

Human Systems of the South Coast of Newfoundland: Cape Ray to Point Crewe

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The views expressed in this document are solely those of the respective authors, and should not be characterized as reflecting the views or policies of the Department of Fisheries and Oceans nor the Government of Canada.

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Executive Summary

This report presents an overview of major human activities along the South Coast of Newfoundland of a socio-economic nature that are of relevance to Integrated Management. It is presented to the Oceans Division, Oceans and Habitat Management Branch, of Fisheries and Oceans Canada for use in Integrated Management of marine resource exploitation and oceans management. Integrated Management is an ecosystem-based approach that brings together environmental, economic, and social considerations for use in informed decision-making and planning.

The geographic limits are defined as Cape Ray in southwestern Newfoundland to Point Crewe on the tip of the Burin Peninsula, extending landward to encompass all watersheds that drain to the South Coast and seaward approximately 24 nautical miles. This region has been identified by Fisheries and Oceans Canada (DFO) as part of the Placentia Bay/Grand Banks Large Ocean Management Area (LOMA). The scope of the report is broad-based and follows a standard outline for ecosystem overviews that was developed by DFO. Existing information about commercial fisheries, aquaculture, human population and socio-demographic features, as well as a range of other topics, are summarized and presented in text as well as 60 tables, 37 figures, and 31 appendices. Omissions of data were noted where appropriate.

Currently there are 45 communities of the South Coast, 39 of which have populations of less than 1000. The six communities with populations of over 1000 are Port aux Basques, Burgeo, Harbour Breton, St. Albans, Fortune, and Grand Bank. Several communities are linked by ferry service and have no road access to the rest of Newfoundland. The 2001 census by Statistics Canada lists the total population for the South Coast communities as 27,225. Since 1991, the population as a whole has declined 20%, with the only community showing positive growth rate being Samiajij Miawpukek at Conne River.

Commercial fisheries still represent the most important economic base for many South Coast communities. Currently there are approximately 3,179 commercial licences for a range of fishing gear held by fishers with a homeport between Cape Ray and Fortune. Landings data (weight and value) for the period 1985-2005 for ten commercially harvested marine fish species and four invertebrate species are presented by Divisions and Subdivisions of the North Atlantic Fisheries Organization (NAFO) and summarized as line graphs. Landings data by DFO statistical sections appears in a separately bound set of appendices.

Aquaculture is currently an important and expanding industry along the South Coast, with 42 aquaculture facilities for salmonids and cod alone, primarily centered in the Coast of Bays region.

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1.0 Introduction

1.1 Purpose of the Report

Canada's *Oceans Act* provides a framework for modern and future ocean management initiatives. It calls for the Minister of Fisheries and Oceans to lead and facilitate the development and implementation of Integrated Management in Canada's coastal, marine, and estuarine waters (*Oceans Act* 1997). Integrated Management represents an ecosystem-based approach to oceans management that brings together environmental, economic, and social considerations (Dept. of Fisheries and Oceans 2002a). The Oceans Action Plan defines it as a comprehensive way of planning and managing human activities such that they do not conflict with one another and that all factors are considered for the conservation and sustainable use of marine resources and shared use of oceans spaces (Dept. of Fisheries and Oceans 2005).

The Action Plan also identifies five priority areas for the implementation of Integrated Management Planning. These are called Large Ocean Management Areas (LOMAs), of which Placentia Bay/Grand Banks is one. The South Coast of Newfoundland is part of the Placentia Bay/Grand Banks LOMA.

To implement integrated management effectively, baseline information is needed on a wide range of features and human activities within the priority areas. The purpose of this report is to present baseline information about the major human activities along the South Coast that can contribute to an overall "Ecosystem Overview and Assessment" for the Placentia Bay/Grand Banks LOMA.

This report builds upon the work of previous draft reports (Osborne *et al.* 2004, BP Environmental Research & Consulting Services 2005, Park and Osborne March 2005), which documented the biophysical features and human activities of the South Coast and Coast of Bays Region. The report attempts to fill important data gaps for the South Coast, particularly with regard to commercial fishing, aquaculture, tourism, and key socio-demographic information.

Baseline data presented in this report are intended for use in informed decision-making by many stakeholders engaged in integrated management of marine resource exploitation and oceans management.

1.2 Study Area

The geographical extent of the South Coast region encompassed by this report is the coastal zone of Newfoundland's South Coast, extending west to Cape Ray, northwest of Channel-Port aux Basques, and east to Point Crewe at the south-western tip of the Burin Peninsula (Figure 1). The South Coast region includes the Bay d'Espoir-Fortune Bay section of the South Coast. The coastal zone as defined by this report includes landward all watersheds that drain to the South Coast and seaward to the limit of 24 nautical miles.

The coastline is approximately 1,967.16 km in length and the marine waters constitute approximately 16,040 km² (BP Environmental Research and Consulting Services 2005).

The coastal zone is a rugged coast with numerous bays, inlets, estuaries, fjords, and headlands. There are currently 45 communities with a total population of 27,255 (Statistics Canada 2001).

For the purposes of this report, the region described above will be referred to as the South Coast.



Figure 1. The South Coast of Newfoundland from Cape Ray to Point Crewe.

2.0 Methodology

2.1 Sources of Information

The document consists of a broad-based review of existing information pertaining to socio-economic activities of the South Coast of relevance to integrated management. The majority of those activities revolve around the commercial fisheries and aquaculture industries. Sources of information included scientific publications; government reports; inventories; internet sites by government agencies, industry, or Regional Economic Development Zones (RED Zones); Community-based Coastal Resource Inventories; and personal communications with scientists, resource managers, economic development agents, tourism experts, industry representatives, and municipal authorities.

2.2 Report Structure

The organization of information follows a standard outline for ecosystem overviews, which was developed by the national headquarters of Fisheries and Oceans Canada (DFO) in Ottawa. The authors added some additional topics that they deemed appropriate for the South Coast, such as tourism and Municipal Wetlands Stewardship. Statistical, map, figure, and text information that are contained in prior reports are given less extensive coverage in this document.

Omissions of data are noted where appropriate. In many instances such omissions resulted from insufficient time or resources to track down information that was not readily available during this study.

3.0 Governance Structures

3.1 Governance in the Context of Integrated Management

The governance and management of ocean related activities along the South Coast is an interactive process involving federal, provincial, regional, municipal, aboriginal, industry, resource user, non-governmental organization, community, and academic/research interests. These include the Government of Canada, Government of Newfoundland and Labrador, aboriginal groups, municipalities, Regional Economic Development Boards, nongovernmental organizations, and business and industry. Collaboration is the governance model proposed for Integrated Management along the South Coast, as well as the rest of Canada, except in certain instances where planning may be achieved through co-management, such as in areas of settled land claims agreements (DFO 2002).

Integrated Management planning requires the participation of several federal authorities that have management and regulatory responsibilities for activities in the ocean management area. In addition, provincial agencies, departments, and management boards have shared responsibilities and roles to play in the protection of Canadian marine, coastal, and estuarine

waters, as well as management of proposed activities within these waters (DFO 1997). They also have authority over land-based activities that have impact on the marine environment.

The lead federal organization in oceans management is Fisheries and Oceans Canada, which is responsible for coordinating federal policies and programs related to oceans. The department is responsible for fisheries, habitat, conservation and protection, maritime safety, aquaculture, and hydrographic services. Under the *Oceans Act*, the department is also responsible for facilitating a national oceans management strategy and implementing an Integrated Management plan that engages partners in the planning and management of ocean activities.

Although no one lead organization exists within provincial government for oceans management, various departments have managerial jurisdiction over human activities within their respective coastal and estuarine areas. With respect to marine harvesting and processing, the Department of Fisheries and Aquaculture (DFA) is responsible for numerous marine related activities. The DFA plays a key role in fishing and aquaculture diversification, quality assurance, inspection, and regulatory enforcement. The Department is also responsible for licensing of processing plants, fish buyers, and aquaculture activities along with planning communications, advocacy, and information services in the oceans sector (DFA 2002).

3.2 Federal and Provincial Departments and Agencies

Table 1 lists federal departments and the corresponding Acts and Accords that describe specific responsibilities for the management of marine activities through policies, legislation, regulation, programs, or services. A detailed overview can be found in the publication, “The Role of the Federal Government in the Oceans Sector” (DFO 1997).

Table 1. Federal departments governed by legislation applicable to the oceans sector (DFO 1997).

Department	Legislation
Department of Fisheries and Oceans	<i>Canada Shipping Act, Coastal Fisheries Protection Act, Fisheries Act, Fisheries Development Act, Fishing and Recreational Harbours Act, Fish Inspection Act, Government Organization Act, Navigable Waters Act, Oceans Act</i>
Department of Foreign Affairs and International Trade	<i>Coasting Trade Act, Foreign Affairs and International Trade Act, Oceans Act</i>
Department of National Defence	<i>Canadian Shipping Act, Emergencies Act, International Convention for the Safety of Life at Sea</i>
Department of Justice	<i>Department of Justice Act, Oceans Act</i>
Department of Indian and Northern Affairs	<i>Arctic Waters Pollution Prevention Act, Canada Petroleum Resources Act, Nunavut Land Claims Agreement Act, Western Arctic (Inuvialuit) Claims Settlement Act</i>
Natural Resources Canada	<i>Arctic Waters Pollution Prevention Act, Canada-Newfoundland Atlantic Accord Implementation Act, Canada-Nova Scotia Offshore Petroleum Resources Accord Implementation Act, Canada Oil and Gas Operators Act, Canadian Petroleum Resources Act, Resource and Technical Surveys Act</i>
Transport Canada	<i>Canada Shipping Act, Coastal Trade Act, Government</i>

	<i>Organization Act, International Convention for the Safety of Life at Sea, National Transportation Act (1987), Pilotage Act, Public Harbours and Port Facilities Act, St. Lawrence Seaway Authority Act, Shipping Conference Exemption Act (1987)</i>
Privy Council Office	<i>Canadian Transportation Accident Investigation and Safety Board Act</i>
Environment Canada	<i>Canadian Wildlife Act, Canadian Environmental Assessment Act, Canadian Environmental Protection Act, Fisheries Act (sections 36-42), Government Organizations Act, Migratory Birds Convention Act</i>
Department of Canadian Heritage	<i>National Parks Act</i>
Health Canada	<i>Food and Drug Act</i>
Public Works and Government Services Canada	<i>Department of Public Works and Government Services Act</i>

Provincial government departments and agencies that work in conjunction with oceans management are listed in Table 2. A detailed overview can be found in the publication, “The Role of Provincial and Territorial Governments in the Oceans Sector” (DFO 1997).

Table 2. Provincial government departments and legislation applicable to the oceans management sector (DFO 1997, Government of Newfoundland and Labrador 2004).

Department	Legislation
Department of Environment and Conservation	<i>Environment Act, Environment Assessments Act, Provincial Parks Act, Wilderness and Ecological Reserves Act, Waste Materials Disposal Act, Pesticides Act, Water Resources Act</i>
Department of Fisheries and Aquaculture	<i>Professional Fish Harvesters Act, Federal Provincial Joint Fisheries and Aquaculture Development Agreements, Aquaculture Act and Regulations, Fisheries Restructuring Act, Fish Inspection Act, Fisheries Loan Act,</i>
Department of Government Services and lands	<i>Lands Act, Occupational Health and Safety Act</i>
Department of Natural Resources	<i>Canada Newfoundland Atlantic Accord Implementation Act</i>
Department of Municipal and Provincial Affairs	<i>Municipalities Act</i>
Department of Tourism Culture and Recreation	<i>Historic Resources Act, Provincial Parks Act, Wilderness and Ecological Reserves Act, Archives Act</i>
Innovation, Trade and Rural Development	<i>Economic Diversification and Growth Enterprises Act</i>

Provincial departments also play a role in oceans management and have responsibilities in the oceans sector. Offices of numerous government departments and agencies located throughout the province that work in conjunction with oceans management are listed in Table 3. A detailed overview can be found in the publication, “The Role of Provincial and Territorial Governments in the Oceans Sector” (DFO 1997).

Table 3. Provincial government departments and legislation applicable to the oceans management sector (DFO 1997. (Government of Newfoundland and Labrador 2004).

Department	Legislation
Department of Environment and Conservation	<i>Environment Act, Environment Assessments Act, Provincial Parks Act, Wilderness and Ecological Reserves Act, Waste Materials Disposal Act, Pesticides Act, Water Resources Act</i>
Department of Fisheries and Aquaculture	<i>Professional Fish Harvesters Act, Federal Provincial Joint Fisheries and Aquaculture Development Agreements, Aquaculture Act and Regulations, Fisheries Restructuring Act, Fish Inspection Act, Fisheries Loan Act,</i>
Department of Government Services and lands	<i>Lands Act, Occupational Health and Safety Act</i>
Department of Natural Resources	<i>Canada Newfoundland Atlantic Accord Implementation Act</i>
Department of Municipal and Provincial Affairs	<i>Municipalities Act</i>
Department of Tourism Culture and Recreation	<i>Historic Resources Act, Provincial Parks Act, Wilderness and Ecological Reserves Act, Archives Act</i>
Innovation, Trade and Rural Development	<i>Economic Diversification and Growth Enterprises Act</i>

Although no one lead organization exists within provincial government for oceans management, various departments have managerial jurisdiction over human activities within their respective coastal and estuarine areas. With respect to marine harvesting and processing, the Department of Fisheries and Aquaculture (DFA) is responsible for numerous marine related activities. The DFA plays a key role in fishing and aquaculture diversification, quality assurance, inspection, and regulatory enforcement. The Department is also responsible for licensing of processing plants, fish buyers, and aquaculture activities along with planning communications, advocacy, and information services in the Oceans Sector (DFA 2002).

3.3 Traditional /Aboriginal Governance

The South Coast of Newfoundland is home to one aboriginal group, the Mi'kmaq people, most of whom reside on the Miawpukek Reserve at Conne River, which is an area of some 14 square miles at the head of Bay d'Espoir. The Miawpukek Band was recognized by the Government of Canada in 1984 as Status Indians under the *Indian Act*. The Miawpukek First Nation is governed by a Chief and six Councillors. The community strives to be economically self-sufficient and guided by traditional Native values. A smaller number of individuals of aboriginal descent live outside of the Miawpukek Reserve in various locations along the South Coast, such as Burgeo. These individuals do not possess the same rights as those living within the Miawpukek Reserve. For approximately three decades, the Federation of Newfoundland Indians (FNI) has been advocating for the recognition of Newfoundland Mi'kmaq residing on the island of

Newfoundland outside of Conne River. Recently the FNI had been successful in entering into formal negotiations with the Government of Canada over an Agreement-in-Principle. The negotiations are expected to conclude in the spring of 2006 (Federation of Newfoundland Indians Newsletter 2006).

3.4 Industry Boards, Cooperatives, and Non-Governmental Organizations

Many local, regional, and international organizations play a role in the sustainable management and development of the Newfoundland's coastal resources. These include industry and resource users in the fishing, aquaculture, oil and gas, transportation, and tourism sectors, as well as land-based businesses in forestry, agriculture, mining, energy, and manufacturing. Table 4 lists some of the industry boards whose memberships include corporations that do business along the South Coast (from: http://www.dfo-mpo.gc.ca/sch/hb2_nf_e.asp Accessed May 16, 2006).

Table 4. Industry boards whose memberships include corporations doing business along the South Coast.

Industry Board	Mandate/Mission
Newfoundland Aquaculture Industry Association (NAIA)	NAIA is a member based non-profit organization that represents the interests of aquaculturists in Newfoundland. Their mandate is to facilitate and promote commercial development of aquaculture.
Fish, Food and Allied Workers (FFAW)	The FFAW represents 20,000 working women and men throughout Newfoundland and Labrador, most of whom are employed in the fishing industry. They are the province's largest private sector union.
Newfoundland Salmonid Growers Association (NSGA)	The mandate of the NSGA is to assist the Newfoundland salmonid aquaculture industry to develop into a global supplier of top quality Atlantic salmon and steelhead trout products that are grown in the cold deep fjords of Bay d'Espoir.
Newfoundland and Labrador Environmental Industry Association (NEIA)	The Mission of NEIA is to promote the growth and development of the environmental industry of Newfoundland and Labrador. Membership includes corporations working in environmental engineering and assessment, water and wastewater treatment, planning, and a variety of other services.
The Canada-Newfoundland and Labrador Offshore Petroleum Board (C-NLOPB)	The C-NLOPB is a federal-provincial authority established in 1985 to administer the relevant provisions of the Canada-Newfoundland Atlantic Accord Implementation Acts as legislated in the Parliament of Canada and the Legislature of Newfoundland and Labrador.
Newfoundland Ocean Industries Association (NOIA)	NOIA's mission is to promote development of East Coast Canada's hydrocarbon resources and to facilitate its membership's participation in oil and gas industries.
Multi-Materials Stewardship Board (MMSB)	MMSB has worked with stakeholders throughout the province to develop and implement recycling and waste diversion programs to help keep Newfoundland and Labrador healthy, clean, and green.
Newfoundland and Labrador Federation of Agriculture (NLFA)	The objective of the NLFA is to coordinate the efforts of Newfoundland farmers, to render services that will promote and advance the social and economic conditions of those engaged in agricultural pursuits, and to assist in formulating and promoting Agricultural policies.

The Ramea fish processing plant is organized as a cooperative-the “Ramea Cooperative” and its members are the decision-makers with respect to the operation of the plant.

Harbour Authorities are typically non-profit, local organizations that operate and manage harbours in accordance with local needs. They typically have strong ties to the community and local fishing industry. Harbour Authorities provide services and strengthen public investment and also establish ways in which the community can participate in the planning, operation, and maintenance of the harbour facilities. Table 5 presents a list of the Harbour Authorities along the South Coast.

Table 5. Harbour Authorities and fishers’ committees on the South Coast of Newfoundland and Labrador.

Harbour Authority	Harbour(s)
Harbour Authority of Burnt Islands	Burnt Islands
Harbour Authority of Port aux Basques	Port aux Basques
Harbour Authority of Isle aux Morts	Isle aux Morts
Harbour Authority of Rose Blanche - Harbour Le Cou	Rose Blanche, Harbour Le Cou
Harbour Authority of Margaree - Fox Roost	Margaree, Fox Roost
Harbour Authority of Burgeo	Burgeo
Harbour Authority of Ramea	Ramea
Harbour Authority of Francois	Francois
Harbour Authority of Belleoram	Belleoram
Harbour Authority of Harbour Breton	Harbour Breton
Harbour Authority of Hermitage	Hermitage
Harbour Authority of Pool's Cove	Pool's Cove
Harbour Authority of Rencontre East	Rencontre East
Harbour Authority of Seal Cove (Connaigre Bay)	Seal Cove
Harbour Authority of McCallum	McCallum
Harbour Authority of English Harbour East	English Harbour East
Harbour Authority of Fortune	Fortune
Harbour Authority of Garnish	Garnish
Harbour Authority of Grand Bank	Grand Bank
Harbour Authority of Grand Le Pierre	Grand Le Pierre
Harbour Authority of St. Bernard's	St. Bernard's
Harbour Authority of Harbour Mille	Harbour Mille
Harbour Authority of Little Harbour East	Little Harbour East

Non-governmental organizations also play a role in helping to ensure the conservation and management of coastal resources and special places throughout the province. Most of these nongovernmental organizations are based in St. John's or Corner Brook and may have direct interests along the South Coast. Such organizations would include but are not limited to Ducks Unlimited, the Salmon Preservation Association for the Waters of

Newfoundland, Legacy Nature Trust, Protected Areas Association of Newfoundland and Labrador, and the Newfoundland and Labrador Environmental Network.

Community and academic/research groups also play a role in helping the public to understand management issues, particularly in view of the shift from single sector or activity-specific management to ecosystem-based management. A number of groups and associations have been established in part to address coastal zone management issues and the conservation of coastal marine resources (Murphy 2001). Given the legacy of the South Coast region's attachment to the sea and the commercial fishery, it is not unexpected that local community groups have now expressed a renewed interest in managing coastal areas in a sustainable manner.

3.5 Federal and Provincial Government Legislative Representation

The Province of Newfoundland and Labrador comprises seven federal and 48 provincial electoral districts (<http://www.stats.gov.nl.ca/Maps/>) with a total population of approximately 512,930 people (Statistics Canada 2001). The South Coast forms part of one federal riding known as Random-Burin-St. Georges, which has a total population of approximately 76,089 (Elections Canada 2004) (Figure 3) and includes four provincial electoral districts: Electrical Districts No. 3 Bellevue, No. 6 Burgeo-La Poile, No. 15 Fortune Bay- Cape La Hune, and No. 17 Grand Bank (Figure 3). The larger communities within each riding or division are presented in Table 6.

Table 6. Federal riding and provincial electoral divisions representing the South Coast.

Provincial Electoral Division	Key Communities	Federal Riding
Bellevue	Clarenville	Random-Burin-St. Georges
Burgeo-La Poile	Channel-Port aux Basque, Burgeo	Random-Burin-St. Georges
Fortune Bay- Cape La Hune	Harbour Breton, St. Albans	Random-Burin-St. Georges
Grand Bank	Fortune, Grand Bank	Random-Burin-St. Georges

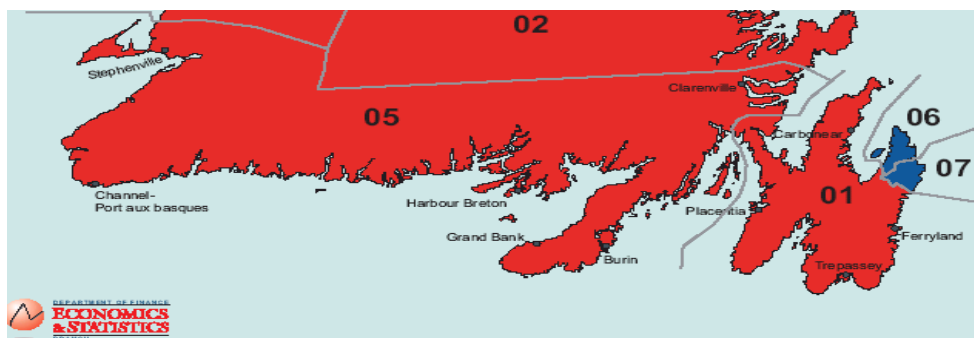


Figure 2. Federal electoral district for the South Coast of Newfoundland (Newfoundland and Labrador Statistics Agency).

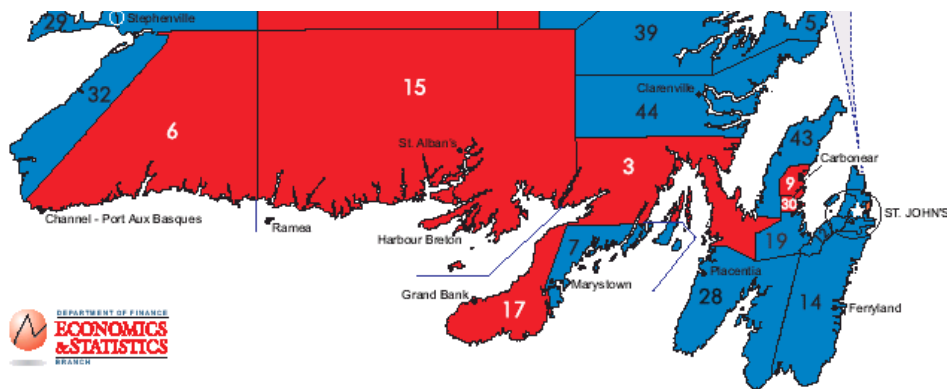


Figure 3. Provincial electoral districts for the South Coast of Newfoundland (Newfoundland and Labrador Statistics Agency).

3.6 Regional Economic Development Boards

During the mid-1990s the provincial government established 20 Regional Economic Development (RED) Zones across the province. The board of each zone is responsible for implementing regional economic development initiatives within the zone's geographic boundaries.

The South Coast region between Cape Ray and Point Crewe is covered by four Regional Economic Development Zone jurisdictions (Figure 4): Zone 10, Marine and Mountain Zone Corporation; Zone 9, Long Range Mountain Economic Development Board; Zone 13, Coast of Bays Corporation; and Zone 16, Schooner Regional Development Corporation. Table 7 lists the contact information for each zone.

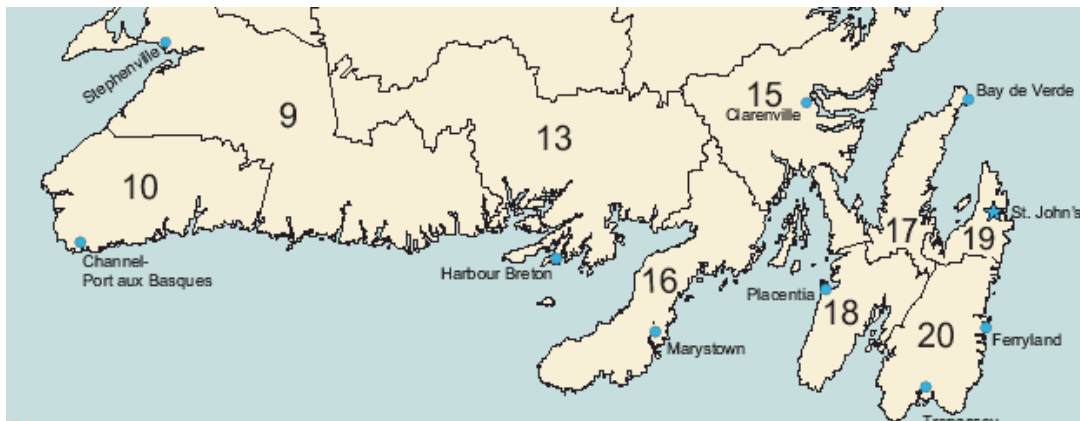


Figure 4. Regional Economic Development Zones 10, 9, 13, and 16. Each Zone includes a portion of the South Coast (Newfoundland and Labrador Statistics Agency).

Table 7: Regional economic development boards operating along the South Coast and their contact information.

Zone	Address	Contact
Zone 10	Marine and Mountain Zone Corporation P.O. Box 2009 Port aux Basques, NF A0M 1C0	Telephone: (709) 695-9350 Fax: (709) 695-7925 Email: webmaster@mmzc.com http://www.mmzc.com/
Zone 9	Long Range Regional Economic Development Board 35 Carolina Avenue Stephenville, NL A2N 3P8	Telephone: (709) 643-3318 Email: thutchings@wec.northatlantic.nf.ca http://www.zone-9.com/
Zone 13	Coast of Bays Corporation P.O. Box 310 St. Alban's, NL A0H 2E0	Telephone: (709) 538-3552 Fax: (709) 538-3627 Toll Free: 1-800-205-0799 Email: inquiries@coastofbays.nl.ca http://www.coastofbays.nl.ca/
Zone 16	Schooner Regional Development Corporation P.O. Box 580 Marystown, NL A0E 2M0	Telephone: (709) 279-4641 Fax: (709) 279-4880 Toll Free: 1-888-279-4646 E-Mail: Schooner@nf.aibn.com http://www.schooner.nf.ca/

3.7 Rural Secretariat

A Rural Secretariat established by the Government of Newfoundland and Labrador in 2004 comprises nine regional councils and one provincial council for the purpose of providing advice and guidance on rural issues and regional strategies developed for the province. The Secretariat will help promote cooperation among communities, regions, and governments so as to address the social and economic needs of rural areas of the province (Rural Secretariat 2006).

Three of the nine Rural Secretariat regions comprise the South Coast communities between Cape Ray and Point Crewe. They are as follows: Stephenville – Port aux Basques, which includes Cape Ray to Baie d’Espoir; Grand Falls-Windsor—Baie Verte—Harbour Breton, which includes Baie d’Espoir to Long Harbour at the head of Fortune Bay; and Burin Peninsula, which includes Long Harbour to Point Crewe (Newfoundland and Labrador Statistics Agency, 2006).

3.8 Other Districts

Health and education activities of the province are organized by zones or districts that are distinct from political or economic zones. The communities of the South Coast region are organized among three School Board districts: District 2 (Western), comprising Cape Ray to François; District 3 (Nova Central), from François to Rencontre in Fortune Bay; and District 4 (Eastern), from Rencontre to Pointe Crewe.

Similarly, South Coast communities are grouped among Western, Central, and Eastern Health Authorities. The Western Health Authority includes Cape Ray to McCallum, the Central Health Authority from McCallum to Long Harbour, and the Eastern Health

Authority from Long Harbour to Point Crewe. The Health and Community Service Boards and the Institutional Health Boards are classified similarly (Newfoundland and Labrador Statistics Agency 2006).

4.0 Human Settlements

4.1 Communities

There are currently 45 communities along the South Coast (Figure 1), each of which is registered with the province as either a municipality or as part of an unorganized Census Subdivision (CSD). Table 8 lists the communities of the South Coast region by Regional Economic Development Zone and identifies those communities that fall within Unorganized CSD's. The Consolidated Service District is an important classification used by Statistics Canada and thus appears in several appendices of this report.

Table 8. Communities of the South Coast in 2006, by Regional Economic Development Zone.

Zone 10	Zone 9	Zone 13	Zone 16	
Burnt Islands	Burgeo	Belleoram	Bay L'Argent	
Channel-Port aux Basques	Ramea	Gaultois	English Harbour East	
Isle aux Morts	Unorganized CSD 3E <i>Francois</i>	Harbour Breton	Fortune	
Rose Blanche - Harbour le Cou		Hermitage	Frenchman's Cove	
Unorganized CSD 3H <i>Cape Ray</i> <i>Fox Roost</i> <i>Long Grade</i> <i>Margaree</i>	Unorganized CSD 3F <i>Grey River</i>	Milltown - Head of Bay d'Espoir	Garnish	
		Morrisville	Grand Bank	
	Unorganized CSD 3I <i>Grand Bruit</i> <i>La Poile</i>		Pools Cove	Grand le Pierre
			Rencontre	Little Bay East
Samiajj Miawpukek			St. Bernard's - Jacques Fontaine	
Seal Cove, Fortune Bay			Terrenceville	
St. Alban's			Unorganized CSD 2G	
St. Jacques - Coomb's Cove			Unorganized CSD 2H	
Unorganized CSD 3A			<i>Grand Beach</i>	
Unorganized CSD 3B			<i>L'Anse au Loup</i>	
Unorganized CSD 3D <i>McCallum</i> <i>St. Joseph's Cove</i> <i>St. Veronica's</i>			Unorganized CSD 2I <i>Harbour Mille - Little Harbour East</i> <i>Little Bay East</i>	
			Unorganized CSD 2J	

Most South Coast communities are linked to the rest of Newfoundland by road systems, while several others have no road access and still rely on ferry service (Figure 1). All communities of the South Coast are situated on or near the shore. (Winterland, and inland community on the Burin Peninsula, lies within a watershed that drains to Placentia Bay.)

Since the time of settlement, several communities of Newfoundland and Labrador have experienced a name change and the communities of the South Coast are no exception. The name change may have occurred in order to avoid confusion with other communities by the same name or to facilitate the operation of a post office. One example is St. Alban's, formerly known as Ship Cove, but changed to St. Alban's in about 1915 to avoid confusion with other communities with the name of Ship Cove. Another example is Grey River, formerly known as Little River, which underwent a name change after a tragic mistake occurred following an outbreak of a severe form of measles around the turn of the century. Reportedly a request for medical assistance was sent to St. John's, but the doctor and supplies were dispatched to a community by the same name on the Northern Peninsula, resulting in a great many people of Grey River dying. Explanations for such name changes as well as a summary of the history of many South Coast communities can be found in the Encyclopedia of Newfoundland (Smallwood 1984).

4.2 Abandoned Communities

The South Coast has experienced dramatic fluctuations in populations over the past 150 years. The appearance and growth of communities has experienced both growth and decline as influenced by a range of socio-economic and political factors that have spanned the past two centuries. None of these factors was more influential than the opportunities and challenges associated with commercial fisheries.

A journey along the South Coast provides an opportunity to visualize the magnitude and breadth of human settlement before the time of re-location programs and more modern influences that have led to residents moving elsewhere. The footprints of dwellings can be found all along the South Coast (Dan Murphy, Western School District, Box 368, Corner Brook, NL, pers. comm.). During its height of settlement, which would have been during the period from about 1900 to 1920, the number of communities rose to above 200 for the South Coast alone (Census of Newfoundland, 1911). Figure 5 illustrates the locations of several abandoned communities that existed during the period 1900—1920 and Table 9 lists these communities by name. The coordinates for abandoned communities are listed in a publication by Mobilewords (1998). The sites, artefacts, and stories that remain or are associated with the abandoned communities need to be recognized for their value—whether potential or real—to residents, tourists, researchers, and other stakeholders who may engage in integrated management planning.

4.3 Population: Status and Trends

The following sources were consulted for the information on population and demographics: Statistics Canada (Census 2001), and Newfoundland and Labrador Statistics Agency.

In 2001, the population of the South Coast region was 27,225. The region has six large communities (Port aux Basques, Burgeo, Harbour Breton, St. Albans, Fortune, and Grand Bank) with populations of greater than 1000. The remaining 39 communities have populations of less than 1000 with some as low as 117 individuals (Table 10a and 10b).

Figure 6 illustrates the comparative populations of communities along the South Coast (Statistics Canada (Census 2001), Newfoundland and Labrador Statistics Agency).

The population of the South Coast has declined 20% since 1991. The only community showing a positive growth rate Samiajij Miawpukek, with an 11% increase in population from 1996 to 2001 and a 37% increase from 1991 to 2001. Figure 7 illustrates percent change in population from 1991 to 2001 by community (Newfoundland and Labrador Statistics Agency).

Research by the Department of Human Resources, Labour, and Employment, has examined population changes in the province since 1991 and projected future changes to the year 2019. The preliminary findings, which are based on data from the Department of Finance, Economics, and Statistics Branch, indicate that the population for the province as a whole will continue to decline but at a slower pace. However, the population decline among 20-64 years old is increasing. The rapid decline among individuals 20-64 years old is influenced by two main factors: out-migration and a change in the natural population growth towards the negative as a result of declining birth rates. Populations within the three Rural Secretariat Regions that encompass the South Coast communities are predicted to follow these overall provincial trends (Department of Human Resources, Labour and Employment 2005).

Table 9. Mapped abandoned communities

Community	Area	Community	Area
Anderson Cove	Fortune Bay	Parsons Harbour	Rencontre Bay
Bay de l'Eau	Fortune Bay	Pass Island	Hermitage Bay
Bay de Loup	Fortune Bay	Patricks Harbour	Hermitage Bay
Brunette	Fortune Bay	Peys Cove	Fortune Bay
Cinq Cerf	South Coast	Piccaire	Hermitage Bay
Connaigre	Connaigre Bay	Point Crewe	Burin Peninsula
Coppett	South Coast	Point Enragee	Burin Peninsula
Corbin	Belle Bay	Pooles Island	Bonne Bay
Cul de Sac West	Aviron Bay	Pushthrough	Bay d'Espoir
Dantzig	Burin Peninsula	Raymonds Island	Bay d'Espoir
Deer Island	White Bear Bay	Raymonds Point	Bay d'Espoir
Doctors Harbour	Belle Bay	Red Cove	Great Bay de l'Eau
Dog Cove	Bay de Vieux	Red Island	South Coast
Dragon	Hermitage Bay	Rencontre West	Devil Bay
Fox Island Harbour	Bay de Vieux	Richards Harbour	South Coast
Furbys Cove	Hermitage Bay	Round Cove	Hermitage Bay
Garia	South Coast	Round Cove	Hermitage Bay
Goblin	Bay d'Espoir	Round Harbour	Hermitage Bay
Grand John	Fortune Bay	Saddle Island	Bay d'Espoir
Grandys Passage	South Coast	Sagona Island	Fortune Bay
Great Jarvis	Bay d'Espoir	Sam Hitches Harbour	Hermitage Bay
Grole	Hermitage Bay	Scouse Cove	Bay d'Espoir
Hiscocks Point	South Coast	Seal Island Harbour	South Coast
Hoop Cove	Fortune Bay	St. John Harbour	Fortune Bay
Indian Harbour	La Poile Bay	Stanley Cove	Bay d'Espoir
Cape La Hune	La Hune Bay	Stone Valley	Bay d'Espoir
Lally Cove	Belle Bay	Stones Cove	Fortune Bay
Langue de Cerf	Fortune Bay	Swoir Cove	White Bear Bay
Little Bay	Great Bay de l'Eau	Tickle Beach	Fortune Bay
Millers Passage	Great Bay de l'Eau	Trammer	Fortune Bay
Molliers	Burin Peninsula	Turnip Cove	Belle Bay
Mosquito	Bonne Bay	Webbers	Burin Peninsula
Muddy Hole	Hermitage Bay	West Point	La Poile Bay
New Harbour	Fortune Bay	White Bear Bay	White Bear Bay
Olive Cove	Hermitage Bay	Bay du Nord	Belle Bay
Otters Point	Couteau Bay	North Bay	La Poile Bay

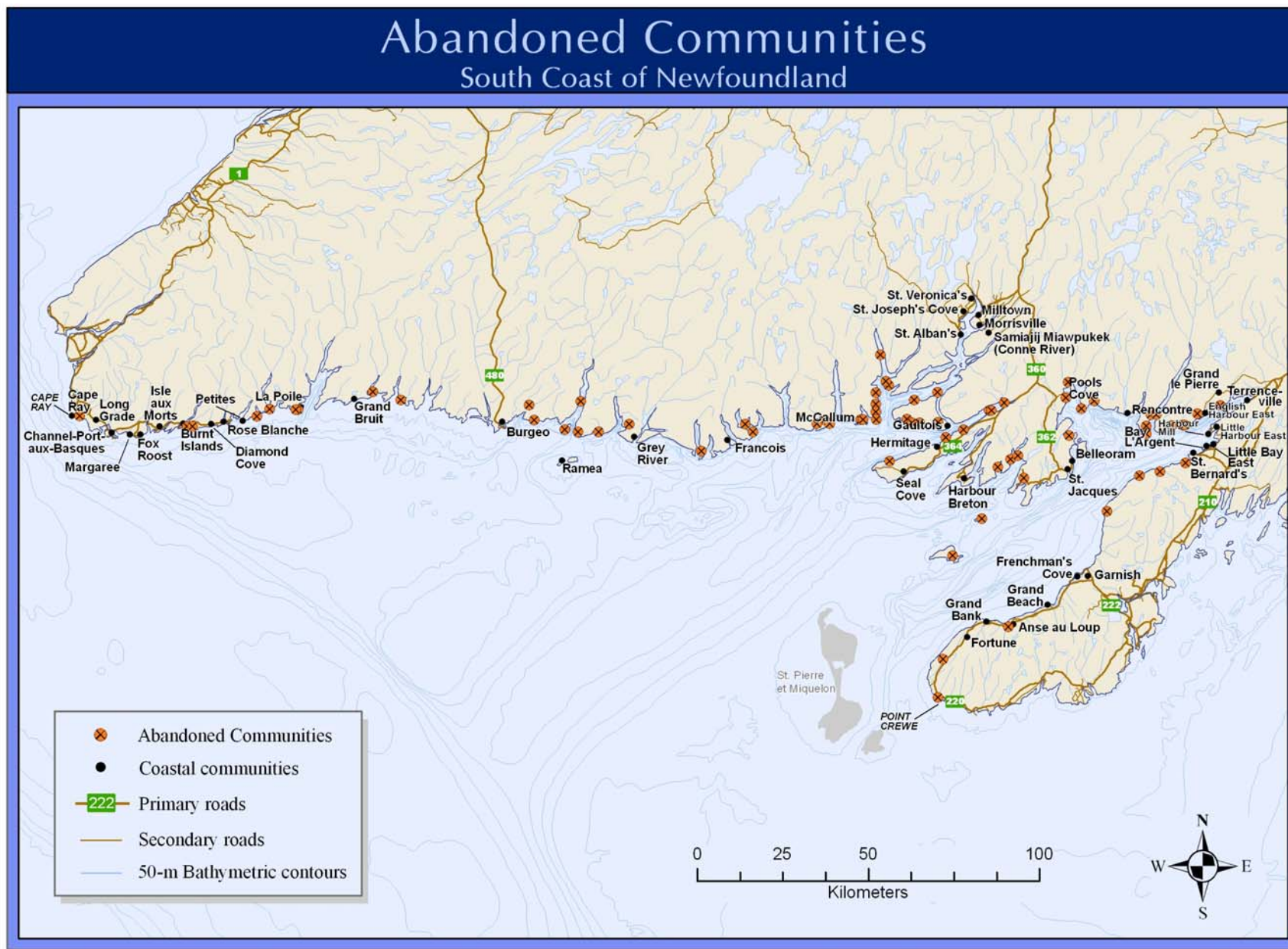


Figure 5. Abandoned Communities of the South Coast of Newfoundland (1900-1920).

Table 10a. Community populations and dwellings by Economic Zone

Zone	CCS	Community	1991	1996	2001	Percent Change (1996 - 2001)	Percent Change (1991 - 2001)	Dwellings 2001
<i>Economic Zone 9 - Long Range Regional Economic Development Board</i>								
9	3F	Burgeo	2,400	2,098	1,782	-15%	-26%	740
9	3F	Ramea	1,224	1,080	754	-30%	-38%	342
9	3E	Unorganized CSD 3E	187	175	162	-7%	-13%	60
9	3F	Unorganized CSD 3F	181	188	174	-7%	-4%	142
Total			3,992	3,541	2,872	-19%	-28%	1,284
<i>Economic Zone 10 - Marine and Mountain Zone Corporation</i>								
10	3H	Burnt Islands	1,024	919	801	-13%	-22%	266
10	3H	Channel-Port aux Basques	5,644	5,243	4,637	-12%	-18%	1,918
10	3H	Isle aux Morts	1,146	988	813	-18%	-29%	316
10	3J	Rose Blanche-Harbour le Cou	918	814	668	-18%	-27%	304
10	3H	Unorganized CSD 3H	1,031	928	745	-20%	-28%	318
10	3I	Unorganized CSD 3I	232	205	181	-12%	-22%	94
10	3J	Unorganized CSD 3J	218	175	115	-34%	-47%	45
Total			10,213	9,272	7,960	-14%	-22%	3,261
<i>Economic Zone 13 - Coast of Bays Corporation</i>								
13	3A	Belleoram	560	564	484	-14%	-14%	173
13	3C	Gaultois	516	423	321	-24%	-38%	129
13	3B	Harbour Breton	2,418	2,290	2,079	-9%	-14%	691
13	3C	Hermitage	756	687	602	-12%	-20%	233
13	3D	Milltown - Head of Bay d'Espoir	1,161	1,124	884	-21%	-24%	376
13	3D	Morrisville	201	194	151	-22%	-25%	54
13	3A	Pools Cove	258	241	206	-15%	-20%	95
13	3A	Rencontre	212	215	202	-6%	-5%	68
13	3D	Samiaijj Miawpukek	613	751	837	11%	37%	259
13	3C	Seal Cove, Fortune Bay	467	419	370	-12%	-21%	140
13	3D	St. Alban's	1,586	1,563	1,372	-12%	-13%	541
13	3A	St. Jacques - Coomb's Cove	880	827	707	-15%	-20%	304
13	3A	Unorganized CSD 3A	7	0	0	0%	-100%	50
13	3B	Unorganized CSD 3B	3	0	0	0%	-100%	21
13	3D	Unorganized CSD 3D	393	348	323	-7%	-18%	304
Total			10,031	9,646	8,538	-11%	-15%	3,438

Source: Statistics Canada and Newfoundland and Labrador Statistics Agency

Table 10b. Community populations and dwellings by Economic Zone

Zone	CCS	Community	1991	1996	2001	Percent Change (1996 - 2001)	Percent Change (1991 - 2001)	Dwellings 2001
<i>Economic Zone 16 - Schooner Regional Development Corporation</i>								
16	2I	Bay L'Argent	403	377	320	-15%	-21%	148
16	2J	English Harbour East	288	253	217	-14%	-25%	76
16	2H	Fortune	2,177	1,969	1,615	-18%	-26%	789
16	2H	Frenchman's Cove, Fortune Bay	229	220	195	-11%	-15%	126
16	2H	Garnish	716	691	665	-4%	-7%	308
16	2H	Grand Bank	3,528	3,328	2,841	-15%	-19%	1,190
16	2J	Grand le Pierre	356	327	294	-10%	-17%	107
16	2I	Little Bay East	201	180	144	-20%	-28%	67
16	2I	St. Bernard's - Jacques Fontaine	852	751	657	-13%	-23%	233
16	2J	Terrenceville	818	737	630	-15%	-23%	238
16	2G	Unorganized CSD 2G	20	8	5	-38%	-75%	64
16	2H	Unorganized CSD 2H	104	102	120	18%	15%	333
16	2I	Unorganized CSD 2I	287	224	182	-19%	-37%	286
16	2J	Unorganized CSD 2J	1	0	0	0%	-100%	25
Total			9,980	9,167	7,885	-14%	-21%	3,990
<i>Entire Study Area</i>								
Total			34,216	31,626	27,255	-14%	-20%	11,973

Source: Statistics Canada and Newfoundland and Labrador Statistics Agency

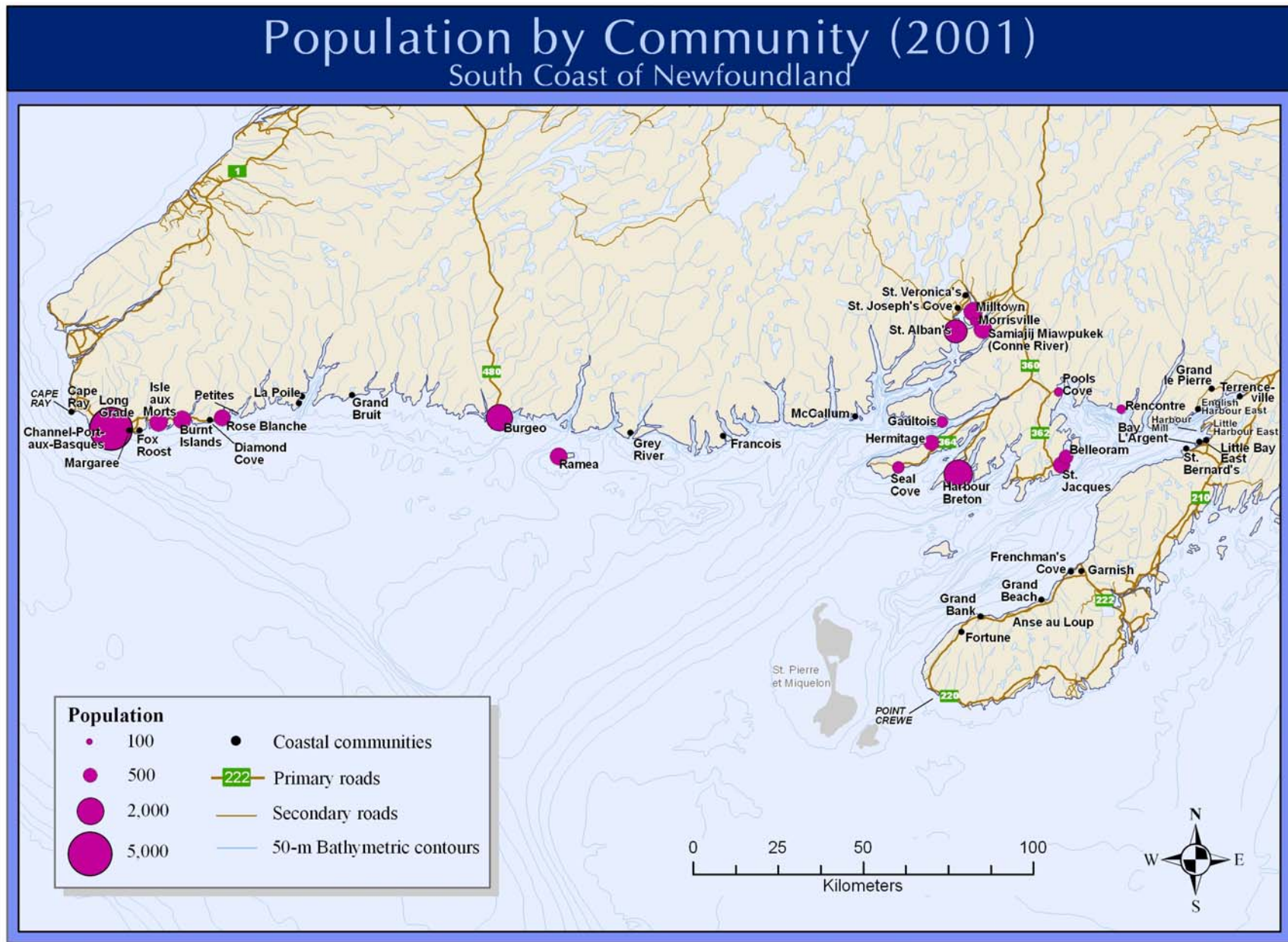


Figure 6. Population of Communities of the South Coast of Newfoundland in 2001 (Statistics Canada).

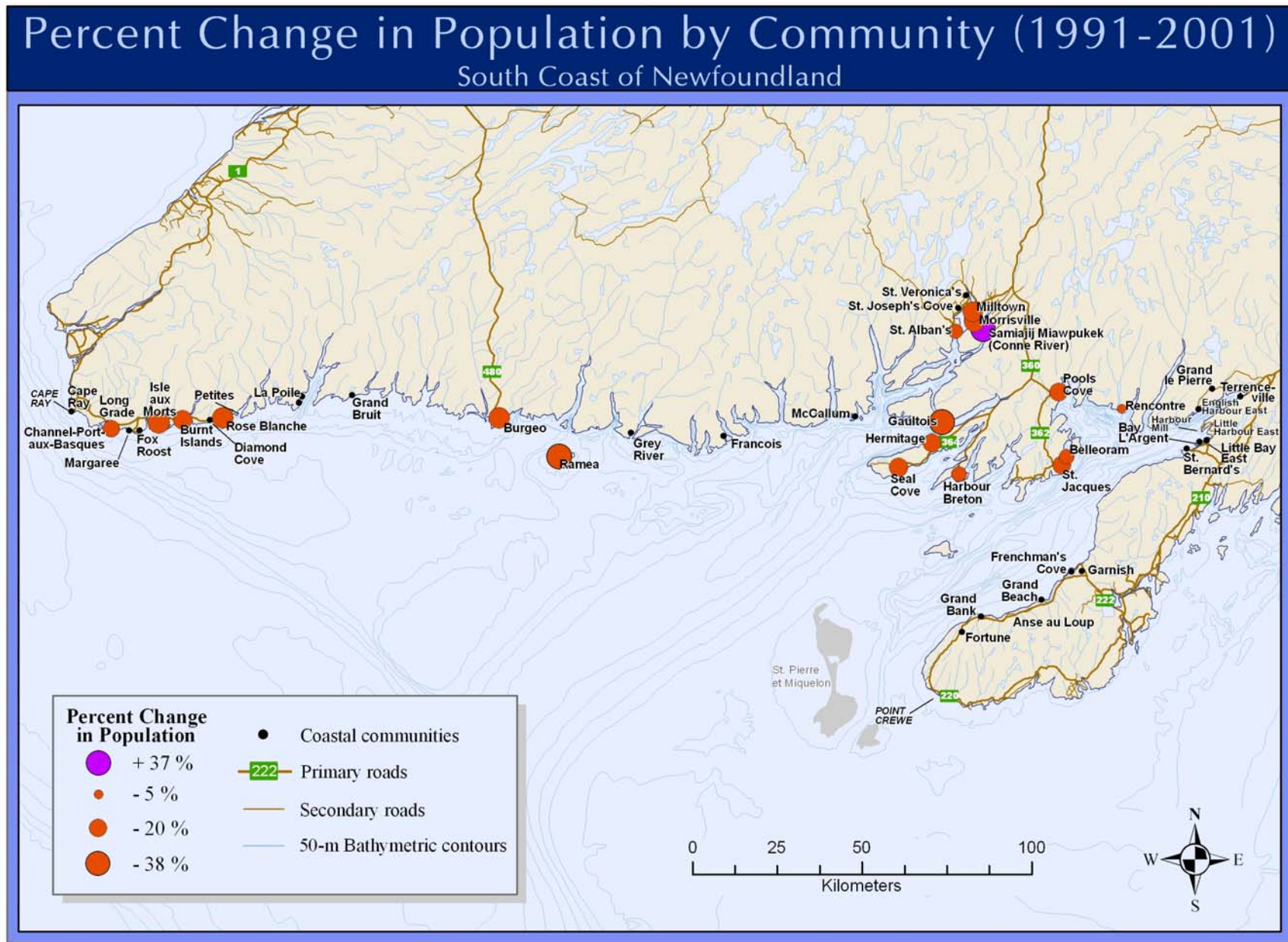


Figure 7. Percent change in population (1991 - 2001). Data from the Newfoundland and Labrador Statistics Agency.

4.4 Labour Force, Income, Education

The province as a whole faces current and future labour market challenges, including an aging population, skills shortages, and competition for workers both nationally and internationally. These issues are expected to continue and have increased impact on the labour market in years to come. According to preliminary findings by the Department of Human Resources, Labour and Employment, the three Rural Secretariat Regions that encompass the South Coast communities are experiencing these same overall challenges to the labour market (Department of Human Resources, Labour and Employment 2005).

For the South Coast communities as a whole, the highest percentage of workers age 15 and over work in the sales and services sector. The top three industries are: manufacturing; agriculture, forestry, fishing and hunting; and retail trade. The average level of schooling among individuals age 20 years and over is less than grade 12. The median total income for residents age 15 years and over is \$13,369, median family income is \$32,390, and household income for all households is \$31,566 (Appendix A 1-13). Statistics Canada defines total, family, and household income as follows: total income is the total income from all sources for an individual; total [census] family income is the total income of an entire family; and total household income is the total income of an entire family within a private household (Statistics Canada 2001).

Appendix section (Appendix A 1-13) provides population tables broken down by sex, labour force, industry divisions, national occupation classification system, school attendance, and highest level of schooling for all South Coast communities. It also provides data on employment income (percent of total income), as well as annual income for individuals, families, and households.

4.5 Archaeological Sites and Artefacts

Archaeological researchers from Memorial University of Newfoundland, as well as other investigators from as early as the mid-nineteenth century, have documented the presence of four pre-contact cultures along the South Coast of Newfoundland. Along the coast at Burgeo alone, 39 archaeological sites have been documented in recent years. These include sites left by maritime Archaic Indians, Groswater Paleo-Eskimo, Dorset Paleo-Eskimo, and Recent Indian. In addition, there are numerous sites left by Europeans from the 19th and 20th centuries, as well as two early 18th or late 17th century sites (Rast 1999). As residents of the Burgeo region will testify, it is quite easy to find artefacts along the coast (Perry Young, Parks and Natural Areas, Gov. of NL, Deer Lake, NL, pers. comm.). These prehistoric and archaeological sites and artefacts need protection and visitors should be advised that they be left undisturbed. These sites and artefacts can enable researchers to learn more about the reliance of early cultures on seasonal availability of coastal resources and the mobile lifestyle of early residents. Evidence of similar patterns can be seen today in the lifestyles and activities of residents of the South Coast.

5.0 Human Activities: Harvesting of Renewable Marine Resources

5.1 Commercial Fishing

Commercial fisheries have long been the centre of economic activity for the South Coast of Newfoundland. The fishing industry has been of great economic and cultural importance to the region. Fishing provided a livelihood and sustained most of the South Coast communities for hundreds of years. Though recent years have witnessed a decline in several economically important fish stocks, the commercial fishery remains the most important economic base for many communities along the South Coast.

As of December 2005, there are approximately 3,179 commercial licences held by fishers with a homeport between Fortune and Cape Ray (Table 11). This total includes 315 for seal harvesting. Commercial licences are specified for various fishing gear including beach and bar seine, bottom otter trawl, Danish seine, Fyke net, gillnet (both set and fixed), hand line (baited), longline, midwater trawl, pot, purse seine, Scottish seine, shrimp beam trawl, and shrimp trawl. These gears are designed to harvest several diverse species including: benthic, pelagic, and groundfish species and shellfish. Appendix B presents the number of commercial licences for different gear types by homeport between Fortune and Cape Ray.

Table 11. Number of commercial licences held by fishers with a homeport between Fortune and Cape Ray by NAFO Region. Data as of December 2005

Fishery	3Ps	3Pn	Total
Bait	408	84	492
Capelin Fixed Gear	2	1	3
Capelin Purse Seine	1	0	1
Eel	7	2	9
Groundfish Danish Seine and Fixed Gear	0	7	7
Groundfish Fixed Gear	483	96	579
Groundfish Mobile Gear	3	3	6
Herring Fixed Gear	170	18	188
Herring Purse Seine	1	0	1
Lobster	318	48	366
Mackerel Fixed Gear	233	65	298
Mackerel Purse Seine	2	0	2
Scallop	190	0	190
Seal - Assistant	15	105	120
Seal - Professional	21	174	195
Snow Crab (Queen)	343	25	368
Squid	181	22	203
Swordfish	1	0	1
Tuna Bluefin	2	0	2
Tuna Other	1	0	1
Whelk	146	1	147
Total	2528	651	3179

A collection of diverse marine fish species, many of which have been utilized for commercial fisheries, are found along the South Coast of Newfoundland. Table 12 presents a list of marine fish species found along the South Coast. Key species, specifically, those exploited in commercial fishery efforts along the South Coast, and those that have generated the highest average annual revenues from 1985-2005 are identified with ** and a short discussion of each follows soon after in the report. In addition, four invertebrate species of commercial significance, the Atlantic snow crab (*Chionocetes opilio*), American lobster (*Homarus americanus*), Northern shrimp (*Pandallus borealis*), and the Iceland scallop (*Chlamys islandica*) are included in the report text.

Due to the large geographic range of the South Coast study area, landings data for commercially harvested species are presented by Divisions and Subdivisions of the North Atlantic Fisheries Organization (NAFO) within the text of the report (Tables 13-26, Figures 9-19 and 21-23) and also by DFO statistical sections in a separately bound set of Appendices. Statistical sections are DFO administrative boundaries. For the South Coast study area, the statistical sections are: Point Crewe to Point Rosie #33; Point Rosie to Boxey Point #34; Boxey Point to Pass Island Point #35; Pass Island Point to Cape La Hune #36; Cape La Hune to Fox Point #37; Fox Point to Rose Blanche Point #38; Rose Blanche Point to Cape Ray #39. Figure 8 presents the NAFO Divisions and Subdivisions and the DFO statistical sections for the South Coast of Newfoundland. Appendices H1 to H14, in a separate bound document, present weight (kilograms), percent weight, value (Canadian dollar), percent value, and number of active ports for annual landings of commercially harvested species for statistical section numbers 33-39.

Table 12. Marine fish species occurring in waters of the South Coast of Newfoundland.

Scientific Name	Common Name	Scientific Name	Common Name
<i>Acipenser oxyrinchus</i>	Atlantic sturgeon	<i>Mallotus villosus</i>	Capelin
<i>Aflonus decagonus</i>	Atlantic sea poacher	<i>Microgadus tomcod</i>	Tomcod
<i>Alosa pseudoharengus</i>	Alewife	<i>Molva bytkelange</i>	Blue ling
<i>Ammodytes americanus</i>	Sand lance	<i>Myoxocephalus</i>	
<i>Anarhichas lupus</i>	Atlantic wolfish	<i>Octodectes spinosus</i>	Longhorn sculpin
<i>Anguilla rostrata</i>	American eel	<i>Myxine glutinosa</i>	Hagfish
<i>Alosa sapidissima</i>	American shad	<i>Nemichthys scolopaceus</i>	American snipe eel
<i>Apeltes quadracus</i>	Fourspine stickleback	<i>Nezumia bairdi</i>	Marlin-spike
<i>Argentina silus</i>	Atlantic argentine	<i>Notolepis rissoi</i>	White barracudina
<i>Benthosema g. laiale</i>	American snipe eel	<i>Scomber scombrus</i>	Atlantic mackerel
<i>Brosme brosme</i>	Cusk	<i>Osmerus mordax</i>	Smelt
<i>Centroscyllium fabricii</i>	Black dogfish	<i>Pholis gunnellus</i>	Rock gunnel
<i>Ceratias holboelli</i>	Deep sea angler	<i>Phycis chesteri</i>	Long fin hake
<i>Cetorhinus maximus</i>	Basking shark	<i>Prionace glauca</i>	Blue shark
<i>Clupea harengus</i>	**Atlantic herring	<i>Pollachius virens</i>	**Pollock
<i>Crutatanthodes maculatus</i>	Wrymouth	<i>Pseudopleuronectes</i>	
<i>Cyclopterus lumpus</i>	**Lumpfish	<i>Americanus</i>	Winter flounder
<i>Enchelyopus cimbrius</i>	Fourbeard rocking	<i>Pungitius pungitius</i>	Ninespine stickleback
	Atlantic spiny lump	<i>Raja rariata</i>	Thorny skate
<i>Euminotremus spinosus</i>	Sucker	<i>Raja laevis</i>	Barn door skate
<i>Gadus morhua</i>	**Atlantic cod	<i>Raja senta</i>	Smooth skate
	Three spine	<i>Raja spinicauda</i>	Spiny tail skate
<i>Gasterosteus aculeatus</i>	Stickleback	<i>Reinhardtius hippoglossoides</i>	**Turbot/Greenland halibut
<i>Glyptocephalus cynoglossus</i>	**Witch flounder	<i>Salmo salar</i>	Atlantic salmon
<i>Hemirhamphus americanus</i>	Sea raven	<i>Salvelinus fontinalis</i>	Brook Trout
<i>Hippoglossoides platessoides</i>	**American plaice	<i>Scomber scombrus</i>	Atlantic mackerel
<i>Hippoglossus hippoglossus</i>	**Atlantic halibut	<i>Scomberesox saurus</i>	Glacier lantern fish
<i>Lamna nasus</i>	Porbeagle	<i>Somniosus microcephalus</i>	Greenland shark
<i>Limanda ferruginea</i>	Yellowtail flounder	<i>Sphoeroides maculatus</i>	Northern puffer
<i>Lophius americanus</i>	Monkfish	<i>Squalus acanthus</i>	Spiny dogfish
<i>Lycenchelys verrilli</i>	Wolf eelpout	<i>Sebastes spp.</i>	**Redfish
<i>Lycodes vahliei</i>	Vahl's eelpout	<i>Tautoglabrus adspersus</i>	Cunner
<i>Macrourus berglax</i>	Rough head grenadier	<i>Thunnus thynnus</i>	Bluefin tuna
<i>Merluccius bilinearis</i>	Silver hake	<i>Triglops murrayi</i>	Mailed sculpin
<i>Melanostigma atlanticum</i>	Atlantic soft pout	<i>Urophycis tenuis</i>	**White hake
<i>Melanogrammus</i>		<i>Xiphias gladius</i>	Swordfish
<i>Aeglefinus</i>	Haddock		

Adapted from: BP Environmental Research and Consulting Services, Torbay, Newfoundland. Original citation from Yurick and Vanstone (1983).

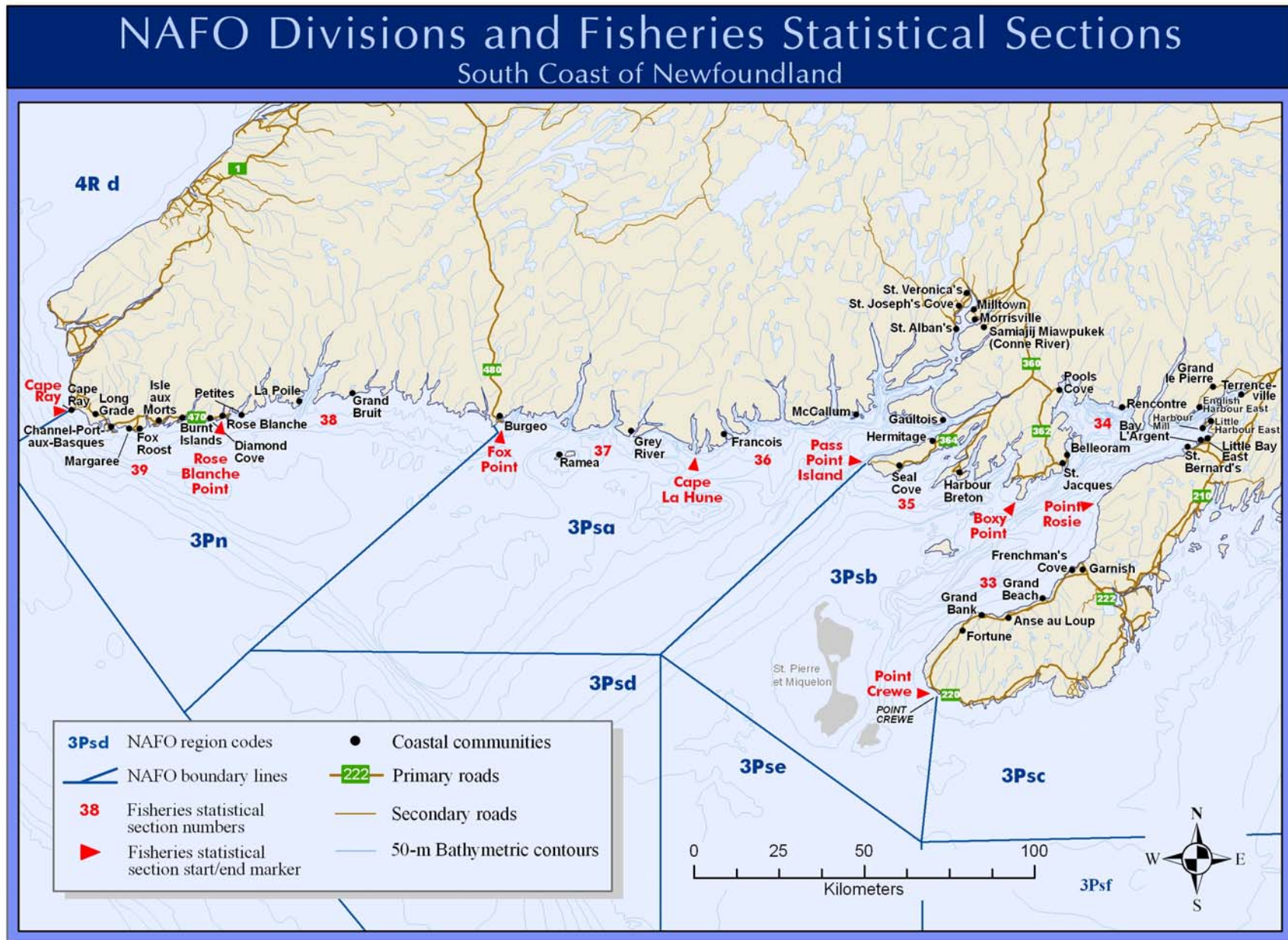


Figure 8. NAFO divisions and DFO statistical sections for the South Coast of Newfoundland. (Information supplied by DFO.)

Appendix C 1-4 presents the proportion of catch (i.e. landings by weight) by gear for commercially harvested species along the South Coast during the period 1985-2005.

Fisheries vessels are categorized by length from < 34 feet, 35-64 feet, 65-99 feet, and > 100 feet. During the period 2001-2005, 99% of American lobster was harvested from vessels less than 35 feet in length, while the majority (64%) of Atlantic cod was harvested from vessels of the same category. By comparison, 97% of Iceland scallop was harvested from vessels 35-64 feet in length and 71% of snow crab was harvested from vessels of the same category. The majority of turbot (60%) was harvested from vessels greater than 100 feet in length. The proportion of catch by vessel category for commercially harvested species along the South Coast in intervals during the period 1985 and 2005 are presented in Appendix D 1-4.

The annual percent value of commercially harvested species landed along the South Coast during intervals is presented by vessel category for the period 1985-2005 and by gear type for the period 1985-2005 in Appendix E 1-4. Percent value is the proportion of the combined value for all species. Figures do not include unregistered vessels.

The following sections describe commercial fishing activities for marine species of the South Coast, beginning with groundfish.

Groundfish

5.1.1 Atlantic Cod (*Gadus morhua*)

Atlantic cod stocks along the South Coast of Newfoundland are combined as the Laurentian North population and identified for management purposes by DFO as (1) St. Pierre Bank (NAFO Division 3Ps) and (2) Northern Gulf of St. Lawrence (NAFO Divisions 3Pn and 4RS). Respectively, these stocks are located north of the Laurentian Channel, along the South Coast of Newfoundland and bordering Quebec (COSEWIC 2003). Historically, these stocks have provided a foundation for the economic structure of the South Coast region. Cod stocks have supported an inshore fixed gear fishery for several centuries as one of the region's most important commercial species (Fisheries Resource Conservation Council 2004). Until the 1990s cod was the economic mainstay of Newfoundland.

As a result of decreased cod landings, concerns regarding the abundance and stability of cod stocks began to be registered by scientists and fishers in the late 1980s. These concerns resulted with the stocks being placed under moratorium in 1992 in order to conserve and rebuild the stocks to their historical level (Fisheries Resource Conservation Council 2004). In 1997 the Fisheries Resource Conservation Council (FRCC) recommended a limited commercial fishery in 3Psa and 3Psb

COSEWIC (2003) reports that the Laurentian North population has declined by approximately 80% over the past thirty years and is at or near historically low levels of

abundance. The primary cause for this trend is the decline in the Northern Gulf stock (3Pn4RS). In comparison, the St. Pierre Bank stock (3Ps) has experienced little change since 1974, remaining relatively stable (COSEWIC 2003). However, to date there is uncertainty as to the status of the Laurentian North population and landings of Atlantic cod in the South Coast region have remained consistently below pre-moratorium levels despite imposed catch limit quotas (FRCC 2004).

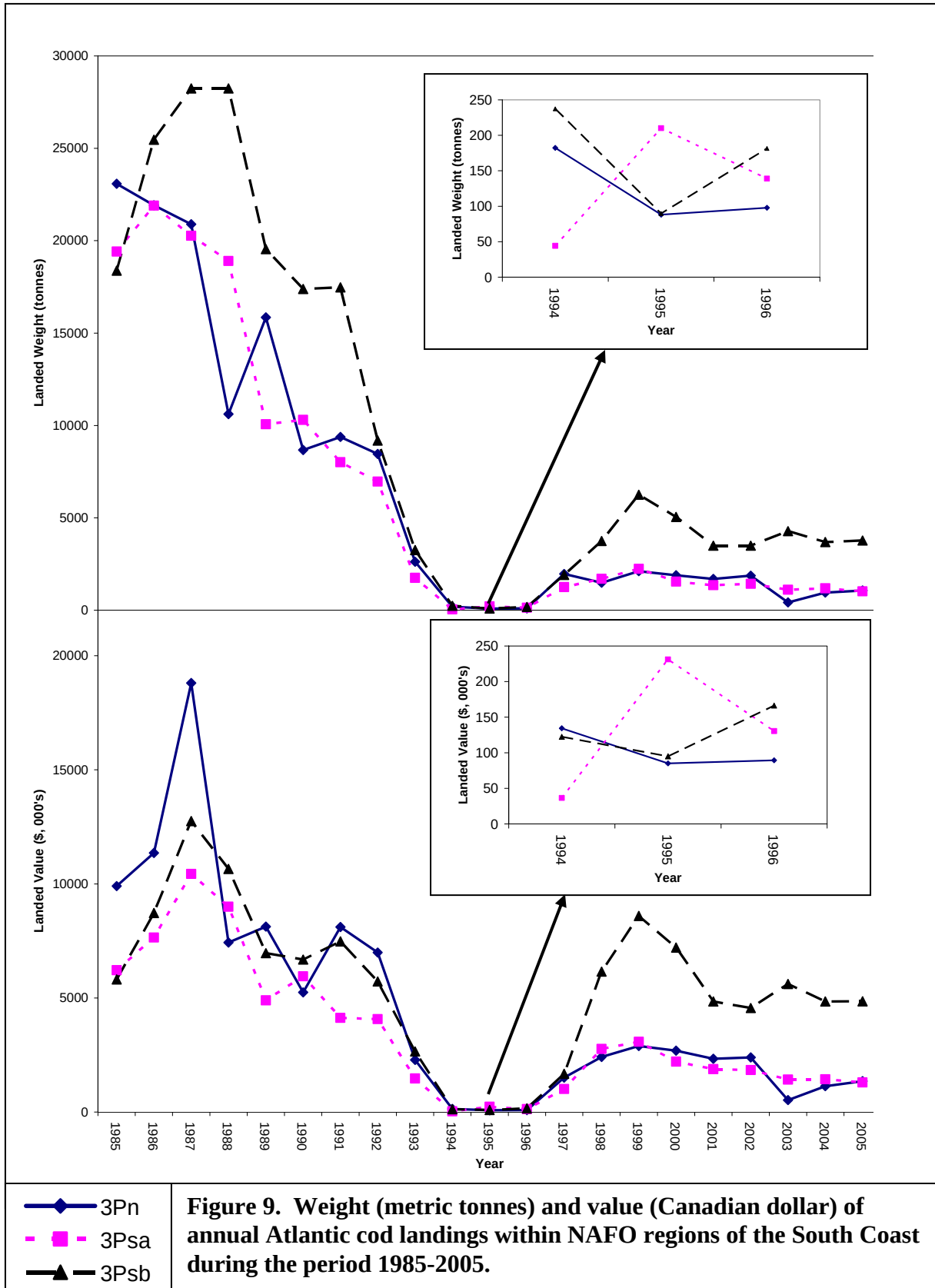
In 2003 The Committee on the Status of Endangered Wildlife in Canada (COSEWIC) recommended in their *Assessment and Update Status Report on Atlantic Cod* that the Laurentian North population of Atlantic cod be classified as threatened.

A cod recovery team mandated to prepare and implement a Cod Recovery Strategy was formed in recent years. The team consists of representatives from the Government of Canada and the Government of Newfoundland and Labrador. The strategy, which was released on November 23, 2005, put forth objectives and goals to aid in the recovery and sustainable management of Newfoundland and Labrador cod stocks, including those in South Coast waters of Subdivisions 3Ps and 3Pn. The action team worked in collaboration with fishing industry stakeholders and the general public and held province-wide consultations (Government of Newfoundland and Labrador 2005).

Weight (metric tonnes) and value (Canadian dollar) of annual landings for Atlantic cod are presented for NAFO regions of the South Coast study area during the period of 1985-2005 (Table 13, Figure 9). During the period for 2001-2005, gillnets (set or fixed) were responsible for 40% of the catch while longlines landed 39% and bottom trawl 17%. The remaining percent was caught in various gears, which caught 1% or less (Appendix C 1-4).

Table 13. Weight (metric tonnes) and value (Canadian dollar) of annual Atlantic cod landings within NAFO regions of the South Coast during the period 1985-2005.

Year	3Pn		3Psa		3Psb	
	Weight (tonnes)	Landed Value (\$)	Weight (tonnes)	Landed Value (\$)	Weight (tonnes)	Landed Value (\$)
1985	23,080	9,902,166	19,413	6,221,042	18,377	5,813,164
1986	21,913	11,355,551	21,898	7,650,977	25,470	8,723,597
1987	20,887	18,802,741	20,266	10,439,211	28,243	12,754,481
1988	10,618	7,428,805	18,902	8,998,541	28,244	10,660,550
1989	15,852	8,127,361	10,063	4,897,591	19,549	6,968,138
1990	8,666	5,247,258	10,300	5,953,603	17,387	6,688,342
1991	9,379	8,110,015	8,013	4,132,549	17,471	7,476,080
1992	8,458	6,995,427	6,959	4,078,554	9,185	5,727,993
1993	2,620	2,284,251	1,752	1,470,782	3,256	2,660,265
1994	182	134,422	44	36,558	237	122,452
1995	88	85,066	210	231,173	90	94,989
1996	98	89,429	139	130,485	181	166,263
1997	1,959	1,511,599	1,255	1,016,243	1,914	1,676,278
1998	1,493	2,419,996	1,697	2,766,986	3,745	6,155,524
1999	2,110	2,895,750	2,240	3,079,695	6,250	8,593,121
2000	1,892	2,691,925	1,550	2,214,691	5,053	7,211,678
2001	1,688	2,337,533	1,354	1,883,338	3,490	4,848,143
2002	1,871	2,399,032	1,432	1,843,166	3,494	4,561,588
2003	425	528,635	1,105	1,425,433	4,280	5,615,533
2004	959	1,139,104	1,185	1,439,542	3,687	4,848,385
2005	1,063	1,356,311	1,022	1,304,022	3,775	4,853,519



5.1.2 American Plaice (*Hippoglossus platessoides*)

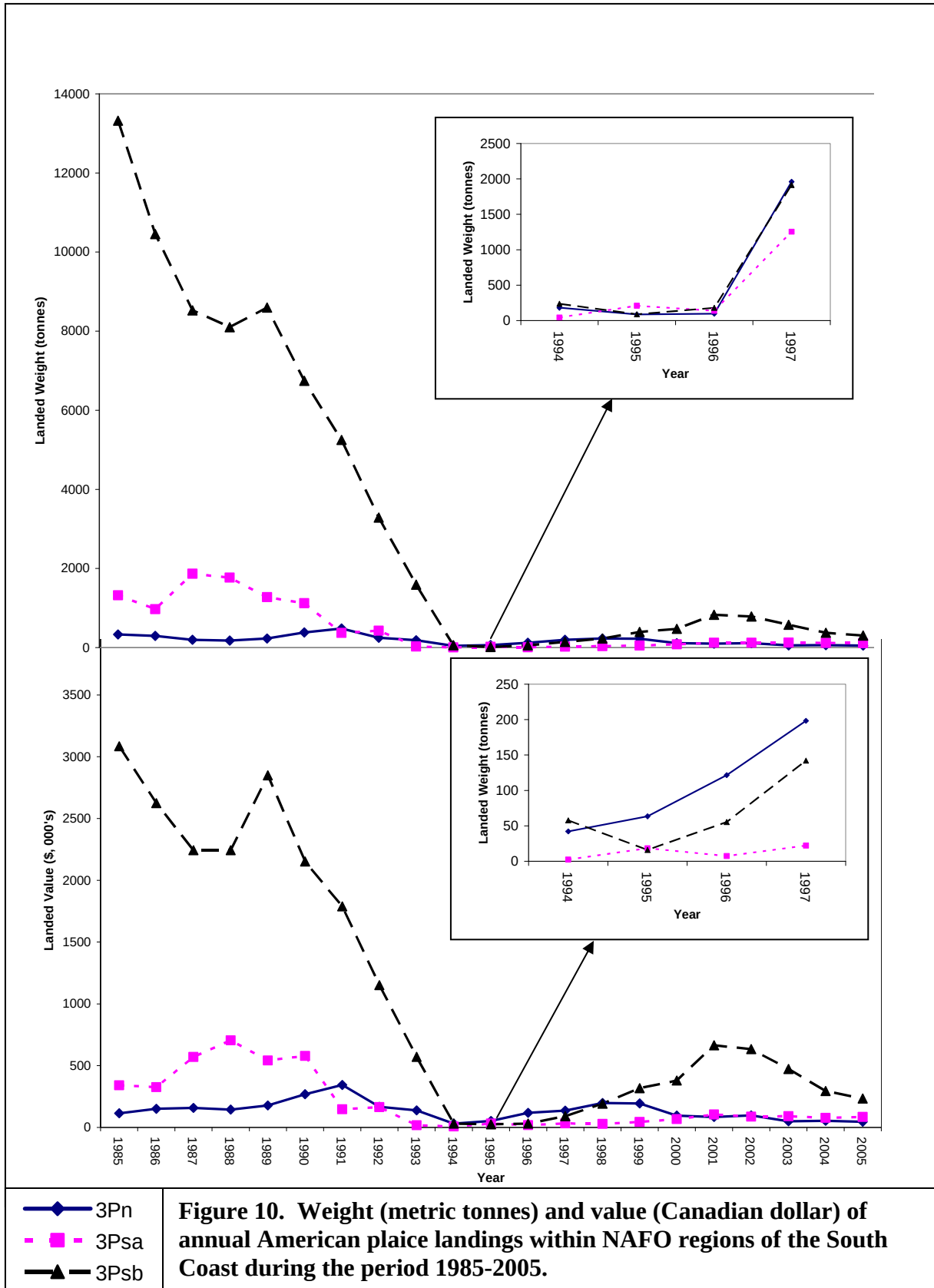
Commercial landings of this stock were at their highest numbers from 1968 to 1973 with the greatest catches occurring from non-Canadian vessels. However, since 1977 only Canada and France have harvested the stock (Morgan et al. 2005). Catches were lower than previously recorded during the 1980s and a rapid decline was noted after 1991. In September 1993, the Fisheries Resource Conservation Council recommended closure of the fishery for the remainder of the year. Subsequently, the 3Ps stock of American plaice has been under moratorium since September 1993.

The Council also recommended that the catch of American plaice should occur as bycatch only. Since that time, landings of American plaice have occurred primarily from two main fisheries, the directed cod and the directed witch flounder fisheries (Morgan et al. 2005). American plaice and cod often share similar areas along the seabed and in the water column. Longline fishermen based in Burgeo and Ramea often have high bycatch of American plaice in their cod directed fishery (Brothers 2002).

Weight (metric tonnes) and value (Canadian dollar) of annual landings for American plaice are presented for NAFO regions of the South Coast study area for the period 1985-2005 (Table 14, Figure 10). During the period 2001-2005, bottom otter trawls were responsible for 45% of the catch, gillnets (set or fixed) 28%, longlines landed 22%, and Danish seine 5% (Appendix C 1-4).

Table 14. Weight (metric tonnes) and value (Canadian dollar) of annual American plaice landings within NAFO regions of the South Coast during the period 1985-2005.

Year	3Pn		3Psa		3Psb	
	Weight (tonnes)	Landed Value (\$)	Weight (tonnes)	Landed Value (\$)	Weight (tonnes)	Landed Value (\$)
1985	330	114,521	1,324	341,207	13,321	3,085,501
1986	296	150,748	973	326,246	10,455	2,624,376
1987	199	158,559	1,867	569,754	8,524	2,243,973
1988	177	144,981	1,767	704,894	8,099	2,243,010
1989	230	177,935	1,274	541,109	8,597	2,849,106
1990	382	269,485	1,121	579,363	6,744	2,152,411
1991	481	343,827	372	147,103	5,251	1,789,105
1992	250	166,284	425	163,997	3,287	1,151,534
1993	184	138,421	29	17,896	1,592	571,021
1994	42	31,582	2	7,534	58	31,061
1995	63	52,090	19	30,928	16	25,161
1996	122	118,256	8	19,015	56	31,722
1997	198	135,137	22	32,751	142	91,111
1998	227	197,451	35	29,233	229	192,128
1999	224	194,109	53	44,818	396	318,069
2000	111	95,855	81	67,437	473	379,492
2001	98	85,105	123	104,640	828	665,417
2002	112	97,307	121	87,652	787	633,872
2003	57	49,460	126	90,434	577	472,782
2004	63	53,772	118	77,251	376	295,060
2005	52	45,793	112	84,633	303	233,439



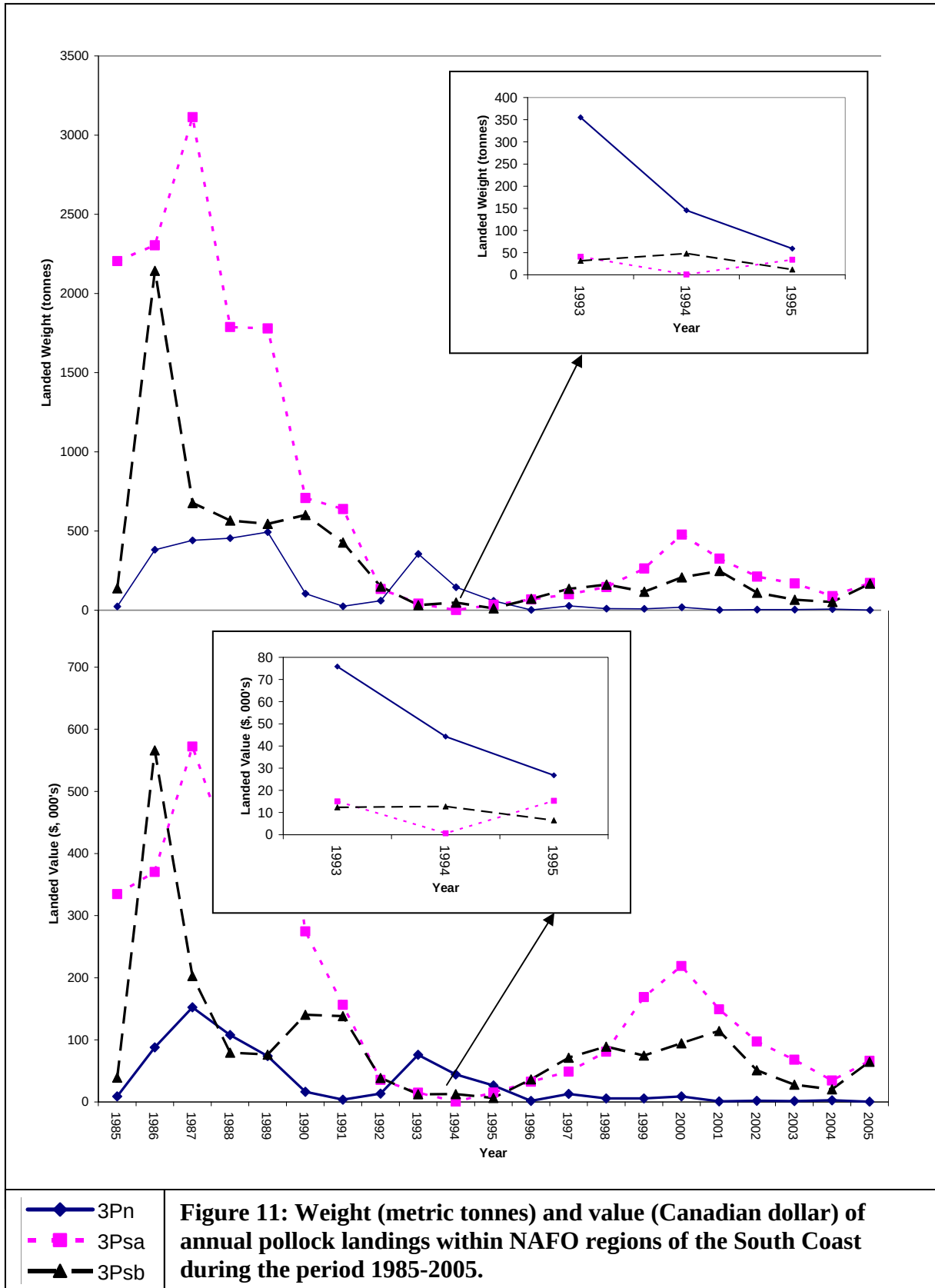
5.1.3 Pollock (*Pollachius virens*)

Pollock is a member of the cod family (Gadidae) and has been found to prefer waters from 0°C to 10°C in the Northwest Atlantic. Therefore, they appear to be at the northern extent of their range in Newfoundland and Labrador waters. Within the study area, their distribution is restricted mainly to the slope waters of Burgeo and St. Pierre Banks and inshore waters (DFO 2005). Pollock has never been determined to occur in large numbers in NAFO Subdivision 3Ps and has not been regarded as a major fishery. In recent years, pollock has not been noted in numbers sufficient to warrant a directed fishery (Murphy 2003; DFO 2005). The pollock fishery for the study area has been a bycatch fishery with the majority of bycatch occurring in the otter trawl, gillnet, and trap fisheries for targeted cod. Catches of pollock declined in 1960 when Spanish vessels were taking them. Subsequent to the extension of Canadian waters, the majority of catches have been from Canadian and French vessels. Currently, catches of pollock in the region remain low (DFO 2005).

Weight (metric tonnes) and value (Canadian dollar) of annual landings for pollock are presented for NAFO regions of the South Coast study area for the period 1985-2005 (Table 15, Figure 11). During the period 2001-2005, gillnets (set or fixed) were responsible for 87% of the total landings, while bottom otter trawl caught 8% and longline gear 5% (Appendix C 1-4).

Table 15. Weight (metric tonnes) and value (Canadian dollar) of annual pollock landings within NAFO regions of the South Coast during the period 1985-2005.

Year	3Pn		3Psa		3Psb	
	Weight (tonnes)	Landed Value (\$)	Weight (tonnes)	Landed Value (\$)	Weight (tonnes)	Landed Value (\$)
1985	23	9,071	2,205	334,578	138	39,126
1986	381	87,892	2,304	370,187	2,144	566,071
1987	441	152,367	3,113	572,299	677	202,574
1988	455	107,882	1,788	398,636	566	79,538
1989	493	73,877	1,779	682,579	546	76,253
1990	105	16,546	708	274,663	601	140,432
1991	25	3,735	639	156,342	427	138,213
1992	60	13,400	135	35,609	149	38,553
1993	355	75,856	41	15,047	32	12,359
1994	146	44,258	1	618	48	12,745
1995	59	26,762	34	15,273	12	6,469
1996	2	1,684	68	32,538	72	36,405
1997	27	12,993	101	48,774	135	71,304
1998	9	5,609	146	80,937	162	89,252
1999	9	5,689	263	168,865	116	74,631
2000	19	8,868	477	218,796	207	94,403
2001	2	995	325	149,114	248	114,165
2002	4	2,019	212	97,234	110	51,011
2003	4	1,545	169	68,004	66	27,927
2004	7	2,628	89	34,505	53	20,441
2005	1	534	172	66,288	168	64,637



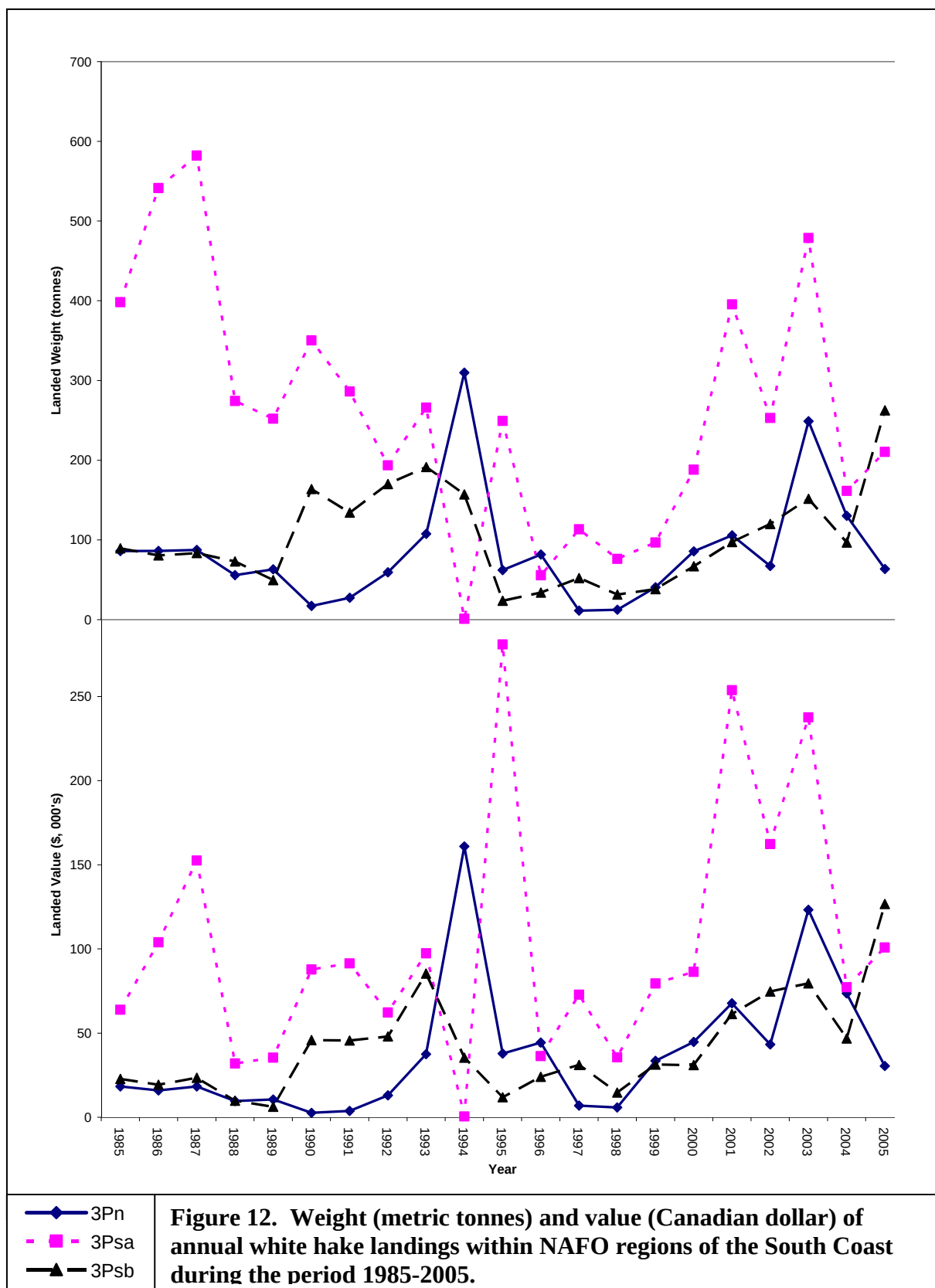
5.1.4 White Hake (*Urophycis tenuis*)

In the mid 1990s Canadian interest in exploiting white hake as a commercial resource increased with the beginning of a limited directed fishery in NAFO subdivision 3Ps. This decision was due primarily to the decline in traditional groundfish species in the waters of Newfoundland and Labrador. Since that time catches of white hake in the study region have been regulated by closures due to excessive bycatch of other species (Kulka et al. 2005). To date, white hake has not been regulated by a quota system and catches in the study region are restricted only by fishery closures in place to prevent the high bycatch of regulated species that remain under moratorium. As stock structure is a major source of uncertainty and current DFO survey numbers indicate low abundance for this species, any removal of existing bycatch restrictions for white hake could result in a non-sustainable population (Kulka et al. 2005).

Weight (metric tonnes) and value (Canadian dollar) of annual landings for white hake are presented for NAFO regions of the South Coast study area for the period 1985-2005 (Table 16, Figure 12). During the period 2001-2005, gillnets (set or fixed) were responsible for 54% of the total landings, while longlines for 36%, and bottom otter trawls caught 9%. The remaining percent was landed by various gears with < 1% (Appendix C 1-4).

Table 16. Weight (metric tonnes) and value (Canadian dollar) of annual white hake landings within NAFO regions of the South Coast during the period 1985-2005.

Year	3Pn		3Psa		3Psb	
	Weight (tonnes)	Landed Value (\$)	Weight (tonnes)	Landed Value (\$)	Weight (tonnes)	Landed Value (\$)
1985	86	18,331	398	63,865	89	22,780
1986	86	15,925	541	103,911	81	19,299
1987	87	18,334	582	152,503	83	23,464
1988	56	9,607	274	31,966	73	9,842
1989	63	10,597	252	35,415	50	6,246
1990	17	2,581	350	87,733	164	45,823
1991	27	3,739	286	91,437	134	45,542
1992	59	12,949	194	62,225	170	48,017
1993	108	37,488	266	97,350	191	85,375
1994	310	160,875	1	467	157	35,376
1995	62	37,779	249	280,863	24	11,890
1996	82	44,327	56	36,334	34	24,018
1997	11	6,913	113	72,864	52	31,131
1998	12	5,775	76	35,537	31	14,619
1999	41	33,556	97	79,466	38	31,269
2000	86	44,694	188	86,328	67	30,995
2001	106	67,723	395	253,720	97	61,302
2002	67	43,208	253	162,263	120	74,653
2003	249	123,238	479	237,560	152	79,543
2004	130	73,573	161	77,198	97	46,784
2005	64	30,472	210	100,810	263	126,715



5.1.5 Atlantic Halibut (*Hippoglossus hippoglossus*)

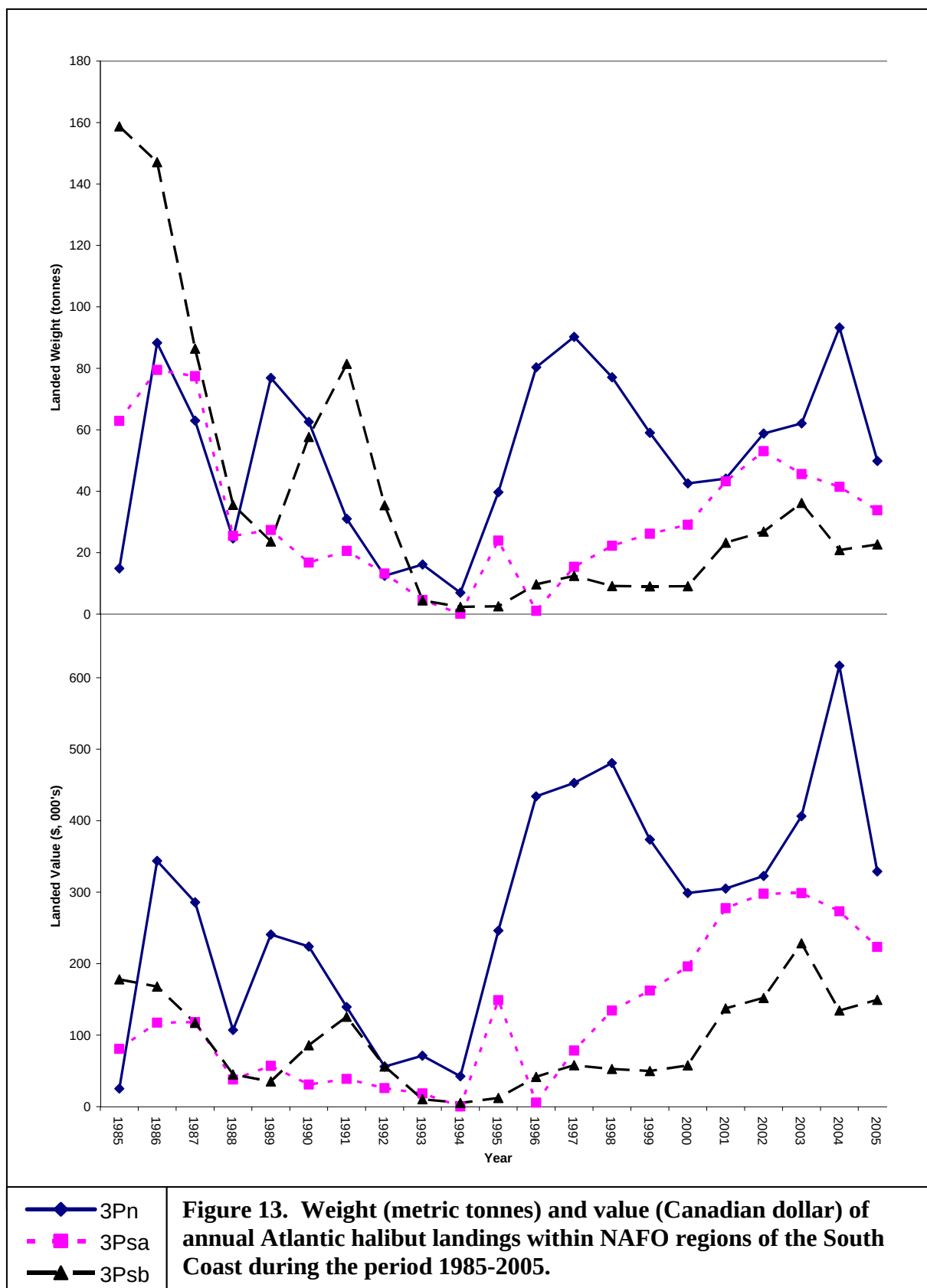
Atlantic halibut has been harvested along the east coast of Canada since 1883. Atlantic halibut is the largest of the flatfishes found in the Northwest Atlantic. Their average commercial weight is 5.0-30 kg with an average commercial length from 80-120 cm. Atlantic halibut is prized as a commercial food fish and commands the highest price over any of the other flatfishes per weight. These factors make Atlantic halibut an economically viable species to harvest and allow fishers to land smaller quantities (Scott and Scott 1988). Atlantic halibut are widely distributed and found mostly in deep waters off Newfoundland and Labrador. One of the main concentrations of the stock is located off the South Coast of the island.

Since 1960 to recent years Atlantic halibut landings have displayed a gradual decline, with the mid-1980s being an exception when an increase in landings was noted (Figure 13). The fishery remained unregulated until 1988, when a catch limit was imposed. In 1994 management measures to conserve the stock, such as mandatory release of less than 81 cm (regarded as undersized) fish, were imposed on both the inshore and offshore fishing fleets. In 2003 the FRCC issued an overall evaluation of the stock stating that it appeared moderately healthy and relatively stable. However, they recommended that management measures to insure the implementation of cautious quotas be in place and that research to measure the status of this resource be ongoing (FRCC 2003).

Weight (metric tonnes) and value (Canadian dollar) of annual landings for Atlantic halibut are presented for NAFO regions of the South Coast study area for the period 1985-2005 (Table 17, Figure 13). During the period 2001-2005, longlines were responsible for 78% of the total landings, while gillnets (set or fixed) for 12%, and bottom otter trawls caught 9%. The remaining percent was landed by various gears with < 1% (Appendix C 1-4).

Table 17. Weight (metric tonnes) and value (Canadian dollar) of annual Atlantic halibut landings within NAFO regions of the South Coast during the period 1985-2005.

Year	3Pn		3Psa		3Psb	
	Weight (tonnes)	Landed Value (\$)	Weight (tonnes)	Landed Value (\$)	Weight (tonnes)	Landed Value (\$)
1985	15	25,166	63	80,840	159	177,913
1986	88	343,819	79	117,324	147	167,999
1987	63	285,915	77	118,319	86	117,103
1988	25	107,231	25	37,824	36	45,070
1989	77	240,819	27	57,161	24	35,403
1990	63	223,967	17	30,913	58	85,757
1991	31	139,377	21	38,879	81	125,765
1992	13	56,082	13	26,024	35	56,282
1993	16	71,251	5	18,439	4	10,427
1994	7	42,561	0	319	2	5,253
1995	40	246,214	24	148,926	3	12,271
1996	80	434,021	1	5,689	10	41,555
1997	90	452,830	15	78,449	12	57,865
1998	77	480,630	22	134,520	9	52,665
1999	59	373,544	26	162,291	9	49,881
2000	43	298,860	29	196,076	9	57,701
2001	44	304,978	43	277,563	23	137,390
2002	59	322,701	53	297,901	27	152,021
2003	62	406,386	46	298,651	36	228,573
2004	93	616,774	41	273,227	21	134,444
2005	50	328,969	34	223,346	23	149,545



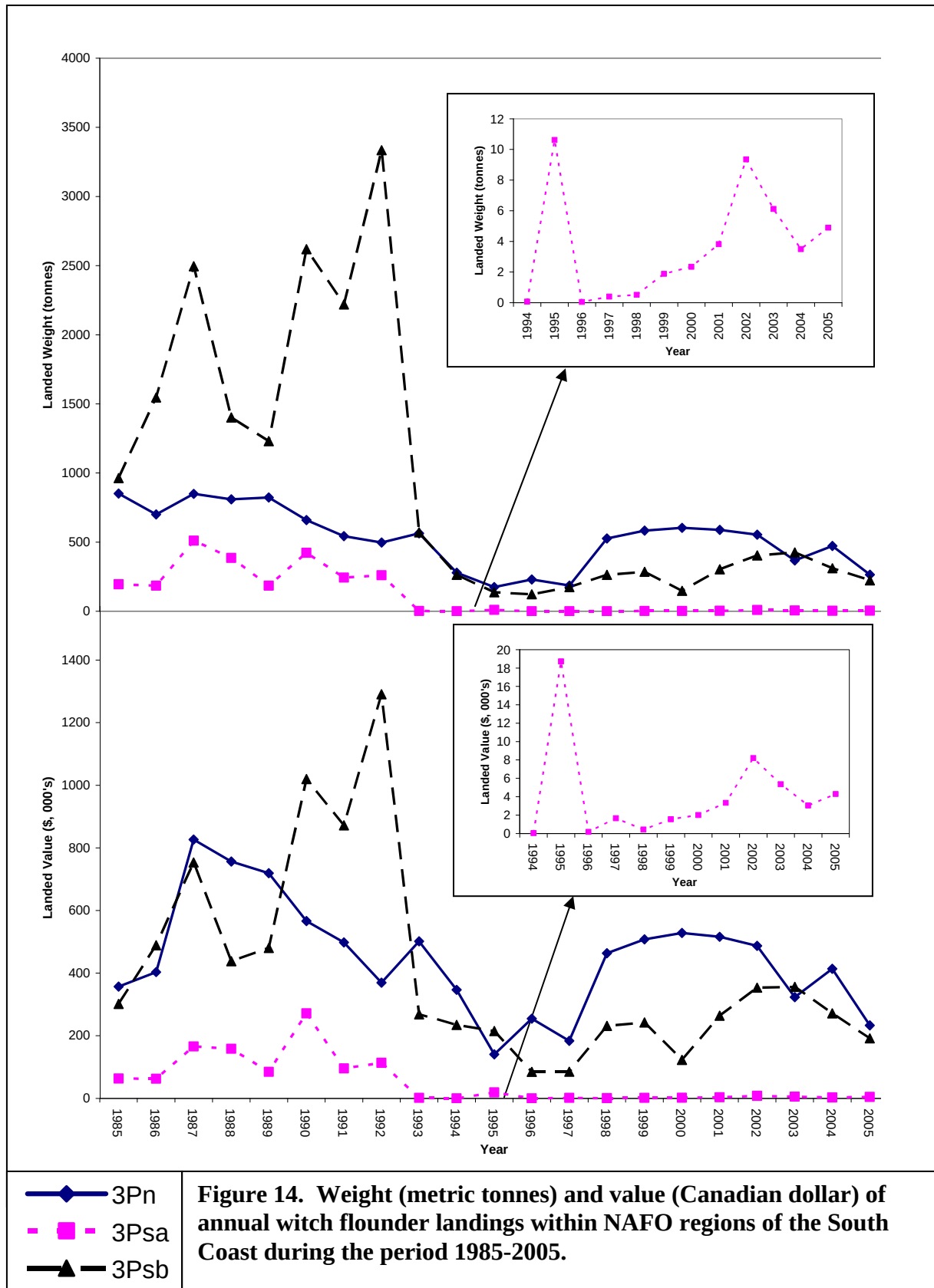
5.1.6 Witch Flounder (*Glyptocephalus cynoglossus*)

Witch flounder reaches its northern limits in the Northwest Atlantic off southern Labrador. In the South Coast region it is primarily distributed along the St. Pierre slope, off Hermitage, in the Hermitage Channel, and in Connaigre and Fortune Bays. Although regarded as relatively low in abundance, the population is widely distributed and continuous throughout NAFO Subdivision 3Ps beyond the 50-fathom contour and into deeper waters of 3Pn (Bowering and Power 2002). Harvest of witch flounder has occurred mainly by Canadian trawlers fishing offshore along the southern slope of St. Pierre Bank. Gillnetters fishing primarily in Hermitage Channel near the South Coast bays also take witch flounder. The majority of seine and gillnet landings have historically occurred from area 3Psb with area 3Psa experiencing an increase in landings in recent years (DFO 2005). Bycatch of American plaice occurs in the witch flounder trawl fishery. However, recent years have seen a decrease in this bycatch after restrictions were put in place via a Conservation Harvesting Plan.

Weight (metric tonnes) and value (Canadian dollar) of annual landings for witch flounder are presented for NAFO regions of the South Coast study area for the period 1985-2005 (Table 18, Figure 14). During the period 2001-2005, Danish seine were responsible for 58% of the total landings, while bottom otter trawls caught 38%, and gillnets (set or fixed) 4% (Appendix C 1-4).

Table 18. Weight (metric tonnes) and value (Canadian dollar) of annual witch flounder landings within NAFO regions of the South Coast during the period 1985-2005.

Year	3Pn		3Psa		3Psb	
	Weight (tonnes)	Landed Value (\$)	Weight (tonnes)	Landed Value (\$)	Weight (tonnes)	Landed Value (\$)
1985	851	357,062	195	63,086	963	301,637
1986	701	403,405	185	62,985	1,546	488,965
1987	849	826,687	511	165,802	2,496	753,551
1988	810	756,254	386	158,451	1,401	438,427
1989	823	719,049	185	84,577	1,230	480,489
1990	659	566,218	423	271,360	2,619	1,019,859
1991	544	498,191	243	95,749	2,220	871,951
1992	497	369,321	261	113,753	3,334	1,290,527
1993	563	501,604	3	1,668	571	268,527
1994	279	346,571	0	41	263	234,418
1995	175	140,504	11	18,720	138	215,260
1996	230	254,554	0	189	122	84,807
1997	186	183,736	0	1,659	175	85,387
1998	527	463,680	1	428	263	231,701
1999	583	507,716	2	1,554	286	242,358
2000	604	528,567	2	2,012	147	123,225
2001	588	516,142	4	3,339	304	264,054
2002	553	486,842	9	8,205	404	353,458
2003	367	323,069	6	5,366	425	355,905
2004	473	413,575	3	3,053	311	271,276
2005	265	232,981	5	4,298	223	191,859



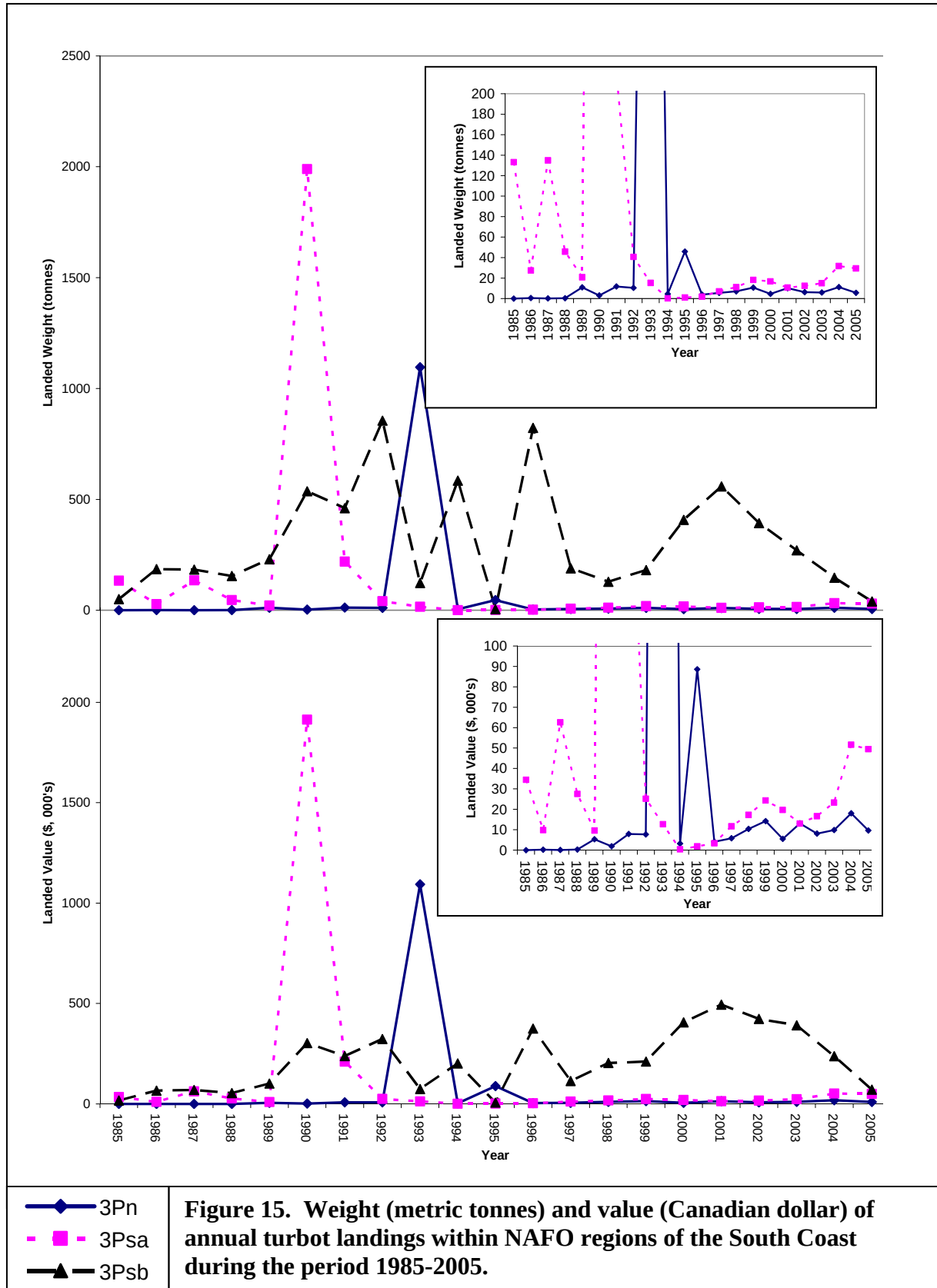
5.1.7 Turbot (Greenland halibut) (*Reinhardtius hippoglossoides*)

Turbot, also known as Greenland halibut, is a deepwater flatfish. Turbot is similar to Atlantic halibut, except that it is smaller in size and weight. As a traditional fishery in Newfoundland, they are found in deep bays. Turbot are found in decreased quantity at depths of less than 100 m; however, they are found in higher densities at depths of between 500 to 1200 m (BP Research and Consulting Services 2005). Turbot has been commercially exploited since approximately 1857 or perhaps sooner, according to Scott and Scott (1998). Until 1977 when the 200-mile fishing zone was declared, Canadian/Newfoundland fishers competed with many foreign fleets for the resource. Since that time the catch has been mainly by Canadian/Newfoundland fleets. During recent times landings of turbot have fluctuated, with a steady decline noted during the mid-nineties when catch rates and efforts were reduced in the turbot fishery as fishers exploited the more profitable snow crab fishery. However, in the late 1990s the snow crab quotas were decreased due to declining stock. Subsequently, turbot landings have been increasing since 1998 as fishers returned to a greater effort in many traditionally exploited areas (Mercer and Wells 2002).

Weight (metric tonnes) and value (Canadian dollar) of annual landings for turbot are presented for NAFO regions of the South Coast study area for the period 1985-2005 (Table 19, Figure 15). During the period 2001-2005, bottom otter trawls were responsible for 60% of the total landings, while gillnets (set or fixed) caught 37%, and longlines 2%. The remaining percent was landed by various gears with < 1% (Appendix C 1-4).

Table 19. Weight (metric tonnes) and value (Canadian dollar) of annual turbot landings within NAFO regions of the South Coast during the period 1985-2005.

Year	3Pn		3Psa		3Psb	
	Weight (tonnes)	Landed Value (\$)	Weight (tonnes)	Landed Value (\$)	Weight (tonnes)	Landed Value (\$)
1985	0	10	133	34,473	50	16,820
1986	1	213	28	9,816	186	66,267
1987	0	71	135	62,578	183	69,166
1988	0	279	46	27,524	154	53,655
1989	11	5,316	21	9,581	230	101,330
1990	3	1,892	1,989	1,912,949	536	302,974
1991	12	7,939	220	210,398	461	238,370
1992	10	7,706	41	25,174	855	323,205
1993	1,096	1,092,860	15	12,690	123	73,676
1994	4	3,210	0	401	584	201,440
1995	46	88,591	1	1,837	4	6,516
1996	4	4,085	2	3,342	822	375,071
1997	6	5,802	7	11,672	189	113,376
1998	7	10,376	11	17,273	128	204,178
1999	11	14,216	18	24,318	181	210,989
2000	5	5,508	17	19,704	407	406,290
2001	10	13,094	11	13,019	558	493,821
2002	6	8,089	13	16,606	393	422,904
2003	6	9,852	15	23,322	270	391,047
2004	11	18,020	32	51,606	146	237,321
2005	6	9,644	29	49,454	40	70,896



5.1.8 Redfish (*Sebastes spp.*)

There are three species of redfish (also known as ocean perch) that occur in the South Coast region of Newfoundland, *Sebastes mentella*, *S. fasciatus*, and *S. marinus*. *Sebastes marinus* occurs mainly on the Flemish Cap and is not of commercial fisheries importance (Morin et al. 2004). However, all three species found in waters of the South Coast of Newfoundland are managed by DFO as one (DFO 2004). Redfish are deepwater groundfish widely distributed in both inshore and offshore waters of the Northwest Atlantic including South Coast waters. Redfish have been exploited in eastern Canadian waters since the 1940's. However, foreign fleets took the majority of redfish harvested from Newfoundland waters during the 1960's and 1970's. Since the declaration of the 200-mile limit in 1977, redfish are taken for the most part by Canadian fleets. The Newfoundland redfish fleet is concentrated in NAFO Subdivision 3Ps. Redfish found in Subdivisions 3Pn and 3Ps along the South Coast are classified and managed in Redfish Management Units, which are based on NAFO Divisions.

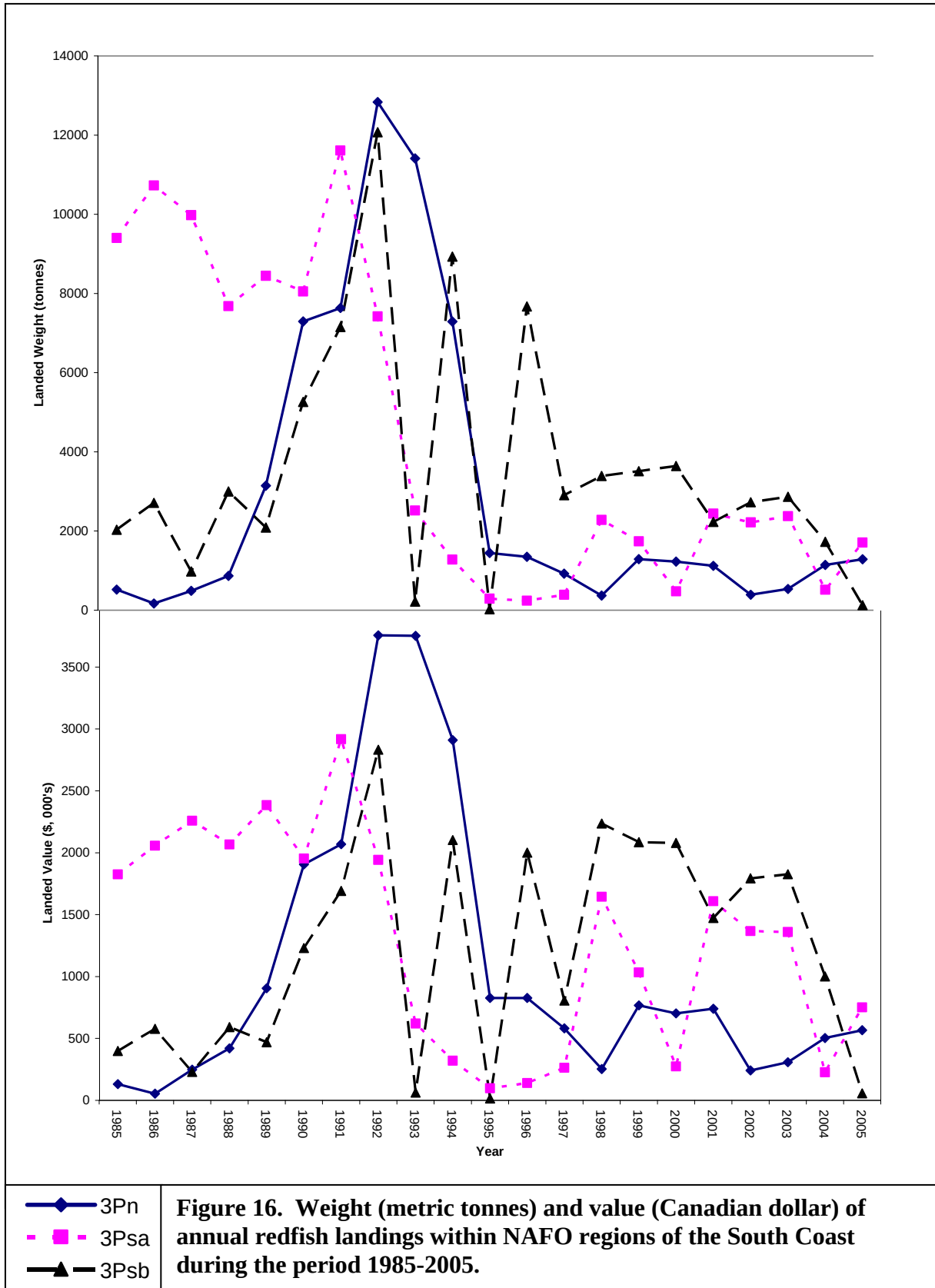
Redfish landings have varied over the past few decades and recently have been the subjects of decline. In 1993 the FRCC recommended a 50% reduction in the 1994 Total Allowable Catch (TAC) for the 3Pn redfish. In 1994 the FRCC recommended another lowering of the TAC due to concern for low stock abundance and the stability of the 3Pn stock. In 1995 a moratorium was imposed on 3Pn redfish, and the directed fishery was closed (FRCC 1997). In 1997 the FRCC held a special consultation on redfish stocks with stakeholders. During this consultation, industry expressed concern regarding the steady decline of redfish biomass in the 3Pn stock and requested specific fishery involved sentinel surveys be conducted. Recent research indicated that redfish biomass appears to remain at low levels in this subdivision (Morin et al. 2004).

In 1997 due to a decline in redfish abundance in Subdivision 3Ps, the FRCC recommended a 3,000 t reduction in the proposed 1994 TAC. The TAC was further reduced for 1995 and conservation measures such as seasonal and area closures were implemented to avoid the taking of 3Pn redfish during possible migration times when 3Pn redfish could mix with those of 3Ps. The TAC for the 3Ps stock was reduced in later years as well. Directed fishing has remained open in Subdivision 3Ps during the closure of the 3Pn fishery, although the TAC has declined. While no definitive cause(s) for the decline of redfish have been identified, bycatch, fishing mortality, additional causes of human induced mortality, and natural variability in environmental conditions are all proposed as possible factors either singularly or cumulatively. (DFO 2004).

Weight (metric tonnes) and value (Canadian dollar) of annual landings for redfish are presented for NAFO regions of the South Coast study area for the period 1985-2005 (Table 20, Figure 16). During the period 2001-2005, bottom otter trawls were responsible for 83% of the total landings, while gillnets (set or fixed) caught 14%, and midwater trawl (stern) gear 2%. The remaining percent was landed by various gears with < 1% (Appendix C 1-4).

Table 20. Weight (metric tonnes) and value (Canadian dollar) of annual redfish landings within NAFO regions of the South Coast during the period 1985-2005.

Year	3Pn		3Psa		3Psb	
	Weight (tonnes)	Landed Value (\$)	Weight (tonnes)	Landed Value (\$)	Weight (tonnes)	Landed Value (\$)
1985	521	131,272	9,400	1,824,772	2,032	397,788
1986	170	54,022	10,729	2,056,405	2,710	577,472
1987	490	248,102	9,979	2,258,468	979	229,292
1988	870	420,069	7,681	2,066,820	3,000	591,386
1989	3,147	904,980	8,448	2,384,351	2,089	469,579
1990	7,294	1,906,272	8,053	1,952,870	5,263	1,229,521
1991	7,634	2,069,173	11,610	2,916,304	7,151	1,691,366
1992	12,834	3,756,405	7,421	1,942,171	12,074	2,832,790
1993	11,412	3,752,660	2,519	620,165	217	62,580
1994	7,288	2,909,350	1,278	319,372	8,934	2,102,127
1995	1,444	826,653	291	97,390	23	15,154
1996	1,350	826,809	240	139,495	7,671	2,000,138
1997	922	581,008	390	262,819	2,905	805,978
1998	372	252,340	2,283	1,644,768	3,389	2,236,456
1999	1,291	766,643	1,740	1,033,462	3,512	2,085,883
2000	1,228	702,385	479	273,557	3,642	2,078,480
2001	1,121	739,948	2,438	1,608,084	2,231	1,472,208
2002	389	241,071	2,218	1,366,536	2,728	1,792,834
2003	539	308,040	2,377	1,359,268	2,865	1,825,774
2004	1,144	503,574	515	227,110	1,730	1,001,385
2005	1,289	566,951	1,709	750,988	126	56,098



5.1.9 Lumpfish (*Cyclopterus lumpus*)

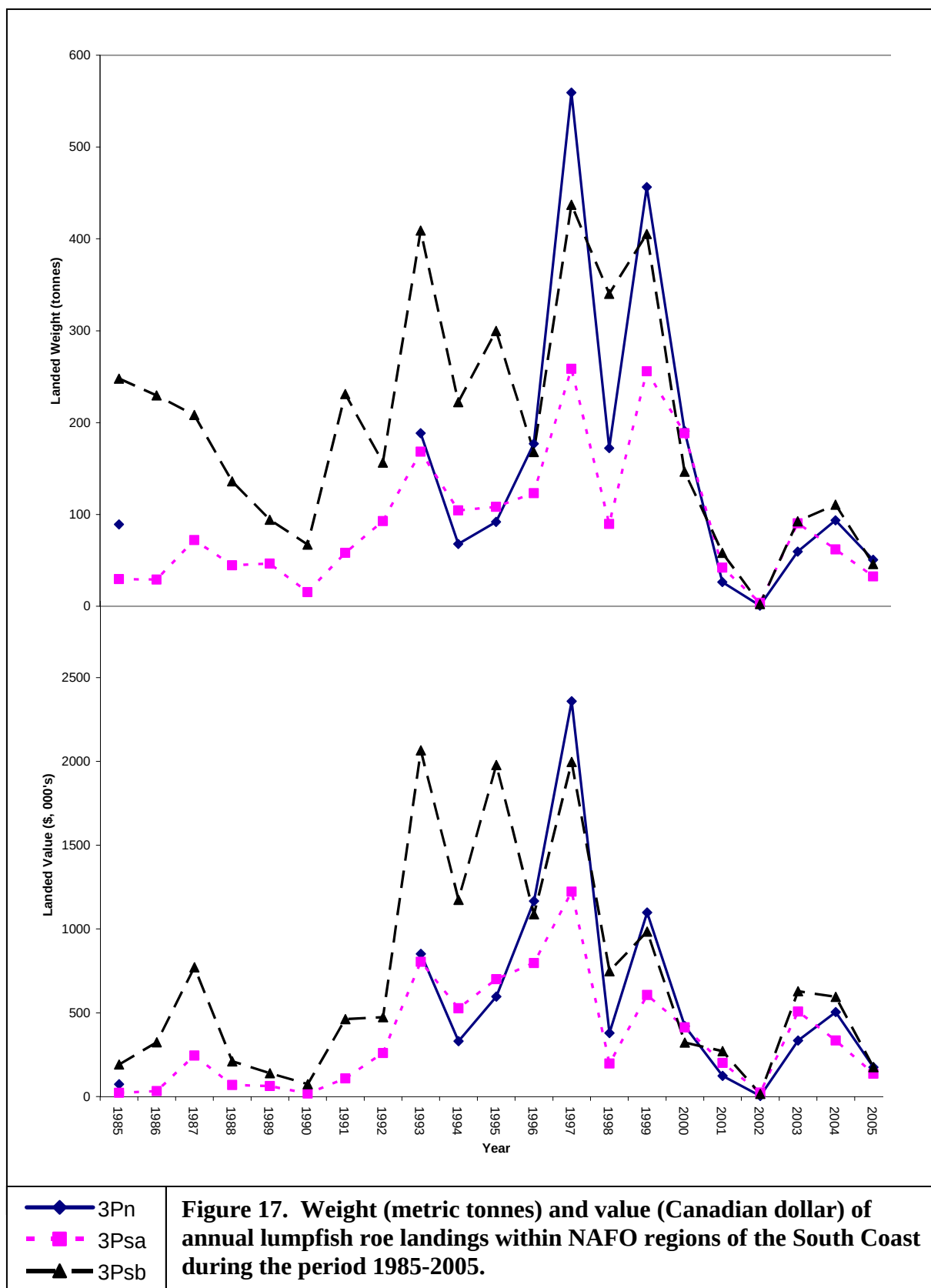
The commercial fishery for lumpfish roe began in Newfoundland in 1969. The majority of the fishery is conducted by vessels less than 35 ft (DFO 2002). The South Coast fishery was slow developing initially and landings for 1985 averaged approximately 367 t. Landings of lumpfish roe peaked in 1997 at 1,255 t. Since 2000 lumpfish roe landings have declined and in 2005 approximately 129 t of lumpfish roe were landed in the south coast study region.

The lumpfish fishery targets pre-spawning females and is primarily based on the sale value of roe, the unfertilized eggs. Therefore, landing trends are set by roe prices and supply management. This extraction regime may not reflect trends in lumpfish abundance and opens the spawning stock to overexploitation (DFO 2002). The lumpfish fishery is regulated through effort controls such as reduction in number of nets allowed, a maximum number of nets allowed, specific mesh size and limited duration of fishing season. In addition, fishing effort has been diverted to the crab fishery, which corresponds in time with the lumpfish fishery, and can be more lucrative depending on current economic factors (price of roe and supply) (DFO 2002). There is a paucity of data for lumpfish as little directed research has been conducted for the species. Research data that have been collected have been extracted from Fisheries and Oceans Canada annual multi-species surveys conducted in NAFO Subdivision 3Ps. These surveys may be ineffective for determining the abundance of lumpfish, as they are not conducted during the seasonal shoreward migration of the lumpfish, thus the survey is unable to obtain accurate data for this stock. Due to the existing lack of data it is not possible to assess the current status of this lumpfish stock.

Weight (metric tonnes) and value (Canadian dollar) of annual landings for lumpfish roe are presented for NAFO regions of the South Coast study area during the period 1985-2005 (Table 21, Figure 17). During the period 2001-2005, gillnets (set or fixed) were responsible for 100% of the landings (Appendix C 1-4).

Table 21. Weight (metric tonnes) and value (Canadian dollar) of annual lumpfish roe landings within NAFO regions of the South Coast during the period 1985-2005.

Year	3Pn		3Psa		3Psb	
	Weight (tonnes)	Landed Value (\$)	Weight (tonnes)	Landed Value (\$)	Weight (tonnes)	Landed Value (\$)
1985	89	73,787	30	22,329	248	191,498
1986			29	32,907	230	323,564
1987			72	244,266	208	770,880
1988			45	68,853	136	209,679
1989			46	62,352	94	139,032
1990			15	17,649	67	74,009
1991			58	108,351	231	462,502
1992			93	259,861	157	473,377
1993	189	851,464	168	803,674	409	2,065,009
1994	68	330,987	104	527,010	222	1,173,380
1995	92	596,369	108	700,267	300	1,977,723
1996	177	1,166,434	123	796,495	168	1,088,022
1997	559	2,372,031	259	1,222,746	437	1,996,945
1998	172	378,671	90	197,344	340	747,671
1999	456	1,098,061	256	606,380	405	984,320
2000	191	419,934	188	412,825	147	322,466
2001	26	123,102	42	200,874	58	270,597
2002	1	3,765	4	23,305	2	15,442
2003	59	334,187	90	507,315	92	628,307
2004	93	503,921	62	333,950	111	594,385
2005	51	174,946	32	136,233	46	175,141



The following sections describe commercial fishing activity for pelagic marine fish species.

Pelagics

5.1.10 Atlantic Herring (*Clupea harengus*)

Herring found in Newfoundland waters are considered to be at the northern limit of their geographic range. Herring stocks that occur within the South Coast study area are restricted to Fortune Bay. Historically, these stocks along with the additional stocks occurring along other coasts of Newfoundland have supported commercial food and bait fisheries. Herring are an important prey source for several species of marine life including other fish, sea birds, and marine mammals.

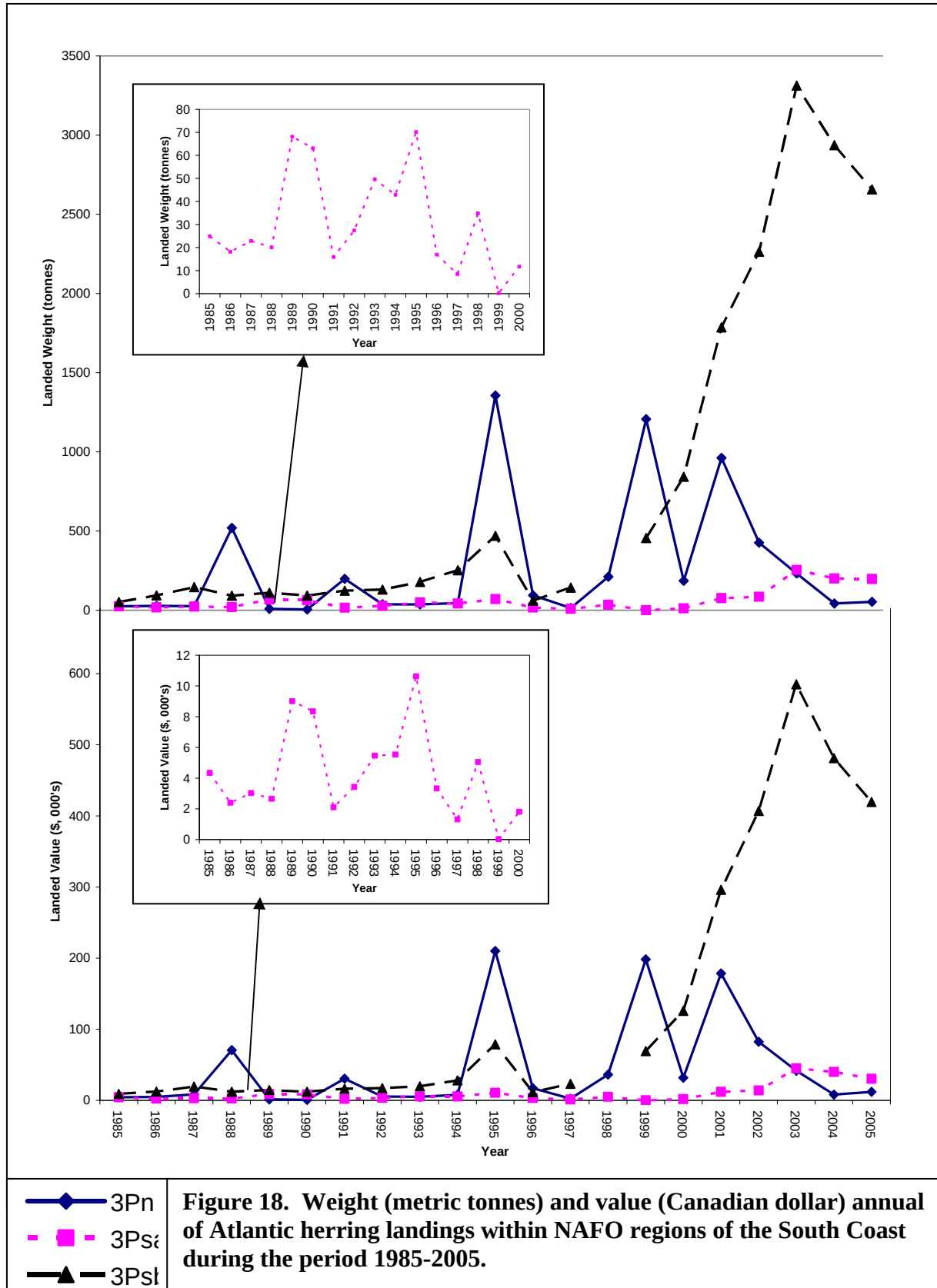
Herring appear to occur in localized populations within bays of the region. The size of these populations is uncertain. Until the late 1960s there was little interest in harvesting herring. From the late 1960s to the mid-1970s the herring fishery was exploited in this region and research on the species was conducted (Personal Communication, John Wheeler, Section Head, Pelagic Section, Department of Fisheries and Oceans, St. John's, Newfoundland).

The fisheries in all stock areas were closed in the early 1980s due to declining stock size. The fishery was re-opened in the mid-1980s (DFO 2004). In the Fortune Bay area the fishery is prosecuted by gillnets and bar seine. The spring 2004 bar seine fishery was concentrated primarily in Long Harbour while the 2004 spring gillnet effort was distributed throughout Fortune Bay. The gillnet effort in the spring fishery reached a peak in 1997 and has since had an 88% decline reported for 2004. Research conducted by DFO using gillnet catch rates displayed a 44% decline from 2002 to 2004 with the current catch rate being 42% of the long-term mean (1982-2004). Currently abundances indices employed by DFO show that this stock has declined since 2002. However, current status of the stock remains uncertain and caution is advised in order to ensure that the stock is allowed to gain integrity (DFO 2004; Wheeler et al. 2004).

Weight (metric tonnes) and value (Canadian dollar) of annual landings for Atlantic herring are presented for NAFO regions of the South Coast study area for the period 1985-2005 (Table 22, Figure 18). During the period 2001-2005, beach and bar seines were responsible for 63% of the total landings, while traps caught 25%, purse seines 8%, and gillnets (set or fixed) 4%(Appendix C 1-4).

Table 22. Weight (metric tonnes) and value (Canadian dollar) of annual Atlantic herring landings within NAFO regions of the South Coast during the period 1985-2005.

Year	3Pn		3Psa		3Psb	
	Weight (tonnes)	Landed Value (\$)	Weight (tonnes)	Landed Value (\$)	Weight (tonnes)	Landed Value (\$)
1985	25	4,390	25	4,339	52	9,070
1986	28	4,825	18	2,399	94	12,434
1987	25	8,559	23	3,024	146	19,303
1988	520	70,499	20	2,655	92	12,253
1989	9	1,393	68	9,012	110	14,682
1990	5	669	63	8,346	93	12,200
1991	198	30,441	16	2,104	123	16,416
1992	38	5,455	27	3,424	130	17,172
1993	36	5,105	50	5,458	179	19,928
1994	45	7,901	43	5,528	253	28,081
1995	1,356	209,914	70	10,624	470	78,869
1996	94	17,289	17	3,329	60	11,452
1997	14	2,495	9	1,309	143	23,253
1998	211	36,221	35	5,045		
1999	1,207	198,303	0	32	456	69,353
2000	185	31,809	12	1,807	843	125,856
2001	962	178,522	76	11,899	1,786	296,070
2002	427	82,290	85	14,047	2,264	407,043
2003	231	41,577	254	45,008	3,312	584,925
2004	43	8,103	201	40,114	2,936	481,127
2005	53	11,878	197	30,335	2,657	419,559



Commercial Invertebrate Species

5.1.11 Iceland Scallop (*Chlamys islandica*)

There are two species of scallop found in commercial aggregations in Newfoundland and Labrador waters: the sea scallop *Placopecten magellanicus* and the Iceland scallop, *C. islandica*. The Iceland scallop is the smaller of the two and is widely distributed in sub-arctic waters (Naidu et al. 2001). In Newfoundland and Labrador waters commercial densities of Iceland scallops are found in the Strait of Belle Isle (Division 4R), Gulf of St. Lawrence (Division 4R), Grand Banks (Division 3LN), along coastal Labrador (Division 2JH, and over St. Pierre Bank (Subdivision 3Ps). Though the Iceland scallop was first exploited by a direct fishery in the Strait of Belle Isle region during 1970, it was not harvested commercially along the South Coast at St. Pierre Bank until 1989. Landings in Subdivision 3Psa were at their highest in 1988. In Subdivision 3Psb landings peaked in 1992. Landings for both subdivisions have since declined substantially.

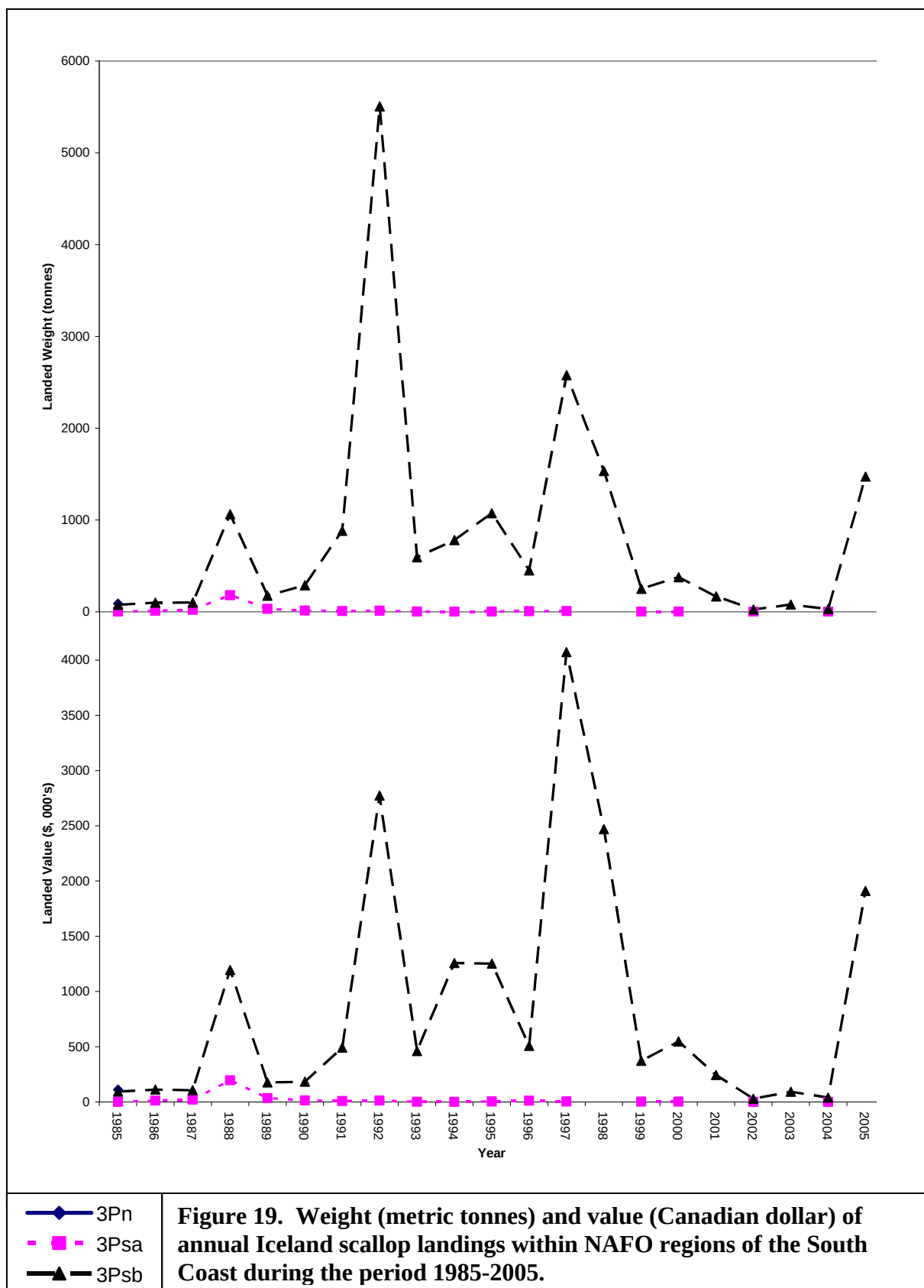
St. Pierre Bank (Subdivision 3Ps) is a major scallop producing area and in 1998 and 1999 had catch rates of 43 and 39% of the total commercial Newfoundland and Labrador catch. This occurred while total effort for the Newfoundland and Labrador region declined by 42% and nominal catch 54% from 1998. In 1999 St. Pierre Bank was the only area where the entire TAC was taken; in 2000 only 32% of the TAC was harvested (1,134 from a TAC of 3,500) (Naidu et al. 2000). The fishery is regulated by limited entry, seasonal restrictions, and catch limits. Catch limits for most areas have not been met in several years and the number of vessels exploiting the fishery remains basically the same.

With the decline of many groundfish stocks in the late 1980s and early 1990s the Iceland scallop fishery experienced intense exploitation. Since that time there has been a decline in availability of scallops, fishery effort, and catch rates. While any declines in abundance requires research to determine causative factors, many fishers have diverted their efforts to crab and shrimp, which at this time appear to be more abundant.

Weight (metric tonnes) and value (Canadian dollar) of annual landings for Iceland scallop are presented for NAFO regions of the South Coast study area for the period 1985-2005 (Table 23, Figure 19). During the period 2001-2005, dredge (boat) was responsible for 100% of the total landings as dredges were the only gear type utilized for the Iceland scallop fishery (Appendix C 1-4).

Table 23. Weight (metric tonnes) and value (Canadian dollar) of annual Iceland scallop landings within NAFO regions of the South Coast during the period 1985-2005.

Year	3Pn		3Psa		3Psb	
	Weight (tonnes)	Landed Value (\$)	Weight (tonnes)	Landed Value (\$)	Weight (tonnes)	Landed Value (\$)
1985	89	112,366	0	100	77	94,262
1986			11	11,906	100	112,041
1987			21	21,481	102	106,359
1988			181	195,790	1,062	1,194,203
1989			32	34,606	176	176,025
1990			13	13,320	289	183,119
1991			8	9,047	883	491,229
1992			12	13,287	5,506	2,773,582
1993			4	2,027	593	460,940
1994			0	195	782	1,257,467
1995			3	4,164	1,074	1,252,217
1996			8	10,864	452	506,796
1997			8	4,672	2,578	4,072,421
1998					1,534	2,469,869
1999			2	2,855	250	372,593
2000			2	3,465	376	547,581
2001					168	243,569
2002			0	420	26	30,025
2003					79	92,137
2004			0	485	30	39,242
2005					1,473	1,910,190



5.1.12 American Lobster (*Homarus americanus*)

The lobster fishery has been essentially a small open boat fishery utilizing passive fishing gear throughout its history. There are 14 individual Lobster Fishing Areas (LFAs) classified for Newfoundland waters. Two LFAs are located within the study region, areas 11 and 12 (Figure 20). Lobster landings for all LFAs in Newfoundland waters except area 11, which encompasses Fortune Bay on the South Coast, have experienced a downward trend. Lobsters in Fortune Bay as in all other LFAs are heavily exploited. Ennis et al. (2003) reported that this trend was ongoing for the previous ten years. In 1995, the FRCC issued *A Conservation Framework for Atlantic Lobster* in response to a request from the Minister of Fisheries and Oceans to review the current approaches to lobster conservation and to recommend strategies. Their report concluded that under the current management scheme lobster stocks were at the risk of not being sustainable. Recommendations put forth by the FRCC within a conservation framework included: (1) increasing egg production; (2) reducing exploitation rate and effective fishing effort; (3) improving stock structure; and (4) minimizing waste. During the winter of 1998 a series of Lobster Advisory Meetings were held throughout the island in which stakeholders were represented. Diverse management regimes were discussed and resultant Conservation Harvesting Plans were developed. These plans put forth recommendations that included the following: increase the minimum catch size by 1.5 mm, from 81 to 82.5 mm carapace length; conduct v-notching; and reduce nominal fishing effort (Ennis et al. 2003). As with other fish species, lobster growth and stability are thought to be influenced by environmental and/or ecological factors. Changes in salinity and bottom water temperature, even seasonally, may influence their viability. Research is being conducted along these lines.

Currently, under the request of the Minister of Fisheries and Oceans the FRCC is reviewing and evaluating the *Atlantic Lobster Conservation Framework* of 1995. The review will identify those conservation measures put forth in the 1995 report that were successful and those that were less successful. The FRCC will also recommend regime changes that may be necessary to adapt the Framework to the present fishery. For the review update the FRCC will undertake extensive consultations with industry stakeholders. The goal of the review is to plan for the long-term sustainability of the lobster fishery by addressing issues such as scientific knowledge base, harvesting efforts, fishing practices, and environmental and ecosystem factors (www.frcc-ccrh.ca accessed on March 19, 2006).

Weight (metric tonnes) and value (Canadian dollar) of annual landings for American lobster are presented for NAFO regions of the South Coast study area for the period 1985-2005 (Table 24, Figure 21). During the period 2001-2005, the pot fishery was responsible for 100% of the total landings as pots were the only gear type utilized for the lobster fishery (Appendix C 1-4).

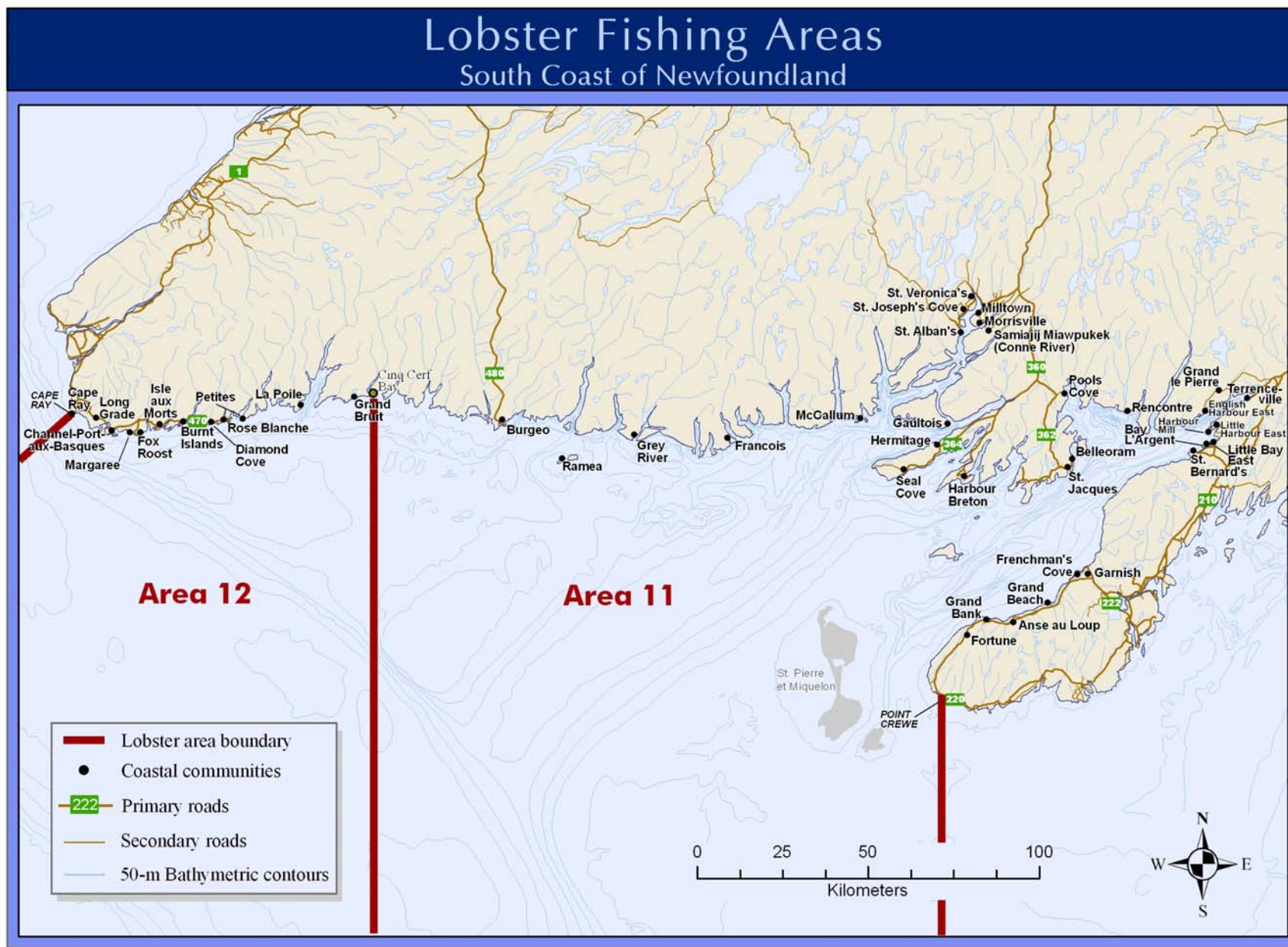
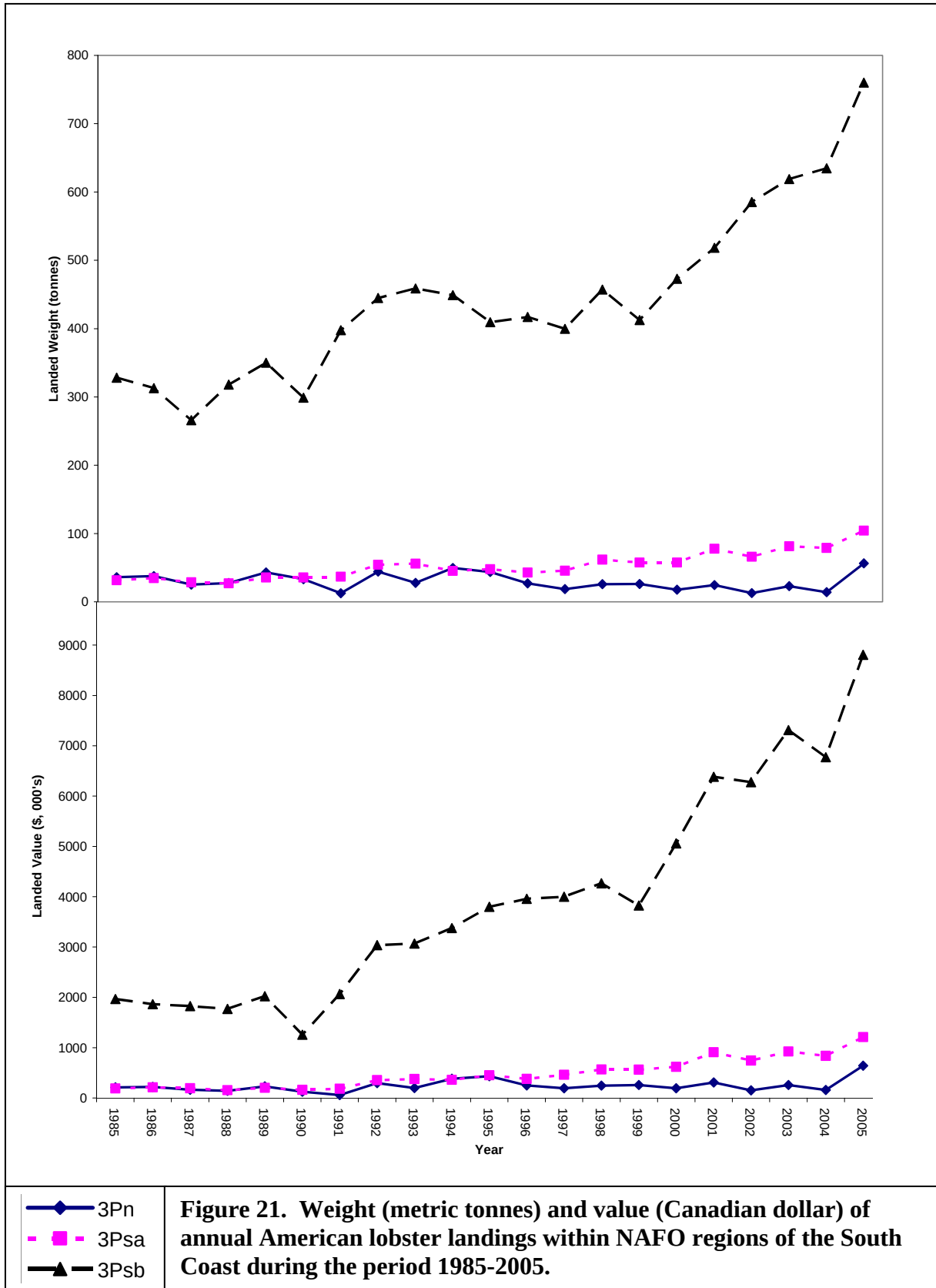


Figure 20. Lobster fishing areas of the South Coast of Newfoundland (Ennis et al. 2003).

Table 24. Weight (metric tonnes) and value (Canadian dollar) of annual American lobster landings within NAFO regions of the South Coast during the period 1985-2005.

Year	3Pn		3Psa		3Psb	
	Weight (tonnes)	Landed Value (\$)	Weight (tonnes)	Landed Value (\$)	Weight (tonnes)	Landed Value (\$)
1985	36	212,004	32	188,842	328	1,967,917
1986	38	221,530	35	210,482	313	1,863,094
1987	25	164,912	29	192,918	266	1,826,609
1988	28	141,729	27	154,827	318	1,770,210
1989	43	230,800	36	202,251	350	2,023,438
1990	33	125,655	36	161,234	299	1,257,092
1991	13	59,024	37	182,440	398	2,067,899
1992	44	295,005	54	354,594	445	3,038,181
1993	28	197,799	56	376,973	459	3,069,505
1994	50	381,617	45	362,550	449	3,378,171
1995	44	431,621	48	452,685	409	3,800,373
1996	27	248,677	43	381,231	417	3,960,226
1997	19	192,626	46	461,547	400	3,999,580
1998	26	246,692	62	566,793	457	4,265,626
1999	26	259,267	57	564,132	413	3,823,951
2000	18	193,746	58	620,214	473	5,062,067
2001	25	306,732	78	907,493	518	6,382,406
2002	13	151,181	66	743,917	585	6,278,207
2003	23	256,816	81	923,052	619	7,309,962
2004	14	159,517	79	835,916	635	6,772,499
2005	56	642,117	104	1,210,265	760	8,807,714



5.1.13 Northern Shrimp (*Pandalus borealis*)

In the mid-1970s a commercial density of Northern shrimp was first located in Newfoundland and Labrador waters during an exploratory fisheries effort. In 1978 five northern shrimp licences were issued to Newfoundland enterprises. During the 1990s as groundfish stocks declined and many fisheries were closed the shrimp fishery became increasingly lucrative. A Northern shrimp otter trawl fishery was conducted in Fortune Bay from 1988-1990. Otter trawl landings peaked in 1989 at approximately 365 t. In 1996 Fisheries and Oceans Canada and the Department of Fisheries and Aquaculture undertook an experimental beam trawl fishery. Public consultations were held with stakeholders in 1997 and 12 licences were established for the area. The Northern shrimp beam trawl fishery for Fortune Bay recorded catch in 1998 was 56 t, catch peaked in 2000 at 155 t and in 2004 was 116 tons. Biomass stock estimated in Fortune Bay from spring research trawl surveys for 1998 to 2004 reported a range of 94 t in 2003 and 1,131 in 2001. The biomass measure for 2004 was 188 t. (Personal communication, David Orr, Research Technician, Department of Fisheries and Oceans, St. John's, Newfoundland).

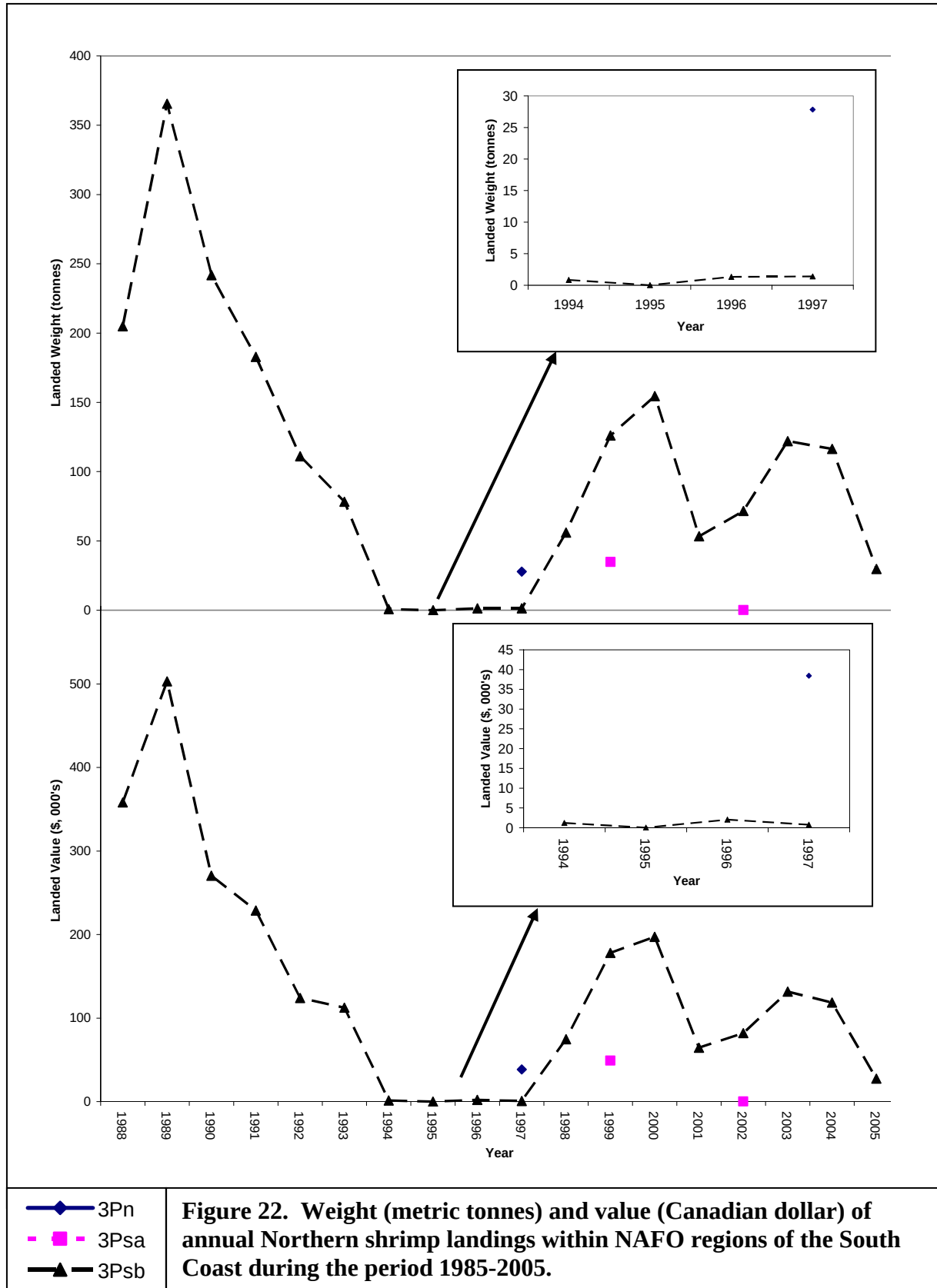
Within the study region the Northern shrimp fishery is managed through limited entry licence procurement. In addition multi-year Northern shrimp management plans are developed in consultation with industry stakeholders. These plans may be amended when deemed necessary by DFO and the fishing industry, to update management measures (Northern Shrimp Management Plan Fact Sheet, accessed on March 22, 2005 at www.dfo-mpo.gc.ca/media/in focus). Licences in the region have varied since 1998 with a range of six to twelve. The Northern shrimp fisheries are under the jurisdiction of the Atlantic Fisheries Regulations. Such regulations for Northern shrimp refer to the minimum mesh size of 40 mm and do not allow fishing in a closed defined area. The offshore Northern shrimp fleet has 100% industry funded observer coverage while the inshore fleet has approximately 10% industry funded observer coverage. Both fleets are required to participate in dockside monitoring. In addition, in order to minimize the bycatch of non-targeted species both the large and small boats are required to utilize a Nordmore grate for sorting, with a maximum spacing between bars of 28 mm for large vessels and 22 mm for small vessels. The Nordmore grate must be employed at all times and in all areas (Orr et al. 2001).

Presently the biomass and abundance indices of Northern shrimp along the South Coast region remain uncertain due to a lack of survey data and the patchy distribution of the species. Consequently, there is insufficient data to determine the status of the resource.

Weight (metric tonnes) and value (Canadian dollar) of annual landings for Northern shrimp are presented for NAFO regions of the South Coast study area for the period 1985-2005 (Table 25, Figure 22). During the period 2001-2005, the beam trawl was responsible for 100% of the total landings, as shrimp beam trawls were the only gear type utilized for the northern shrimp fishery (Appendix C 1-4).

Table 25. Weight (metric tonnes) and value (Canadian dollar) of annual Northern shrimp landings within NAFO regions of the South Coast during the period 1985-2005.

Year	3Pn		3Psa		3Psb	
	Weight (tonnes)	Landed Value (\$)	Weight (tonnes)	Landed Value (\$)	Weight (tonnes)	Landed Value (\$)
1988					205	358,169
1989					365	503,146
1990					242	270,351
1991					183	228,742
1992					111	123,942
1993					78	112,344
1994					1	1,228
1995					0	32
1996					1	2,058
1997	28	38,425			1	782
1998					56	74,639
1999			35	49,032	126	177,892
2000					155	197,206
2001					53	64,478
2002			0	148	72	82,011
2003					122	131,708
2004					116	118,508
2005					30	27,505



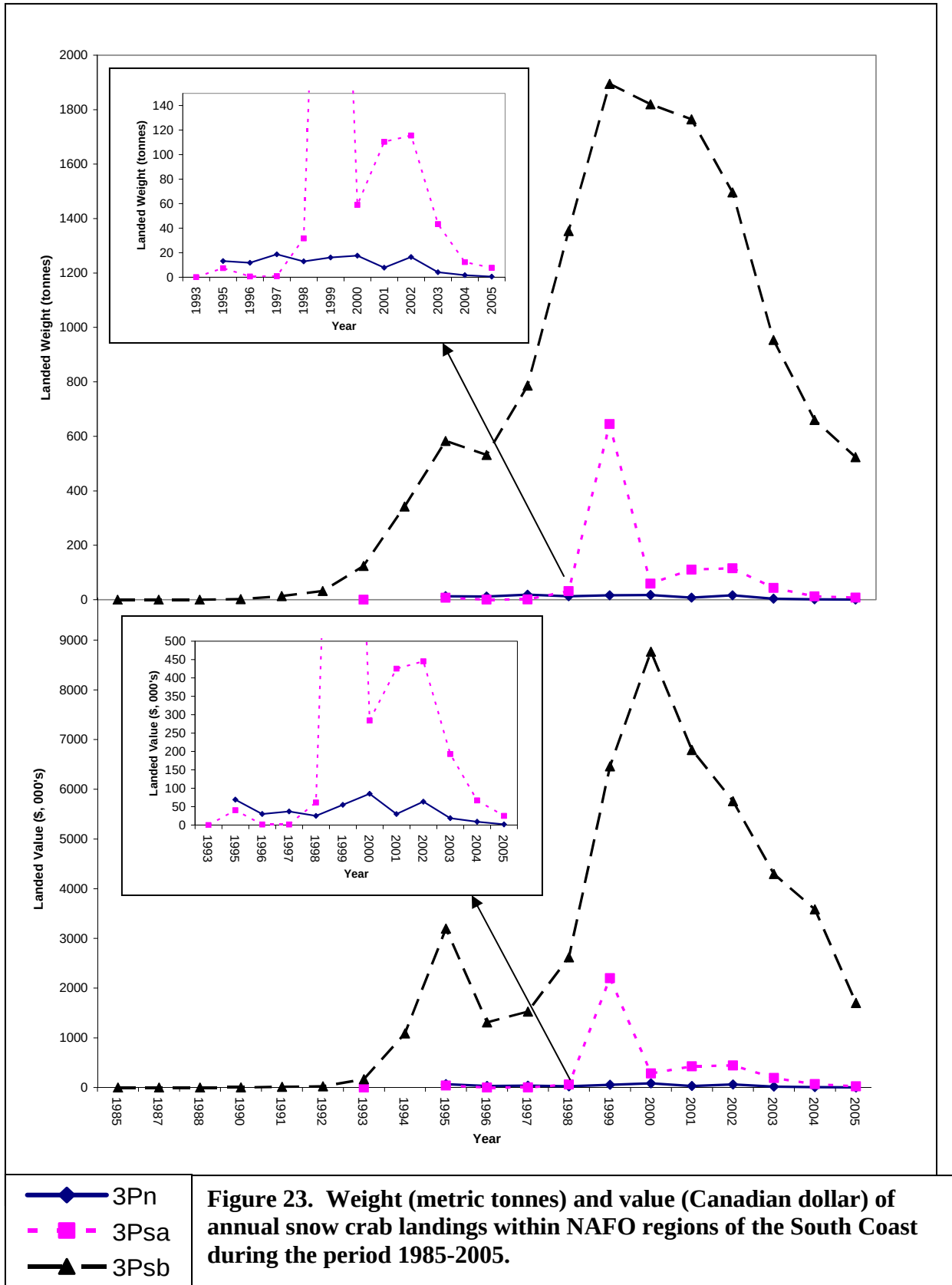
5.1.14 Snow Crab (*Chionecetes opilio*)

The Newfoundland snow crab fishery commenced in Trinity Bay in 1968 and was limited to NAFO Divisions 3KL until the mid-1980's (DFO 2004). Licences supplemental to groundfishing were issued in NAFO Subdivision 3Ps in 1985. In 1993 a snow crab fishery commenced in NAFO Division 4R including Subdivision 3Pn (DFO 2005). Snow crab harvesters employ fleets of conical baited traps with a required minimum mesh size of 135 mm. This mesh restriction allows smaller crabs to escape. The minimum legal size for retaining snow crab is 94 mm carapace width. This regulation excludes females from the snow crab fishery while ensuring that a portion of the adult males in the population remains available for reproduction. In addition, all under-sized and soft-shelled males that are retained in the traps must be returned to the sea. Handling mortality particularly on small (< 95 mm carapace width) males may have adverse affects, and options for reducing such mortality are being investigated. In the late 1980s a system of quota control was put in place for the fishery. Currently, the snow crab fishery is managed through a regime of multiple quota-controlled management areas. Under this regime, all fleets have designated trap limits, quotas, trip limits, fishing areas within divisions, and differing seasons. Presently, there are 3,300 licence holders engaged in several fleet sectors (DFO 2005).

Weight (metric tonnes) and value (Canadian dollar) of annual landings for snow crab are presented for NAFO regions of the South Coast study area for the period 1985-2005 (Table 26, Figure 23). During the period 2001-2005, the pot fishery was responsible for 100% of the total landings, as pots were the only gear type utilized for the snow crab fishery (Appendix C 1-4).

Table 26. Weight (metric tonnes) and value (Canadian dollar) of annual snow crab landings within NAFO regions of the South Coast during the period 1985-2005.

Year	3Pn		3Psa		3Psb	
	Weight (tonnes)	Landed Value (\$)	Weight (tonnes)	Landed Value (\$)	Weight (tonnes)	Landed Value (\$)
1985					0	253
1987					0	24
1988					0	80
1990					2	3,584
1991					14	16,936
1992					32	25,756
1993			0	79	124	168,420
1994					342	1,090,593
1995	13	69,209	7	40,249	583	3,194,994
1996	12	30,051	1	1,511	532	1,310,231
1997	19	36,939	1	1,699	787	1,527,023
1998	13	25,075	32	61,405	1,354	2,621,307
1999	16	55,059	645	2,199,928	1,895	6,461,268
2000	18	85,057	59	284,398	1,820	8,767,722
2001	8	30,002	110	425,231	1,764	6,792,054
2002	17	63,553	116	445,152	1,496	5,759,698
2003	4	18,757	43	192,995	954	4,295,381
2004	2	9,122	12	67,017	660	3,586,325
2005	1	1,776	8	24,830	524	1,701,675



5.1.15 Emerging Fisheries

The commercial fishery sector has traditionally been the most significant economic contributor to the economy of Newfoundland, including the South Coast region. During recent times, however, some historically stable fisheries have been in decline and several have been placed under moratorium. While these events have presented challenges to the industry, commercial fisheries remain the primary economic sector for many communities on the island and along the South Coast. In order to ensure the long-term economic stability of these communities, interest has grown in exploring alternative fisheries for species that formerly were not exploited and that are present in local waters. In recent times, the harvest of previously underutilized species has lead to the development of new outlets and afforded new economic revitalization to many communities. The exploitation of these species heightens the opportunities for fishers, plant owners, and plant workers to increase employment and ensure economic stability for communities.

Both Fisheries and Oceans Canada and the Department of Fisheries and Aquaculture have initiated programs for research and development of new and emerging fisheries. Species that are of interest for emerging fisheries are listed in Table 27.

Table 27. New and emerging fisheries in Newfoundland and Labrador.

Common Name	Scientific Name
Atlantic King Crab	<i>Lothodes maja</i>
Atlantic Dogfish	<i>Squalus acanthias</i>
Atlantic Hagfish	<i>Myxine glutinosa</i>
Common Jellyfish	<i>Aurelia aurita</i>
Monkfish	<i>Lophius americanus</i>
Red Atlantic King Crab	<i>Neolithodes grimalidii</i>
Red Hake	<i>Urophycis chuss</i>
Rock Crab	<i>Cancer irroratus</i>
Sculpin	<i>Myoxocephalus spp.</i>
Sea Cucumber	<i>Cucumaria frondosa</i>
Toad Crab	<i>Hyas spp.</i>
Whelk	<i>Buccinum undatum</i>

Cited from: BP Environmental Research and Consulting Services 2005.

5.2 Fish Processing

The province of Newfoundland and Labrador has 117 licensed primary processing facilities. Fifteen of these plants are located within the South Coast study area (Table 28). Currently active plants function in primary (PP), secondary (SP), and aquaculture production (AP). Primary processing is producing a product ready for market, for example, in filleted form. Secondary processing contains a second layer of processing such as smoked or breaded and ready for market. Aquaculture processing is the processing of aquaculture products. A fourth category, Retail or RP, is retail ready

for Newfoundland and Labrador sales only, and may not be exported beyond the province.

Several of the licensed processing plants operate year round, while some plants function on a seasonal basis. Collectively, the fish processing sector in Newfoundland and Labrador employs 13,300 people either on a full time, part time, or seasonal basis (Government of Newfoundland and Labrador 2005).

Table 28. Fish and/or seafood processing plants located along the South Coast as of 30 January 2006.

Company Name	Location	Species Processed	Contact
All Materials Products	Isle aux Morts, NL	Mussels (Aquaculture) (SP)	P.O. Box 161 Isle aux Morts, NL ADM 1JO Telephone : (709) 698-3600 (709) 698-3835 Fax : (709) 698-3773
Burgeo Fish Market	Burgeo, NL	Groundfish All Species, (RP), Lobster (RP), Pelagics, All Species, (RP) Scallop (RP), Shrimp (RP)	P.O. Box 543 Burgeo, NL AND 2H0 Telephone: (709) 886-1242 (709) 886-2621 Fax: (709) 886-2192
Eric Kings's Fisheries Limited	Burnt Islands, NL	Crab (PP), Groundfish All Species (PP), Lobster (PP), Lumpfish (PP), Pelagics All Species (PP), Salmonids (Aquaculture (PP)	P.O. Box 10 Burnt Islands, NL AOM 1BO Telephone: (709) 698-3421 (709) 698-3851 Fax: (709) 698-3025
Eric Kings's Fisheries Limited	Channel Port aux Basques	Groundfish All Species, (RP), Lobster (RP)	P.O. Box 10 Burnt Islands, NL AOM 1BO Telephone: (709) 698-3241 (709) 698-3851 Fax: (709) 698-3025
Billard Fisheries Limited	Margaree, NL	Groundfish All Species (PP), Lobster (PP)	P.O. Box 6, Suite 4 Margaree, NL AOM 1CO Telephone: (709) 698-3241 (709) 698-3866 Fax: (709) 698-3123
Clearwater Seafoods Limited Partnership	Grand Bank, NL	Clam (PP), Lobster (PP), Scallop (PP), Whelk (PP)	P.O. Box 340 Grand Bank, NL AOE 1WO Telephone: (709) 832-1550 Fax: (709) 832-1555
Fisheries Products International Limited	Fortune, NL	Groundfish All Species (PP), Lobster (PP), Pelagics All Species (PP), Scallop (PP)	P.O. Box 550 70 O'Leary Avenue St. John's, NL A1C 5L1 Telephone: (709) 832-1860 (709) 832-1861 Fax: (709) 832-1862

James Cox, trading as Harbour Breton Retail Trade	Harbour Breton, NL	Groundfish All Species (RP), Lobster (RP), Pelagics All Species (RP), Scallop (RP)	P.O. Box 188 Harbour Breton, NL AOH 1PO Telephone: (709) 885-2430 Fax: (709) 885-2431
Ocean Choice International (2005) Inc.	Hermitage, NL	Groundfish All Species (PP), Lobster (PP), Lumpfish (PP), (Pelagics All Species (PP), Salmonids (Aquaculture) (PP)	P.O. Box 8274 St. John's, NL A1B 3N4 Telephone: (709) 883-2323 (709) 782-8244 Fax: (709) 883-3216
Harvesters Choice Inc.	Gaultois, NL	Groundfish All Species (PP), Pelagics All Species (PP)	25 Trinity Street St. John's, NL A1E 2M3 Telephone: (709) 841-5121 Fax: (709) 841-6151
North Atlantic Sea Farms Corporation	St. Alban's, NL	Atlantic Salmon (AP), Cod (AP), Trout (AP)	P.O. Box 400 St. Alban's, NL A1E 2M3 Telephone: (709) 583- 3231 (709) 583-3020 Fax: (709) 583-3022
Ocean Choice International (2005), Inc.	Burgeo, NL	Groundfish All Species (PP)	P.O. Box 8274, Station A St. John's, NL A1B 3N4 Telephone: (709) 886-2662 (709) 782-6244 Fax: (709) 886-2862
Ramea Co-operative Ltd.	Ramea, NL	Whelk (PP)	P/O/ Box 400 Ramea, NL Telephone: (709) 625-2200 Fax: (709) 625-2277
Seafrezz Foods Inc.	Channel Port aux Basques, NL	Groundfish All Species (PP), Lobster (PP), Lumpfish (PP), Pelagics All Species (PP), Salmonids (Aquaculture) (PP), Scallop (PP)	415 Griffin Drive Corner Brook, NL A2H 3E9 Telephone: (709) 695-7067 Fax: (709) 695-7402
Sea King Foods Inc.	Grand Bank, NL	Crab, Snow (RP), Groundfish All Species), Mussels (Aquaculture) (RP), Pelagics All Species (RP) Scallops (RP), Shrimp (RP), Whelk (RP)	P.O. Box 765 7 Water Street Grand Bank, NL A0E-1W0 Telephone: (709) 832-0499 Fax: (709) 832-0461

Data obtained and cited from: Department of Fisheries and Oceans, Licencing Division.

On February 7, 2006 the Premier of Newfoundland announced that processor Bill Barry would take over the former Fishery Products International plant in Harbour Breton to process herring, mackerel, and capelin.

5.3 Seal Hunting/Seal Fishery

There were 315 licences for seal hunt enterprises in the study region homeport areas between Fortune Bay and Cape Ray as of 2005. Fifteen assistant licences occur in the NAFO Division 3Ps, while 106 assistant licences are issued in Division 3Pn. There are 21 professional seal hunt licences issued in 3Ps and 174 licensed enterprises in 3Pn (Table 29).

Table 29. Weight (kilograms), number, and value (Canadian dollar) of seal species for DFO statistical sections of the South Coast of Newfoundland.

Section	Year	Species Name	Weight	Number	Value
33	1985	Seal skins, unspecified (no.)	0	21	210
	1991	Seal meat	11	0	5
		Seal skins, harp, beater (no.)	0	7	74
		Seal skins, harp, old (no.)	0	12	96
		Seal skins, harp, ragged jacket (no.)	0	5	55
		Seal skins, hood, young (no.)	0	12	156
		Seal skins, unspecified (no.)	0	3	26
	1992	Seal skins, harp, old (no.)	0	70	560
		Seal skins, harp, ragged jacket (no.)	0	50	550
		Seal skins, hood, old (no.)	0	10	180
		Seal skins, hood, young (no.)	0	105	1,365
		Seal skins, ringed/jar (no.)	0	5	18
		Seal skins, unspecified (no.)	0	25	213
	1993	Seal skins, harp, old (no.)	0	10	80
		Seal skins, hood, old (no.)	0	15	266
		Seal skins, hood, young (no.)	0	140	1,820
	1994	Seal skins, harp, bedlamer (no.)	0	1,360	12,240
		Seal skins, harp, old (no.)	0	172	1,376
		Seal skins, hood, old (no.)	0	40	710
		Seal skins, hood, young (no.)	0	330	4,290
		Seal skins, unspecified (no.)	0	600	4,200
	1995	Seal skins, harbour (no.)	0	66	467
		Seal skins, harp, old (no.)	0	30	218
		Seal skins, hood, young (no.)	0	271	2,913
		Seal skins, unspecified (no.)	0	305	2,984
34	1991	Seal flippers (no.)	0	14	28
		Seal meat	73	0	32
		Seal skins, harp, beater (no.)	0	11	100
		Seal skins, harp, old (no.)	0	3	24

	1992	Seal skins, unspecified (no.)	0	1	9
		Seal flippers (no.)	0	6	12
		Seal meat	36	0	16
		Seal skins, harp, bedlamer (no.)	0	1	9
		Seal skins, harp, old (no.)	0	2	16
		Seal skins, hood, young (no.)	0	16	208
	1993	Seal skins, harp, beater (no.)	0	1	11
		Seal skins, harp, old (no.)	0	4	32
		Seal skins, hood, young (no.)	0	23	299
		Seal skins, unspecified (no.)	0	3	24
	1994	Seal skins, hood, young (no.)	0	26	338
	1995	Seal skins, harp, old (no.)	0	5	36
		Seal skins, hood, young (no.)	0	8	86
35	1992	Seal skins, harp, beater (no.)	0	4	30
		Seal skins, harp, old (no.)	0	30	240
	1995	Seal skins, harbour (no.)	0	30	212
36	1992	Seal flippers (no.)	0	4	8
		Seal meat	86	0	38
		Seal skins, harp, old (no.)	0	22	176
		Seal skins, hood, young (no.)	0	1	13
		Seal skins, unspecified (no.)	0	160	1,360
	1993	Seal skins, unspecified (no.)	0	67	536
	1994	Seal skins, unspecified (no.)	0	370	2,590
	1995	Seal skins, harbour (no.)	0	10	71
		Seal skins, harp, old (no.)	0	50	364
		Seal skins, hood, young (no.)	0	100	1,075
		Seal skins, unspecified (no.)	0	120	1,950
37	1991	Seal meat	136	0	60
		Seal skins, hood, young (no.)	0	40	520
	1992	Seal skins, harp, ragged jacket (no.)	0	100	1,100
		Seal skins, hood, young (no.)	0	150	1,950
	1993	Seal skins, hood, young (no.)	0	350	4,550
	1994	Seal skins, hood, young (no.)	0	250	3,250
		Seal skins, unspecified (no.)	0	50	350
	1995	Seal skins, hood, young (no.)	0	200	2,150
38	2003	Seal flippers (no.)	0	113	48
		Seal meat	914	0	109
		Seal skins, harp, beater (no.)	0	559	27,391
	2004	Seal skins, harp, beater (no.)	0	7	334
39	1994	Seal flippers (no.)	0	30	27
		Seal meat	800	0	160
	1996	Seal fat	7,839	0	1,176
		Seal meat	15,547	0	4,198
		Seal skins, harp, beater (no.)	0	1,292	20,799
		Seal skins, harp, bedlamer (no.)	0	142	1,377
		Seal skins, harp, ragged jacket (no.)	0	6	60

		Seal skins, hood, young (no.)	0	12	185
	1997	Seal meat	3,391	0	640
		Seal penis (no.)	0	25	500
		Seal skins, harp, beater (no.)	0	41	902
		Seal skins, harp, bedlamer (no.)	0	2	28
		Seal skins, harp, old (no.)	0	21	252
		Seal skins, harp, ragged jacket (no.)	0	98	1,176
		Seal skins, hood, old (no.)	0	18	363
	2001	Seal skins, harp, beater (no.)	0	38	790
	2002	Seal skins, harp, beater (no.)	0	614	28,981
		Seal skins, harp, bedlamer (no.)	0	29	344
		Seal skins, harp, ragged jacket (no.)	0	232	4,640
	2003	Seal fat	51,785	0	10,358
		Seal flippers (no.)	0	891	479
		Seal meat	30,504	0	9,973
		Seal penis (no.)	0	70	1,260
		Seal skins, harp, beater (no.)	0	17,445	729,572
		Seal skins, harp, bedlamer (no.)	0	23	158
		Seal skins, harp, ragged jacket (no.)	0	1,393	28,295
	2004	Seal fat	66,696	0	13,339
		Seal skins, harp, beater (no.)	0	13,884	654,074
		Seal skins, harp, bedlamer (no.)	0	5	36
		Seal skins, harp, ragged jacket (no.)	0	2,223	30,697
	2005	Seal skins, harp, beater (no.)	0	735	37,862
		Seal skins, harp, ragged jacket (no.)	0	21	327

5.4 Marine Species at Risk along the South Coast

The *Species at Risk Act* (SARA) became law in June 2003. Enforcement initiatives under the Act became effective in June 2005. Such initiatives make it illegal to harm or kill species listed under SARA, or to harm or destroy their critical habitat. The act protects the wildlife found on federal lands and waters as well as their critical habitat. SARA is legislation developed by the government of Canada to implement recovery strategies for species found to be at risk. The Act also is in place to prevent other species from becoming at risk. The Act consists of three components.

1. The Species at Risk Act, which protects wildlife found on federal lands and waters along with their critical habitat.
2. The Accord for the Protection of Species at Risk, whereby the Government of Canada collaborates with provinces and territories to develop bilateral species at risk protection, incorporating legislation and diverse complementary initiatives for the protection of species and the recovery of species and their habitat.

3. The Habitat Stewardship Program, which encourages stewardship among Canadian citizens that will foster actions to protect species and their habitat which will lead to the recovery of species at risk and prevent others from becoming at risk (www.speciesatrisk.gc.ca Accessed on March 26, 2006).

Species are designated at risk by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) after examining a broad range of scientific data. COSEWIC consists of a committee of experts that assesses and designates which wild species (flora and fauna) are in peril and may disappear from Canadian habitats. Their recommendations are sent to the federal cabinet which, after consultations with affected stakeholders and interested groups, then decides whether a species should be listed under SARA.

In addition, numerous species in Canada have not been assessed by COSEWIC and are considered to be in some peril and at the risk of extinction or extirpation. Such species are placed on the COSEWIC candidate list, which places them in priority for future assessment (www.speciesatrisk.gc.ca Accessed on March 26, 2006).

There are five designations for which species may be classified. These are as follows:

- Extinct: a species that no longer exists anywhere on earth.
- Extirpated: a wildlife species that no longer exists in the wild in Canada, but exists elsewhere.
- Endangered: a wildlife species that is facing imminent extirpation or extinction.
- Threatened: a wildlife species that is likely to become endangered if nothing is done to reverse the factors leading to its extirpation or extinction.
- Special concern: a wildlife species that may become threatened or endangered because of a combination of biological characteristics and identified threats (www.speciesatrisk.gc.ca Accessed on March 26, 2006).

Table 30 presents marine species at risk and candidate species that are relevant to the South Coast study area.

Table 30. Marine species at risk and candidate species of the South Coast study area.

Common name	Scientific name	Status
Atlantic cod	<i>Gadus morhua</i>	Threatened
Atlantic wolffish	<i>Anarhichas lupus</i>	Special concern
Northern wolffish	<i>Anarhichas denticulatus</i>	Threatened
Spotted wolffish	<i>Anarhichas minor</i>	Threatened
Cusk	<i>Brosme brosme</i>	Threatened
Blue whale	<i>Balaenoptera musculus</i>	Endangered
North Atlantic right whale	<i>Eubalaena glacialis</i>	Endangered
Fin whale	<i>Balaenoptera physalus</i>	Special concern
Harbour porpoise	<i>Phocoena phocoena</i>	Special concern

Sowerby's beaked whale	<i>Mesoplodon bidens</i>	Special concern
Leatherback turtle	<i>Dermochelys coriacea</i>	Endangered
American plaice	<i>Hippoglossoides platessoides</i>	Candidate species
Atlantic halibut	<i>Hippoglossus hippoglossus</i>	Candidate species
Deepwater redfish	<i>Sebastes mentella</i>	Candidate species
Ocean pout	<i>Zoarces americanus</i>	Candidate species
Smooth skate	<i>Malacoraja senta</i>	Candidate species
Spiny eel	<i>Notacanthus chemnitzii</i>	Candidate species
Pollock	<i>Pollachius virens</i>	Candidate species

Species at Risk list from, www.cosewic.gc.ca Accessed on April 15, 2006.

5.5 Aboriginal Fisheries

In 1990 the Supreme Court of Canada handed down its milestone ruling in the *Sparrow* decision. This decision, while issued for the Musqueam First Nation, recognized that all Aboriginal peoples have a right to fish for food, social, and ceremonial purposes. The court found that this right takes priority over other uses of the fishery once conservation of the resource has been respected. The ruling also stressed the importance of consultation with Aboriginal groups where fisheries issues that involve them are considered. To address and affirm the importance of this decision and to ensure stable fishery management, DFO launched the Aboriginal Fisheries Strategy (AFS) in 1992. The objectives of the strategy are:

- to provide a framework for the management of fishing by Aboriginal groups for food, social, and ceremonial purposes;
- to provide Aboriginal groups with an opportunity to participate in the management of fisheries, thereby improving conservation, management, and enhancement of the resource;
- to contribute to the economic self-sufficiency of Aboriginal communities;
- to provide a foundation for the development of self-government agreements and treaties; and
- to improve the fisheries management skills and capacity of aboriginal groups.

The AFS will assist DFO in managing aboriginal fisheries in line with the *Sparrow* decision and any related Supreme Court decisions of the future. The AFS is a tool to provide effective management and regulation of fishing by Aboriginal groups and seeks to establish mutually acceptable and time-limited fisheries agreements between DFO and Aboriginal groups (from: www.dfo-mpo.gc.ca/communic/fish_man/afs_e.htm Accessed January 28, 2006).

A primary component of the AFS is the Allocation Transfer Program (ATP). This program assisted a process for voluntary retirement of commercial fisheries licence

holders and the re-issuance of such licences to appropriate Aboriginal groups. The program is therefore designed to provide Aboriginal groups with employment and income while not placing additional burdens on existing resources. By way of the ATP program and the opportunities it presents, the Conne River Miawpukek First Nation Band has purchased several commercial fishing enterprises to date, including three inshore vessels.

The Miawpukek Band Reserve located in Conne River has a population of over 700 members. The reserve is located on the South Coast of the island and covers an area of approximately 14 square miles (Mercer and Wells 2003).

The Miawpukek first Nation (MFN) currently has three commercial fishing vessels. These vessels are 34 feet 11 inches in length and are classified as mid-to-offshore. All three vessels have a full compliment of licences; however, their primary efforts are for crab, cod, scallops, and herring. The three vessels are all based in Conne River but frequently sail from Harbour Breton and other ports that may be closer to the fishing grounds. All fish species are prosecuted based upon agreed catch methods, seasons, and quotas with MFN and DFO working in collaboration to enforce put forth regulations as part of the management teams. The MFN also has a recreational food fishery in their home area of Conne River. A food fishing agreement has been developed by MFN and DFO that overseas all band members catching fish for food purposes. Under the AFS the Miawpukek First Nation of Conne River retains access to fish species under federal jurisdiction and managed by DFO for food, social, and ceremonial purposes (Personal Communication Ross Hinks, Director of Natural Resources, Council of the Conne River Micmacs, Conne River Reserve).

5.6 Aquaculture

Historically communities within the study area have depended on marine resources including commercial fisheries for their livelihood. With recent declines in various commercial fish species, the closure of the commercial Atlantic salmon fishery, and the moratorium on the cod fishery, many fishery sectors have diversified their efforts. While some communities in the South Coast region still rely on commercial fisheries for their economic base, increasingly others have turned to aquaculture for economic benefits.

5.6.1 Development of Industry

Efforts to establish an aquaculture industry on the South Coast of Newfoundland began in the Bay d'Espoir region in the mid-1980s with efforts to cultivate Atlantic salmon. The site was located in the warm waters below the surge tanks of the Bay d'Espoir hydroelectric power plant. The warm waters provided an opportune environment where the young fish could develop rapidly (BP Environmental Research and Consulting Services 2005). Since its inception the aquaculture industry has grown steadily in the Bay d'Espoir area as well as other communities located in the Coast of Bays and to a lesser degree in scattered communities along the remaining South Coast area.

5.6.2 Suitability of Region

The South Coast of Newfoundland is environmentally ideal for aquaculture production. The region is comprised of numerous and sheltered bays, inlets, fjords, and freshwater lakes. Coastal influences such as prevailing winds and ocean currents during the winter months along with higher air temperatures produce some of the warmest oceanographic conditions on the island. These combined factors allow marine coastal waters of the South Coast region to be free of pack ice year round, excluding the deeper inner areas of the coast, which are geographically more prone to occurrences of land-fast ice during the winter season than are the open coastal waters. Land-fast ice poses a particular hazard to aquaculture pens, making it imperative that they be located in protected areas in ice-free inner coast and outer coast sites in order to avoid destruction by ice movement (Osborne et al. 2004). Concurrently, higher water temperatures above the lower lethal limit of -0.7 degrees Celsius for Atlantic salmon in many regions of the South Coast, permit salmon to be over wintered at pen sites. However, temperatures at several sites have been observed to be below the lethal limit for Atlantic salmon. A management tactic to allow salmon to over winter is to set nets deeper than six to eight metres below the top level of cold water to 20-25 metres, thus allowing the fish to avoid the super chilled water. Even at higher than lethal water temperatures the cold winter waters do not allow for optimal growth during this season. At temperatures below 4 degrees Celsius it is believed that salmon do not grow well but instead engage exclusively in basic metabolic processes (Personal communication, Geoff Perry, Regional Aquaculture Coordinator, DFO St. John's, Newfoundland).

The aquaculture industry has become an important economic resource for Newfoundland and Labrador and has been a source of revitalization for some rural communities. In 2004 Newfoundland's 32 commercial mussel growers produced 2,300 tonnes of mussels (Table 31) (The Cold Harvester, June 2005), which translated into a value of \$5 million dollars (Table 32). In 2005 commercial mussel growers produced 3,157 tonnes of mussels for a value of \$6.9 million dollars (Personal communication, Steve Moyse, Policy, Planning and Research Analyst, Department of Fisheries and Aquaculture, St. John's, NL).

The aquaculture industry has contributed substantially to the provincial economy and has played a significant role in the improvement of the socio-economic situation of rural coastal communities. This is supported by the fact that within the province, the aquaculture industry employed 500 people in 2004. Sales attributed to the aquaculture sector have increased in recent years with a value of \$3 million in 1995 (Osborne et al. 2004), nearly \$11 million in 1998 (10,741,000), and \$22 million in 2004 with an increase to \$33.5 million in 2005 (Table 32) (Government of Newfoundland and Labrador 2004; 2005; Coast of Bays Marine Infrastructure Report 2005).

Aquaculture ventures along the South Coast of Newfoundland from Cape Ray to Point Crewe are mainly focused on finfish (salmonids), specifically, Atlantic salmon and Steelhead trout with a limited blue mussel industry (Figure 24; Inset). The culturing and production of these species is centered in the Coast of Bays region, mainly the areas of Fortune Bay, Connaigre Bay, Hermitage Bay, and Bay d'Espoir (Coast of Bays Marine

Infrastructure Report 2005). In 2004, thirteen finfish companies in the area produced 3,329 tonnes of Atlantic salmon and Steelhead trout combined (Table 31) with an export value of \$17 million dollars (Table 32). During 2005, 5,006 tonnes of salmonids were produced for a value of \$26.6 million, representing increases of 50% weight and 56% value over 2004 (Tables 31 and 32). In addition, there is interest in expanding the culture of blue mussels in the region and preliminary research and development work in Atlantic cod aquaculture is presently underway (Personal communication, Steve Moyse, Policy, Planning and Research Analyst, Department of Fisheries and Aquaculture, St. John's, Newfoundland).

Table 31. Total aquaculture production (tonnes) within the South Coast of Newfoundland for the period 1998-2005.

Species	1998	1999	2000	2001	2002	2003	2004	2005
Atlantic Salmon	401	399	670	1,092	1,270	1,450	1,964	
Steelhead Trout	1,315	2,078	842	1,719	1,600	1,150	1,365	*5,006
Blue Mussels	946	1,700	1,051	1,452	1,700	1,300	2,300	3,157
Atlantic Cod	11	105	155	207	227	30	n/a	n/a
Total	2,673	4,282	2,718	4,470	4,797	3,930	5,629	8,163

Cited from: Coast of Bays Marine Infrastructure Report 2005 page 8. Data pertaining to 2005 from Personal Communication, Steve Moyse, Policy, Planning and Research Analyst, Department of Fisheries and Aquaculture, St. John's, Newfoundland. *Note: The level of production and value in 2005 is presented for salmonids as a group, and not defined specifically for Atlantic salmon and Steelhead Trout. Hence, the numbers are combined in the table.

Table 32. Total aquaculture value (\$, 000) within the South Coast of Newfoundland for the period 1998-2005.

Species	1998	1999	2000	2001	2002	2003	2004	2005
Atlantic Salmon	2,924	2,462	4,962	5,200	6,132	6,670	*17,000	*26.6 M
Steelhead Trout	6,919	11,401	5,493	9,752	8,800	6,324		
Blue Mussels	815	3,799	2,699	3,929	5,500	2,280	5,000	6,900
Atlantic Cod	83	335	495	525	900	30	n/a	n/a
Total	10,741	17,997	13,649	19,406	21,332	15,304	22,000	33.5 M

*Note: The level of production and value in 2004 and 2006 is presented for salmonids as a group, and not defined specifically for Atlantic salmon and Steelhead Trout. Hence, the numbers are combined in the table. (Original source: Personal Communication, Steve Moyse, DFA) Cited from: Coast of Bays Marine Infrastructure Report 2005 page 8.

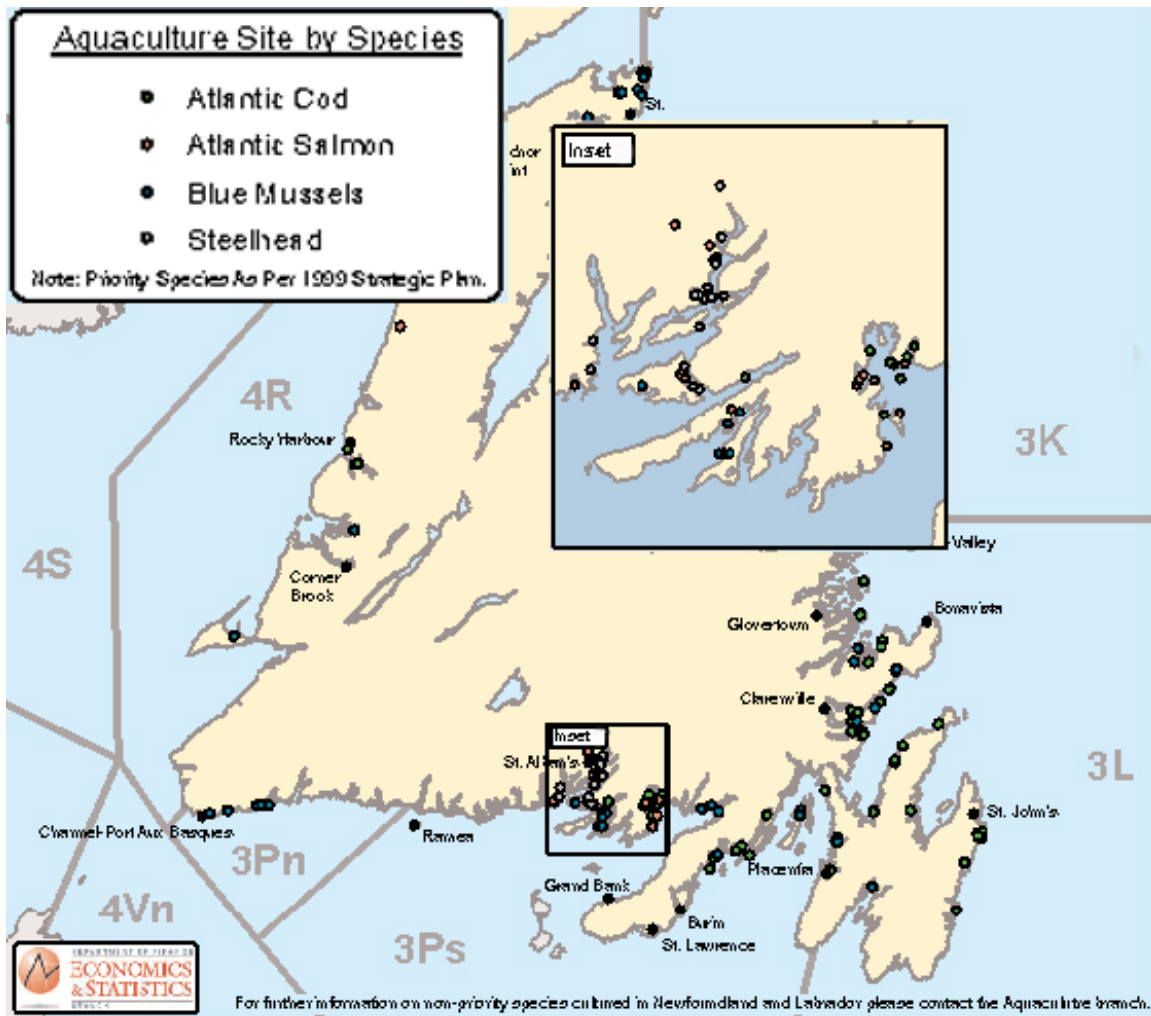


Figure 24. Location of Aquaculture Sites in Newfoundland and Labrador. 2005. Cited and adapted from *Seafood Industry Year in Review, 2005*. Published by The Government of Newfoundland and Labrador, Department of Fisheries and Aquaculture.

The majority of blue mussel enterprises in the province are centered along the north coast of Newfoundland. Aquaculture efforts to harvest finfish—mainly Atlantic salmon, Steelhead trout, and Atlantic cod—occur primarily in NAFO Divisions 3Pn and 3Ps along the South Coast of Newfoundland, with sites centered in the Coast of Bays region where aquaculture efforts have increased steadily (Figure 24; Inset).

There are currently 42 aquaculture facilities for salmonids and cod along the South Coast study area, from Cape Ray to Point Crewe, with the greatest number located in the Coast of Bays region (Figure 24; Table 33). With the increased revenues brought forth by the aquaculture industry, it is anticipated that the South Coast region of the province will experience expansion of the industry.

Table 33. Salmonid and Atlantic cod aquaculture licensing activity along the South Coast as of October 2005.

Category	# Companies	Licences				Total # Licences	Total # Sites
		Atlantic Salmon	Steelhead Trout	Rainbow Trout	Atlantic Cod		
Currently Licenced	14	25	19	3	8	55	42
Approved Pending Lease and/or Financing Applications in Referral Systems	6	9	5	0	3	17	13
	11	31	1	0	2	34	34
Total						106	89

Note: Often times there is more than one salmonid species licensed per site, which is reflected in a different, number of sites in comparison to number of licenses issued. Adapted from: Coast of Bays Marine Infrastructure Report 2005 page 9.

In the Coast of Bays region approximately 158 people are employed to work directly with the aquaculture industry. The aquaculture services sector (i.e. divers, net cleaners, construction crews, etc.) maintains an additional staff. One hundred and eight people are employed in the North Atlantic Sea Farms Corporation processing facility located at St. Albans. This plant handles the majority of salmonid aquaculture harvest and for the most part functions at capacity on a year round basis (Personal communication, Steve Moyse, 2006)

From 1998 to 2004 interest in developing aquaculture activity and applications for active licences for scallops, clams, oysters, and marine plants increased (Table 34). The names and addresses of South Coast companies located from Cape Ray to Point Crewe which are currently engaged in the production of several aquaculture species are presented in Table 36. Thirteen of the listed companies are engaged in salmonid production, namely, Atlantic salmon, Steelhead trout, Rainbow trout, and Speckled trout. There are five companies dealing in the production of Atlantic cod, and ten companies in place for the production of blue mussels. Scallops, clams, and oysters each have a company geared toward their production. Several companies are involved in the production of more than one species.

Table 34. Aquaculture licensing activity exclusive of salmonids along the South Coast, as of October 2005

Species	Licences						
	1998	1999	2000	2001	2002	2003	2004
Blue mussels	24	24	23	20	20	17	16
Scallops	2	3	3	3	2	2	2
Clams	0	0	0	0	1	1	1
Oysters	0	0	0	0	1	1	1
Marine plants	0	0	0	1	1	1	1

Data obtained and cited from: Brent Tompkins, Aquaculture Development Officer, Government of Newfoundland and Labrador, Department of Fisheries and Aquaculture, P.O. Box 679, 58 Hardy Avenue, Grand Falls-Windsor, NL Canada A2A 2K2.

Projections put forth by the Department of Fisheries and Aquaculture for the period 2005-2008 for finfish exclusively predict a growth in this aspect of the industry along the South Coast (Coast of Bays Marine Infrastructure Report 2005). According to the department's records for licensing of finfish aquaculture operations along the South Coast region, the numbers of approved or pending approval applications for new aquaculture operation sites potentially may double or beyond within the near future (Table 35) (Coast of Bays Marine Infrastructure Report 2005).

Table 35. Aquaculture production (tonnes) estimates for Newfoundland.

Year	Steelhead Trout	Atlantic Salmon	Total	* Anticipated New Entrants
2005	1,489	4,239	5,728	
2006	1,435	4,844	6,279	
2007	1,635	4,600	6,235	1,100
2008	1,635	4,600	6,235	3,670

Cited from: Coast of Bays Marine Infrastructure Report 2005 page 10.

The Department of Fisheries and Aquaculture is looking to the South Coast finfish aquaculture industry to experience continuing growth and development in the future and to become an environmentally and economically sustainable contributor to the provincial economy. To assist in the facilitation of this growth the department initiated and maintains several aquaculture industry assistance programs. These include the following:

- Aquaculture Innovation Program
- Human Resource Development Program
- Marketing Intelligence Assistance Program
- Aquaculture Working Loan Guarantee Initiative

The goals of these programs both singularly and collectively are intended to, “help aquaculture companies increase efficiencies, address human resources and skill transfer requirements and increase competitiveness” (The Honorable Trevor Taylor, The Cold Harvester, June 2005, pp 6 and 31).

Table 36. Aquaculture companies of the South Coast study area in 2005.

Aquaculture Type	Address	City/Town	Postal Code	Telephone	Fax
Atlantic salmon					
Bonne Bay Fish Farms	P.O. Box 279	St. Alban's	A0H 2E0	538-3119	538-3737
Cold Ocean Salmon Inc.	14 Magaguadavic Drive	St. George, NB	E0G 2Y0	(506) 529-9014	(506) 529-9010
Fortune Bay Aquaculture. (Formerly Markland Seafoods Ltd.)	General Delivery	Conne River	A0H 1J0	882-3474	882-3475
Long Island Resources Ltd.	P.O. Box 378	St. Alban's	A0H 2E0	538-3348	538-3548
Marine Salmon Farms Inc.	14 Magaguadavic Drive	St. George, NB	E0G 2Y0	(506) 529-9014	(506) 529-9010
Nordland Aquaculture Ltd.	P.O. Box 378	St. Alban's	A0H 2E0	538-3348	538-3548
Norsk Salmon Inc.	P.O. Box 378	St. Alban's	A0H 2E0	538-3348	538-3548
North Atlantic Sea Farms Corp.	P.O. Box 400	St. Alban's	A0H 2E0	538-3231	538-3022
South Coast Salmon Inc.	14 Magaguadavic Drive	St. George, NB	E0G 2Y0	(506) 529-9014	(506) 529-9010
Steelhead trout					
Bonne Bay Fish Farms	P.O. Box 279	St. Alban's	A0H 2E0	538-3119	538-3737
Fortune Bay Aquaculture Inc. (formerly Markland Seafoods Ltd.)	General Delivery	Conne River	A0H 1J0	882-3474	882-3475
Long Island Resources Ltd.	P.O. Box 378	St. Alban's	A0H 2E0	538-3348	538-3548
Nordland Aquaculture Ltd.	P.O. Box 378	St. Alban's	A0H 2E0	538-3348	538-3548
North Atlantic Sea Farms Corp.	P.O. Box 400	St. Alban's	A0H 2E0	538-3231	538-3022
Nova Fish Farms Inc.	P.O. Box 451	St. Alban's	A0H 2E0	538-3335	538-3335
Rainbow trout					
Fortune Bay Aquaculture Inc. (formerly Markland Seafoods Ltd.)	General Delivery	Conne River	A0H 1J0	882-3474	882-3475
Long Island Resources Ltd.	P.O. Box 378	St. Alban's	A0H 2E0	538-3348	538-3548
North Atlantic Sea Farms Corp.	P.O. Box 400	St. Alban's	A0H 2E0	538-3231	538-3022
Speckled trout (None)					
Atlantic cod					
Connaigre Aquaculture Farms	P.O. Box 165	Harbour Breton	A0H 1P0	885-2848	885-2431
Marinus Bio Resources Ltd.	P.O. Box 283	Wesleyville	A0G 4R0	536-5679	536-5679
Newfoundland Aqua Ventures Ltd.	P.O. Box 1443	Bay Roberts	A0A 1G0	586-2252	586-2870
North Atlantic Cod Farms Corp.	P.O. Box 400	St. Alban's	A0H 2E0	665-3168	665-4107
Blue mussels					
Atlantis Farms Ltd.	P.O. Box 688	Harbour Breton	A0H 1P0	885-7951	885-3111
Blue Water Farms Ltd.	P.O. Box 688	Harbour Breton	A0H 1P0	885-2283	885-3111
Con Aqua Ltd.	P.O. Box 688	Harbour Breton	A0H 1P0	885-7951	885-3111
Connaigre Aquaculture Farms	P.O. Box 165	Harbour Breton	A0H 1P0	885-2848	885-2431
Connaigre Fish Farms Inc.	P.O. Box 219	La Scie	A0K 3M0	675-2511	675-2457
Leveson Willmott	P.O. Box 220	Hermitage	A0H 1S0	883-2348	N/A
Little Bay Farms Inc.	P.O. Box 368	Harbour Breton	A0H 1P0	885-2074	885-2892
Miller's Passage Inc.	P.O. Box 375	Fortune Harbour	A0H 1E0	739-5197	N/A
Northeast Mussels Inc.	P.O. Box 61	Rose Blanche	A0M 1P0	956-2913	N/A
South Coast Aquaculture Ltd.	P.O. Box 8274, Station A	St. John's	A1B 3N4	364-2722	368-2260
Scallops					
Connaigre Aquaculture Farms	P.O. Box 165	Harbour Breton	A0H 1P0	885-2848	885-2431
Clams					
Newfoundland Clam Farms Ltd.	P.O. Box 21073	St. John's	A1A 5B2	895-5100	895-5130
Oysters					
Newfoundland Clam Farms Ltd.	P.O. Box 21073	St. John's	A1A 5B2	895-5100	895-5130
Marine Plants					
Ramea Economic Development Association	P.O. Box 69	Ramea	A0N 2J0	625-2250	625-2282

All data obtained and cited from: Brent Tompkins, Aquaculture Development Officer, Government of Newfoundland and Labrador, Department of Fisheries and Aquaculture, P.O. Box 679, 58 Hardy Avenue, Grand Falls-Windsor, NL Canada A2A 2K2.

Fisheries and Oceans Canada and the provincial Department of Fisheries and Aquaculture (DFA) share responsibility and jurisdiction for the Newfoundland aquaculture industry under a Memorandum of Understanding (Personal Communication, Geoff Perry, Regional Aquaculture Coordinator, DFO, St. John's, Newfoundland). The province is responsible for aquaculture development and site licensing while DFO oversees conservation and protection of the fish, fish habitat, as well as fish health and navigation and marine safety issues. DFO administers its lead through the Fish and Health Protection Regulations, Introduction and Transfers policy, the *Navigable Waters Protection Act*, and the *Oceans Act* (1997).

In addition, in August 2000, DFO under its Aquaculture Action Plan launched a Program for Sustainable Aquaculture. One aspect of the program includes The Aquaculture Policy Framework (APF) which details the following:

- Confirms DFO as both a regulator and enabler of aquaculture development;
- Contributes to DFO's reorientation as a department of sustainable development; and:
- Encourages rather than restrains responsible aquaculture development.

(Cited from: <http://www.dfo-mpo.gc.ca/aquaculture/ref/AAPe.htm> on January 22, 2006).

Ancillary to federal and provincial efforts on behalf of sustainable aquaculture, several support agencies and groups are in place for the Newfoundland aquaculture industry. These include: The Newfoundland Aquaculture Industry Association (NAIA), The Newfoundland Salmonid Growers Association (NSGA), The Atlantic Canada Opportunities Agency (ACOA), Human Resources Development Canada (HRDC), Department of Development and Rural Renewal (DDRR), the National Research Council (NRC), Canadian Aquaculture Industry Alliance (CAIA), and The Canadian Centre for Fisheries Innovation (CCIF). (Cited from Supporting Rationale and Qualitative Ecosystem Objectives for the Proposed Large Ocean Management Area Boundaries Based on Ecosystem Criteria: Newfoundland and Labrador Region Volume 2, Appendices, March 2002, D. Mercer/N. Wells, DFO, St. John's, NL).

5.7 Marine Plant (Seaweed) Harvesting

Oceanographic and biological factors present along the South Coast of Newfoundland such as water temperature and ice free and nutrient rich waters for the majority of the year, help make the region an ideal habitat for the growth of marine plants (seaweeds). The region is regarded as a highly productive area for the growth of marine plants with potential for a marine plant harvesting industry. In addition, the region's rocky coast affords many marine plant species a suitable habitat. On a global scale marine plants comprise a major component for the aquaculture industry. They have an annual value of billions of dollars and a worldwide employment base of hundreds of thousands (Hooper 1999). Harvested marine plants are utilized for human food, animal food, fertilizer, and nutritional supplements and may be of potential use for medicinal and industrial purposes (BP Research and Consulting Services 2005).

Until recently, little attention has been directed toward seaweed aquaculture in Newfoundland. To date over 200 seaweed and vascular plants have been identified in coastal areas of Newfoundland. Several of these marine plants are present along South Coast coastal waters and are found in small quantities and in patchy distribution (BP Research and Consulting Services 2005). In the early 1990s at Isle aux Morts, research was conducted on marine plants and the feasibility of harvesting them. During the summer of 2000 a preliminary marine plant biomass survey was carried out for the South Coast region from Fortune Bay to Hermitage Bay. The objective of the study was to ascertain if the present stock of marine plants warranted a further full-scale biomass survey. The study concluded that the year 2000 was not an optimum year for marine plants as many were below reported stocks according to local knowledge and that further investigation was required (Osborne et al. 2004).

Research has continued to 2006 on the possibility of establishing a commercial enterprise for marine plants. Presently, this focus is concentrated in the Ramea area where economic development associations, industry, and entrepreneurs are collaborating in this effort. Major obstacles to the development of a marine plant aquaculture industry are that it is a capital intense industry and requires long-term investments (Personal Communication Ian Stewart, President, Newfoundland Aqua Products, Ramea, Newfoundland).

Though further research is required to determine the marine plant species with the greatest potential for harvest, three species are of primary interest at this time: (1) knotted wrack (*Ascophyllum nodosum*); (2) bladder wrack (*Fucus vesiculosus*); and (3) cabbage kelp (*Laminaria longicruris*). Knotted wrack is a marine plant of the mid-to-low intertidal zone where the water is relatively calm and will grow abundantly. Knotted wrack prefers shores protected from heavy wave action and free from the scour of ice and has been identified in ice-free areas of the South Coast. It is absent or reduced when turbulent conditions are present (Lee 1977). On the South Coast knotted wrack has been found in Seal Cove, Sandyville, Great Bay de l'Eau, Chapel Island and Pool's Cove. Though it usually grows to less than one metre in length when mature, two-meter long specimens have been found in ice-free regions of the South Coast.

Bladder Wrack, a member of the fucus species, inhabits the middle of the tidal zone. It is found along the coastline of Newfoundland and is widely distributed on the South Coast. Bladder wrack has been found in several areas of the Coast of Bays including, Seal Cove, Sandyville, Hermitage, Connaigre Bay, Deadmans Bight, Great Bay de l'Eau, Boxey Harbour, English Harbour West and Belle Bay.

Cabbage kelp is a cold water marine plant, which grows from the shallow sublittoral to deep waters (Lee 1977). It is distributed throughout Newfoundland and is found growing on rocky surfaces of the subtidal zone. Cabbage kelp is the largest kelp species found in Newfoundland and may exceed eight metres in length. Specimens greater than 20 m in length have been found in Fortune Bay. Cabbage kelp has been found in the areas of Great Bay de l'Eau, Chapel Island, Pool's Cove, Belle Harbour, Belle Bay, Cinq Islands Bay and Rencontre East (DFO 1999).

5.8 Community-based Coastal Resource Inventory

The collapse of the traditional cod fisheries and the closure of other key fisheries have fostered increased awareness of the need for communities to become more involved in the conservation and stewardship of their marine resources. Many fisheries and other groups have expressed desire to become involved in establishing new approaches for the co-management and sustainable development of these resources. In response, the Marine Environment and Habitat Management Division of DFO began in 1996 to undertake a coordinated and strategic plan to inventory, map, and organize marine-related traditional ecological knowledge and other information. Traditional ecological knowledge was collected using an interview process with community residents and combined with information from existing data sources such as publications and government documents. The immediate product is an experience-based inventory of local ecological knowledge about the coastal resources of the province, viewed from the perspectives and values of coastal residents who live and work with those resources. The inventory, which includes both qualitative and quantitative data, exists in the form of thematic databases and associated maps and is referred to as the Community-based Coastal Resource Inventory, or CCRI. The anticipated benefit and end result is to promote local participation in economic development, conservation, and management within the coastal zone (Canning & Pitt Associates and C. Story and Associates 1996, O'Brien et al., 1998).

The CCRI database was used to identify specific features on maps of the South Coast region. Information in the database includes the distribution of marine species important to local fisheries. Species distributions are portrayed as polygons. Figures 25 through 29 portray CCRI data on the distribution of cod, lobster, redfish, crab, and scallop. Table 37 lists the fisheries for which data exist in the CCRI databank for the South Coast region.

Non-resource based data gathered through CCRI includes information on several different types of features as well as locations for communities and abandoned communities. These are identified as point features. Existing communities are identified by name.

Shipwrecks along the South Coast are identified as points of interest for tourism. No distinction is made on the type or name of the wreck. Other tourism related information includes the distribution of eagles and marine mammal sightings. The sighting points are identified based on broad categories such as “whale,” “dolphin/porpoise,” and “seal.” Mapped points do not differentiate between species; however, species specific data are available on the attribute data tables. Table 38 lists the categories of information available through the CCRI databank for the South Coast.

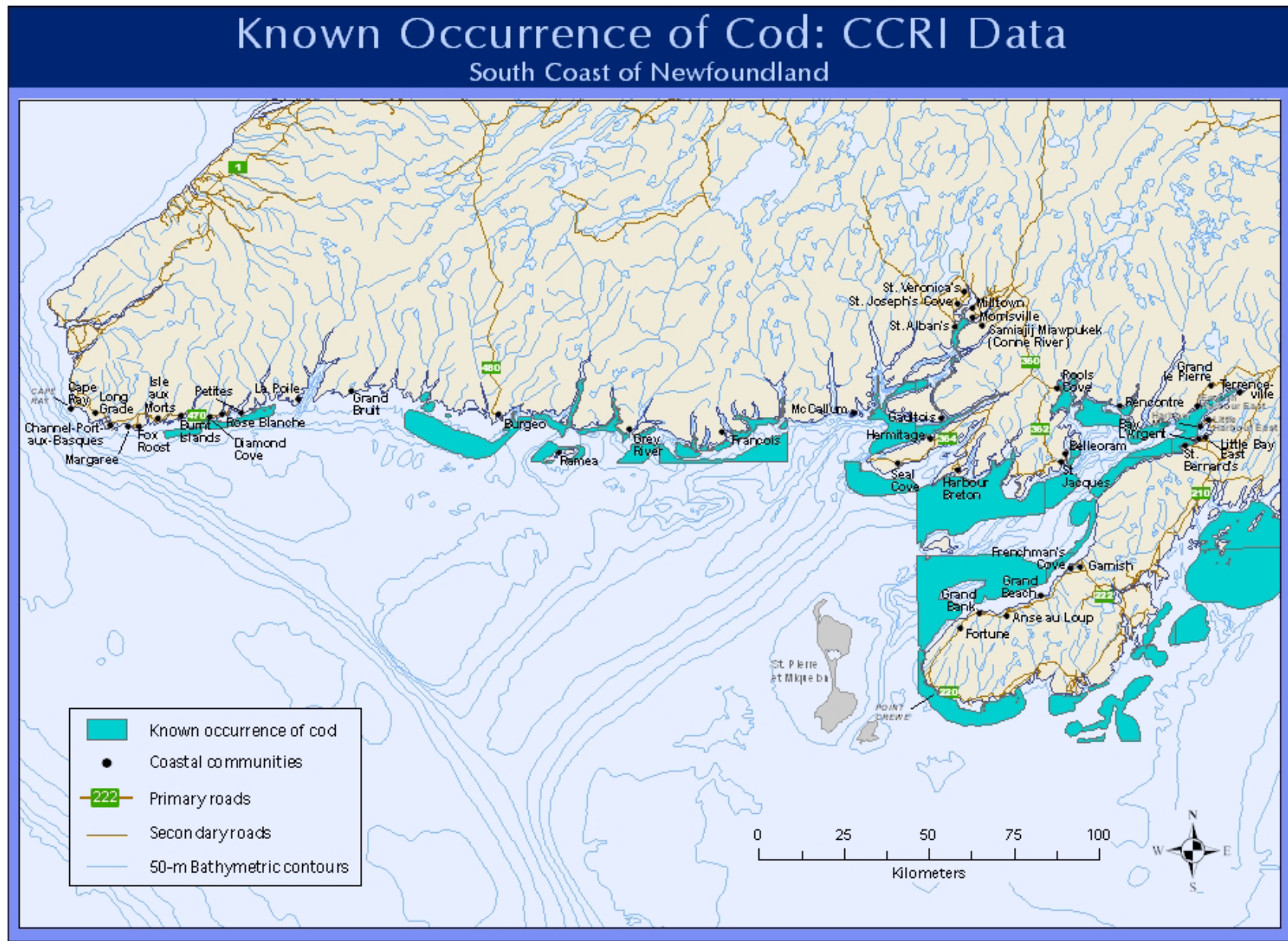


Figure 25. Known occurrence of cod: CCRI data.

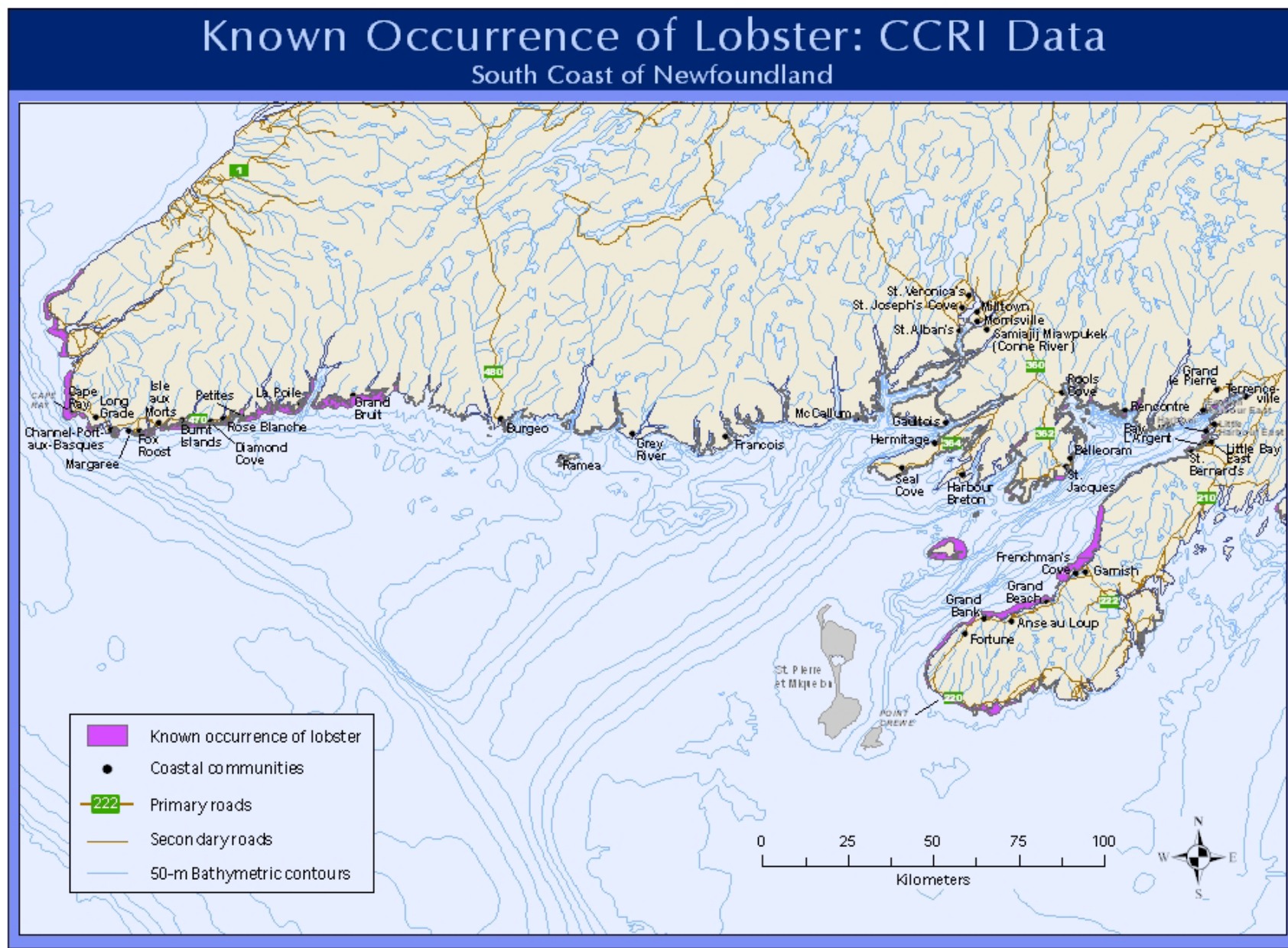


Figure 26. Known occurrence of lobster: CCRI data.

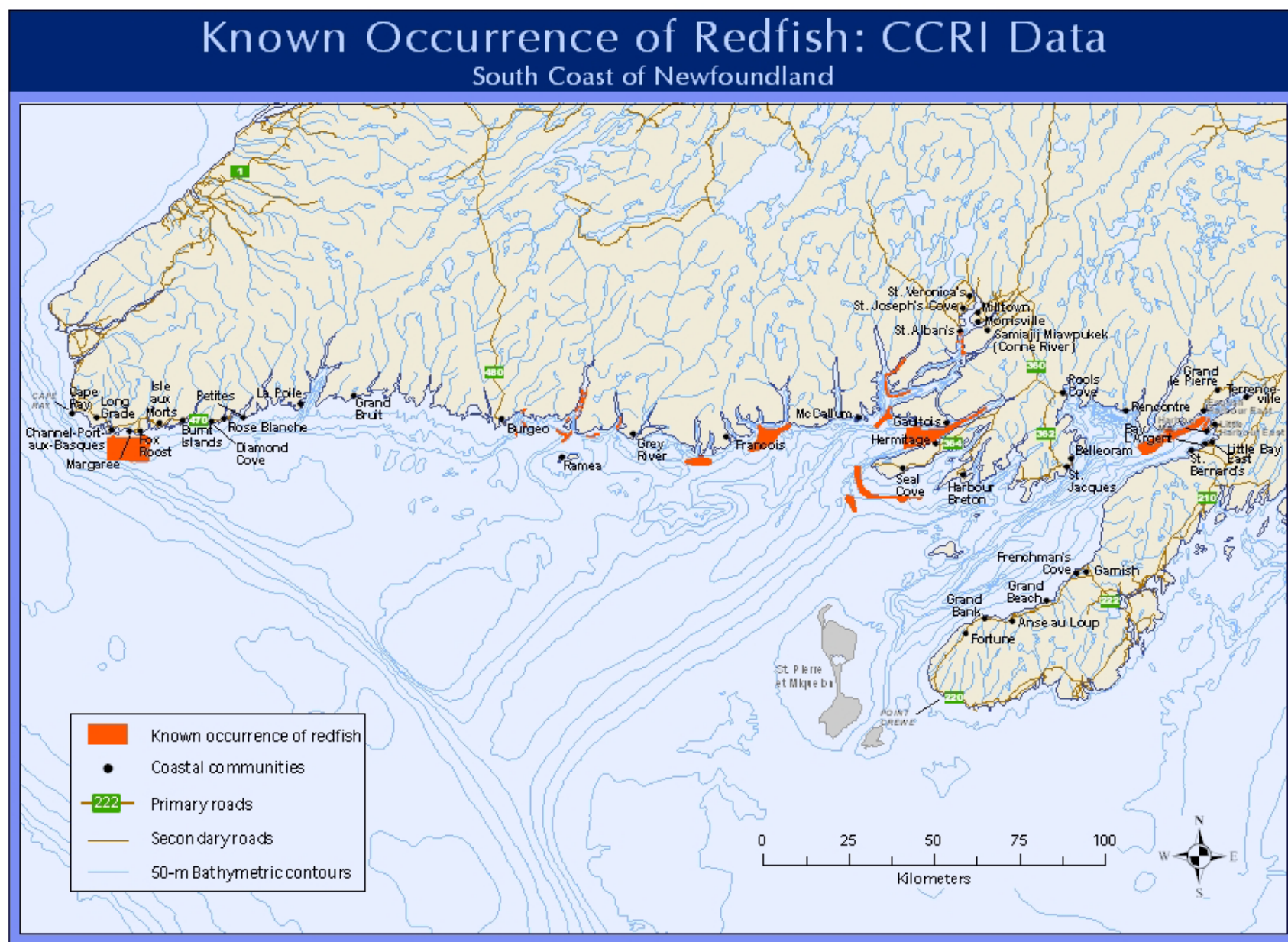


Figure 27. Known occurrence of redfish: CCRI data.

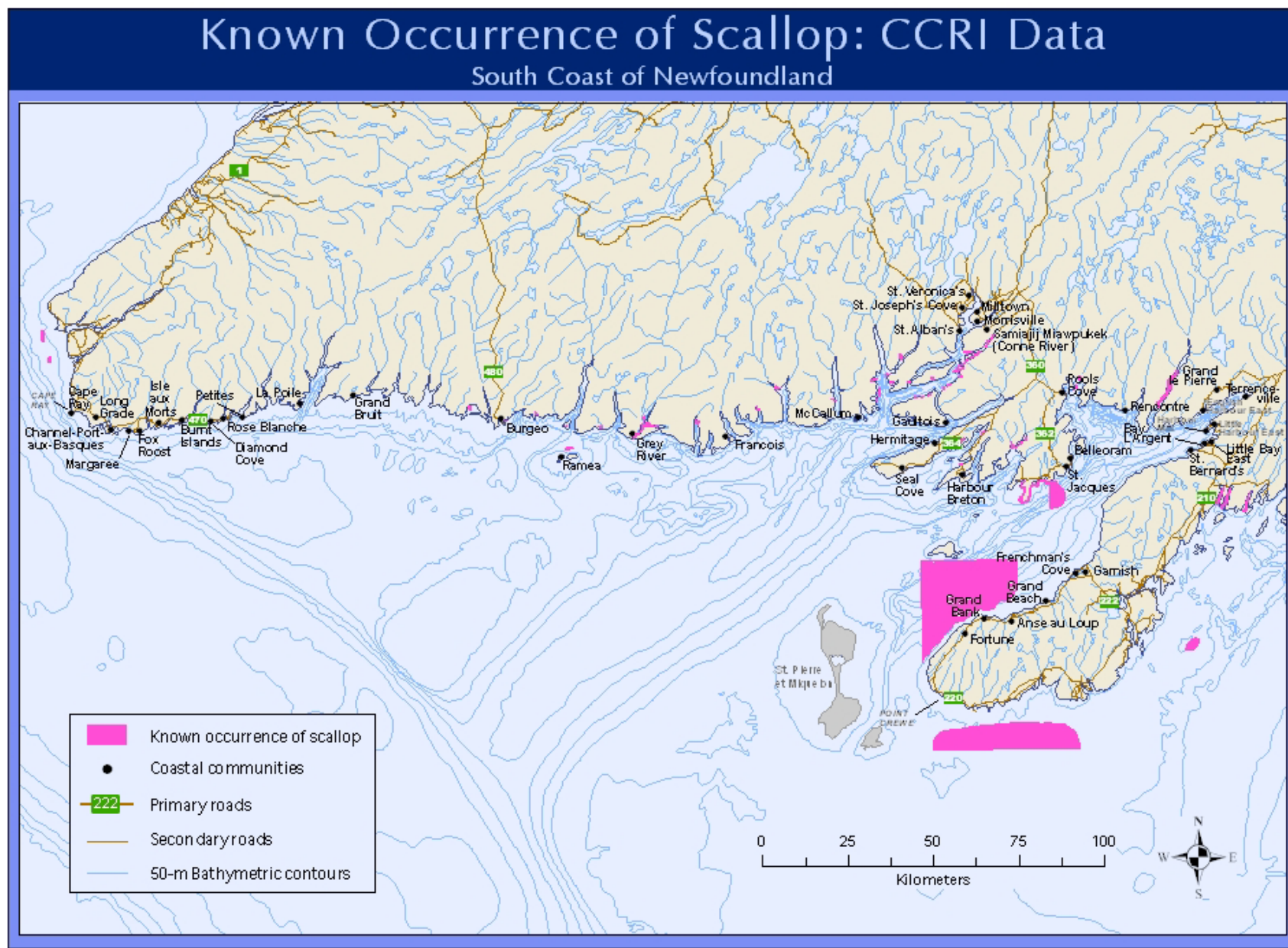


Figure 28. Known occurrence of scallop: CCRI data.

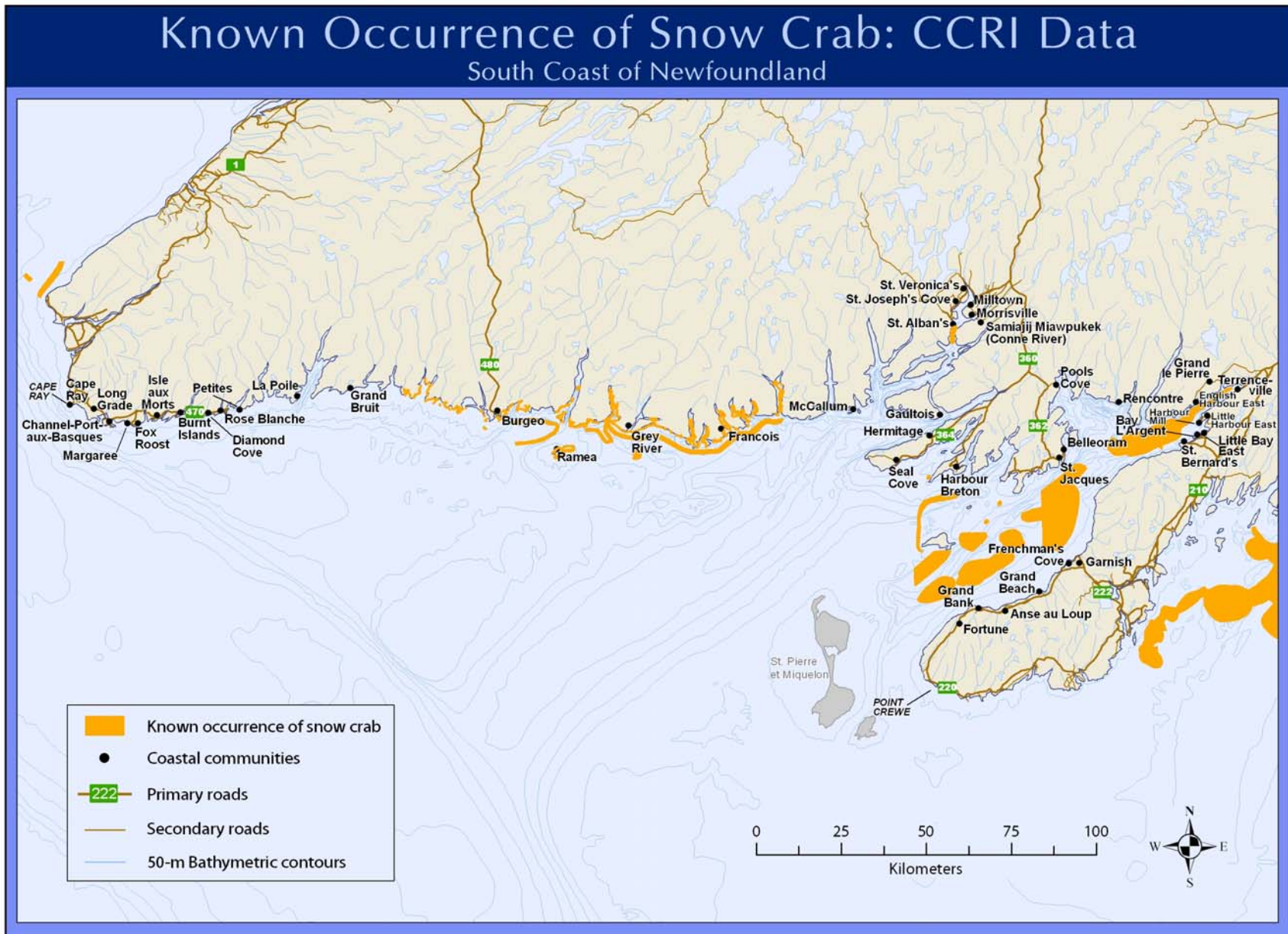


Figure 29. Known occurrence of snow crab: CCRI data.

Table 37. Species for which data exist in the CCRI databank on fisheries of the South Coast (Source: DFO, Marine Environment and Habitat Management Division, St. John's, NL).

Groundfish	Pelagics	Shellfish	Aquaculture
Turbot	Brook Trout	Clam	Atlantic Salmon
Skate	Capelin	Mussel	Brook Trout
Redfish	Eel	Lobster	Scallop
Lumpfish	Herring	Squid	Steelhead
Halibut	Mackerel	Snow Crab	Mussel and Blue Mussel
Flounder	Salmon	Rock Crab	Cod
Cod	Shark	Northern Stone Crab	
Pollock	Smelt	Scallop	
American Plaice	Trout	Sea Urchin	
Winter Flounder	Tuna	Quahog	
Witch Flounder		Snail	
Haddock		Shrimp	
Hake		Whelk	
Hagfish		Periwinkle	

Note: No aquaculture data exists for the area between Grand Bruit and McCallum

Table 38. Categories of information available through CCRI data bank for the South Coast (Source: DFO, Marine Environment and Habitat Management Division, St. John's, NL).

Infrastructure Points	Infrastructure Lines
Boat building facility	Planning
Breakwater	Forest Access Road
Landfill	Infrastructure Polygons
Marina	Ocean Dumping Site
Sawmill	Planning
Slipway	Municipal Boundary
Wharf	Protected Water Supply
Accommodation	Culture Points
Agricultural Area	Abandoned Community
Airstrip	Burial Ground
Bridge/Causeway	Cottage Area
Dam	Ghost Light
Fish Processing Plant	Historic Site
Government Building	Shipwreck
Government Wharf	Tourist Site
Industrial/Commercial Area	Anchorage

Lighthouse	Beach
Navigation Aid	Camping
Power Generating Plant	Church
Private Wharf/Stage	Park
Retail Outlet	Recreational Facility
Sewage Outfall	Trail
Water Intake	Archaeological Dig
Bed and Breakfast (Accommodation)	Bird Sanctuary
Dam (Protected Water Supply)	Museum
Hospital (Government Building)	Culture Lines
Hotel (Accommodation)	Salmon River
Incinerator (Industrial/Commercial Area)	Trail
Information Center (Government Building)	Recreational Boating
Industrial/Commercial Area (Boat Building Facility)	Park
Landfill Dump Site (Industrial/Commercial Area)	Scuba
Mine Related Area	Culture Polygons
Protected Water Supply	Park
Spring Water	Scuba
Storage Tank	Bird Sanctuary
	Arctic Hare

Notes:

- 1) Infrastructure Points are general types, some having more detailed descriptions. No data exist for area roughly between Grand Bruit and McCallum.
- 2) For Infrastructure Line, Infrastructure Polygons, and Culture Polygons, data only exist for the Southwest Coast and Bay d'Espoir/Connaigre subregions.

6.0 Human Activities: Land-based Activities

6.1 Agriculture

The commercial agriculture sector along the South Coast is relatively small, although agriculture takes place just outside the region in the Codroy Valley to the west and in Winterland on the Burin Peninsula. There do not appear to be sod operations within the South Coast study area.

On the other hand, many residents maintain garden plots for home use. Activity within the Schooner Regional Development Corporation's zone could not be obtained during the time of this research, due to office renovations and the unavailability of the website given that the Corporation was going through office renovations.

6.2 Forestry

Three of the eighteen Forest Management Districts on the island portion of Newfoundland and Labrador fall within the South Coast region. The three districts include District 14 (St. Georges), District 7 (Bay d'Espoir), and District 3 (Burin Peninsula). The boundaries for each district are highlighted in Figure 30 and described as follows:

- **District 14** – located in Southwestern Newfoundland and begins near the community of Gallants, continues south to Port aux Basques and is bounded by Grey River in the east.
- **District 7** – located on the South Coast approximately halfway between St. John's and Port aux Basques. The northern boundary extends to Berry Hill Pond on the Bay d'Espoir Highway and to Great Burnt Lakes and Meelpaeg Lake in the northwest section of the District.
- **District 3** – the Burin Peninsula.

District 14 – St. Georges District.

Timber ownership in District 14 is allocated among Abitibi Consolidated Inc., Corner Brook Pulp and Paper Ltd., and the Crown. However, all commercial timber plots are located north of Cape Ray resulting in no commercial harvesting adjacent to the South Coast region.

District 14 has 21 designated areas for domestic harvesting on Crown Land. Generally, these areas are in close proximity to communities and have traditionally provided residents with fuel wood, saw logs, fencing, and material utilized by the region's fishing industry. Two of the 21 designated domestic harvesting areas are located along the coast of the South Coast region (Figure 30). The forest resources within these areas are

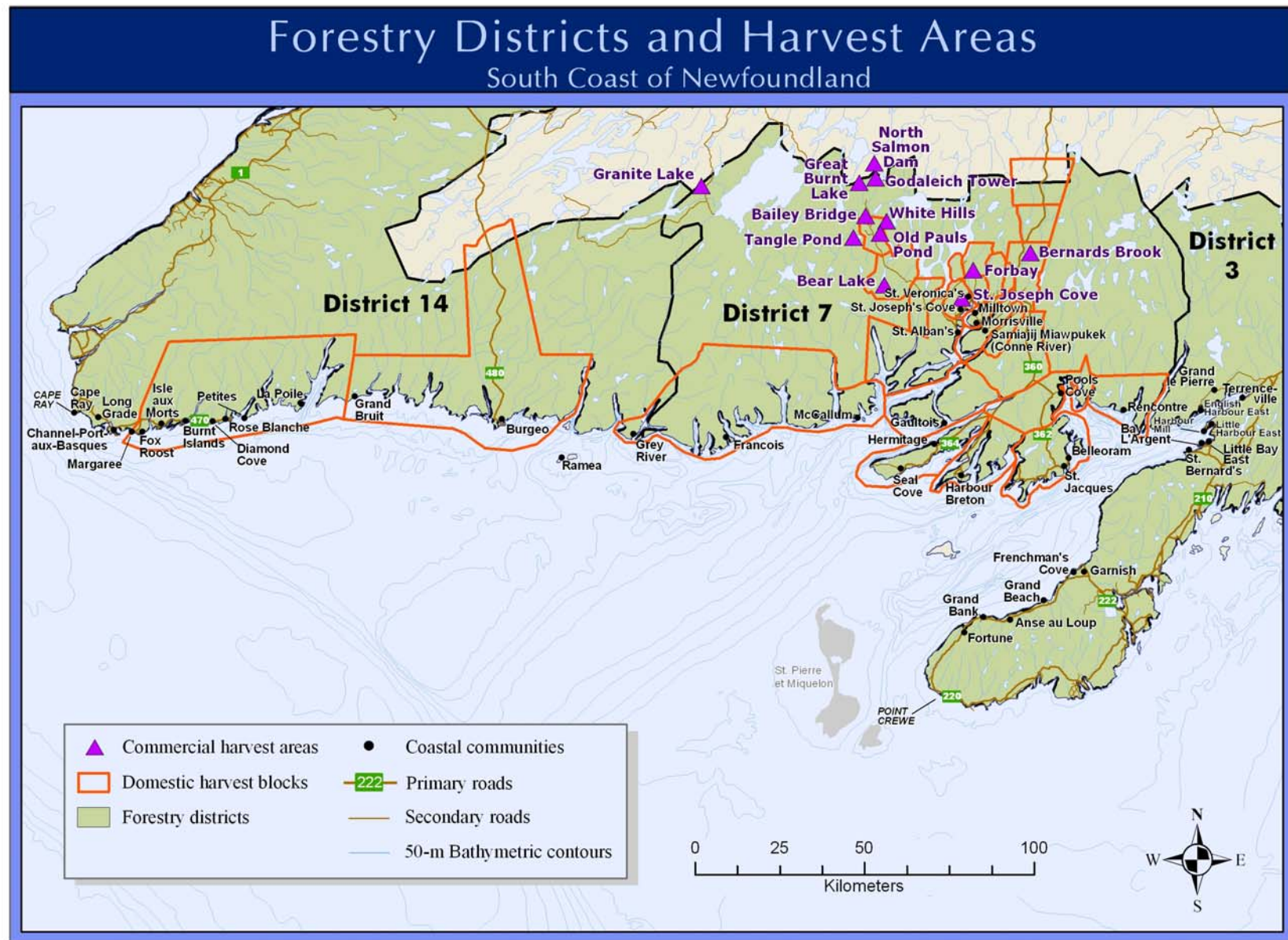


Figure 30. Forestry districts and harvest areas of the South Coast of Newfoundland. (Source: Department of Forestry Resources and Agrifoods, 2001)

relatively limited and have not been inventoried by the province. Approximately 150 permits are issued on an annual basis in this region resulting in an estimated 2,000 m³ being harvested annually (Department of Forestry Resources and Agrifoods, 2001).

Combined, these areas cover much of the coastal region between the communities of Port aux Basques and Grey River and encompass approximately 3,031 km² or 22% of District 14's total area (Department of Forestry Resources and Agrifoods, 2001).

District 7 – Bay d’Espoir

District 7 is utilized for both commercial and domestic timber harvesting. Roundwood (e.g. whole logs) harvested within the Bay d’Espoir area is generally shipped to larger sawmills in central Newfoundland or utilized by pulp and paper mills in Grandfalls, Corner Brook, and the former Stephenville mill prior to closure in 2005 (Osborne, 2004). The District 7 Crown commercial operating areas are shown on the overview map and detailed in Table 39. This table indicates the potential merchantable volume available for harvest in each of the operating areas.

Table 39. Summary of proposed timber harvest within District 7 for the period 2003-04 to 2007-08.

Project Name	Available Harvest Volume (m ³)	Area (ha)
Great Burnt Lake	18,750	375
Bailey Bridge	6,650	95
White Hills	10,500	150
Tangle Pond	3,150	45
Old Pauls Pond	3,150	45
Bear Lake	16,875	225
Bernards Brook	1,200	15
Godaleich Tower	20,000	400
North Salmon Dam	10,500	210
St. Joseph's Cove	2,500	346
Forbay Road	4,900	100
Granite Lake	21,420	510
Total	119,595	2,516

(Source: Department of Forest Resources and Agrifoods, 2001 & 2002)

Similar to District 14, the ability to harvest timber for personal use (e.g. firewood, logs, construction material) is considered to be a right of heritage by many local residents. Highlighted in the District 7 Five Year Operating Plan are 26 domestic harvesting areas available for public use, 13 of which are located directly along the coastal region. Approximately 800 Domestic Cutting Permits are issued annually throughout the district with an average yield of approximately 12,000m³ being harvested (Osborne 2004).

The domestic cutting block designation encompasses approximately 4,999 km² or roughly 46% of the District's total area. These domestic cutting blocks are outline in Figure 30 (Department of Forestry Resources and Agrifoods, 2002).

District 3 – Burin Peninsula

Currently there is no commercial interest within District 3. Timber harvest is solely the result of domestic use by the region's residents. Forest resources within this District are relatively limited and of poor quality. Due to the insufficient forest resources no Forest Management Five Year Operating Plan exists for District 3 to date (Trina Appleby, Appleby Consulting, Grand Bank, Newfoundland, pers. comm).

6.3 Hydro

All hydroelectric generating plants and infrastructure within the Bay d'Espoir watershed are owned and operated by Newfoundland and Labrador Hydro, a provincial crown corporation. The hydroelectric plant located north of Bay d'Espoir is the largest facility of its type in Newfoundland, producing 25,706 GWh annually. The headwaters of the Bay d'Espoir system begin at Victoria Lake at an approximate elevation of 320 meters. Through a man-made array of dams and canals, this water is directed to generating plants at Granite Canal, Upper Salmon, and, finally, 150 km from Victoria Lake to its final tidewater destination at Bay d'Espoir (Newfoundland and Labrador Hydro 2006).

The Granite Canal generating station has a rated capacity of 40 MW with an annual average energy production of 224 GWh. The generating unit utilizes approximately 37 m of head with a rated plant flow of 122.4 m³/s.

The Upper Salmon Development utilizes a portion of the residual head, between Meelpaeg Lake Reservoir and Round Pond, within the watershed of the Bay d'Espoir Hydroelectric development. The plant operates at a normal supply level of 241 m under a net head of 51 metres. The average rated flow of 189.5 m³/s is used to generate 84 MW of electrical power with an average annual production of 541 GWh (Newfoundland and Labrador Hydro 2006).

As part of Hydro's commitment to the environment, a 45,000 m² fish habitat compensation facility was included in this development to ensure any aquatic habit loss was avoided, reduced, or replaced. A Fish Habitat Compensation Agreement was signed with the Federal Department of Fisheries and Oceans to ensure proper construction, utilization and long term viability of the facility (Newfoundland and Labrador Hydro 2006). The new facility provides 44,450 m² of spawning and rearing habitat for ouananiche and brook trout that were displaced from the existing waterway below the Granite Canal discharge when the water in the Granite Canal was diverted. The design and approach has received provincial and international awards (SPAWNER 2005).

As of 2003 the hydroelectric industry was employing approximately 90 people in the Coast of Bays region, with 83 located at the Bay d'Espoir facility (Department of Fisheries and Oceans 2003).

6.4 Wind Power

In Ramea, there is a demonstration wind plant consisting of six 65 kW wind turbines and ancillary equipment interconnected to the Newfoundland and Labrador Hydro utility grid. The diesel plant controller is modified to integrate the wind plant with the existing diesel plant. The wind powered generators operate efficiently. According to the Mayor, each generator takes 65 kW to generate electricity, for a total of 390 kW, as compared with 900 kW to operate the diesel generator (Lloyd Rossiter, Mayor, Ramea, NL, pers. comm.).

6.5 Sewage Disposal and Treatment and the Release of Other Organic Wastes

Many coastal communities of the province dispose untreated sewage into the marine environment, and the South Coast is no exception. In 2001 the Oceans Program of DFO partnered with the Newfoundland and Labrador Department of Environment to compile a database on the province's municipal sewage systems. During the period 2001-2004, data was collected by means of phone and fax surveys to the municipalities and then mapped for the Marine Environmental Quality Atlas. Data were also collected on the treatment level and outfall locations for communities along the coast. The latter information was obtained from environmental approval permits, shoreline surveys in selected areas, and personal interviews with municipalities (Department of Fisheries and Oceans 2005a, b).

Currently, approximately 73% of the population of residents of Newfoundland & Labrador as a whole are serviced by municipal sewers, whether or not treatment is involved. However, such a high percentage reflects the fact that the majority of the population resides in St. John's. The remainder of the population, including along the South Coast, still relies on individual septic tank and disposal as the most common type of sewage treatment (Cyril McCarthy, Chief Engineer, Department of Municipal Affairs, Corner Brook, NL, pers. comm.).

Table 40 lists the current wastewater management for communities of the South Coast region. Most of the information pertains to municipal systems, since obtaining data about private systems can be extremely difficult and time-consuming. Only those communities for which information was available at the time of this report are listed. The information from Port aux Basques to Grey River was provided by the Department of Municipal Affairs and would be current to 2006 (Cyril McCarthy, pers. comm.). Information for communities east of Grey River was taken from Osborne *et al.*(2004). Current information regarding wastewater management for communities east of Grey River would be available from the Gander/Central and St. John's/Eastern District offices. The appropriate representatives from these offices were not available at the time of this report.

Table 40. Current wastewater management for communities of the South Coast between Port aux Basques and Grey River.

Community/Area	Current Wastewater Management
Port aux Basques	Large municipal system. Close to 100% of the community is served by the system. No treatment. Raw sewage disposal by outfall pipes.
Margaree/Fox Roost (Local Service District)	All individual septic systems. No reported problems.
Isle aux Morts	
Burnt Islands	Near 100% of the community is served by the system (a few houses exempted). No treatment. Raw sewage disposal by outfall pipes.
Harbour Le Cou/Rose Blanche	Pressurized sewer system (pump station). No treatment. Based on an experiment back in the 1960s.
La Poile/Grand Bruit	Individual septic systems.
Burgeon	Near 100% of the community is served by the system. No treatment. Raw sewage disposal by cluster outfall pipes. The systems could be improved relatively quickly if by-pass from storm-water could be allowed.
Ramea	Close to 100% of the community is served by the system. No treatment. Raw sewage disposal by outfall pipes.
Grey River	All individual septic systems. No reported problems.
Belleoram	Municipal and private outfalls, no treatment ('04).
Boxey	Private outfalls ('04).
Gaultois	Municipal and private outfalls, no treatment ('04).
Harbour Breton	Municipal outfalls, no treatment ('04).
Hermitage	Municipal outfalls, no treatment ('04).
Milltown - Head of Bay d'Espoir	Municipal and private outfalls, no treatment ('04).
Morrisville	Private outfalls ('04).
Pools Cove	Municipal and mostly private outfalls, no treatment ('04).
Rencontre East	Municipal outfalls, no treatment ('04).
Samiajj Miawpukek	Secondary treatment, using bio-filtering system ('04).
Seal Cove, Fortune Bay	Municipal outfalls, no treatment ('04).
St. Alban's	Municipal system, secondary treatment, using air agitation treatment process ('04).
English Harbour West	Private outfalls, no treatment ('04).
St. Jacques	Private outfalls ('04).

Any new on-site septic system needs to be designed and the installation supervised by a professional engineer or certified technician who is supposed to follow the published guidelines for design of wastewater systems. For guidelines for the design of acceptable sewerage systems, consult Government of Newfoundland & Labrador: Guidelines for the Design, Construction, & Operation of Water & Sewerage Systems, which has just been

updated, on Government of Newfoundland and Labrador website under Municipal Affairs. This new publication is for the entire Atlantic Region.

The sources and types of waste that are released into the marine environment are primarily degradable wastes such as domestic sewage. Other degradable wastes include fish plant offal, finfish aquaculture wastes such as excess feed and faeces, and sawmill wastes. A study by Cull in 2000 examined the comparative levels of organic wastes that are released into the coastal waters of Newfoundland from these four sources: domestic sewage, fish plant offal, aquaculture wastes, and sawmill wastes (Cull 2000). For the province as a whole during the period 1992-1996, offal was the largest source of coastal organic wastes, followed by sewage, followed by sawmill wastes. Aquaculture was the smallest contributor of organic wastes. For the South Coast region including the Bay d'Espoir subregion, offal was the largest contributor of organic wastes; however, sewage was the second largest source of wastes during 1992-1994 and aquaculture the second largest source of wastes in 1995 and 1996 (Cull 2000). It may be hypothesized that, given the decline of fish processing activity and the increase in aquaculture (both finfish and shellfish) since 1996, the proportion of organic wastes released into the coastal environment represented by these four sources will have shifted in recent years.

6.6 Solid Waste Disposal and Management

6.6.1 The Provincial Context and Management Strategy

More than 400,000 tonnes of solid waste is generated in Newfoundland and Labrador each year, equalling approximately two kilograms per person per day. Approximately 34% of total solid waste generated in the province is residential; 60% comes from institutional, commercial, and industrial sources including health and education services, business, and restaurants; and 6% results from construction, land-clearing, and demolition (Newfoundland and Labrador Waste Management Strategy 2002).

Most of this waste is classified as paper or organic—two categories that can be diverted from the waste stream, thereby significantly reducing the total amount of waste disposed into landfills. Table 41 presents an overview of total waste generated in the province.

Table 41. Solid waste in Newfoundland and Labrador (Adapted from Newfoundland and Labrador Waste Management Strategy 2002).

Material	Percent Total Waste
Paper	37
Organic	30
Metal	9
Plastic	8
Glass	6
Inorganic	4
Other	6

Although no information was available on the category breakdown of solid waste for South Coast communities, it might be assumed that the proportional contents of solid waste for communities without road link to the rest of the province would not be significantly different. Waste audits conducted for three isolated communities in Labrador by the Quebec-Labrador Foundation in the late 1990s found paper and organics to represent the highest percentage of total solid waste (Blanchard *et al.* 1998).

Following province-wide community consultations conducted in 2001, the Government of Newfoundland and Labrador published a solid waste management strategy in 2002. The strategy puts forward a regional approach and provides a framework for creating formal partnerships among incorporated communities, Local Service Districts, and unincorporated areas. A central objective is to create a system that allows communities to pool resources and consolidate waste disposal sites. To support this regional approach, five goals were established in the document:

- divert 50% of the materials currently going to disposal by 2010;
- reduce the number of waste disposal sites by 80 %;
- eliminate open burning at disposal sites by 2005 and phase out the use of incinerators by 2008;
- phase out use of unlined landfill sites by 2010; and
- full province-wide modern waste management by 2010

Five actions were identified and the province is currently engaged in trying to achieve the goals as soon as possible. There are many challenges to achieving these goals, particularly for the smaller, more isolated communities of the South Coast. The future will involve communities collecting and sending their solid waste to designated transfer stations, where no burning will be allowed and waste is to be covered daily with fill material. There will also be at least three large-scale, modern, lined landfill sites in what will be called “host regions.” Implementation costs have been estimated at \$240 million.

The 2002 Provincial Strategy is currently under revision. Agreement exists with the overall framework, but the strategy regarding financing required additional negotiations. Additional questions arose regarding the associated costs and environmental impact of transporting waste large distances from small rural communities to the three main disposal sites. Requirements vis-à-vis standards and regulations also justified further examination by government given the Province’s varied physical geography. Modifications may be made to the landfill closures deadline of 2012. Finally, the revisions will likely provide further detail regarding governance models and benchmarks for environmental standards.

6.6.2 Legislation, Regulations, and Standards

The Enabling Statute in the Province for issues related to solid waste management is the Environmental Protection Act of 2002, under which a number of regulations subsequently have been made. These laws affect any solid waste management strategy, whether it be administered at the municipal or regional levels. For instance, the Air

Pollution Control Regulations (2004) prohibit burning domestic waste and trash from commercial, industrial, or municipal operations. Other items include: tires, plastics, treated lumber, drywall, demolition waste, hazardous waste, biomedical waste, rubber, paint products, fuel and lubricant containers, used oil, animal cadavers, and hazardous substances. On April 29, 2005 Newfoundland and Labrador signed a Memorandum of Understanding (MOU) with the Federal Government in order to identify priority areas of cooperation on issues related to climate change and build partnerships to achieve cost-effective emission reductions. Both landfills and the open burning of garbage represent sources of green house gas emissions, and therefore one of the priority areas of cooperation specifically mentioned in the MOU is the reduction of emissions from municipal and solid waste sources.

To help achieve the goals set out by the Provincial Waste Management Strategy, disposal bans for tires and used oil have been put into place. These are covered by the Waste Management Regulations (2003) and Used Oil Control Regulations (2004) respectively. Both items are prohibited from being disposed in a waste disposal site; given the fact that both represent valuable resources, the government has provided mechanisms for their recycling. Consumers pay into the tire recycling programme when they purchase new tires. Retailers are required by law to accept old tires. When retailers accumulate 30 tires or more, the Multi-Materials Stewardship Board (MMSB) arranges pick-up within 72 hours. A new transport contract has eliminated problems experienced in earlier years with un-timely tire pick-ups. Information on how this program is being implemented in South Coast communities was not available at the time of this report.

Under the Environmental Protection Act (2002) the Waste Diversion Regulations (2005) give the Minister the right to designate a material banned from disposal. Additionally, any person responsible for a disposal site shall not allow any banned materials from being disposed at that site. The Provincial Strategy recommends additional bans on items such as corrugated cardboard, newsprint, bond paper, and even organics and household hazardous waste (Government of Newfoundland and Labrador 2002). Following this, curb-side pick-up of cardboard and paper recycling has begun in several regions of the Province, with office paper recycling now mandatory in St. John's, Mount Pearl, Paradise and Conception Bay South for all businesses with 25 employees or more. Smaller businesses will be required to participate in March 2006.

- At the time of this report, the Department of Environment and Conservation was in the process of finalizing a document on environmental standards for municipal solid waste management (MSW) facilities.

6.6.3 Management along the South Coast

The South Coast falls within several waste management regions. The 2002 Provincial Waste Management Strategy mapped four proposed regional transfer station service areas and four isolated community regions for the South Coast. They are serviced by incinerators and landfills, however continued open burning of garbage continues at many landfills, especially those sites without available fill material. With respect to

governance, several waste management committees are active along the coast. The largest and most institutionalized ones operate in the Codroy Valley (outside the South Coast region, but a good example), Port aux Basques, Burgeo, and the Burin Peninsula. The latter is serviced by the Schooner Regional Waste Management Committee in which the Regional Economic Development Corporation actively is involved. The Schooner Waste Management Committee conducted a feasibility study on a proposal to transfer waste to the Avalon Peninsula. Shorter-term goals include the consolidation of waste disposal sites. The lack of road access to many communities is a major challenge to the implementation of regional waste management along the South Coast. Shipping solid waste by barge is considered dangerous.

The following information details specific regional services for the South Coast. The source of this information is: personal communication, Policy and Planning Division, Municipal and Provincial Affairs, St. John's (March 2, 2006) and Cyril McCarthy, Chief Regional Engineer, Municipal and Provincial Affairs, Corner Brook (March 24, 2006).

The Grey River and La Poile incinerators are very small (approximately 10 ft.) and are easily transportable. Ramea's incinerator is broken and they are investigating transporting waste off the South Coast via a three-stream truck to Corner Brook (Corner Brook requires separation of paper and cardboard).

The Marine Environmental Quality Atlas (Department of Fisheries and Oceans 2005 a, b) contains maps of the active and inactive landfills and incinerators for the South Coast region as of 2001.

Table 42. Regional Waste Management Services Along the South Coast.

Community / Area	Current Waste Management	Future Plans
Port aux Basques (services Cape Ray to Burnt Islands, soon to include east to Harbour Le Cou)	Incinerator	- area lies within the Western Waste Management Host Region - current proposal calls for the site to eventually become a regional transfer station
Rose Blanche	Landfill	- set to close at the end of 2006 - waste will be transported to Port aux Basques
La Poile	Incinerator (small)	
Burgeo	Incinerator	- trying to develop environmental alternatives - capital and operating costs are limiting
Ramea	Incinerator	same as above, isolated community
Grey River	Incinerator (small)	same as above, isolated
Francois	Incinerator	same as above, isolated
McCallum	Incinerator	same as above, isolated
St. Alban's	Landfill	services St. Joseph's Cove and St. Veronica's
Milltown	Landfill	investigating consolidation with St. Alban's
Morrisville	Landfill	same as above
Conne River	Landfill	same as above
Gaultois	Landfill	
Seal Cove	Landfill	
Hermitage	Landfill	services surrounding unincorporated communities
Harbour Breton	Incinerator	
St. Jacques - Coombs Cove	Landfill	
Belleoram	Landfill	
Pool's Cove	Landfill	also have a small incinerator which is not currently used
Rencontre East	Incinerator	
English Harbour East	Landfill	
Grand Le Pierre	Landfill	
Terrenceville	Landfill	
Little Harbour East Bay L'Argent St. Bernard's – Jacques Fontaine Little Bay East	Incinerator	
Garnish	Landfill	
Grand Bank and Fortune	Incinerator	possible future site for a consolidated site servicing additional communities
Point May	Landfill	

7.0 Extraction of Non-renewable Resources

A map of mines and quarry sites for the South Coast region appears in Figure 31. The map does not include the former Hope Brook gold mine or Grey River tungsten mine described below.

The Marine and Mountain Zone Corporation reports that there are vast deposits of a variety of minerals within Zone 10. These include gold at the Cape Ray Fault; beryl, quartz, and silica along the coastal areas of Rose Blanche and Diamond Cove; zinc, lead, and copper near LaPoile; and large outcrops of granite in many areas throughout the Zone (Marine and Mountain Zone, 2005).

7.1 Historical Mining

Rose Blanche: The Rose Blanche Lighthouse was built in 1871 from granite recovered directly below the lighthouse site. When the lighthouse was restored in 1999, 90% of the original stone was recovered and re-used in the restoration project. Other mining activities in that area took place in the community of Diamond Cove, west from Rose Blanche. Graphite was mined some 75 years ago in small quarry site in Diamond Cove. The only recent quarrying or mining activity in the area was for the removal of graphite during road construction to Diamond Cove.

Hope Brook Gold Mine: This was an active gold mine near the Cinq-Cerf Bay and Couteau Bay, about 30 miles west of Burgeo, that eventually closed about seven or eight years ago. BTC Selco owned the mine some years ago, but sold it to another company. The gold mine was shut down apparently due to some overspill of the tailings, possibly during occurrences of heavy rain. Sulfide and heavy minerals reportedly leached into the water, killing fish and other marine wildlife.

7.2 Current and Recent Mining

Grey River: As of Feb. 28, 2006, the only active mining within the study area was near Grey River, and even that it is not really “active”. South Coast Ventures Inc. had the rights to this site but have since sold it to Playfair Mining, based out of Vancouver. Playfair Mining did exploratory work for tungsten and gold by doing some small drilling (3-4 ft.) and surface sampling work. Asarco mining company mined the same site, in search of Tungsten, and built a 600ft. long tunnel underground into the countryside at the site Playfair Mining now owns. There are no plans underway by Playfair Mining for the Coast of Bays area. (Figure 31)

7.3 Oil and Gas Exploration and Development

Currently, no exploration rights, permits, or licences have been issued within the study area for any of the major companies that have joint ventures in such terminals as Terra Nova, White Rose, and Hibernia. These companies include Shell Canada, Exxon Mobil, Petro Canada, etc. Furthermore, no significant discoveries have been made within the

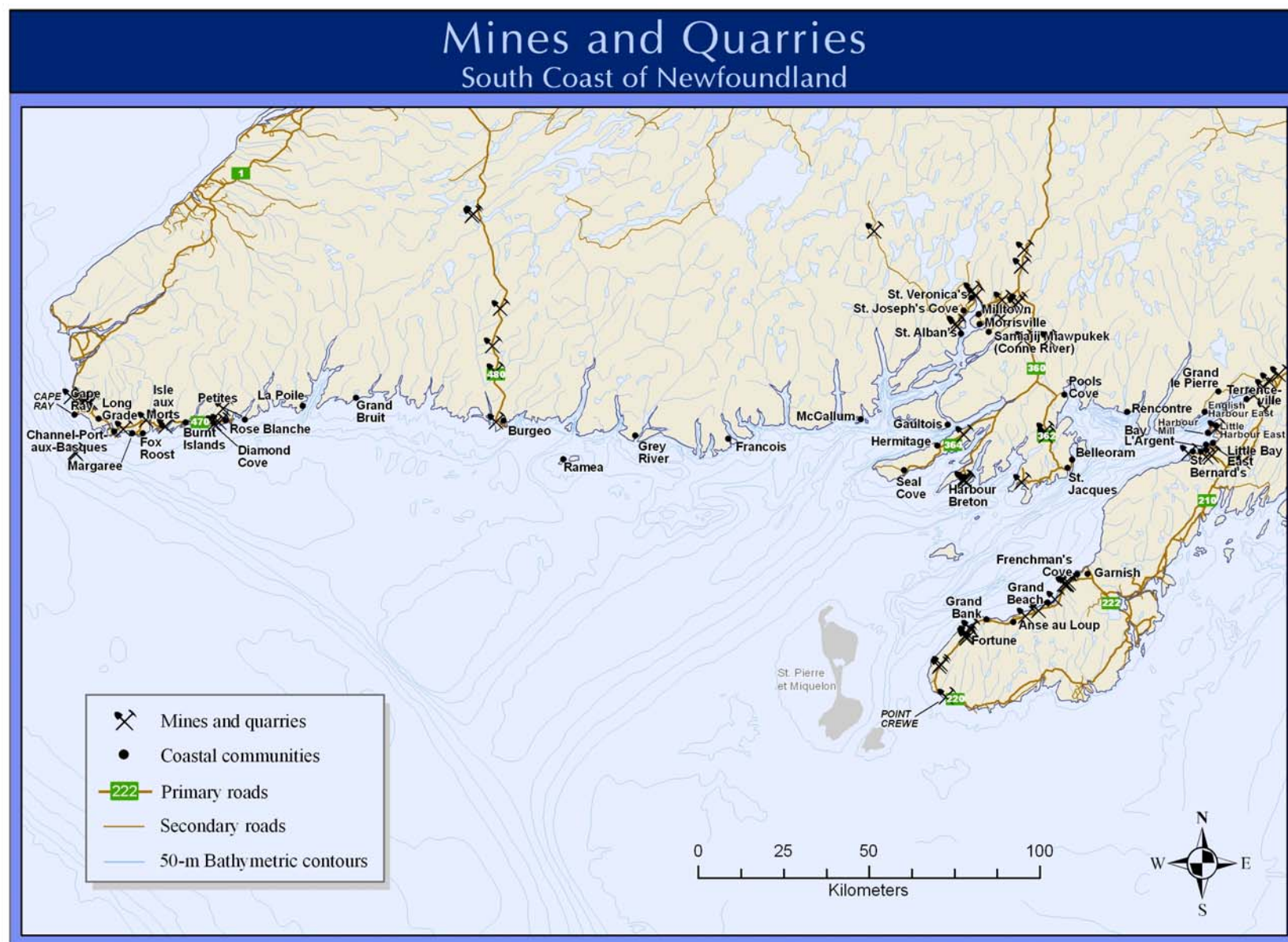


Figure 31. Mines and quarries of the South Coast of Newfoundland. (Source: Newfoundland and Labrador Geological Survey, 2006)

study area. The only recent significant discoveries for oil and gas reserves are located off the coast of central Labrador and possibly in Port-Au-Port.

8.0 Marine Transportation

Vessel traffic along the South Coast region is generally limited to ferry service, fishing boats, and a variety of vessels serving other needs. Additional ship traffic includes the transportation of diesel fuel to the more remote communities, vessels that transport feed and fish for aquaculture facilities, and cruise ships.

The Cabot Strait is the major point of entry to the Gulf of St. Lawrence and as such receives a high volume of vessel traffic on an annual basis. The shipping lanes for vessels entering the Gulf of St. Lawrence are outside the study region; nonetheless, the high volume of tankers and container ships using those lanes raises concerns related to potential threats to marine safety and environmental protection in general.

8.1 Administrative Authorities

Transport Canada takes the lead role in regulating and managing marine traffic within Canadian waters (Transport Canada 2006). Table 43 lists the Government of Canada Acts and Regulations facilitating marine vessel activity in Canadian waters.

Table 43. Canadian government Acts and Regulations facilitating marine vessel activity in Canadian waters.

Acts and Regulations
<i>Canada Marine Act</i>
<i>Canada Shipping Act</i> and Regulations
<i>Canadian Transport Accident Investigation and Safety Board Act</i> and Regulations
<i>Coastal Trading Act</i>
<i>Marine Transportation security Act</i>
<i>Navigable Waters Protection Act</i> and Regulations
<i>Pilotage Act</i> and Regulations
<i>Transportation of Dangerous Goods Act</i> and Regulations

8.2 Passenger and Commercial Marine Transportation

There are currently 16 intra-provincial ferry services operating within the Province of Newfoundland and Labrador, three of which are located in the South Coast region. Intra-provincial ferry service along the South Coast provides passenger and freight service

along various routes involving twelve communities between Rose Blanche and Bay L'Argent. The service, routes, and vessels utilized are summarized in Table 45. A schedule of service can be found on the government of Newfoundland and Labrador web site at <http://www.tw.gov.nl.ca/FerryServices/>.

An inter-provincial ferry service operated by Marine Atlantic, a federal Crown Corporation, provides a year-round 96 nautical mile daily commercial and passenger vehicle link between Port-aux-Basques, Newfoundland, and North Sydney, Nova Scotia (Marine Atlantic 2006). Service is twice daily from mid-September through May and 2-4 times daily during the high season from June to mid-September. The Corporation owns and operates four ice-class vessels—three passenger/vehicle ferries and a single cargo ferry—which are summarized in Table 46. Schedules and other details can be found on the Marine Atlantic web site at <http://marineatlantic.ca>.

Marine Atlantic reported a net income of \$2,603,000 for 2005 (Marine Atlantic 2005). There was a gradual decline in passenger traffic in contrast to a gradual increase in commercial vehicle traffic reported for the period 2002-2005, as summarized in Table 45. In May 2005, an inter-departmental Advisory Committee formed by the Minister of Transport, Minister of Natural Resources, and the Regional Minister for Newfoundland and Labrador announced a series of recommendations for improved ferry service. These included investing in the current fleet, phasing in three larger vessels between 2006 and 2011, and relocating Marine Atlantic's head office to Port aux Basques. The Minister of Transport may also support the construction of a second dock in Port aux Basques (Marine Atlantic 2005). These changes, if implemented, could provide significant benefits to the local economy in the near future.

Table 44. Passenger and vehicle traffic (,000) for the period 2002-2005 (Marine Atlantic Annual Reports for 2002-2005).

	2002	2003	2004	2005
Passengers	529.0	457.2	419.2	418.1
Passenger Vehicles	172.7	151.2	137.3	137.8
Commercial Vehicles	79.1	81.2	85.7	86.6

There is ferry service operating from the Burin Peninsula to the French island of St. Pierre. The 41 metre passenger vessel, *Atlantic Jet*, operates from Fortune to St. Pierre and from St. Pierre to the adjacent French island of Miquelon (SPM Express 2006). The vessel's capacity is 264 passengers and a crew of six. The schedule and other details can be found on the SPM Express web site at <http://www.spmexpress.net>.

Table 45. Intra-provincial ferry routes for select communities of the South Coast (Department of Transportation and Works 2006).

Community	Route	Vessel	Auto	Passenger	Freight
Rose Blanche	Rose Blanche - La Poile	MV Marine Coaster		x	x
La Poile	La Poile - Grand Bruit	MV Marine Coaster		x	x
	La Poile - Rose Blanche	MV Marine Coaster		x	x
Grand Bruit	Grand Bruit - La Poile	MV Marine Coaster		x	x
	Grand Bruit - Burgeo	MV Marine Coaster		x	x
Burgeo	Burgeo - La Poile	MV Marine Coaster		x	x
	Burgeo - Ramea	MV Gallipoli	x	x	x
	Burgeo - Grey River	MV Marine Voyager		x	x
Ramea	Ramea - Burgeo	MV Gallipoli	x	x	x
	Ramea - Grey River	MV Gallipoli	x	x	x
Grey River	Grey River - Ramea	MV Gallipoli	x	x	x
	Grey River - Burgeo	MV Marine Voyager		x	x
	Grey River - Francois	MV Marine Voyager		x	x
Francois	Francois - Grey River	MV Marine Voyager		x	x
	Francois - McCallum	MV Marine Voyager		x	x
McCallum	McCallum - Francois	MV Marine Voyager		x	x
	McCallum - Hermitage	MV Marine Voyager		x	x
	McCallum - Hermitage	MV Terra Nova		x	x
	McCallum - Gaultois	MV Terra Nova		x	x
Hermitage	Hermitage - McCallum	MV Marine Voyager		x	x
	Hermitage - Gaultois	MV Marine Voyager		x	x
Gaultois	Gaultois - Hermitage	MV Marine Voyager		x	x
	Gaultois - McCallum	MV Marine Voyager		x	x
Rencontre	Rencontre - Bay L'Argent	MV Northern Seal		x	x
	Rencontre - Pool's Cove	MV Northern Seal		x	x
Bay L'Argent	Bay L'Argent - Rencontre	MV Northern Seal		x	x
Pool's Cove	Pool's Cove - Rencontre	MV Northern Seal		x	x

Table 46. Fleet specifications for Marine Atlantic vessels operating between Port aux Basques, Newfoundland, and North Sydney, Nova Scotia (Maine Atlantic 2006).

Vessel	Registry	Tonnage (Dead Weight)	Capacity (Passengers)	Capacity (Cars / Tractor Trailers)
MV Joseph and Clara Smallwood	St. John's, NL	4,513	1,200	370 / 77
MV Caribou	St. John's, NL	3,662	1,200	370 / 77
MV Leif Ericson	St. John's, NL	4,650	500	250 / 72
MV Atlantic Freighter	Nassau, Bahamas	8,661	12	N/A / 75

8.3 Safety and Security

The responsibility for ship inspection falls under Transport Canada's Marine Safety Directorate, which regulates marine transportation as well as the inspection of both domestic and foreign vessels in Canadian waters. The nearest Marine Safety Offices are located in Corner Brook and Marystown (Transport Canada 2006).

The Marine Communications and Traffic Services section of the Canadian Coast Guard provides the initial response to commercial vessels entering Canadian waters. The Port aux Basques Vessel Traffic Service Zone extends from all Canadian waters adjacent to the west and southwest coasts of Newfoundland contained within the area bounded by a line bearing 232° True from Cape Ray Light, 47°37'17.1"N, 59°18'16.8"W, and a line bearing 180° True from Rose Blanche Point Light, 47°35'57"N, 58°41'30"W (Transport Canada 2006).

Marine Search and Rescue is the responsibility of the Canadian Coast Guard, under the purview of Fisheries and Oceans Canada. The nearest Search and Rescue coordinating office for all air and marine operations is the Maritime Rescue Subcentre located in St. John's, with telephone numbers of 1 (800) 563-2444 or (709) 772-5151 (Transport Canada 2006).

The International Ship and Port Facility Code (ISPS) came into effect in 2004. The ISPS establishes a framework for international cooperation to detect and take preventative measures against security incidents affecting ships and port facilities involved in international voyages and trade. Transport Canada decides the extent of application of the ISPS Code to those port facilities that occasionally may be required to serve ships arriving or departing on an international voyage. Currently along the South Coast Fortune and St. Albans are compliant with ISPS.

8.4 Port Administration and Management

The administration of ports in the Province of Newfoundland and Labrador is primarily the responsibility of the federal and provincial government. As part of the National Marine Policy's Port Divestiture Program, the management and operation of several ports along the South Coast as well as elsewhere in the Province have been divested. The program seeks to transfer the ownership and operation of Regional/Local ports from Transport Canada to other federal departments, provincial/territorial governments, or local interests, including municipalities. Port aux Basques is the only port along the South Coast where Transport Canada remains the Harbour Authority. Grand Bank on the Burin Peninsula is one of four ports in Newfoundland and Labrador that was deproclaimed. Several other ports along the South Coast were transferred to the Province in 1995-1996: Burgeo, François, Gaultois, Grand Bruit, Grey River, Hermitage, La Poile, McCallum, Ramea, and Rencontre East. English Harbour West, English Harbour East, and Little Bay East have also been transferred. St. Albans, Milltown, Harbour Breton, Terrenceville, and Fortune have remaining regional or local port facilities under Transport Canada (Transport Canada 2006).

The operations and management of harbours that accommodate commercial fishing and recreational needs falls within the Small Craft Harbours Branch (SCH) of Fisheries and Oceans Canada. The SCH establishes and maintains local harbour management by means of Harbour Authorities, which are local not-for-profit corporations that operate and manage harbours in accordance with local needs. Harbour Authorities are often closely tied to local fisher groups. Construction, dredging, and repair projects submitted by Harbour Authorities have priority access to SCH funds (Department of Fisheries and Oceans 2006).

8.5 Port Services and Infrastructure

Various forms of coastal infrastructure are associated with marine transportation, including wharves, slipways, breakwaters, and marinas. In addition, several communities of the South Coast have harbour infrastructure components specific to the aquaculture and fish processing industries. These include infrastructure related to processing technologies, storage, waste disposal, feed, and hatcheries.

A marine infrastructure report prepared in 2005 for the Coast of Bays Corporation reviewed infrastructure requirements for the Coast of Bays Regional Economic Zone. The report recommended a five year \$3.8 million plan for economic activity and investments in infrastructure that would benefit the three principal industry sectors, namely fishing, aquaculture, and tourism. With respect to aquaculture, the findings were similar to a 2004 report by the Newfoundland Aquaculture Industry Association regarding immediate needs for repairs and upgrades (AquaNeuve Solutions 2005).

Information on port specifications relative to requirements for cruise ships was available for three ports of the South Coast (Table 47).

Table 47. Specifications for three ports along the South Coast (CANAL 2006).

Port	Port Specifications		Services
Francois	Channel Depth at Low Tide:	25m	Water, Lighting, Open Gangways, Garbage Disposal, Recycling, Medical Services (Nursing Assistant)
	# of Cruise Berths:	1	
	Berth Depths:	12m	
	Berth Lengths:	40m	
Ramea	Channel Depth at Low Tide:	11m	Water, Lighting, Bunkering, Optional Pilotage. Optional Tug, Security (Provided on request by local authorities), Medical Services
	# of Cruise Berths:	1	
	Berth Depths:	5.5m	
	Berth Lengths:	53m	
Port aux Basques	Channel Depth at Low Tide:		Water, Ice (block or cube), Bunkering, Garbage Disposal, Sewage, Waste Oil, Provisions, Divers, Optional Pilotage, medical services
	# of Cruise Berths:	2	
	Berth Depths:	7.6m	
	Berth Lengths:	122m	

An electronic web-based survey conducted by the Cruise Association of Newfoundland and Labrador (CANAL) in the fall of 2005 attempted to identify port services and infrastructure specific to cruise ship visits that were needed or in place at ports around the province. Three communities responded from the South Coast: Port aux Basques, Ramea, and La Poile. (Cruise Association of Newfoundland and Labrador 2005).

Table 48. Reported strengths, weaknesses, and challenges regarding port infrastructure and services relative to cruise vessels (Cruise Association of Newfoundland and Labrador 2005).

Question	Port aux Basques	Ramea	La Poile
Strengths	Two docks for smaller ships	Protected harbour, walking trail, strong tourism committee	"Authentic" Newfoundland outpost, community tours
Weaknesses	Limited dock space for large ships, no ready supply of trained, certified tour guides	Unknown	Poor cell phone service, no public internet
Challenges	Permission from Marine Atlantic to use their second dock	Convincing Captains that harbour is large enough to enter safely instead of docking offshore	Improved technological services

8.6 Cruise Ship Requirements and Regulations

The Cruise Association of Newfoundland and Labrador (CANAL) has identified several considerations required in order for the cruise industry to grow in Newfoundland and Labrador. It is engaged in a port readiness program designed to inform stakeholders in ports such as those along the South Coast of their needs for encouraging greater visitation by cruise ships. A comprehensive manual written for port stakeholders on how to encourage growth of the cruise industry in local communities is available through CANAL (Intervale Conservation and Heritage Associates and CANAL, 2005).

Cruise vessels operating within Canada's coastal and internal waterways are subject to a range of international and domestic regulatory controls with respect to pollution and discharges. Of particular note are the Regulatory Controls For Cruise Vessel Waste For Vessels Operating In Canadian Waters (Transport Canada, 2006).

Transport Canada is also working with the cruise industry to develop voluntary guidelines to govern the industry's waste management practices. At the international level, commercial passenger vessels are subject to the International Maritime Organization (IMO) regulatory framework for pollution controls, which are covered under the International Convention for the Prevention of Pollution from Ships, or the MARPOL 73/78 convention, relating to oil, packaged goods, sewage, garbage, and air emissions.

Appendix F-1 and F-2 lists the tentative and actual schedule for cruise ships visiting South Coast ports during 2005 and 2006.

Table 49. Regulatory Requirements for Cruise Ships Operating in Canadian Territorial Waters and Ports.

Canadian Coastal Trading Act	Respecting the use of foreign ships and non-duty paid ships in the coasting trade. http://www.tc.gc.ca .
Canada Border Services Agency Regulations	Ensures the free flow of trade and travel while protecting the safety and security of Canadians. http://www.cbsa-asfc.gc.ca .
ISPS Regulations	(Effective July 1, 2004) New, comprehensive security regime that seeks to establish an international framework of co-operation between governments, government agencies and the shipping and port industries in order to detect and take preventive measures against security incidents affecting ships or port facilities used in international trade. http://www.tc.gc.ca .
Atlantic Pilotage Authority	Established in 1972 pursuant to the Pilotage Act. Establishes, operates, maintains and administers, in the interest of safety, an efficient Pilotage service within the designated waters of the Atlantic region. http://www.atlanticpilotage.com .
Canada Port Authorities	Established under The Canada Marine Act (CMA), which received Royal Assent on June 11, 1998, CPAs are agents of the Crown only when they are involved in activities related to shipping, navigation, and the transportation and handling of goods and passengers as described in their Letters Patent. Boards of directors appointed by the federal, provincial and municipal governments are responsible for the management of port authority activities, including decisions related to port authority expenditures. CPAs are required to be self-sufficient and fund their operations through the revenues that they generate. Under Section 25 of the Canada Marine Act, CPAs are not eligible for federal funding, other than grants of general application or in the case of emergencies. http://www.tc.gc.ca .
Human Resources and Skills Development Canada (HRSDC)	Requires crew members of foreign registered vessels operating in the Coastal Trade to possess a valid employment authorization, issued by Department of Citizenship and Immigration. http://www.sdc.gc.ca .
Regulatory Controls For Cruise Vessel Waste For Vessels Operating In Canadian Waters	Cruise vessels operating within Canada's coastal and internal waterways are subject to a range of international and domestic regulatory controls

	with respect to pollution and discharges. At the international level, commercial passenger vessels, including cruise vessels, are subject to the International Maritime Organization (IMO) regulatory framework for pollution controls covered under the International Convention for the Prevention of Pollution from Ships, or the MARPOL 73/78 convention, relating to oil, packaged goods, sewage, garbage and air emissions. Domestically, in addition to pollution regulations of the Canada Shipping Act (CSA), Transport Canada is also working with the cruise industry to develop voluntary guidelines to govern their waste management practices. Once established, these guidelines would be subject to periodic review to determine if additional regulatory approaches are required. For further information respecting Regulatory Controls For Cruise Vessel Waste For Vessels Operating In Canadian Waters please click on: http://www.tc.gc.ca.
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Source: Cruise Association of Newfoundland and Labrador 2005

9.0 Cable and Pipeline Corridors

The ecosystem overview report for the Coast of Bays region (Osborne et al. 2004) describes major trans-Atlantic submarine cables from Fortune Bay to Nova Scotia that are no longer in use, as well as underwater cables serving local communities in the Coast of Bays region with hydroelectric power.

A fiber optic cable runs from Cape Ray to Nova Scotia, as well as one from Searston Beach, which is in the Codroy Valley just outside the South Coast region, to Nova Scotia.

The existence of these cables could not be confirmed with Aliant in time for this report.

10.0 Recreational Activities

10.1 Recreational Fishing

Recreational fishing is very popular in Newfoundland and attracts many visitors on an annual basis. Atlantic salmon fishing in particular is very popular. There are nearly 200 rivers with salmon runs and nearly all are on a public access system. Recreational fishing is not exclusively targeted to salmon, the “king of fish.” Other targeted species include

brook trout, ouananiche, steelhead trout, and Atlantic cod, as well as various other groundfish, pelagic, and shellfish species. Outfitting camps and guiding are a strong business within Newfoundland and Labrador. There are more than 35 outfitter camps within the watersheds of the South Coast alone (Figure 32).

10.1.1 Salmon

The Government of Newfoundland and Labrador asserts that the province comprises 60% of North America's Atlantic Salmon rivers (Department of Tourism, Culture, and Recreation 2005). The annual Angler's Guide (Department of Fisheries and Oceans Canada 2005) is produced by DFO, which is responsible for setting season dates, gear regulations, bag limits, salmon angling statistics, and general information. The provincial Department of Environment and Conservation, Inland Fish and Wildlife Division, is responsible for issuing salmon angling licences and setting requirements for hiring a guide.

For salmon angling, the marine and inland waters are divided into coastal waters and inland waters (including scheduled and non-scheduled inland waters). Salmon angling in coastal waters is permitted year-round as hook-and-release only and does not require a licence. There are 186 scheduled salmon rivers in Newfoundland and Labrador.

For inland waters, season dates and bag limits apply for all sport fishing. A salmon angling licence is required by all anglers of any sport fish in scheduled salmon rivers. For salmon fishing on scheduled rivers, anglers must use barbless hooks. Rivers are classified as I-IV according to the health of the stock. Class III rivers have a bag limit of two fish, while Class IV rivers have a bag limit of four. All non-scheduled salmon rivers are rated Class III, with seasonal and daily bag limits of two. Environmental protocols are utilized for management, meaning that for certain classes of rivers, the waters will be closed to fishing if water levels are low and water temperature exceeds 22 degrees Celsius. These and other management features are part of an Adaptive Management Strategy by DFO and are spelled out in the annual Angler's Guide (Department of Fisheries and Oceans 2005) and the Salmon Management Plan (Department of Fisheries and Oceans 2002).

DFO has a structured consultation process on Atlantic salmon, which includes representation from conservation groups, Newfoundland and Labrador Wildlife Federation, commercial outfitters, anglers, Community Watershed Management organizations, Aboriginal groups, and Provincial Government agencies. A Salmon Working Group is responsible for the development of management options in support of conservation objectives. The recommendations of the Salmon Working Group are presented for review and discussion by members of the Newfoundland Salmonid Advisory Committee.

A new adaptive management strategy and river classification system was developed by the Salmon Working Group in 1999 and has continued in effect for the current

management plan (2002-2006). DFO, in consultation with the Salmonid Advisory Committee, conducts annual reviews of the river classes and adjusts individual rivers in line with identified conservation concerns.

For the 2005 season, all of the scheduled rivers along the South Coast were classified as Class III with the exception of Grey River, which was Class II. Preliminary catch data for scheduled rivers of the South Coast in 2003 and 2004 are presented in Table 50. A watershed management plan is in place for Conne River (Class III), which is described in the Angler's Guide (Department of Fisheries and Oceans 2005). Figure 32 maps the locations of fishing and hunting camps within watersheds of the South Coast region (Dan Chaisson, Acting Managing Director, Outdoor Product Development, Department of Tourism, Culture, and Recreation, Millbrook Mall, Herald Avenue, Corner Brook, NL, pers. comm.).

There are four enforcement detachments by DFO that cover the South Coast region: Port aux Basques, Burgeo, Harbour Breton, and Grand Bank. Supplementing the enforcement staff is a guardian program. This is usually contracted out to an organization other than DFO. Guardians are site-based, sometimes on remote rivers. They can report violations but cannot make arrests. Where feasible, cooperative enforcement arrangements are made with other agencies.

The key issue along the South Coast from an enforcement standpoint is poaching (Berkley Slade, Staff Officer, Recreational Fisheries, DFO, St. John's, NL, pers. comm.). Leaders of the Salmon Preservation Association for the Waters of Newfoundland (SPAWN) state that another issue is the effects of environmental protocols on tourism. Rivers can be closed on short notice, which poses a hardship to visitors from out of province (Bill Bungay, Past President, SPAWN, Goodhouse mall, 93 West Street, Corner Brook, NL, pers. comm.; and Keith Piercey, Past President, Salmonid Council, NL, pers. comm.).

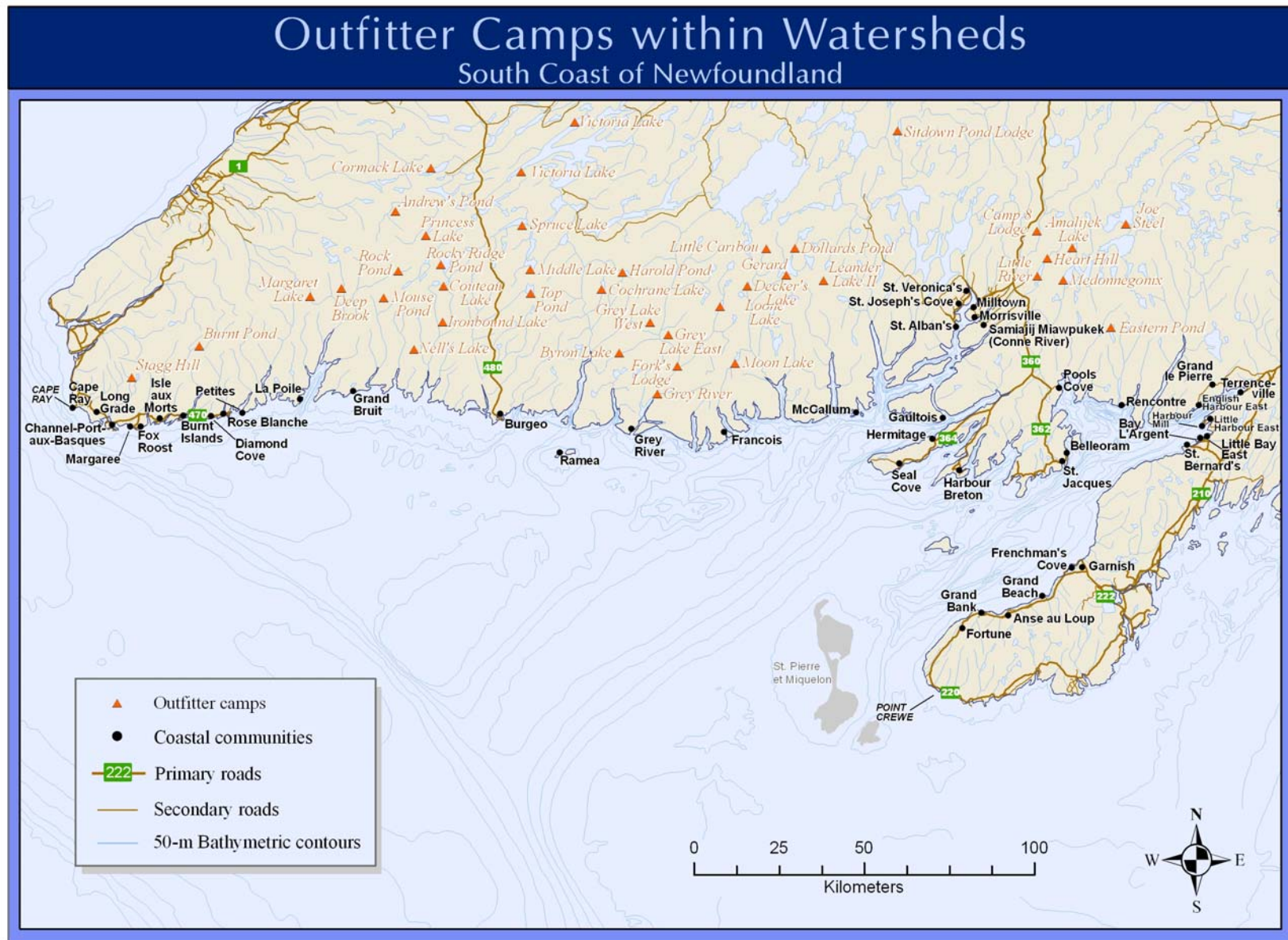


Figure 32. Outfitter camps within the watersheds of the South Coast of Newfoundland. Data courtesy Government of Newfoundland and Labrador, Dept. of Tourism, Culture, and Recreation, Corner Brook, NL.

Table 50. Classification and Preliminary catch data for Atlantic salmon from scheduled rivers along the South Coast, Zones 11 and 12 for 2003 and 2004.

River	2003			2004		
	Rods	Catch	CPUE	Rods	Catch	CPUE
Zone 11						
Grand Bank Brook and tributary streams	27	6	0.22	80	51	0.64
Garnish River Including Lower Garnish and Upper or Black River and tributary streams	651	233	0.39	433	116	0.27
Long Harbour River and Tributary streams, Fortune Bay	735	705	0.96	701	577	0.82
Bay du Nord River	437	221	0.51	371	76	0.20
Simmons Brook and tributary streams	129	44	0.34	57	29	0.51
South West Brook and tributary streams, Cinq Island Bay	9	0	0.00	15	6	0.40
Old Bay Brook, Bay de l'Eau	18	5	0.28	19	0	0.00
Taylor's Bay Brook, Bay de l'Eau	98	3	0.03	15	5	0.33
Conne River and tributary streams including Bernard's Brook and Twillick Brooks, Bay d'Espoir	619	245	0.40	808	403	0.50
Long Reach Brook, East Bay	89	0	0.00	4	0	0.00
Allan's Cove Brook, Facheux Bay	9	0	0.00	8	0	0.00
Bottom Brook, Facheux Bay	45	10	0.22	34	26	0.76
Hare Bay Rivers, Southwest Coast	107	56	0.52	126	96	0.76
Grey River, including Salmon Brook	722	316	0.44	685	753	1.10
White Bear River	700	258	0.37	865	574	0.66
Bay de Lupe River	0	0	0.00	No Data		
Kings Harbour River	40	33	0.82	15	9	0.60
Zone 12						
Grandy's River, including Top Pond Brook	1337	898	0.67	1631	921	0.56
Cinq Cerf River	201	53	0.26	61	82	1.34
East Bay Brook, La Poile	No Data			No Data		
La Poile River	1230	512	0.42	605	380	0.63
Farmer's Arm River	13	8	0.62	73	64	0.88
Garia River, including North West Brook	281	146	0.52	299	188	0.63
Burnt Island River	165	64	0.39	333	93	0.28
Isle aux Morts River	272	130	0.48	310	145	0.47
Grand Bay River	152	41	0.27	46	20	0.43
North West Brook, Grand Bay	No Data			No Data		

Note: Grandy's River and Cinq Cerf River were part of Zone 11 in 2003.

Studies have shown that salmon returns to rivers are highly dependent on marine exploitation rates. Since the moratorium on commercial salmon fishing, average total returns of salmon have increased for most rivers in Newfoundland where monitoring has taken place. However, the South Coast may be in a different situation. Conne River, which is monitored, is one of three rivers in the province where average returns of small

salmon declined during the moratorium. Reasons for this decline are not understood (Dempson *et al.* 2001). It would appear that survival at sea is the issue (Berkley Slade, pers. comm.).

Recreational fishing in Newfoundland and Labrador by resident anglers has continued to decline since 1997, from an average of 22,000 to approximately 14,350 in 2003. Non-resident anglers have maintained an average of 1,600 over the same time period. Information for 2003 is still preliminary and no data were available for the 2004 angling season or the South Coast in particular. Most resident anglers fish on rivers in Newfoundland, while non-resident anglers mainly fish on the Labrador Rivers, many as guests at outfitting lodges (Department of Fisheries and Oceans 2002).

10.1.2 Trout and Other Species

The island of Newfoundland is now One Trout Angling Zone. This includes regulations pertaining to speckled trout, brown trout, rainbow trout, and ouananiche. Consultations on a new plan for insular Newfoundland in 2005 resulted in no changes for the next five years. The daily bag limit for inland and coastal waters is 12 trout or 5 pounds + 1 fish. Exceptions include Northwest Brook, Bay d’Espoir, from the DFO caution signs to the hydro plant tail race is open to angling year-round, with no daily bag limit. These and other specific regulations for recreational fishing of trout and all other species can be found in the Angler’s Guide (Department of Fisheries and Oceans 2005).

10.2 Hunting

10.2.1 Big Game

On the island of Newfoundland, there are approximately 120,000 moose (post hunt), more than 80,000 woodland caribou in distinct herds, and more than a few thousand black bear (http://www.env.gov.nl.ca/env/wildlife/wildlife_r_m/big.htm, accessed June 6, 2006).

The Department of Environment and Conservation’s Inland Wildlife Division is tasked with managing populations of big and small game. Several moose management areas comprise the South Coast region; their boundaries coincide with bear management areas. In addition, four caribou management areas comprise the South Coast, with the exception of the Burin Peninsula, where caribou hunting is not permitted. Moose and caribou licences are issued on a draw basis to qualified big game hunters. Bear licences are issued through an application system. Two areas of the South Coast are closed to shooting, snaring, and trapping: Brunette Island in Fortune Bay and Fortune Head Ecological Reserve on the Burin Peninsula (Department of Environment and Conservation 2006). The 2006-2007 Hunting and Trapping Guide contains detailed information on this year’s wildlife management plan for provincial game and furbearing species, including opening and closing dates, hunting and non-hunting zones, boundary changes, and other changes related to big game and small game hunting and trapping. Black bear are hunted in spring and fall. A limit of two black bears is allowed per licence. The 2006-07

management plan allows 26,255 moose licences and 4,635 caribou licences on the island. This represents an overall provincial decrease of 205 moose licences and a decrease of 970 caribou licences compared to the 2005-06 hunting season. Recent evidence suggests that many of the major caribou herds on the island are experiencing population declines, but neither the extent nor the rates of decline have been ascertained. For the 2006-07 season, a significant boundary change occurred inland between CMA 62 (Buchans) and 63 (Grey River), which reflects the current range and distribution of caribou herds for these areas. Also new beginning November 5, 2006, Sunday hunting of moose and caribou will be permitted (Department of Environment and Conservation 2006).

Licence sales are an indicator of hunting activity and they generally follow the quota for each area. The Wildlife Division uses hunter trend data to determine whether big game populations within each management area are increasing or decreasing in response to the provincial harvest strategy (Glen Luther, Biometrician, Department of Environment and Conservation, Corner Brook, NL, pers. comm.). Licence sales for the 2002-2004 season for moose and caribou appear in Tables 51 and 52. Licence sales for 2005 were not available at the time of this report, but the quotas can be obtained from the Hunting & Trapping Guide for 2005-06. Data are not separated by resident and non-resident categories.

The total sale of moose licences for most moose management areas of the South Coast region remained fairly constant for the period 2002-2004.

Table 51. Moose licence sales (Resident and Non-resident) (Source: Glen Luther, Department of Environment and Conservation, Inland Fish and Wildlife Division).

Area	Licence Sales		
	2002	2003	2004
10	631	649	651
11	495	487	481
19	295	296	277
20	109	128	124
25	563	514	538
28	396	400	400
30	158	160	160
37	98	103	97
38	20	20	20
Total	2,765	2,757	2,748

The total sale of caribou licences for caribou management areas of the South Coast region decreased during the period 2002-2004.

Table 52. Caribou licence sales (Resident and Non-resident) (Source: Glen Luther, Department of Environment and Conservation, Inland Fish and Wildlife Division).

Area	Licence Sales		
	2002	2003	2004
61	710	757	680
63	1,234	1,284	1,054
64	2,149	1,777	1,487
67	465	440	389
Total	4,558	4258	3610

The populations of caribou herds that range within the South Coast region experienced increases from the early 1970s to the 1980s, with continued increases for some herds extending into the 1990s. The LaPoile and Middle Ridge populations have experienced declines in recent years.

Table 53. Caribou Population Estimates (1970-2006) (Source: Glen Luther, Department of Environment and Conservation, Inland Fish and Wildlife Division).

Year	Population Estimate				
	La Poile	Grey River	Sandy Lake	Middle Ridge	Pot Hill
1971	2765	5495		3600	
1973		5116		3820	
1974	2304	4824			
1975		5400			
1979	7590		295	4608	529
1980	4994	8208			
1981		8900	1433	3718	1780
1982	10303	8611		7841	
1983		10268	941		2338
1984			1462		
1986	10548				
1987		10108	4631		3344
1988	11210				
1992	8853				
1995				19765	
1997	10565	11225	1070		5250
2003				14981	
2004	3076				
2006				8748	

The moose survey results for 1973 and 1997 show a decrease in the population of moose for Moose Management Area 19 (Burgeo area); the results for 1973 and 1995 show a decrease in moose population for Moose Management Area 20, which is mostly inland from the Bay d'Espoir area.

Table 54. Moose Survey Results (Source: Glen Luther, Department of Environment and Conservation, Inland Fish and Wildlife Division).

Area	Year of Survey	Population Est.
10	1973	2590
	1982	2992
	2000	2868
11	1973	2577
	1983	2343
	1998	3048
19	1973	2500
	1997	1520
20	1973	1700
	1995	572
25	1974	1788
	1980	2420
	1995	3816
26	1983	2676
	1997	2980
28	1974	1276
	1981	2624
	1997	3090
30	1978	592
	1982	442
	1997	1400
37	1975	1350
	1978	2276
	1982	1700
	1983	2650
	1992	800
38	1974	360
	1978	592
	1982	266
	1997	352

10.2.2 Small Game

Two zones exist for the management of furbearers: southwest Newfoundland, from Cape Ray to the Burgeo Highway; and the Burgeo Highway extending east for the rest of the South Coast region. Trapping of the following fur bearing mammals is permitted: beaver, muskrat, otter, coyote, fox (“coloured” and “white”), lynx, ermine, squirrel, and mink. Snaring and shooting snowshoe hare is pursued; there are no requirements for using modified snares, since the key habitat and dispersal locations for the endangered

Newfoundland Pine Marten fall outside of the South Coast region. Arctic hare exist in low densities and no shooting or snaring is allowed.

There are three small game management zones for ptarmigan: Avalon/Swift Current, at the head of Fortune Bay; the Burin Peninsula; and the rest of the South Coast region. Ptarmigan are hunted inland on the barrens in the fall. The year 2006 is the fourth year of a five-year management plan for ptarmigan. Spruce and Ruffed Grouse are not in high densities.

Harvest information is based on returns, but only 2 ½ - 5 % of small game licence holders report back. Each year the province develops a management plan for small game species, which reviews season dates, quotas, bag limits, and other management measures. In general, the province is coming out of a low period and moving into a high period for populations of small game; regional variations exist (Jonathan Sharpe, Department of Environment and Conservation, Inland Fish and Wildlife, Corner Brook, pers. comm.).

Enforcement of wildlife regulations (and federal legislation where empowered) is the responsibility of the Department of Natural Resources. Enforcement officers are authorized to enforce provisions under the Migratory Birds Convention Act and Regulations, the Endangered Species Act, and the Wilderness and Ecological Reserves Act and Regulations. There is a District office in Milltown and a Satellite office in Grand Bank.

10.2.3 Turr and Seaduck Hunting

The hunting of Common and Thick-billed Murres, called turrs in Newfoundland and Labrador, has been an important tradition since early settlement. At the time of Confederation, residents of the newly formed province were granted an exemption to the Migratory Birds Convention, which classifies Common and Thick-billed Murres as nongame. Residents of the province are the only people in North America, other than aboriginal peoples, who legally can hunt murres.

During the fall, large numbers of turrs move down the northeast coast of Newfoundland to winter along the South Coast, arriving mid to late December. Often there are large concentrations of turrs along the South Coast, depending on the weather. Common Murres are the first to arrive. In January they move offshore and the Thick-billed Murres move into the area, where they remain until the season closes on March 10th (Ken Tucker, Wildlife Enforcement Coordinator, Canadian Wildlife Service, Lewisporte, NL, pers. comm.).

Management of migratory game birds as well as Common and Thick-billed Murres is the responsibility of the federal government, under Environment Canada's Canadian Wildlife Service. Turr hunting is managed by regions, the South Coast being part of a larger region classified as Zone 3. Providing adequate surveillance along the extensive coastline has long been a considerable challenge, particularly with respect to the turr hunt. Traditionally the turr season was long and without the restriction of bag limits. The

challenges grew worse beginning in the 1960s, when changes in the economy and lifestyles of Newfoundlanders brought improved transportation, more efficient hunting tools, faster boats, and increased spending power. Such changes made it easier for the more experienced hunters to hunt excessively and to sell turrs to people who were unable to take part in the hunt.

These challenges, along with a growing concern among seabird biologists about the sustainability of Thick-billed and Common Murre populations, eventually led to drastic improvements in the regulatory framework for the management and enforcement of turr hunting. Today all turr hunters must purchase and have in their possession a Migratory Game Bird Hunting Permit and a Habitat Conservation Stamp. In addition, season length and bag limits are in effect: there is a limit of 20 birds per day for turrs. The seasons and bag limit possessions are posted on the internet at www.cws-scf.gc.ca/publications/reg/index.

Management improvements did not fully solve the issues surrounding turr hunting. Excessive hunting and illegal sale of turrs continues along the South Coast, as evidenced by the undercover operation in the spring of 2005 that led to the arrests of hunters from Rose Blanche and Port aux Basques (The Gulf News, March 20, 2006). The estimated sale of turrs by one group of hunters in the 2004/2005 season numbered about 1,000 birds (National Post, March 18, 2006).

For all of Newfoundland and Labrador, CWS currently maintains only two full-time enforcement officers, who are stationed in Lewisporte, and two officers and a supervisor in St. John's. In recent years, they were assisted by wildlife officers from provincial government, but such collaboration is no longer considered feasible since the merger of provincial wildlife enforcement with forestry. At the present time, assistance is being provided from enforcement officers with Fisheries and Oceans Canada, who are stationed in Port aux Basques, Burgeo, and Marystown, and reportedly there is potential for even greater collaboration (Ken Tucker, pers. comm.).

Currently the main enforcement issues concerning the turr hunt are excessive hunting and out of season hunting (Ken Tucker, pers. comm.). One of the reasons excessive hunting occurs is that there is no season limit on the number of turrs, which makes it possible for a hunter to shoot hundreds of turrs in one season. This scenario may be one factor in unraveling the illegal sale of birds.

Besides turrs, the other group of birds hunted to a large extent along the South Coast is sea ducks, especially Common Eider, and to a lesser extent scoters, Long-tailed Duck (Oldsquaw), and Harlequin Duck. Waterfowl such as Black Duck are also hunted. For sea ducks, one of the issues cited by enforcement is out of season hunting of King Eiders, which migrate along the South Coast in November before the season opens and as well in the Spring. There are reports that King Eiders are being sold (Ken Tucker, pers. comm.).

The Barrow's Goldeneye and Harlequin Duck are listed as species of Special Concern, both federally (COSEWIC) and by provincial legislation.

10.3 Parks and Protected Areas

Thirteen types of protected areas exist in Newfoundland and Labrador, of which seven are under federal and six under provincial jurisdictions. The South Coast region between Cape Ray and Point Crewe contains a total of nine provincially protected areas, seven that are near the coastline and two that are significantly inland and include watersheds that drain to other coasts. Like all protected areas of the province, these were created and are maintained for the purposes of biodiversity conservation, scientific research, recreation, education, and ecotourism. Table 55 lists the protected areas within the South Coast region, the provincial Acts and Regulations governing the use of those areas, and a brief description of their significant features. Only the most pertinent Acts and regulations are listed. Figure 33 identifies the location of these protected areas (Department of Environment and Conservation, Parks and Natural Areas Division 2006). Information about Marine Protected Areas under possible consideration along the South Coast was requested but no information was made available at the time of this report.

Table 55. Protected areas within the South Coast study area. (Department of Environment and Conservation 2006, Canadian Heritage Rivers System, 2006 & Government of Newfoundland and Labrador, 2006)

Park or Protected Area	Act and Regulations	Brief Description
T'Railway Provincial Park	<i>Provincial Parks Act, Newfoundland and Labrador T'Railway Provincial Park Proclamation, Off-road Vehicle Operation in the Newfoundland and Labrador T'Railway Provincial Park Order</i>	A multi-use recreational trail extending almost 900 km from Port aux Basques to St. John's, the South Coast region section of the trail extending from Port aux Basques to Cape Ray. Uses the main line of the old Canadian National Railway bed.
J.T. Cheeseman Provincial Park	<i>Provincial Parks Act, Parks—Cheeseman Provincial Park Proclamation. (Also relevant are Species at Risk Act, Endangered Species Act, and regulations under each.)</i>	J.T. Cheeseman is a Natural Environment Park located approximately 15km east of Channel-Port aux Basques and 200km west of Corner Brook on the Trans Canada Highway. This is a popular park with visitors from all over Canada and the United States. Bogs, beaches, and rolling forested hills. Camping, picnicking, swimming. Nesting and feeding area of the endangered Piping Plover.
Big Barasway Wildlife Reserve	<i>Wild Life Act, Wild Life Reserve Big Barasway, Burgeo Regulations. (Also relevant are Species at Risk Act, Endangered Species Act, and regulations under each.)</i>	Contains barachois and beach habitats. Nesting and feeding area of the endangered Piping Plover.

Sandbanks Provincial Park	<i>Provincial Parks Act, Parks—Sandbanks Provincial Park Proclamation.</i>	Undulating sand dunes and long expanses of beach. Spruce-fir forest and barrens. Archeological sites. Camping, bird watching, kayaking, swimming.
Jipujjkuespem Provincial Park	<i>Provincial Parks Act, Parks—Jipujjkuei Kuesperm (Little River Pond) Provincial Park Proclamation, 1997.</i>	A park reserve, part of the traditional hunting grounds of the Mi'kmaq people, whose descendants are living in nearby Conne River. Forested ecoregions. Globally rare boreal felt lichen, <i>Erioderma pedicellatum</i> . The Miawpukek Band own and operate an inner perimeter portion called the Jipujij'kuei Kuespem Nature Park, providing camping and dumping services, kayak/canoe rentals, walking trail, and float plane charters. A cultural village open to the public, pow wow, arts and crafts.
Middle Ridge Wildlife Reserve	<i>Wild Life Act, Wild Life Middle Ridge Reserve Regulations</i>	Largest caribou herd on the island.
Bay du Nord Wilderness Reserve	<i>Wilderness and Ecological Reserves Act, Wilderness and Ecological Reserve—Bay du Nord Wilderness Reserve Order</i>	Pristine conditions, diverse natural features, and scenic beauty of great majesty. Maritime Barrens Ecoregion and Western Newfoundland Forest Ecoregion, forests, lakes, and rapids. Bay du Nord River has been nominated to the Canadian Heritage Rivers System. The nominated section extends from the northern limits of its watershed boundary south to Pool's Cove in Fortune Bay.
Frenchman's Cove Provincial Park	<i>Provincial Parks Act, Parks—Frenchman's Cove Provincial park Proclamation</i>	Situated by a large barachois, mudflats, mixed forest, and tidal lagoons. Camping, playground, swimming, golf.
Fortunehead Ecological Reserve	<i>Wilderness and Ecological Reserves Act, Fossil Ecological Reserve Regulations, Wilderness and Ecological Reserve—Fortune Head Ecological Reserve Order</i>	A Fossil Ecological Reserve. Unique and internationally significant fossil assemblage which marks the boundary between the Precambrian and Cambrian eras. For scientific and educational purposes.



Figure 33. Protected areas of the South Coast of Newfoundland. Data from Govt of Newfoundland and Labrador, Parks and Natural Areas Division, Dept. of Environment & Conservation, Deer Lake, NL. Codroy Provincial Park and the King George IV Ecological Reserve lie immediately outside of the South Coast region. The western terminus of the T'Railway is at Port aux Basques. Map data for Frenchman's Cove Provincial Park was not provided at the time of this report.

Provincial Park and Provincial Park Reserve designations have undergone recent changes. Provincial Park Reserves protect areas with significant natural features and landscapes. Many of Park Reserves in the province were former Provincial Parks with the campground portion leased to private operators. The Park Reserve is the remaining land mass which was included in the former Provincial Park.

Visitor numbers to Provincial Parks during 2005 appear in Table 56. Frenchman's Cove receives the highest number of Newfoundland visitors and is the only park of the three with an adjacent golf course. J.T. Cheeseman receives the highest number of visitors from other Canadian provinces, which may be due to its proximity to the Marine Atlantic ferry crossing to Nova Scotia. Sandbanks receives the highest number of visitors from Newfoundland and Labrador.

Table 56. Visitor numbers to Provincial Parks of the South Coast during 2005
(Source: Department of Environment and Conservation, Parks and Natural Areas Division 2006).

Provincial Park	Residence				
	Nfld. & Lab.	Other Canadian	USA	Foreign	Total
J.T. Cheeseman	2,974	3,188	975	27	7,164
Sandbanks	3,174	537	124	27	3,862
Frenchman's Cove	8,335	404	47	116	8,902

Data on the number of registered campers to the Provincial Parks from 2003 to 2005 show a decline in the visitation between 2003 and 2004 followed by a slight variation in visitation among the three parks for 2005 (Source: Department of Environment and Conservation, Parks and Natural Areas Division 2006).

Table 57. Number of Camping units registered at Provincial Parks along the South Coast.

Year	Registered Camping Units		
	J.T. Cheeseman Provincial Park	Sandbanks Provincial Park	Frenchman's Cove Provincial Park
2003	3,418	1,319	3,242
2004	2,688	1,217	3,100
2005	2,931	1,403	2,930

10.4 Municipal Wetlands Stewardship

Stewardship agreements in general are voluntary agreements involving municipalities, corporations, schools, or landowners as well as the Province of Newfoundland and Labrador for the purposes of conservation and the advancement of stewardship behaviour among residents. Agreements often specify the types of activities that may be allowed in designated areas and assert a commitment on the part of the municipality or landowner to care for the designated area.

Two types of stewardship agreements exist that are in use along the South Coast. Municipal Wetlands Stewardship, a core initiative of the Eastern Habitat Joint Venture in Newfoundland and Labrador, involves a Municipal Stewardship Agreement with the Province in which municipalities agree to protect and manage specific wetland habitats located within their municipal boundaries. The provincial office of the EHJV, in turn, provides towns with technical advice, resource inventories, and a management plan for the protected areas under the Stewardship Agreement. The agreement is voluntary and has no special regulatory control. Yet once signed, the agreement becomes a powerful tool for the municipality to manage future development and to leverage funds for conservation and recreation.

A Municipal Wetlands Stewardship agreement exists between the Province (through the Minister of Tourism, Culture, and Recreation) and the Town Council of the Town of Port aux Basques for a portion of wetlands and uplands habitats adjacent to the J.T. Cheeseman Provincial Park in the Grand Bay West area. The ponds, bogs, streams, salt marshes, and barachois are used by ducks and geese for staging, overwintering, nesting, and brood-rearing. Three proposed management units within the stewardship zone—namely Shorts Pond, Big Barachois, and Rocky Barachois—are important nesting and feeding areas for migratory waterfowl such as Black Duck, American Widgeon, Northern Pintail, Greater Scaup, Common Merganser, and Green-winged Teal (Port aux Basques Municipal Stewardship Agreement 2003). The territory covered by the Agreement includes the important sand dunes and beaches, which also serve as nesting and feeding areas of the endangered Piping Plover (Figure 34). A local environmental group known as the Rocky Barachos Pioneer Preservers has been instrumental in promoting the stewardship agreement and conservation efforts in general.

A second type of stewardship agreement exists among landowners in the area of Big Barasway near Burgeo. Twenty owners of cabins have signed individual “Good Steward” agreements with a responsible staff level authority in the province’s Wildlife Division that pledges their commitment to responsible behaviour with respect to wildlife and wildlife habitat. The individuals agree to the following four points: 1) to not knowingly harm wildlife or wildlife habitat, especially waterfowl; 2) to ask the Wildlife Division for advice when in doubt about planned activities that may or may not harm wildlife; 3) to respect the local wildlife reserve that protects Piping Plover and their habitats; and 4) to encourage others to be conservation-minded in this area. The province, in turn, agrees to offer advice, develop strategies, and seek funding opportunities that will assist the residents of Burgeo in protecting and enhancing the Big Barasway (Big Barasway Wetland Conservation Good Steward Agreement 1995).

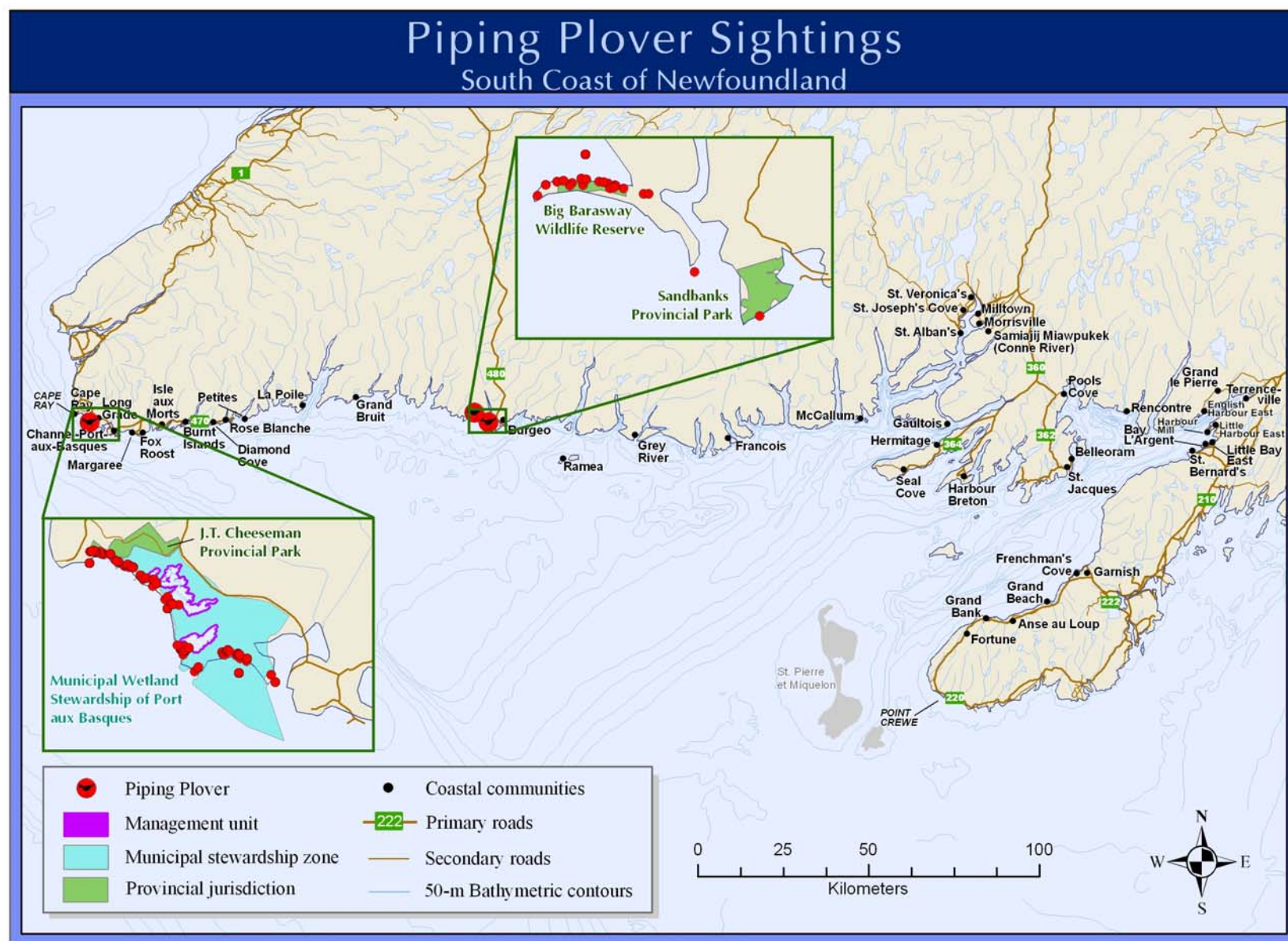


Figure 34: Piping Plover sighting along the South Coast of Newfoundland. Data from Atlantic Canada Conservation Data Centre, P.O. Box 2007, Corner Brook and from Govt. of NL, Fish and Wildlife Division, Dept. of Environment and Conservation, Corner Brook, NL.

10.5 Wildlife Observation

There exist abundant opportunities for wildlife viewing along the South Coast. Several communities such as Ramea promote bird watching as a local attraction and some communities offer good whale watching opportunities as well. The provincial Travel Guide to Newfoundland and Labrador lists tour guides, trails, observation points, and special seasonal opportunities for bird watching and viewing marine mammals (Department of Tourism, Culture, and Recreation 2006).

Birdwatchers with a special interest in seabirds (e.g., murre, black guillemot, razorbill) and coastal waterbirds (e.g., gulls, terns, cormorants, seaducks) can find many opportunities for viewing a diversity of species along the South Coast, particularly in the winter season since much of the coastal area in general remains ice free. The many islands offer suitable breeding sites for seabirds, but most are small in number as compared with the large Ecological Reserves such as Cape St. Mary's and Witless Bay on the Avalon Peninsula. One unusual occurrence for Newfoundland is the existence of a nesting colony of Manx Shearwaters, a pelagic species, on an island off the tip of the Burin Peninsula. The existence of this colony first became widely known nearly two decades ago.

The Atlantic Canada Conservation Data Centre, Newfoundland and Labrador office, maintains a database of recorded observations for fauna and flora of the province. Figure 36 portrays observational data for seabirds and other waterbirds along the South Coast. Figure 35 portrays observation data for birds, freshwater fish, and the boreal felt lichen that are listed by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) and fall under the protection of the *Species at Risk Act* and the provincial *Endangered Species Act*.

The Community-based Coastal Resource Inventory of Newfoundland and Labrador maintains a database of information from observations and other reported or traditional knowledge sources in communities of Newfoundland and Labrador. Figure 37 shows the occurrences of marine mammal sightings along the South Coast.

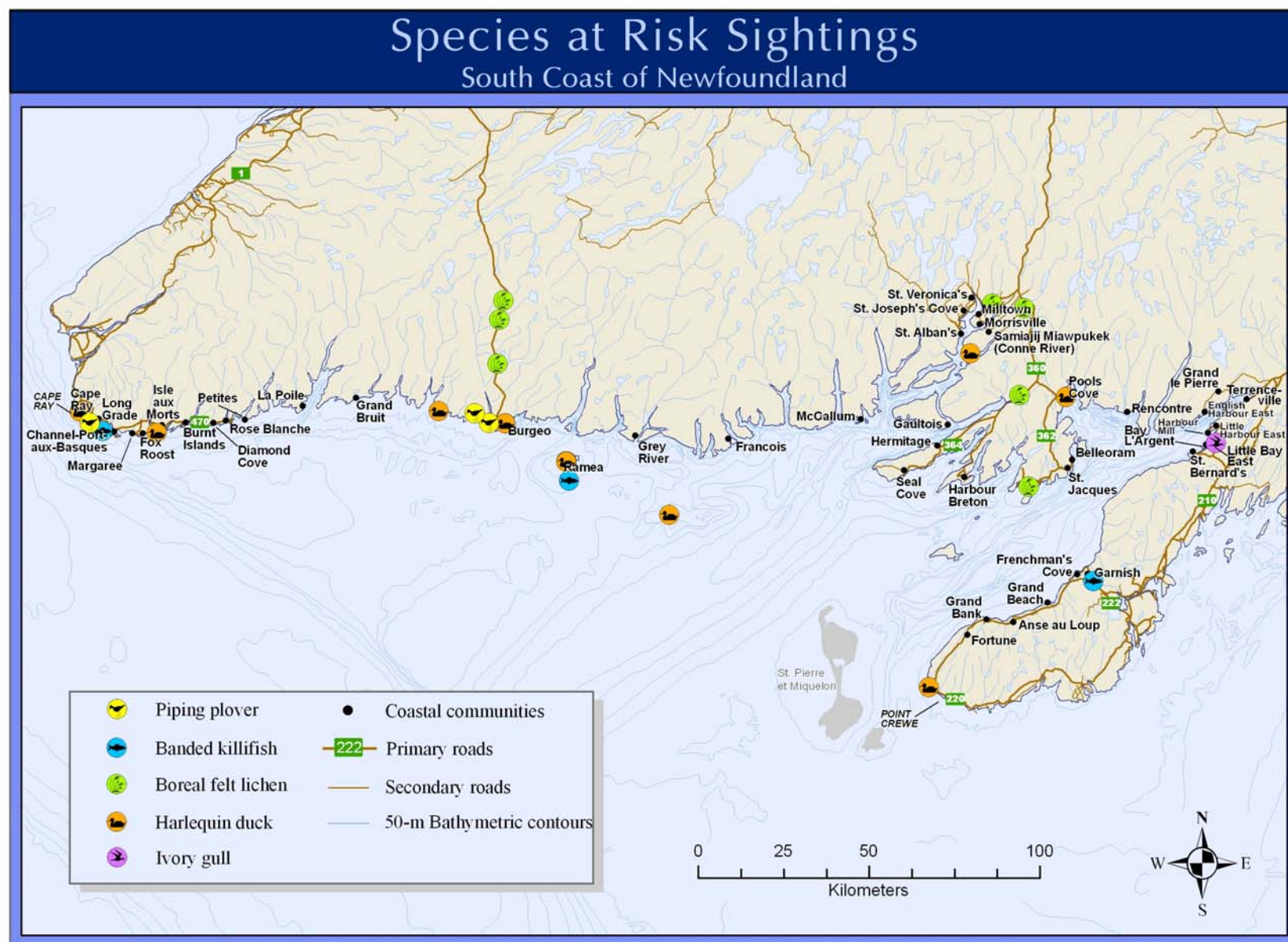


Figure 35. Species at Risk sightings along the South Coast of Newfoundland. Data from Atlantic Canada Conservation Data Centre, P.O. Box 2007, Corner Brook.

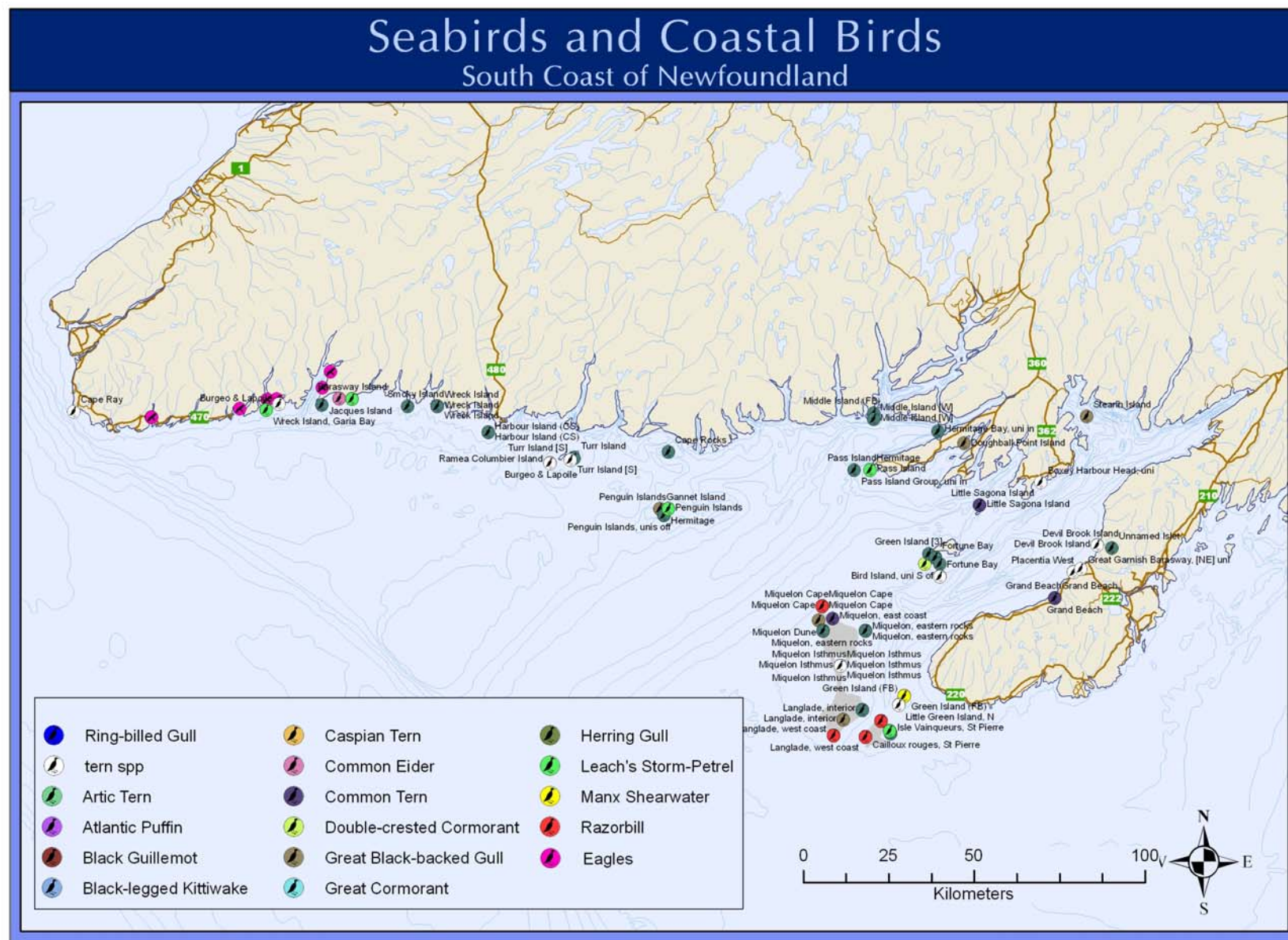


Figure 36. Seabirds and Coastal Birds along the South Coast of Newfoundland. Data from Atlantic Canada Conservation Data Centre, P.O. Box 2007, Corner Brook and Fisheries and Oceans Canada and .

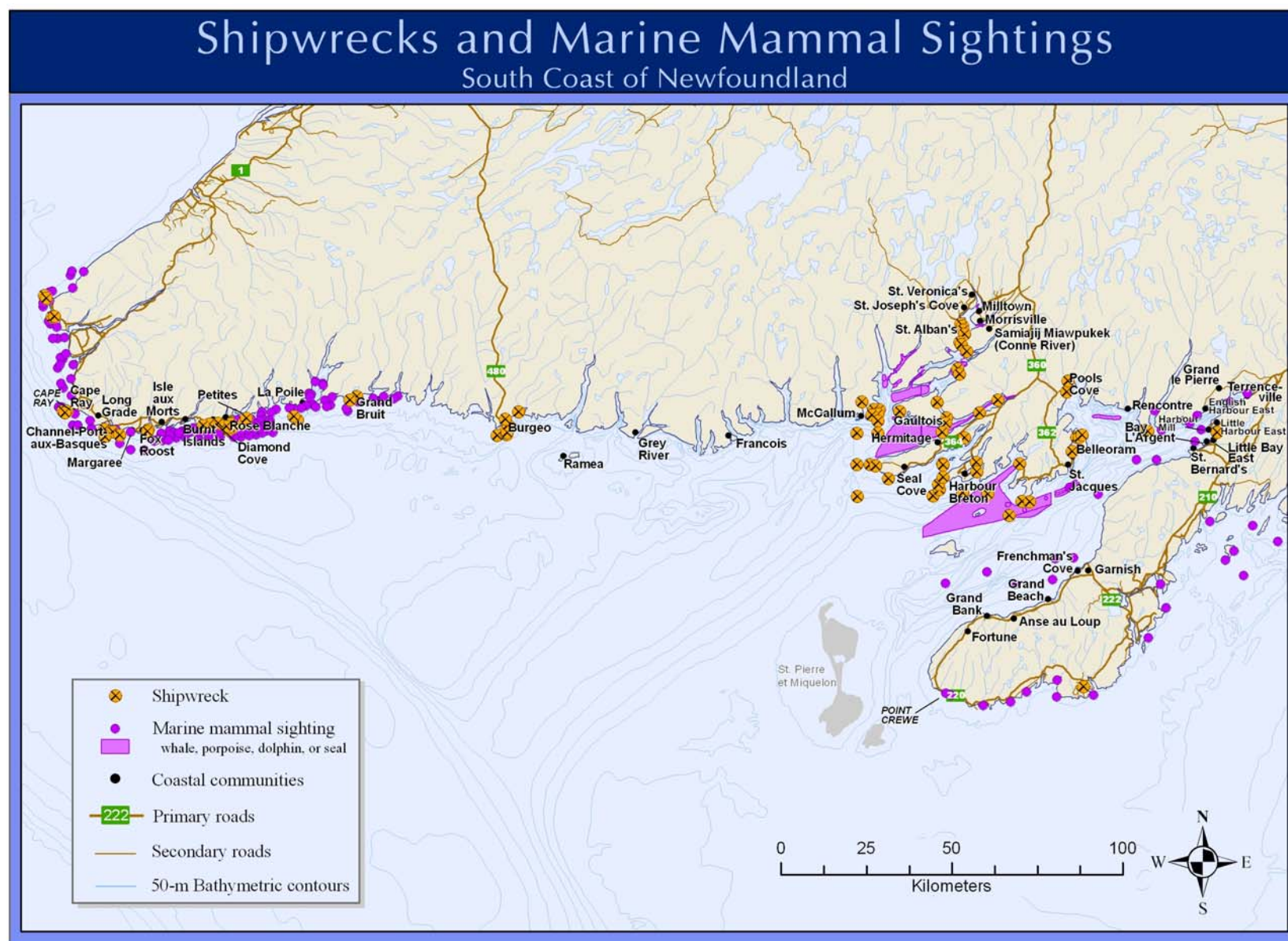


Figure 37. Shipwrecks and marine mammal sightings along the South Coast of Newfoundland. Data courtesy of Fisheries and Oceans Canada.

10.6 Sea Kayaking

Sea kayaking has become an increasingly popular sport in Newfoundland and the South Coast is becoming a popular region for people whose skills range from beginner to expert. Kayakers travel to the South Coast in search of a variety of experiences, from the rugged coastline and remoteness to the sheltered bays and Barachois. The friendly outposts and abundant remains of historic settlements add to the richness of the cultural experience.

The route from Rose Blanche in the west to the Burin Peninsula in the east may be divided into six distinct subregions. Table 58 describe the routes, special features, and degree of difficulty.

Table 58. Sea kayaking routes and features along the South Coast, from Rose Blanche to the Burin Peninsula (Source: Murphy and Redmond 2002).

Rose Blanche/Harbour Le Cou to Burgeo		
Journey	Distance	Duration
Rose Blanche to Petites	10 km Return	1 day to overnight
Rose Blanche to La Poile	35 km	1-3 days (ferry return)
Rose Blanche to Grand Brut	55 km	2-5 days (ferry return)
Rose Blanche to Burgeo	100 km	4-7 days (without fiords)
-Fiord Exploration	Add up to 150 km)	Add up to 7 days
Water Routes:		
For competent kayakers in swells, reflective waves, and offshore paddling. Significant stretches of exposed coastline with few landing zones. Dominant southwesterly winds.		
Special Features:		
Communities of Petites, West Point, Indian Harbour, La Poile and Grand Bruit. Caribou along headlands. Considered among the best sea kayaking in Atlantic Canada. Remote and resettled communities, deep penetrating fiords, elevated, exposed coastline, many islands. Excellent hiking and panoramic vistas.		
Burgeo Area		
Distance		Duration
1-100 km		1-6 days
Water Routes:		
Currents from the Grandy's River collide with running ocean tides, causing challenging conditions.		
Special Features:		
Sandy beaches and seals in Big Barasway, sunken fishing vessel in Rencontre Island harbor, "face" in mountain on southeast shore of Bay de Loup.		

Burgeo to Ramea to Francois		
Journey	Distance	Duration
Burgeo to Ramea	17 km (ferry route)	
Burgeo-Francois	85 km	4-10 days
Water Routes:		
Exposed coastline with limited landing zones, requiring expert kayaking skills. Rapid changes in air temperatures. Escape route at Grey River, a port of call for the coastal ferry. Plenty of fishing boats working along the coast and in an emergency usually are a reasonable contingency plan to help out. Those not as experienced may take the ferry to Grey River and paddle the protected waters of the Grey River Fiord.		
Special Features:		
For some this route rates very high despite a lack of marine life. Few whale observations		
Bay d'Espoir to McCallum to Gaultois		
Distance	Duration	
Up to 250 km	4-10 days	
Water Routes:		
Little Passage and Lampidoes Passage are subject to tidal currents. Recommended use of back tides and favourable winds.		
Special Features:		
2000 year old Dorset archaeological site, Mi'kmaq Cross in North Harbour, resettled communities, old whaling stations, North Bay fiord, hiking		
Fortune Bay: English Harbour East to Pool's Cove to Long Harbour Fiord		
Journey	Distance	
Pool's Cove to English Harbour East	80 km	
Long Harbour Fiord side trip	add 60 km return	
Water Routes:		
Dominant southwesterly winds and 1 m (3 ft.) waves. Best at early morning and evening Tidal currents strong in Long Harbour. Consult tide tables and use 50/90 rule when entering or leaving.		
Special Features:		
Bay du Nord Fiord and falls, resettled communities of Bay du Nord, Lally Cove, Stones Cove, Anderson's Cove, Rencontre Lake. Waterfalls, hiking.		
Hazards:		
Newfoundland Black Bear is common. Many cabins equipped with bear mats.		
Point May to St. Pierre to Miquelon		
Distance	Duration	
20-30 km	One way crossing 4-6 hours	
Water Routes:		
St. Pierre visible only on clear day. Requires excellent navigational skills for open water.		
Special Features:		
Visiting a foreign country by kayak. French Culture.		

11.0 Tourism

The South Coast region offers a variety of opportunities to tourists from out of province and residents of Newfoundland and Labrador. Many but not all of these opportunities are described in the annual publication of the provincial Travel Guide. The Travel Guide organizes information according to regions of the province. Three regions comprise the communities of the South Coast: Eastern, Cape Ray to Burgeo; Central, east of Burgeo to Long Harbour, and East, Burin Peninsula (Department of Tourism, Culture, and Recreation 2006). The following are just a few highlights of the many opportunities along the South Coast.

Port aux Basques is considered the gateway to the province as it is the port of entry for most visitors traveling across the Cabot Strait from Nova Scotia. Some of the town's best known attractions are the Gulf Museum, the Railway Heritage Centre, and the start of the Newfoundland T'Railway. There is a fairly large visitors' centre just outside of town on the Trans Canada Highway.

The town of Fortune on the Burin Peninsula receives many tourists traveling to and from the French islands of St. Pierre and Miquelon. Nearby, the town of Grand Bank has a strong heritage focus and features the Southern Newfoundland Seaman's Museum, a provincial museum constructed as a memorial to the Newfoundlanders who lost their lives at sea.

The Miawpukek Band at the Conne River Reserve promotes its culture and traditional heritage by hosting each year a pow wow that brings together people from across the world for a community celebration that is open to tourists. Mi'kmaq Crafts are produced and sold at the Band's Craft store.

The community of Burgeo is accessible to tourists traveling by automobile via Route 480, which is known as the Caribou Trail. Travelers should always check with weather conditions before embarking on Route 480, as travel can be dangerous in rough weather or fog and is not advisable at night when caribou and moose can be a distinct hazard to motorists.

Communities of the Coast of Bays region area are easily accessible to tourists traveling by car from the Trans Canada Highway by taking Route 360 south until it branches to the various subregions of Bay d'Espoir, Connaigre Peninsula, and Fortune Bay North Shore.

Between Rose Blanche east of Port aux Basques and the Bay d'Espoir area is a long and rugged coastline that offers a variety of opportunities to visitors who seek a more intimate contact with the sea and with residents of the more remote communities. There are a growing number of adventure tourism opportunities such as sea kayaking, rock climbing, and diving for sea wrecks. Accommodations in the smaller communities such as François can be found by inquiring about boarding homes, as these smaller services are often not listed in the provincial Travel Guide.

11.1 Visitation and Occupancy

Based on the 2003/2004 auto exit survey conducted by the Department of Tourism, Culture, and Recreation, the province received approx 100,400 non-resident automobile visitors between June and October of 2003. Of these visitors the reported location of overnight stays, by Zone, was as follows: 32% Zone 10, 16% Zone 9, 2% Zone 13, and 5% Zone 16, with the highest proportion of visitors reported for Zone 10, the Marine and Mountain Zone. These data represent the entire Zones, as information was not available for just the South Coast communities (Roger Haynes, Department of Tourism, Culture & Recreation, Strategic Planning and Policy, St. John's, NL, pers. comm.).

The number of visitors that traveled to the province by car declined between 2003 and 2005. As cited in the transportation section of this report, Marine Atlantic reported a slight decline in the number of passenger vehicle crossings as well as the number of passengers in and out of Port aux Basques for the period 2003 to 2005 (Roger Haynes, Department of Tourism, Culture & Recreation, Strategic Planning and Policy, St. John's, NL, pers. comm.).

Other indicators of a decline during the past three years of visitors traveling by car can be seen in the number of visitors to the Visitors Centre at Port aux Basques. In 2003 there were 30,253 visitors, compared with 24,663 in 2004 and 24,686 in 2005 (Roger Haynes, Department of Tourism, Culture & Recreation, Strategic Planning and Policy, St. John's, NL, pers. comm.).

Tourists on the Burin Peninsula may have also declined slightly during that same period, as indicated by data on the number of passenger arrivals at the Customs Office in Fortune and the number of visitors to the Provincial Seamen's Museum at Grand Bank (Table 59).

Table 59. Number of passenger arrivals at the Customs Office in Fortune and visitors to the Provincial Seamen's Museum in Grand Bank (Source: Roger Haynes, Department of Tourism, Culture & Recreation, Strategic Planning and Policy, St. John's, NL, pers. comm.).

Year	Passengers Arrivals at the Customs Office	Visitors to the Provincial Seamen's Museum
2003	13,153	5,012
2004	12,419	4,794
2005	12,336	4,224

Annual occupancy (i.e. roofed accommodation) for all Economic Zones that embrace the South Coast region appear to range between 31% and 48%. Zone 10 (Marine and Mountain Zone) appears to experience the greatest increase in occupancy rate during the tourist season of June to September. Table 60 lists annual and seasonal occupancy data

for Zones 9, 10, 13, and 16, with the exception that Zone 9 represents only the occupancy data for the Burgeo/Ramea area. It could not be verified whether these data for Zone 9 include the communities of François and Grey River.

Table 60. Percent annual and seasonal occupancy for Zones 9, 10, 13, and 16 for the period 2003-2005. Data for Zone 9 represent Burgeo/Ramea only; data for all other Zones represent the entire zone. Summer occupancy is June-September (Source: Roger Haynes, Department of Tourism, Culture & Recreation, Strategic Planning and Policy, St. John's, NL, pers. comm.).

Year	Zone 9		Zone 10		Zone 13		Zone 16	
	Annual	Summer	Annual	Summer	Annual	Summer	Annual	Summer
2003	36.3	46.4	34.2	58.0	29.0	37.2	37.5	48.2
2004	31.1	36.5	32.8	54.1	23.9	28.5	44.0	55.9
2005	n/a	n/a	33.6	58.2	31.3	34.0	48.3	60.7

11.2 Recreational Opportunities, Accommodations, and Attractions

Recreational opportunities for the South Coast region are described in this report in the sections on recreational fishing, hunting, parks and protected areas, wildlife observation, and sea kayaking. Table 58 in the sea kayaking section includes a description of special features along the more remote sections of the coast. The provincial Travel Guide lists additional recreational opportunities in the Attractions and Adventures sections of the Western, Central, and Eastern regions of the province (Department of Tourism, Culture, and Recreation 2006). These are summarized in Appendix G-1.

A list of accommodations for the South Coast region appears in Appendix G-2. This list is a summary of information from the Newfoundland and Labrador Travel Guide and does not include several boarding homes, outfitters' camps, and other accommodation. Listings in the Travel Guide are on a fee basis.

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Appendix A-1. Total population by sex (100% Data) (Statistics Canada, 2001)

Community	Burnt Islands	Channel-Port aux Basques	Isle aux Morts	Rose Blanche-Harbour le Cou	Unorganized CSD 3H	Unorganized CSD 3I	Unorganized CSD 3J	Burgeo	Ramea	Unorganized CSD 3E	Unorganized CSD 3F	Belleoram	Gaultois	Harbour Breton	Hermitage	Milltown - Head of Bay d'Espoir	Morrisville	Pools Cove	Rencontre	Samiaij Miawpukek
Total Population	800	4,635	810	665	745	185	115	1,785	755	165	175	485	320	2,080	605	885	155	205	200	835
Female, Total	390	2,400	405	340	350	95	50	890	395	85	90	235	170	1,025	300	450	80	110	95	415
Male, Total	405	2,235	405	325	395	90	60	890	360	80	90	250	150	1,055	300	430	70	95	105	425
Community	Seal Cove, Fortune Bay	St. Alban's	St. Jacques - Coomb's Cove	Unorganized CSD 3A	Unorganized CSD 3B	Unorganized CSD 3D	Bay L'Argent	English Harbour East	Fortune	Frenchman's Cove, Fortune Bay	Garnish	Grand Bank	Grand le Pierre	Little Bay East	St. Bernard's - Jacques Fontaine	Terrenceville	Unorganized CSD 2G	Unorganized CSD 2H	Unorganized CSD 2I	Unorganized CSD 2J
Total Population	370	1,370	705	0	0	325	320	220	1,615	195	665	2,840	295	140	660	630	0	120	180	0
Female, Total	185	690	350	0	0	160	145	105	810	105	350	1,505	140	75	320	310	0	60	90	0
Male, Total	185	680	360	0	0	165	170	110	800	90	315	1,335	155	70	340	325	0	60	90	0

Appendix A-2. Total population 15 years and over by labour force activity (20% Sample Data) (Statistics Canada, 2001)

Community	Burnt Islands	Channel-Port aux Basques	Isle aux Morts	Rose Blanche-Harbour le Cou	Unorganized CSD 3H	Unorganized CSD 3I	Unorganized CSD 3J	Burgeo	Ramea	Unorganized CSD 3E	Unorganized CSD 3F	Belleoram	Gaultois	Harbour Breton	Hermitage	Milltown – Head of Bay d'Espoir	Morrisville	Pools Cove	Rencontre	Samiajij Miawpukek
Total Population	690	3,880	675	545	645	145	105	1,525	655	105	155	350	265	1,665	545	760	135	170	155	640
In the Labour Force	360	2,100	290	220	355	65	60	745	275	50	85	220	135	940	280	385	95	85	85	500
Employed	205	1,510	155	75	250	40	35	420	200	40	25	170	70	455	165	250	50	60	75	280
Unemployed	155	590	140	150	110	20	25	325	70	10	60	50	70	490	120	135	40	30	15	220
Not in the Labour Force	335	1,780	380	325	285	85	35	775	380	60	70	130	130	725	260	375	40	80	70	140
Participation Rate	52.2	54.1	43.0	40.4	55.0	44.8	57.1	48.9	42.0	47.6	54.8	62.9	50.9	56.5	51.4	50.7	70.4	50.0	54.8	78.1
Employment Rate	29.7	38.9	23.0	13.8	38.8	27.6	33.3	27.5	30.5	38.1	16.1	48.6	26.4	27.3	30.3	32.9	37.0	35.3	48.4	43.8
Unemployment Rate	43.1	28.1	48.3	68.2	31.0	30.8	41.7	43.6	25.5	20.0	70.6	22.7	51.9	52.1	42.9	35.1	42.1	35.3	17.6	44.0
Community	Seal Cove, Fortune Bay	St. Alban's	St. Jacques – Coomb's Cove	Unorganized CSD 3A	Unorganized CSD 3B	Unorganized CSD 3D	Bay L'Argent	English Harbour East	Fortune	Frenchman's Cove, Fortune Bay	Garnish	Grand Bank	Grand le Pierre	Little Bay East	St. Bernard's – Jacques Fontaine	Terrenceville	Unorganized CSD 2G	Unorganized CSD 2H	Unorganized CSD 2I	Unorganized CSD 2J
Total Population	325	1,195	605	-	-	260	250	185	1,375	180	570	2,350	245	125	540	520	-	130	165	-
In the Labour Force	200	705	320	-	-	125	90	90	795	125	330	1,355	90	75	290	240	-	35	65	-
Employed	70	480	275	-	-	75	55	85	615	85	275	1,155	75	75	200	135	-	15	35	-
Unemployed	130	225	45	-	-	45	35	0	185	45	55	195	20	0	95	105	-	20	25	-
Not in the Labour Force	125	495	285	-	-	140	160	100	575	55	240	1000	155	45	245	280	-	95	100	-
Participation Rate	61.5	59.0	52.9	-	-	48.1	36.0	48.6	57.8	69.4	57.9	57.7	36.7	60.0	53.7	46.2	-	26.9	39.4	-
Employment Rate	21.5	40.2	45.5	-	-	28.8	22.0	45.9	44.7	47.2	48.2	49.1	30.6	60.0	37.0	26.0	-	11.5	21.2	-
Unemployment Rate	65.0	31.9	14.1	-	-	36.0	38.9	0.0	23.3	36.0	16.7	14.4	22.2	0.0	32.8	43.8	-	57.1	38.5	-

Appendix A-3. Total population 15 - 24 years by labour force activity (20% Sample Data) (Statistics Canada, 2001)

Community	Burnt Islands	Channel-Port aux Basques	Isle aux Morts	Rose Blanche-Harbour le Cou	Unorganized CSD 3H	Unorganized CSD 3I	Unorganized CSD 3J	Burgeo	Ramea	Unorganized CSD 3E	Unorganized CSD 3F	Belleoram	Gaultois	Harbour Breton	Hermitage	Milltown - Head of Bay d'Espoir	Morrisville	Pools Cove	Rencontre	Samiajij Miawpukek
Total Population	150	550	105	25	85	20	25	190	110	25	45	55	60	310	85	110	35	20	30	145
In the Labour Force	40	235	20	10	40	15	10	55	20	10	10	55	15	125	25	45	25	0	0	80
Employed	25	155	10	0	30	10	0	15	10	0	0	35	15	60	10	20	10	10	0	35
Unemployed	15	80	15	10	10	0	10	45	10	0	10	15	0	65	15	25	15	0	0	45
Not in the Labour Force	110	315	80	15	40	10	20	140	90	15	35	0	45	180	60	70	15	15	30	65
Participation Rate	26.7	42.7	19.0	40.0	47.1	0.0	40.0	28.9	18.2	40.0	22.2	100.0	25.0	40.3	29.4	40.9	71.4	0.0	0.0	55.2
Employment Rate	16.7	28.2	9.5	0.0	35.3	0.0	0.0	7.9	9.1	0.0	0.0	63.6	25.0	19.4	11.8	18.2	28.6	0.0	0.0	24.1
Unemployment Rate	37.5	34.0	75.0	100.0	25.0	0.0	100.0	81.8	50.0	0.0	100.0	27.3	0.0	52.0	60.0	55.6	60.0	0.0	0.0	56.3
Community	Seal Cove, Fortune Bay	St. Alban's	St. Jacques - Coomb's Cove	Unorganized CSD 3A	Unorganized CSD 3B	Unorganized CSD 3D	Bay L'Argent	English Harbour East	Fortune	Frenchman's Cove, Fortune Bay	Garnish	Grand Bank	Grand le Pierre	Little Bay East	St. Bernard's - Jacques Fontaine	Terrenceville	Unorganized CSD 2G	Unorganized CSD 2H	Unorganized CSD 2I	Unorganized CSD 2J
Total Population	30	195	95	-	-	30	35	40	180	25	75	345	55	15	110	120	-	10	25	-
In the Labour Force	20	100	40	-	-	15	15	15	75	15	45	135	20	10	55	40	-	0	20	-
Employed	10	40	25	-	-	10	10	15	65	0	30	95	15	10	35	30	-	0	10	-
Unemployed	0	55	15	-	-	10	10	0	15	10	20	40	10	0	20	10	-	0	0	-
Not in the Labour Force	0	95	55	-	-	15	20	25	105	10	30	205	40	10	55	85	-	0	0	-
Participation Rate	66.7	51.3	42.1	-	-	50.0	42.9	37.5	41.7	0.0	60.0	39.1	36.4	66.7	50.0	33.3	-	0.0	80.0	-
Employment Rate	33.3	20.5	26.3	-	-	33.3	28.6	37.5	36.1	0.0	40.0	27.5	27.3	66.7	31.8	25.0	-	0.0	40.0	-
Unemployment Rate	0.0	55.0	37.5	-	-	66.7	66.7	0.0	20.0	0.0	44.4	29.6	50.0	0.0	36.4	25.0	-	0.0	0.0	-

Appendix A-4. Total population 25 years and over by labour force activity (20% Sample Data) (Statistics Canada, 2001)

Community	Burnt Islands	Channel-Port aux Basques	Isle aux Morts	Rose Blanche-Harbour le Cou	Unorganized CSD 3H	Unorganized CSD 3I	Unorganized CSD 3J	Burgeo	Ramea	Unorganized CSD 3E	Unorganized CSD 3F	Belleoram	Gaultois	Harbour Breton	Hermitage	Milltown - Head of Bay d'Espoir	Morrisville	Pools Cove	Rencontre	Samiajij Miawpukek
Total Population	540	3,330	570	520	560	125	80	1,335	545	80	110	295	205	1,355	460	650	100	150	125	495
In the Labour Force	320	1,865	270	210	315	50	50	690	255	40	75	165	120	815	255	340	70	85	85	420
Employed	180	1,355	145	75	220	30	35	405	190	40	25	135	55	395	155	230	40	50	75	245
Unemployed	140	510	125	140	100	20	15	280	60	10	50	35	70	425	105	110	25	30	15	175
Not in the Labour Force	225	1,465	300	310	245	75	15	635	290	45	35	130	85	545	200	305	25	65	40	75
Participation Rate	59.3	56.0	47.4	40.4	56.3	40.0	62.5	51.7	46.8	50.0	68.2	55.9	58.5	60.1	55.4	52.3	70.0	56.7	68.0	84.8
Employment Rate	33.3	40.7	25.4	14.4	39.3	24.0	43.8	30.3	34.9	50.0	22.7	45.8	26.8	29.2	33.7	35.4	40.0	33.3	60.0	49.5
Unemployment Rate	43.8	27.3	46.3	66.7	31.7	40.0	30.0	40.6	23.5	25.0	66.7	21.2	58.3	52.1	41.2	32.4	35.7	35.3	17.6	41.7
Community	Seal Cove, Fortune Bay	St. Alban's	St. Jacques - Coomb's Cove	Unorganized CSD 3A	Unorganized CSD 3B	Unorganized CSD 3D	Bay L'Argent	English Harbour East	Fortune	Frenchman's Cove, Fortune Bay	Garnish	Grand Bank	Grand le Pierre	Little Bay East	St. Bernard's - Jacques Fontaine	Terrenceville	Unorganized CSD 2G	Unorganized CSD 2H	Unorganized CSD 2I	Unorganized CSD 2J
Total Population	295	1,000	510	-	-	230	215	145	1,195	155	495	2,005	190	110	430	400	-	120	140	-
In the Labour Force	180	605	280	-	-	110	75	75	720	110	285	1,220	70	65	235	200	-	35	45	-
Employed	60	440	250	-	-	65	45	70	550	85	245	1,060	60	65	165	105	-	15	25	-
Unemployed	130	170	30	-	-	35	25	0	170	35	35	155	10	0	75	95	-	20	25	-
Not in the Labour Force	125	400	230	-	-	125	140	75	470	45	210	795	115	35	190	195	-	95	100	-
Participation Rate	61.0	60.5	54.9	-	-	47.8	34.9	51.7	60.3	71.0	57.6	60.8	36.8	59.1	54.7	50.0	-	29.2	32.1	-
Employment Rate	20.3	44.0	49.0	-	-	28.3	20.9	48.3	46.0	54.8	49.5	52.9	31.6	59.1	38.4	26.3	-	12.5	17.9	-
Unemployment Rate	72.2	28.1	10.7	-	-	31.8	33.3	0.0	23.6	31.8	12.3	12.7	14.3	0.0	31.9	47.5	-	57.1	55.6	-

Appendix A-5a. Total population 15 years and over by industry divisions (20% Sample Data) (Statistics Canada, 2001)

Community	Burnt Islands	Channel-Port aux Basques	Isle aux Morts	Rose Blanche-Harbour le Cou	Unorganized CSD 3H	Unorganized CSD 3I	Unorganized CSD 3J	Burgeo	Ramea	Unorganized CSD 3E	Unorganized CSD 3F	Belleoram	Gaultois	Harbour Breton	Hermitage	Milltown - Head of Bay d'Espoir	Morrisville	Pools Cove	Rencontre	Samiaij Miawpukek
Total labour force	360	2,100	290	220	355	65	65	745	275	45	85	220	135	940	285	380	95	90	85	500
Industry - Not applicable	10	145	35	20	20	0	0	55	10	0	35	20	0	50	10	20	35	10	10	0
All industries	350	1,950	255	200	330	65	65	695	265	45	50	200	135	890	270	360	70	80	80	500
Agriculture, forestry, fishing, and hunting	60	35	15	55	45	35	45	65	70	25	25	90	15	160	45	25	0	25	55	75
Mining and oil and gas extraction	0	0	0	0	0	10	0	35	0	0	0	10	0	0	0	0	0	0	0	0
Utilities	0	10	0	15	10	0	10	10	0	0	0	0	0	10	0	40	10	0	10	10
Construction	10	95	10	15	15	0	0	15	0	0	0	0	35	20	10	30	30	10	0	55
Manufacturing	90	185	25	0	55	0	0	55	70	10	0	15	35	340	125	40	0	10	0	15
Wholesale trade	0	30	0	0	0	0	0	10	0	0	0	20	0	0	0	0	0	0	0	0
Retail trade	30	290	20	10	45	0	0	100	10	0	0	10	10	60	20	70	10	0	0	35
Transportation and warehousing	85	335	75	40	70	15	10	85	35	10	0	0	0	30	0	25	0	0	0	10
Information and cultural industries	0	15	0	0	10	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0
Finance and insurance	0	45	0	0	0	0	0	10	0	0	0	0	0	15	0	0	0	0	0	0
Real estate and rental and leasing	0	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Professional, scientific, and technical services	0	20	10	0	0	0	0	50	0	0	0	10	0	0	0	10	0	0	0	10
Management of companies and enterprises	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Administrative and support, waste management and remediation services	10	40	10	0	10	0	0	0	0	0	0	0	0	10	0	10	0	10	0	10
Educational services	25	165	20	0	15	10	0	45	15	0	0	0	30	25	20	25	0	10	15	45
Health care and social assistance	10	225	10	20	10	0	0	55	10	0	10	0	0	65	10	25	0	0	0	60
Arts, entertainment, and recreation	0	0	0	0	0	0	0	15	0	0	0	0	0	10	0	10	0	0	0	0
Accommodation and food services	10	140	30	10	35	0	0	25	25	0	0	0	0	45	10	20	10	0	0	20
Other services (except public administration)	20	135	15	15	15	0	0	45	10	0	0	10	0	45	20	0	15	20	0	25
Public administration	20	155	15	15	10	0	0	70	15	10	10	20	15	60	10	30	0	10	0	130

Appendix A-5b. Total population 15 years and over by industry divisions (20% Sample Data) (Statistics Canada, 2001)

Community	Seal Cove, Fortune Bay	St. Alban's	St. Jacques - Coomb's Cove	Unorganized CSD 3A	Unorganized CSD 3B	Unorganized CSD 3D	Bay L'Argent	English Harbour East	Fortune	Frenchman's Cove, Fortune Bay	Garnish	Grand Bank	Grand le Pierre	Little Bay East	St. Bernard's - Jacques Fontaine	Terrenceville	Unorganized CSD 2G	Unorganized CSD 2H	Unorganized CSD 2I	Unorganized CSD 2J
Total labour force	200	705	320	-	-	120	90	85	795	125	335	1355	95	80	290	235	-	35	65	-
Industry - Not applicable	20	35	10	-	-	10	0	0	45	0	10	30	0	0	25	15	-	0	0	-
All industries	185	670	315	-	-	110	90	90	745	125	330	1325	90	75	265	225	-	35	60	-
Agriculture, forestry, fishing, and hunting	115	35	105	-	-	50	15	75	110	50	105	110	45	15	85	20	-	10	30	-
Mining and oil and gas extraction	10	0	15	-	-	0	0	0	0	0	0	0	0	0	0	10	-	0	0	-
Utilities	0	25	10	-	-	0	0	0	10	0	0	0	0	0	0	0	-	0	0	-
Construction	10	130	0	-	-	0	15	0	30	15	0	35	10	10	45	40	-	10	10	-
Manufacturing	30	70	0	-	-	10	10	0	295	45	65	390	0	0	10	30	-	0	10	-
Wholesale trade	0	10	0	-	-	0	0	0	10	0	0	45	0	0	0	0	-	0	0	-
Retail trade	0	100	40	-	-	15	10	0	85	0	15	145	10	20	35	20	-	10	0	-
Transportation and warehousing	10	25	30	-	-	10	0	10	10	0	10	35	10	0	15	45	-	0	0	-
Information and cultural industries	0	10	0	-	-	0	0	0	0	0	0	0	0	0	0	0	-	0	0	-
Finance and insurance	0	0	0	-	-	0	0	0	0	0	0	15	0	0	0	0	-	0	0	-
Real estate and rental and leasing	0	0	0	-	-	0	0	0	0	0	0	10	0	0	0	0	-	0	0	-
Professional, scientific, and technical services	0	10	10	-	-	0	0	0	0	0	25	10	0	0	0	0	-	0	10	-
Management of companies and enterprises	0	0	0	-	-	0	0	0	0	0	0	0	0	0	0	0	-	0	0	-
Administrative and support, waste management and remediation services	0	10	0	-	-	0	0	0	10	0	10	15	0	0	10	0	-	0	0	-
Educational services	0	45	10	-	-	0	10	0	25	0	15	80	0	0	0	35	-	0	0	-
Health care and social assistance	0	70	40	-	-	0	0	0	70	15	40	180	0	10	25	0	-	10	0	-
Arts, entertainment, and recreation	0	10	0	-	-	0	0	0	0	0	10	0	0	0	0	0	-	0	0	-
Accommodation and food services	0	55	0	-	-	0	15	0	15	0	15	60	10	0	10	15	-	0	0	-
Other services (except public administration)	10	40	20	-	-	0	10	0	15	0	0	95	10	10	15	0	-	0	0	-
Public administration	0	30	25	-	-	25	10	0	70	0	15	85	10	0	10	10	-	0	10	-

Appendix A-6a. Total population 15 years and over by national occupational classification system (20% Sample Data) (Statistics Canada, 2001)

Community	Burnt Islands	Channel-Port aux Basques	Isle aux Morts	Rose Blanche-Harbour le Cou	Unorganized CSD 3H	Unorganized CSD 3I	Unorganized CSD 3J	Burgeo	Ramea	Unorganized CSD 3E	Unorganized CSD 3F	Belleoram	Gaultois	Harbour Breton	Hermitage	Milltown - Head of Bay d'Espoir	Morrisville	Pools Cove	Rencontre	Samiaij Miawpukek
Total labour force	360	2,100	290	220	355	65	65	745	275	45	85	220	135	940	285	380	95	90	85	500
Occupation - not applicable	0	145	35	20	20	0	0	50	10	0	30	20	0	50	15	20	30	0	0	0
All occupations	355	1,955	255	200	330	60	65	695	265	50	50	200	135	895	270	365	65	80	85	500
A Management occupations	20	135	0	10	20	0	0	20	10	0	0	15	0	50	20	15	0	0	10	25
B Business, finance, and administration occupations	20	200	15	10	20	0	0	55	0	10	0	10	10	60	0	40	10	0	0	40
C Natural and applied sciences and related occupations	25	40	15	25	0	0	0	50	15	0	0	0	0	20	10	35	0	0	0	20
D Health occupations	0	70	0	0	10	0	0	35	0	0	0	0	0	30	0	10	0	0	0	10
E Occupations in social science, education, government service, and religion	15	190	20	10	15	10	0	45	0	0	10	0	30	20	10	20	0	10	0	50
F Occupations in art, culture, recreation, and sport	10	15	0	0	0	0	0	0	10	0	0	0	0	10	0	0	0	0	0	20
G Sale and service occupations	55	655	105	55	90	0	10	175	85	0	15	25	15	160	45	115	25	15	0	110
H Trades, transport and equipment operators, and related occupations	80	465	65	30	100	20	0	100	30	0	10	30	60	90	35	75	25	10	0	105
I Occupations unique to primary industry	65	55	20	60	40	30	45	150	75	25	25	90	10	145	45	30	0	25	55	110
J occupations unique to processing, manufacturing and utilities	60	125	20	10	35	0	0	60	40	10	0	30	20	315	105	25	0	15	0	15

Appendix A-6b. Total population 15 years and over by national occupational classification system (20% Sample Data) (Statistics Canada, 2001)

Community	Seal Cove, Fortune Bay	St. Alban's	St. Jacques - Coomb's Cove	Unorganized CSD 3A	Unorganized CSD 3B	Unorganized CSD 3D	Bay L'Argent	English Harbour East	Fortune	Frenchman's Cove, Fortune Bay	Garnish	Grand Bank	Grand le Pierre	Little Bay East	St. Bernard's - Jacques Fontaine	Terrenceville	Unorganized CSD 2G	Unorganized CSD 2H	Unorganized CSD 2I	Unorganized CSD 2J
Total labour force	200	705	320	-	-	120	90	85	795	125	335	1,355	95	80	290	235	-	35	65	-
Occupation - not applicable	20	35	10	-	-	0	0	0	45	10	10	30	90	0	30	20	-	0	0	-
All occupations	180	670	315	-	-	110	90	85	745	125	325	1325	10	80	265	225	-	35	65	-
A Management occupations	0	25	15	-	-	0	0	0	35	0	30	110	0	15	15	0	-	0	0	-
B Business, finance, and administration occupations	10	10	30	-	-	10	10	0	50	0	15	90	0	0	25	10	-	0	10	-
C Natural and applied sciences and related occupations	0	45	0	-	-	15	0	0	45	0	35	55	0	0	10	0	-	0	0	-
D Health occupations	0	25	15	-	-	0	0	0	25	0	10	60	0	0	0	0	-	10	0	-
E Occupations in social science, education, government service, and religion	0	50	20	-	-	0	0	0	30	0	20	80	0	0	0	20	-	0	0	-
F Occupations in art, culture, recreation, and sport	0	15	0	-	-	0	0	0	0	0	0	15	0	0	0	0	-	0	0	-
G Sale and service occupations	0	205	45	-	-	10	15	10	125	15	55	345	10	20	45	40	-	10	20	-
H Trades, transport and equipment operators, and related occupations	20	215	80	-	-	10	35	10	105	35	40	200	25	20	70	110	-	10	0	-
I Occupations unique to primary industry	105	35	105	-	-	65	15	75	115	45	100	115	45	15	105	30	-	0	25	-
J occupations unique to processing, manufacturing and utilities	35	55	10	-	-	0	10	0	220	30	35	250	0	10	0	10	-	10	0	-

Appendix A-7. Total population 15 to 24 years by school attendance (20% Sample Data) (Statistics Canada, 2001)

Community	Burnt Islands	Channel-Port aux Basques	Isle aux Morts	Rose Blanche-Harbour le Cou	Unorganized CSD 3H	Unorganized CSD 3I	Unorganized CSD 3J	Burgeo	Ramea	Unorganized CSD 3E	Unorganized CSD 3F	Belleoram	Gaultois	Harbour Breton	Hermitage	Milltown - Head of Bay d'Espoir	Morrisville	Pools Cove	Rencontre	Samiaij Miawpukek
Total population	150	550	105	25	80	15	25	190	105	25	45	55	55	310	85	105	40	25	30	145
Not attending school	55	185	15	10	35	0	0	55	60	25	20	50	45	160	35	25	25	10	15	85
Attending school full time	85	360	90	15	45	20	25	140	50	0	25	10	10	145	40	85	15	15	15	55
Attending school part time	10	10	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	0	10
Community	Seal Cove, Fortune Bay	St. Alban's	St. Jacques - Coomb's Cove	Unorganized CSD 3A	Unorganized CSD 3B	Unorganized CSD 3D	Bay L'Argent	English Harbour East	Fortune	Frenchman's Cove, Fortune Bay	Garnish	Grand Bank	Grand le Pierre	Little Bay East	St. Bernard's - Jacques Fontaine	Terrenceville	Unorganized CSD 2G	Unorganized CSD 2H	Unorganized CSD 2I	Unorganized CSD 2J
Total population	25	190	95	-	-	25	30	40	180	25	75	340	60	15	115	120	-	10	25	-
Not attending school	15	70	35	-	-	0	35	20	75	10	45	90	25	15	40	45	-	10	25	-
Attending school full time	15	120	60	-	-	20	0	20	105	15	35	245	30	0	70	80	-	0	0	-
Attending school part time	0	0	0	-	-	0	0	0	0	0	0	0	0	0	0	10	-	0	0	-

Appendix A-8a. Total population 20 years and over by highest level of schooling (20% Sample Data) (Statistics Canada, 2001)

Community	Burnt Islands	Channel-Port aux Basques	Isle aux Morts	Rose Blanche-Harbour le Cou	Unorganized CSD 3H	Unorganized CSD 3I	Unorganized CSD 3J	Burgeo	Ramea	Unorganized CSD 3E	Unorganized CSD 3F	Belleoram	Gaultois	Harbour Breton	Hermitage	Milltown - Head of Bay d'Espoir	Morrisville	Pools Cove	Rencontre	Samiajij Miawpukek
Total population	595	3,560	600	535	605	140	80	1,395	605	105	125	315	240	1,490	495	690	105	155	125	580
Less than grade 9	275	840	250	240	215	55	40	500	230	30	75	160	85	455	210	245	25	25	20	115
Grades 9 to 13	175	1,285	180	160	195	45	20	445	245	60	25	95	80	590	185	205	50	100	80	130
Without high school graduation certificate	140	1,030	160	130	155	40	15	330	155	40	15	80	65	450	130	140	25	60	65	70
With high school graduation certificate	30	255	25	30	45	10	0	115	85	15	10	10	15	140	50	60	25	40	15	55
Trades certificate or diploma	60	640	85	70	85	30	10	205	60	20	15	30	25	175	55	110	20	10	0	115
College	55	355	40	55	75	10	10	175	20	0	0	15	15	160	15	50	20	0	0	170
Without certificate or diploma	15	100	10	25	35	0	0	60	15	0	0	0	0	50	15	10	15	0	0	20
With certificate or diploma	45	260	30	30	40	10	0	120	10	0	0	10	15	105	0	40	0	0	0	155
University	30	430	40	0	30	10	0	65	55	0	0	30	30	115	35	75	0	25	15	55
Without degree	30	115	15	10	20	0	0	15	15	0	0	25	0	80	20	20	0	10	10	15
Without certificate or diploma	20	60	15	0	20	0	0	10	15	0	0	10	0	65	10	15	0	15	10	10
With certificate or diploma	10	50	0	0	0	0	0	0	0	0	0	20	0	10	0	0	0	0	0	10
With bachelor's degree or higher	0	315	25	10	10	10	0	55	40	0	10	0	30	35	20	50	0	10	0	40

Appendix A-8b. Total population 20 years and over by highest level of schooling (20% Sample Data) (Statistics Canada, 2001)

Community	Seal Cove, Fortune Bay	St. Alban's	St. Jacques - Coomb's Cove	Unorganized CSD 3A	Unorganized CSD 3B	Unorganized CSD 3D	Bay L'Argent	English Harbour East	Fortune	Frenchman's Cove, Fortune Bay	Garnish	Grand Bank	Grand le Pierre	Little Bay East	St. Bernard's - Jacques Fontaine	Terrenceville	Unorganized CSD 2G	Unorganized CSD 2H	Unorganized CSD 2I	Unorganized CSD 2J
Total population	315	1,090	550	-	-	240	240	160	1,265	170	535	2,165	205	125	480	455	-	130	150	-
Less than grade 9	150	275	185	-	-	65	85	75	355	35	100	600	60	15	130	160	-	70	55	-
Grades 9 to 13	125	365	200	-	-	105	140	75	425	105	175	750	125	75	170	155	-	55	60	-
Without high school graduation certificate	95	280	155	-	-	65	105	70	305	45	120	625	90	30	130	125	-	40	50	-
With high school graduation certificate	30	85	40	-	-	35	30	0	120	55	55	120	30	40	40	35	-	10	15	-
Trades certificate or diploma	25	210	65	-	-	30	15	10	260	25	120	435	10	15	105	55	-	0	25	-
College	10	150	45	-	-	30	10	10	150	0	90	190	10	15	50	30	-	0	0	-
Without certificate or diploma	0	45	0	-	-	25	10	10	55	0	10	20	0	0	20	15	-	0	0	-
With certificate or diploma	0	110	40	-	-	10	10	10	95	10	80	170	0	20	35	15	-	10	0	-
University	0	90	65	-	-	10	0	0	70	0	50	190	0	0	25	45	-	0	0	-
Without degree	0	35	35	-	-	10	0	0	25	0	25	65	10	0	20	25	-	0	10	-
Without certificate or diploma	0	35	30	-	-	10	0	0	20	0	15	45	0	0	15	15	-	0	0	-
With certificate or diploma	0	10	0	-	-	0	0	10	10	0	10	15	0	0	0	10	-	0	0	-
With bachelor's degree or higher	0	50	25	-	-	0	0	0	50	0	25	130	0	0	10	25	-	0	0	-

Appendix A-9. Total population 15 years and over with employment income by work activity (20% Sample Data) (Statistics Canada, 2001)

Community	Burnt Islands	Channel-Port aux Basques	Isle aux Morts	Rose Blanche-Harbour le Cou	Unorganized CSD 3H	Unorganized CSD 3I	Unorganized CSD 3J	Burgeo	Ramea	Unorganized CSD 3E	Unorganized CSD 3F	Belleoram	Gaultois	Harbour Breton	Hermitage	Miltown - Head of Bay d'Espir	Morrisville	Pools Cove	Rencontre	Sami'ij Miawpukek
Total population	415	2,140	310	230	395	0	0	805	290	0	0	180	150	985	295	380	0	0	0	520
Average employment income \$	17,529	21,379	17,665	17,069	16,182	0	0	15,770	15,546	0	0	12,957	9,392	18,938	15,584	22,028	0	0	0	14,509
Standard error of average employment income \$	1,957	862	1,778	2,202	1,173	0	0	1,102	1,798	0	0	2,589	1,543	921	1,585	2,160	0	0	0	0
Worked full year, full time	25	870	60	30	85	0	0	235	55	0	0	0	0	155	65	120	0	0	0	80
Average employment income \$	29,305	32,773	21,888	26,466	29,066	0	0	28,525	25,936	0	0	0	0	33,545	29,946	43,501	0	0	0	35,398
Standard error of average employment income \$	4,120	1,397	5,221	4,902	2,460	0	0	2,515	6,080	0	0	0	0	2,328	3,152	2,951	0	0	0	0
Worked part year or part time	365	1,240	240	195	280	0	0	555	220	0	0	170	135	800	230	255	0	0	0	430
Average employment income \$	17,447	13,649	16,751	15,746	13,307	0	0	10,757	11,895	0	0	12,915	6,469	16,565	11,285	12,411	0	0	0	10,525
Standard error of average employment income \$	2,181	850	1,901	2,425	1,119	0	0	814	1,370	0	0	2,835	894	894	1,368	2,010	0	0	0	0
Community	Seal Cove, Fortune Bay	St. Alban's	St. Jacques - Coomb's Cove	Unorganized CSD 3A	Unorganized CSD 3B	Unorganized CSD 3D	Bay L'Argent	English Harbour East	Fortune	Frenchman's Cove, Fortune Bay	Garnish	Grand Bank	Grand le Pierre	Little Bay East	St. Bernard's - Jacques Fontaine	Terrenceville	Unorganized CSD 2G	Unorganized CSD 2H	Unorganized CSD 2I	Unorganized CSD 2J
Total population	190	710	285	-	-	130	85	0	760	0	345	1,365	85	0	235	205	-	0	0	-
Average employment income \$	21,826	14,774	15,641	-	-	16,253	19,704	0	17,535	0	28,606	20,056	21,052	0	16,417	21,414	-	0	0	-
Standard error of average employment income \$	2,753	1,060	1,870	-	-	2,620	4,117	0	1,099	0	5,465	1,246	3,423	0	1,703	2,182	-	0	0	-
Worked full year, full time	0	190	75	-	-	15	0	0	195	0	60	510	0	0	55	50	-	0	0	-
Average employment income \$	0	23,312	25,444	-	-	43,884	0	0	31,145	0	35,864	30,583	0	0	21,230	36,181	-	0	0	-
Standard error of average employment income \$	0	2,569	3,822	-	-	6,611	0	0	2,257	0	4,569	1,807	0	0	3,238	4,597	-	0	0	-
Worked part year or part time	175	490	210	-	-	115	65	0	555	0	275	815	70	0	180	145	-	0	0	-
Average employment income \$	20,289	11,601	12,091	-	-	12,993	20,927	0	13,068	0	27,599	14,267	17,620	0	15,068	16,553	-	0	0	-
Standard error of average employment income \$	2,775	948	1,898	-	-	2,055	4,959	0	987	0	6,732	1,578	3,557	0	1,965	2,074	-	0	0	-

Appendix A-10. Composition of total income expressed as a percentage (20% Sample Data) (Statistics Canada, 2001)

Community	Burnt Islands	Channel-Port aux Basques	Isle aux Morts	Rose Blanche-Harbour le Cou	Unorganized CSD 3H	Unorganized CSD 3I	Unorganized CSD 3J	Burgeo	Ramea	Unorganized CSD 3E	Unorganized CSD 3F	Belleoram	Gaultois	Harbour Breton	Hermitage	Milltown - Head of Bay d'Espoir	Morrisville	Pools Cove	Rencontre	Samiajij Miawpukek
Total - Composition	100	100	100	100	100	0	0	100	100	0	0	100	100	100	100	100	0	0	0	100
Employment income	68.9	65.1	58.6	49.4	62.9	0.0	0.0	56.5	54.6	0.0	0.0	49.0	44.8	66.6	55.1	67.5	0.0	0.0	0.0	63.3
Government transfer payments	28.8	24.3	37.1	41.1	30.4	0.0	0.0	36.7	35.8	0.0	0.0	45.7	53.8	30.1	38.8	26.3	0.0	0.0	0.0	35.5
Other	2.1	10.8	3.6	10.2	6.4	0.0	0.0	6.8	10.3	0.0	0.0	5.4	2.6	3.1	5.5	6.4	0.0	0.0	0.0	1.0
Community	Seal Cove, Fortune Bay	St. Alban's	St. Jacques - Coomb's Cove	Unorganized CSD 3A	Unorganized CSD 3B	Unorganized CSD 3D	Bay L'Argent	English Harbour East	Fortune	Frenchman's Cove, Fortune Bay	Garnish	Grand Bank	Grand le Pierre	Little Bay East	St. Bernard's - Jacques Fontaine	Terrenceville	Unorganized CSD 2G	Unorganized CSD 2H	Unorganized CSD 2I	Unorganized CSD 2J
Total - Composition	100	100	100	-	-	100	100	0	100	0	100	100	100	0	100	100	-	0	0	-
Employment income	66.0	60.0	54.8	-	-	58.5	46.7	0.0	58.1	0.0	68.6	67.0	44.3	0.0	51.0	53.1	-	0.0	0.0	-
Government transfer payments	34.0	36.4	39.4	-	-	37.4	47.5	0.0	31.8	0.0	24.6	28.0	50.2	0.0	39.9	41.5	-	0.0	0.0	-
Other	1.2	3.5	5.8	-	-	4.1	5.6	0.0	10.1	0.0	6.2	5.2	5.0	0.0	8.8	5.2	-	0.0	0.0	-

Appendix A-11a. Total annual income of population 15 years and over (20% Sample Data) (Statistics Canada, 2001)

Community	Burnt Islands	Channel-Port aux Basques	Isle aux Morts	Rose Blanche-Harbour le Cou	Unorganized CSD 3H	Unorganized CSD 3I	Unorganized CSD 3J	Burgeo	Ramea	Unorganized CSD 3E	Unorganized CSD 3F	Belleoram	Gaultois	Harbour Breton	Hermitage	Milltown - Head of Bay d'Espoir	Morrisville	Pools Cove	Rencontre	Samiajij Miawpukek
Total income	690	3,875	670	550	640	0	0	1,520	650	0	0	350	265	1,665	545	760	0	0	0	640
Without income	105	330	70	55	40	0	0	180	85	0	0	40	10	205	70	50	0	0	0	50
With income	585	3,550	605	495	600	0	0	1,340	570	0	0	310	250	1,460	480	705	0	0	0	595
Under \$1,000	60	165	25	35	15	0	0	75	75	0	0	20	25	40	10	30	0	0	0	0
\$ 1,000 - \$ 2,999	70	265	45	30	45	0	0	65	55	0	0	15	10	75	30	90	0	0	0	25
\$ 3,000 - \$ 4,999	45	170	35	10	55	0	0	55	35	0	0	10	20	100	25	90	0	0	0	15
\$ 5,000 - \$ 6,999	0	200	100	40	55	0	0	40	30	0	0	10	0	100	35	35	0	0	0	20
\$ 7,000 - \$ 9,999	60	330	100	55	55	0	0	195	95	0	0	35	35	125	60	90	0	0	0	40
\$10,000 - \$11,999	40	290	60	50	35	0	0	165	50	0	0	45	55	100	30	60	0	0	0	45
\$12,000 - \$14,999	70	305	35	90	85	0	0	205	45	0	0	60	30	135	90	50	0	0	0	80
\$15,000 - \$19,999	70	425	70	55	70	0	0	165	40	0	0	55	25	225	75	65	0	0	0	130
\$20,000 - \$24,999	25	380	25	35	90	0	0	100	35	0	0	40	10	180	35	30	0	0	0	75
\$25,000 - \$29,999	20	205	15	35	25	0	0	55	15	0	0	20	10	115	15	10	0	0	0	60
\$30,000 - \$34,999	30	185	25	10	10	0	0	80	25	0	0	0	10	75	35	30	0	0	0	30
\$35,000 - \$39,999	25	190	25	10	25	0	0	35	30	0	0	10	10	50	20	20	0	0	0	30
\$40,000 - \$44,999	30	120	10	20	25	0	0	10	20	0	0	0	0	50	0	30	0	0	0	15
\$45,000 - \$49,999	10	150	20	0	10	0	0	40	0	0	0	0	0	15	20	15	0	0	0	0
\$50,000 - \$59,999	0	75	10	0	0	0	0	40	15	0	0	0	0	0	15	25	0	0	0	10
\$60,000 and over	30	90	10	15	10	0	0	15	10	0	0	0	0	70	0	25	0	0	0	10
Average income \$	17,974	19,842	15,394	16,057	16,593	0	0	16,844	14,532	0	0	15,472	12,776	19,048	17,470	17,575	0	0	0	19,941
Median income \$	12,975	15,499	10,081	13,185	13,517	0	0	12,804	9,974	0	0	13,108	10,814	16,010	14,025	10,990	0	0	0	17,248
Standard error of average income \$	1,549	597	1,177	1,235	1,116	0	0	777	1,208	0	0	1,643	1,120	773	1,194	1,412	0	0	0	0

Appendix A-11b. Total income of population 15 years and over (20% Sample Data) (Statistics Canada, 2001)

Community	Seal Cove, Fortune Bay	St. Alban's	St. Jacques - Coomb's Cove	Unorganized CSD 3A	Unorganized CSD 3B	Unorganized CSD 3D	Bay L'Argent	English Harbour East	Fortune	Frenchman's Cove, Fortune Bay	Garnish	Grand Bank	Grand le Pierre	Little Bay East	St. Bernard's - Jacques Fontaine	Terrenceville	Unorganized CSD 2G	Unorganized CSD 2H	Unorganized CSD 2I	Unorganized CSD 2J
Total income	330	1,200	610	-	-	260	250	0	1,375	0	570	2,355	250	0	540	515	-	0	0	-
Without income	30	110	60	-	-	20	20	0	140	0	25	220	30	0	65	65	-	0	0	-
With income	295	1,090	550	-	-	240	230	0	1,230	0	545	2,135	215	0	475	450	-	0	0	-
Under \$1,000	15	60	55	-	-	25	20	0	95	0	20	95	0	0	35	40	-	0	0	-
\$ 1,000 - \$ 2,999	25	85	35	-	-	45	10	0	50	0	40	170	20	0	40	30	-	0	0	-
\$ 3,000 - \$ 4,999	15	60	70	-	-	10	20	0	70	0	15	95	20	0	20	35	-	0	0	-
\$ 5,000 - \$ 6,999	20	25	20	-	-	10	25	0	45	0	30	115	10	0	25	30	-	0	0	-
\$ 7,000 - \$ 9,999	15	135	45	-	-	15	30	0	85	0	50	180	15	0	50	35	-	0	0	-
\$10,000 - \$11,999	10	150	45	-	-	0	25	0	105	0	35	165	35	0	55	30	-	0	0	-
\$12,000 - \$14,999	45	130	80	-	-	15	15	0	115	0	40	310	10	0	65	40	-	0	0	-
\$15,000 - \$19,999	30	155	70	-	-	40	45	0	185	0	90	310	20	0	65	40	-	0	0	-
\$20,000 - \$24,999	15	85	45	-	-	40	10	0	215	0	50	195	0	0	20	20	-	0	0	-
\$25,000 - \$29,999	10	50	25	-	-	15	10	0	60	0	55	75	15	0	25	55	-	0	0	-
\$30,000 - \$34,999	10	40	20	-	-	0	10	0	35	0	20	125	25	0	35	35	-	0	0	-
\$35,000 - \$39,999	25	15	10	-	-	0	0	0	30	0	15	60	15	0	10	10	-	0	0	-
\$40,000 - \$44,999	40	40	10	-	-	0	10	0	45	0	40	90	10	0	10	15	-	0	0	-
\$45,000 - \$49,999	10	20	10	-	-	0	0	0	40	0	0	25	0	0	10	0	-	0	0	-
\$50,000 - \$59,999	20	25	10	-	-	15	0	0	30	0	15	65	15	0	15	25	-	0	0	-
\$60,000 and over	0	0	10	-	-	0	10	0	20	0	40	65	0	0	10	10	-	0	0	-
Average income \$	21,821	16,184	14,681	-	-	14,892	14,981	0	18,670	0	26,109	19,237	18,330	0	15,929	18,066	-	0	0	-
Median income \$	15,454	12,966	12,254	-	-	13,180	11,455	0	16,820	0	17,205	14,031	11,561	0	12,039	13,670	-	0	0	-
Standard error of average income \$	2,081	814	1,224	-	-	1,788	1,913	0	876	0	3,749	852	2,060	0	1,215	1,333	-	0	0	-

Appendix A-12a. Total census family income of all families (20% Sample Data) (Statistics Canada, 2001)

Community	Burnt Islands	Channel-Port aux Basques	Isle aux Morts	Rose Blanche-Harbour le Cou	Unorganized CSD 3H	Unorganized CSD 3I	Unorganized CSD 3J	Burgeo	Ramea	Unorganized CSD 3E	Unorganized CSD 3F	Belleoram	Gaultois	Harbour Breton	Hermitage	Milltown - Head of Bay d'Espoir	Morrisville	Pools Cove	Rencontre	Samiajij Miawpukek
Census family income	250	1,460	255	220	235	0	0	570	255	0	0	135	105	630	195	290	0	0	0	245
Under \$10,000	10	65	45	0	10	0	0	20	50	0	0	15	20	30	15	15	0	0	0	0
\$ 10,000 - \$19,999	40	175	40	40	15	0	0	105	35	0	0	30	20	45	15	50	0	0	0	25
\$ 20,000 - \$29,999	55	315	50	75	60	0	0	135	50	0	0	15	30	145	45	70	0	0	0	50
\$ 30,000 - \$39,999	50	240	35	25	50	0	0	115	45	0	0	35	20	110	45	35	0	0	0	50
\$ 40,000 - \$49,999	35	190	20	30	55	0	0	55	40	0	0	35	10	105	25	45	0	0	0	40
\$ 50,000 - \$59,999	20	140	40	10	20	0	0	35	0	0	0	0	0	70	30	35	0	0	0	25
\$ 60,000 - \$69,999	15	115	0	25	0	0	0	45	25	0	0	0	0	40	0	10	0	0	0	20
\$ 70,000 - \$79,999	10	90	10	0	0	0	0	10	0	0	0	0	10	40	10	0	0	0	0	10
\$ 80,000 - \$89,999	20	50	0	0	15	0	0	25	0	0	0	0	0	25	0	10	0	0	0	10
\$ 90,000 - \$99,999	0	30	0	0	0	0	0	10	0	0	0	0	0	0	0	10	0	0	0	0
\$100,000 and over	0	45	0	0	10	0	0	0	0	0	0	10	0	10	0	15	0	0	0	10
Average family income \$	39,046	42,374	33,376	31,845	38,733	0	0	35,707	29,599	0	0	31,728	27,855	42,070	36,047	39,868	0	0	0	44,340
Median family income \$	32,946	37,426	26,485	27,559	35,803	0	0	31,052	28,601	0	0	31,781	22,977	37,712	34,181	33,317	0	0	0	38,443
Standard error of average family income \$	2,797	1,390	2,670	2,155	2,761	0	0	1,799	2,224	0	0	3,441	3,592	1,772	2,599	3,183	0	0	0	0

Appendix A-12b. Total census family income of all families (20% Sample Data) (Statistics Canada, 2001)

Community	Seal Cove, Fortune Bay	St. Alban's	St. Jacques - Coomb's Cove	Unorganized CSD 3A	Unorganized CSD 3B	Unorganized CSD 3D	Bay L'Argent	English Harbour East	Fortune	Frenchman's Cove, Fortune Bay	Garnish	Grand Bank	Grand le Pierre	Little Bay East	St. Bernard's - Jacques Fontaine	Terrenceville	Unorganized CSD 2G	Unorganized CSD 2H	Unorganized CSD 2I	Unorganized CSD 2J
Census family income	140	435	220	-	-	110	85	0	535	0	205	920	90	0	195	180	-	0	0	-
Under \$10,000	0	25	10	-	-	0	10	0	35	0	0	65	10	0	10	15	-	0	0	-
\$ 10,000 - \$19,999	10	105	45	-	-	25	40	0	50	0	15	170	0	0	60	35	-	0	0	-
\$ 20,000 - \$29,999	20	70	55	-	-	25	15	0	115	0	25	190	20	0	20	30	-	0	0	-
\$ 30,000 - \$39,999	35	65	60	-	-	15	0	0	110	0	35	120	10	0	35	20	-	0	0	-
\$ 40,000 - \$49,999	30	75	20	-	-	15	10	0	85	0	35	130	15	0	20	0	-	0	0	-
\$ 50,000 - \$59,999	35	35	15	-	-	25	0	0	40	0	25	90	10	0	15	25	-	0	0	-
\$ 60,000 - \$69,999	10	40	10	-	-	0	15	0	65	0	10	55	20	0	15	10	-	0	0	-
\$ 70,000 - \$79,999	0	10	10	-	-	0	10	0	20	0	15	20	0	0	15	15	-	0	0	-
\$ 80,000 - \$89,999	0	0	10	-	-	0	0	0	10	0	10	30	0	0	0	10	-	0	0	-
\$ 90,000 - \$99,999	0	10	0	-	-	0	0	0	10	0	20	10	0	0	0	0	-	0	0	-
\$100,000 and over	0	0	0	-	-	0	0	0	0	0	15	45	0	0	0	10	-	0	0	-
Average family income \$	44,417	36,024	32,754	-	-	32,774	29,511	0	38,943	0	64,569	40,326	38,129	0	36,169	42,507	-	0	0	-
Median family income \$	43,243	32,186	30,022	-	-	25,976	19,453	0	36,248	0	44,609	31,834	32,732	0	30,205	32,567	-	0	0	-
Standard error of average family income \$	3,025	2,033	2,520	-	-	3,033	5,195	0	1,848	0	10,505	2,135	4,582	0	2,852	4,152	-	0	0	-

Appendix A-13a. Total household income of all private households (20% Sample Data) (Statistics Canada, 2001)

Community	Burnt Islands	Channel-Port aux Basques	Isle aux Morts	Rose Blanche-Harbour le Cou	Unorganized CSD 3H	Unorganized CSD 3I	Unorganized CSD 3J	Burgeo	Ramea	Unorganized CSD 3E	Unorganized CSD 3F	Belleoram	Gaultois	Harbour Breton	Hermitage	Milltown - Head of Bay d'Esprit	Morrisville	Pools Cove	Rencontre	Samiaij Miawpukek
Household income	260	1,845	300	265	265	0	0	670	295	0	0	155	110	670	215	335	0	0	0	255
Under \$10,000	0	140	70	20	30	0	0	35	55	0	0	10	15	35	0	20	0	0	0	0
\$ 10,000 - \$19,999	40	340	55	55	35	0	0	185	65	0	0	45	10	70	30	85	0	0	0	35
\$ 20,000 - \$29,999	45	370	40	80	55	0	0	140	55	0	0	15	45	130	50	75	0	0	0	45
\$ 30,000 - \$39,999	45	255	40	30	35	0	0	120	45	0	0	30	25	125	40	35	0	0	0	50
\$ 40,000 - \$49,999	55	225	25	25	60	0	0	60	40	0	0	50	10	105	35	50	0	0	0	35
\$ 50,000 - \$59,999	25	145	30	25	25	0	0	35	0	0	0	0	0	70	35	35	0	0	0	30
\$ 60,000 - \$69,999	15	145	0	25	0	0	0	40	15	0	0	0	10	55	10	15	0	0	0	20
\$ 70,000 - \$79,999	10	95	25	0	0	0	0	25	10	0	0	0	10	50	20	0	0	0	0	10
\$ 80,000 - \$89,999	15	50	0	0	10	0	0	25	0	0	0	0	0	25	0	0	0	0	0	15
\$ 90,000 - \$99,999	10	30	0	0	0	0	0	10	0	0	0	0	0	0	0	10	0	0	0	0
\$100,000 and over	0	40	10	0	10	0	0	10	0	0	0	0	0	0	0	15	0	0	0	10
Average household income \$	40,868	38,185	30,963	30,087	37,415	0	0	33,710	27,980	0	0	31,009	29,310	41,721	38,325	37,233	0	0	0	46,503
Median household income \$	38,851	31,456	24,466	27,137	33,309	0	0	27,333	26,067	0	0	31,087	23,623	37,358	36,250	29,392	0	0	0	40,277
Standard error of average household income \$	2,696	1,237	2,758	2,160	3,375	0	0	1,779	2,062	0	0	3,191	3,427	1,759	2,665	3,040	0	0	0	0

Appendix A-13b. Total household income of all private households (20% Sample Data) (Statistics Canada, 2001)

Community	Seal Cove, Fortune Bay	St. Alban's	St. Jacques - Coomb's Cove	Unorganized CSD 3A	Unorganized CSD 3B	Unorganized CSD 3D	Bay L'Argent	English Harbour East	Fortune	Frenchman's Cove, Fortune Bay	Garnish	Grand Bank	Grand le Pierre	Little Bay East	St. Bernard's - Jacques Fontaine	Terrenceville	Unorganized CSD 2G	Unorganized CSD 2H	Unorganized CSD 2I	Unorganized CSD 2J
Household income	135	510	260	-	-	110	130	0	645	0	260	1,110	100	0	215	200	-	0	0	-
Under \$10,000	0	35	15	-	-	0	10	0	50	0	0	90	0	0	10	10	-	0	0	-
\$ 10,000 - \$19,999	15	120	65	-	-	30	65	0	115	0	60	290	15	0	75	60	-	0	0	-
\$ 20,000 - \$29,999	15	80	65	-	-	30	20	0	115	0	30	195	25	0	20	35	-	0	0	-
\$ 30,000 - \$39,999	30	80	50	-	-	15	10	0	105	0	45	150	15	0	35	20	-	0	0	-
\$ 40,000 - \$49,999	30	90	20	-	-	15	10	0	100	0	35	120	15	0	20	10	-	0	0	-
\$ 50,000 - \$59,999	25	40	15	-	-	25	0	0	50	0	20	85	10	0	0	25	-	0	0	-
\$ 60,000 - \$69,999	15	45	10	-	-	0	10	0	65	0	15	65	20	0	15	15	-	0	0	-
\$ 70,000 - \$79,999	10	0	10	-	-	0	10	0	25	0	15	20	0	0	25	15	-	0	0	-
\$ 80,000 - \$89,999	0	0	0	-	-	0	0	0	10	0	0	35	0	0	10	10	-	0	0	-
\$ 90,000 - \$99,999	0	15	0	-	-	0	0	0	0	0	20	0	10	0	0	10	-	0	0	-
\$100,000 and over	10	0	0	-	-	0	0	0	0	0	20	60	0	0	0	10	-	0	0	-
Average household income \$	47,611	34,644	30,893	-	-	32,270	26,317	0	35,736	0	55,194	36,942	40,033	0	35,354	40,801	-	0	0	-
Median household income \$	46,926	31,081	26,771	-	-	25,928	17,646	0	33,218	0	38,563	29,079	39,154	0	30,104	32,519	-	0	0	-
Standard error of average household income \$	3,950	1,879	2,380	-	-	2,872	3,425	0	1,735	0	8,966	1,934	4,028	0	2,913	4,154	-	0	0	-

Appendix B. Number of commercial licences held by fishers with a homeport between Fortune and Cape Ray as of December 2005.

NAFO	HomePort Code	HP Name	Bait	Capelin Fixed Gear	Capelin Purse Seine	Eel	Groundfish Danish Seine And Fixed Gear	Groundfish Fixed Gear	Groundfish Mobile Gear	Herring Fixed Gear	Herring Purse Seine	Lobster	Mackerel Fixed Gear
3PS	53301	FORTUNE	15	1				22	2	6		12	8
3PS	53302	GRAND BANK	14					17		4		11	8
3PS	53305	GRAND BEACH	9			1		8				9	
3PS	53308	FRENCHMANS COVE, F. BAY	7					7		1		7	1
3PS	53309	GARNISH	31					32		8		29	15
3PS	53404	ST. BERNARDS, F.B.	23					24		13		23	17
3PS	53405	JACQUES FONTAINE	2					2		2		2	
3PS	53406	BAY L'ARGENT	5					5		3		4	3
3PS	53407	LITTLE BAY EAST, F.B.	6					5		3		6	4
3PS	53408	LITTLE HARBOUR EAST F.B.	2					2		1		2	1
3PS	53409	HARBOUR MILLE	9					10		5		8	3
3PS	53411	TERRENCEVILLE	4		1			7	1	3	1	3	3
3PS	53412	GRAND LA PIERRE	9					10		4		8	5
3PS	53413	ENGLISH HARBOUR EAST	11					14		7		10	3
3PS	53414	NEW HARBOUR (VACATED), F.B.	1					1		1		1	
3PS	53417	ANDERSONS COVE (VACATED)	1					1		1		1	1
3PS	53420	RENCONTRE EAST	18					18		11		18	12
3PS	53424	POOL'S COVE	11					9		6		11	3
3PS	53426	BELLEORAM	24					26		12		22	13
3PS	53427	ST. JACQUES	6					7		3		4	3
3PS	53428	ENGLISH HARBOUR WEST	7					7		4		7	3
3PS	53429	MOSE AMBROSE	2					2				2	1
3PS	53430	BOXEY	7					7				7	3
3PS	53501	COOMBS COVE	4					4				4	3
3PS	53502	WRECK COVE	10					12		1		9	6
3PS	53507	HARBOUR BRETON	43	1		3		59		32		30	26
3PS	53510	SEAL COVE, F.B.	11					16		4		13	12
3PS	53511	SANDYVILLE	2					2				2	2
3PS	53602	HERMITAGE	23			1		29		14		15	17
3PS	53604	GAULTOIS	5					8		5		4	3
3PS	53607	CONNE RIVER	3					5		4			3
3PS	53609	MILLTOWN	1					1				1	
3PS	53610	HEAD OF BAY D'ESPOIR	1			2		1				1	
3PS	53614	GREAT JARVIS (VACATED)	1					1				1	1
3PS	53616	MCCALLUM	22					26		3		18	18
3PS	53620	FRANCOIS	15					17		3		5	10
3PS	53701	GREY RIVER	3					8					
3PS	53702	RAMEA	10					15		1		4	1
3PS	53703	BURGEO	30					36		5		4	21
3PN	53802	MUDDY HOLE (VACATED)											
3PN	53805	GRAND BRUIT	6					6		2		5	5
3PN	53807	LAPOILE	13					13		3		7	12
3PN	53810	PETITES	3					3				2	2
3PN	53811	HARBOUR LE COU	2					3		1		2	3
3PN	53901	ROSE BLANCHE (INCL DIAMOND CV)	22	1			1	28		8		10	18
3PN	53902	BURNT ISLANDS	17			1	3	17		2		10	8
3PN	53903	ISLE AUX MORTS	2					3	3			2	2
3PN	53904	FOX ROOST	2					2		1		1	1
3PN	53905	MARGAREE	4				3	4		1		2	4
3PN	53906	CHANNEL-P. AUX B.(INC MOUSE IS	10					14				5	8
3PN	53907	GRAND BAY											
3PN	53908	CAPE RAY	3			1		3				2	2
TOTAL			492	3	1	9	7	579	6	188	1	366	298

Appendix B. Part 2

NAFO	HomePort Code	HP Name	Mackerel Purse Seine	Scallop	Seal - Assistant	Seal - Professional	Snow Crab (Queen)	Squid	Swordfish	Tuna Bluefin	Tuna Other	Whelk	Total
3PS	53301	FORTUNE		17			20	4				17	124
3PS	53302	GRAND BANK		11	1		16	10				11	103
3PS	53305	GRAND BEACH					8					1	36
3PS	53308	FRENCHMANS COVE, F. BAY		3			6					3	35
3PS	53309	GARNISH		10		1	32	13				24	195
3PS	53404	ST. BERNARDS, F.B.		15			17	14				6	152
3PS	53405	JACQUES FONTAINE					2						10
3PS	53406	BAY L'ARGENT		3			3	3				3	32
3PS	53407	LITTLE BAY EAST, F.B.		4		3	3	4				3	41
3PS	53408	LITTLE HARBOUR EAST F.B.		1									9
3PS	53409	HARBOUR MILLE		5			6	2				2	50
3PS	53411	TERRENCEVILLE	1	5			4	4				1	38
3PS	53412	GRAND LA PIERRE		6			8	3				1	54
3PS	53413	ENGLISH HARBOUR EAST		13	2	1	10	4				3	78
3PS	53414	NEW HARBOUR (VACATED), F.B.		1			1	1					7
3PS	53417	ANDERSONS COVE (VACATED)		1			1	1					8
3PS	53420	RENCONTRE EAST		5			12	3					97
3PS	53424	POOL'S COVE		1			6	1					48
3PS	53426	BELLEORAM		18	2	5	24	2				6	154
3PS	53427	ST. JACQUES		1			6					4	34
3PS	53428	ENGLISH HARBOUR WEST		2			7					3	40
3PS	53429	MOSE AMBROSE					1	1					9
3PS	53430	BOXEY		1			7						32
3PS	53501	COOMBS COVE		1			3	1					20
3PS	53502	WRECK COVE		5		1	9	10					63
3PS	53507	HARBOUR BRETON	1	33	4	3	49	23				30	337
3PS	53510	SEAL COVE, F.B.		2		1	14	11				6	90
3PS	53511	SANDYVILLE		2			1	2				1	14
3PS	53602	HERMITAGE		5	1		17	22				4	148
3PS	53604	GAULTOIS					1	2					28
3PS	53607	CONNIE RIVER		4			5		1	1	1	4	31
3PS	53609	MILLTOWN											3
3PS	53610	HEAD OF BAY D'ESPOIR											5
3PS	53614	GREAT JARVIS (VACATED)					1	1				1	7
3PS	53616	MCCALLUM		3		4	4	5				1	104
3PS	53620	FRANCOIS		2			8	8		1		6	75
3PS	53701	GREY RIVER		6			2						19
3PS	53702	RAMEA		3	3		10					3	50
3PS	53703	BURGEO		1	2	2	19	26				2	148
3PN	53802	MUDDY HOLE (VACATED)				1							1
3PN	53805	GRAND BRUIT				2							26
3PN	53807	LAPOILE			5	15	6	6					80
3PN	53810	PETITES				3	1	1					15
3PN	53811	HARBOUR LE COU				3	2						16
3PN	53901	ROSE BLANCHE (INCL DIAMOND CV)			10	38	3	7					146
3PN	53902	BURNT ISLANDS			8	33	7	3				1	110
3PN	53903	ISLE AUX MORTS			3	9	1	2					27
3PN	53904	FOX ROOST			1	5							13
3PN	53905	MARGAREE			8	11	3						40
3PN	53906	CHANNEL-P. AUX B.(INC MOUSE IS			57	41	1	3					139
3PN	53907	GRAND BAY			3	2							5
3PN	53908	CAPE RAY			10	11	1						33
TOTAL			2	190	120	195	368	203	1	2	1	147	3179

Appendix C-1. Proportion of catch by gear for commercially harvested species along the South Coast during the period 2001-2005.

Gear	Species													
	Atlantic Cod	Pollock	White Hake	American Plaice	Witch Flounder	Turbot	Redfish	Lumpfish	Atlantic Herring	Iceland Scallop	Lobster	Northern Shrimp (<i>Pandalus Borealis</i>)	Snow Crab	Atlantic Halibut
Bottom Otter Trawl (stern)	17	8	9	45	38	60	83	-	-	-	-	-	-	9
Cod Pots (Experimental Gear)	<1	-	-	-	-	-	-	-	-	-	-	-	-	-
Danish Seine	1	<1	<1	5	58	1	<1	-	-	-	-	-	-	<1
Dredge (Boat)	-	-	-	<1	-	-	-	-	-	100	-	-	-	-
Beach & Bar Seine	-	-	-	-	-	-	-	-	63	-	-	-	-	-
Gill Net (Set or Fixed)	40	87	54	28	4	37	14	100	4	-	-	-	-	12
Hand Line (Baited)	3	1	<1	<1	<1	<1	<1	-	-	-	-	-	-	<1
Longline	39	5	36	22	<1	2	1	-	<1	-	-	-	-	78
Purse Seine	-	-	-	-	-	-	-	-	8	-	-	-	-	-
Midwater Trawl (side)	-	<1	-	<1	-	-	-	-	-	-	-	-	-	-
Midwater Trawl (stern)	<1	<1	<1	-	<1	<1	2	-	-	-	-	-	-	-
Shrimp Beam Trawl	-	-	-	-	-	-	-	-	-	-	-	100	-	-
Pot	<1	<1	<1	<1	-	-	<1	-	-	-	100	-	100	<1
Scottish Seine	1	-	<1	<1	<1	-	<1	-	-	-	-	-	-	<1
Trap	<1	<1	-	<1	-	-	-	-	25	-	-	-	-	<1

Appendix C-2. Proportion of catch by gear for commercially harvested species along the South Coast during the period 1996-2000.

Gear	Species													
	Atlantic Cod	Pollock	White Hake	American Plaice	Witch Flounder	Turbot	Redfish	Lumpfish	Atlantic Herring	Iceland Scallop	Lobster	Northern Shrimp (<i>Pandalus borealis</i>)	Snow Crab	Atlantic Halibut
Bottom Otter Trawl (stern)	7	6	8	31	28	58	44	-	-	-	-	-	-	7
Cod Pots (Experimental Gear)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Danish Seine	<1	<1	2	21	70	1	<1	-	-	-	-	-	-	<1
Dredge (Boat)	-	-	-	-	-	-	-	-	-	100	-	-	-	-
Beach & Bar Seine	-	-	-	-	-	-	-	-	38	-	-	-	-	-
Gill Net (Set or Fixed)	44	89	64	20	1	39	7	99	13	-	-	-	-	5
Hand Line (Baited)	2	<1	1	1	<1	<1	<1	-	<1	-	-	-	-	6
Longline	42	4	25	25	<1	1	1	-	<1	-	-	-	-	82
Purse Seine	-	-	-	-	-	-	-	-	44	-	-	-	-	-
Midwater Trawl (side)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Midwater Trawl (stern)	2	1	1	2	1	1	49	<1	-	-	-	-	-	<1
Shrimp Beam Trawl	-	-	-	-	-	-	-	-	-	-	-	86	-	-
Pot	<1	<1	-	<1	<1	-	-	-	-	-	100	-	100	-
Scottish Seine	2	-	-	<1	-	-	<1	-	-	-	-	-	-	-
Trap	<1	<1	-	<1	<1	-	<1	-	5	-	-	-	-	<1
Shrimp Trawl	<1	-	-	-	-	<1	-	-	-	-	-	16	-	-

Appendix C-3. Proportion of catch by gear for commercially harvested species along the South Coast during the period 1991-1995.

Gear	Species												
	Atlantic Cod	Pollock	White Hake	American Plaice	Witch Flounder	Turbot	Redfish	Atlantic Herring	Iceland Scallop	Lobster	Northern Shrimp (<i>Pandalus Borealis</i>)	Snow Crab	Atlantic Halibut
Bottom Otter Trawl (stern)	51	54	8	65	90	90	32	-	-	-	-	-	32
Bottom Otter Trawl (side)	-	-	-	-	-	-	-	-	-	-	-	-	-
Bottom Pair Trawl Total	-	-	-	-	-	-	-	-	-	-	-	-	-
Cod Pots (Experimental Gear)	-	-	-	-	-	-	-	-	-	-	-	-	-
Danish Seine	2	>1	4	9	>1	>1	>1	-	-	-	-	-	-
Dredge (Boat)	-	-	-	>1	-	-	-	-	100	-	-	-	-
Dredge (Hand)	-	-	-	-	-	-	-	-	-	-	-	-	-
Beach & Bar Seine	-	-	-	-	-	-	-	1	-	-	-	-	-
Gill Net (Set or Fixed)	12	35	47	6	5	7	2	42	-	-	-	>1	9
Hand Line (Baited)	2	>1	>1	-	-	-	-	-	-	-	-	-	>1
Jigger	3	>1	-	-	-	-	-	-	-	-	-	-	-
Longline	26	9	32	3	3	2	>1	-	-	-	-	-	58
Purse Seine	-	-	-	-	-	-	-	55	-	-	-	-	-
Midwater Trawl (side)	-	-	-	-	-	-	-	-	-	-	-	-	-
Midwater Trawl (stern)	2	1	8	>1	>1	>1	63	-	-	-	-	-	>1
Modified Groundfish Trawl	>1	-	-	-	-	-	3	-	-	-	-	-	-
Shrimp Beam Trawl	-	-	-	-	-	-	-	-	-	-	-	-	-
Pot	-	-	-	-	-	-	-	-	-	100	-	100	-
Scottish Seine	1	>1	>1	16	-	-	-	-	-	-	-	-	>1
Semi Pelagic Trawl	-	-	-	-	-	-	>1	-	-	-	-	-	-
Shrimp Trawl	-	-	-	>1	>1	>1	-	-	-	-	100	-	-
Trap	>1	>1	-	-	-	-	-	>1	-	-	-	-	>1
Gill Net (Drift)	-	-	-	-	-	-	-	-	-	-	-	-	-

Appendix C-4. Proportion of catch by gear for commercially harvested species along the South Coast during the period 1985-1990.

Gear	Species												
	Atlantic Cod	Pollock	White Hake	American Plaice	Witch Flounder	Turbot	Redfish	Atlantic Herring	Iceland Scallop	Lobster	Northern Shrimp (<i>Pandalus Borealis</i>)	Snow Crab	Atlantic Halibut
Bottom Otter Trawl (stern)	71	67	10	92	66	79	54	-	-	-	-	-	59
Bottom Otter Trawl (side)	1	6	2	>1	1	1	11	-	-	-	-	-	2
Danish Seine	1	>1	3	2	27	>1	>1	-	-	-	-	-	>1
Dredge (Boat)	-	-	-	-	-	-	-	-	99	-	-	-	-
Dredge (Hand)	-	-	-	-	-	-	-	-	>1	-	-	-	-
Beach & Bar Seine	-	-	-	-	-	-	-	3	-	-	-	-	-
Gill Net (Set or Fixed)	4	23	55	1	2	17	4	62	-	-	-	73	2
Hand Line (Baited)	>1	>1	>1	>1	-	>1	>1	-	-	-	-	-	>1
Jigger	>1	>1	>1	-	-	>1	>1	-	-	-	-	-	-
Longline	20	4	30	>1	>1	2	1	-	-	-	-	-	36
Purse Seine	-	-	-	-	-	-	-	35	-	-	-	-	-
Midwater Trawl (side)	-	-	>1	-	-	>1	>1	-	-	-	-	-	-
Midwater Trawl (stern)	>1	>1	>1	>1	>1	>1	29	-	-	-	-	-	>1
Modified Groundfish Trawl	-	-	>1	-	-	-	-	-	-	-	-	-	-
Pot	-	-	-	-	-	-	-	-	-	100	-	27	>1
Scottish Seine	>1	>1	>1	4	3	>1	-	-	-	-	-	-	-
Shrimp Trawl	>1	-	-	>1	>1	>1	>1	-	-	-	100	-	-
Trap	>1	>1	>1	>1	-	>1	>1	>1	-	-	-	-	>1

Appendix D-1. The proportion of catch by vessel category for commercially harvested species along the South Coast during the period 2001-2005.

Species	Vessel Category (ft.)			
	< 35	35-64	65-99	100+
Atlantic Cod	64%	22%	< 1%	14%
Pollock	69%	25%	3%	3%
White Hake	67%	26%	1%	6%
American Plaice	43%	13%	< 1%	44%
Witch Flounder	3%	59%	< 1%	37%
Turbot	35%	6%	< 1%	60%
Redfish	13%	46%	3%	38%
Atlantic Halibut	58%	36%	< 1%	6%
Lumpfish	100%	-	-	-
Atlantic Herring	35%	57%	3%	4%
Iceland Scallop	3%	97%	-	-
Lobster	99%	1%	-	-
Northern Shrimp (<i>Pandalus Borealis</i>)	37%	63%	-	-
Snow Crab	29%	71%	-	-

Appendix D-2. The proportion of catch by vessel category for commercially harvested species along the South Coast during the period 1996-2000.

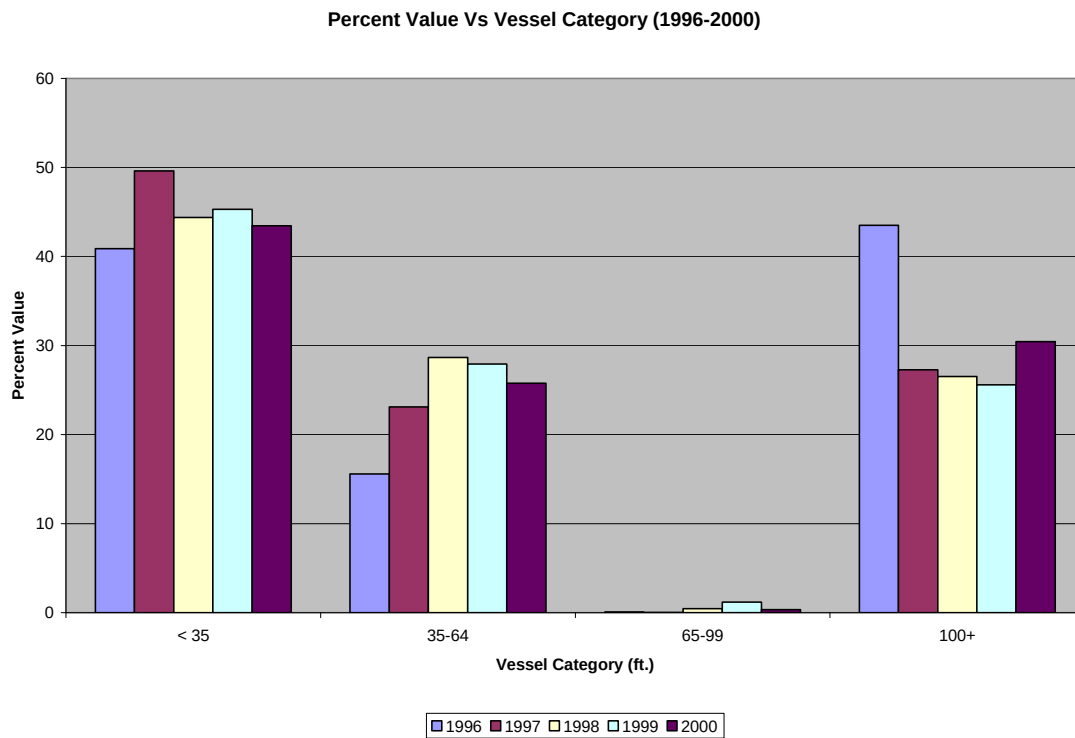
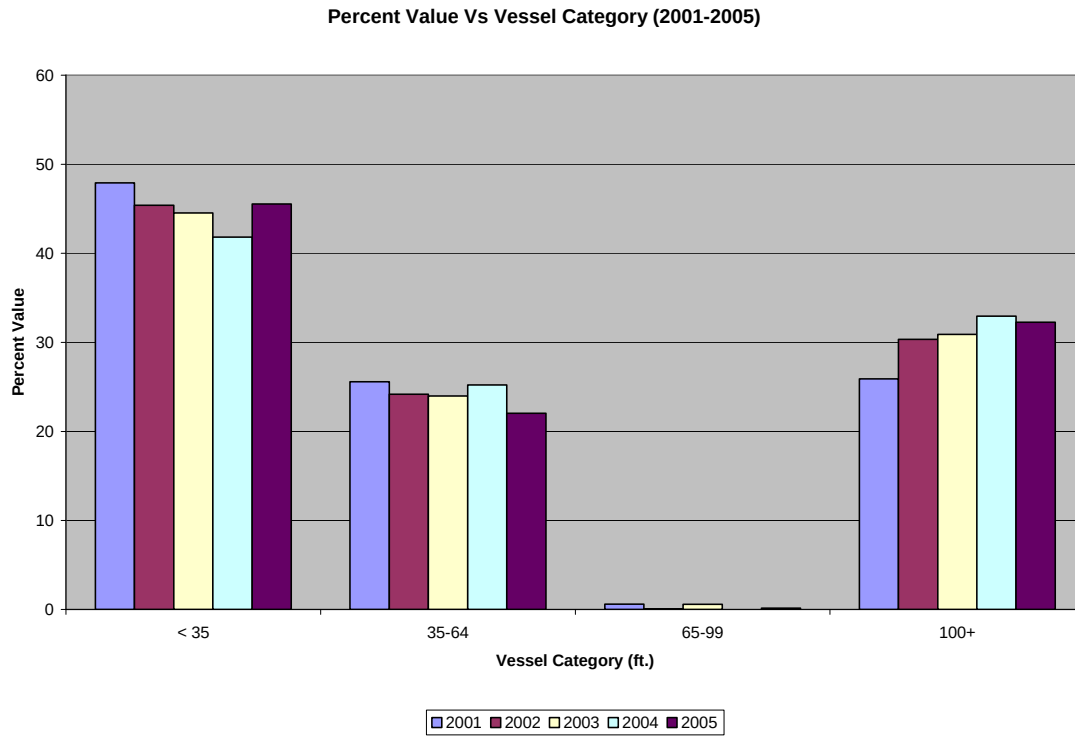
Species	Vessel Category (ft.)			
	< 35	35-64	65-99	100+
Atlantic Cod	63%	30%	< 1%	8%
Pollock	81%	19%	< 1%	1%
White Hake	78%	14%	2%	6%
American Plaice	40%	30%	< 1%	29%
Witch Flounder	1%	71%	< 1%	28%
Turbot	35%	6%	-	59%
Redfish	7%	26%	2%	64%
Atlantic Halibut	37%	62%	< 1%	2%
Lumpfish	96%	4%	-	< 1%
Atlantic Herring	39%	18%	14%	29%
Iceland Scallop	5%	84%	< 1%	11%
Lobster	99%	1%	-	-
Northern Shrimp (<i>Pandalus Borealis</i>)	41%	59%	-	-
Snow Crab	44%	55%	< 1%	< 1%

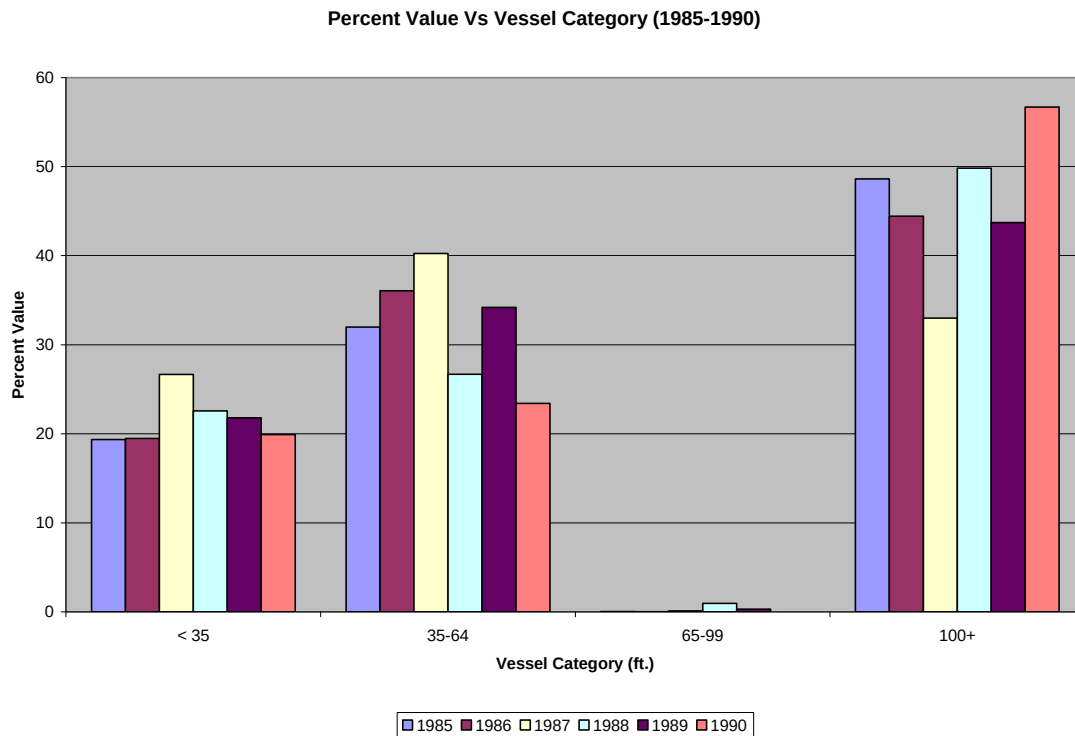
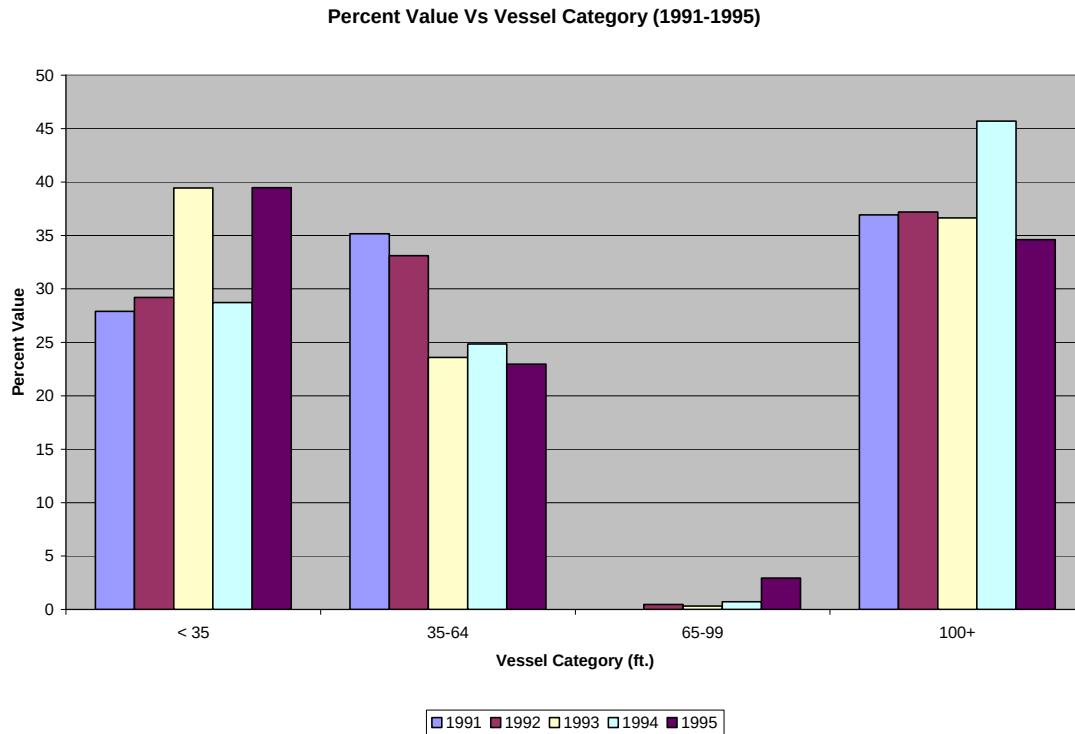
Appendix D-3. The proportion of catch by vessel category for commercially harvested species along the South Coast during the period 1991-1995.

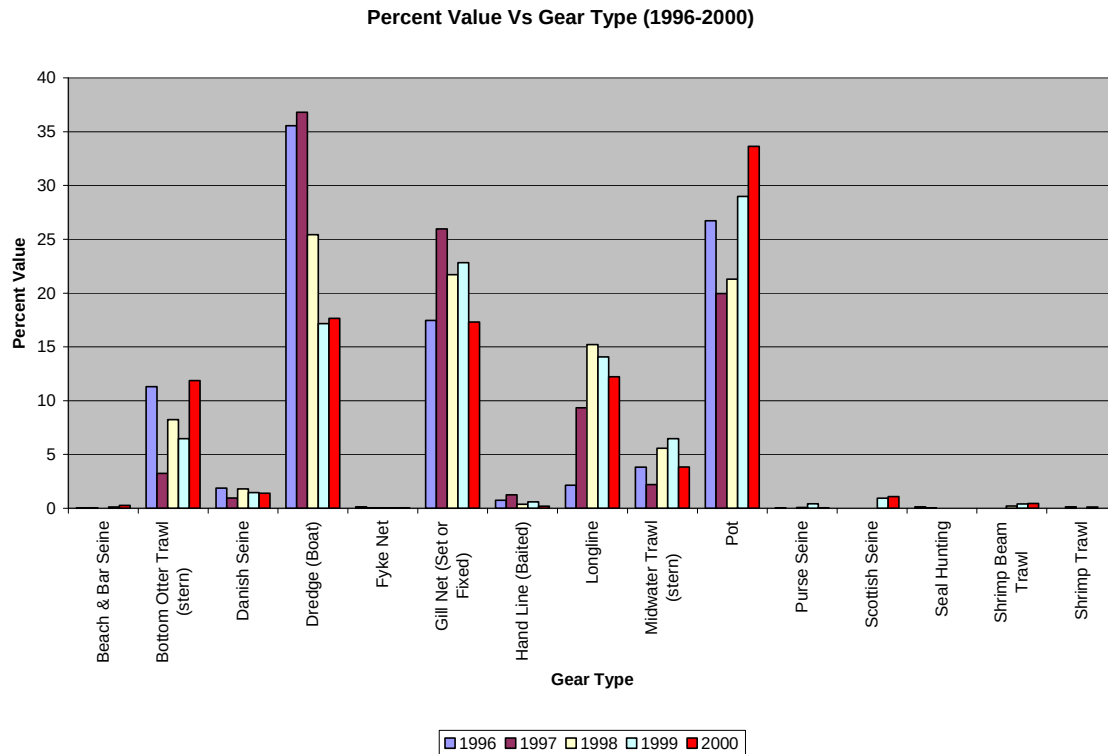
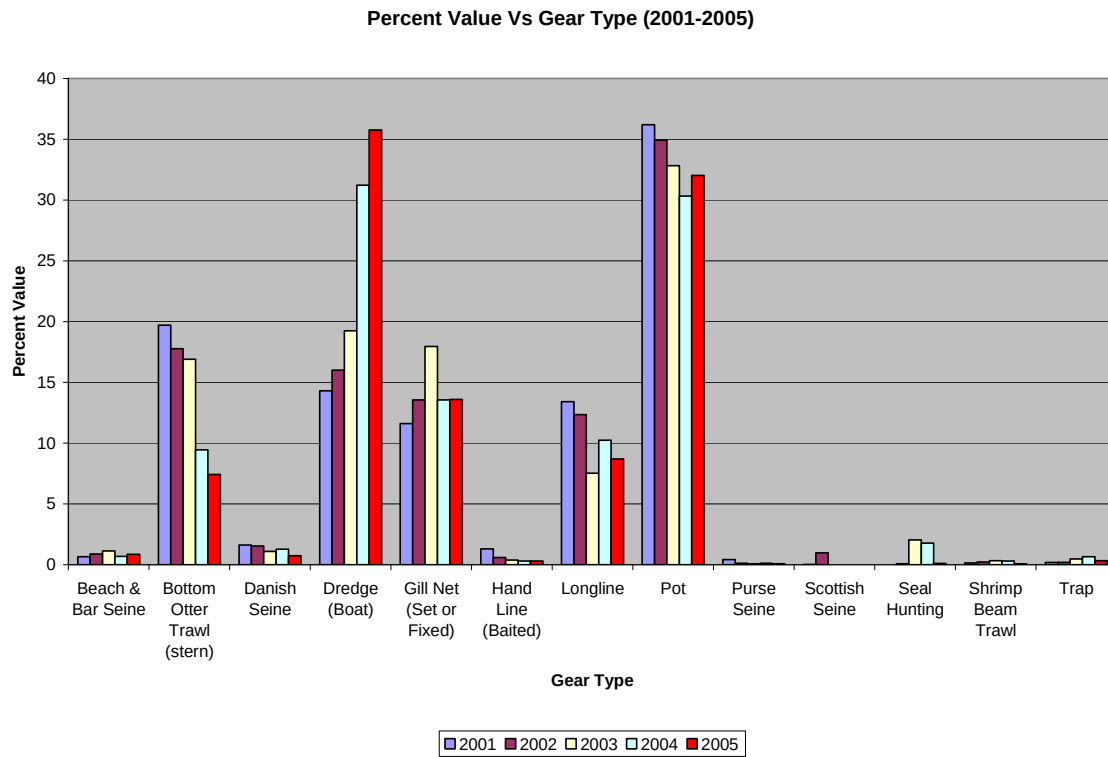
Species	Vessel Category			
	< 35	35-64	65-99	100+
Atlantic Cod	28%	34%	> 1%	38%
Pollock	34%	34%	> 1%	33%
White Hake	49%	28%	8%	15%
American Plaice	6%	9%	> 1%	85%
Witch Flounder	2%	27%	> 1%	71%
Turbot	9%	3%	-	88%
Redfish	3%	37%	> 1%	60%
Atlantic Halibut	19%	26%	7%	48%
Lumpfish	-	-	-	-
Atlantic Herring	49%	1%	8%	41%
Iceland Scallop	3%	44%	1%	52%
Lobster	99%	> 1%	-	-
Northern Shrimp (<i>Pandalus Borealis</i>)	> 1%	99%	-	-
Snow Crab	31%	69%	-	-

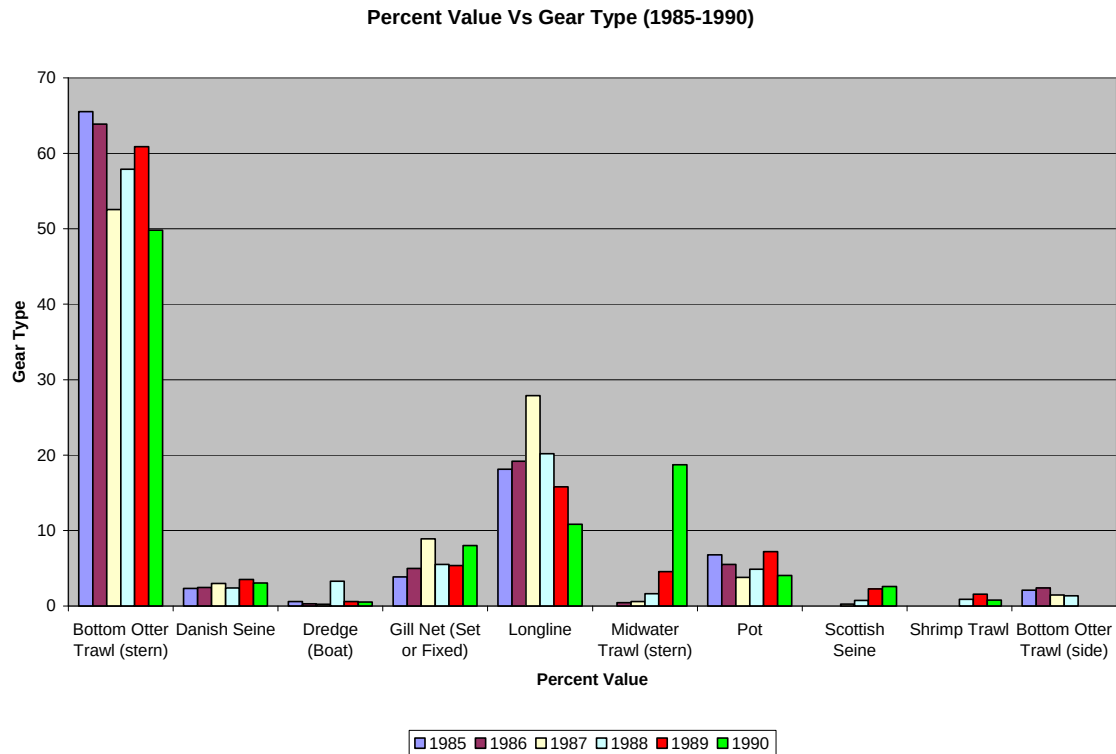
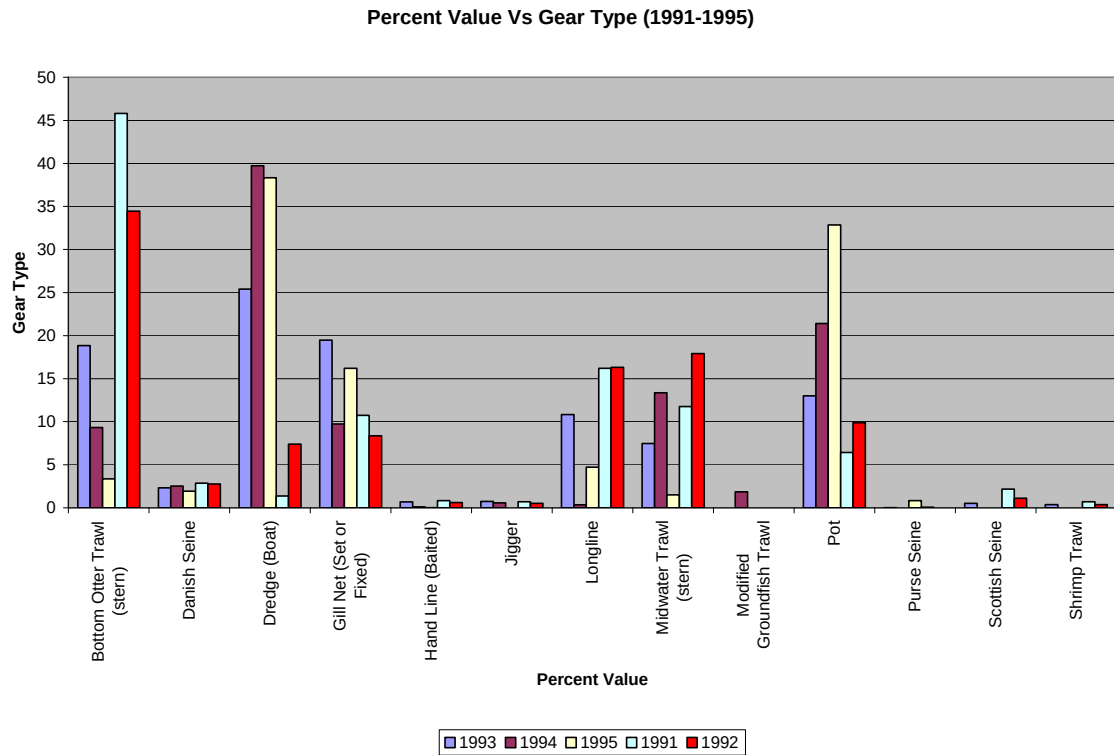
Appendix D-4. The proportion of catch by vessel category for commercially harvested species along the South Coast during the period 1985-1990.

Species	Vessel Category (ft.)			
	< 35	35-64	65-99	100+
Atlantic Cod	16%	33%	< 1%	52%
Pollock	25%	23%	< 1%	52%
White Hake	69%	20%	< 1%	10%
American Plaice	1%	3%	< 1%	96%
Witch Flounder	1%	29%	-	69%
Turbot	14%	7%	-	80%
Redfish	4%	13%	< 1%	13%
Atlantic Halibut	12%	27%	< 1%	61%
Lumpfish	-	-	-	-
Atlantic Herring	64%	1%	-	35%
Iceland Scallop	31%	18%	15%	37%
Lobster	99%	< 1%	-	-
Northern Shrimp (<i>Pandalus Borealis</i>)	< 1%	99%	-	-
Snow Crab	89%	11%	-	-

Appendix E-1. Percent value vs vessel category histograms (1996-2005).

Appendix E-2. Percent value vs vessel category histograms (1985-1995).

Appendix E-3. Percent value vs gear type histograms (1996-2005).

Appendix E-4. Percent value vs gear type histograms (1985-1995).

Appendix F-1. 2006 Tentative cruise ship schedule

PORT	SHIP	CRUISELINE	DATE	CREW	PAX
RAMEA	Akademik Ioffe	Quest Nature Tours	7/9/06	53	110
	MV Explorer	Adventure Canada	9/25/06	53	98
FRANCOIS	MV Explorer	Adventure Canada	9/25/06	53	98

Source: Cruise Association of Newfoundland and Labrador

Appendix F-2. 2005 Actual Cruise Ship Schedule

PORT	SHIP	CRUISELINE	DATE	CREW	PAX
GRAND BRUIT	MV Explorer	Adventure Canada	9/26/05	53	108
GREY RIVER	MV Explorer	Adventure Canada	9/26/05	53	108
RAMEA	Akademik Ioffe	Peregrine Adventures	7/9/05	53	50
	MV Explorer	Adventure Canada	9/26/05	53	108
	Polar Star	Polar Star Expeditions	9/29/05		95

Source: Cruise Association of Newfoundland and Labrador

Appendix G-1. Attractions & adventures along the South Coast. (Source: Newfoundland and Labrador Travel Guide 2005)

Location	Establishment
Cape Ray, Route 408	J.T. Cheeseman Provincial Park, Cape Ray Lightkeeper's House, Cape Ray Paleoeskimo Site
Channel-Port aux Basques, Route 1	Newfoundland Trailway-Trans-Canada Trail (Wreckhouse Trail), Gulf Museum, Scott's Cove/Harbour Boardwalk
Rose Blanche, Route 470	Sou'wester Boat Tours, Rose Blanche Lighthouse
Burgeo, Route 480	Sandbanks Provincial Park Hiking Trails, King George IV Ecological Reserve, Burgeo Coast Wilderness Excursions
Ramea, Route 480	Man-O-War Hill/Ramea Walking Trail
St. Alban's Route 361	Royal Canadian Legion Museum
Conne River, Route 365	Eagle Quest Adventures
Harbour Breton, Route 360	Sunny Cottage Heritage Center, Harbour Breton Lion's Club Playground
Belleoram, Route 362	John Cluett Heritage House
Bay du Nord Wilderness Reserve, Route 360	Bay du Nord Wilderness Reserve
English Harbour West, Route 363	J. Petite & Sons Museum
Garnish, Route 213	Long Ridge Hiking Trail
Frenchman's Cove, Fortune Bay, Route 213	Grande Meadows Golf Course, Frenchman's Cove Provincial Park Hiking Trail
Grand Bank, Route 220	Marine Hike, Nature Trail, George C. Harris House-Museum of Local History, Grand Bank Historic Lighthouse & Waterfront Heritage Walk, Provincial Seamen's Museum, Frazer Park
Fortune, Route 220	Heritage Fortune, Fortune Head Ecological Reserve, St. Pierre Tours/Lake's Travel

Appendix G-2. Accommodations Cape Ray –Point Crewe (Source: Newfoundland and Labrador Travel Guide 2005)

Location	Establishment
Channel-Port aux Basques, Route 1	Bye the Sea Bed & Breakfast Caribou Bed & Breakfast Heritage Home Bed & Breakfast Hotel Port aux Basques Ocean View Inn Radio Station Inn St. Christopher's Hotel
Isle aux Morts, Route 470	Lillington's Housekeeping Units
Rose Blanche, Route 470	Hook, Line & Sinker
Grand Bruit, Route 470	Blue Mountain Cabins
Burgeo, Route 480	Burgeo Haven "Inn on the Sea" Gillett's Motel
Ramea, via ferry from Route 480	Ramea Retreat The Four Winds
Head of Bay D'Espoir	Motel Bay D'Espoir Vancor Motel
English Harbor West, Route 363	Olde Oven Inn
Boxey Harbour, Route 363	Auntie's Inn Hospitality Home
Harbour Breton, Route 360	Southern Port Hotel
Fortune, Route 220	Fortune Inn Bed & Breakfast Horsebrook Trailer Park
Grand Bank, Route 220	Granny's Motor Inn My Dad's Place The Inn by the Sea
Frenchman's Cove, Fortune Bay, Route 213	Grand Fairways Resort Frenchman's Cove Provincial Park
Garnish, Route 213	Bakeapple Cottage Long Ridge Cottages