FISHERIES RESOURCE CONSERVATION COUNCIL

2001 / 2002 Conservation Requirements for Groundfish Stocks in the Gulf of St. Lawrence

Report to the Minister of Fisheries and Oceans

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April 2001

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Table of Contents

LETTER TO THE MINISTER

April 18, 2001

The Honourable Herb Dhaliwal, P.C., M.P.
Minister of Fisheries and Oceans
200 Kent Street
Ottawa, ON K1A 0E6

Dear Minister,

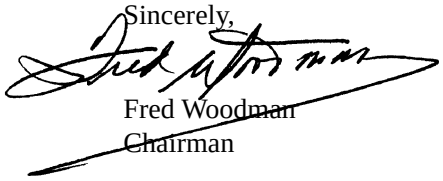
The Fisheries Resource Conservation Council (FRCC) herewith presents to you its report on 2001/2002 Conservation Requirements for Groundfish Stocks in the Gulf of St. Lawrence.

The advice provided is to maintain catch levels on all stocks: the Council has analyzed the available scientific information and the information gathered during consultations with stakeholders. This analysis confirms that this status quo approach is acceptable for the next year.

I should note that last year the Council was optimistic about the perspectives for 4TVn cod, and pessimistic about 3Pn4RS cod. In this report, we have reversed these opinions. Slow and steady signs of rebuilding appear to be underway in the northern Gulf of St. Lawrence (3Pn4RS) cod stock. Maintaining the TAC at its current level and continuing the conservative fishing strategies implemented by the industry should allow this rebuilding to continue. In the southern Gulf of St. Lawrence (4TVn) cod stock, a lack of recruitment and low productivity lead us to be more cautious; however, with the implementation of the conservation measures outlined in our report, stability in the TAC for 2001/2002 is acceptable, and follows on the Council's forecast of last year for such stability.

During the coming year, as we have outlined previously, the Council will continue its endeavour to develop Fisheries Resource Conservation Plans for Gulf of St. Lawrence groundfish stocks, in consultation with stakeholders, and fisheries managers and scientists.

Sincerely,



Fred Woodman
Chairman

INTRODUCTION

This is the third FRCC report dedicated to groundfish stocks in the Gulf of St.-Lawrence. It maintains the philosophy of previous reports, in line with FRCC's mandate and with its intent to make more explicit the ecosystemic approach stated in its terms of reference.

Common conservation issues are grouped in a single section. As in previous reports, ecosystem issues are raised. For each stock, a general perspective describes an overview of the fish population, fishery and trends. Instead of separating scientific and fishing industry information from consultations and briefs in separate sections, we have incorporated these in a common text leading to specific recommendations. By incorporating recommendations into the text, we hope to make clearer why those recommendations are made.

The overall picture of groundfish stocks in the Gulf remains pessimistic, even if signals may lead to some hope for certain stocks. Most groundfish stocks are still close to historical lows. Rebuilding, if any, remains very slow. Fish growth rates have declined. Recruitment levels remain well below the level that would induce a fair rebuilding. During our consultations, almost nobody challenged that view. We have to keep in mind that the sum of the TACs for all stocks is now in the range of 10% of what it was in the 1980s. This clearly shows the long road to recovery faced by these stocks.

In the future, stock-specific strategies and objectives will be developed. This implies the definition of objective, measurable indicators to be followed. The FRCC attempted to launch a discussion on such strategies during the March 2001 consultations with stakeholders, with mixed results. Considering the precarious state of most Gulf of St. Lawrence groundfish stocks, and the critical situation that the fishing industry might face, stakeholders are, logically, more concerned by the immediate than by long term planning. **As expressed during the consultations, stakeholders feel that pressing issues for the stocks must be addressed first. Unless the seal issue is addressed and unless poor fishing practices are corrected, fishers feel that stocks won't recover and that discussion on long term approaches is futile. The Council feels, however, that now is the time to discuss such long-term planning.**

The growing frustration within the industry and the eroding confidence in science and in the decision making process clearly shows the necessity of building long term plans that will set the course of action within an agreed framework.

The FRCC will initiate the development of conservation plans for stocks and ecosystems, in cooperation with industry, DFO Science and DFO management.

In this report, as an interim stage, the FRCC is keeping with a principle expressed last year for some Gulf stocks and in other reports dealing with other regions. It aims at providing some stability in the fisheries while avoiding small changes, up or down, in TAC from year to year. This means that, **unless significant changes occur in the stock status, based on both scientific data and on fishers' views, no changes in TACs should occur.**

There is a growing frustration among fishers about the state of scientific information. After eight years of heavy constraints on fishing activities, scientists are not able to provide answers to basic questions on issues such as:

- constant low levels of recruitment (4T4Vn Cod, American Plaice);
- high natural mortality rates (3Pn4RS Cod, 4T4Vn Cod);
- geographical distribution (most southern Gulf stocks are concentrated in the eastern part);
- decreasing growth rates (4T4Vn Cod, Greenland halibut).

The feeling is that as time goes on, it seems that less knowledge is gathered about the stocks. The industry feels, as does the FRCC, that a complete cessation of fishing (e.g. a moratorium) would mean the loss of valuable information on the state of the stocks.

The FRCC then faces a cruel dilemma: can some significant commercial activities be allowed in such a situation?

The consultations showed that the industry, at present, prefers a slow rebuilding approach over drastic conservation measures that could destroy local economies. This report acknowledges those views, at least for the short term.

However, how long low biomass levels, low rebuilding rates, and consequent low catch levels can be accepted is still to be defined.

General Conservation Measures

The FRCC feels it is not necessary to reiterate every recommendation made in past reports. Unless clearly stated otherwise, those recommendations are still valid.

Several principles are valid for every stock and are explained in the Council's 1997 Groundfish Conservation Framework for Atlantic Canada (FRCC.97.R.3). As basic principles, the Council adopted the following:

- Recruitment fishing must be avoided; small fish are to be protected and by-catches of those fish should be kept at the lowest possible level;
- Significant removals of a single year-class must be avoided;
- Fishing on concentrations during peak spawning period should be minimised;
- Fishing activities should not be concentrated in one period and/or in one geographical area, in order to protect the diversity of stock components;
- In gillnet fisheries, gear must be tagged to identify its owner; gillnets must be regularly tended; other measures, as necessary, must be implemented to limit gear losses in order to prevent ghost fishing;
- Sentinel Fisheries Programs and joint Science-Industry Research Programs must be continued and expanded, even after fisheries reopen;
- DFO should implement Dockside Monitoring Programs and at-sea Observer Programs for every groundfish fishery, in order to get reliable estimates of total fish removals from every stock;
- Sentinel fisheries programs, joint Science-Industry Research Programs, Dockside Monitoring and Observer programs, and reporting systems must be consistent among areas and regions;
- Log-books be made compulsory for all groundfish fisheries and the data obtained should be processed in order to provide useful information on fishing activities and results;
- Discarding must be minimized;
- For American plaice, witch flounder and white hake, these stocks are generally considered to overwinter outside the Gulf and, thus, the management units do not take into consideration the winter portion of the population; clarifications on the distribution range and migration patterns of those stocks are needed.

The FRCC is still concerned about the high fishing capacity exerting heavy pressure on Gulf groundfish stocks, which for the most part, are in a precarious state.

During Council's consultations, several fishers raised concerns about discards and the level of unreported catches (quotas have been exceeded in some places). The risk of dumping and discarding might increase with the implementation of the two-tier pricing system during the next fishing season (differential pricing based on fish size and quality). The FRCC has also heard about amounts of gear on boats that could exceed the allowed amounts. However, no precise numbers are available.

Considering the issues raised by the industry, the FRCC recommends particularly:

- **100% dockside monitoring be implemented and enforced;**
- **DFO Management and Industry should explore options to increase at sea observer coverage for all gear sectors;**
- **DFO regulate fishing activity at sea by increasing boardings to enforce the conservation requirements, e.g. number of gillnets, number of hooks, mesh size/configuration, etc., used by fishing vessels;**
- **DFO should develop appropriate monitoring mechanisms to determine/control the extent of dumping, discarding and misreporting;**
- **should dumping, discarding and misreporting persist for a particular gear sector and/or area, the fishery should be closed for this particular gear sector and/or area.**

In the mean time, DFO Science and Management, in cooperation with the industry, must analyze the benefits, the feasibility and the impact of additional conservation measures, especially on:

- **definition and protection of key juveniles areas;**
- **definition and protection of key spawning areas;**
- **local temporal closures.**

This work has to be done during the year 2001 in order to be implemented no later than the 2002 season.

Recommendations Dealing with the Ecosystem

Seals

The large seal population continues to be a major concern raised in every consultation held by the Council. The FRCC, along with the fishing industry, is concerned that predation by seals may be postponing recovery of several important cod stocks. In the Southern Gulf and along the Scotian Shelf, grey seals are of special concern because this species resides in the area and is an efficient predator of groundfish.

Fishermen regard the seal as the primary harvester of groundfish stocks, and the primary benefactor of the moratoria on commercial fishing and economic hardship imposed on rural communities in Atlantic Canada. Fishermen question why they must continue to face increasing restrictions on commercial fishing activities, while seal herds are not reduced. Fishermen believe that international pressure generated by animal rights groups has resulted in a Canadian public policy of favoring seals over fish. Fishermen often pose the question of whether groundfish resources are being managed for the benefit of the many struggling coastal communities in Atlantic Canada or for the burgeoning seal herds.

The FRCC believes that this international pressure favours seals over fish and ignores a balanced approach to the ecosystem and to fisheries management. It is fact that the Atlantic cod, and several other groundfish, are in a precarious state in many regions of Atlantic Canada, sufficiently so to justify fishing moratoria. Seal herds are not in a precarious state, and in some areas are at high abundance levels never before seen in these areas. The FRCC emphasizes the importance of the vulnerable and threatened groundfish stocks to Atlantic Canadian coastal communities and peoples, and increasing evidence of the potential severity of seal predation on these stocks.

The FRCC recognizes that the effect of seals within marine ecosystems is complex, that quick fixes are unlikely, and that further research is needed. The FRCC does not believe that seals were the singular cause of the decline in groundfish populations. Neither does the FRCC support massive culling. Rather, the FRCC believes that seals are a valuable renewable resource and supports the establishment of a sustainable industry based on their harvest. Nevertheless, the ecosystem and precautionary approach to rebuilding groundfish stocks advocated by the FRCC is inconsistent with unlimited, unhampered and unrestricted seal predation on highly vulnerable groundfish stocks.

Seals cannot be considered “sacred” while populations of less charismatic creatures are allowed to decline. Thus, the FRCC firmly believes that reductions in seal populations are required in areas such as groundfish spawning areas and juvenile groundfish nursery grounds where acute predation is lowering the likelihood that groundfish stocks can return to levels that would support Atlantic Canadian coastal communities and sustain their maritime cultures and fisheries.

The FRCC recommends that areas where groundfish are particularly vulnerable to predation be identified and considered for protection as “seal exclusion zones”. One such area is St. Georges Bay in the Southern Gulf of St. Lawrence (western Cape Breton).

The FRCC recommends that seal harvest management plans include recommendations for reductions in herd size to levels that will sustain a long-term seal industry and are compatible with groundfish rebuilding objectives.

Oil and Gas Exploitation

During FRCC’s consultations in the southern part of the Gulf, a major concern was expressed again about the developing oil and gas exploration, leading to possible exploitation. As in its previous report, the Council considers that this leads to conservation issues that have to be addressed.

The Gulf of St. Lawrence is a semi-confined highly productive environment. The FRCC still believes that any activity that would have a negative impact on that productivity must be closely assessed and monitored.

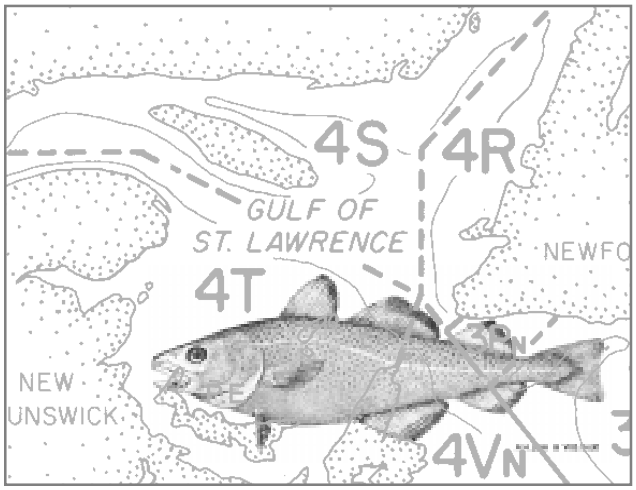
The FRCC recommends that any oil and gas production activities in the Gulf of St. Lawrence, from exploration to production phase, including the decommissioning phase, be postponed until a complete assessment, made through a transparent process, on the potential impact of those activities on the marine life is made.

During consultations, stakeholders raised concerns about the fact that the report of the DFO Science RAP session on the impact of oil/gas development will be released only after the Canada-Nova Scotia Offshore Petroleum Board (CNSOPB) public review has been concluded.

In line with its previous recommendation, the FRCC recommends that no decisions on oil and gas exploration and development activities should be taken before all information, from DFO and from CNSOPB, is made available publicly.

Chapter 2:
Stock by Stock Recommendations

COD - 3PN4RS



PERSPECTIVE

The stock is located north of the Laurentian Channel, west of Newfoundland and on the lower north shore of the Gulf of St. Lawrence. It overwinters outside the Gulf, in the 3Pn area. Scientific evidence shows that it also appears further east, on the Burgeo Bank.

This cod stock was the most productive of the two Gulf cod stocks, with catches regularly above 50,000t until the late eighties, and some years above 100,000t.

Prior to 1994, this stock experienced the effects of poor fishing practices (harvesting of undersized fish, dumping, highgrading, misreporting, etc.). Overfishing combined with poor environmental conditions may explain the sharp decline observed in the early nineties, which led to the closure of the fishery in 1994. The fishery reopened in 1997.

ANALYSIS

The 2001 Stock Status Report (SSR) for 3Pn4RS cod notes a substantial improvement in growth and condition is observed over the last few years. The age at maturity has shown a significant decrease in the last few years, perhaps as a response of the population to a low abundance. The indices of all surveys (DFO research vessel, sentinel longline, sentinel mobile (July and October)) have all shown progressive increases. Only the sentinel gillnets have shown no increase since 1995. The spawning stock biomass was estimated at 77,000t on January 1, 2001, and the total biomass was estimated at 95,000t. The 1995 and 1996 year classes are the largest seen in this stock in the past decade, however below historical average.

The analytical model applied by scientists in February 2001 shows a slightly more positive outlook than the 2000 assessment. The SSR shows fishing mortality in 2000 was approximately 20%, exceeding $F_{0.1}$ which was estimated at 15%. However, it must be noted that these mortality rates are calculated on fully-recruited ages (fish age 7 to 9), while the fishery exploits fish from age 3 resulting in an actual fishing mortality which is lower than the calculated mortality, but is still high.

The FRCC conducted public consultations on this stock in Port au Choix and Port aux Basques, Newfoundland, as well as in other places in the southern part of the Gulf, in March 2001. Presentations from the Food, Fishermen and Allied Workers Union in both Newfoundland meetings highlighted their perceptions of the shortcomings of the assessment, and stressed that emphasis should be placed on the recent relative changes in indicators, rather than on the output of the Sequential Population Analysis (SPA). The FFAW maintains that the SPA systematically underestimates the actual stock biomass, and lags the changes in the stock. Stakeholders in attendance generally supported this view. In Port aux Basques, there was significant concern about the mixing of the 3Pn4RS and 3Ps cod stocks. It was the view of stakeholders that the winter closure of the Burgeo Bank was insufficient to prevent fishing of the 3Pn4RS cod stock in the 3Ps area. Using the example of one fish tagged in the La Poile area and caught on the St. Pierre Bank, fishermen maintained that the 3Pn4RS stock migrates out of the Gulf of St. Lawrence in the winter and the entire 3Ps offshore area should be closed during that migration period.

Fishermen again present a different perspective than scientists on stock status and continue to report improved catch rates, and an increase in cod size and condition. Longline sentinel fishermen recorded their highest catch rates in the series in 2000. The 1993, 1995 and 1996 year classes are relatively high and are contributing to stock recovery. Last year's indications that the 1997 year class is the highest in the last decade appear to be borne out. The telephonic survey carried on by FFAW and the Lower North Shore Fishermen Association indicates an overall stable catch rate, or a slight decline, from 1999 to 2000. Fishermen attempted to present a direct comparison between the SPA-calculated spawning stock biomass estimate of 76,000t on April 1, 2001 in the 3Ps stock, and the SPA-calculated spawning stock biomass estimate of 77,000t on January 1, 2001 for 3Pn4RS cod. They used this

Figures are in 000t

Year	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000*
TAC	100	92.1	80.3	73.9	76.5	58	35	35	18	Moratoruim			6	3	7.5	7
Catch	87.3	82	66.5	43.7	44.8	37.5	31.8	30.6	17.7	0.5	0.09	0.03	4.3	3.1	7.2	6.5

*Catch as of Jan 3/2001

1. Figures are from the Integrated Fisheries Management Plan Atlantic Groundfish

comparison to question the Council's recommendation of a 15,000t TAC in 3Ps cod, while the Council's last recommendation for 3Pn4RS cod was a TAC of 7,000t, which in their view was despite virtually identical spawning stock biomass numbers from the SPA. Such an analysis ignores significant differences between the two stocks, such as total biomass; growth and maturity data; age profile of the stocks; and productivity. Based on their analysis of the indicators, the FFAW advocated a 2001/2002 TAC of 9,000t.

The Council reviewed the comprehensive brief submitted by the FFAW on behalf of its members with an interest in the 3Pn4RS cod fishery. The brief presents a list of indicators, as well as interpretations of the status of these indicators, and the Council finds this a useful and helpful contribution to monitoring the status of the stock. The brief attempts to present an objective analysis of various indicators. Generally, while the analysis of the sentinel (gillnet, longline and mobile gear) indicators as well as the DFO RV survey might

Sources

DFO Science

SSR A4 - 1 (2001) Northern Gulf of St. Lawrence Cod (3Pn, 4Rs) in 2000.

FRCC Consultations

The FRCC held consultations on this stock in 2001 in:

Port au Choix, NF (March 19)
Port aux Basques, NF (March 20)
Port Hawkesbury, NS (March 20)
Moncton, NB (March 21)
Magdalen Islands, QC (March 22)
Gaspé, QC (March 23)

Written Briefs

Fish, Food and Allied Workers – David Decker (2001-010-00093)

Council's View of Stock Status

Overall stock indicators:	Stock at low level, very slow improvement
Overall biomass:	Improved since 1994 with slight annual increases
Spawning biomass:	Improved since 1994, important decrease in maturity at age;
Recruitment:	1993 year class entered the fishery in 1999, year classes 1995 and 1996 are the best of the last decade, however below historical long term average
Growth and condition:	Important improvement; fish condition and weight at age back to historical highs.
Age structure:	Still narrow, few fish older than 9 years.
Recent exploitation rate:	Very high in 1999 (26% of ages 7 and older), according to scientific assessment; even if possibly overestimated by the analytical model (as per industry's perception), current exploitation level likely to be high.

appear to be positive, the Council has three significant concerns about this analysis:

- the time frame over which the changes are assessed in the FFAW submission is quite short (changes since 1997 for the sentinel surveys and since 1994 for the RV survey are cited);
- even if the biomass has significantly improved since the moratorium, the yearly increasing rate remains modest; and,
- while average increases might appear large, the absolute changes in the indicators are quite small.

The Council recognizes that the biological indicators, such as recruitment, condition, migration and distribution appear to be more positive than they have been in recent years; however, when compared to the long term averages available for this stock, most of these indicators are below average.

While one exploitation strategy for this stock might be to attempt to follow small changes in the stock status with small changes in the TAC, the Council is concerned that such a strategy might prevent a true rebuilding of this stock to levels which are more in keeping with historical averages.

In its 2000 report, the FRCC noted that the 2000/2001 TAC level should remain stable until such a time as a significant increase in the stock occurred and an increase in TAC was warranted. The Council believes that it would not be appropriate to increase the exploitation rate at this time. An increase in 2001 may negatively affect the benefits obtained through the conservation efforts made by the industry since the moratorium.

The FRCC recommends that the 2001/2002 TAC for 3Pn4RS cod be maintained at 7000t.

The FRCC is pleased to note that the process that led to the 2000 assessment has been changed, and industry stakeholders were invited to attend the Regional Assessment Process meeting of February 2001.

The FRCC is also pleased to note that cooperation between science and industry is successful in that area: sentinel fisheries provides a large amount of information being used in the scientific assessment; the tagging program is still going on; the gillnet selectivity study was completed. This type of cooperation must be promoted and expanded.

Further to the objective of minimizing fishing on spawning concentrations during peak spawning periods, the Council repeats the following recommendation from its last report on this stock:

The FRCC recommends that DFO, in consultation with industry, identify the location and timing of major spawning concentrations of cod (e.g. St. George's Bay of western Newfoundland) and take effective measures (including fishing closures) to protect those spawning concentrations from fishing.

The Council is also concerned about the mixing of fish stocks from the Gulf of St. Lawrence and the south coast of Newfoundland, and repeats the following recommendation:

The FRCC recommends that the winter fishing closure (November 15 to April 15) on Burgeo Bank be continued to protect the 3Pn4RS cod stock components.

The FRCC also recommends that DFO Science, in cooperation with DFO Management and Industry, analyze the validity of an expansion of the winter closure to 3Psa.

The Council is pleased to see that there is ongoing scientific work on the mixing issue. This work should be pursued.

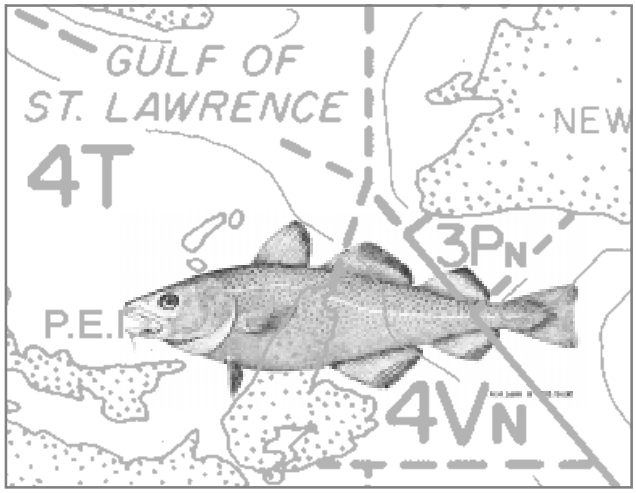
A total of 43,000 cod have been tagged in this stock, with only 1132 recaptured tags. This suggests a very low exploitation rate, which continues to be inconsistent with the calculated exploitation rate. Even if the tagging program was not designed to assess stock biomass and exploitation levels, the small rate of tag recovery, which could be translated in a low exploitation estimate, is regularly raised in the consultations.

The FRCC recommends that studies be undertaken to clarify why the tagging program provided so few tag returns.

Concerns have been repeatedly raised by industry about the effect of increasing mesh size from 5½ inches to 6 inches. That increase was initially intended by the FRCC to take place in 1999 and was postponed by DFO to 2000. The recommendation was repeated by the Council in 2000, and the implementation of this increase was deferred once again, pending the outcome of a comparative study of 5 ½" and 6" gillnet catches. New information provided by scientists shows that a mesh size increase would increase the exploitation rate on fish larger than 72 cm. Having reviewed the results of the selectivity study, the FRCC acknowledge that, considering the current size structure of the stock, large spawners are better protected by the current mesh size.

For the time being, the FRCC accepts that the mesh size of 5 ½ inches be maintained. In order to avoid targeting the same year class from year to year, the mesh size should not exceed 6 inches.

COD - 4TVN



PERSPECTIVE

Cod in the southern Gulf of St. Lawrence have been exploited for over three centuries. After averaging 30,000t early in the last century, landings rose to peak at more than 100,000t in 1958. Landings remained in the 60,000t range after the mid-1960's, with a brief decline in the early 1970's. The fishery declined rapidly in the early 1990's before closing in September 1993, and was reopened for limited commercial effort in 1999.

Landings prior to 1950 were primarily hook and line, with mobile gears and gillnets being introduced in later years. In modern times, this fishery has supported a substantial harvesting and processing industry in communities in the southern Gulf and the Cabot Strait area where the stock overwinters.

While this stock provided a fair amount of catches in the past, it is considered as a stock with a low productivity compared to stocks outside of the Gulf. This means that it should be managed cautiously as fast growth rates cannot be expected.

ANALYSIS

The 2001 DFO Stock Status Report for this stock indicates that the stock has increased slightly in the year 2000. The calculated growth rate, however, lies within the margins of error of the assessment. This results in a still very low spawning stock biomass. This status is still attributed to low production, poor recruitment and high mortalities. After a number of successive low years in the late 1980's and early 1990's, recruitment in subsequent years has been modestly stronger, though still below the long-term average. The recruitment, however is poor in absolute value but good in relative terms, compared to the spawning stock biomass. The biomass growth is jeopardized by the low individual growth rate observed in this stock. The prospect for the next year is very pessimistic as, at best, no biomass growth could occur even without any fishing taking place. The Council has observed that successive recent assessments of this stock track closely from one year to the next, and notes that, for example, the results of this year's assessment are close to those predicted by the 2000 assessment.

At recent industry consultations, the Council heard no strong dissent from the scientific views. Fishers are discouraged that, after years of moratorium and low TACs, science has no new answers to explain the lack of increase in biomass, and recruitment that still disappears rapidly. They are also upset that the large increase in catches in certain areas are not recognized as improvements in the stock. When recommendations were made, it was in favor of the status quo.

In its 2000 report, the FRCC recommended maintaining the TAC at 6,000t for this stock, while expecting little growth of the biomass at this level of exploitation. At that time, the Council reiterated that no further major changes in the TAC would be likely in the near future.

The FRCC recognizes that the biomass remains at a low level, that the change in biomass is not significant and that its increasing rate remains low, due to the current low productivity of the stock. The Council feels that the status quo remains acceptable for another year, acknowledging the risk of further decline of the stock.

The FRCC recommends that the 2001/2002 TAC for 4TVn cod be maintained at 6000t.

The FRCC is aware of the fact that this recommendation may lead to further decline in the stock biomass. It feels, however, that proper management measures such as the ones put in place during the 2000-2001 fishing season, along with implementation of other conservation measures should reduce this risk. Among additional conservation measures, the following ones should be implemented.

The Council recommends that DFO Science, in cooperation with DFO Management and Industry, identify and implement additional conservation measures, especially on:

- **definition and protection of key juveniles areas (eg. Shediac Valley);**

Figures are in 000t

Year	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000*
TAC	67	60	45.2	54	54	53	48	43		Moratorium			2	3	6	6
Catch	64	68.7	54.6	47.9	42.7	40.2	31.5	28.3	4.01	0.9	0.3	0.4	1.5	2.5	6.2	5.6

*Catch as of Dec. 23/99

1. Figures are from the Integrated Fisheries Management Plan Atlantic Groundfish

- **definition and protection of key spawning areas (e.g. Miscou Bank);**
- **local temporal closures.**

The study should be undertaken during the year 2001 in order to implement those measures for the 2002 season, if at all possible.

Several issues that could affect conservation were raised during consultations. If proven, those practices are not acceptable.

The FRCC recommends that DFO address the following issues raised during the consultations:

- **unreporting and misreporting of cod brought in by fishers holding a licence for species other than groundfish (e.g. mackerel);**
- **quotas overruns and blackmarket of cod especially in the recreational fishery;**
- **quota overruns in some sectors because the authorized period of fishing was too short to allow proper control of fishing effort;**
- **the amount of authorized gear is not fully respected.**

The FRCC recommends that should dumping, discarding and misreporting, as well as misuse of gears persist for a particular gear sector and/or area, the fishery

Sources

DFO Science

SSR A3-01 (2001) Cod in the southern Gulf of St. Lawrence.

FRCC Consultations

The FRCC held consultations on this stock in 2001 in :

Port au Choix, NF (March 19)
Port aux Basques, NF (March 20)
Port Hawkesbury, NS (March 20)
Moncton, NB (March 21)
Magdalen Islands, QC (March 22)
Gaspé, QC (March 23)

Written Briefs

Federation of Gulf Nova Scotia Groundfishermen (Fixed/Mobile <45' Competitive) – Osborne Burke (2001-010-00094)

NCBFVA – Clifford Aucoin(2001-010-00096)

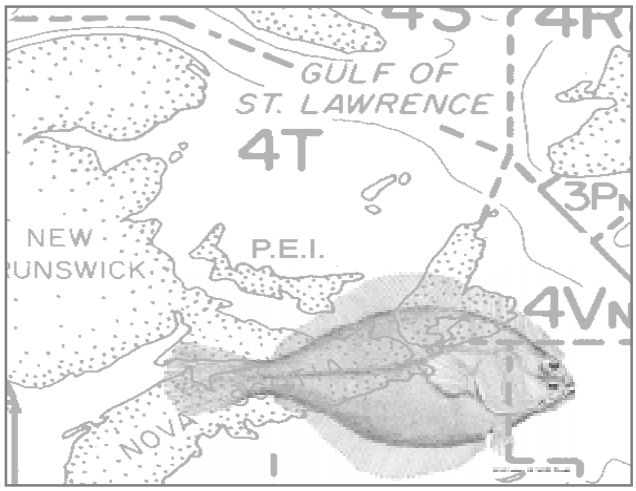
Council's View of Stock Status

Overall indicator:	Marginally improving in 2000 from a very low level; the status may become worse in 2001;
Overall biomass:	Marginal improvement in 2000, below the long term average; likely to decline during 2001;
Spawning Biomass:	Marginal improvement in 2000, below the long term average; likely to decline in 2001.
Recruitment:	still at low level, below the long term average
Growth and condition:	Stable at an intermediate level
Age Structure:	Stable
Distribution:	Increasingly restricted to the eastern portions of the summer range. Unknown in winter
Recent exploitation rate:	Fishery resumed at low level in 1999, in order of 8% in 2000.

should be closed for this particular gear sector and/or area.

The FRCC again recommends that any fishing on 4TVn cod during its over-wintering in the 4Vn area should only take place to the extent that there is a high confidence that catch of 4Vn resident stock be minimal. The Department of Fisheries and Oceans is encouraged to research the conditions by which this might be achieved.

American Plaice - 4T



Perspective

American plaice used to be the most abundant groundfish after cod, in the southern Gulf of St. Lawrence. The females are distinguished by a faster growth and reach larger sizes than males. They reach sexual maturity at between 7 and 15 years old while males reach maturity between 5 and 7 years old. Spawning occurs in late spring and early summer. Results based on research surveys indicate that the stock is at its lowest historical level. Total biomass estimated at 300,000t at the end of the 1970's decreased to approximately 30,000t in 1999. Age classes between 4 and 7 years are stable at a low level. Recent RV survey catches were more abundant in the eastern part of 4T. The commercial catches showed the same pattern which suggest a shift of distribution of the stock in recent years.

The landings in the 4T fishery, which is managed by quota since 1977, ranged between 5000t and 10,000t until 1992. From 1993 to 1999, lower catches in the range of 1300t to 2400t did not allow for a recovery of the stock, according to the scientific assessment. The 2000 TAC was not caught, mainly due to market reasons, according to the fishing industry

Analysis

The 2001 DFO Stock Status Report describes a stock which has been in decline since 1980 and is still at its lowest level in the 1971-2000 survey period. Recruitment is stable at a very low level, and the resultant year classes are much smaller than have been earlier observed. In addition, this stock persists to be increasingly concentrated in the eastern part of 4T in recent years. Scientists consider that American plaice in 4T are vulnerable to overexploitation, and suggest that catches should be well below 2000t in order to promote conservation.

The views of the fishing industry remains influenced by the shifted distribution of the stock. Fishers based in the western portion of the stock area report that plaice are not as abundant as they were previously. In the eastern area, where most remaining plaice fishing occurs, fishers report that catches have maintained or even improved in recent times. The pattern of these observations correlates with the results of the survey. During recent consultations, very few comments were made on this particular stock, most of them suggesting the status quo.

Until recent times, it was widely known that poor conservation practices, notably excessive catches of small fish and significant unaccounted discards, were characteristic of the fishery on this stock, and this likely contributed to stock declines. In the last five to seven years, the mobile fleets which prosecute the bulk of this fishery have made significant strides in addressing these problems, and recent evidence indicates that the capture of small plaice in the plaice-directed fishery is no longer a serious conservation concern. In reducing the TAC to the 2000t level and holding it in that general range since 1996, the Council has hoped to facilitate these changes and is seeking a signal that rebuilding has begun.

Considering the stock area as a whole, and the continuing good catch rates of fishers in the south-eastern Gulf notwithstanding, the Council observes again that stock rebuilding has not yet been reported in this stock and that indeed overall stock abundance continues to erode slowly. The Council acknowledges that, on the basis of improved monitoring of catches and landings, further gear modifications to reduce small plaice have been introduced for the coming season. The Council continues to support these efforts.

The FRCC recommends that the 2001/2002 TAC for 4T American plaice be maintained at 2000t.

As stated in the Introduction, in order to promote a recruitment increase, **the Council recommends that additional conservation measures be analyzed by DFO Science and Management, in cooperation with the Industry, in order to be implemented no later than the year 2002**.

Figures are in 000t

Year	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000*
TAC	10	10	10	10	10	10	10	10	5	5	5	2	2.5	1.5	2	2
Catch	10.5	7.7	8.4	6.8	4.8	4.4	5.04	4.9	1.6	2.4	2.3	1.4	1.7	1.1	1.5	1.3

*Catch as of Jan 3/2001

1. Figures are from the Integrated Fisheries Management Plan Atlantic Groundfish

The Council is concerned by the fact that the minimum legal size for this fish is below what is required by the market. As stated in its 1997 report on Gear Technology, the Council believes that the "*smallest size of fish caught should be that which can be utilized*".

The FRCC recommends that a study be carried on to analyze the selectivity of the current mesh size being used with respect to the market size of the fish and to implement corrective measures as necessary.

Once again, some fishers groups questioned the validity of the RV Needler data to track this particular stock. They requested the funding of a commercial research cruise to measure the relative catchability of the RV Needler on flatfishes.

The Council is also concerned by the apparent lack of monitoring and enforcement that was reported by the Industry during consultations.

Sources

DFO Science

SSR A3-26 (2001) American Plaice (Div. 4T)

FRCC Consultations

The FRCC held consultations on this stock in 2001 in :

Port au Choix, NF (March 19)
Port aux Basques, NF (March 20)
Port Hawkesbury, NF (March 20)
Moncton, NF (March 21)
Magdalen Islands, NF (March 22)
Gaspé, NF (March 23)

Written Briefs

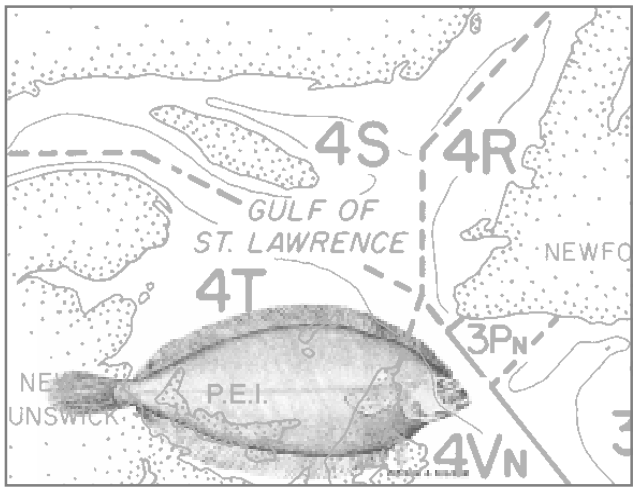
Federation of Gulf Nova Scotia Groundfishermen (Fixed/Mobile <45' Competitive) – Osborne Burke (2001-010-00094)

NCBFVA – Clifford Aucoin(2001-010-00096)

Council's View of Stock Status

Overall stock indicator:	The stock abundance is at its lowest level in 2000
Total biomass:	After its initial decrease in early 1980's, it attains its lowest level of all RV surveys (1971-2000)
Spawning biomass:	Unknown
Recruitment:	Stable at low level
Growth and condition:	Unknown
Age structure:	Unknown
Distribution:	Abundance stable at low levels, concentrated on the eastern part of the distribution. Continued decline on the western portion
Recent exploitation rate:	Unknown

WITCH FLOUNDER - 4RST



PERSPECTIVE

The commercial fishery for witch flounder developed in Newfoundland in the 1940's with the introduction of the otter trawler. The fishery in the Gulf of St. Lawrence began when the stocks in Fortune Bay declined, moving the vessels into St. George's Bay (Newfoundland) in the 1950's.

Winter catches of witch gained in importance in the offshore, as by-catch in the cod and redfish directed fisheries. The fishery further expanded in the Gulf during the 1970's to the Esquiman Channel and the Northern shore of Cape Breton Island.

Witch flounder came under quota management in 1977, with a precautionary quota of 3500t for northern Gulf of St. Lawrence (4RS). The first detailed assessment of 4RS was conducted in 1978 and continued until 1981. During the 1980's, landings in 4T increasingly dominated Gulf witch landings, however the management unit remained as 4RS. The TAC was increased to 5000t in 1979 in 4RS, to remove an old and slow growing component of the stock. This measure reduced the age composition of the stock and landings declined, and by 1982 the TAC was reduced to 3500t. Stock assessments resumed in 1991, and following the recommendations of the Fisheries Resource Conservation Council in 1994, the management unit was extended to 4RST in 1995.

ANALYSIS

The 2001 DFO Stock Status Report indicates some positive signs for the 4RST witch flounder population. The biomass appeared to increase sharply in 1999 compared to the low level from 1993 to 1998 and remained at the same relatively high level in 2000. This increase is observed within the entire Gulf, at different levels. A strong year class, likely 1995, has been observed in the RV survey of the northern Gulf each year since 1997. Stock structure remains a major source of uncertainty for this resource.

The industry agrees with science views that the stock status has improved. In order to take advantage of this improvement, fishers asked for an increase in the TAC up to 1200 tons.

Last year, the FRCC acknowledged the views from the industry and recommended a modest increase in the TAC, while stating that this TAC should remain stable until such a time as a significant increase in this stock has occurred. The FRCC recognizes that a new strong year class should soon be contributing to the fishery. But, at this time, it would be premature to increase the TAC based on one strong year class.

The FRCC recommends that the 2001/2002 TAC for 4RST witch flounder be maintained at 1000t.

On the science report on dumping and discarding, it was noted that there could be highgrading in this stock of fish under 14 inches, the fish size demanded by the market. Scientists and fishers recognize that the witch flounder fishery is mainly a recruitment fishery, which is detrimental to stock recovery. The industry appears to be ready to move to correct this situation.

The Council recommends a study be carried on to analyze the selectivity of the current mesh size being used with respect to the market size of the fish and to implement corrective measures as necessary.

Figures are in 000t

Year	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000*
TAC	3.5	3.5	--	3.5	3.5	3.5	3.5	3.5	3.5	1	1	1	1	0.8	0.8	1
Catch	0.7	0.8	0.3	0.16	1.20	0.7	0.5	0.4	0.5	0.1	0.3	0.5	0.6	0.89	0.82	0.83

*Catch as of Nov. 19/99

1. Figures are from the Integrated Fisheries Management Plan Atlantic Groundfish

Sources

DFO Science

SSR A3 - 36 (2000) Updates on Selected Gulf of St. Lawrence Groundfish Stocks

FRCC Consultations

The FRCC held consultations on this stock in 2001 in :

Port au Choix, NF (March 19)
Port aux Basques, NF (March 20)
Port Hawkesbury, NS (March 20)
Moncton, NB (March 21)
Magdalen Islands, QC (March 22)
Gaspé, QC (March 23)

Written Briefs

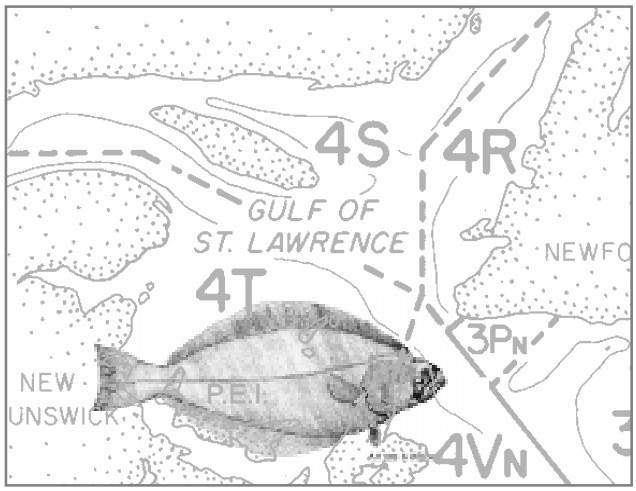
Federation of Gulf Nova Scotia Groundfishermen (Fixed/Mobile <45' Competitive) – Osborne Burke (2001-010-00094)

NCBFVA – Clifford Aucoin(2001-010-00096)

Council's View of Stock Status

Overall indicator:	Population still at low level, slightly improving, in size and in distribution.
Total Biomass:	General improvement due to good recruitment; variable among areas
Spawning Biomass:	Unknown
Recruitment:	Stable during the 90's; strong year class observed
Growth and condition:	No information
Age structure:	No information
Distribution:	Biomass improvement shown in several Gulf areas; stock structure remains uncertain.
Recent exploitation rate:	Low landings due to low TAC.

GREENLAND HALIBUT - 4RST



PERSPECTIVE

In the Gulf of St. Lawrence, there are two main fishing areas for this stock: a western area, in the St. Lawrence estuary and the Anticosti Island area, which represents generally more than 80% of the catches, and an eastern area, in the Esquiman Channel.

The development of the fishery is recent. Long term average landings are in the range of 4000t. Very high catches, above 8000t, were experienced in the past and were followed by sharp declines. Male and female halibut have different growth rates, with females reaching maturity at a larger size.

According to the 2001 DFO Stock Status Report, the Greenland halibut population in the Gulf of St. Lawrence continues to show positive signs.

ANALYSIS

This Greenland halibut fishery is mainly prosecuted with gillnets. Conservation measures implemented, by regulation and by industry initiatives (i.e. mesh size, reduction of fishing effort, sorting grids in the shrimp fishery) have led to a recovery of the stock.

In the 2001 DFO Stock Status Report for Greenland halibut in the Gulf of St. Lawrence, the biomass index derived from scientific survey in 2000 is the highest observed in the time series, and has been increasing steadily since 1993. Distribution area has been expanding especially south of Anticosti Island along the Laurentian Channel.

In 2000, there was a significant decrease in the catch rates in the fishery for reasons that do not appear to be related to the abundance of the resource. Some fishers relate that with the presence of high concentrations of snow crabs that prevent fishing on some grounds where large halibut used to be.

The FRCC feels that a prudent approach would be not to increase the current TAC in order to maintain the spawning stock biomass and to improve survival of year classes in the fishery. The FRCC believes that any TAC increase should be considered with caution, and unless major changes in the stock status are noticed, the TAC should not change in the near future. Stakeholders seem to be in general agreement with the SSR as they recommend *status quo* for the TAC for the 2001/2002 fishing season.

The FRCC recommends that the 2001/2002 TAC for 4RST Greenland halibut be maintained at 4500t.

Both the scientific and the sentinel surveys provide positive signs of recruitment with strong year classes in 1997 and 1999, which should only begin to be recruited into the fishery starting in 2002 and 2004 respectively. Due to the strong incoming recruitment, it is expected that catches of small fish may be a problem in the coming years.

The FRCC recommends that measures continue to be applied to limit catches of undersized 4RST Greenland halibut.

During the 2001 consultations, the industry expressed concerns over the potential concentration of the fishery on the larger females, which could have a negative impact on the stock's long term reproductive capacity. Fishers link this situation to the utilization of the 6 inch (15.2 cm) mesh size. In order to address this issue, they recommend the use of 5½ inch (14 cm) mesh at a ratio of 30 % for the 2001/2002 fishing season. According to their views, this would test the hypothesis that a more balanced sex ratio will occur in catches and thus would protect a part of the female biomass, while avoiding the capture of large successful spawners.

The FRCC does not accept a decrease in the mesh size, knowing that more fish will be killed. The Council reiterates its principle to protect young, immature fish and it feels that short-term benefits should not be allowed to overtake long-term objectives. A properly set TAC should allow sufficient mature biomass to survive the fishery in order to preserve the reproductive capacity of the stock.

In order to address the issues raised by the fishers on long term yield and ratio of male and female in the commercial catch, the Council recommends that

Figures are in 000t

Year	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000*
TAC	5	5	8.7	10.5	10.5	10.5	10.5	10.5	4	4	4	2	3	4	4.5	4.5
Catch	2.3	6.5	10.9	7.5	5	2.3	2	3.5	2.5	3.5	2.4	1.9	2.6	3.9	3.6	2

*Catch as of Jan 3/2001

1. Figures are from the Integrated Fisheries Management Plan Atlantic Groundfish

DFO Science Branch evaluate the short and long term impact on the stock associated with the use of 51/2 versus 6 inch mesh.

Part of the request of fishers was justified with the assumption that males may never reach commercial size and therefore should be fished at a smaller size.

The FRCC recommends that scientists conduct a complementary study aimed at determining sexual maturity at length and growth rate of fish at maturity (male and female).

Some fishers have also expressed concerns about some recent increases in soaking time of gillnet exceeding 3 days. The Council shares this concern and feels that extended soak times have a negative impact on the resource.

The FRCC recommends that DFO management take necessary measures to restrict gillnet soak time within conservation guidelines.

The fishing of Greenland halibut in the Cabot Strait remains a concern for fishers. The FRCC feels that a better understanding of stock migration is required.

The FRCC reiterates last year's recommendation that studies on stock definition, through tagging programs and other scientific work, be continued and expanded.

Sources

DFO Science

SSR A4 - 03(2001) Gulf of St. Lawrence (4RST) Greenland Halibut.

FRCC Consultations

The FRCC held consultations on this stock in 2001 in :

Port au Choix, NF (March 19)
Port aux Basques, NF (March 20)
Port Hawksbury, NS (March 20)
Moncton, NB (March 21)
Magdalen Islands, QC (March 22)
Gaspé, QC (March 23)

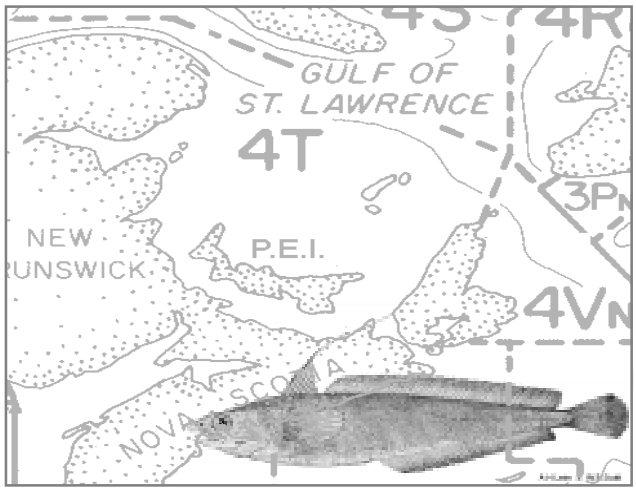
Written Briefs

None received.

Council's View of Stock Status

Overall stock indicator:	Stock still rebuilding
Overall biomass:	Consistently increasing since 1993
Spawning Biomass:	Unknown
Recruitment:	1997 and possibly 1999 year classes above average.
Age structure:	Improving
Recent exploitation rate:	Decreased in 1999 and 2000
Geographical distribution:	Expanding south of Anticosti Island.

WHITE HAKE - 4T



PERSPECTIVE

The white hake fishery has been conducted in the southern Gulf of St. Lawrence since the early 1960's. Traditionally, this stock has been harvested with both mobile and fixed gear primarily in the inshore fishery. Although this fishery did not rate as the most important groundfish fishery, with the exception of several localised areas, it nevertheless played a vital role in the historical landings and revenues of the inshore fleet. Annual landings in this southern Gulf groundfish fishery have averaged 5675t from the early 1960's to 1994.

Catch rates continued to decline in the early 1990's until the fishery closed in 1995. The overall range and distribution of this stock remains concentrated in St. Georges Bay, Cape Breton. Limited removals have continued since the moratorium for the purposes of sentinel surveys and by-catch for other fisheries.

ANALYSIS

The 2001 DFO Stock Status Report indicates that the biomass and the abundance of commercial-sized fish remain low. Also, there has been a contraction of the geographic range distribution. However, there are very good indications of 30-40 cm hake that should recruit to the fishery over the coming years. Continued efforts of industry (i.e., mesh size increases and other conservation measures) should ensure a continued rebuilding of this stock to previous historic levels.

There is increasing evidence that two stock components could exist: one in the Laurentian Channel, and the other in the Strait, the latter being in a far worse state than the earlier.

The general consensus is that the stock remains very low and in a precarious state. However, the outlook for the future is better as new year classes are observed and should be protected.

The FRCC supports the recent industry proposal of establishing a joint venture with DFO Science to develop an index fishery. However, since the commercial size component of the stock remains in a precarious state, the FRCC cannot support the TAC increase for the 2001/2002 fishing season the industry proposal would imply. Considering the proposed benefits of the proposal, the FRCC will reanalyze its position next year in the light of stock status at that time.

The FRCC reiterates its previous recommendations for this stock:

The FRCC recommends that there be no directed fishery for 4T white hake in 2001/2002.

Considering the balance of evidence that two components exist, the FRCC recommends that DFO generate management options for the two components of the stock.

The index of total mortality for ages 5 to 8 increased substantially in the last two years (1999 and 2000). There is much uncertainty concerning the magnitude of the estimated landing of white hake in the recreational fishery in 1999 and 2000.

The FRCC recommends that conservation measures implemented for the season 2000/2001 be continued and enforced.

The fishing industry also raised concerns about the recreational fishery which, in their view, is not controlled.

The FRCC reiterates, one more time, that, when a stock is under moratorium, no recreational fishery should exist. If such a fishery persists it should be closely monitored, and mortality induced by this fishery should be recorded.

Figures are in 000t

Year	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000*
TAC	12	12	9.4	5.5	5.5	5.5	5.5	5.5	3.6	2			Moratorium			
Catch	6.7	4.9	5.9	3.7	4.9	4.2	3.7	3.9	1.2	0.9	0.06	0.04	0.1	0.13	0.16	0.09

*Catch as of Jan 3/2001

1. Figures are from the Integrated Fisheries Management Plan Atlantic Groundfish

Sources

DFO Science

SSR A3 - 12(2001) White Hake in the Southern Gulf of St. Lawrence

FRCC Consultations

The FRCC held consultations on this stock in 2001 in :

Port au Choix, NF (March 19)
Port aux Basques, NF (March 20)
Port Hawkesbury, NS (March 20)
Moncton, NB (March 21)
Magdalen Islands, QC (March 22)
Gaspé, QC (March 23)

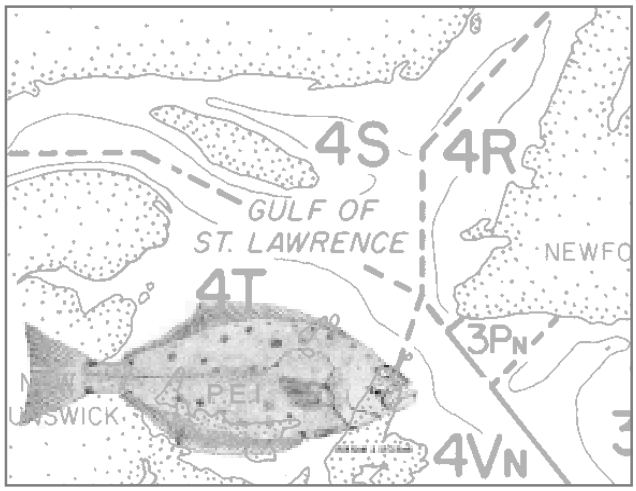
Written Briefs

Federation of Gulf Nova Scotia Groundfishermen (Fixed/Mobile <45' Competitive) – Osborne Burke (2001-010-00094)

Council's View of Stock Status

Overall stock indicator:	Stock abundance is improving. Future prospect looks better due to incoming recruitment
Total biomass:	Lower than the long term average, however biomass index is the highest since 1992
Spawning biomass:	Unknown
Recruitment:	Abundance of small fish is increasing
Growth and condition:	No information
Age structure:	Fish larger than 45cm less abundant than long term average; increasing abundance of fish in the 30-40cm range
Distribution:	Still mainly concentrated in Western Cape Breton area (St. George's Bay)

Atlantic Halibut - 4RST



Perspective

Atlantic halibut is widely distributed in the deep channels of the Gulf of St. Lawrence. It is thought that it overwinters outside the Gulf, in the 3Pn areas.

The fishery is generally prosecuted with long lines. Over the past 20 years, the average landings are in the range of 300-400t with peaks as high as 800t. Historical data indicate that catches may have been above 1000t.

Analysis

The implementation of a minimum legal size and the mandatory release of undersized halibut has translated into a significant decrease in the landings of small fish. The wide size range of fish caught is a positive sign of stock health. However, questions about the actual size at maturity for females, which might be much higher than the present minimum legal size, raise the issue of stock reproductive capacity under the current management regime.

Industry reported that a certain unquantified amount of small fish is killed and is either dumped or sold illegally. This would result in an unaccounted mortality.

The FRCC recommends that DFO enforce strictly the "possession clause" that would prevent the possession and the selling of undersized halibut.

The FRCC recommends that if dumping, discarding and misreporting persist for a particular gear sector and/or area, the fishery should be closed for this particular gear sector and/or area.

According to the 2001 DFO Stock Status Report, the current situation is the same as it was in 1999 and 2000: wide size ranges and decreasing catches of small fish, which both can be interpreted as positive signs. No reliable biomass index is available. Despite the fact that catches are capped by a TAC, it seems clear that the actual potential catches are lower than historical catches (which were in the range of 1000t) and would indicate that the stock continues to be depressed from historical levels. The fishing industry seems to agree with the stock status described by scientists. The status quo is recommended by the industry.

The FRCC recommends that the 2001/2002 TAC for 4RST Atlantic halibut be maintained at 350t.

The FRCC recommends that the release of fish smaller than 81cm be maintained, and enforced.

The minimum legal size is an issue raised by scientists. The present size of 81cm may be well below the size at maturity for females, which could be above 100cm. If a size of 100 cm at maturity is confirmed, the current regulation does not protect the stock's reproductive capacity.

The FRCC recommends, as a scientific priority, that studies be undertaken to determine the size at maturity of 4RST Atlantic halibut.

Stock unit and possible mixing with stocks outside the Gulf remains an issue. Fishers feel that the ongoing tagging experiments will bring valuable information to identify biological links between various stock components.

The FRCC recommends that the 4RST Atlantic halibut tagging program be continued and expanded.

The Industry and the FRCC are concerned by the catches occurring in winter in the Cabot Strait (3Pn area) which are not subject to any control or regulation. The FRCC feels that such an open-ended, uncontrolled, fishery is no more acceptable.

Until the stock structure is defined, the FRCC recommends the catch in 3Pn area be capped at the recent catch levels.

Figures are in 000t

Year	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000*
TAC	--	--	--	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.35	0.35
Catch	0.19	0.27	0.27	0.19	0.22	0.42	0.34	0.14	0.11	0.12	0.07	0.23	0.28	0.3	0.34	0.22

*Catch as of Jan 3/2001

1. Figures are from the Integrated Fisheries Management Plan Atlantic Groundfish

Sources

DFO Science

SSR A4-02(2001) Atlantic Halibut of the Gulf of St. Lawrence (Div. 4RST) - Update (2000)

FRCC Consultations

The FRCC held consultations on this stock in 2001 in :

Port au Choix, NF (March 19)
Port aux Basques, NF (March 20)
Port Hawkesbury, NS (March 20)
Moncton, NB (March 21)
Magdalen Islands, QC (March 22)
Gaspé, QC (March 23)

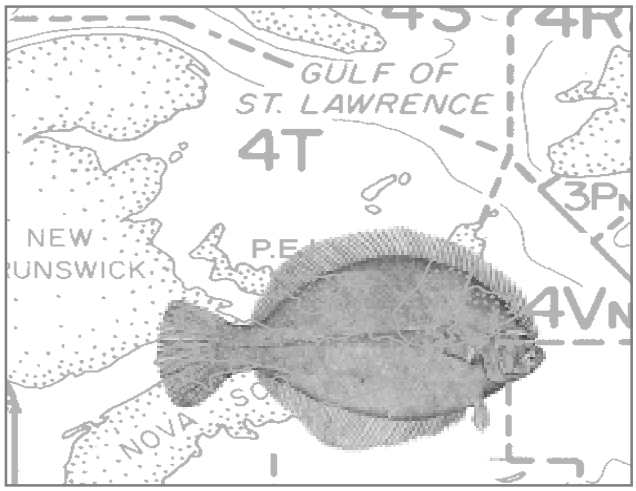
Written Briefs

Federation of Gulf Nova Scotia Groundfishermen (Fixed/Mobile <45' Competitive) – Osborne Burke (2001-010-00094)

Council's View of Stock Status

Overall stock indicators:	Stock at low level
Overall biomass:	Unknown but likely to be at low level
Spawning biomass:	Unknown
Recruitment:	Unknown
Growth and condition:	Not available
Age structure:	No reliable indicator, wide size range present (positive indicator)
Recent exploitation rate:	TAC increased to 350 t in 1999. By-catch of small fish in mobile and gillnet fisheries is still a concern

WINTER FLOUNDER - 4T



PERSPECTIVE

In the southern Gulf of St. Lawrence (4T), winter flounder are limited to the Magdalen Islands and to southern parts of 4T. Growth rates vary widely between regions, with females reaching sexual maturity at about 25 cm and with males maturing at about 20 cm. The historical landings in the 4T winter flounder fishery varied widely between a few tons and 4500t. Those large fluctuations may be partially due to misreporting or to landings of "unspecified" flatfishes. Lower landings could have also been affected by the use of larger mesh sizes, which have increased considerably since 1960. The catches were limited by a precautionary TAC of 1000t since 1996. Landings declined after 1997, averaging 600 tons.

ANALYSIS

Following last year's full assessment, DFO science provided an update in 2001. The Stock Status Report for 4T winter flounder confirms trends observed in the past years. The annual research survey in 2000 provided an abundance index higher than the previous four years. However, there has been a decline in the size of winter flounder and the index of the total stock biomass has been below the long term average for most of the past decade. Winter flounder has a tendency to be smaller in size and weight since 1971. Trends in survey biomass suggest that the stock for the whole of 4T, is presently below the average abundance for the past three decades. These are warning signals. Uncertainties exist however. The survey only covers a small part of the overall distribution of the species and the mean number in inshore areas is highly variable. In addition, the survey shows high variations in biomass trend over time between geographical areas.

The scientific view contrasts with the active fishers, who in interviews over the past six years say that the abundance of the resource is stable or increasing.

Some comments were made during the 2001 consultations to the effect that mobile gear observed substantial amounts of small winter flounder. However, fixed gear fishers noticed the repeated presence of some larger fish when first setting their gear, but following the first day of fishing effort, these larger fish quickly disappear. Considering the limited extent of scientific knowledge on the dynamics of this stock, they recommend *status quo* on the 2001 TAC.

The FRCC recommends that the 2001/2002 TAC for 4T winter flounder be maintained at 1000t.

The last winter flounder assessment indicated that the data used to evaluate local abundance, recruitment and stock identification should be improved considering that stock appears to be made up of several components. Some progress has been made through initiatives put in place in recent years (industry survey on Magdalen Island, logbooks in the southern Gulf and tagging studies) to help improve the data in order to determine whether local management measures would be applicable.

The FRCC recommends that the tagging program be continued in order to provide a more realistic view of the state of the stock and its migration.

Dumping and discarding of primarily undersized American plaice, as well as winter flounder, remains a major concern and must be resolved.

The FRCC recommends that conservation measures implemented for the season 2000/2001 be continued and enforced.

Figures are in 000t

Year	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000*
TAC												1	1	1	1	1
Catch	1.2	2	1.8	1.4	2.1	2.1	2.5	1.9	1.2	0	0	0	1.08	0.64	0.61	0.47

*Catch as of Dec. 23/99

1. Figures are from the Integrated Fisheries Management Plan Atlantic Groundfish

Sources

DFO Science

SSR A3 - 36 (2001) Updates on Selected Gulf of St. Lawrence Groundfish Stocks in 2001

FRCC Consultations

The FRCC held consultations on this stock in 2001 in :

Port au Choix, NF (March 19)
Port aux Basques, NF (March 20)
Port Hawkesbury, NS (March 20)
Moncton, NB (March 21)
Magdalen Islands, QC (March 22)
Gaspé, QC (March 23)

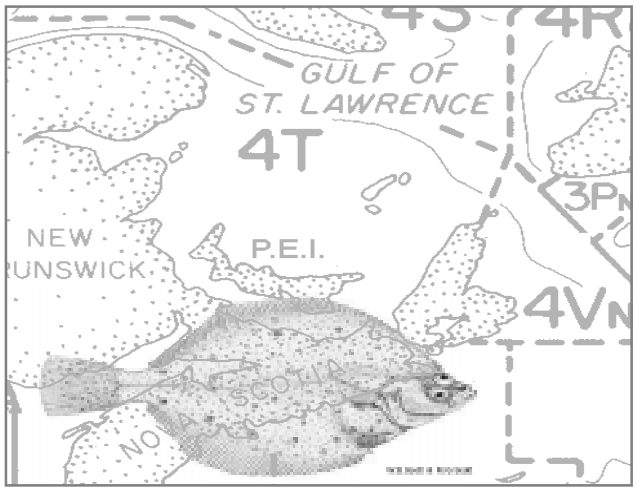
Written Briefs

Federation of Gulf Nova Scotia Groundfishermen (Fixed/Mobile <45' Competitive) – Osborne Burke (2001-010-00094)

Council's View of Stock Status

Overall stock indicator:	The stock abundance is lower than the long term average.
Total biomass:	Lower than the long term average.
Spawning biomass:	Unknown
Recruitment:	Unknown
Growth and condition:	Mean size and weight at lowest historical levels.
Age structure:	Unknown
Distribution:	Probably several local components of this stock.

YELLOWTAIL FLOUNDER - 4T



PERSPECTIVE

Yellowtail flounder in the Gulf of St. Lawrence are primarily concentrated around the Magdalen Islands where they have supported a bait fishery for the local lobster fishery. Other than the localised fishery around the Magdalen Islands, yellowtail flounder is harvested as a by-catch in other fisheries. The Magdalen Island fishery is mainly carried out using mobile gear.

A one-time overseas market developed during 1997 resulted in over 800t being harvested. Quotas were established for this stock in 1998 for the first time at a level of 300t. Due to poor markets and an establishment of a quota, harvesting effort has been dramatically reduced since 1998. The TAC in 2000 was nearly taken when fishery closed in August 25, 2000 with similar landings compared to 1999. A localised bait fishery continues to be prosecuted.

ANALYSIS

The FRCC considers that the outlook of the stock has not changed much since 2000 but the number of fish of less than 25cm in 2000 is higher than the 1984-1999 average and may indicate improved recruitment. The area was surveyed again in August 2000 as a result of a DFO-Industry collaboration started in 1999 to cover the inshore areas of the Magdalen Islands not covered by the RV survey. This survey showed similar results from the previous year: the yellowtail were present in most sets but the length frequency of the catches showed very few fish less than 15cm, similar to the RV survey results.

During the Council's consultations in the Magdalen Islands, a request was made to increase the quota to 400t. The FRCC acknowledges the efforts being made by the local industry to monitor this local stock.

Considering the uncertain improvement in the number of fish less than 25cm and the fact that commercial-size fish decreased compared to the 1984-1999 average, it would be premature to increase the TAC from the current level.

The FRCC recommends that a 2001/2002 quota of 300t be maintained for 4T yellowtail flounder in the Magdalen Islands area.

The joint Industry-Science research program seems very promising and should be encouraged.

The FRCC recommends that the ongoing DFO-Industry project be maintained to continue to develop indices of abundance and recruitment in order to get more complete information for future assessment of this stock.

The FRCC recommends that in other areas, catches should not exceed those required for the normal conduct of fisheries directed toward other species.

Figures are in 000t

Year	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000*
TAC											0.43	0.43	0.8	0.3	0.3	0.3
Catch					0	0	0	0.12	0.12	0.06	0.2	0.21	0.8	0.19	0.34	0.25

*Catch as of Dec. 23/99

1. Figures are from the Integrated Fisheries Management Plan Atlantic Groundfish

Sources

DFO Science

SSR A3-36 (2001) Updates on selected Gulf of St. Lawrence groundfish stocks in 2001

FRCC Consultations

The FRCC held consultations on this stock in 2001 in:

Port au Choix, NF (March 19)
Port aux Basques, NF (March 20)
Port Hawkesbury, NS (March 20)
Moncton, NB (March 21)
Magdalen Islands, QC (March 22)
Gaspé, QC (March 23)

Written Briefs

Regroupement des pêcheurs professionnels des Îles de la Madeleine – Manon Richard (2001-010-00095)

Council's View of Stock Status

Overall indicator:	Population stable; slight improvement in 2000
Total Biomass:	Biomass index increased in the past 4 years
Spawning Biomass:	Unknown
Recruitment:	The decrease in the modal size in the survey may indicate some recruitment; few fish less than 15cm
Growth and condition:	No information
Age structure:	Decrease in the abundance of large fish
Distribution:	Fish localised around Magdalen Islands and along Prince Edward Island; the existence of sub-components is debated
Recent exploitation rate:	Low landings due to low TAC

Appendix 1:
FRCC Mandate and Membership

FRCC Terms of Reference

1. Introduction

The Government of Canada is committed to a more comprehensive approach to the conservation and management of our fisheries resource. This approach demands a better understanding of complex fisheries ecosystems - the interaction of fish with other species, predator-prey relationships, and also changes in the marine environment like ocean currents, water temperatures and salinity.

The Government of Canada is also committed to a more effective role in decision-making for those with practical experience and knowledge in the fishery.

The Minister of Fisheries and Oceans has established the Fisheries Resource Conservation Council (FRCC) as a partnership between government, the scientific community and the direct stakeholders in the fishery. Its mission is to contribute to the management of the Atlantic fisheries on a 'sustainable' basis by ensuring that stock assessments are conducted in a multi-disciplined and integrated fashion and that appropriate methodologies and approaches are employed; by reviewing these assessments together with other relevant information and recommending to the Minister total allowable catches (TACs) and other conservation measures, including some idea of the level of risk and uncertainty associated with these recommendations; and by advising on the appropriate priorities for science.

2. Definition of Conservation

Fisheries conservation is that aspect of the management of the fisheries resource which ensures that its use is sustainable and which safeguards its ecological processes and genetic diversity for the maintenance of the resource. Fisheries conservation ensures that the fullest sustainable advantage is derived from the resource and that the resource base is maintained.

3. Council Objectives

3.1 To help the government achieve its conservation, economic and social objectives for the fishery.The conservation objectives include, but are not restricted to:

3.1.1 rebuilding stocks to their 'optimum' levels and thereafter maintaining them at or near these levels, subject to natural fluctuations, and with 'sufficient' spawning biomass to allow a continuing strong production of young fish; and,

3.1.2 managing the pattern of fishing over the sizes and ages present in fish stocks and catching fish of optimal size.

3.2 To develop a more profound understanding of fish-producing ecosystems including the inter-relationships between species and the effects of changes in the marine environment on stocks.

3.3 To review scientific research, resource assessments and conservation proposals, including, where appropriate, through a process of public hearings.

3.4 To ensure that the operational and economic realities of the fishery, in addition to scientific stock assessments, are taken into account in recommending measures to achieve the conservation objectives.

3.5 To better integrate scientific expertise with the knowledge and experience of all sectors of the industry and thus develop a strong working partnership.

3.6 To provide a mechanism for public and industry advice and review of stock assessment information.

3.7 To make public recommendations to the Minister.

4. Mandate and Scope

4.1 The Fisheries Resource Conservation Council will address these objectives by bringing together industry, DFO science and fisheries management, and external scientific and economic expertise in one body.

4.2 The Council will:

4.2.1 advise the Minister on research and assessment priorities;

4.2.2 review DFO data and advise on methodologies;

4.2.3 consider conservation measures that may be required to protect fish stocks;

4.2.4 review stock assessment information and conservation proposals, including through public hearings, where appropriate; and,

4.2.5 make written public recommendations to the Minister on TACs and other conservation measures.

4.3 The Council may recommend any measures considered necessary and appropriate for conservation purposes such as TACs, closure of areas to fishing during specific periods, approaches to avoid catching sub-optimal sized fish or unwanted species, and restrictions on the characteristics or use of fishing gears.

4.4 The Council's scope includes Canadian fish stocks of the Atlantic and Eastern Arctic Oceans. In the first instance, the Council will address groundfish, and then subsequently take on responsibility for pelagic and shellfish species.

4.5 The Council may also advise the Minister on Canada's position with respect to straddling and transboundary stocks under the jurisdiction of international bodies such as the Northwest Atlantic Fisheries Organization (NAFO).

5. Size, Structure and Make-Up

5.1 The Council will consist of not more than 14 members with an appropriate balance between 'science' and 'industry'.

5.2 Members are chosen on merit and standing in the community, and not as representatives of organizations, areas or interests.

5.3 'Science' members, are drawn from government departments, universities or international posts, and are of an appropriate mix of disciplines, including fisheries management and economics.

5.4 'Industry' members are knowledgeable of fishing and the fishing industry and understand the operational and economic impacts of conservation decisions.

5.5 All members of the Council are appointed by the Minister.

5.6 All members, including the Chairperson, are appointed for a three year term; terms can be renewed.

5.7 Members appointed from DFO serve 'ex officio'.

5.8 Members have to disclose any interest in the Atlantic or Eastern Arctic fishery and take appropriate measures so as to avoid potential or real conflict of interest situations during the term of appointment.

5.9 The four Atlantic Provinces, Quebec and the Northwest Territories may each nominate one delegate to the Council. These delegates have access to the Council's information, and may participate fully in meetings, but will not be asked to officially endorse the formal recommendations to the Minister.

5.10 The Council is supported by a small Secretariat, to be located in Ottawa. The Secretariat will:

5.10.1 provide administrative support for the functioning of the Council;

5.10.2 provide a technical science and fisheries management support;

5.10.3 organize Council meetings;

5.10.4 record decisions of the Council;

5.10.5 undertake a professional communications function for the Council, providing a central point for communications to and from the Council; and

5.10.6 undertake such other matters as from time to time might be appropriate.

5.11 The Chairman may appoint an Executive Committee, consisting of the Chairman, Vice-Chairman, and three other Members.

5.12 In addition, the Chairman may, from time to time, strike an 'ad hoc' committee to deal with a specific issue.

6. ACTIVITIES:

6.1 Reviews appropriate DFO science research programs and recommends priorities, objectives and resource requirements.

6.2 Considers scientific information - including biology, and physical and chemical oceanography, taking into account fisheries management, fishing practices, economics and enforcement information.

6.3 Conducts public hearings wherein scientific information is presented and/or proposed conservation measures/options are reviewed and discussed.

6.4 Recommends TACs and other conservation measures.

6.5 Prepares a comprehensive, long-term plan and a work plan for the Council which are reviewed annually at a workshop with international scientists and appropriate industry representatives.

6.6 Ensures an open and effective exchange of information with the fishing industry and contributes to a better public understanding of the conservation and management of Canada's fisheries resource.

FRCC MEMBERSHIP:

MEMBERS:

Fred Woodman, Chairman
Jean-Claude Brêthes, Vice-Chair
Maurice Beaudin
Bill Broderick
Bruce Chapman
Charlie Dennis
Jean Guy d'Entremont
Gabe Gregory
Nick Henneberry
Frank Hennessey
Dan Lane
Paul Nadeau
John Pope
George Rose

PROVINCIAL DELEGATES:

Ray Andrews, Nunavut
Mario Gaudet, New Brunswick
David MacEwen, Prince Edward Island
Dario Lemelin, Québec
Tom Dooley, Newfoundland and Labrador
Clary Reardon, Nova Scotia

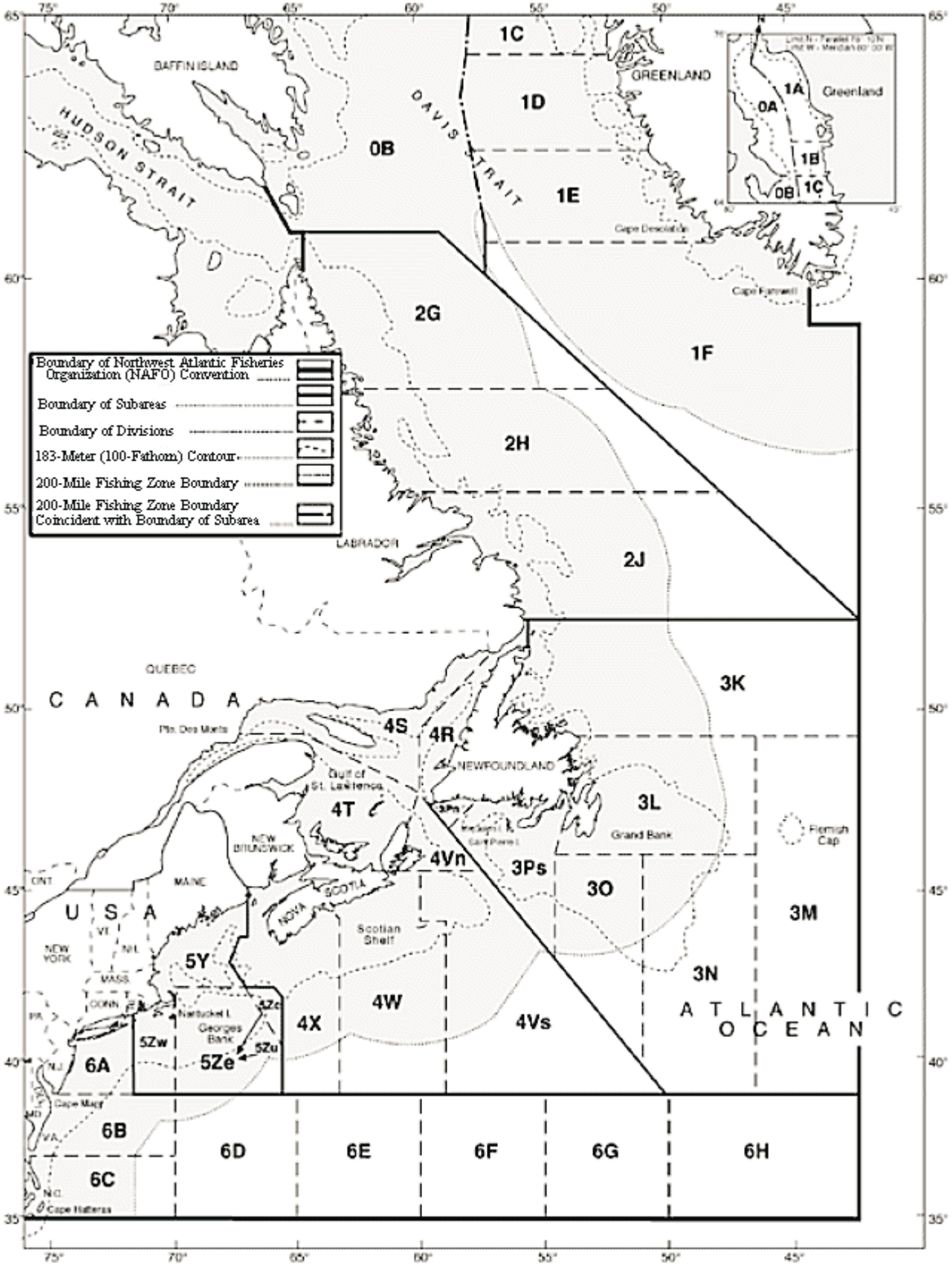
EX OFFICIO:

Gilles Belzille
Barry Rashotte
Denis Rivard

SECRETARIAT:

Michel G. Vermette, Executive Director
Tracey Sheehan
Helena DaCosta
Debra Côté

200 Mile Fishing Zone and NAFO Fishing Boundaries



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