

FISHERS WHO SURVIVED FROM THE COLLAPSE OF COD

A CASE STUDY OF ST. ANTHONY NEWFOUNDLAND

Reiko HIGASHIMURA, Fukui Prefectural University, reiko@fpu.ac.jp

ABSTRACT

The fishing communities in the St. Anthony area of Newfoundland, Canada, were forced to adjust to the collapse of cod catches in Atlantic Canada in the early 1990's. It was not only the fishing industry that was affected. The entire community had to live through the changes in resources. To evaluate the changes that occurred after collapse of cod and to understand today's fishery in the area, I conducted research in 2002 and 2005. Today, fishers and fishery have survived the collapse of cod fishing and have arrived at the new and relatively stable stage. While the number of fishers has been increasing since 1998, those of enterprises and fishing vessels are decreasing. Fishery incomes have risen because cod fishery has been replaced by fishing of valuable snow crab. Communities should be maintained such that fishers can continue to engage in fishery.

Keywords: Atlantic Canada, Collapse of Cod, Newfoundland, St. Anthony, Remote Area, Snow Crab, Small Vessel, Coastal Fishery

INTRODUCTION

In the early 1990's, the sharp decrease of groundfish catches in Atlantic Canada, especially that of cod, and the moratorium on cod fishing from 1992 greatly affected the Canadian province of Newfoundland and Labrador (NFLD), where cod fishery had long been a symbol of industry. It had long supported remote communities in NFLD and other Canadian Atlantic provinces.

This paper is a case study on fishery in the St. Anthony area, which was among the areas hardest struck by the collapse of cod. The remote St. Anthony area is at the northern end of Newfoundland Island. Cod fishery supported this area for the hundreds of years¹ until the cod moratorium.

More than ten years has passed since the moratorium took effect. The combined catch of groundfish, pelagic fish and shellfish in NFLD was greatly reduced that of the 1980's, although the value of the landings doubled. The number of fishers also was reduced by half [1]. Even these few statistics make it obvious that fishery in this province has undergone a drastic change.

Beyond the statistical analysis, how has the situation changed? How have fishers adjusted to the change? Few studies have addressed this question [2][3]. This paper examines how an area that has traditionally depended on fishery adjusts to great changes in resources, based on research in the St. Anthony area. The fishers and the industries of the area had to adjust to the moratorium. During this adjustment, the people in the area recognized that fishery, the main industry of the area for generations, is not without risk. Fishery is prone to changes in resource availability, and those that are involved in it have to adapt to those changes. The collapse of cod stocks brought this realization home.

This paper aims to understand the process of survive the abovementioned resource change. First, I will clarify fishery changes in the landings of different resources, the number of fishing vessels and fishers, the combinations of target resources, fishery income by showing statistics [4]², and the results of interviews with fishers. Second, I will examine how fishers recognize the situation, based on the interviews.

Interviews with fishers were conducted in February 2002 (2 fishers at 2 enterprises, September 2002 (7 fishers at 6 enterprises), and September 2005 (14 fishers at 12 enterprises). The number of different enterprises was 15, because some enterprises were interviewed more than once³. Each interview took almost one and a half hours, and most were done at the subject's home.

CAHNGING OF FISHERY IN ST. ANTHONY AREA

The St. Anthony area (Figure 1) consists of the town of St. Anthony and the six adjoining communities. The population of the town was 2730 and falling as of 2001, and that of each community was several hundred. The main industries are fishery, seafood processing, and tourism. The unemployment rate in winter, the off season, is 60%. However, an airport and a general hospital are located in the area, making it a center of the Northern Peninsula of Newfoundland Island.

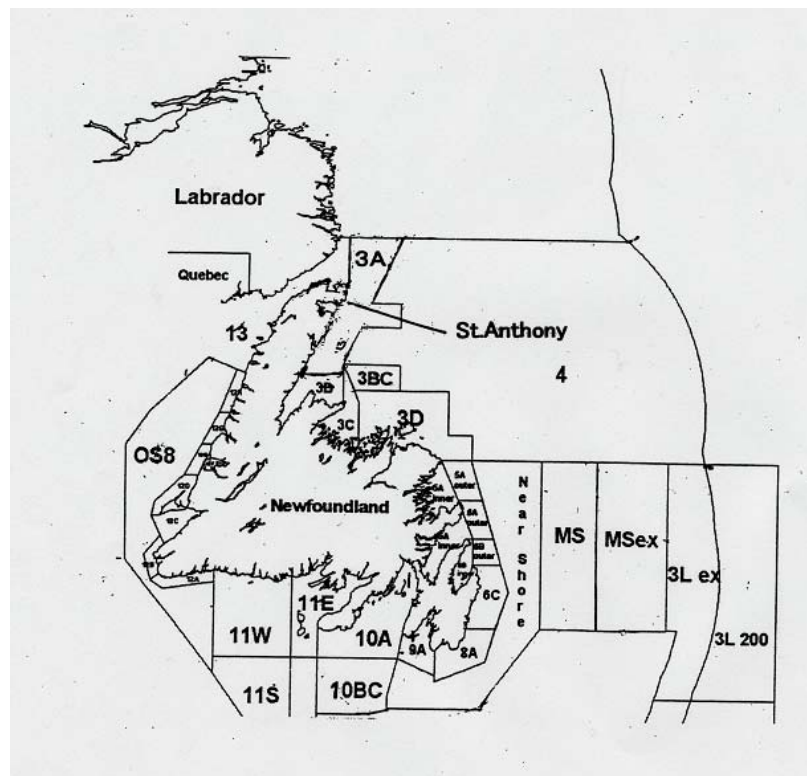


Figure 1. The map of St. Anthony and Newfoundland & Labrador

Self-employed fishers operate vessels smaller than 65 feet, because larger enterprises are not allowed to own or operate the vessels of that size [5, p.13]. Fishers who operate vessels smaller than 35 feet in the St.

Anthony area may do so only in area 3A of Figure 1, and those who operate vessels from 35 feet to 65 feet must do so only in area 4. In this paper, vessels under 35 feet are regarded as small vessels, and those 35 feet to 65 feet are regarded as large vessels.

Figure 2 indicates the cod and snow crab landings. Cod fishery was the mainstay before the moratorium of cod, and snow crab fishery is the mainstay these days. Shrimp is also an important fish for St. Anthony. As the statistics on shrimp catch include figures for a large vessel operated by companies, this paper does not examine that resource. The snow crab catch increased from 120 t in 1991 to 960 t in 1992, after which it fell to 550 t before stabilizing at 550 t to 900 t. The value of the snow crab catch increased rapidly from \$180,000⁴ in 1991 to \$5 million in 1995, but decreased suddenly to \$1.4 million in the next year before gradually rebounding.

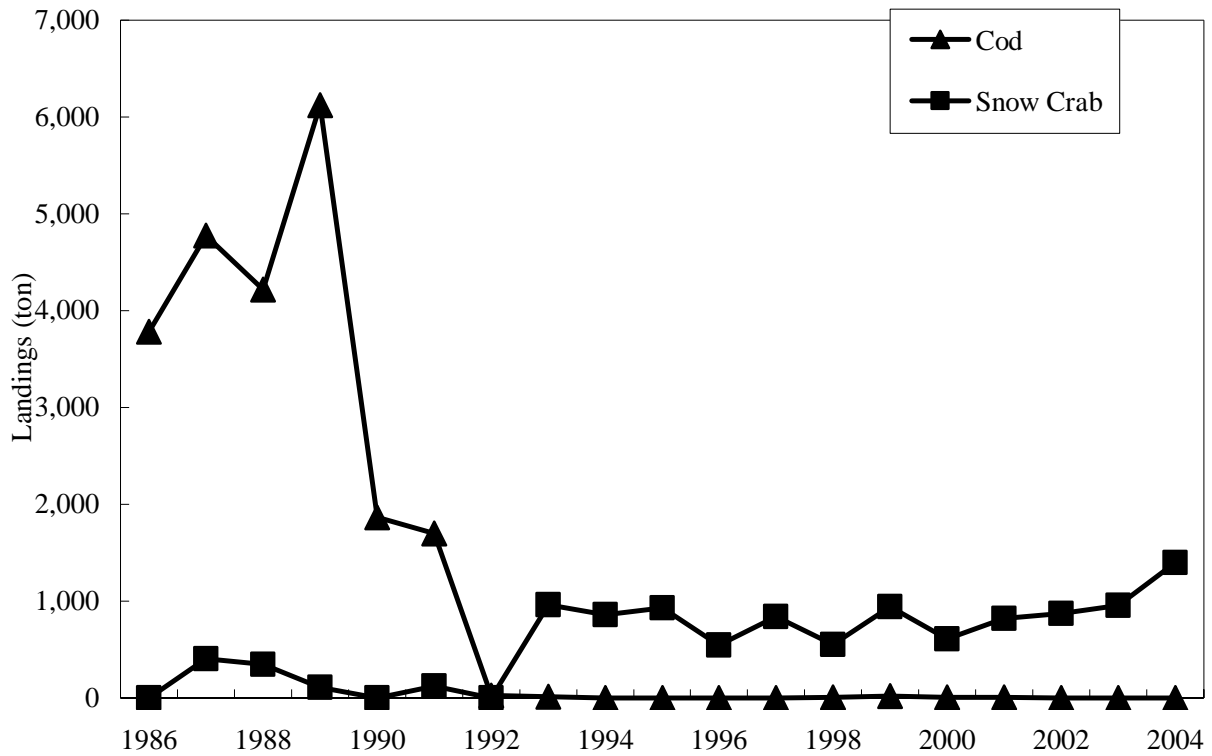


Figure 2. Transition of landings of cod and snow crab

CHANGES IN NUMBER OF FISHERS AND FISHING VESSELS

Figure 3 gives the numbers of fishing vessels and fishers. Although the number of fishers decreased after peaking in 1988, it started rebounding in 1998 and had recovered to 423 as of 2004, about twice as many as in 1998⁵. Before the moratorium, most of the cod catch was landed by vessels under 30 feet and operating with a one- or two-person crew, including the captain.

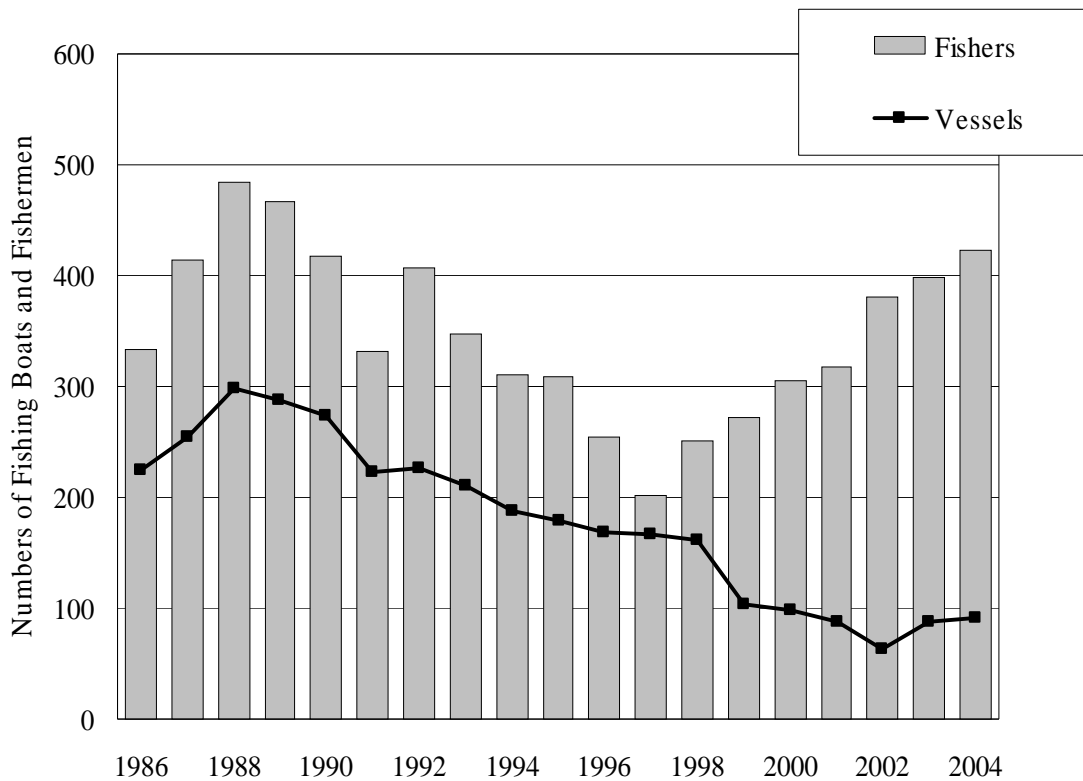


Figure 3. Transition of numbers of Fishers and fishing vessels

During the moratorium, some people accepted compensation to leave the fishery industry, under the condition that they not re-enter it. The small vessels of today are operated by crews of three, on average, and large vessels by crews of four or five. That means crew size has increased. This is one reason for the decrease in vessels and increase in fishers [6]. During my research in the St. Anthony area, a fisher pointed out to me a small vessel under 24 feet and told me that the owner had joined the crew of a large shrimping vessel. Also, I heard that some former fishers had returned to fishery, despite being prohibited from doing so.

The things mentioned above show that fishers who left from fishery because of the cod moratorium were those with small vessels. And more fishers are crewing on vessels they do not own.

CAHNGES IN TARGETED RESOURCES AND INCOME

Targeted Resources and Income of Today

Table 1 indicates type of catch for each of the fishers who were interviewed. The fishing ground of Mr. N and Mr. O is different from that of the others. All fishers, besides them, fish for both snow crab and other fishes. Fishers with large vessels of over 64.11 feet earn a living by catching snow crab and shrimp, the latter of which accounts for as much as 50% of income from fishery, and sometimes even more. They

monitor market prices and resource situation to time their shifts between crab and shrimp from April to October.

Table1: Fisheries Resources Targeted by Interviewees

	Age	Size of Vessel	Resource Targeted
A*	64	64.11 feet	Shrimp (main) and snow crab
B*	52	64.11 feet	Snow crab (main), shrimp, and Greenland halibut (sometimes)
C	64	64 feet,	Snow crab (main), mackerel, and shrimp (2005 -)
D*	55	58 feet	Snow crab and shrimp (50:50)
E	27 (crew)	50 feet	Snow scab (main), capelin (2005 -)
F	29 (crew)	45 feet	Snow scab, capelin and mackerel (2005 -)
G	58	39 feet	Snow crab, lumpfish and capelin (2005 - restart)
H	53	34.11 feet	Snow crab, lumpfish, and capelin
I	50	34.11 feet	Snow crab, lumpfish, capelin, cod as bycatch of white flounder, and cod research
J	45	34.11 feet	Snow crab, lumpfish, capelin, cod as bycatch of white flounder and whelk
K*	45	34.11 feet	Snow crab, lumpfish, whelk and mackerel
L	40	34.11 feet	Snow crab, lumpfish, cod research
M	44	26 feet	Snow crab, lumpfish, capelin, whelk and cod as bycatch of white flounder
N	41	26 feet	Capelin, lumpfish, lobster, cod, mackerel (2005 -), and rock crab (- 2004)
O	50	25 feet	Capelin, lumpfish, mackerel (2005 -), and cod and rock crab (- 2004)

*interviewed only in 2002

N and O operate only in the Gulf of St. Lawrence and not in the Atlantic Ocean.

Based on interviews with each fisher.

The main fishery for fishers with small vessels is snow crab, and most fishers reported depending on it for about 50% of their fishery income. They catch several kinds of fish over the course of the fishing season. All fishers are engaged in lumpfish fishery, which is relatively profitable. They export its roe to the EU. This fishery starts in May or June and lasts two weeks, and most fishers begin their fishing season with it.

Snow crab fishing legally opens on June 15 every year. Because crab is managed according to TAC and ITQ, each fisher stops fishing upon reaching the ITQ in August or September.

Capelin fishery is allowed for a week to ten days in July. The interviews found that most of fishers had recently returned to capelin fishery. This suggests that they were monitoring the market prices and the capelin stocks.

In 2005 the DFO started allowing white flounder fishers to keep a certain volume of cod as bycatch. In fact, those fishers target cod when fishing for white flounder. A fisher told me in 2005, “This is the first year we’ve gotten a cod quota since the moratorium.” This comment shows how fishers interpret the DFO policy. In cod sentinel fishery, DFO guidelines allow some fishers to catch cod. After submitting otoliths to the DFO, fishers may sell their cod for income. Those allowed to engage in sentinel fishery are limited to about one fisher per community.

Whelk fishery starts in September, using pots or similar gear. There are no quotas, although the number of pots is limited to 500 per day. The number of pots used per day is less than that. This is the last fishery of the year, because ice prevents small vessels from launching from October.

Five of the six fishers surveyed in the St. Anthony area answered the questions on annual income. The fishers who owned 34.11-foot vessels said the annual income for the captain is \$30,000. A fisher who owns a 26-foot vessel earns \$25,000 as a captain, out of which the operating costs come. Fifty to seventy percent of the landed value goes to the captain, and the rest is shared among the crew. Fuel and other operating costs are paid by the captain. Two people both with licenses occasionally use one vessel for fishing, and both get about the same income. In some cases, the captain gets \$30,000 including operating cost and another gets \$25,000.

In responding about their income, fishers tended to include employment insurance (EI) as part of that income, unless otherwise requested. This suggests that fishers regard EI as part of their annual income. The average amount of EI for fishers in St. Anthony was \$9,300 per year [7]. EI is based on yearly fishery income. Given that the income of a crewmember with licenses who does not bear fuel cost is \$25,000, it is estimated that self-employed fishers depend on EI for about 40% of their income.

Changes in Targeted Resources and Income

The main fish for all fishers before the moratorium was cod. Thirteen out of 15 fishers were asked about their main resource target (excluding two fishers who had a different fishing ground), and five of those answered only cod. Other targets were salmon, greenland halibut, capelin, and lumpfish.

Fishers who own small vessels did not depend only on cod fishery even before the moratorium; they fished for a combination of resources. Their main income source shifted from cod to snow crab as catches of snow crab increased.

The shift from cod to snow crab benefited fishing incomes. To the question “How does your income now compare to that before the cod moratorium?” seven out of 13 fishers answered “It’s higher now.” Two answered “It hasn’t changed”, and four did not respond.

FROM COD TO SNOW CRAB

Some fishers had held snow crab licenses before the collapse of cod fishery. Of the fishers interviewed, the large-vessel owners Mr. B and Mr. D had held snow crab licenses. Both said that they had not engaged in snow crab fishery before the collapse of cod fishery, because they were able to enough with cod fishery and the snow crab prices were low. In fact, snow crab prices in NFLD, although they fluctuate,

averaged \$1.7/kg from 1987 to 1995 and \$3.78/kg from 1995 to 2004 [8]. Snow crab fishery became very attractive because of increases in the resource and its retail price.

Most of today's snow crab fishers only started targeting that resource after they had been given a snow crab "permit," not a license, as social security or compensation by the DFO. Most fishers who own small vessels in the St. Anthony area conducted snow crab fishery in fishing ground 3A, because the DFO allowed 50 t of snow crab to be caught there in 1991 for the first time. The quotas for holders of 3A permits were gradually increased to 350 t in 1998 and to 265 t in 2002. These permits were issued every year without promise for next year [9], but they were transferred licenses that were nearly permanent [5, p.33]⁶.

CAREER ENTRY AND RETIREMENT

Fishers were asked why they entered fishery. Table 2 gives the results.

Table 2. "Why did you enter fishery?"

	Age	Size of Vessel	Rason for entering fishery
A*	64	64.11 feet	—
B*	52	64.11 feet	Grew up by fishery.
C	64	64feet	There were no other jobs.
D*	55	58feet	I became a crew of my father's ship at the age of nine.
E	27 (crew)	50 feet	Environment of growing up. Everyone was also a fisher.
F	29 (crew)	45 feet	No idea. Everyone was also a fisher.
G	58	39 feet	A traditional job.
H	53	34.11 feet	A major job.
I	50	34.11 feet	No special reason.
J	45	34.11 feet	No special reasons.
K*	45	34.11 feet	I don't know.
L	40	34.11 feet	No special reason.
M	44	26 feet	Father was also a fisher and I was familiar with sea.
N	41	26 feet	No idea. Father was also a fisher and a major job.
O	50	25 feet	Father was also fisher, and a happy job.

*interviewed only in 2002

E and F were asked whether they want to become owener-operators, because they were too young to ask about retirement.

N and O operate only in the Gulf of St. Lawrence and not in the Atlantic Ocean.

Based on interviews with each fisher.

Most answered “My father was also a fisher” “Everyone was also a fisher” and “There were no other jobs.” They chose fishery as a career because it is the traditional job in the area. When asked the age at which they entered fishery, some respondents answered age 6 to 8, but most answered age 15 to 17, i.e., that they had started crewing on their fathers’ vessel and earning pay after graduating from high school. It is common for them to have started helping their fathers from childhood.

Most licenses currently held by fishers were issued directly by DFO. Few licenses were purchased from a third party. In summary, most fishers entered fishery under the tutelage of their father and then succeed their father and obtained licenses from the DFO.

Fishers were asked, “What will you do with your license when you retire?” The responses are given in Table 3.

Table 3. "What will you do with your license when you retire?"

	Age	Size of Vessel	What to do with license
A*	64	64.11 feet	Give to my son who is a crew on my vessel.
B*	52	64.11 feet	Give to my son who is a crew on my vessel.
C	64	64feet	Give to my daughter who is a crew on my vessel.
D*	55	58feet	Give to my child.
E	27 (crew)	50 feet	It depends.
F	29 (crew)	45 feet	My father will sell the lisences at his retirement.
G	58	39 feet	If pofitable, give to my child. Otherwise, sell it.
H	53	34.11 feet	Sell.
I	50	34.11 feet	Sell.
J	45	34.11 feet	Depends on the situation. Possiblly give to my brother who is a crew on my vessel.
K*	45	34.11 feet	Don't want to give it to my son. Want my son to get another job.
L	40	34.11 feet	Don't want to give it to my son. Want my son get another job.
M	44	26 feet	Possibly give it to my daughter
N	41	26 feet	Possiblly sell.
O	50	25 feet	Sell.

*interviewed only in 2002

E and F were asked whether they want to become owener-operators, because they were too young to ask about retirement.

N and O operate only in the Gulf of St. Lawrence and not in the Atlantic Ocean.

Based on interviews with each fisher.

Most fishers with large vessels (over 35 feet) answered that they would give them to their children. Most fishers with small vessels under 35 feet answered that they would sell the license to a non-family member. Some fishers made a point of saying that they did not want their children to enter fishery. Two respondents who are crew members answered that they did not intend to obtain licenses because were reluctant to take the responsibility of running a business.

They have come to regard fishing merely as one profession among many. This is because they had realized, as a result of the collapse of cod fishery, that fishery was very risky, and they saw many people who had left fishery and the area for other jobs, which made them aware of other ways of living.

CONCLUSION

Summary

Over ten years has passed since the collapse of cod fishery shook the St. Anthony area and the whole of NFLD. Fishers and fisheries have arrived at a new stage and have become relatively stable. In light of the abovementioned, the changes of fishery in the St. Anthony's area during the cod moratorium are summarized below.

Because of the collapse of cod fishery, many people have moved away in search of jobs. Although it is difficult to have a complete understanding of population movements, most communities are said to have experienced depopulation. It is impossible for fishery and its associated industries to support as many people as it once did.

The governments were promoting professionalism in fishery. Under this policy, only fishers who earn more than 75% of their income from fishery can be issued fishery licenses [10]. Consequently, the numbers of fishing vessels and self-employed fishers have decreased and each fisher's income has increased. Fishery of today may be sailing toward a better future, or more efficient fishery. However the sustainability of the snow crab resource is not guaranteed. And depopulation of the communities is occurring. If a community disappears for whatever reason, its fishery must also disappear. Fishers cannot live without a community, even if there is an abundance of fish.

Discussion

Fishers managed to adjust to great changes by shifting to snow crab from their mainstay of cod. However, it was only because the federal government decided to promote the snow crab fishery by issuing permits and licenses that fishers were able to enter snow crab fishery. Fishery regulations including the moratorium on cod fishing have been decided by the federal government, and fishery in the St. Anthony area had adapt to the resource change. For better or worse, the roots of change and adjustment inevitably lie in government policies, and it is upon these that fishers and communities must base their decisions.

Even with snow crab fishery, it is still impossible for self-employed fishers to earn a living without EI. Depopulation and demographic aging will become more serious without EI in places as remote as the St. Anthony area. One option for Canadians to consider is to let remote fishery villages vanish. However, it is important for a large nation like Canada to maintain areas like the St. Anthony, which is a hub community.

The most direct way of making fishery efficient or freeing it from subsidies is to decrease the number of fishers and increase the income per fisher. At the same time, however, it is necessary to maintain

communities so that fishery can continue. It is impossible for only a few fishers to live without communities surrounding them.

EI has played a role of maintaining income in the St. Anthony area and other remote fishing communities [11][12]. Of course, it is doubtful that EI is the most appropriate system for income maintenance. For example, EI benefit dependent on fishery income has room for reconsideration. However it is inevitable that fishers will receive some subsidies to maintain their communities, and such maintenance is necessary.

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ENDNOTES

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¹ A map drawn in 1877 shows more communities than are found today.

² All statistics concerning the St. Anthony area are from the Department of Fisheries and Oceans in Ottawa, unless otherwise noted.

³ In 2002 research, an employee of a processing company in St. Anthony introduced to me a woman who searched fishers to interview. In 2005 research, a fisher interviewed in February and August in 2002 introduced a woman who arrange interviews. Both women are from St. Anthony and tried to find various kinds of fishers, but those for interviews were not selected at random. Both had many acquies of fishers, besides concerning with interviews, greeting at streets etc., but most fishers knew only one side. The lady of 2002 knew more fishers with large vessels and the lady of 2005 who was from fishers’ family knew more fishers with small vessels. Although they knew their name each other, they must belong to different groups in the communities.

⁴ All dollars are Canadian dollars.

⁵ It is impossible to compare the pre-1998 figures to the post-1998 figures, because the statistical methods were changed in 1998.

⁶ As mentioned above, the fishery licenses are officially in no sense of permanent permission and not allowed to transfer. However if fishers aren't issued without faults bring it to justice for compensation. In this means, they can rely on licenses much more than "permits".