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### **THE FUNDY FIXED GEAR COUNCIL 1996-2006: TEN YEARS OF COMMUNITY-BASED MANAGEMENT**

#### **1. INTRODUCTION**

This paper gives an account of the first ten years of the Fundy Fixed Gear Council (FFGC). The specific purposes of the paper are

- to outline the FFGC's activities and achievements
- to note trends and patterns in a way that will help the FFGC in planning for the future
- to describe links between FFGC's work and integrated management
- to make recommendations to the FFGC for further research

The paper is part of the FFGC's involvement in the Coastal CURA Project, which has provided the project grant that made it possible. The Coastal CURA is

*A five-year project that is building knowledge and capacity across the Maritimes, to support community involvement in managing our coasts and oceans. The Coastal CURA – a "Community University Research Alliance" – is a partnership of First Nations communities, fishery-related organizations and university participants, funded by the Social Sciences and Humanities Research Council of Canada (SSHRC).*

In its first year the Coastal CURA has supported a number of mini-projects among its member organizations that look back on their past work. This retrospective also serves to identify links between CBM and integrated management, which will form the basis of activities in the next phase of the CURA.

#### METHODOLOGY

The FFGC's community-based management work has been multi-faceted from the very beginning. It has included almost every aspect of fisheries management including harvesting, access, compliance, research, government relations, policy and democratic decision-making. This paper gives a brief account of the first ten years of the FFGC's work, and attempts to summarize this complex achievement. In doing so it loses much of the richness of detail of issues that were part of the FFGC's story. It also lacks the voices of the fishermen who made and maintained the FFGC- that is another piece of research that remains to be done. This paper's modest aim is to outline key elements of the FFGC's work, and to identify some patterns and trends

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that emerge over from this ten year retrospective. To do this, it draws on a number of source documents:

- catch data from DFO
- participation data from DFO
- minutes of meetings
- project reports
- newsletters

The paper has been divided into following sections:

- background: a description of the FFGC's core propose and structure
- an history survey- an account of major trends and patterns over the ten year period
- a note on some of the ways FFGC's work has related to integrated management
- some suggestions for further research

### **2. BACKGROUND**

The FFGC is the management board for under 45' groundfish fishery on the Nova Scotia side of the Bay of Fundy. It is one of eight such management boards in the Scotia-Fundy Region, includes most of Nova Scotia and southwest New Brunswick.

"Fixed gear" includes handline, longline and gillnet.

"Groundfish" includes cod haddock and pollock, as well as halibut, hake, halibut, dogfish and flounder. (Dogfish is not technically a groundfish but is categorized as such for management purposes).

The region served by the FFGC is the Nova Scotia side of the Bay of Fundy, which comprises the counties of Digby, Annapolis, Kings, Colchester and Cumberland.

The FFGC was created in 1996 by three fishermen's associations, the MFU Local 9, Bay of Fundy Inshore Fishermen's Association (BFIFA) and the Islands Inshore Fishermen's Association (IIFA). In 1996 DFO allocated community quotas to eight regions, following a widespread protest by inshore fishermen in Nova Scotia and Southwest New Brunswick. A major cause of the protest was the possible

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introduction of ITQs into the inshore groundfish fishery, among other issues. The protest, which was both widespread throughout the inshore fishery and broadly-based in fishing communities across the region, culminated a mediated process that resulted in allocated community quotas to be managed by regional management boards. Fishermen's associations in the Bay of Fundy region took this as a starting point for a community-based approach to fisheries management.

This was no small undertaking. Immediately these fishermen found themselves responsible for managing a fishery with more than 250 vessels spread over five counties, with a membership mostly made up of fishermen who had never belonged to any association before. No sooner was the FFGC created that it was deeply engaged in the work of

- writing a Conservation Harvesting Plan for approval by DFO
- making sure there was participatory democratic decision-making
- managing harvesting during the fishing season (usually running from early spring to mid-fall), by setting weekly and trip limits
- determining who had access to the fishery, and getting them signed up, using a system of civil contracts
- Allocating and managing quotas for five species for three different gear-type fleets - handline, longline and gillnet
- coordinating of a number research projects
- establish maintaining a compliance system
- ensuring that there was constant communication with members
- developing of policies about how the FFGC would operate
- representing its members to government (primarily DFO through the Fixed Gear Advisory Committee and the Scotia-Fundy Groundfish Advisory Committee
- relating to other management boards
- a wide array of other functions

In the work of non-profit community development organizations, any one of these tasks could have constituted a major project unto itself (with a major project grant) . To understand the FFGC's achievement, it important to realize that both the

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organizational capacity-building and the actual management of the fishery were undertaken all at once in 1996, without any government funding or support.<sup>1</sup>

### **3. HISTORICAL SUMMARY**

#### **A. INTRODUCTION**

This section gives an historical overview of the FFGC's first ten years. It divides the work into the following categories:

- landings, landed value and participation
- allocation
- harvesting
- governance
- access
- compliance
- research
- economics
- internal issues
- external issues
- evaluation

Under each of these headings there is a brief overview of the data, as well as the identification of some of the key trends and patterns, and suggestions for further research.

#### **B. LANDINGS, INCOME AND PARTICIPATION**

This section outlines landings, income and participation for the three fleets (handline, longline and gillnet). It is important to note that it does not deal with allocation or any issues related to allocation - just what was landed by each of the three fleets, how much was earned and how many boats participated.

The sources of the data are

- DFO landings
- PEI Dept of Fisheries website (for prices)
- FFGC landing reports and newsletters

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<sup>1</sup> recent articles about subsidies in the word fisheries to the contrary, groups like the FFGC have received no financial support

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### GILLNET

Gillnetters' landings showed major variations over the ten year period, with a sharp increase in cod and pollock landings in 1999, a slight increase in both species 2004 and a decline since that time.

### LANDINGS

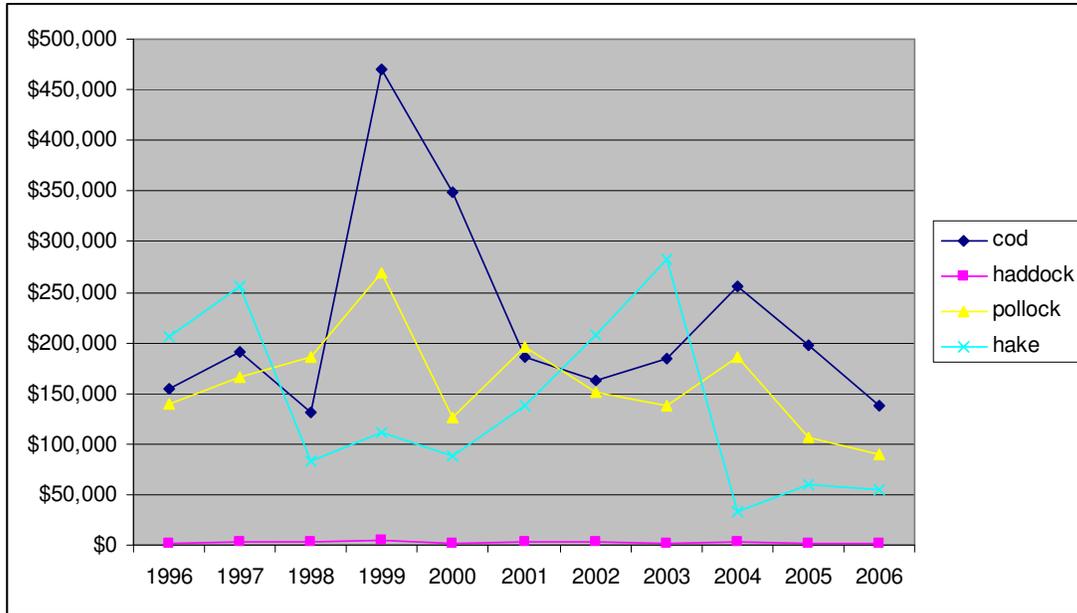
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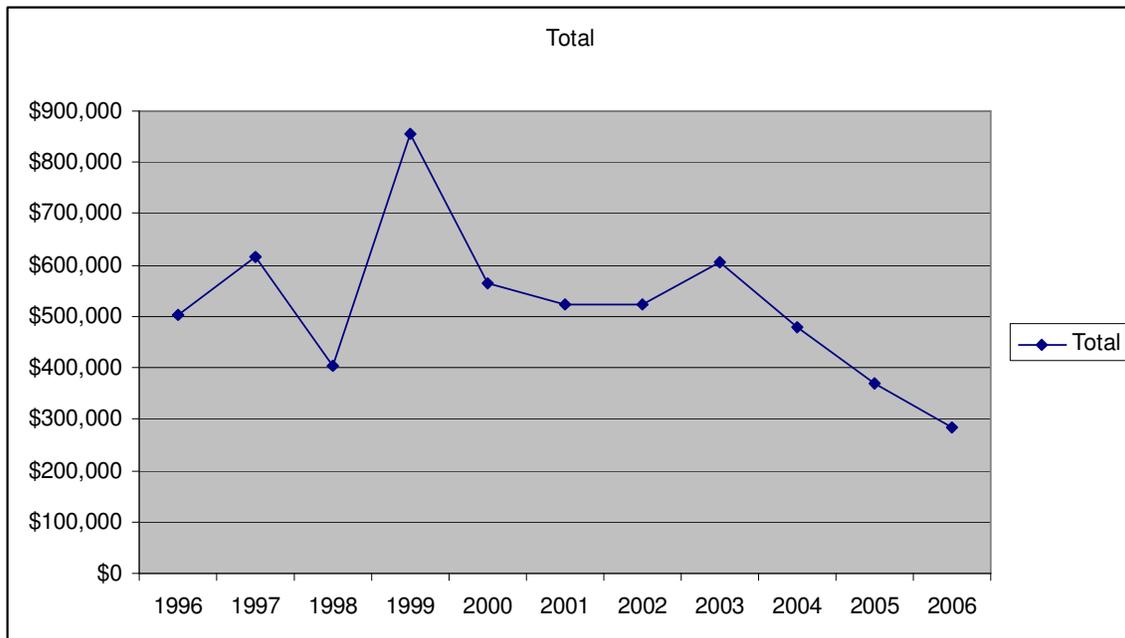
### INCOME

The gillnetters' income also fluctuated greatly over the first ten years, with a sharp decrease in 1998 and a sharper increase in 1999. There has also been a steady overall decrease since 2003.

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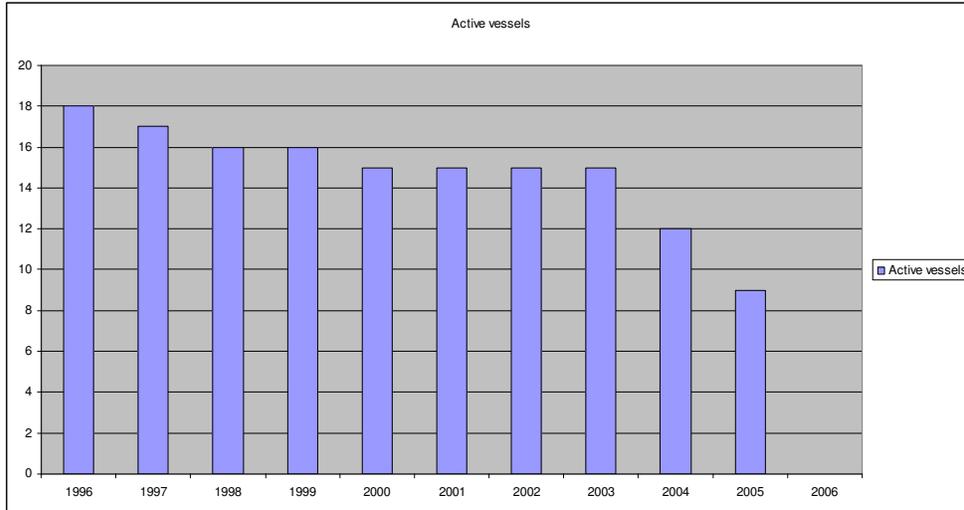
After a sharp drop in 1997, followed by a sharp increase in 1998, the overall combined income from the gillnet fishery remained steady for about four years. It has shown a steady decrease since then. This can be attributed to lower hake and cod landings, as well as lower prices for pollock.



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### PARTICIPATION

The number of active gillnetters went from 18 in 1996 to 9 in 2006, although all 18 gillnetters continue to sign up with the FFGC.



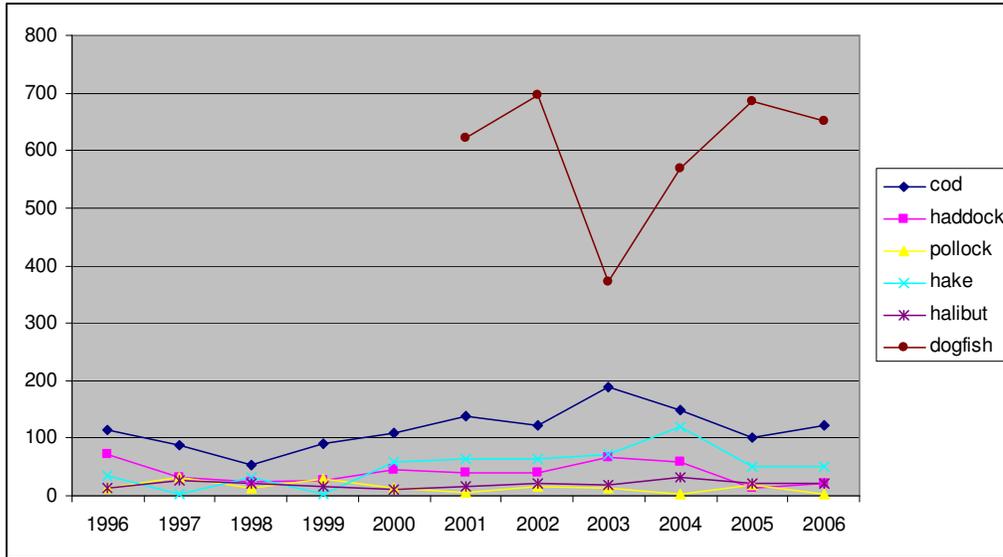
### LONGLINE

#### LANDINGS

An important difference between the longline fleet and the other two fleets is its capacity to land a greater variety of species. Although it has been primarily a cod, haddock and hake fishery, halibut, and more recently dogfish, have become important longline species. This has given the longline fleet an element of adaptability that the other two fleets lacked, given the overall scarcity of the resource. The landings of cod, haddock halibut and hake were remarkable steady over the ten year period, with haddock as a major factor. The important addition the of a commercial dogfish fishery in 2000, which is primarily a longline fishery, also contributed oth longline fleets overall resilience.

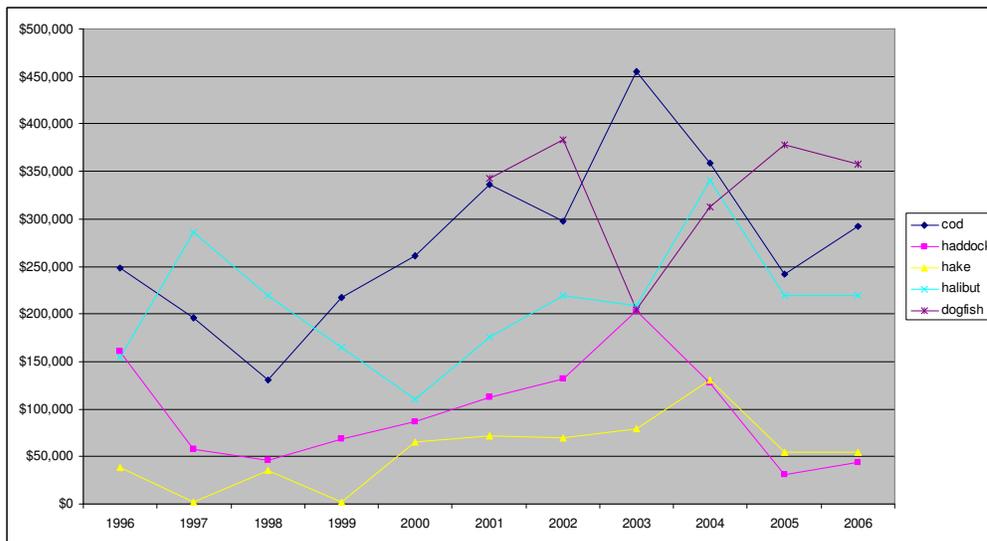
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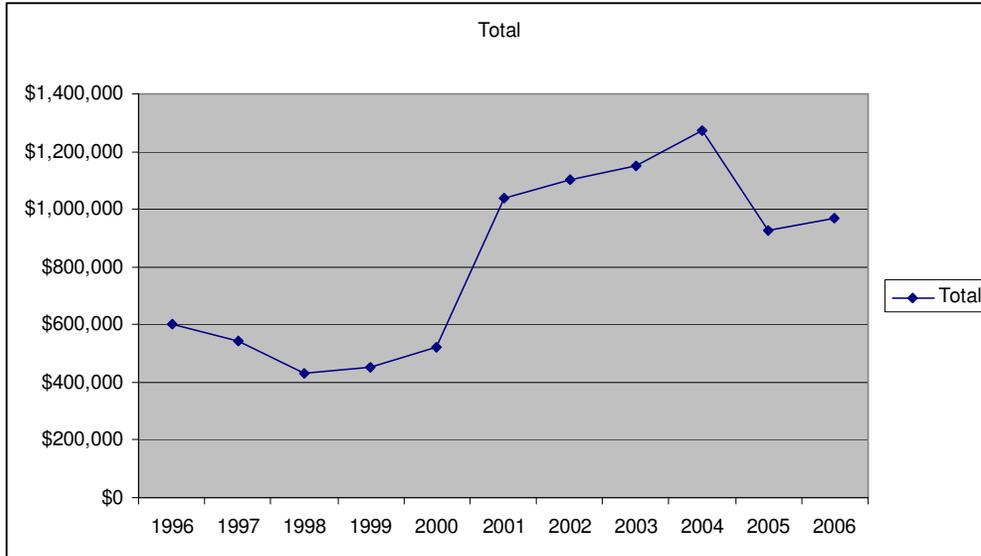


**INCOME**

The overall income from longline almost doubled, rising from \$600,000 in 2000 to \$1,200,000 in 2004. There has however been a dramatic decline in landed value of all species since 2004

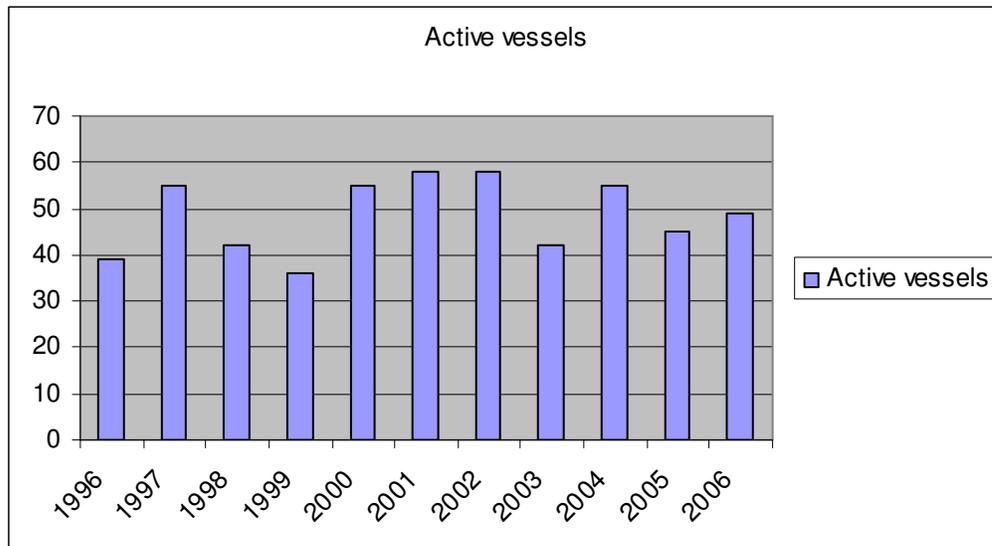


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## PARTICIPATION

The number of longliners has remained stable between 1999 and 2006.

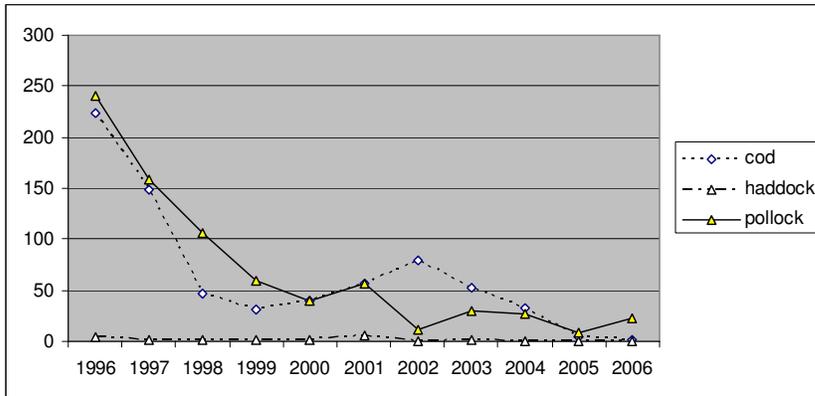


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### HANDLINE

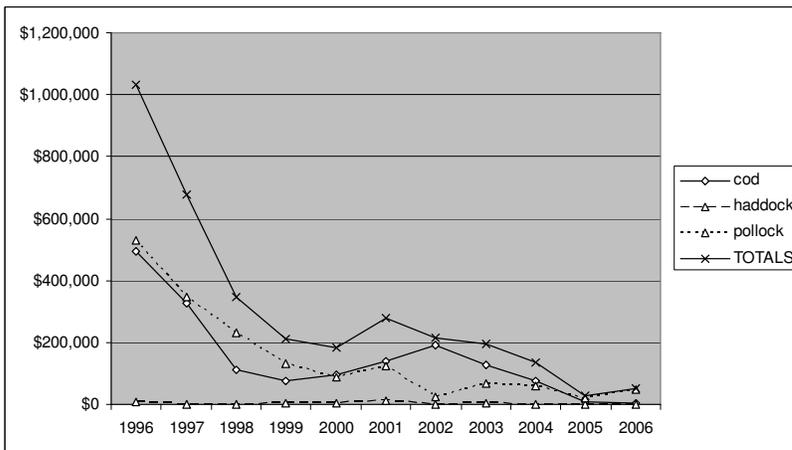
#### LANDINGS

The decline of handline fleet is certainly the most dramatic change that happened to the FFGC over the first ten years. After a successful beginning in the first two years, there has been a steady decline, to the negligible numbers in 2006.



### INCOME

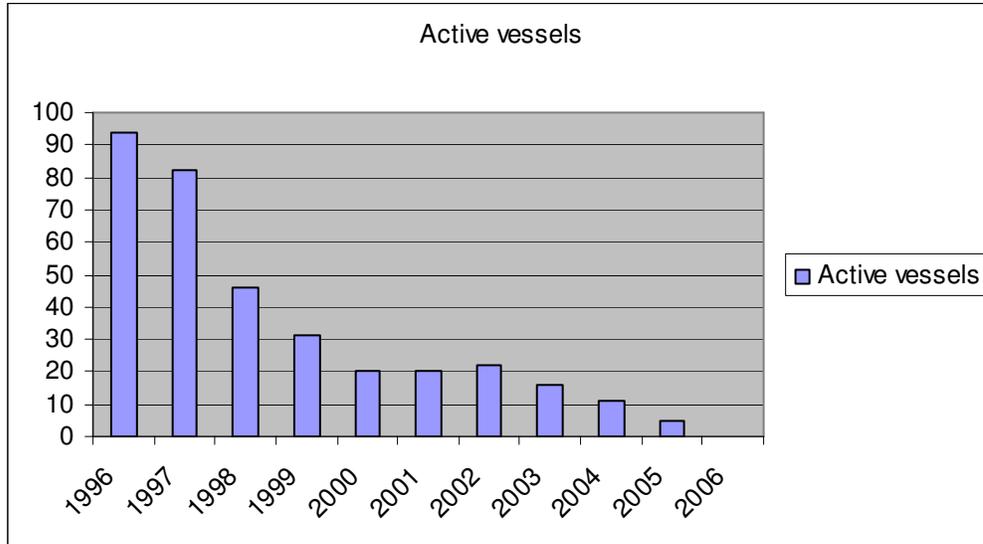
Income tells the same story. The handliners' landed value went from more than \$1,000,000 in 1996 to almost nothing ten years later.



### PARTICIPATION

In less than five years the number of active handliners went from almost a hundred to a mere handful.

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### CONCLUSIONS

#### PATTERNS AND TRENDS

Four main patterns emerge from this survey of landing, income and participation:

- the complete collapse of the handline fishery
- the volatility of the gillnet fishery
- the reduction of the active gillnet fishermen
- the relative stability and even growth of the longline fishery

#### FURTHER RESEARCH QUESTIONS

Examination to this data gives rise to the need for further research, including research on

- the historical development of each fleet
- the comparative economic impact of each fleet (some of this was begun by the MRI project, see below)
- the underlying market trends that affected prices
- the extent and role of inactive licenses in the region, both those which were signed with the FFGC, and those which were not

### **C. HARVESTING**

The management of the harvest is perhaps the most central aspect of fisheries CBM. For the FFGC this function had two aspects: a) externally, writing a fishing plan that

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was submitted to DFO annually, and b) internally, managing the harvest for each of fleet throughout the season.

The annual fishing plan is required by DFO before opening the fishery. Typically it has consisted of the allocations, the limits and the goals and objectives of the proposed fishery. The FFGC also has included its principles, including, for example that the FFGC is an owner-operator fishery and is committed to a pooled quota.

The internal management of the harvest consisted of the three gear-type committee setting weekly limits, or in the case of the gillnet fleet, trip limits. Initially this required many meeting of the gear committee during the seasons. Over the years this process was simplified and increasingly done by setting limits at the beginning of the season and coming to agreement about further adjustments by means of telephone calls to all committee members. Decisions about raising or lowering weekly quota for a specific species and fleet would be made based on a number of factors, including how long they wanted the season to last, the mix of species, discouraging transshipping and equity between different areas with different fishing patterns.

It is important to stress here the high degree of adaptivity needed to manage the FFGC's harvest. Even for each gear-type fleet the patterns of harvesting are quite complex within any given season. For example, a typical season for the longline fleet might consist of

- an initial short but lucrative halibut fishery , especially in the Upper Bay of Fundy
- some initial groundfish fishing in April and May, by single licence holder longliners who do not have lobster licences, as well as those who have licences in LFA 35 which has a different lobster season than LFA 34
- an increased effort in groundfish by LFA 34 licence holders in the beginning of June when the LFA 34 season ends, and those licence holder come into the groundfish fishery
- some boats entering the dogfish fishery through the summer
- a fall fishery by single licence holders who are not preparing for the fall lobster fishery

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The gillnet and handline fisheries also have a variety of fishing patterns based on a range of geographic and economic factors. The management of these complex fishing patterns through the season have often required intensive debate, complex decision-making, frequent consultation with participating fishermen, and a balancing act between competing regional interests.

### **D. ALLOCATION**

The FFGC operates within a quota system of fisheries management. An overall Total Allowable Catch (TAC) is determined based on DFO science, which is then allocated to harvesters based on various formulae. Allocation of quota is therefore a key determining factor for the FFGC. There are three distinct aspects of the allocation of FFGC's quota: 1) the overall allocation to the FFGC by DFO 2) the allocation within the FFGC between the three FFGC gear-type fleets, and 3) allocation to harvesters within each fleet.

#### DFO Allocations to the FFGC

After an intensive mediation process between DFO and the fixed gear fishermen's associations in 1996, an allocation formula was arrived at based on catch history between 1986 and 1993. Each area was allocated the aggregate of the individual catch histories of all the fixed gear licences in that area. Arriving at this process was extremely difficult, and a number of groups, notably those in Shelburne County, were not satisfied with it. An important addition to this formula was that an additional 3% of the overall fixed gear quota was taken off all groups and given to the Digby area. The rationale for this re-allocation was two-fold:

- 1) Digby had exceptionally poor catch history because landings had not been adequately recorded due to a large salt fish fishery. Many Digby fishermen also believed that much of the Digby fixed gear landings had been counted as mobile sector landing by buyer who also own mobile gear a fleets.
- 2) The Digby area representatives proposed an "experimental handline fishery" that would provide a pilot for community-based management in the small boat sector of the fixed gear groundfish fishery. The formula that was arrived at applied to cod, haddock and pollock (know as CHP). Halibut and hake were the two other species caught by the fixed gear fleet at that time. The formula for hake was developed by

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the Fixed Gear Advisory Committee in 1998. This formula was a blend of two periods, plus an allocation of equal shares.

Halibut has been managed as a "Global quota", that is, an overall quota with weekly limits got the Scotia-Fundy whole region.

Over the years the allocation of cod haddock and Pollock fluctuated, based on the changes in the overall TAC.

### **TRADES WITH OTHER GROUPS**

These allocations were made by DFO at the beginning of each season with the understanding that when any one species was caught the group would be shut down for the season. However this rarely if ever happened because quotas could also be modified throughout the seasons by means of trades with other groups. Such trades were made according to a protocol worked out by the Scotia-Fundy Fixed Gear Advisory Committee, and approved by DFO. The main stipulation of this process is that a form letter be signed by both management boards.

### **SELLING AND BUYING FISH FROM OTHER MANAGEMENT BOARDS**

Some management boards also modified their quotas by buying and selling from other management boards. In 1997 the FFGC established a firm policy not to buy or sell fish to or from other management boards or sectors, based on the rationale that this was imply participating in the quota commodity system used by ITQ fisheries.

There have been some exceptions however in recent years

1) The dogfish fishery has required payment to DFO Science in exchange for quota and 2) there have been examples of individual being given permission to buy quota for their fleet group. These have been identified by the FFGC's as "grey areas"<sup>2</sup>

#### Allocation between FFGC Fleets

The initial allocation between the three fleets was based on the following factors

- In 1996 the gillnet fleet secured its 1986-1993 catch history from DFO first

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<sup>2</sup> meeting with FFGC April 2007

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- The longline and handline arrived at a formula for the remaining hook and line quota based on percentage that were proportional to the number of fishermen who signed dup in each plan.

The allocation to the three fleets was modified through the season by trades between the groups. These trades were initiated by the gear committees and approved by the council. Trade were made through the season in every season using as a means of addressing various issues

- fleets had allocations of species that they would not normally harvest, e.g. gillnetters haddock, handliners haddock
- one fleet had fished more than its allocation and one fleet had fished less

### Allocations to harvesters within Fleets

"Allocations" is not a wholly accurate term for this category, since FFGC specifically has never allocated quota to individual fishermen, but rather set limits for landings from active fishermen. This was specifically stated in every annual fishing plan that was submitted to DFO, and in the FFGC Terms of Reference, stating "There are no individual quotas." In other words a key element of the FFGC management system was that there was a pooled community quota, as opposed to a collection of individual quotas.

For the longline and handline fleet's "allocations" would typically be for weekly limits, by species, with variations, such as a maximum per trip. For the gillnet fleet the time period varied, sometime by week, sometime by month, or even by the whole season.

In recent years there have been some exceptions to this

- 1) dogfish, because DFO required payment for dogfish allocation for science, which was paid for by individual fishermen
- 2) inactive gillnetters wanted to have individual allocation which they could combine

These were identified as grey areas by the council.<sup>3</sup>

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<sup>3</sup> FFGC meeting Apr 2007

**E. GOVERNANCE**

The three fishermen’s associations in the area- BFIFA, IIFA and MFU Local 9- established the FFGC as a management board for the inshore groundfish fishery in their area. It is important to understand that the FFGC was never intended to be a new fishermen’s association. Fishermen’s associations are professional organizations that represent inshore multi-species fishermen in all aspects of their work. A management board, like the FFGC, is a body created by the fishermen’s associations manage a particular fishery. In one sense, the associations provide the democratic foundation for the management board.

The Terms of Reference of FFGC identified democratic transparent decision-making as the basis for its management practices. This was reiterated when it adopted the principles of *Writing the Rules* <sup>4</sup>

***Fishermen Must Hold Authority in Management-*** *Local community-based governance bodies are needed where fishermen, through their associations, have the primary role in the stewardship and management of all adjacent fishery resources and ecosystems that support them*

Based on these principles the FFGC created an organizational system for decision-making that was both accountable and effective. The organization as it was set up in 1996, consisting of the following organizational components.

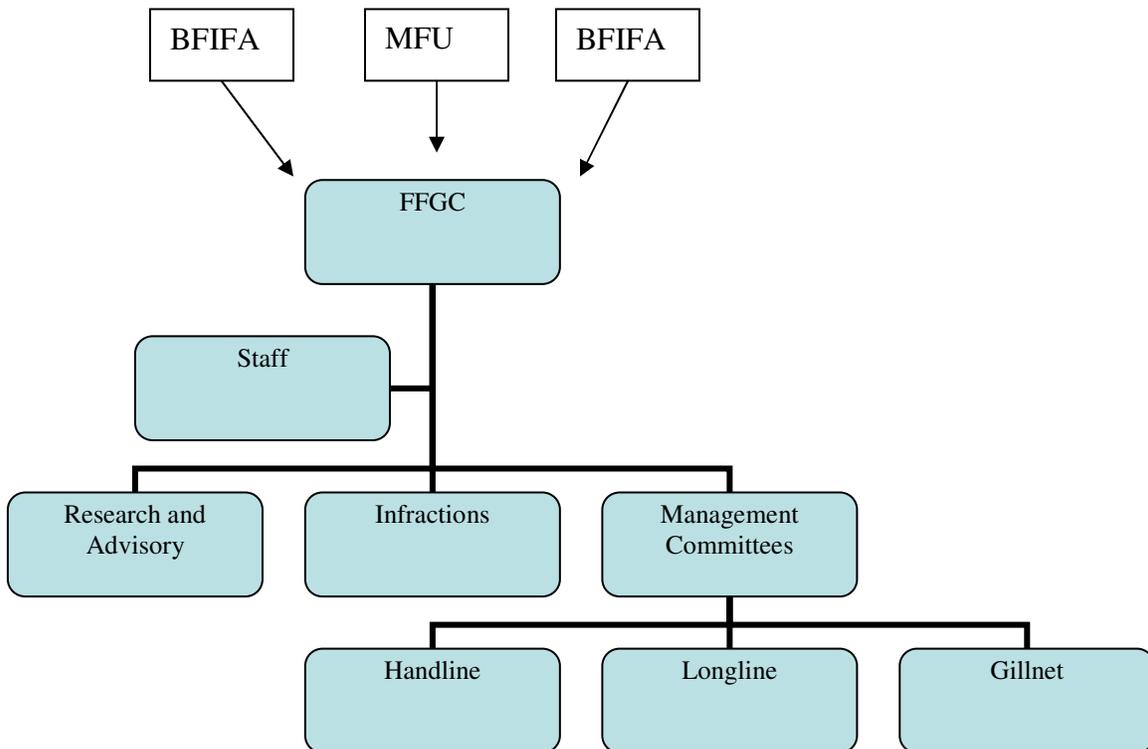
- The Council  
The FFGC, a nine member council made up of three representatives appointed or elected from each three fishermen association. Responsible for overall decision-making
  
- Gear committees  
Handline, longline and gillnet committees, made up of representatives of the association, and responsible for harvesting of each fleet. This meant meeting at the beginning of the season to set weekly limits and trip limits, and then meeting throughout the season to adjust them in order to achieve specific goals and targets

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<sup>4</sup> FFGC website

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- **Infractions Committee**  
The committee responsible for ensuring compliance to FFGC management plans. This committee was formed each time it was needed, and consisted of four fishermen appointed by their associations, and chaired by a Council member responsible for compliance (see below)
- **Research and Advisory**  
A committee of invited researchers, community members, academics responsible for giving advice on research, and on long term planning (see below)



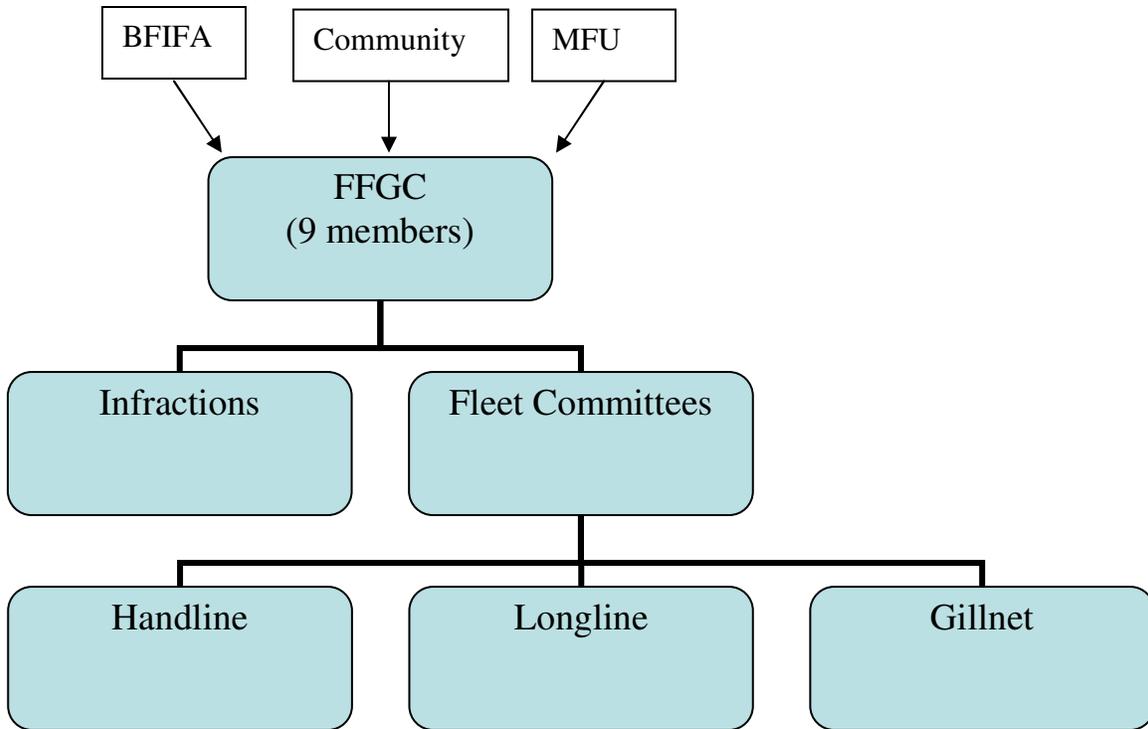
The FFGC’s organizational structure was modified over the years. By 2001, there had been three major changes:

- In 1998 the Islands Inshore Fishermen’s Association had amalgamated with the Bay of Fundy Inshore Fishermen’s Association, due to lack of participation
- Research and Advisory Committee has been dropped, mostly because of lack of staff and resources to coordinate the committee

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- The three seats were added for community members. These were to be individuals who had knowledge of the fishery, but no specific financial stake in it. They would be nominated by the associations, and would come from different areas in the FFGC's region.

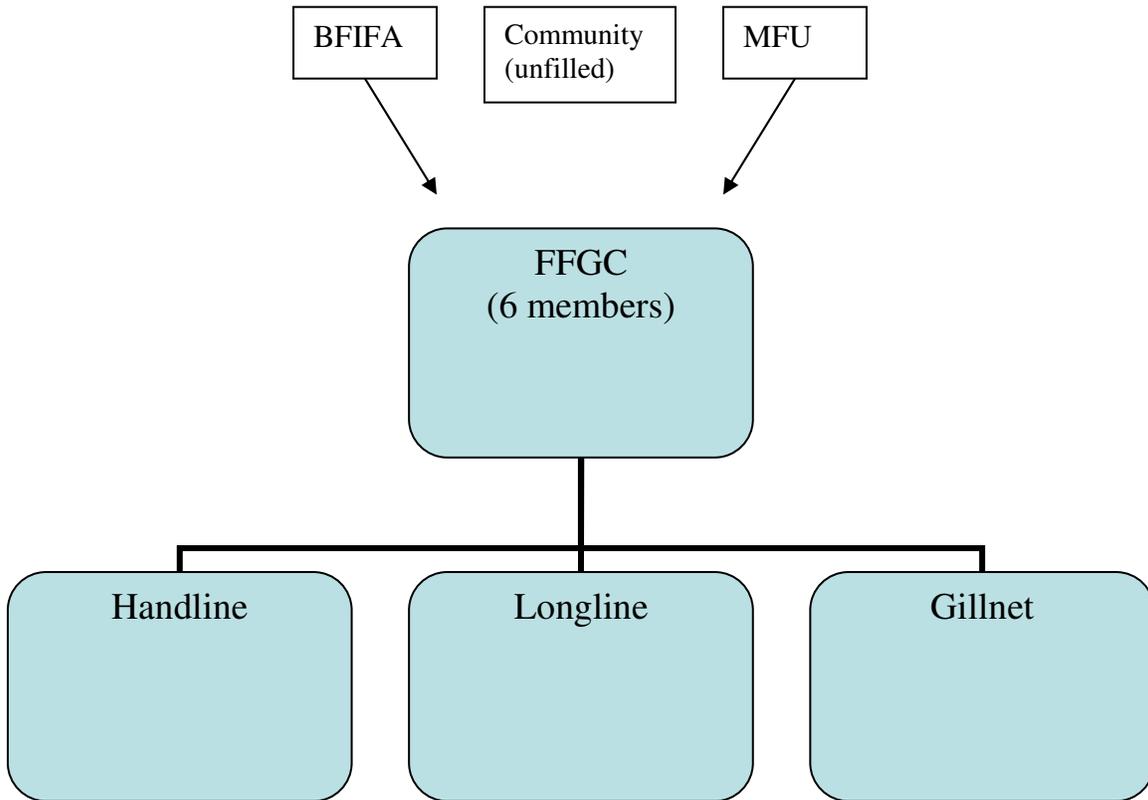
2001 Structure



By 2006 the FFGC's organizational structure had been further simplified:

- The Infractions Committee had been removed and compliance decisions replaced by an automatic sanctions system
- The community seats were not filled

2006 Structure



TRENDS AND PATTERNS

Looking at the changes in the FFGC’s organizational structure over the years we can see a pattern of streamlining and simplifying the way decisions are made. This was largely because it was hard for fishermen to attend so many meetings, especially through the season. The result was that more of the decision-making responsibility was concentrated in the council itself. This was largely due to lack of funds for staff to coordinate the committee work.

**F. ACCESS**

Access is about determining who can and cannot participate in the management scheme. For the FFGC this meant setting criteria for who could sign up to fishing under their fishing plan. These criteria were that you had to

- have an under 45’ groundfish licence
- have a home port that was in the FFGC’s management area

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- be a paid-up member of one of the participating fishermen's associations
- have signed a contract with FFGC

The one exception was that in 1996 a small number of handliners from Yarmouth County were signed up because they were MFU members who felt they fit better with the Digby plan. Some of these were "grandfathered" in over the years. No other exceptions were made after that.

The FFGC's ability to define the access to its fishery was based on some key policy decisions made by DFO. These were

- All fixed gear fishermen were in DFO's plan, called Group X, until they voluntarily signed up with a management board. This was an unmanaged plan, which generally had a short season. In this way, no fisherman was being prevented from using his license, because he was not signed up under a management board- he could fish with "Group X"
- the management boards were not required to sign up a fisherman, even if he fished in its management area
- DFO would not issue annual license conditions to fishermen who had not already signed up with a management board.

These provisions made it possible for the FFGC manage access to this fishery, and to develop a compliance system.

### **G. COMPLIANCE**

Compliance, that is the ability of a management body to ensure that its rules and limits are adhered to, is a key part of the FFGC's self-governance. That is, when the council set weekly limits or any other rules for the fishery. It needed a way of enforcing those rules. This was entirely an internal matter, since DFO only took responsibility for enforcing legal regulations outlined in licence conditions, as opposed to the internal limits set by a management board.

The FFGC's compliance system was based on

- Civil contracts between the fishermen and the FFGC, which were signed at the beginning of each season.
- An infractions committee appointed by the two fishermen's associations and chaired by a member of the Council

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### 1996 SYSTEM

The compliance system as it was set up in 1996 followed the steps

- The secretary in the FFGC tracks landing and identifies boats that have exceeded limits
- A infractions committee is convened, with one member appointed from each association, and chaired by a council member
- Files are prepared, without names, and presented to the committee outlining the infraction,
- Sanctions are applied, which seem to fit the infraction. These might range from
  - getting a letter of warning for a small overrun
  - a reduction on the next week's limits
  - To complete withdrawal of privileges of fishing under the FFGC, in cases where a fisherman has repeatedly committed a major infraction in full knowledge that he was breaking FFGC rules. This was only done very rarely over the ten year period. If a fisherman had been sanctioned before, this would be noted in his file, which might then have a bearing on the seriousness of the sanction.

The FFGC members were able to start to see patterns emerging about what kinds of sanction were applied for what kinds of infractions, and these would be shared with the Infractions Committee.

Over the years, there were two major changes made to the compliance system. The first happened when a fisherman who had been sanctioned asked for an appeal of a sanction. The council decided that this could be brought before the council itself to decide. This would mean that the fisherman lost his anonymity in the process. In some cases, a closer look at the facts showed that the sanction was too heavy. In other cases, the sanction might be changed by the FFGC For example, in one case a fisherman asked to have a financial penalty rather than a reduction fishing time, and this was granted.

In 2006, the FFGC decided to change to a system of automatic sanctions. That is, if you went over the weekly or trip limit, you would automatically sanctioned by having the reduction in your limit the follow week. The main reason for this was that council

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members were not comfortable with making judgements in cases of appeals, since there was no protection of anonymity.

### Further Research

Look into the compliance systems of other CBM initiatives.

## **H. COMMUNICATIONS**

### Internal

Communications play a central role in the democratic decision-making of any organization. For the FFGC it has been particularly important because its members are spread over a number of communities. Also, because the council decisions have such an important impact on the livelihoods and income during the fishing season.

### Port Reps

A system of Port representatives or "port reps" was created in which at every wharf one fisherman and one alternative were elected to represent that wharf. The port reps had two roles 1) inform the fishermen at that wharf about decisions made by the FFGC 2) to inform the council about issues and opinions of fishermen at that wharf. Thus, typically, the council might change a weekly limit, the port reps would be notified and they would tell fishermen at that wharf, and if there were any issues or concerns about that decision, the port rep would convey them back to the council.

### Newsletter

The newsletter was the other important communications tool. Typically the newsletter would go out once a month throughout the season. The initial newsletter would have the essentials of the fishing plan, and information about how and when to get signed up. It also served as a way to update fishermen about project and policy changes that are happening through the season.

### Website

In recent years the FFGC website has played an increasingly important role. Especially when it comes to quotas for dogfish. There is now a password-protected site for FFGC member to log on and see the weekly quotas

### External Communications

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As well as communicating with its members the FFGC has always been aware of the importance of communicating what it does to the rest of the world. However, this has not happened in a concerted way however, but rather through media stories and awards and events that have happened by chance.

An interesting view of the FFGC communications can be seen in the study by a St.FX intern as part of SRSF project. In this project the student randomly interviewed people in Digby about their attitudes to the local inshore fishery. The responses indicated widespread apathy and even, in some cases, hostility to local inshore fishermen.

Although this indicated a need for increased communication within the community, the FFGC has never had a coordinated communications plan for informing the community about its work. There have been some newspaper stories over the years, but mostly related to crises and issues, but not simply to the work of the FFGC.

There has also been coverage in the national media. In 1998 *The Nature of Things* profiled the FFGC and other CBM groups in the region

The FFGC also garnered some attention when it won a couple of awards: GOMC Award and the CCN Proud Communities Award.

### **I. RESEARCH**

From the outset, the FFGC saw research as a critical element in its work. Initially the key question behind the research was: what do we need to learn in order to do CBM in this fishery? Over the years, the focus of research has drifted away from research based on fishermen questions to research that were mandated by DFO.

In order to manage its initial ambitious research plan the FFGC created a committee, the Research and Advisory Committee, made up of academic, government researchers, as well as community members and fishermen. This group had a dual mandate: 1) to advise the FFGC on its research agenda 2) to provide overall advice to FFGC on its long term planning. This group was active from 1996 to 1999, but was discontinued after that.

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In the next few years, the FFGC's research relied heavily on collaborations with other organizations, including

- The Social Science for Sustainable Fisheries (SRSF) CURA
- The Centre for Community-based Management
- The Fishermen's Scientists Research Society (FSRS).

In recent years, the FFGC's involvement in research has been reduced to paying DFO science fees for dogfish and halibut, in order to have access to those fisheries.

### SURVEY OF PROJECTS

1996

#### *Community-Based Management /Experimental Handline*

The first research project the FFGC undertook happened as a result of the initial allocation in April of 1996. (see above) the 'Digby group' had been given an extra allocation with the understanding that it would pilot a community based approach in its handline fishery, called "The Experimental Handline Plan" in order to develop this plan, the Council applied and received funding from the Fundy Community Foundation, the result was a comprehensive pilot project that included

- a non-quota , effort control approach
- a local input on licensing
- marketing
- professionalization and training
- enforcement

The FFGC submitted this plan to DFO on two occasions, but never received any response.

#### *Fleet Profile*

The FFGC also wanted to develop a solid knowledge base about the fleet it was managing. To do this it worked with a second year student from the COGS to produce a fleet profile. This outlined how many active boats were participating in the FFGC in each port.

There also was a number of other research projects planned in 1996 that were not undertaken:

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- a cod mortality study to indicate the mortality of cod survive release from handline
- habitat survey
- a gear type comparison, between hook an line and mobile

1997

### *Marine Protected Area Project (World Wildlife Fund)*

The FFGC received funding from the World Wildlife Fund (WWF) to do a project aimed at finding out what its members thought about marine protected areas (MPAs). A number of kitchen table and local meetings were held to get fishermen's thoughts on this. The main question for the discussion was "What would you protect and why?".

### *The Role of Research in CBM (Gulf of Maine Council)*

The FFGC received a grant from the GOMC to look at the role of research in CBM and to facilitate the work of the research and Advisory Committee.

1998

### *Length Frequency Measuring*

The FFGC assisted the DFO stock survey by conducting ongoing length frequency sampling.

### *FFGC Communications Project*

The Canadian Rural Secretariat funded the FFGC to develop a series of information pamphlets on community-based management, as well a brochure. It also commissioned a painting about the FFGC by a Saskatchewan artist, which was used in the brochure.

1999

### *Cod tagging*

The FFGC participated in a large scale, multi-year cod tagging project coordinated by DFO St Andrews.

### *FFGC Marketing Study*

Under the Social Research for Sustainable Fisheries (SRSF) project

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an intern conducted research in to the viability of applying New England marketing models to southwest Nova Scotia.

### *FFGC Communications Study*

Under the Social Research for Sustainable Fisheries (SRSF) project  
an intern conducted research on the FFGC communications needs and opportunities

2000

### *Spawning Ground Survey*

The FFGC participated in a study led by Centre for Community Based Management in St. Andrews, to identify local spawning stocks.

2001

### *Ecolabelling*

Saltwater Network and the MRC supported a study on ecolabelling possibilities and networking convening. This resulting in a number of meetings and collaborations with EAC, restaurants, marketing organizations and other fishermen's organizations.

2002

### *Dogfish Science fees*

With the advent of the commercial dogfish fishery, DFO required predicating management board to ay for science fees.

2004

### *RCIP ITQ Study*

An intern supported by the Rural Communities Impacting Policy (RCIP) project to look at the impact of ITQs on employment in the scallop fleet

2006

### *Halibut*

Science fees have recently been introduced for the halibut fishery.

## TRENDS AND PATTERNS

Looking at the FFGC's research project over the years, two main patterns emerge:

- The FFGC understood the importance of research to its work, and that this research would have to be multi-disciplinary in nature, including biological, social and economic topics.
- Over the years the FFGC did less and less of its own research and more and more mandatory research for DFO, which had no relevance to FFGC management work.

## **J. ECONOMICS**

### **The Inshore Groundfish Fishery's Role in Local Economy**

The inshore groundfish fishery plays a relatively minor role in the local economy of the region. The main source of income for most participating fishermen is the lobster fishery, which is the mainstay of the local economy. However the groundfish fishery is an important second income which they could pursue between lobster seasons. It also played an important role in maintaining a year-round multi-species small boat fishery in the region. There were however a significant numbers of handliners, and a few longliners, who depended on groundfish as their main source of income.

### **Community Economic Development**

Community-based fisheries management has sometimes been described as part of coastal community economic development. It also gives equal weight to the long term well-being of the ecosystem, livelihoods and community. In practice however the FFGC has never taken on a role in economic development part of the local inshore fishery. The major exception to this was the participation in the ecolabelling project, which did not get past the research stage.

### **Other Economic Factors**

The largest single economic factor affecting the FFGC's fishery was the rising cost of going fishing. This included the cost of

- dockside monitoring
- observer coverage
- wharfage fees
- dues
- insurance

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The other major economic factor was the steep rise of fuel prices after 2001.

### **FURTHER RESEARCH QUESTIONS**

Two possible subject for further economic research are

- determining the role of income groundfish in local livelihoods
- making a comparison with other CBM groups that have done CED work

### **K. INTERNAL ISSUES**

One of the key achievements of FFGC was its development of a capacity to resolve conflicts. That there have been internal conflicts should come as no surprise. How many citizens are asked to get together and determine how much each other are going to earn, by dividing up on a severely limited resource? The FFGC has done this year in and year out, when conflicts arose, has handled them internally, except for occasional help with facilitation from the MRC.

#### **CBM**

From the very beginning, the key issue facing the FFGC was how create a system of community-based management for its fishery. This meant going beyond the role of simply managing a groundfish quota on behalf of DFO, to include a broader concept of democratic, participatory, ecosystem based local management. As notes above, this was also one of the condition of the initial allocation, that is to pilot an "Experimental Handline Fishery" that would look at alternative community-based approaches.

#### **ALLOCATIONS**

One of the most difficult tasks faced by the FFGC was how to fairly and equitably allocate the fish between its three fleets. This emerged as an issue in three main ways:

- When a fleet did not catch its entire allocated quota of a species. This happened with the handline cod quota in the 1996 and 1997
- when a fleet overran its quota
- When there was an issue with the initial allocation of the quota. T.i.e. 2001 gillnet

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A recent issue that has emerging the gillnet fleet is whether to allocate fish to vessel that are signed up but not actively fishing

### **L. EXTERNAL ISSUES**

External issues that related specifically to the inshore groundfish fishery were most dealt with at the Fixed Gear Advisory Committee. Some of the most difficult issues were:

- the allocation of hake to management boards
- trading and selling quota to other sectors
- observer coverage
- science fees

The FFGC was also engaged in a number issue that were external to its management of the inshore groundfish fishery.

### **KRILL**

One of the earliest of these was the proposed krill fishery. Because krill is an important food source for groundfish, the FFGC had serious concerns about a new fishery for this species. It joined a coalition of environmental groups, First Nations, other inshore fisheries groups and community groups

### **SHIFT OF EFFORT**

A major issue in the late 1990's was the shift of fishing effort by mobile and South Shore gillnet fleet into the Bay of Fundy. This problem was identified by the FRCC and DFO Science. Through Bay of Fundy Fisheries Council (see below) the FFGC played a role in raising this issue with DFO at the Fixed Gear Advisory and Scotia-Fundy Groundfish Committees. Although the campaign was ultimately unsuccessful and predicted the collapse of the groundfish stock in the Bay of Fundy.

### **OWNER-OPERATOR**

The FFGC played a role as part of a coalition in policy change efforts to strengthen owner-operator and fleet separation policies.

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### M. COLLABORATIONS

#### 1) The Bay of Fundy Fisheries Council (BFFC)

In 1997 the FFGC, together with twelve other inshore fishermen's associations around the Bay of Fundy, founded the Bay of Fundy Fisheries Council (BFFC). There was a growing awareness that there were overarching ecosystem issues that related to the whole Bay of Fundy that need to be addressed, such as non-renewable resource, broad cross-sectoral fisheries issues, land based pollution and other issues. The BFFC purpose was to take an ecosystem view of the Bay of Fundy's fisheries. That is, it was not just about representing the interest of the fishermen's organizations and their members. Rather, the BFFC was about taking a broader and longer term stewardship role. The *Writing the Rules* project (see above) was a specific attempt to define what was meant by "ecosystem based", from the perspective of the Bay of Fundy's inshore fishermen. The project consisted of a year long process that started with kitchen table meetings around the bay, and went to organizational meetings and then to a regional workshops. In each session, the project workers asked fishermen say how they would manage the Bay of Fundy's fisheries if they had the authority to do so including area closures, gear limits, seasonal limit and b) *Why* they would take these conservation measures. From this second question, a set of principles of ecosystem fisheries were developed. These have since been used by a number of groups in Canada and the US as a starting point for community-based management.

#### The Bay of Fundy Marine Resource Centre

In 1998 the FFGC, together with the Western Valley Development Authority (WVDA), founded The Bay of Fundy Marine Resource Centre MRC). Its purpose was to provide learning, technical, organizational, and other kinds of support to groups engaged in coastal community-based management.

The FFGC has also collaborated with the MRC on numerous projects including

- cod tagging
- SRSF
- Writing the Rules

Social Science ST FX CURA

(See above)

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### TURNING THE TIDE

The FFGC was also a participant in *The Turning the Tide* project, which was supported by a grant received by Dr. Tony Charles from the Pew Fellows Program in Marine Conservation. The aim of the project was to support community-based fisheries and coastal management through cooperative work between aboriginal and non-aboriginal fishermen's organizations in the Maritimes. Through this project FFGC representatives participated in three study tours (two on Vancouver Island and one in the Gulf of Maine<sup>5</sup>, and assisted on the development of a handbook on community based management.

### COASTAL CURA<sup>6</sup>

The Coastal CURA is a five-year project that is building knowledge and capacity, across the Maritimes, to support community involvement in managing our coasts and oceans. The Coastal CURA – a “Community University Research Alliance” – is a partnership of First Nations communities, fishery-related organizations and university participants, funded by the Social Sciences and Humanities Research Council of Canada (SSHRC).

### INTERNATIONAL LINKS

When it first undertook the implementation of community-based management, FFGC looked for models and discovered that most of these were in other countries. To learn more about this work overseas, the FFGC connected with a number of organizations that had international scope. Most important of these were

- CORR Sustainable Livelihoods Workshop  
The FFGC participated in a summer institute on sustainable coastal livelihoods at the MRC in 1999
- South Asia Partnership  
The FFGC participated in a study tour of Sri Lanka in 1998
- World Forum of Fishworkers and Fish Harvesters  
A FFGC representative attended the founding meeting in New Delhi in 1998

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<sup>5</sup> website

<sup>6</sup> website

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### **N. EVALUATION**

Like any community-based organization, community-based fisheries management groups need some way of checking from time to time to ask “how are we doing”, in order to move forward. This means setting some goals and identifying some indicators to provide some means of telling if they are moving towards those goals. These might include social, economic and ecological indicators.

Except for the initial process of developing the CBM plan, the FFGC did not set goals for either the short or long term. Once it was clear that DFO would not participate or support the FFGC’S CBM plan, there was little energy for continuing on this course. The demands and stress of managing the fishery form season to season made this increasingly difficult over the years.

There was an attempt to get feedback form fishermen about the FFGC work in the first two years. This took the form of holding post-season local meetings and asking what worked and what didn’t work in the past season. Although this gave valuable input for the management the following season,

#### **Further Research**

- Look at how other CBM groups have done evaluation

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### **3. FFGC AND INTEGRATED MANAGEMENT**

When considering the relationship between the FFGC's work and integrated management, it is important to note that there is nothing inevitable about this connection, in fact, quite the opposite. The FFGC's organizational mandate and structure- to manage some quotas for specific species in the inshore groundfish fishery- is by definition narrow, inherently running counter to the holistic, ecosystem-based approach that we take inherent to integrated management. What is interesting is that, in spite of its narrow focus, the FFGC has also taken on other responsibilities that have very little to do with inshore groundfish fisheries, especially broader ecosystem-based issues.

One way this happened was that the FFGC played a role in creating organizations that were more broadly based and holistic in scope, such as the Bay of Fundy Marine Resource Centre (MRC), The Bay of Fundy Fisheries Council (BFFC) and Saltwater Network.

There were also a number of projects that went far beyond the scope of the FFGC's fisheries management mandate.

#### **RIGHT WHALE CONSERVATION**

The FFGC, and in particular the MFU Local 9 Gillnetters, played a major role in working with right whale conservationists. This consisted of a number of initiatives focused on

- awareness education among fishermen related to whale identification and disentanglement
- experimental use of break-away gear
- participation on the Right Whale Recovery Team, and chair its Right Whale and Fishermen Working Group
- facilitating many meetings and interactions between fishermen and whale conservationists

#### **OIL SPILL READINESS**

The FFGC was an active participant in the MRC's initiative to develop a community-based oil spill readiness program for the Nova Scotia side of the Bay of Fundy. This program, sponsored by Canadian Coast Guard, aimed to create of a data base of all assets that might be mobilized in the case of an oil spill in the Bay of Fundy, including a listing of all insured boats and trained licence holders.

#### **MARINE PROTECTED AREAS PROJECT**

In 1997 the FFGC received support from the World Wildlife Fund (WWF) Protected Spaces grant program to develop an understanding of inshore fishermen's perspective on Maine protected

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areas. The main activity of the project was a series of area meetings with FFGC members. In these meeting the fishermen identified a range of spatial limits on fishing, which they believed would promote the sustainability of the fishery. The report form this project is attached.

### **KRILL**

In 1999 the FFGC participated in a coalition of wale conservationists, academics, fisheries groups, First Nations and community groups, which successfully stopped a proposed krill fishery.

### **NON- RENEWABLE NATURAL RESOURCES**

The FFGC was an active participant in a series of workshops, hosted by the MRC, on the extraction of non-renewable resources from the Bay of Fundy region, and its effect on both ecosystems and fisheries.

#### **4. CONCLUSIONS**

##### **SUMMARY OF TRENDS**

When the FFGC was allocated a community quota in 1996 there were number of possible directions open to it. It could have just set out to manage the quota on behalf of DFO. Or it could even have allocated the quota to individual boats, as a number of the management boards did. Instead, the FFGC set out to create a system of community-based fisheries management, based on principles of democratic self-governance, that included almost every aspect if fisheries management. In doing this FFGC was setting its sights very high. It is hard to imagine a fishery that would be more difficult to organize in this way. Among the factors working against it were

- scarcity of resource
- a powerful industrial fleet fishing on the same stock (the mobile 45-65)
- inclusion of very different, and traditionally opposed) gear types with in the group ( gillnet and hook and line)
- no seasons, or seasonal closures
- no line son the water (except for NAFO 4X area)
- a quota system that required dividing the allocation between fleets every year
- soaring operating overhead costs

And perhaps, most importantly, the FFGC was operating within a policy context, in which the federal government was actively promoting, not community-based management, but ITQs. This meant that there was no Federal Government support for capacity-building or developmental activities from the DFO, but rather a constant undermining of any efforts toward community-based approach.

Any retrospective look on the FFGC must bear these challenges constantly in mind when assessing its failures and successes.

In light of this, the very existence of the FFGC in 2007 should be counted as a great success. The very fact that inshore fishermen in this area continue to manage their fishery in a democratic and participatory way is a significant achievement. and evidence that community-based management can and does work.

But beyond just staying intact, the FFGC has had some notable successes, in particular with the longline fleet. As we have seen from the historical overview this fleet was able to maintain its numbers and maintenance even increase its landed value since 1996.

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The gillnet fleet can also be counted as a success, although the number of active fishermen has been reduced by 50%, it has continued to maintain a landed value.

Having said that, it must be noted that the FFGC's most significant failure was the complete collapse of the handline fleet. This went from almost 100 active handliners, who landed more than a million dollars worth of fish in 1996 to none in 2007. It may be unfair to characterize this as a failure, since the main factors that contributed to it were largely out of the FFGC's control. These included rapid rise of operating costs and fees, and the disappearance of inshore stocks. Whatever the reasons though, the collapse of the handline fishery must be counted as a great loss both to the FFGC, and to the communities of this region. IAnd it was a particularly serious loss for the many of the handliners for whom this was a key part of their household incomes.

Apart from these two major gains and losses, the FFGC had to modify its original ambitious goals, for a variety of reasons, most of which fall under the heading of 'not enough resources'.

### Research

In 1996 there was a broad range of research projects, including both biological and social science research that reflected the questions fishermen felt they needed to know in order to do CBM in this fishery. By 2004 nearly all the research projects consisted of fee-for-service, which DFO science required in order get an allocation, e.g. the dogfish fishery. There have been some exceptions to this trend, including this paper, but they are increasingly rare.

### Community-Based Management (CBM)

A key goal of the FFGC was to develop a new approach to CBM. This was set out clearly in 1996-and 1997 and submitted to DFO twice as pilot project. Because of lack of any positive response, these efforts were largely abandoned.

### Marketing

The FFGC attempted to develop innovative approaches to marketing, with support from the MRC and Saltwater Network. These included market research and examination of cooperatives. Most of these efforts focused on finding high-end niche markets for hook and line groundfish, and included eco- labelling, local restaurants.

### Community Involvement

The "community" in community-based management has been important for the FFGC since it started. It has not always been clear however how to involve the community in its decisions-making. The most specific effort to involve community was in the creation of three community

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seats on the council. These have never been permanently filled however and community members have never become part of the FFGC meetings.