

Wednesday, February 17, 2010

Honourable Gail Shea, M.P.
Minister of Fisheries and Oceans Canada
200 Kent Street
Ottawa, Ontario, K1A 0E6
Canada

Re: Turbot Recommendation

Dear Minister Shea:

As Chairperson of the Torngat Joint Fisheries Board, it is my privilege to submit for your consideration the Board's inaugural recommendation. It is recommended that the Minister establish a 650mt Nunatsiavut Communal Turbot Allocation.

The Board is the primary body making recommendations on the conservation and management of fish species set out in the Labrador Inuit Land Claims Agreement. In late 2008 and up to the fall of 2009 the Board received representations from interest groups, community representatives, and the Nunatsiavut Government that warranted an assessment of the present and historical management of the Turbot fishery adjacent to Nunatsiavut.

The Board has gained a comprehensive understanding of a broad range of issues and information relating to turbot through analysis of historical management and policy measures, fishery development initiatives, quota and catch data, resource prospects and discussions with experts and officials.

The culmination of this work marks a year-long deliberation by the Board. We submit that this recommendation is balanced and equitable to all parties, and presents the most tenable of several possible alternatives. This recommendation is consistent with the principles of resource allocation espoused by Fisheries and Oceans Canada, which include adjacency, historical attachment, and aboriginal priorities. It is also consistent with provisions of the Labrador Inuit Land Claims Agreement. Attached for your review is supporting documentation. The actions required to implement the recommendation will not be precedent setting and would uphold the honor of the Crown.



I would welcome the opportunity to discuss this with you and your officials.

Sincerely,

John Mercer
Chairperson
Torngat Joint Fisheries Board

cc: Honourable Anthony Andersen, First Minister, Minister of Lands & Resources
Nunatsiavut Government

Honourable Clyde Jackman, Minister of Fisheries & Aquaculture
Government of Newfoundland and Labrador



Torngat Joint Fisheries Board
Memorandum to the Minister of Fisheries and Oceans
Fishery Management in Nunatsiavut
(February 17, 2010)

Issue:

A Turbot Allocation for Nunatsiavut

Recommendation:

It is recommended that:

- The Minister establish a 650mt Nunatsiavut Communal Turbot Allocation.

Background:

1. The Torngat Joint Fisheries Board and the Nunatsiavut Turbot Allocation Request

- The Torngat Joint Fisheries Board (hereafter the “Board”) received representation from Nunatsiavut residents and officials requesting a review of the turbot fishery and explicit requests for a communal allocation. The Board has also been involved in ongoing dialogue between the Nunatsiavut Government and Fisheries and Oceans Canada.
- The Board is the creation of the three negotiating parties to the Labrador Inuit Land Claims Agreement (hereafter the “Agreement”), and established under the Agreement, with its roles, responsibilities and powers outlined in parts 13.10 and 13.11 of Chapter 13. The Board is the primary body making recommendations on the conservation of species set out in the Agreement, and the management of fisheries in the Labrador Inuit Settlement Area (other than the Inuit Domestic Fishery, whose management falls under the authority of the Nunatsiavut government). Therefore, in regard to the subject matter of the request to the Minister, TJFB has both the authority and responsibility to make recommendations to the Minister in respect of issues surrounding the management of Greenland halibut, and referred to Section 13.11.2 items (a) through (h) of the Agreement to obtain the necessary guidance in discharging its responsibility. In respect of recommendations on allocations in the “Zone”, Section 13.11.2 (b) refers.
- The Board had previously sought input and advice on the management of the turbot fishery during community consultations conducted in November of 2008. During these consultations community representatives supported the establishment of an Inuit communal quota.

- The Board observed that Nunatsiavut representatives are continually reminded in formal or casual discussions on the turbot fishery that Labrador Inuit do not have historical participation, dependency or catch history and as a result has no valid claim for current access. That perspective is not consistent with the Board's analysis.
- The Board is disconcerted by the observation that Labrador Inuit access, participation and catch history in all groundfish fisheries is negligible, considering that Nunatsiavut is situated closest to some of the most productive fishing grounds and water masses in the northwest Atlantic (i.e. Hopedale Channel, Cartwright Channel, Hawke Channel and Saglek Slope) that have sustained large demersal and pelagic fisheries for generations.
- In light of these observations and to ensure a cogent recommendation on the Nunatsiavut request, the Board determined it necessary to gain a thorough and balanced understanding of Nunatsiavut participation and development in the Turbot fishery in Atlantic Canada. A retrospective analysis was conducted for the period from the 1960s, when the fishery expanded, through to Canada's commencement of modern licensing, allocation and scientifically based management in its fisheries (i.e. the early to mid-1970s), and up to the present day. A copy of the analysis is attached as Appendix A.

2. The Review of the Turbot Fishery and Fishery Development in Nunatsiavut

- The Board's review revealed that the modern turbot fishery commenced and expanded with the advent of synthetic gillnets in the mid 1960s. It is also generally agreed that Canada's attention to formalized fishery management accelerated in the mid-1970s, associated with the Groundfish Crisis of 1974-1976, the extension of jurisdiction and creation of NAFO in 1977, and the introduction in May 1976 of the first "*Policy for Canada's Commercial Fisheries*". This period is relevant because it coincided with the Report of the Royal Commission on Labrador, which was undertaken in 1975 and explored in detail the state of the fisheries on Labrador's north coast, to wit:

*"...other species are not commercially harvested for a number of reasons which include a lack of adequate knowledge of the resource, lack of proper gear, lack of processing facilities, and lack of available markets or marketing agencies. Other species known to occur on the Labrador coast, which can be marketed and which could be accessible with proper gear, to inshore based Labrador fishermen include, rock cod, capelin, halibut, **turbot** (emphasis added), Icelandic scallops, and shrimp...p.550"*

"A Summary of the Coastal Fishery; Northern Labrador.....There are no longliners now owned by the residents of northern Labrador to take advantage of an autumn cod fishery in deeper waters or to search out other species such as turbot and flounder.p.560"

- If the Board were to offer a 2009 update "*A Summary of the Coastal Fishery; Northern Labrador*", in what is now Nunatsiavut and the Labrador Inuit Settlement Area, an

accurate assessment would be that little has changed for Labrador Inuit from the portrayal of 1975. The northern Labrador fishery has stagnated over the period; “southern” fleets have progressed, and further to the north Nunatsiavut’s neighbours in Nunavut have enjoyed a burgeoning fishery over the past two decades.

- In assessing the cause to the current predicament the Board focused on the fishery development model applied in Nunatsiavut versus that applied in adjacent areas. The Board determined that the approach employed over at least the past two decades in Nunatsiavut has been a succession of general funding programs; the most prominent among these were the Newfoundland Inshore Fisheries Development Agreement (NIFDA) and the Fisheries Component of the Comprehensive Labrador Cooperation Agreement (CLCA) that focused on infrastructure development in Labrador during the 1980s and early 1990s. These programs were, unfortunately, unsuccessful in achieving stated objectives. By comparison, over the past three decades other aboriginal groups and “southern” interests have been provided significant resource allocations, in lieu of or in tandem with capital.
- For illustration, the approach taken in developing the Nunavut turbot fishery has been the provision of substantial allocations for the exclusive use of the region (i.e. 6,500t provided in NAFO OA since 2001, and a 1,350t increment in November 9, 2009 to the 1,500t previously held in NAFO OB, which brings Nunavut’s total turbot allocations to 9,350t). Consequently, the Nunavut harvesting sector has rapidly expanded after many years of virtual non-existence. Moreover, Nunavut has been given latitude to develop a fishery of its design; Labrador Inuit were constrained by policy and program measures to develop an inshore fishery based on <65’ vessels (without dedicated allocations), which are inappropriate for the environment in which they reside and operate.
- Inuit interests received their first and only groundfish allocations in 1990 when 1500t of turbot was provided in the announcement of the northern turbot development program (i.e. 750t each to Labrador Inuit Development Corporation and the Torngat Fish Producers Cooperative Society Limited), but these were reduced to a total of 230t by 1996 under subsequent reallocation decisions. The region has received no further groundfish allocations. The Board notes that both entities are separate and distinct from the Nunatsiavut Government.
- A criticism of the funding programs available to the Labrador Inuit was that they were programs of general application; the very modest northern Labrador fishery was treated as being at par with other fleets of Atlantic Canada. This was an oversight, as Labrador Inuit fishers were disadvantaged on many fronts. Most operated out of open speed boats (<9 metres), fished near shore, possessed only rudimentary navigating and deep water fishing experience, and were neither eligible for nor technically competent to master large vessels needed for fishing in deepwater. The absence of local fleet support services, seasonality (ice often remained on the coast until mid-July and September gales precluded use of small vessels), lack of representation (including language

barriers) and other externalities were overlooked or improperly weighted when fishery management plans and program criteria were developed.

- Efforts to develop inshore groundfish capacity on the northern Labrador coast occurred after all the fish were gone. Various commissioned reports relate that “fish” (i.e. cod) had virtually disappeared from the northern Labrador coast by the early 1980s. Despite the often generous funding available, there was no impetus to build an enterprise without fish to catch.
- It is the Board’s conclusion that commentary on Nunatsiavut’s lack of historical participation and dependency on turbot and groundfish in general is unbalanced. An equivalent discussion is needed on the policy instruments and resource prospects off Labrador through the 1980s to the present, and the accompanying fishery development model that was delivered and failed on the northern Labrador coast. In addition to vessel replacement rules that were a continuous barrier to fleet development, there was no business case or viable fishing plan to support inshore fishery or fleet development in Nunatsiavut in the mid 1980s or early 1990s (or thereafter).
- The Labrador Inuit were also frustrated by a succession of related policies and programs (*i.e. Vessel Replacement Rules in the Commercial Fisheries Licensing Policy for Eastern Canada (1976 - 89), Resource Short Plant Program (1979), Sector Management (1981), Enterprise Allocation Program (1985), Northern Turbot Development Program (1990)*) that failed to provide Nunatsiavut secured access, or to protect fish resources on which they relied. Of the specific programs identified above, the Northern Turbot Development Program requires particular mention.

3. The Northern Turbot Development Program

- In the wake of the northern cod collapse and the groundfish moratoria the one program that offered hope for aboriginal communities, indeed all northern fishing communities that were struggling to gain a firm footing in the groundfish fishery, was the *Northern Turbot Development Program*.
- The program provided large fishery development quotas in Sub-areas 0 and 2, immediately adjacent to Nunavut and Nunatsiavut. It seemed academic that northern aboriginal groups would be the principal beneficiaries based on routinely applied allocation criteria of adjacency, need and historical attachment to the area, and notwithstanding the absence of other opportunities. This appeared to be the case as the Labrador Inuit Development Corporation (LIDC) and Torngat Fish Producers Cooperative Society Limited (Torngat) each received 750t allocations in NAFO 0B on announcement of the program in 1990, but by the end of the program in 1998 they were left with only 70t and 160t, respectively, far short of what is needed to substantiate a fishery or fleet development.

- Significant competitive northern turbot developmental program quotas were also announced in NAFO 2GH, an area that is unattractive to the southern inshore and groundfish fleets because of the distance to the fishing grounds, the difficult fishing conditions, and lack of fleet support. In 1994 the 2GH stock unit was eliminated and combined with 2J and 3K to form the current 2+3K stock unit, and placed under the management authority of NAFO. The inclusion of 2GH with 2J and 3K as one management unit has facilitated the taking of the entire quota in the southern component of the stock area.
- The 2+3K inshore quota is now accessible by most of the Newfoundland based inshore vessels and is caught quickly under the fishing pressure of the more numerous and better equipped southern fleets. It is late in the season when northern Labrador based harvesters are ready to fish turbot in Sub-area 2, and by that time the quota is either taken or insufficient to warrant gearing up. The Department of Fisheries and Oceans introduced season and quota splits over the past three seasons to provide Nunatsiavut fishers some opportunity to catch turbot before the quota is totally exhausted. This has not proven successful or popular with the fleets.

4. Turbot Science and Resource Status

- In developing its recommendation the Board also considered it integral to understand the state of the science driving the management of the turbot resource. Turbot is understood to be a contiguous stock in the northwest Atlantic. For example, turbot in NAFO 0A migrate to 0B to spawn, turbot move from 0B to Disko Bay in Greenland where a winter through-the-ice fishery occurs, and fish in 2GHJ may migrate to 4R and 3L. Hence, the purpose of management units for turbot is to restrict access and movement of vessels or fishery participants in relation to resource distribution.

a) Canadian Research Vessel Surveys in Sub-areas 0, 2 & 3

- Canada has conducted surveys in the southern part of Div. 0A in 1999, 2001, 2004, 2006 and 2008 and these have formed the basis to observed quota increases from 300t in 2000 to 6,500t by 2006.
- The Board's review reveals that 0B received research vessel survey coverage in only two years, 2000 and 2001.

"...The two years (2000 and 2001) for which Div. 0B was surveyed were also significantly different from one another ($\chi^2 = 58$ $df = 1$, $P < 0.0001$, Fig. 2). Most of the females surveyed were immature (Table 2)...."

- Dwyer and Healey (2005) document the sampling design and sampling frequency in Subarea 2 and Division 3K over 1978-2004. *Division 2G is no longer covered by Canadian surveys (emphasis added)*. Division 2H is scheduled for survey coverage *in every second*

year (emphasis added), and was included in the 2008 fall survey. NAFO Divisions 2J and 3K have been surveyed annually since the 1970s, but a total of twenty strata in Divisions 2J and 3K were not completed in the fall of 2008.

- Surveys have been conducted by Canada in Divisions 3LMNO for many years; however, prior to 1996 the maximum depth usually did not exceed 400 meters. Therefore, data collected on Greenland halibut were considered inadequate to describe distribution and abundance for this stock and were not used for assessment purposes. In 1996, the survey design was extended to depths of at least 730 meters, and where possible, to 1500 meters during fall surveys. The fall surveys of Division 3L were not fully completed during the 2004, 2005 and 2008 surveys.

b) Survey Coverage and Timing

- Multiple coverage deficiencies are of particular significance in assessing the status of this resource: sporadic coverage of Divisions 2G (only 10 surveys in the last 30 years, and no coverage since 1999) and 2H (only 14 surveys in the last 30 years, with surveys conducted only every second year since 2004); incomplete survey of Division 3L in the fall of 2004 (see Healey and Dwyer 2005); incomplete coverage of Divisions 3NO during the spring 2006 survey; no survey of Division 3M during either of the 2004, 2005 or 2008 fall surveys and irregular coverage of the deep-water strata of Divisions 3NO.

c) Resource Prognosis

- Survey estimates of [Turbot] stock biomass in Divisions 2J and 3K, the area which provides the largest contribution to Canadian surveys, steadily increased over 2002-2007. The biomass estimate for 2008 is approximately 30% lower than the 2007 level. However, survey results for the Canadian fall survey of 2008 are difficult to interpret due to the substantial coverage deficiencies in most Divisions. Recent recruitment results suggest poor prospects for stock rebuilding in the future.
- In 2003, the Fisheries Commission of NAFO established a fifteen year rebuilding plan for the 2+3KLMNO portion of the turbot resource, with the intent to: “take effective measures to arrest the decline in the exploitable biomass and to ensure the rebuilding of this biomass to reach a level that allows a stable yield of the Greenland halibut fishery over the long term.”
- In an attempt to improve the rebuilding prospects for this stock, NAFO set TACs at 20, 19, 18.5, and 16 ('000t), respectively, for the years 2004-07. However, estimated annual catches have exceeded the TAC by considerable magnitudes (27%, 22%, 27%, and 42%, respectively) in each year since the inception of this rebuilding plan. The 2008 and 2009 TACs were set at 16,000t. The estimated 21,180t catch for 2008 is 32% greater than the 16,000t rebuilding plan TAC.

- The most recent assessment of this stock indicates that the rebuilding plan has been ineffective in initiating any recovery. Fishing mortality is still at high levels, spawner biomass has remained at very low levels, and all fisheries continue to target immature fish.

e) Science and Resource Information - Conclusions

- The Board was led to a number of conclusions from the science information. Firstly, the status of the resource in 2G and 2H is unknown and this has been the case for many years, and it follows that the stock status is really not understood across the entire 2+3K management Unit.
- Secondly, there is no robust scientific basis to the quota currently set for Turbot in NAFO 2+3K, or in fishing areas to the north and south. The recent 1500t increase of the OB Turbot quota came from the best available, but dubious information sources including Canadian offshore vessel single and double trawl CPUEs and proxies in the form of surveys in Greenlandic waters in depths <600 metres, and a deepwater Greenland Halibut survey conducted by Denmark in NAFO 1CD. There is no dedicated Canadian survey in OB to validate the 1500t quota increase, as the only two surveys in the management unit were conducted in 2000 and 2001.
- Finally, the absence of regular research surveys in NAFO Divisions 2G and 2H is troubling for the Board, as informed debate with Nunatsiavut representatives on the status and management of turbot or any species adjacent to the “Zone” is not possible. The paucity of science and absence of surveys in 2GH is a longstanding point of contention with the Labrador Inuit, and is adding to current controversy over allocation of turbot and other resources. The Board deems it prudent to take the initiative to address the significant gap in science information in NAFO 2GH, to the extent its resources allow, and has engaged in discussions with regional DFO science personnel on possible science initiatives that could be undertaken in the Zone.

Current Synopsis

- Recently the Nunatsiavut Government, the Labrador Inuit Development Corporation and the Torngat Fish Producers Cooperative Society Limited engaged consultants to undertake a review of their fishing assets, with a view to consolidation in one viable fishing entity. This concept has been espoused for many years by internal and external observers of the Nunatsiavut fishery. The consultant's analysis of the assets, resource allocations and licences held by the parties suggest an opportunity exists, but the resource package is deficient without a groundfish supply.
- The Board is convinced that past programs and current fishery management measures aimed at assisting local fishers in participating in the Turbot fishery, though well intended, were not sufficient to rescue the Nunatsiavut fishery from its current malaise. Programs and policies of general application that were insensitive to Nunatsiavut circumstances some 3 decades ago remain largely intact. Governments' genuine efforts and objectives for fishery development in northern Labrador have not been attained, as evidenced by the current inactivity and absence of a fleet.
- The Board is concerned that the certainty and "spirit of intent" of the Fisheries Chapter of the Labrador Inuit Land Claims Agreement is proving elusive as it pertains to resolving management and allocation issues.
- It is the Board's view that a recommendation to establish a 650MT Communal Allocation is the only practical means to achieve multiple objectives and resolution to a longstanding inequitable situation. The requested allocation could be excised from the existing turbot quota, and identified as a Nunatsiavut communal quota or alternatively it could be achieved through a general quota increase as per the recent OB increase.

Alternatives:

- The Board considered a number of policy alternatives to address the disparity in the turbot fishery:
- The Board dismissed the reinstatement of the 70/30 (quota) split that was in place for two seasons, which was reduced to 80/20 for 2009, in the management of the 2+3K inshore turbot fishery. It amounts to a "half-measure", is difficult to manage, and was not supported by Nunatsiavut fishers or the remainder of the inshore fleets, nor did it generate a satisfactory outcome in terms of fleet development and local landings.
- Another option considered was a licensing policy variation whereby Nunatsiavut would be provided a number of large vessel eligibilities (i.e. the privilege to license/register a number of larger vessels). This option was dispensed summarily on the basis of the foregoing retrospective; there is not sufficient quota or a viable fishing plan for a large vessel, based solely on accessing the competitive turbot quota.

- The Board also contemplated the creation of a Nunatsiavut scientific quota in 2GH, sourced from the existing 2+3K Turbot quota, with each fleet sector quota reduced on a pro rata basis to create the allocation. This option was not supported on the grounds that it requires considerable adjustments to quota keys, coordination, and expertise and resources that are presently not available within Nunatsiavut institutions.
- The status quo was evaluated as an option, but this would serve to continue the current inactivity in the fishery, and generate additional discontent. This option would entail Nunatsiavut or its fishers gaining access to the fishery through purchasing quotas or enterprises, implying that private investment or government dollars would be used to purchase enterprises and allocations. This option was not supported on the grounds that it would be too costly and that either version would be untenable to government(s) or Nunatsiavut fishers.

Legislative and Policy Considerations:

- The Labrador Inuit Land Claims Agreement and the Fisheries Act provide the legal and constitutional basis to the supplied recommendation and the suggested course of action. The recent allocation decisions in OB which have potential to directly impact resource availability and fishing prospects for Nunatsiavut provide rationale.
- A principal policy consideration is the assessment of antecedents and precedents of re-configuring a quota key for a stock. Would the recommended course of action set a precedent for frivolous requests, and are there antecedents, past decisions, upon which the Minister and the Department could substantiate the recommended course of action? The response to both is the affirmative. In respect of precedents, each subsequent case would have to be advanced on merit.
- In respect of an antecedent the Board refers to the Quebec-Newfoundland 4RST Turbot Dispute. During the early to mid-1990s Newfoundland based fishermen began to heavily target the competitive turbot quota in the Gulf of St. Lawrence such that they harvested far beyond their traditional catch level in the fishery. This became an issue for many years between the Quebec and Newfoundland fleets. When traditional consultation mechanisms and inter-regional management interventions (i.e. Laurentian and Newfoundland Fisheries Management Branches) were unable to resolve the escalating dispute the two parties were obliged to prepare their respective arguments for presentation to an independent committee led by Judge Gerard V. La Forest. The committee recommended that history be restored with Quebec receiving 82% of the allocation and Newfoundland based fishers provided 18%.
- An adjunct to the Quebec case is referenced from DFO CSAS documents...*“Since 1998, new fishers in the Gaspé and along the Lower North Shore targeting Greenland halibut with gillnets have participated in the Quebec fishery. **They were granted an allocation***

as a part of the Quebec competitive fishery (emphasis added). An Individual Quota project was introduced in 1999 for traditional fishers in Quebec to allow them to extend their fishing season.”(www.dfo-mpo.gc.ca/csas/Csas/status/2000/A4-03e.pdf.)

Financial Considerations

- The Board determined that 63 enterprises based out of 2+3K (including 4 vessels from 2J and 2 overlap vessels based in 4R) participated in the 2+3K competitive fishery in 2009. Thirty one (31) of these vessels reported landings exceeding 100t (i.e. highliners primarily based out of La Scie and Fogo). The remaining participants had nominal landings, typically under 12t.
- The benefits to Nunatsiavut harvesting and processing operations from a 650t secure supply of turbot can be represented and measured in many forms:

Harvesting

- Nunatsiavut fishers and enterprises require turbot to establish viable multi-species enterprises.
- Over the past few years Inuit harvesters have balked at using joint venture arrangements in the 2+3K competitive fishery because of the split-season quota overruns that occur in June make an August fishery uncertain. A dedicated allocation will support increased fishing activity, technology transfer, and eventual fleet development.
- The allocation will correct for loss of available raw material due to DFO changes in the management area boundaries of 2GH during the mid-1990s.
- The allocation will promote harvesting in and adjacent to the land claims area.

Processing and Employment

- The allocation of turbot will ensure stability of raw material supply for processing operations, versus events of past years due to over-harvesting of the June fishery in 2+3K. Unstable supply has deteriorated Torngat Fish Producers Cooperative Society Limited (TFPC) standing in the market, due to uncertainty over landings.
- The allocation would support modifications/upgrades to facilities placed on hold due to uncertainty of supply.
- The additional turbot would enable production at TFPC’s Nain facility, and make local production of TFPC and LIDC OB quotas more attractive. Under current challenges, these quotas are sold in the water to generate maximum revenue to support operations.
- The allocation will augment employment levels at both processing facilities at Nain and Makkovik, providing additional workers eligibility for employment insurance.

- The allocation will increase the viability of processing facilities during the short production season, and support increased hourly rates for employees and purchase price offered to harvesters, and aid in retaining employees with employment levels equal to a full time seasonal employment.

In summary, for the processing operations the 650t turbot allocation translates into a doubling of the current processing employment at the TFPC facilities.

Intergovernmental Considerations

- A reallocation within 2+3K is confined to the Province of Newfoundland and Labrador and is under the purview of the Newfoundland and Labrador Region of the Department of Fisheries and Oceans. The Governments of Canada, Newfoundland and Labrador, and Nunatsiavut have appointees on the Torngat Joint Fisheries Board.
- A reallocation from a broader component of the North West Atlantic stock complex would involve interest outside of Newfoundland and Labrador.
- A quota increase within 2+3K would have international implications, while an increase in OB would be a Canadian issue.
- The Nunatsiavut Government on behalf of its beneficiaries has significant interest in the Board's handling of the matter in a fair and impartial manner. Recently, the Nunatsiavut Government has been disputing the interpretation of sections of the Fisheries Chapter of the Agreement, and can be expected to have great interest in the outcome of the recommendation to the Minister. The outcome of this exercise will be viewed as the acid test of the credibility and effectiveness of the Board as an instrument of the Agreement.

Consultations and Meetings on Turbot

- The Torngat Joint Fisheries Board has invested considerable time and resources over the past year to gain a comprehensive understanding of the various issues and positions surrounding turbot. The Board held consultations during the week of November 3 -7, 2008 in the Nunatsiavut communities of Nain, Hopedale, Postville, Makkovik and Rigolet and was provided advice on turbot before the need for this formal review was initiated. The messages received at the community sessions is that there is plenty of turbot but Nunatsiavut lacks the resources to access the species, and that Nunatsiavut requires a communal quota in order to obtain benefit from the fishery.
- The Board met at length on 4 separate occasions between January 2009 and September 2009 to deliberate on the positions put forward at the community consultations, to clarify its role with respect to turbot management, and to identify data gaps and arrange the collection of relevant information. In early November the Board received a final

report on the history of the Nunatsiavut and Canadian turbot fishery. At a meeting on the November 16th, 2009 the Board concluded its review of the available information, and commenced formulation of its final recommendation, which was finalized at a January 26th, 2010 meeting.



Appendix A

Greenland Halibut

A Fishery Management Retrospective and
Analysis of Fishery Development in Northern
Labrador

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Introduction

This overview of Greenland Halibut (turbot) fishery in the northwest Atlantic was prepared for the Torngat Joint Fisheries Board and is intended to portray an accurate as possible history of the Canadian Turbot fishery, outline the issues that have persisted through the years, and the role of this species in the development of the Nunatsiavut fishery in a past and present context. It is further intended as an informative and retrospective piece; information on the resource and genesis of the fishery, participants, historical access and allocation data, quota and catch statistics, and management and policy decisions are reviewed for the period 1960 to present.

Emphasis is placed on aboriginal participation in the fishery, specifically the Labrador Inuit and their representative institutions. The review aims to provide a northern Labrador perspective on the fisheries policy and programs introduced over the years for turbot and the impacts and benefits of these initiatives on Nunatsiavut residents and fishing entities that have conducted fishing operations primarily in NAFO Divisions 2G, 2H, and 2J (i.e. NAFO Sub-area 2). For this reason information, events, and management decisions relating to the 3LMNO and 4RST stock components and fisheries are not extensively described.

The paper is ultimately intended to support the Torngat Joint Fisheries Board in discharging its responsibilities and to offer Labrador Inuit Land Claims beneficiaries and other readers some understanding of management and policy development in respect of the fisheries and species of fish identified in the Labrador Inuit Land Claims Agreement.

The Labrador Inuit Land Claims Agreement (LILCA)

Fisheries Management Provisions Relating to Greenland Halibut

Like other Chapters of LILCA, the fishery chapter (Chapter 13) consumed numerous lengthy negotiation sessions, particularly around the constructs and definitions of conservation and fishery management; access and allocations, quantities and locations, and the Minister's absolute discretionary powers. Fettering a Minister's authority to manage the fishery versus aboriginal autonomy, authority to govern, and rights and freedoms to enjoy traditional and commercial opportunities in this sector is the subject of much debate in every land claim negotiation.

The Torngat Joint Fisheries Board is the creation of the three negotiating parties, and established under the Agreement, with its roles, responsibilities and powers outlined in Part 13.10 and 13.11 of Chapter 13. The Board is the primary body making recommendations on the conservation of a species set out in the Agreement, and the management of fisheries in the Labrador Inuit Settlement Area (other than the Inuit Domestic Fishery, whose management falls under the authority of the Nunatsiavut government). The list of species is set out in Schedules 13B, C and D of the final agreement.

Greenland Halibut – Description and Distribution

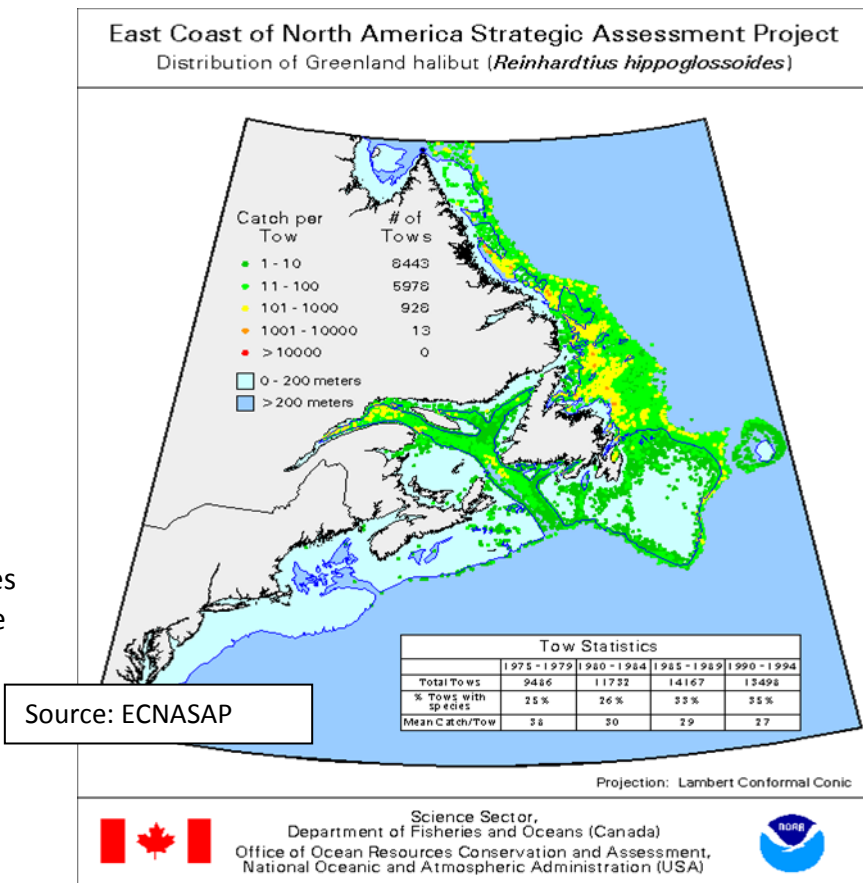
Greenland halibut (*Reinhardtius hippoglossoides*), or turbot as the species is more commonly known, are widely distributed in the Northwest Atlantic from high in the Arctic between Canada and Greenland to as far south as the Scotian Shelf; they are most abundant from the eastern Grand Bank and Flemish Cap well beyond the Canadian 200-mile limit and north (Bowering and Brodie, 1995, Scott and Scott, 1988).



Turbot is a deepwater species with higher densities occurring in depths of about 500–1200m along the edge of the continental slope and the channels running between the fishing banks of the continental shelf, as well as the deep inshore bays of eastern Newfoundland and the fjords of Greenland and Baffin Island. The East Coast of North America Strategic Assessment Project (ECNASAP) research survey tow data for 1975 to 1994, shown in the figure below, provide the historical distribution of the resource in the Labrador Sea, the Northeast Newfoundland Shelf, the Grand Banks, Gulf of St. Lawrence and Scotian Shelf. The density plots show the shelf edge along northern Labrador (NAFO 2G), the Hopedale Channel (NAFO 2H), the Cartwright Channel and Hawke Channel off eastern Labrador (NAFO 2J) as being

continuously productive areas for the species, as well as the highly productive areas off northeast Newfoundland in the St. Anthony Basin and Funk Island Deep (i.e. NAFO 3K).

In recent years, with advances in modern fishing technology, turbot have been found to be commercially abundant in some areas as deep as 1500–1800 m, particularly in the proximity of the Sackville Spur and Flemish Pass, immediately east of the Grand Banks (Bowering and Brodie, 1995) and has been caught in longline investigations as deep as 2200 m off West Greenland (Boje and Hareide 1993) and the Flemish Cap (de Cardenas et al. 1996). The species is also of commercial importance in the Gulf of St. Lawrence and exists in limited quantities along the south Newfoundland coast, Fortune Bay, and in the Laurentian Channel.



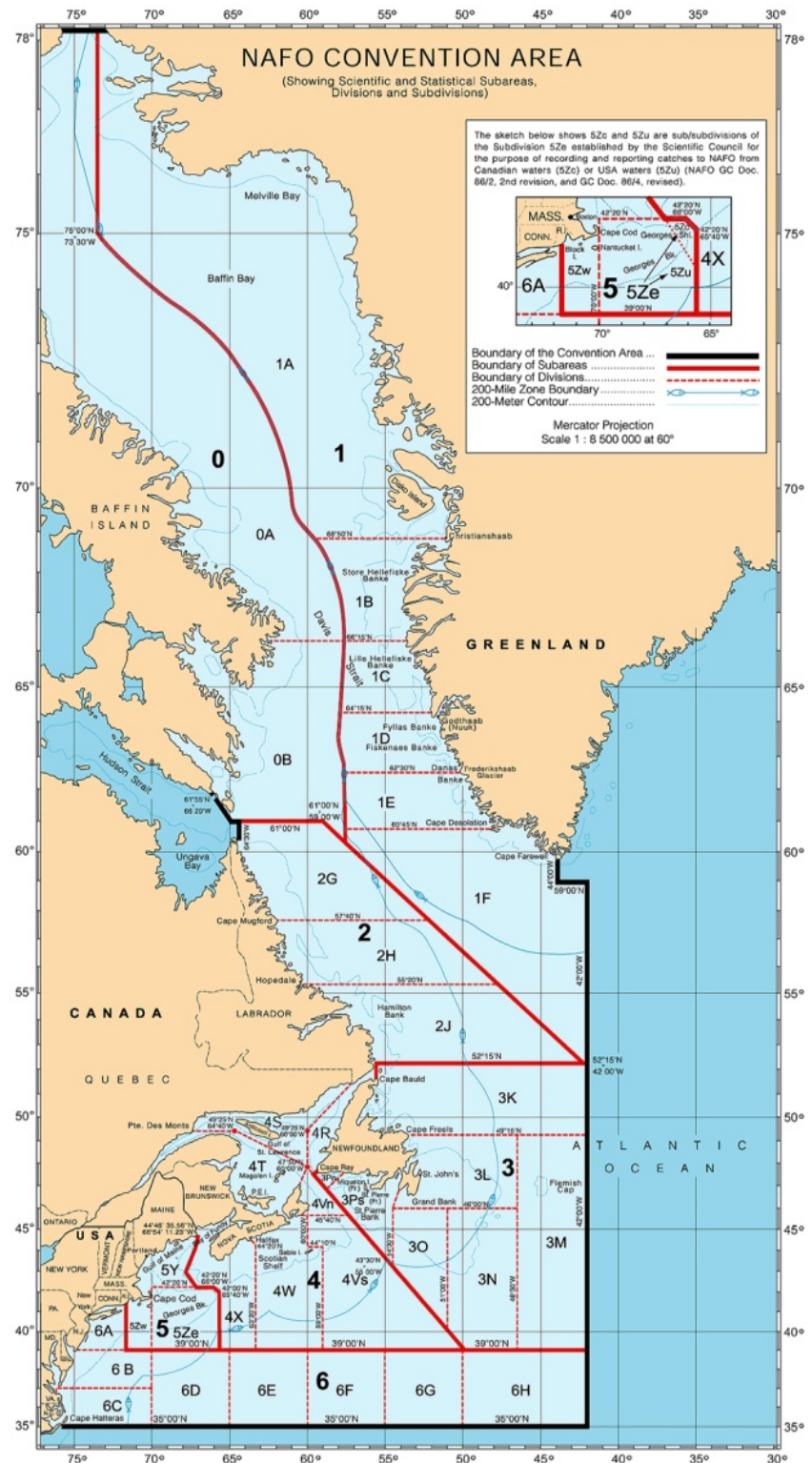
Stock structure of Greenland halibut in the Northwest Atlantic has been studied using a variety of methods e.g., protein electrophoresis (Fairbairn 1981), parasites (Khan et al. 1982; Arthur and Albert 1993), morphometrics (Bowering 1988), meristics (Misra and Bowering 1984; Riget et al. 1992), and tagging (Bowering 1984; Riget and Boje 1989)). These data suggest that Greenland halibut comprise a single self-sustaining stock from Davis Strait to the Grand Bank and Flemish Cap (Bowering and Chumakov 1989).

Greenland halibut in the Gulf of St. Lawrence are believed to be a separate, relatively small, self-sustaining stock, which receives migrants from the Labrador area through the Strait of Belle Isle between Quebec and the island of Newfoundland (Bowering 1982).

The major spawning location of Greenland halibut in the western Atlantic is in the deep slope area of Davis Strait along the boundary between Canada and Greenland (Smidt 1969; Templeman 1973; Chumakov 1975; Bowering 1983). However, with research activity on Greenland halibut expanding to very deep water, complemented by commercial fishing operations, additional information on spawning locations is becoming available. Fish in spawning condition have been reported from the deep slope area off the coasts of Labrador and northeastern Newfoundland by domestic gillnetters (Morgan and Bowering 1996) to as far south as Flemish Pass (Junquera and Zamarro 1994; Morgan and Bowering 1996).

The implications for fisheries management can be quite complex considering the possible scenarios for stock structure. Prior to 1995, Greenland halibut in the far north in the Davis Strait and northwestern Greenland (NAFO Subareas 0 and 1) were managed bilaterally between Canada and Greenland as a single unit, while those further south along the Labrador and northeastern Newfoundland continental shelf (NAFO Subarea 2 and Divisions 3KL) were regulated by Canada within its 200-mile limit. The fishery for Greenland halibut beyond the 200-mile limit south of this area (NAFO Divisions 3LMNO) was unregulated. The management units of the NAFO Convention Area can be viewed in the adjacent figure.

In 1995, based on the advice of the NAFO Scientific Council, the inshore area of northwestern Greenland (Division 1A) began to be regulated separately from the offshore areas, and all of the Greenland halibut south of the Davis Strait (NAFO Subareas 2 and 3) began to be regulated as a single unit under the management of the multinational NAFO Fisheries Commission. These changes were prompted by conservation concerns. For example, if the entire resource were a single biological unit, intense fishing effort in areas of localized abundance could cause significant damage to the resource as a whole. It is critical, therefore, that the stock structure in the Northwest Atlantic be elucidated as conclusively as possible.

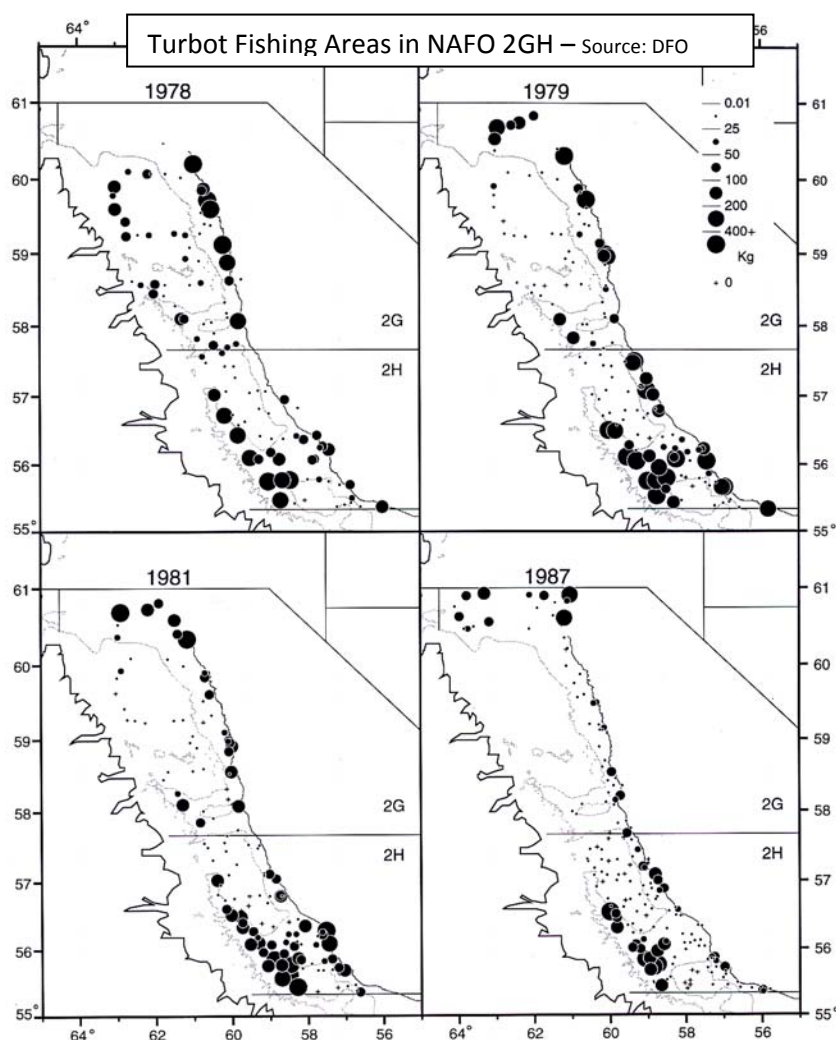


Origin of the Canadian Commercial Fishery

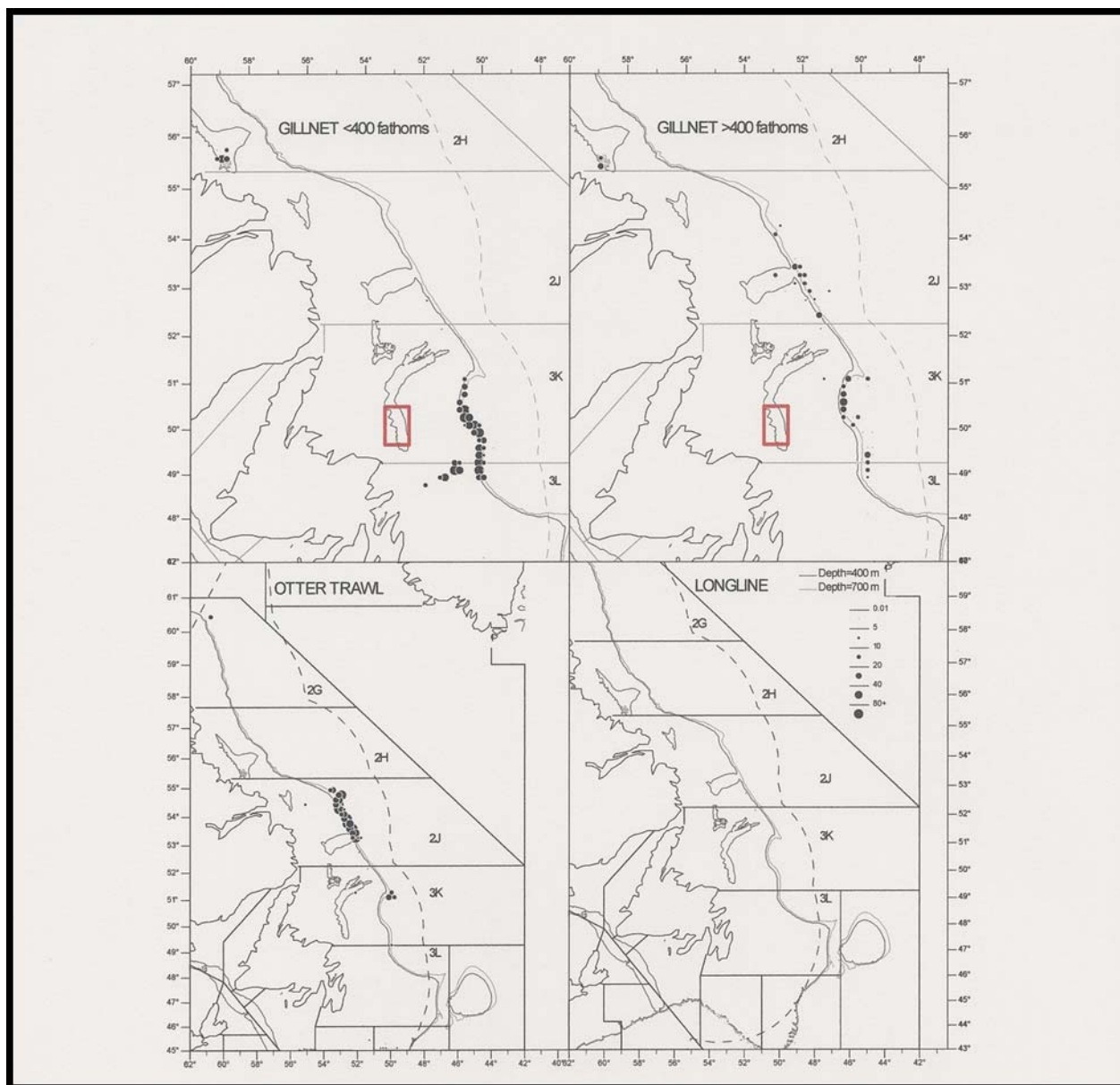
The sale of Greenland halibut from the 2+3KL portion of the stock dates back as far as 1857. Until 1964, Newfoundlanders played an important part (along with Greenland Danes) in a traditional inshore baited-line fishery. The products, mainly in salted form, were exported to eastern

Canadian markets, as well as to the United States and British West Indies. A change in the Canadian fishery for Greenland halibut in Subareas 2 and 3 began in the mid 1960s with the use of synthetic gillnets in the deepwater bays of eastern Newfoundland, particularly Trinity Bay. With the introduction of these highly efficient synthetic gillnets, the use of longlines decreased, and by 1967 had been practically eliminated from the Greenland halibut fisheries. Also, in the late 1960's, Polish and Soviet fleets began to compete for the harvest in the deep waters of the continental slope off northern Labrador. The Canadian offshore sector had little experience harvesting turbot in deepwater during this period. Newfoundland

landings dropped sharply as a result. From 1970 to 1977, landings stabilized at around 30,000 t annually. As catches declined in Trinity Bay, the effort moved progressively northward in the other bays along the east and northeast coast of Newfoundland. (Source: <http://www.mi.mun.ca/mi-net/fishdeve/turbot.htm> Oct 22/09).



In later years vessels moved further offshore to the deep channels, such as the area in the central part of Div. 3K known as Funk Island Deep, the continental slope, and by the 1990s to northern fishing grounds in 0B, and finally in the early 2000s to NAFO 0A in the far north.



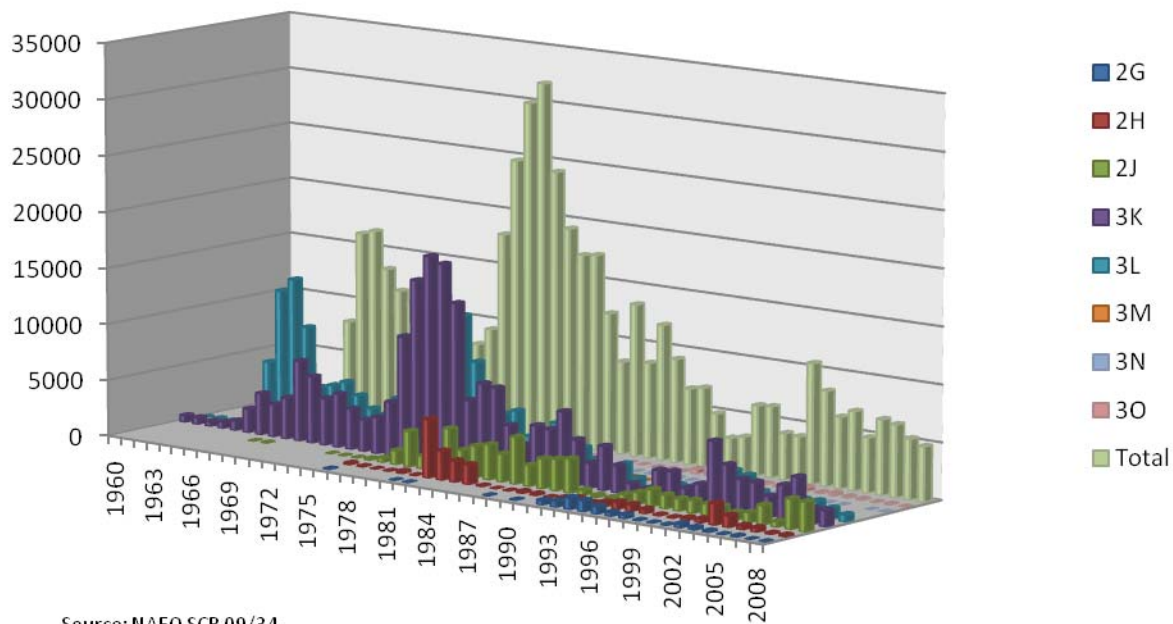
Distribution of Greenland halibut commercial fishery catches by all gear types in 2008 in NAFO 2+3KLMNO. Fishery exclusion area in red.

Source: NAFO SCR 09/38

Canadian turbot catches increased from fairly low levels in the early 1960s to almost 32,000t in 1980 then declined steadily to between 2900 and 6300t in each year from 1993-99. This declining trend was mainly a result of low catch rates and reduced effort, as fishers pursued other species such as snow crab, which were more profitable and plentiful. However, in 2000, the Canadian catch in NAFO Subarea 2 and Divisions 3KLMNO was about 10,600t, more than two and a half times greater than catches in 1998 and 1999. The reasons for the increased catch and effort on the stock include a switch of some effort by fishers in Divs. 3KL from snow crab to turbot due to declining quotas for crab, combined with improved catch rates for Greenland halibut in most of the traditional fishing areas, and strong markets (Brodie and Power, 2000). Canadian catches in

Sub-areas 2 and 3 for the period 1960 to 2008 are provided below, and raw numbers used in generating this chart are contained in Appendix 1.

Canadian Catch of Turbot in 2+3KLMNO 1960 - 2008



The Newfoundland and Labrador fishery has been conducted mainly by small vessels (<20 m) fishing in the deepwater channels near the Newfoundland and Labrador coast as well as in the deepwater bays, using an average mesh size of 150 mm. However, Canadian gillnet catches taken during recent years also include those from a substantial fishery along the deep edge of the continental slope in Divisions 2J and 3KLO.

In an attempt to reduce the catch of young Greenland halibut in this new deepwater gillnet fishery, gillnet mesh size for Greenland halibut in the Canadian zone in depths >732 m (400 fathoms) is regulated to be no less than 190 mm. Total gillnet catch in 2008 was about 3,500t.

Canadian otter trawl catches peaked at about 8,000t in 1982, declined to less than 1,000t in 1988, and then increased to about 7,400t in 1991, which is the highest level since 1982. From 1993 to 2000, catches by this fleet were less than 1300 tons annually, and although there was very little effort in some years, notably 1998 and 1999, otter trawl catches in 2000 did increase to the highest level since 1992 at approximately 2,200t, and in 2008 the catch was about 2,400t.

Participants

In the table below the number of groundfish licences issued in the Newfoundland Region in 2002 is provided. While this information is dated, it is not significantly different today and illustrates the groundfish fishing capacity that exists in Newfoundland and Labrador. The actual numbers of fishers eligible and able to fish turbot in 0, 2+ 3KL is considerably less; the <35' fleet which comprises the greatest proportion of the total numbers is precluded by distance and vessel size from anything but nearshore stock components, sector management policy prevents others from neighbouring regions of the Island portion of the province from entering the area, and traditional participation criteria restricts others.

NUMBER OF LICENCES ISSUED BY TYPE BY PROVINCE AND REGION (2002) (Source: DFO Resource Management – Atlantic)										
PROVINCE	REGION	A	C	E	J	L	M	O	S	T
Nova Scotia	Scotia-Fundy	2,681	1,675	1,974	-	-	1	305	58	335
	Gulf	319	405	636	4	-	122	125	1	201
New Brunswick	Scotia-Fundy	231	218	45	-	-	-	204	13	14
	Gulf	626	1,112	1,179	8	2	1,136	229	20	136
P.E.I.	Gulf	857	850	1,244	1	-	1,541	390	-	88
Québec	Québec	965	1,079	767	-	73	-	77	54	215
Newfoundland	Newfoundland	4,693	2,362	2,032	74	1,960	-	919	438	781
Total Atlantic		10,372	7,701	7,877	87	2,035	2,800	2,249	584	1,770

Codes	Species	Codes	Species
A	Groundfish	M	Clam
C	Herring	O	Scallop

Sector management was introduced in 1982 as a means to restrict inshore groundfish fleets to their home sectors. There are three sectors: Sector 1 - NAFO 0, 2, 3KLMNOPs (i.e. Davis Strait, Labrador, northeast and southern Newfoundland), Sector 2 - NAFO 4RST, 3Pn (i.e. western and south-western Newfoundland and Gulf of St. Lawrence) and, Sector 3 - NAFO 4VWX, 5 (Nova Scotia - Scotian Shelf and Bay of Fundy). There are a lot of Newfoundland (and non-Newfoundland based) groundfish license holders in Sector 2 that could access turbot off northern Labrador (2GH) or in 3KL in Sector 1 but they are restricted from doing so because of sector management. There are exceptions for those who have an established history of fishing in another sector, or who reside in areas bordering another sector (i.e. authorized overlaps). For example fishers in NAFO Divisions 4R and 4S (in Sector 2), which borders NAFO Division 2J (in Sector 1) are authorized to fish in 2J, and vice versa. A reasonable estimate of eligible and able enterprises that could target turbot would be in the order of 1000, but the active vessels are generally less than a third of this number.

In NAFO 0A and 0B, the circumstances are entirely different. In 0A Nunavut interests are allocated the entire 6,500t quota, so only vessels they own or partner with are eligible to participate in the fishery. This number has varied over the years as the allocations have grown, but usually less than 10 vessels combined in the >65' fixed gear and >100' mobile gear fleets have participated each year. The 0B offshore fishery is also restricted to a small number of participants by virtue of resource allocations that are limited to several aboriginal groups in Labrador, Northern Quebec and Nunavut, a group of Newfoundland based <65' vessels, and a few companies in the middle distance, Scandinavian longline, and >100' mobile gear (offshore) sectors. A policy implemented in 2000 restricts access to competitive quotas in 0B to those enterprises with a verified history of fishing in the area prior to 2000. A total of 12 vessels in the <65' fixed gear fleet, 5 in the 65'-100' fixed gear sector, 5 in the >100' mobile gear fleet and 3 Scandinavian longliners retain this eligibility. The number of active vessels varies by year. The Nunavut inshore quota (i.e. for Cumberland Sound) is taken by local residents in a through the ice winter fishery.

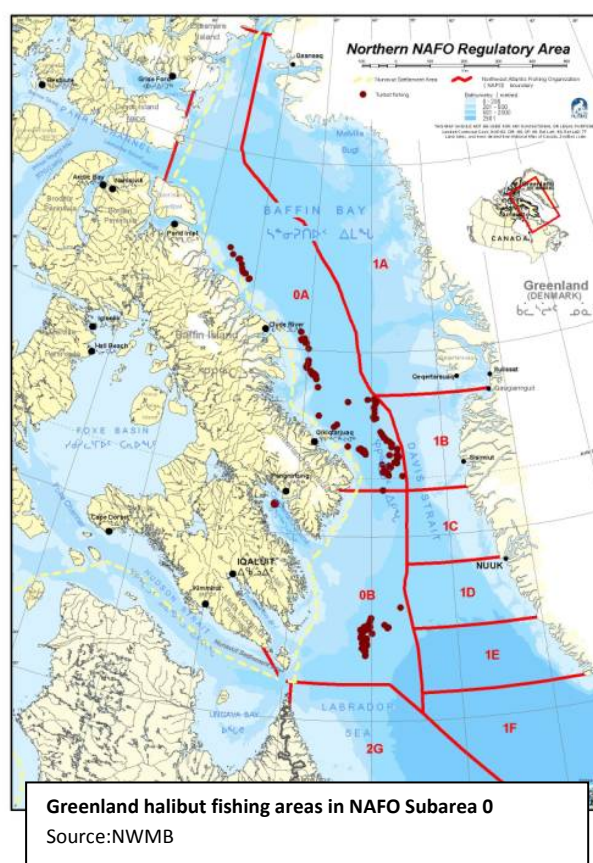
The Fisheries: A Management Unit Retrospective

1. NAFO 0A and 0B Turbot

The Canadian Greenland halibut fishery began in Division 0B in 1981, at which time most of the Canadian quota was allocated to foreign countries. These foreign allocations were steadily reduced until they were eliminated in 1992.

In 1988, the Inuit of what is now Nunavut received an inshore allocation of 100t in 0B. During the 1990s, with the collapse of most major groundfish resources in the Northwest Atlantic, Greenland halibut became the most significant groundfish fishery in the region (Bowering 1999). Meanwhile, the Greenland halibut stock began to decline in biomass and shift in age structure (Bowering et al. 1995, in Morgan and Bowering 1997). In 1994, based on the first detailed assessment of this Greenland halibut stock (Atkinson et al. 1994, cited in Bowering 1999) and other information, the NAFO Scientific Council recommended that the TAC in the Baffin Bay/Davis Strait-West Greenland management unit be reduced significantly from 25,000t to 11,000t.

Canada's 50% share of the 25,000t TAC (split equally with Greenland) dropped from 12,500t to 5,500t in 0B where it remained until November 2009 when a 1,500t increase was announced.



Beginning in 1986, an inshore longline through-ice fishery for Greenland halibut was developed in Cumberland Sound. Catches in this fishery peaked in 1992 at 430t. Declining catches throughout the 1990's were due mainly to deteriorating ice conditions that limited safe access. Conditions improved in 2002 and 2003 and effort increased resulting in catches exceeding 200t, however since then conditions have been poor and 2005 was the shortest fishing season on record with only 2 weeks where ice conditions were safe for fishing. A separate quota of 500 t was established for this fishery in December 2004 that includes provision for a summer fishery in the inner portion of Cumberland Sound. Small inshore experimental fisheries for Greenland halibut are beginning in other areas of Nunavut. (Note: Similar nearshore experimental efforts were conducted near Hopedale in the mid-1980s, but results were unfavourable). Prior to 1996 there was no fishery in Division 0A. While there was no separate Greenland halibut quota identified for Division 0A, from 1996 to 2000 Nunavut interests were allowed to harvest up to 300t in an exploratory fishery in this management unit.

In June of 2000, the NAFO Scientific Council recommended that an additional TAC that would generate a low fishing mortality be implemented for the offshore areas of 0A and 1A. In 2001, Canada established an exploratory fishery quota of 3,500t in 0A, increasing it to 4,000t in 2002 and to 4,400 t for 2003 to 2005.

In 2005, NAFO Scientific Council recommended an increase in TAC for 0A and 1A (offshore) + 1B based on data from surveys in new areas in 2004. Consequently in 2006, the recommended TAC was 13,000t for 0A and 1A (offshore) + 1B; an increase of 5000t. Nunavut's position is that it is the primary jurisdiction adjacent to Subarea 0, and with its historical attachment and economical dependence on the fishery, their access and allocation should be 80%-90% to this adjacent resource. To date, the Canadian portion of the TAC in 0A remains at 6,500t and is allocated entirely to Nunavut. Combined with their quotas in 0B, Nunavut interests now hold 68% of the Sub-area 0 allocations. In the release of the 2006 to 2008 management plan for NAFO 0A and 0B, the Minister of Fisheries and Oceans announced that the 2006 access and allocation arrangements in 0A will be stabilized for four years. Further, should stock levels increase in the 0B fishery, existing access arrangements remain in effect but shares will have to be reviewed in light of land claims.

A chronology of the prominent management decisions for the turbot fishery in NAFO 0A and 0B is provided below (as presented in the 2005-2008 Turbot Management plan for NAFO Sub-area 0) to accompany the quota tables that follow .

- From 1981 – 1991 the majority of Canadian quota is allocated to foreign countries.
- In 1988 a 100t Nunavut Inshore Fishery allocation is created in 0B (inside the Nunavut Settlement Area)
- In 1990 Northern Greenland halibut Development Program begins as a means for Canadians to access underutilized or unutilized fish stocks. A 5,360t developmental allocation created. The Department issued annual invitations for proposals to harvest the developmental allocations. The majority of the developmental allocation was harvested by chartered foreign vessels. Nunavut inshore allocation increased to 500mt.

- In 1992 the Developmental allocation is increased to 10,460t. The Nunavut Inshore allocation is increased to 1,000t.
- In 1993 the Developmental quota is reduced to 3,920t and a 6,540t competitive allocation for Canadian licence holders is established.
- In 1994 a significant reduction of the TAC occurs following NAFO Scientific Council advice. The competitive allocation eliminated. The Nunavut allocation is maintained.
- The 1996 Developmental quota is reduced to 2,500t in an effort to reduce the use of foreign charters and encourage Canadianization. An exploratory allocation in 0A (32 fishing days, or about 300t maximum) is provided to Nunavut, which was not counted against the Canadian quota. As well, Nunavut is provided a 500t allocation in the offshore area of 0B (bringing Nunavut's total 0B allocation to 1,500t). A competitive allocation is re-introduced at 1,500t (split 900t fixed gear and 600t mobile gear).
- In 1998 a 5-year Management Plan is announced (1998-2002) following extensive consultations with stakeholders. The Plan includes provisions for Nunavut to receive 50% of any increase in the Subarea 0 Canadian quota. The use of foreign vessels to harvest the Canadian quota was eliminated. "Developmental" allocations renamed "Company" allocations.
- In 2000 access to the competitive fishery is restricted to those groundfish license holders who had historically participated in the fishery.
- In 2001 a new 0A exploratory fishery allocation of 3,500t is provided exclusively to Nunavut interests.
- In 2002 the 0A exploratory allocation is increased to 4,000t, all of which is provided to Nunavut interests.
- In 2003 a 3 year Management Plan is announced (2003-2005). A 10% quota increase was granted and an additional 400t was allocated for the offshore in 0A for 2004.
- In 2004 a 10% quota increase was granted and an additional 400t was allocated to BFC for offshore in 0A.
- In 2005, the 10% quota increase provided in 2004 in 0A was reserved for inshore fisheries development. The limited success of the inshore fishery allowed for the remaining quota to be moved to the offshore fishery. In 0B a separate zone was set for the Cumberland Sound inshore fishery with a 500t quota. The NAFO Scientific Council recommended that for 2006 the TAC for 0A and 1A offshore + 1B be increased to 13,000t. The TAC in 0A currently remains at 6,500t and is held entirely by Nunavut interests.

The tables below provide the fleet sector shares and the Company Quota holders for the 0B quota held just prior to the recent transfer of the SeaFreez quotas. The percentage shares for the company quotas will require adjustment in light of the recent transfer to new interests.

Fleet Sectors

Sector	Tonnes	Percentage
Nunavut residents	1,500	27.30
Company quotas	2,500	45.40
Competitive fishery	1,500	27.30
Total	5,500	100.00

Company Quotas

Company	Tonnes	Percentage
SeaFreez	1,900	76.0
Clearwater	230	9.2
Seaku Fisheries Inc.	70	2.8
Nunavik Arctic Foods	70	2.8
Labrador Inuit Development Corporation	70	2.8
Tornгат Producers Co-op	160	6.4
Total	2,500	100

The following table provides the Canadian allocation history for the entire NAFO Sub-area 0 management area.

Canadian Quotas for NAFO Divisions 0A and 0B 1981 - 2009											
CANADIAN QUOTAS	1981-89*	1990	1991	1992	1993**	1994	1995	1996	1997	1998	1999
0A											
Nunavut	0	0	0	0	0	0	0	300	300	300	300
TOTAL 0A	0	0	0	0	0	0	0	300	300	300	300
0B											
Foreign Charters	12400	6640	6640	1040	1040						
Develop/Comp Alloc.*		5360	5360	10460	3920	4500	4500	2500	2500	2500	2500
Nunavut	100	500	500	1000	1000	1000	1000	1500	1500	1500	1500
Competitive*					6540			1500	1500	1500	1500
TOTAL 0B	12500	12500	12500	12500	12500	5500	5500	5500	5500	5500	5500
GRAND TOTAL	12500	12500	12500	12500	12500	5500	5500	5800	5800	5800	5800
* Most of the quota was provided to foreigners											
** In 1993 developmental and competitive offshore quotas were permitted to be caught in either SA0 or 2GH.											
CANADIAN QUOTAS		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009*
0A											
Nunavut		300	3500	4000	4400	4400	4400	6500	6500	6500	6500
TOTAL 0A		300	3500	4000	4400	4400	4400	6500	6500	6500	6500
0B											
Foreign Charters											
Devel/Comp Alloc.		2500	2500	2500	2500	2500	2500	2500	2500	2500	2650
Nunavut		1500	1500	1500	1500	1500	1500	1500	1500	1500	2850
Competitive		1500	1500	1500	1500	1500	1500	1500	1500	1500	900
TOTAL 0B		5500	5500	5500	5500	5500	5500	5500	5500	5500	7000
GRAND TOTAL SA0		5800	9000	9500	9900	9900	9900	12000	12000	12000	13500

*Nunavut is provided 1,350t of a 1,500t quota increase in 0B announced on November 9, 2009. Nunavik received the residual 150t.

2. NAFO 2GHJ, 3KLMNO

During the 1990s this component of the Greenland halibut resource, perhaps more than any other resource in the northwest Atlantic, can be best described as the pawn of internal domestic wrangling and an international resource grab. The changes to the management units for the NAFO Sub-area 2 and 3 portions of the stock have been numerous over the past three decades as the fishery developed and various national and international fishing interests repositioned themselves (i.e. a diversion of effort) in the wake of the precipitous decline of northern cod. Reconciling the convoluted management history is difficult even for those with longstanding attachment to the fishery.

This management area was fished primarily by inshore fishermen along the northeast coast of Newfoundland and Labrador. The origin of the inshore gillnet fishery is traced back to fishing in the deepwater of Trinity bay during the early 1960s.

The Greenland halibut stock in Subarea 2 and Div. 3KL first came under TAC management by Canada in 1974. The TAC in this portion of the stock area increased from 35,000t in 1980 to 55,000t in 1981-84, 75,000t in 1985, and 100,000t in 1986-89. After 1989, the 100,000t TAC was broken into two components; 35,000t in 2GH and 65,000t in 2J3KL. The increases in TAC were the result of research vessel survey estimates of stock biomass (in excess of 400,000t) which indicated presence of both high levels of fishable biomass as well as prospects of several better than average recruiting year-classes. The TACs were intended to apply to the entire stock area, and not just the portion in Canadian waters (Miller et al, 2007).

In 1990 the 2J3KL TAC was reduced by 50% to 32,500t over concerns of stock health. Historically, most of the catch has been taken by inshore fishers in 2J3KL. The inshore harvest declined from approximately 17,000t in 1981 to 5,500t in 1990, while foreign catches outside 200 miles increased to 30,000mt. Despite the fact that the inshore experienced low catch rates, and the resource was clearly being overexploited outside 200 miles, turbot was placed in the Developmental Pool Program (*note: See the detailed section on the Northern Turbot Developmental Program below. An important consideration for turbot's placement in the program was to bolster Canadian catches in support of Canada's negotiating position at NAFO; the stock came under management control of NAFO in 1994, with the ensuing "turbot war".*)

After observing an estimated reduction in stock biomass from the late 1970s to the late 1980s in Subarea 2 and Div. 3KL of about 50%, the TAC was reduced to 50,000t in 1990 and this level was maintained to 1993 despite further substantive declines in stock size throughout the normal range of observed historical stock distribution. The late 1980s to early 1990s coincided with a period of increased fishing effort in the NAFO regulatory area with the influx of about 40 Spanish factory freezer vessels displaced from Namibia. (Miller et al, 2008)

Although the Scientific Council of NAFO, in its deliberations during June 1993, could not advise on an appropriate catch level for 1994, the TAC was reduced to 25,000t by Canada in Subarea 2 and Divisions 3KL in consideration of low levels of stock size estimated for this area. It was intended that this TAC should include all catches in Subarea 2 and 3 for conservation purposes. Nevertheless, catches in the NAFO Regulatory area continued unregulated.

In 1994, management of Greenland halibut in Subarea 2 and Div. 3KLMNO (*note the change to include Divisions 3MNO*) became the responsibility of the NAFO Fisheries Commission, which imposed a TAC of 27,000t for 1995. This level was maintained for 1996 and was proportioned throughout the management area in an attempt to reduce high concentrations of effort in localized areas. By 2003 the TAC had increased to 42,000t. NAFO implemented a long-term rebuilding plan for turbot in 2+3KLMNO in 2004, but catches are still exceeding levels needed to bring about rebuilding. The Canadian allocation history for the 2+3KLMNO fishery from 1990 to 2009 is provided in Appendix 2 to this paper.

Origin of the Nunatsiavut and Aboriginal Fisheries for Greenland halibut

A review of a variety of literature sources including Hawkes (1916), Brice-Bennett (1975), Borlase (1993), and Environment Canada (1996) suggest that Greenland halibut did not figure prominently in the traditional diet or trade of Inuit peoples of Canada. Firstly, turbot is a deepwater species and would have only been harvested incidentally prior to the 1900s and, secondly, when captured the fish was used primarily as dog feed. The Inuit fish diet remains dominated by salmon, char, and trout, with cod, rock cod, capelin, herring, the occasional mackerel and other littoral zone, tidal flat and near-shore flatfish, groundfish, shellfish (e.g. mussels, scallops, whelks) and sea urchins being less prominent/preferred sources of fish protein. The following excerpts allude to the place of turbot in Inuit subsistence and commercial fisheries.

“Inuit in Labrador have over 200 years of commercial fishing experience, with Atlantic Cod, Atlantic Salmon, and Arctic Charr being the traditional species. Labrador Inuit are also exploring opportunities for expanding into trade in non-traditional species, such as scallops, shrimp, and Greenland turbot. (Environment Canada , 1996)”

“The fact that the JBNQA did not prevent commercial fisheries or sport hunting says more, I think, about already established commercial interests that predate the Agreement than about the need to conserve the resources for domestic use. Moreover, these large-scale fisheries involve species such as shrimp or turbot that have not been customarily eaten by Inuit; these are seen as permissible for harvest because there is no tradition of their domestic consumption. (Gombay, 2004)”

The following excerpts from the 1975 Royal Commission on Labrador allude to the state of the local fisheries only 3 decades ago;

“...other species are not commercially harvested for a number of reasons which include a lack of adequate knowledge of the resource, lack of proper gear, lack of processing facilities, and lack of available markets or marketing agencies. Other species known to occur on the Labrador coast, which can be marketed and which could be accessible with proper gear, to inshore based Labrador fishermen include, rock cod, capelin, halibut, turbot, Icelandic scallops, and shrimp...p.550”

“A Summary of the Coastal Fishery; Northern Labrador.....There are no longliners now owned by the residents of northern Labrador to take advantage of an autumn cod fishery in deeper waters or to search out other species such as turbot and flounder. P.560”

“Additional Salt Water Research (Recommendation) 4. Exploration for and assessment of other species such as turbot, flounder and shrimp.....Pre-emptive quotas should be set on all new species restricting them to Labrador residents until sufficient is known about productivity and sustainable yields.”

Today, Nunatsiavut fishing interests have access to both the NAFO 0B and 2+3KL fisheries; Torngat and LIDC by virtue of their 0B company allocations, and inshore fishers to the 2+3KLMNO competitive quotas by authority of groundfish licences they possess.

LIDC and Torngat hold allocations for 0B, not vessel registrations or licences, so they must partner with a licensed vessel owner to harvest their allocations. Technology and knowledge transfer (i.e. mentoring) has been a longstanding objective of Canadian fisheries policy in respect of providing resource allocations (without licences) to aboriginal and special interest groups with no deep-sea fishing history. While the intent of the policy is genuine, cogent, and has been acceptable for some, a reality is it is difficult for the aboriginal group to emerge as a stand-alone entity under such arrangements, particularly if quota holdings are minimal. This is the case with turbot held by LIDC and Torngat.

Those with experience in the middle distance sector (generally referring to vessels >65' to 100') can attest to the difficulty of maintaining an enterprise with a business plan based on securing quota holdings of others. In fact, one need only confer with the licence/vessel owners of the Fixed Gear Offshore Harvesters (*a group of middle distance licence holders who today are effectively inactive*), or any other >65 foot fixed gear enterprise to understand why these enterprises cannot survive by leasing quotas of others. An enterprise must possess its own “critical mass” of quota before joint venture arrangements become tractable. Labrador Inuit interests have attempted but have not enjoyed success in developing middle distance enterprises, such enterprises are widely acknowledged as most suitable for northern fishing areas. In fact, over the past several seasons both LIDC and Torngat have had no alternative but to dispose of their 0B allocations under royalty charters with other offshore fishery participants. The continuing challenge confronting these two Nunatsiavut quota holders is to develop an economy and the northern Labrador fishery for the benefit of Inuit communities with the meagre groundfish holdings at their disposal.

Recent information from Nunatsiavut and DFO representatives reveal there has been no Nunatsiavut based fisher fully equipped to prosecute the inshore turbot fishery for some time, which is largely unchanged from the situation described by the Royal Commission in 1975. Indeed, true inshore enterprise participation in the competitive turbot fishery has been fleeting over the years. A small number of Nunatsiavut harvesters based largely out of Makkovik and Goose Bay did participate in the gillnet fishery in the “Makkovik Trench” (i.e. southwestern Hopedale Channel) during the 1980s, but only a very few possess licences or eligibility for vessels suitable for prosecuting the fishery today. The lack of access to vessels and quotas for fleet development purposes has been a longstanding point of contention with the entire Labrador fleet, and particularly for Nunatsiavut based fishers.

Over the years a host of programs focusing on cash incentives, rather than allocations, have been put in place to spur local fleet development, with virtually no success. The reality is a vessel without quota is *non-sequitur* in the north and the result is that historical participation and local landings that could sustain onshore operations have been negligible relative to the remainder of the province. The need for fleet (and processing) capacity development is a perennial issue in northern Labrador. It is an issue the former Labrador Inuit Association and its membership continually grappled with, and with the conclusion of the Labrador Inuit Land Claims Agreement the task of addressing fleet development has shifted to the Nunatsiavut government.

The reasons for stagnated fleet development and absence of a vibrant fishery are many. A thorough analysis of the matter would fill a separate document. However, it is readily apparent from the beleaguered state of the Nunatsiavut fishery, and the fact that it has not changed appreciably from what it was in 1975 is testimony to fishery development initiatives and policies that have failed to meet their objectives.

Processing in Nunatsiavut

The following information was extracted from the Labrador Resources Advisory Council (LRAC): Third Annual Report (1978-1979)

“In 1978 the Department of Rural Development turned over the responsibility of the plants at Nain, Makkovik and Black Tickle to the Department of Fisheries. While some protest developed from the local level following this decision due to lack of consultation, the province went ahead and called tenders for the lease and operations of the plants. The deadline was September 1978. As a result of this move, a committee was formed in Northern Labrador called the [Fishery Emergency Policy Committee], which consists primarily of fishermen from the 6 communities from Nain to Rigolet, the LIA and the LRAC. The main purpose of this committee was to start in motion the mechanics to form a Northern Labrador Fisheries Cooperative to operate and manage the fishery in northern Labrador. A proposal was submitted to the provincial government before the September 30 deadline.

As a result a series of consultation meetings were held in the communities to determine the feelings of the people with regard to the various proposals submitted. It was clear from the meetings that the people in the communities were apprehensive about private companies coming in to develop their fisheries, and, in fact, most people expressed a desire to be given the opportunity to run the fishery themselves. The government recognized that a cooperative approach is the best approach, though in response to the general feeling that the people need time to organize, the Department of Fisheries agreed to run the plants for another year....”

The Torngat Fish Producers Co-operative Society Limited in Labrador was eventually established in 1981, and is owned by Inuit members. The co-op has exported a variety of fish products throughout the world, including cod; H&G turbot, blocks, fillets and heads; various arctic char products, brine frozen snow crab sections, and frozen Icelandic scallops. Turbot and crab are the principal species which currently sustain its operation.

The ongoing struggles in the fish processing industry of Newfoundland and Labrador are well studied and documented. An aging and declining workforce, unfavourable currency exchange rates, depressed resources, quality and supply issues, and the general global economic slowdown are crippling the industry. In northern Labrador the problem is exacerbated by geographical separation and location. Seasonality is always an impediment to the fishery in the north. Nominal and inconsistent raw material supply offers a significant challenge in production scheduling, and leads to sub-optimal capacity utilization, as production facilities are either over-taxed or idle. High energy and shipping costs, and satisfying community employment needs, are additional pressures on the bottom line and competitiveness of the northern plants.

Torngat Fish Producer's Cooperative also has first-hand experience with the challenges of operating middle distance vessels. It leased the Nain Banker for the 1997 fishing season, with the view to harvesting and landing its turbot and other species that could be sourced at the time for its facilities on the north coast. While the Cooperative had the opportunity to lease the vessel for two years, it exercised its option to terminate the lease after only one. Both LIDC and Torngat have made concerted attempts in fleet development, but these efforts have proven unsuccessful to this point. Invariably, whether it is inshore or offshore vessel categories, lack of resource has always been a principal detriment to developing fleet capacity in the north.

Over the past 3 seasons (i.e. 2006-2009) DFO managed the <65' fixed gear 2+3K turbot competitive quota using split fishing seasons (i.e. an early and late opening to the fishery). The premise to this approach is that Nunatsiavut interests should be able to access some of the competitive turbot quota for local processing, which would otherwise be exhausted by the time their crab fishing operations concluded. In 2009 the total <65' fixed gear allocation quota (2,163t) was divided 70% for the early opening and 30% for the late season fishery.

This approach, designed with the best of intentions, was not without issues and can be viewed as creative but did not achieve desired objectives. Firstly, it is difficult for resource managers to muster the necessary assets to monitor and control the pace of the fishery to ensure that only 70% of the quota is harvested. Overruns of the first season quotas occurred, and Nunatsiavut interests found that their participation was frustrated by management measures (i.e. risk management) aimed at ensuring no overrun during the second opening. Random draws were held for subsequent fishing trips, and Nunatsiavut was often unsuccessful in these. Moreover, waiting for quota reconciliations and ensuing trip draws is not an ideal for those involved in harvesting arrangements or running a processing business in the short northern Labrador fishing season.

The growing level of frustration observed by the Torngat Joint Fisheries Board was compounded in 2009 when the turbot working group recommended a revision to the management approach to an 80/20 season/quota split for the next fishing season. It can be assumed that this was not a malicious intent by the fleets to marginalize northern participants even farther, but rather a rational response by southern harvesters to access more turbot given the disastrous year (particularly in the inshore shrimp fishery) and general decline of markets and prices for fish products in 2009. Hence, the 70/30 split did not generate desired results and the 80/20 split will be a further step backwards. Nunatsiavut is not equipped to engage in the competitive turbot fishery under the current management regime.

The Northern Greenland Halibut Developmental Program and Resource Short Plant Program

No discussion of the turbot fishery in Atlantic Canada is complete without some observations on The Northern Greenland Halibut Developmental Program, which was initiated as a means for Canadians to access and develop fisheries for “underutilized” fish stocks. Established in 1990, the program initially included the three northern management units, Sub-area 0, 2GH and 2J3KL. The Department of Fisheries and Oceans issued invitations for proposals to harvest the developmental allocations, and established criteria to assess the proposals on an annual basis. Due to a lack of Canadian harvesting capacity, the majority of the developmental allocations were permitted to be harvested by chartered foreign vessels. This last provision enabled fishery participants with no attachment to northern fishing areas to gain access to what has become a very lucrative and important fishery.

Sub-area 0

In Sub-Area 0 5,360t was set aside for the program in 1990 and 1991. This was increased to 10,460t in 1992. In 1993 the developmental quota was reduced to 3,920t and a competitive quota of 6,540t was introduced for Canadian licence holders. However, with a significant reduction in the TAC in 1994, the competitive allocation was eliminated and the developmental quota was set at 4,500t, where it remained for 1995. In 1996 the developmental quota was reduced to 2,500t in an effort to reduce the use of foreign charters in the fishery and encourage Canadianization. The competitive quota was reintroduced at 1,500t (split 900t for fixed gear and 600t for mobile gear). In 1998 the developmental program was eliminated and the quotas were renamed “Company Allocations” and provided to specific harvesting interests.

Divisions 2GH

The 2GH area was part of the program for four years, from 1990 to 1993. The quota was established at 9,070t in 1990 and was increased to 10,170t in 1991 and 11,570t in 1992. In 1993 the developmental quota in the area was reduced to 7,110t. With a significant quota reduction in 1994, the 2GH area was eliminated from the program.

Divisions 2J3KL

The 2J3KL area was part of the program for 1990 and 1991 only, with a quota of 12,480t in each of the two years. For 1992, the Canadian turbot quota in the area was reduced by approximately 8,000t and the developmental quota in 2J3KL was eliminated from the program.

The Northern Turbot Development Program – An Aboriginal and Inshore Fleet Retrospective

From the perspective of many participants in the groundfish fishery, the Northern Turbot Development Program was an opportunity lost, an affront to those who had originally developed the fishery, a resource grab for well positioned fishing interests, or all three. The events and circumstances surrounding the establishment of the Northern Turbot Developmental Program and

the attendant allocation decisions still evoke strong feelings in the fishing industry. In 1990, the science information indicated a drastically declining resource; the Newfoundland and Labrador inshore fishery had been fishing the resource both inshore and offshore with gillnets for just about 30 years, and was facing its greatest crisis in terms of resource reduction. Moreover, program participants were permitted foreign joint venture arrangements while some foreign fleets (particularly the Spanish and Portuguese) were heavily overexploiting the resource outside 200 miles. Despite protests and demands for abolishing the program, it was maintained. In retrospect decision makers were faced with an untenable policy dilemma; implementing demands for strict conservation measures and catch reductions on domestic turbot fisheries while foreign fleets were pillaging the resource in an unregulated fishery outside 200 miles would ensure a weak bargaining position during turbot negotiations at NAFO. It was a lose-lose scenario.

In reflecting on the 1990 to 1995 period it is now obvious that Canadian platforms and companies weren't positioned to catch turbot. The catch rates and the cost structure of domestic fishing vessels versus prevailing market prices made it unprofitable for Canadian and other modern fleets to fish turbot. At that time, the Russians were essentially the only foreign harvesters available and with a vessel cost structure that enabled them to fish turbot viably. But this too was limited, as fishing was often done at the expense of the crew who had to endure deplorable working conditions and low wages on the dilapidated Russian vessels that were seen prosecuting the fishery. Indeed, a brief recount of newspapers of the day reveal instances where Russian vessels were either detained or abandoned at Canadian ports amid accusations of failure to pay wages, or because the crew refused the working conditions.

If and when Russian vessels became available, and a quota group felt secure that a legitimate venture was possible, it was often near the end of the fishing season when there was only enough time to get small amounts of quota harvested prior to the annual closure. The final outcome was that the allocations held by the Labrador Inuit Development Corporation and the Torngat Fish Producer's Cooperative (and others) weren't fully harvested, and despite their protests a "use it or lose it policy" resulted in drastic reduction of their initial allocations.

The program also had criteria requiring participants to land raw material to local processors, the intent being to maximize local employment and benefits to plants hard hit by the northern cod and groundfish collapse. The landing requirement made the quota holders captive to the few that processed (and harvested) turbot. The impact on aboriginal quota holders was that they were frustrated in their attempts to "develop" a fishery. The "use or lose it" approach was also adopted in the program and continual "re-jigging" of quotas and quota keys resulted in successive cuts and reallocation of the 750mts each Labrador Inuit interest received on announcement of the program, down to the nominal 70t and 160t quotas they currently hold.

The consequence of such historical allocation and licensing decisions, not only in respect of northern turbot, but other adjacent fishery resources (*notably northern cod in the 1970s when the commercial fishery policy for eastern Canada was being actively developed*) was to freeze nascent user groups in time from a fishery development standpoint, and this is evident today. There is no inshore fleet in Nunatsiavut, efforts to develop middle distance capacity have been frustrated by a number of factors (sufficient stand alone allocations being a major shortcoming), and plants struggle to procure raw material.

Operating northern based fishing enterprises is not for the faint of heart; factor in mechanical or crew problems, bad weather and other exigencies, and an enterprise operating on the margins becomes highly vulnerable. In retrospect it could be reasoned that regional disparities should have commanded significantly greater weighting in allocation decisions on northern turbot resources, as aboriginal groups in these areas are at a significant competitive (technological, infrastructure, etc.) disadvantage. In retracing the events surrounding Labrador Inuit participation in the northern turbot development program and the turbot fishery in general, an alternative approach would have been to put the original LIDC and Torngat Quotas for northern turbot aside in a “reserve” that other parties could have drawn down while the two entities developed capacity in the fishery. Such an approach was suggested in the distant past (i.e. Royal Commission on Labrador – 1975), as described earlier, but did not gain sufficient traction. Instead, the Labrador Inuit had to avail of programs and policies of general application in developing a fishery. Unfortunately, history has shown that programs of general application have been insufficient in addressing aboriginal needs. This became manifestly clear with the succession of legal challenges and Supreme Court decisions commencing around 1990 (e.g. Sparrow Decision) and thereafter the Marshall Decision (1999) that redefined aboriginal rights with respect to subsistence and commercial fishing.

To illustrate the residual displeasure with the Northern Turbot Development Program and turbot allocations in OB, the positions of some of the fishery stakeholders and immediately adjacent user groups (i.e. aboriginal groups in Nunatsiavut, Nunavut and Nunvaik) are outlined in the following excerpts from the April 2004 “Report of the Standing Senate Committee on Fisheries and Oceans”

“In 1990, the Government of Canada established a groundfish development program [...] That left Inuit out in the cold.” – Cathy Towtongie, President, NTI, Committee Proceedings, 17 September 2003

“ [F]or us to get our 1,000 metric tonnes we will displace somebody else. That is the only way it can be done under the current quota arrangement.” – Neil Greig, Adviser, Makivik Corporation, Committee Proceedings, 8 October 2003

“We feel very strongly that northern communities in Northern Quebec and Labrador have not been treated fairly and have seen their allocations decline significantly in favour of large southern corporations” ... – The Northern Coalition, Brief Submitted to the Committee, September 2003

“Considerable investments were made and significant costs incurred by offshore groundfish license holders to develop the turbot fishery in OB, based in large part on assurances by the Government of Canada that continued access to available quotas would be maintained.” – The GEAC, Brief Submitted to the Committee, September 2003

“We all know that allocations are a political game. It appears that when it comes to the North [...] this very important principle of adjacency is forgotten.” – The Northern Coalition, Brief Submitted to the Committee, September 2003

“Why can we not compete in the competitive portion of this quota? Why is it that one southern company, with no financial investment in this fishery has an allocation of 1,900 tonnes of the

overall 2,500-tonne company quotas?” – *The BFC, Brief Submitted to the Committee, 4 November 2003*

“.....One way for Nunavut to increase its share of the fishery would be to purchase one or more company quotas and/or have existing groundfish licences in the competitive fishery transferred to territorial interests. The submission of the Nunavut Fisheries Working Group suggested that this could involve southern fishing enterprises that: had not shown a real financial commitment to the fishery; sold their quota to other Atlantic fishing concerns in return for royalties; and did not consistently participate in the fishery.”..... *Report of the Committee*

Even though the northern turbot development program was terminated over a decade ago, there is enduring debate. A recent request by “SeaFreez” to transfer its former OB turbot developmental allocations (see table below) was seen by some groups as an opportunity to correct a perceived wrong by having this quota recalled and reallocated.

Company Quotas OB

Company	Tonnes	Percentage
SeaFreez	1,900	76.0
Clearwater	230	9.2
Seaku Fisheries Inc.	70	2.8
Nunavik Arctic Foods	70	2.8
Labrador Inuit Development Corporation	70	2.8
Torngat Producers Co-op	160	6.4
Total	2,500	100

The Resource Short Plant Program

The Resource Short Plant Program (RSPP) was put in place during the late 1970s, initially as a means of utilizing northern cod after extension of jurisdiction in 1977, to provide raw material to certain processing plants in Newfoundland and Nova Scotia that would otherwise be closed in fall and winter (Parsons, 1993). From 1980 to 1982 only Newfoundland plants were involved in the program. The program initially provided only northern cod (*what Kirby had identified in his 1982 report would be vast amounts of surplus resource available after the extension of jurisdiction*) to a company (established by the plants identified) that in turn contracted vessels to harvest the allocation. Foreign platforms were later permitted, if Canadian vessels couldn't be found to harvest the allocations. In 1984 allocations of turbot (8,000t) and Redfish (7,900t) were added to the program. There was limited utilization of these quotas by the program, and with the significant reductions and moratoria on most groundfish stocks by 1994, the allocations were ended.

This program proved very useful for resource short plants in Newfoundland. Fish plants (or plant workers) in the northern Labrador communities observed no benefit from this program, even though they were starved for raw material and employment. The plants were deemed ineligible. Even modest RSPP allocations to northern Labrador plants or the LIA (given the issue of provincial

government involvement in the facilities) would have brought huge relief to these resource starved operations.

Greenland halibut quotas and catches related to the RRSP program from 1990 to 1993 are detailed in the table below

RRSP program Greenland halibut quotas and catches - 1990 to 1993

	1990		1991		1992		1993	
	Quota	Catch	Quota	Catch	Quota	Catch	Quota	Catch
2GH	20	0	20	0	20	0	20	0
2J3KL	1650	443	1650	274	1650	0	1922	0

Markets

Over the past decade the markets for Greenland Halibut have grown and remained generally strong. In at least the past 5-7 years market returns have been very attractive, averaging in the order of CAD\$5000 to CAD\$5500 per tonne of finished product. Turbot producers confirm that the quoted price range still stands in 2009, subject to pack-out and the source of the raw material. Mobile gear vessels tend to pack-out a higher percentage of smaller fish relative to fixed gear, and hook and line vessels tend to catch larger and produce better quality fish than all other gears. While all the fisheries in the northwest Atlantic harvest what are considered undersize turbot, the NAFO 0A fishery has been noted by participating enterprises as having a greater proportion of small fish relative to other management units. NAFO OB has the best fishing grounds, and generally yields larger more valuable turbot. As with any product, timing of entry into the marketplace effects final price offers. If large volumes of product are entering the market, price softens for certain size ranges (usually smaller fish). With the strong prices of recent years this has not been a significant issue. Even the price of turbot heads has been attractive in recent years, adding additional revenue for producers. Again, larger heads (i.e. 300-500 grams) provide best returns.



Typical product forms include frozen block, fresh and frozen fillets, quick frozen H&G and HOG, and heads, cheeks, and smoked products for niche markets. The principal product form demanded by the marketplace, and which provides the best return is quick frozen H&G turbot (tail off), particularly fish in the 5+ kg size range. Price schedules increase incrementally with increasing fish size.



Given the preferred finished product form, processors are faced with the decision of how much further processing is warranted on fresh product, as further

holding, handling, trimming, or “bobbing” of tails diminishes the value of the fish. Offshore factory freezer vessels engaged in the turbot fishery have a natural advantage as market ready fresh frozen fish can be landed and shipped directly. The principal market for turbot is Southeast Asia; Taiwan, Japan and mainland China in descending order of importance. Chinese buyers tend to purchase the smaller fish, but this may vary by customer. Some companies have moved product into niche ethnic markets in the northeast United States, but these tend to be small orders. Similarly, small volumes of product have been moved in Europe, typically to Germany where smoked turbot is desired. Newfoundland and Labrador producers are also faced with the fact that there are a small number of major players who influence the global buying, selling and distribution of Turbot.

Resource Status (2009/10)

Greenland halibut in the northwest Atlantic is undoubtedly one of the most resilient and persistent species. Over the past two decades the resource has been very heavily exploited. Firstly, all the fisheries in the northwest Atlantic target larger females (particularly the spawning components in NAFO 0B), and, secondly, a significant percentage of small fish that have not reached maturity continue to be taken. The southern management unit, particularly the area outside 200 miles in 3LNO, was virtually decimated during the late 1980s to mid-1990s by foreign overfishing. In 2003 NAFO implemented a long-term stock rebuilding program, but the annual target harvest levels have been exceeded (outside 200 miles) in every year since its introduction. All these factors combined have not and do not bode well for the future recovery of the stock.

Despite the fishing pressure on the stock over the years, a strong 1995 yearclass brought about an increase in biomass during the early 2000's. For this to occur, it is speculated that there must be contributions to the stock from deepwater areas that remain beyond the reach of modern fishing gears. Or, the pelagic nature of the fish may enable a portion of the population to escape bottom fishing gears. Based on the latest assessments of all the management units, it is unlikely there will be significant stock rebuilding, or quota increases in the near term.

1. Sub-area 0

Canada has conducted surveys in the southern part of Div. 0A in 1999, 2001, 2004, 2006 and 2008. The biomass has increased gradually from 68,700 tons to 81,000 tons and 86,200t in 2004. The biomass decreased to 52,271t in 2006. However, the survey coverage was not complete and two of the four survey strata missed fell within the depths 1001-1500m (where fish are known to occur) and accounted for 11,000 – 13,000 tons of biomass in previous surveys. Therefore, the 2006 estimates are considered to be lower than the most recent surveys, but comparable to the estimate from 1999. Biomass in 2008 was estimated to be 77,182t. Mean biomass per tow was 1.67 t/ km², higher than in 2006 and 1999, but lower than was observed in 2001 and 2004.

Length distributions were available from the gill net, single trawl and twin trawl fishery in Div. 0A and 0B. The catch in the gill net fishery in Div. 0A was dominated by a mode at 63 cm, similar to that seen in previous years [note: Immature fish. The size at 50% maturity in females is estimated

to be around 70cm (approximately a 10 years old fish)]. The length distributions in the single and twin trawl fishery were very similar with modes around 48cm, as seen in previous years.

There have been no regular research vessel surveys of NAFO 0B throughout the history of the fishery. In fact, the only surveys conducted in this management unit were undertaken in 2000 and 2001. The resource is assessed purely on commercial fishery indicators, and from a management and conservation perspective, these are dubious reference points.

The length distribution from the gill net fishery in Div. 0B showed a mode at 65 cm. The mode has been around the mid 60's in recent years. The length distributions in the single and twin trawl fishery were very similar with modes around 48-50 cm, for both types of gear, as seen in recent years. As indicated above, this data reveals that the fishery targets immature fish, a proportion which have not yet reached spawning size. (Note: A conservative management approach for most fisheries is based on harvesting fish, females in particular, that have spawned at least once. This is often determined by the size/length at 50% maturity, which for female turbot ranges from about 68-73cms in the northwest Atlantic.)

2. 2+3KLMNO

The 2J3KL portion of this management unit has received annual research trawl surveys since the 1970s, so there is an excellent times series of biological data (fishery independent information) that enables analytical assessments. The 2GH region has received only sporadic trawl surveys over the past 3 decades, and the survey information is highly variable (i.e. huge variance around point estimates).

Catches in this area increased from low levels in the early-1960s when the fishery began to over 36,000 tons in 1969, ranged from 18,000t to 39,000t until 1990, when an extensive fishery developed in the deep water of the NAFO Regulatory Area (Bowering and Brodie, 1995). The total estimated catch for 1990 - 94 was in the range of 47,000t to 63,000t annually, although estimates in some years were as high as 75,000t. Beginning in 1995, TACs for the resource were established for the entire stock unit by the Fisheries Commission (previous TACs were set autonomously by Canada), and the catch declined to just over 15,000t in 1995. Catches increased and peaked at nearly 44,000t through the late 1990s and into the early part of the 2000s, but have decreased under a recently introduced turbot rebuilding plan.

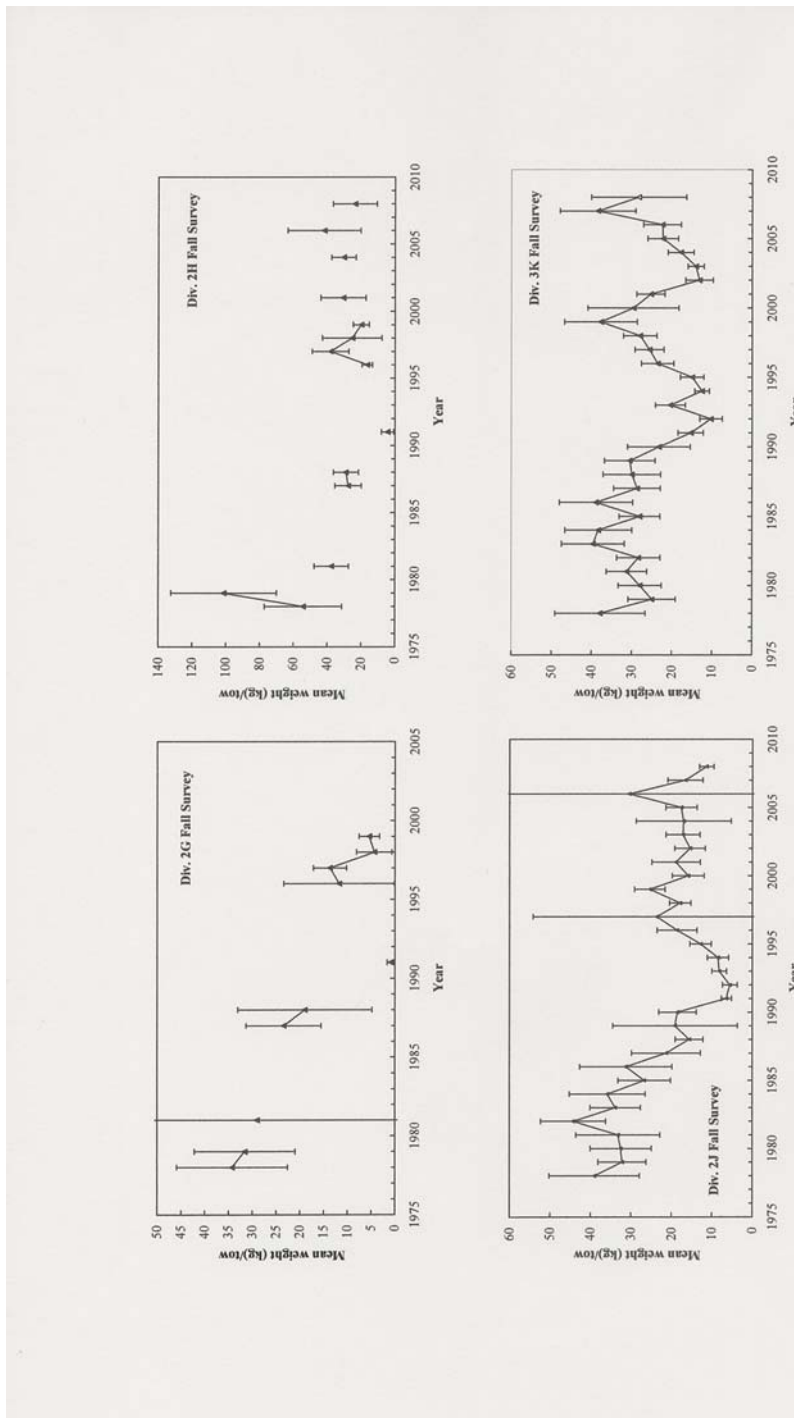
In 2003, the Fisheries Commission of NAFO established a fifteen year rebuilding plan for this stock, with the intent to: "take effective measures to arrest the decline in the exploitable biomass and to ensure the rebuilding of this biomass to reach a level that allows a stable yield of the Greenland halibut fishery over the long term. In an attempt to improve the rebuilding prospects for this stock, TACs were set at 20, 19, 18.5, and 16 ('000t), respectively, for the years 2004-07. However, estimated annual catches have exceeded the TAC by considerable magnitudes (27%, 22%, 27%, and 42%, respectively), in each year since the inception of the rebuilding plan. The 2008 and 2009 TACs were set at 16,000t. The estimated 21,180t catch for 2008 is 32% greater than the 16,000t rebuilding plan TAC. The plan also notes that subsequent TAC levels "may be adjusted by the Scientific Council advice" but "shall not be set at levels beyond 15% less or greater than the TAC of the preceding year".

Results of the 2008 NAFO Scientific Council assessment of this stock indicated that the exploitable (ages 5+) biomass in 2008 was one of the lowest in the estimated time series. Estimates of average fishing mortality have decreased since 2003 and the strength of the year-classes about to enter the exploitable biomass was estimated to be very weak (Healey and Mahé, 2008).

Data from the EU survey of the Flemish Cap indicate stability in the biomass index for the portion of the survey which has been used in recent analytical assessments (0-730m). However, survey information from deeper depths, covered since 2004, suggest considerable increases in biomass. Results from the Canadian spring survey of Divisions 3LNO indicate decreases in abundance and biomass compared to the 2007 levels.

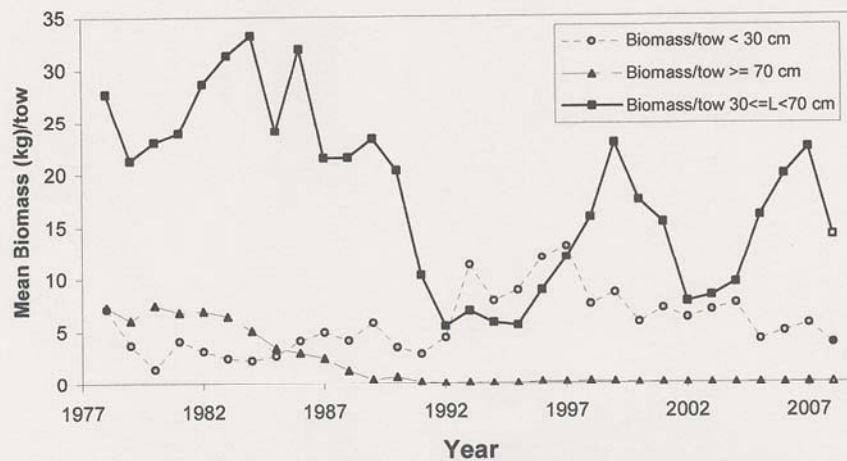
The figures on page 29 and 30 show the fall research survey results (mean kg/tow) for the period 1975 to 2008 for NAFO Divisions 2G, 2H, 2J and 3K, and the mean biomass for the 2+3K component, respectively, for the period 1977 to 2008. The data show the downward spiral of the resource from the 1970s to the early 1990s across all divisions, with perhaps marginal (but variable) recovery in 3K in 2000 and 2007. What is obvious from the data is that there are no large fish, as turbot >70cm are essentially absent from the surveys, but what is not so obvious is that there is effectively no data from 2GH in the development of these estimates.

The virtual absence of resource surveys in the north (i.e. NAFO 2G, 2H and 0B) has been an ongoing point of contention. These areas have been surveyed only intermittently over the years, so it is nearly impossible to determine the true state of the resource. "Quotas for Science" have been provided in the northern shrimp fishery to support scientific investigations in areas not regularly covered by DFO annual research surveys, and perhaps this is the manner in which Nunatsiavut could access both good information and fishing opportunities in 2GH.



Turbot Biomass Estimates (kg/tow) from Fall Research Surveys 1975 to 2008

Source: NAFO SCR 09/33

Mean Biomass (kg/tow) of Greenland halibut from Fall Surveys in NAFO 2+3K: 1977-2008

Source: NAFO SCR 09/33

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Appendix 1: Canadian Catches of Greenland Halibut by NAFO Division 1960 – 2008

Canadian Catches of Greenland Halibut by NAFO Division 1960 - 2008									
	2G	2H	2J	3K	3L	3M	3N	3O	Total
1960				610	50				660
1961				613	128				741
1962				479	107				586
1963				592	184				776
1964				870	887				1757
1965				2129	5953				8082
1966				3691	12518		17		16226
1967			7	2892	13705		1	3	16608
1968			53	3672	9597		31		13353
1969				7140	4413		1	2	11556
1970				5937	4769		5		10711
1971				4160	5248		2		9410
1972				4736	4216				8952
1973			5	3602	3233		1	7	6848
1974			19	2817	2909		9	3	5757
1975			22	3245	4540		7		7814
1976	62	168	153	4779	4144	1	7		9314
1977		72	419	10751	6725	1	2	3	17973
1978		14	1255	15875	7548	1	5	4	24702
1979		34	3163	18165	8578	2	17	6	29965
1980		217	1157	17658	12742	14	43	3	31834
1981	10	41	862	14379	8833		49	6	24180
1982	15	5155	3942	6031	4105		55	6	19309
1983		2578	2238	7679	4618		12	2	17127
1984		1913	2796	7496	5078		12	2	17297
1985		1758	3101	4395	3023		35	1	12313
1986		82	2476	2886	2769		2	1	8216
1987		6	4143	4740	4561		1		13451
1988	45	27	1867	4591	1921	2	12	2	8467
1989		190	2635	6342	2809	6	10	3	11995
1990	57	171	2798	4075	2020	38	4	4	9167
1991		50	3008	2215	1291	157	11	7	6739
1992	428	230	476	3882	1951	4	10	22	7003
1993	557	403	214	2398	880		19	435	4906
1994	1045	210	203	1032	258		1	204	2953
1995	1006	453	709	754	197			116	3235
1996	688	639	1058	2567	888			339	6179
1997	370	619	1513	2659	935			184	6280
1998	358	418	1234	1374	633		1	103	4121
1999	65	103	1094	1940	683			131	4016
2000	45	81	1152	5845	2901	1	1	567	10593
2001	63	251	1030	3999	2666		9	347	8365
2002	374	360	1030	2933	1466	15		112	6290
2003	258	1897	730	2873	964			252	6974
2004	147	1050	891	1844	794		1	142	4869
2005	39	378	1717	3006	1379		3	115	6637
2006	102	402	499	3904	1438			34	6379
2007	3	121	2648	1456	1015		5	92	5340
2008	10	158	2591	1435	645		4	19	4862

Appendix 2: Canadian Turbot Quotas in NAFO Sub-areas 2 and 3 1990-2009

CANADIAN QUOTAS	1990*	1991*	1992*	1993*	1994*	1995*	1996*	1997*	1998*	1999*	2000
2GH	10000	11100	15500	17500							
2J3KL	29500	29500	21020	32500							
2+3KLMN					6500						
2+3K											
3LMNO						6790	6790	6790	6790	8300	8793
						3000	2500	3000	3000	3667	3890
TOTAL 2+3KLMNO	39500	40600	36520	50000	6500	9790	9290	9790	9790	11967	12683

FLEET ALLOCATIONS											
2+3K*											
FG <65'					520	1580	1580	1580	1580	1932	2036
FG 65-100'					24	72	72	72	72	88	80
FG >100' SLL					31	94	94	94	94	115	121
MG <65'					15	46	46	46	46	56	59
MG 65-100'					3	9	9	9	9	11	11
Vessels >100'	910	910	3910	910	476	1262	1262	1262	1262	1386	1639
Competitive				9460	1931	3727	3727	3727	3727	4555	4802
Developmental/Others	9070	10170	11570	7110						157	
RSP	20	20	20	20							
Total	10000	11100	15500	17500	3000	6790	6790	6790	6790	8300	8748
3LMNO*											
FG <65'	9050	9050	9050	16341	2020	1731	1393	1443	1443	1763	1870
FG 65-100'	1000	600	1000	721	77	76	63	63	63	77	383
FG >100' SLL	280	280	280	961	119	102	135	185	185	104	160
MG <65'	20	20	20	481	59	51	43	43	43	53	56
MG 65-100'	20	20	20	96	12	10	8	8	8	10	11
VESSELS >100'	5000	5400	9000	9978	1213	1030	858	858	858	861	862
Unassigned				2000				400	400	611	548
Developmental/Others	12480	12480								188	
RSP	1650	1650	1650	1922							
Total	29500	29500	21020	32500	3500	3000	2500	3000	3000	3667	3890

* 1990 - 1993 Fleet Allocations are 2GH and 2J3KL. 1994 Fleet Allocations are SA2 and 3KLMN

CANADIAN QUOTAS	2001	2002	2003	2004	2005	2006	2007	2008	2009
2GH									
2J3KL									
2+3KLMN									
2+3K									
3LMNO	10049	11053	10985	5097	5236	5366	4087	4019	4019
	4450	4891	4560	2264	1772	1416	1902	1778	1778
TOTAL 2+3KLMNO	14499	15944	15545	7361	7008	6782	5989	5797	5797

FLEET ALLOCATIONS									
2+3K*									
FG <65'	5407	5948	5853	2704	2610	2501	2163	2163	2163
FG 65-100'	513	564	332	245	252	217	273	205	205
FG >100' SLL	513	564	555	256	243	237	205	204	205
MG <65'	191	210	207	95	91	88	76	76	76
MG 65-100'	18	20	20	9	9	8	7	7	7
Vessels >100'	3407	3747	4018	1788	2031	2315	1363	1364	1363
Competitive									
Developmental/Others									
RSPP									
Total	10049	11053	10985	5097	5236	5366	4087	4019	4019
3LMNO*									
FG <65'	2734	3008	2871	1367	1299	1265	1094	1094	1094
FG 65-100'	120	132	86	123	191	24	48	48	48
FG >100' SLL	156	171	163	78	74	72	62	63	63
MG <65'	71	78	75	36	34	33	28	28	28
MG 65-100'	13	10	9	4	4	4	4	4	4
VESSELS >100'	1356	1492	1356	656	170	18	666	541	541
Unassigned									
Developmental/Others									
RSPP									
Total	4450	4891	4560	2264	1772	1416	1902	1778	1778