed improvements in UNFA in the 2006 review conference would have been enhanced if straddling stocks provisions of UNFA had been fully tested and a record of failure had been documented. Time is now too short to do much before the 2006 review. However, efforts to secure improvements to UNFA provisions should continue before and after the review conference.**

## 9. CONCLUSIONS AND ADVICE

The Advisory Panel on the Sustainable Management of Straddling Fish Stocks was appointed on December 13, 2004, to “advise the Government of Canada on how to reduce overfishing and avoid ecological destruction of straddling stocks in the NAFO Regulatory Area and achieve sustainable use of the oceans.” It was also asked to “present recommendations on how to strengthen coastal state rights on management of straddling stocks off Canada’s east coast.”

The straddling stocks are those that exist on the Grand Banks in NAFO Divisions 3LMNO and whose natural range spans the 200-mile limit. They do not include those that inhabit the Flemish Cap and exist entirely outside 200 miles (notwithstanding that the Flemish Cap is part of the Canadian continental shelf). The problems of conservation and management of straddling stocks on the Grand Banks are unique in the world, at least in their scale. There is no other situation where the interests of a coastal state in so many fishery resources that are mostly within its jurisdiction can be (and have been) so easily undermined by distant water fishing fleets. Because the problem is unique, it is difficult to find any immediate remedy in the current law of the sea provisions for managing straddling stocks. Such provisions are generally not developed for single country problems such as this one.

**The Panel feels two inescapable conclusions flow from, and are supported by, the reviews we have commissioned and the interviews and analysis we conducted. The first is that the current provisions of law of the sea have not provided the means for sustainable management of straddling fish stocks in the Northwest Atlantic. The second is that NAFO has failed, largely as a consequence of the unwillingness of member states to negotiate provisions that help to overcome some of the shortcomings in the law of the sea. These cannot be remedied quickly given the pace at which international law develops. This leaves changing the current RFMO arrangement as the only realistic option for substantive action.**

**The principal shortcomings of NAFO are: (1) the lack of a precautionary and sustainable management approach based on realistic conservation objectives, (noting that this is now being examined, but is not implemented or built into the Convention); (2) the current voting procedure which allows minority interests to influence events out of all proportion to their own involvement in the fishery; (3) the existence of an objection procedure which allows those “opting out” of a majority decision to proceed to fish as they**

**decide, without consequence except to the detriment of the area's resources and the interests of other participants; and (4) the lack of a compulsory dispute settlement mechanism. These are fatal flaws. NAFO has lost all credibility in Canada and will have no credibility until these deficiencies are remedied and seen to be so.**

It could be argued that NAFO itself should be reformed, but we do not believe that a reform initiative could be successful. NAFO, as it exists, contains too many members who would have little or nothing to gain from the kinds of reforms which would result in effective conservation to the benefit, essentially, of the major players within the organization. We also believe that the extent of the necessary reforms requires a new beginning in order to give such an initiative the profile it needs to achieve success in the management of the straddling stocks, as well as those stocks entirely outside 200 miles.

**We are, therefore, firmly convinced that the Government of Canada should, as an immediate priority, act to replace the Northwest Atlantic Fisheries Organization (NAFO) with a new Regional Fisheries Management Organization (RFMO) that incorporates the modern approaches to, and principles of, sustainable ecosystem management contained in UNFA and the array of other international agreements, codes and declarations that have emerged in recent years. The new arrangement should explicitly recognize the special interest of the coastal states in the sustainable management of stocks, while protecting existing shares of rebuilt stocks for current members of NAFO. The absence of an objection procedure combined with compulsory dispute resolution and enhanced enforcement powers will also help to make this new RFMO the model for managing the world's straddling stocks and shared fishery resources in a sustainable manner. The creation of a new regional fisheries management organization is preferable to, and could achieve the same benefits as, a custodial management approach.**

Those most knowledgeable about these matters are also the most likely to despair of finding a solution to the straddling stocks conservation and management issues. That being said, for some time, now the "custodial management" approach has received continuing attention at senior federal and provincial political levels. The implications of such a unilateral extension of Canadian authority outside 200 miles have not been fully debated; and the expectations of what could be achieved may be unrealistic. It is, nevertheless, a way of providing an appealing response to a high profile public issue that has been so stubborn of resolution over the past 20 years, notwithstanding the existence of the 1982 Law of the Sea Convention and a Regional Fisheries

Management Organization (NAFO), whose members are among the most developed nations on earth.

**As noted earlier we find there is a lack of a commonly agreed definition and an essential understanding of custodial management except that Canada would “take charge” of the situation and implement measures to control overfishing and rebuild fish stocks. Generally, it is considered simply as something that Canada could and should do. The concept is a political one, does not have accepted legal foundations, and has not been built on a body of jurisprudence or state practice. Its implementation would violate international law and likely lead to Canada being forced into an international arbitration which it would lose.** Meanwhile, the most commonly repeated variant of custodial management would appear to envisage the continuation of NAFO, as well as foreign fleets fishing straddling stocks and sharing in the yield from rebuilt stocks into the indefinite future. It is not at all certain that much of the interested public is aware of or shares this understanding. In the final analysis, while this approach may not be legally possible or achievable, it has been adopted in the public mind as the one that will quickly solve the conservation problem of the Grand Banks straddling stocks. The concept will continue to be the preferred solution in the mind of the public unless, and until, another resolution is found. **We believe that the creation of a new regional fisheries management organization along the lines we have outlined is the preferred solution, and could address the same issues with essentially the same benefits as a custodial management approach.**

Any attempt to create a new regional fisheries management organization will only succeed if it is supported by a variety of other strategies designed to attract further attention to the unacceptable state of affairs in the NRA and to attract the support of other states with significant interests in the area. The major conservation issues on the Grand Banks centre on the groundfish resources. These are shared mainly (approximately 80%) between Canada and the European Union. The fisheries are now based mainly on the south coast of Newfoundland, and in the ports of Vigo in Spain and Aveiro in Portugal. The long association with these fisheries shapes public perceptions in these areas. There is a very long historical record and an economic and emotional attachment that is real and enduring, and which translates into political attention at the highest levels in these regions and these countries. The complete problem will not be adequately addressed unless, and until, an understanding among the major players on social, economic and political issues can be reached.



**For this reason we strongly urge that Canada engage the European Union with the objective of developing a bilateral agreement to rebuild groundfish stocks and to better manage the straddling stocks as well as those entirely outside 200 miles. This would be to the continued benefit of those regions which have historically fished these resources and which continue to depend on them with such strong economic and cultural attachments. It is surely in the interest of these regions, these countries and the larger European Union to make common cause with Canada in a situation where more than 80% of groundfish allocations are assigned to these two entities. There is almost nothing left to lose, but much to gain if such understandings can be developed and new ground can be broken.**

The European Union is a natural partner in an initiative to replace NAFO with a new regional management organization. Not only do the EU and Canada share most of the groundfish allocations; both have coastlines in the Northwest Atlantic (in the case of the EU through Greenland in NAFO Subarea 1, and St. Pierre & Miquelon in Subarea 3, both of which now vote separately in NAFO). The United States is also a natural and important partner, and while US allocations are currently minimal in the NAFO regulatory area, this is a situation which could, and probably would, change if the groundfish resources could be rebuilt.

Most of the Grand Banks groundfish stocks have been fished down to but a small proportion of their former abundance. For decades, these stocks were thought capable of sustaining higher annual yields than has proven to be the case. A climatic cooling from the mid 80s to the mid 90s reduced productivity. That less productive period also coincided with objections to NAFO rules and the adoption of high autonomous quotas. The Grand Banks ecosystem is now degraded and unbalanced. The variety and abundance of fish appears to have been largely replaced by shrimp, crab and mammals, with unpredictable consequences for productivity and stability. This unsatisfactory ecosystem state should not be allowed to continue. The attempt to maximize production from all fisheries simultaneously through single species management models almost certainly cannot be achieved. **We, therefore, believe that a scientific review aimed at Grand Banks fisheries management in an ecosystem context is urgently needed and would be invaluable in informing fisheries management worldwide. Its objectives should be the defining of conservative management practices designed to restore and preserve this unique system. We believe that Canada itself should mount a substantial scientific research program to document the current situation and to inform rebuilding strategies, and encourage other NAFO members to cooperate in this effort. The**

**objective should be to rebuild the system by 2015, as urged by the Johannesburg Declaration, to the level and variety of productivity existing before the current degradation, i.e., to the situation prevailing in the 1950's.**

Within Canada, considerable hope had been placed on the most recent addition to relevant law of the sea: "***The Agreement on Management of Straddling and Highly Migratory Fish Stocks***" or the ***UN Fisheries Agreement (UNFA)***. It is a very recent and essentially untried international convention. By 2004, it had been ratified by 52 countries compared to the 148 that have accepted the Law of the Sea Convention itself. Only three NAFO Contracting Parties have not ratified UNFA; thus, its provisions ought to be accepted in a new and improved organization to replace NAFO. **Meanwhile, it remains unknown whether the UNFA provisions could mean substantial improvement for managing the straddling stocks on the Grand Banks. Therefore, Canada should take every opportunity to test this agreement both before and after the review conference to be held in 2006.**

We really see no hope for rebuilding groundfish stocks and restoration of the Grand Banks ecosystem without a new regional fisheries management organization devoted to that purpose; and in which the participants can have some expectation of rebuilt resources, more successful fisheries and restored regional economies. Meanwhile, Canada must maintain a strong stance and high profile in protecting these resources insofar as we can within our own jurisdiction. In order to do this **we must remain in NAFO until it is replaced. The current provisions of the *Coastal Fisheries Protection Act and Regulations* should remain without alteration. The increase in Canadian surveillance and enforcement instituted in 2004/2005 should be continued at least at current levels** until it yields results in the form of a high level of compliance with management measures and an increased willingness to adopt the institutional reforms necessary to rebuild the Grand Banks ecosystem.

While the primary initiative ought to be the replacement of NAFO, **we also believe it to be important for Canada to launch a vigorous and continuing campaign within the UN to improve and give practical consequence to the 1982 LOS Convention in general and the UN Fisheries Agreement in particular.** While the law of the sea has made great strides in the past quarter century, the success stories in marine conservation are few and the failures too many; the Grand Banks being one of the worst cases.

Improvements in the law of the sea governing international fisheries must be measured in the conservation results they achieve. There is no other standard which is meaningful. They should also be measured by improvement in the quality of life of the people who depend on these resources and the regional economies that are supported by them.

International negotiations to establish appropriate regional organizations and to advance the law of the sea provisions are, and appropriately so, conducted by diplomats, by fisheries managers and by national and international public servants. These individuals bring to these problems expert knowledge and very high levels of skill and dedication. What they often do not have is a background in, and an understanding of, the commercial and business world which actually conducts the fishing, processing and domestic and international trade. The Panel believes that this aspect of the international fisheries scene has been inadequately examined and analyzed as a means of contributing to the resolution of international fisheries management issues which otherwise appear intractable. **We believe that there might well be business solutions to some of these issues which could cut through the knots that tie up processes at the government to government level.** It has been beyond our timeframe and indeed beyond the scope of our analysis to examine these issues in any depth, but we have considered them just enough to be intrigued by the possibilities of commercial arrangements which could remove many of the issues that arise in state-to-state negotiations or multilateral fora such as NAFO. **To put it plainly, satisfactory business arrangements which translate into satisfactory employment arrangements on fishing vessels and in local economies could, perhaps, prevent the escalation of some issues to the international level.**

**Finally, Canada's strategy to rebuild the straddling stocks of the NRA and to replace NAFO with a new RFMO must be carried forward with the kind of profile, commitment and resources which would ensure that they are brought to a satisfactory and successful conclusion. We believe that if the issue of Grand Banks conservation is placed in a broader context of ocean governance and is accepted as an important political and economic imperative by the Government of Canada, the necessary reforms can be achieved. Their achievement will require that this be a sustained political imperative and involve a concerted effort by a senior and talented team of officials who will stand down only when the task is completed.**

## 10. RECOMMENDATION AND ACTION PLAN

### 10.1 RECOMMENDATION

**The Government of Canada should, as an immediate priority, act to replace the Northwest Atlantic Fisheries Organization (NAFO) with a new Regional Fisheries Management Organization (RFMO) that incorporates the modern approaches to, and principles of, sustainable ecosystem management contained in UNFA and the array of other international agreements, codes and declarations that have emerged in recent years. The new arrangement should explicitly recognize the special interest of coastal states in the sustainable management of stocks, while protecting existing shares of rebuilt stocks for current members of NAFO. The absence of an objection procedure, combined with compulsory dispute resolution and enhanced enforcement powers, will help to make this new RFMO the model for managing the world's straddling stocks and fishery resources in a sustainable manner. The creation of a new regional fisheries management organization is preferable to, and could achieve the same benefits as, a custodial management approach.**

### 10.2 ACTION PLAN

While the foregoing is the primary and central piece of advice from our analysis and deliberations, there are a number of strategies that should be pursued in support of this goal and which would go a long way to assuring that the resolution of the straddling stocks conservation and management problems would have a reasonable chance of success.

- **Canada should remain in NAFO until it is replaced in order to avoid a complete free-for-all that would only make the present situation worse, while making it clear to other NAFO members that change is necessary.**
- **The increase in Canadian surveillance and enforcement instituted in 2004/2005 should be continued, at least at current levels, to maintain and enhance the benefits of reduced illegal and unregulated fishing that this increased surveillance has produced.**

- **Canada should engage the European Union with the objective of developing a bilateral agreement to rebuild groundfish stocks and to better manage the straddling stocks, as well as those entirely outside 200 miles. Such an improvement would continue to benefit of all those regions which have historically fished these resources and which continue to depend on them economically and culturally. It is surely in the interest of these regions, these countries and the larger European Union to make common cause with Canada in a situation where more than 80% of groundfish allocations are assigned to these two entities.**
- **A comprehensive scientific review of the Grand Banks ecosystem should be undertaken as the basis for designing informed conservation objectives and ecosystem rebuilding measures in a ten-year timeframe.**
- **A vigorous and continuing campaign must be undertaken within the UN to improve and give practical consequence to the 1982 LOS Convention in general, and the UN Fisheries Agreement in particular, in pursuit of improvements in international law to deal with straddling stocks and areas outside national jurisdiction.**
- **Fishing is a business, a source of jobs and of income. Fishing activities are largely conducted by international commercial entities that require profits to survive and which would be expected to benefit from a rebuilding of fish stocks in the area. These businesses face similar procurement, processing and marketing pressures. These similar interests might provide the basis for business solutions to counter non-sustainable fishing practices. Business solutions are an opportunity that the government of Canada should encourage commercial interests to pursue.**
- **Finally, the success of these initiatives will require leadership at the highest levels of government, including that of the Prime Minister, the Minister of Fisheries and Oceans and the Minister of Foreign Affairs, sustained political support, as well as a concerted effort by a senior and talented team of officials who will stand down only when the task is completed.**

We are heartened by the Minister of Fisheries and Oceans' announcement of April 29, 2005, that effectively starts implementation of several elements of this advice. We owe the pursuit of these initiatives to the goal of conservation in the world's oceans. We owe it to the Grand Banks ecosystem which has been so badly abused in the past quarter century; and we owe this especially to the people on both sides of the Atlantic, whose lives have been disrupted by our collective failure to do what we all know really should have been done at least 20 years ago.

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## APPENDIX I

### Reviews Commissioned by the Panel

Marine Environmental Law Institute (MELI), Dalhousie Law School:	"Strategic Brief on Straddling Fish Stocks"
Gough, Joseph:	"Review of Canada's Bilateral Agreements and Foreign Allocations in Relation to Atlantic Straddling Stocks"
ORCA Inc.:	"Select Drivers in the European Union in Relation to NAFO Management and Decisions"
O'Rielly, Alastair:	"The Case for a Canada-EU Fisheries Alliance and Approaches to Straddling Stock Management off Canada's East Coast"
Parsons, Scott:	"Governance of Straddling Stocks in the Northwest Atlantic. A Review of the Northwest Atlantic Fisheries Organization"
Pope, John and NRC (Europe) Ltd:	"NAFO Straddling Stocks - Scientific Basis for Management"

## **APPENDIX II**

### **Meetings Held By Panel**

Selected Staff DFO, Ottawa

Selected Staff FAC, Ottawa

Minister and Officials, Department of Fisheries & Aquaculture, Newfoundland and Labrador

Fishermen, Food and Allied Workers (E. McCurdy)

Association of Seafood Producers Inc. (H. Clarke and selected members)

Minister, Deputy Minister and staff, Department of Fisheries and Agriculture, Nova Scotia

Members of the Dalhousie Law School, Halifax

Roger Stirling, Seafood Producers Association of Nova Scotia, Halifax

John Angel, NAFO Commissioner, Halifax

Bruce Chapman, Groundfish Enterprise Allocation Council

Max Short, Special Advisor, DFO

Alastair O'Rielly, Canadian Centre for Fisheries Innovation

John Crosbie

Scott Parsons

Ches Cribb, FFAW Offshore

Leo Strowbridge, Director Special Projects DFO NL Region

J W Baird and W S Follett DFO NL Region

John Spencer, Head, Regional Arrangements, EU

Andy Noseworthy, Office of ACOA President

David Griffith, Secretary General, ICES, Copenhagen

Enrique Lopez-Veiga, Minister of Fisheries, Galicia, Santiago de Compostela

Allison Saunders, Fisheries Attaché, Canadian Mission to the EU, Brussels

C. Mogensen, WWF Europe

Tony Long, WWF Europe

Fisheries Institute for North Atlantic Islands (FIN)

## **APPENDIX III**

### **Written Submissions to the Panel**

Clarke, H.M. Chairman, Association of Seafood Producers Inc., St. John's, NL.

Department of Fisheries and Aquaculture, Government of Newfoundland and Labrador, St. John's, NL.

Coughlan, Geoff. St. John's, NL.



## APPENDIX IV

### Chronology of Canada's Actions to Curb Overfishing and to Improve International Fisheries Governance

<p>May 1-5, 2005</p>	<p>The Government of Canada hosts an international conference in St. John's, Newfoundland and Labrador, on the <i>Governance of High Seas Fisheries and the United Nations Fish Agreement</i>. Prime Minister Paul Martin kicks off the Conference with a <i>keynote speech</i> on the need to protect global fish stocks. Ministers or their representatives from 19 States or entities issue a <i>Ministerial Declaration</i> (to guide the work of delegations from almost 50 States). Among other things, the Ministers commit themselves to strengthening the use of scientific information and the precautionary approach in the decision-making of regional fisheries management organizations (RFMOs), and stronger monitoring, control and surveillance regimes. They also agree to work towards better dispute settlement procedures in accordance with the <i>UN Convention on the Law of the Sea (UNCLOS)</i> and the <i>UN Fish Agreement (UNFA)</i>, and to establish regional guidelines for States to use in sanctioning their flag vessels and nationals for non-compliance. At the close of the conference, the co-chairs present a summary of the views and ways forward suggested in the five workshops (ecosystems-based considerations in fisheries management; compliance and enforcement; decision-making in RFMOs; balancing fishing capacity and fishing aspirations; and new areas and gaps).</p>
<p>April 20, 2005</p>	<p>Fisheries and Oceans Canada (DFO) holds a technical briefing to update media on the Conference on the <i>Governance of High Seas Fisheries and the UN Fish Agreement – Moving from Words to Action</i> being held in St. John's, Newfoundland and Labrador in early May. Briefing focuses on the goals of the Conference, the Conference program, and the list of ministers and delegations attending.</p>
<p>March 12, 2005</p>	<p>On behalf of the Minister of Fisheries and Oceans Canada (DFO), the Deputy Minister of DFO delivers the keynote address on illegal, unreported and unregulated (IUU) fishing at the UN Food and Agriculture Organization Ministerial Meeting on Fisheries in Rome.</p>
<p>March 9 and 11, 2005</p>	<p>The first ministerial meeting of the High Seas Task Force in Paris and Rome. Task Force members, including Canada as the North American member, agreed to pursue six priority areas: sharing intelligence and better coordination of monitoring, control and surveillance; developing a global registry of high seas fishing vessels; preparing guidelines on the performance of flag States regarding their high seas fishing vessels; strengthening in-port measures and control over nationals; analyzing trade-related measures; and RFMO-based initiatives and governance issues.</p>
<p>March 7, 2005</p>	<p>Canada tables its <i>National Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing (NPOA-IUU)</i> at the annual meeting of the United Nations Food and Agriculture Organization (FAO) Committee on Fisheries (COFI) in Rome. The plan outlines ongoing programs and initiatives, as well as existing policies and legislation, which tackle the issue of IUU fishing.</p>
<p>February 18, 2005</p>	<p>The Government of Canada launches its Overfishing and International Fisheries Governance Web site and the official site for the <i>Conference on</i></p>

	<i>the Governance of High Seas Fisheries and the United Nations Fish Agreement.</i>
January 25 - 27, 2005	Canadian fishery inspectors attend workshop in Brussels for inspectors from the Northwest Atlantic Fisheries Organization (NAFO). The workshop improves understanding of how different Contracting Parties conduct inspections and lays the groundwork for further harmonization of procedures.
January 20, 2005	Technical briefing in Ottawa to update the media regarding Canada's actions in 2004 to combat overfishing and to improve international fisheries governance. The briefing focuses on three main areas: monitoring and surveillance efforts; diplomatic activities; and international fisheries governance improvements.
December 31, 2004	At-sea inspections of vessels in the NAFO Regulatory Area (NRA) in 2004 total 241. Up to three dedicated Canadian patrol vessels were on duty in the NRA, logging 675 patrol days (165 days of which were provided by the Navy). An estimated 2,540 flying hours of aerial surveillance were also dedicated to the NRA (2,000 by DFO through Provincial Airlines Limited and 540 by the Air Force).
December 13-14, 2004	Canada-Russia bilateral fisheries consultations in Moscow.
December 13, 2004	Fisheries and Oceans Minister Geoff Regan announces the Advisory Panel on the Sustainable Management of Straddling Fish Stocks in the Northwest Atlantic during a speech to the St. John's Board of Trade. The Panel is mandated to look at the whole range of Canada's efforts to combat overfishing and at the question of custodial management, and to suggest areas for improvement and ways to move forward.
December 2, 2004	Canada closes ports to vessels from the Faroe Islands and Greenland due to overfishing of shrimp in NAFO Division 3L in excess of their 2004 NAFO -set quota.
December 1, 2004	Vessels from the Faroe Islands resume fishing in the NRA in excess of their NAFO -set 3L shrimp quota.
November 16, 2004	The intergovernmental Conference on <b>The Governance of High Seas Fisheries and the United Nations Fish Agreement — Moving from Words to Action</b> (May 1-5, 2005 in St. John's, Newfoundland and Labrador) is announced.
November 16, 2004	Minister Regan addresses the United Nations General Assembly, focusing on the depletion of the world's fish stocks and the problem of global overfishing. He also outlines Canada's strategy to combat overfishing and to improve international fisheries governance.
November 6-10, 2004	Minister Regan visits counterparts in Portugal and Britain. In Portugal, Minister Regan and Minister Costa Neves agree to sign a Memorandum of Understanding on co-operation and to have a workshop for experts on the legal frameworks in Canada and Portugal in St. John's, Newfoundland and Labrador, February 9-10, 2005. In Britain, Minister Regan agrees to identify opportunities for Canada to advance the work of the High Seas Task Force.
October 28, 2004	Minister Regan joins the High Seas Task Force – an international, ministerial task force dedicated to the fight against illegal, unreported and unregulated (IUU) fishing activities on the high seas.
October 15, 2004	During the Progressive Governance Summit in Budapest, Hungary, Prime Minister Paul Martin meets with the Prime Minister of Spain and they agree

	to pursue further bilateral fisheries co-operation.
October, 2004	Fisheries and Oceans Canada ( DFO ) Associate Deputy Minister participates in bilateral meetings with senior officials from Spain, Portugal, and the EU to strengthen co-operation regarding overfishing.
September 22, 2004	During his address to the United Nations General Assembly, Prime Minister Martin stresses the need for a global oceans policy to allow for the rebuilding of fish stocks and improved regulation of fisheries under international law. While in New York, the PM meets with the Portuguese Prime Minister and they agree that bilateral work on a variety of fisheries issues will begin right away.
September 13-17, 2004	Progress made at the annual meeting of NAFO in Dartmouth, Nova Scotia. Among the outcomes, NAFO Contracting Parties agreed to regulate three previously unregulated fish stocks (Division 3LNO thorny skate, 3O redfish, and 3NO white hake) and to modify NAFO Conservation and Enforcement Measures to make at-sea and in-port inspections more effective.
September 2, 2004	A technical briefing is held to update Canadians on the monitoring, surveillance, and diplomatic actions taken by Canada since May 2004 to combat overfishing.
August 31, 2004	There are 38 vessels fishing on Nose and Tail of the Grand Banks, 41% fewer than the 64 vessels fishing there on the same day in 2003.
August 27, 2004	Denmark agrees to stop Greenlandic and Faroese vessels fishing in excess of their NAFO-set 3L shrimp quota.
August 24, 2004	Meeting of Canadian, Danish, Faroese and Greenlandic officials to obtain agreement from Denmark to stop fishing in excess of their NAFO-set quota for 3L shrimp.
August 15, 2004	At-sea inspections of vessels in the NRA since May 1 <sup>st</sup> total 123. Canadian patrol vessel hours in the Area total 3,082.
August, 2004	Canada secures EU support for a technical consultation between Canadian and EU NAFO inspectors to develop a common understanding of the NAFO inspection process. The joint inspection workshop will take place in Brussels from January 25-27, 2005.
July 23, 2004	DFO officials meet with Russian counterparts in Ottawa.
July 22, 2004	Canada-United States annual bilateral fisheries consultations.
July 6, 2004	Canada-EU meeting of Deputy Ministers in Brussels results in agreement to focus on areas of common interest and on how to move forward co-operatively, particularly in NAFO.
June 25, 2004	Galician Fisheries Minister Enrique Lopez Veiga arrives in Canada to meet with ministers and officials in Quebec, Nova Scotia, and Newfoundland and Labrador. Visits to scientific installations and processing and aquaculture plants lay foundation for future exchanges.
June 8-10, 2004	Prime Minister Martin raises Canada's concerns about overfishing on the high seas with the Presidents of the EU and France during the G8 Summit at Sea Island, Georgia.
June 3-5, 2004	Minister Regan raises Canada's concerns about overfishing during the North Atlantic Fisheries Ministers Conference in Iceland.
June 2, 2004	Between May 3 and June 2, Canada's NAFO inspectors board and inspect

	36 fishing trawlers in the NRA.
June, 2004	DFO International Affairs Director General meets counterpart in Portugal.
June, 2004	Surveillance indicates international groundfish fleets have stopped fishing in the shallower waters of the continental shelf, where they are likely to catch excessive amounts of species under moratoria.
June 2004 – ongoing	Canadian embassies provide démarches on Canada's NAFO objectives to fisheries authorities of NAFO Contracting Parties.
Late Spring, 2004	DFO reallocates \$12.5 million internally towards Canada's strategy to combat overfishing and to improve international fisheries governance.
Week of May 17, 2004	DFO Associate Deputy Minister participates in bilateral meetings on overfishing in Brussels, Madrid, Santiago de Compostela and Lisbon to establish important contacts to deal more effectively with issues. The visit is the first high-level official delegation to visit European countries since summer 2002.
May 8, 2004	Minister Regan updates Canadians on NAFO inspections conducted May 4-7.
May 6, 2004	Minister Regan and then Foreign Affairs Minister Bill Graham announce an additional \$15 million to further enhance surveillance and patrols in the NRA , increasing from one dedicated vessel to two to three on the Nose and Tail of the Grand Banks and the Flemish Cap. Money will also fund an advisory panel to provide advice on how to end the cycle of high seas ecosystem destruction, increased diplomatic interventions, and Canada's agenda to improve international fisheries governance.
May 4, 2004	Amendments to Canada's Coastal Fisheries Protection Regulations (CFPR) are approved, enabling Canada to apply United Nations Fish Agreement (UNFA) enforcement procedures to all UNFA parties with fleets in the NRA.
April 30, 2004	DFO and Department of National Defence (DND) staff finalize operational plan to target vessels for inspections during fishing operations.
March 16, 2004	Minister Regan announces new, five-and-a-half year, \$51-million contract with Provincial Airlines Limited (PAL) to provide aerial surveillance of waters in and outside Canada's 200-mile limit. Annual flying hours under contract total about 4,800 hours; about 2,000 hours dedicated specifically to NRA.
March 16, 2004	Minister Regan outlines five-year, \$17.5 million strategy to enhance Canada's at-sea patrol programs; strengthen DFO co-operation with DND ; and increase Canada's monitoring and analysis capacity.
December 9, 2003	Fisheries and Oceans Minister Robert Thibault announces amendments to the CFPR to enable Canada to better control and manage the activities of foreign fishing vessels in Canadian waters and ports. The new regulations will provide the flexibility to grant or deny access to Canadian ports on a vessel-by-vessel basis, while retaining the ability to deny access to an entire fleet, if necessary.
November 6, 2003	Canada ratifies UNCLOS (United Nations <i>Convention on the Law of the Sea</i> ) which provides the framework for international oceans law governing many aspects of oceans affairs – from fisheries and navigation to marine pollution and scientific research.
August 7, 2003	Canadian ports are reopened to Faroese fishing vessels banned since March 2002 for overfishing their quota of Division 3L shrimp.

August 5, 2003	Canada uses its new vessel-by-vessel port-closure policy to ban a Greenland-based vessel, the <i>Regina C</i> , from Canadian ports for overfishing of shrimp in Division 3L.
December 13, 2002	Canada reopens its ports to the Estonian fishing fleet after Estonia takes action to address Canadian concerns about illegal fishing activity.
September 27, 2002	Minister Thibault announces a new approach whereby Canada will close its ports to international fishing vessels that are believed to have committed serious violations of conservation and enforcement measures set by NAFO.
July 12, 2002	Minister Thibault releases Canada's Ocean Strategy, a framework for the protection and sustainable use of Canada's marine environment. Among the activities outlined in the strategy is the promotion of international collaboration to protect globally shared fisheries and ocean resources.
June 24-27, 2002	Minister Thibault presses the need to improve fishing conservation measures on the high seas and address increasing non-compliance with NAFO measures conservation during meetings with European counterparts in Lisbon, Madrid, Brussels and Copenhagen.
April 9, 2002	Canadian ports are closed to Estonian ships based on evidence of fishing in excess of quotas, misreporting of catches and other NAFO violations.
March 21, 2002	Canada closes its ports to fishing vessels from the Faroe Islands for overfishing their quota of shrimp in Division 3L and for misreporting catches in 2002 and 2001.
December 11, 2001	UNFA enters into force, following ratification by the United Nations' 30 <sup>th</sup> State.
June 2001	The United Nations Food and Agriculture Organization (FAO) Committee on Fisheries (COFI) formally adopts the International Plan of Action to Prevent, Deter, and Eliminate Illegal, Unreported, and Unregulated Fishing Activities (IPOA-IUU).
March 2, 2001	COFI approves the IPOA.
<b>Main Canadian Actions Against Overfishing Prior to 2000</b>	
August 3, 1999	Canada ratifies UNFA.
1998	Canada becomes the first country to apply the International Code of Conduct for Responsible Fisheries adopted in 1995 by the FOA . The Canadian Code of Conduct for Responsible Fishing Operations contains nine principles and 36 guidelines developed as a grassroots initiative by fishers.
December 4, 1995	Canada signs UNFA .
August 1995	UN Conference adopts the United Nations <i>Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of December 10, 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks</i> , commonly referred to as UNFA . Canada plays a leading role in UNFA 's development.
May 5, 1995	Fisheries and Oceans Minister Brian Tobin announces the recovery of an illegal trawl net at the site where a net was released from the Spanish fishing vessel, <i>Mayi Cuarto</i> , after the ship was boarded by Canadian inspectors on April 28, 1995. The vessel is ordered by the EU to return to a Spanish port

	and the net is later returned to Spain for legal proceedings.
March 9, 1995	Canadian Fishery Officers seize the Spanish fishing vessel <i>Estai</i> after warning shots are fired. The trawler is believed to be fishing illegally on the Nose of the Grand Banks. The captain of the vessel is charged with four violations under the <i>Coastal Fisheries Protection Act</i> .
March 3, 1995	The federal government amends the CFPR to make it an offence for Spanish and Portuguese vessels to fish Greenland halibut on the Grand Banks. Previously the regulations applied only to flag-of-convenience vessels and stateless vessels.

Source: "Overfishing and International Fisheries Governance"  
@ [www.dfo-mpo.gc.ca/overfishing-supeche/history\\_e.htm](http://www.dfo-mpo.gc.ca/overfishing-supeche/history_e.htm)

## **APPENDIX V**

### **NAFO Contracting Parties**

(as of January 2005)

		<b>Country</b>	<b>NAFO Member since</b>
<b>1</b>		<b>Bulgaria</b>	<b>1979</b>
<b>2</b>		<b>Canada</b>	<b>1978</b>
<b>3</b>		<b>Cuba</b>	<b>1978</b>
<b>4</b>		<b>Denmark (in respect of Faroe Islands + Greenland)</b>	<b>1979</b>
<b>5</b>		<b>European Union (EU)</b>	<b>1978</b>
<b>6</b>		<b>France (in respect of Saint Pierre et Miquelon)</b>	<b>1996</b>
<b>7</b>		<b>Iceland</b>	<b>1978</b>
<b>8</b>		<b>Japan</b>	<b>1980</b>
<b>9</b>		<b>Korea, Republic of</b>	<b>1993</b>
<b>10</b>		<b>Norway</b>	<b>1978</b>
<b>11</b>		<b>Russian Federation</b>	<b>1978</b>
<b>12</b>		<b>Ukraine</b>	<b>1999</b>
<b>13</b>		<b>United States of America</b>	<b>1995</b>

Source: NAFO Website

## APPENDIX VI

### National Shares of NAFO Groundfish Quotas <sup>(1)</sup>

(Percentage Shares)

Stock	Canada	EU	All Others	Total
<b>Cod</b>				
3M	0.8	57.1	42.2	100.0
3NO	47.7	41.0	11.3	100.0
<b>Redfish</b>				
3LN	42.6	18.2	39.2	100.0
3O	30.0	35.0	35.0	100.0
3M	2.5	39.1	58.4	100.0
<b>American Plaice</b>				
3LNO	98.5	1.3	0.2	100.0
3M	7.5	34.5	58.0	100.0
<b>Yellowtail-3LNO</b>	97.5	0.0	2.5	100.0
<b>Witch-3NO</b>	60.0	13.3	26.7	100.0
<b>White Hake-3NO</b>	29.4	58.8	11.8	100.0
<b>Skates-3NO</b>	16.7	63.0	20.4	100.0
<b>Turbot-3LMNO</b>	15.0	58.6	26.4	100.0
<b>Percent of Straddling Stocks<sup>(2)</sup></b>	48.6	32.1	19.3	100.0
<b>Percent of All<sup>(2)</sup></b>	37.3	35.0	27.7	100.0

Notes: (1). Excluding "Oceanic Redfish"

(2). Arithmetic Averages of individual quota shares.

The above percentages are based on shares of current open quotas and on the shares in closed fisheries for the last year each was open.

Source: NAFO/FC Doc. 04/17, Serial No. N5067



## APPENDIX VII

### Number of Citations Issued by Canadian Inspectors in the NAFO Regulatory Area, 1984 to 2004

<b>Year</b>	<b>Citations</b>
1984	22
1985	37
1986	37
1987	20
1988	8
1989	9
1990	7
1991	30
1992	30
1993	40
1994	63
1995	20
1996	12
1997	13
1998	16
1999	17
2000	26
2001	27
2002	32
2003	23
2004	15
<b>Total</b>	<b>504</b>

Source: Dept. of Fisheries and Oceans