

**SOCIO-ECONOMIC OVERVIEW
OF LEADING TICKLES
AREA OF INTEREST (AOI), NEWFOUNDLAND**

EXECUTIVE SUMMARY

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This Executive Summary is based on a document developed under contract, and DFO assumes no liability for the accuracy of the information contained therein. This document is a compilation of existing social and economic information intended for use by the MPA Steering Committee in identifying information gaps, determining research priorities, and management planning.

TABLE OF CONTENTS

1.0	INTRODUCTION	3
1.1	Background Information.....	3
2.0	REGIONAL CONTEXT	4
3.0	COMMUNITY PROFILES	6
3.1	Leading Tickles	6
3.2	Glovers Harbour	7
4.0	HUMAN USE AND DEVELOPMENT.....	8
4.1	Fisheries.....	8
4.2	Aquaculture	9
4.3	Marine Flora	9
4.4	Marine Mammals.....	10
4.5	Marine Birds.....	10
4.6	Tourism and Recreation.....	10
4.7	Forestry	11
4.8	Agriculture.....	12
4.9	Mining and Mineral Processing.....	12
4.10	Offshore Oil and Gas Development	12
4.11	Manufacturing	13
5.0	MANAGEMENT ISSUES	13
5.1	Pollution.....	13
5.2	Other Marine Use Conflicts.....	14
5.3	Onshore Use Conflicts.....	14
6.0	SUMMARY AND RECOMMENDATIONS.....	14
7.0	REFERENCES	15
7.1	Personal Communications	15
7.2	Literature Cited.....	15

LIST OF FIGURES

Figure 2.1.0	Map of Regional Area.....	5
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1.0 INTRODUCTION

In March 2002, a Socio-Economic Overview of Leading Ticks Area of Interest (AOI) Newfoundland (Taylor 2002) was submitted to the Department of Fisheries and Oceans (DFO). The overview was commissioned to aid DFO and local stakeholders in decision-making regarding potential marine protected area (MPA) establishment in the Leading Ticks/Glovers Harbour area. It was written in compliance with the Terms of Reference developed to guide the collection and presentation of information relevant to describing the socio-economic characteristics for AOIs. Both primary and secondary research methods were employed in its compilation. The purpose of this executive summary is to provide a general synopsis of the overview for use by DFO, stakeholders and the Steering Committee established to guide the MPA process. The executive summary is intended to be complementary to the socio-economic overview and it is recommended the overview be referred to when additional detail is required.

1.1 Background Information

MPA History

In 1997, Canada adopted the *Oceans Act*, providing DFO and stakeholders with the tools necessary to promote sustainable development in conjunction with integrated management planning. Under the *Oceans Act*, three complementary initiatives for conservation and protection of the oceans are outlined. The MPA program is designed to conserve and protect marine areas and resources for reasons outlined in Section 35 of the *Oceans Act*.

Stakeholders such as coastal communities, environmental organizations, or other individuals or groups can approach DFO to propose that an area be considered under the MPA program. Following a preliminary review, DFO may identify the proposed location as an Area of Interest (AOI). After being identified as an AOI, DFO has the responsibility to investigate and identify the ecological, technical and socio-economic merits of designating the area as an MPA. The compilation of a socio-economic overview is a significant component of the evaluation process. These overviews can be updated periodically as new or more detailed information becomes available.

Leading Ticks AOI

In the fall of 1997, two proposing organizations, the Town of Leading Ticks and the Leading Ticks-Glovers Harbour Fisherpersons Committee, submitted a proposal to DFO to consider the marine waters surrounding Leading Ticks, approximately 50 km² as an MPA. Both groups and local fishers, have recognized the need to conserve and protect commercial and non-commercial fishery resources and their associated habitats. Species of interest include cod, blackback flounder, capelin and lobster. Areas of importance for marine birds have also been identified, as well as an offshore island of

historical importance (BAI&RN 2000). In June 2001, Leading Ticks was announced as an AOI in DFO's MPA program.

Community-Based Coastal Resource Inventory (CCRI)

A Community-based Coastal Resource Inventory (CCRI) was undertaken in the Notre Dame Bay region in 1997. The work detailed traditional fishing grounds, marine mammal resources, municipal infrastructure (e.g. sewage outfalls), coastal infrastructure (e.g. aquaculture sites, processing plants, government wharves) and cultural and tourism resources (e.g. historic sites, shipwrecks, recreation areas) related to the marine environment surrounding Leading Ticks and Glovers Harbour. The information collected was based on interviews with local residents and is therefore considered traditional ecological knowledge. As a warning to users of CCRI information, the data collected has not been verified by DFO and thus should be used with some caution.

Various sections of the overview make reference to the CCRI and readers should be aware of the potential misleading information that might be presented. However, it is the opinion of Taylor (2002) that data referenced from the CCRI for the Leading Ticks study area is an accurate reflection of the resources that exist in the area. For further information on this system contact DFO.

2.0 REGIONAL CONTEXT

Scenic Notre Dame Bay, located on the northeast coast of Newfoundland, is situated between Fogo Island and Cape St. John on the Baie Verte Peninsula (Figure 2.1.0). One of Newfoundland's most irregular shaped bays, the shoreline is deeply incised with finger-like projections and is spotted with more than 350 islands. Historically, numerous fishing settlements, established by early Europeans, dotted the coastline. Before European settlement, areas surrounding the Exploits River were home to the Beothuk, a now extinct group of natives, who hunted and fished the interior during winter months and exploited the rich marine resources along the coastline during summer months. Present day communities still rely heavily on the fishery as the mainstay of the economy, but have in the past, and continue in the future, to explore other resource and non-resource base options.

Leading Ticks and Glovers Harbour are located in the Exploits Valley Economic Zone 12 and are represented by the Exploits Valley Economic Development Corporation (EVEDC). The region is home to 26,941 persons (as of 2001) and according to the EVEDC is experiencing extensive economic growth. Major generators of income include the pulp and paper industry, service centers (e.g. business sector, port facilities, regional health care facilities), lumberyards, retail sector and small scale manufacturing (EVEDC 1997). The zone also exhibits less dependency on seasonal employment and transfer payments than many other economic zones. The EVEDC has identified both Leading Ticks and Glovers Harbour as underdeveloped areas of the Exploits Region but acknowledge that they possess vast resources, tourism potential and a rich history and

culture (Butt 2001). Over the years the corporation has worked closely with both communities to expand their economic sectors and initiate future development.

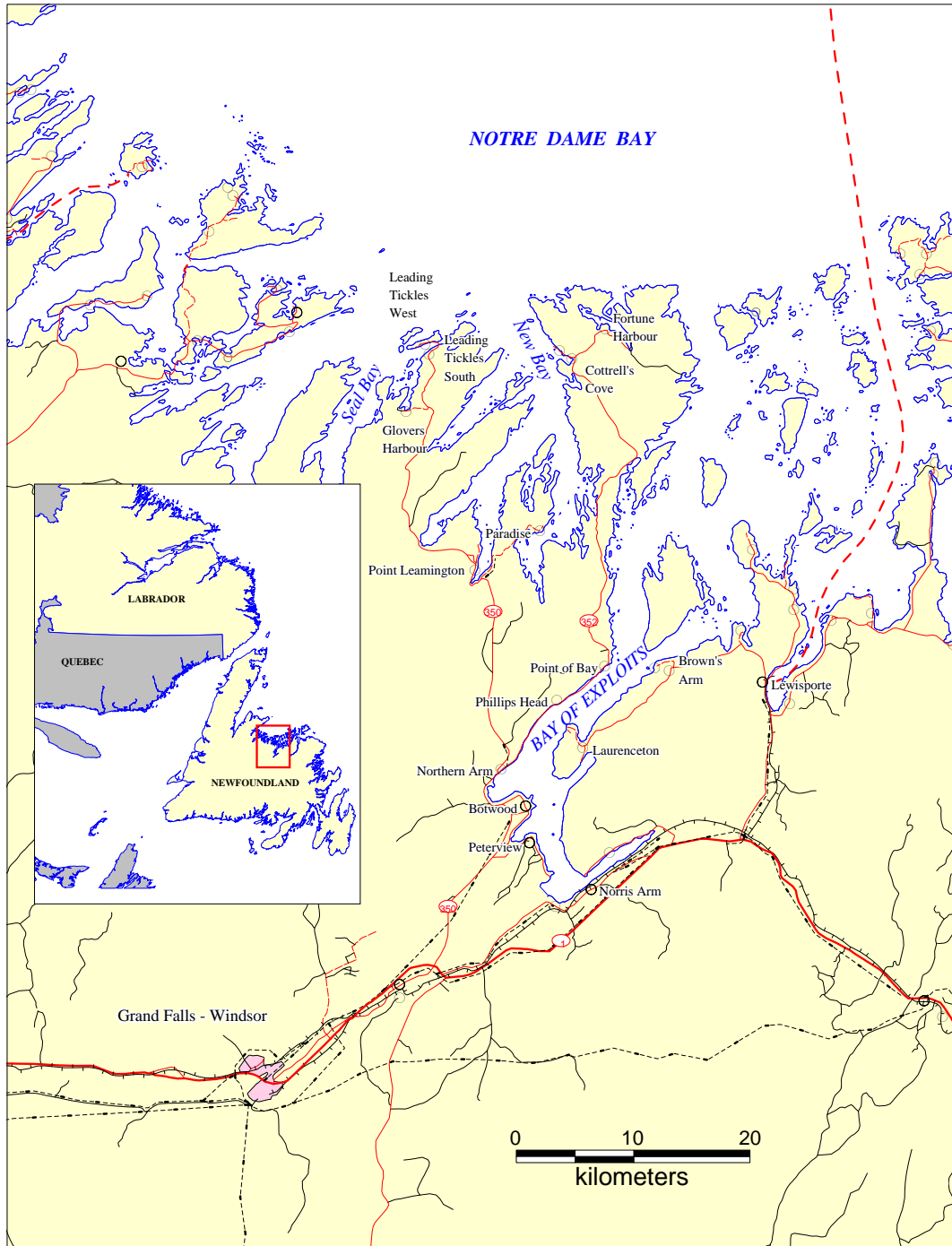


Figure 2.1.0 Map of Regional Area

The Exploits Valley benefits in terms of diversity from the presence of its regional service center in Grand Falls-Windsor. Located 456 km from St. John's and 272 km from Corner Brook, Grand Falls-Windsor is one of the major suppliers of newsprint to world centers. Here the main financial core can be found including financial institutions, insurance agencies and brokers, and investment dealers. A variety of other services, tourism attractions and recreational facilities are also available. Other regional centers include Bishop's Falls (manufacturing and former rail depot) and Botwood (major shipping port).

3.0 COMMUNITY PROFILES

3.1 Leading Ticks

The community of Leading Ticks (formerly Ladle or Lading Ticks) is located on the northeast coast of Newfoundland, in central Notre Dame Bay. By road the community is approximately 490 km from St. John's and approximately 100 km from the Town of Grand Falls-Windsor, the nearest regional service center. Established as a fishing and lumbering community in the early 1800s, the town was incorporated in 1961. The town covers a land area of 27.63 km² and has a current population of 453 individuals.

Initial settlers focused on trade in salmon and furs, and conflicts with the Beothuks were common. The population rose from 15 individuals in 1836 to 399 by 1891 (ENL 1997). At the turn of the century, many smaller fishing settlements were growing around Leading Ticks. Census returns from 1911 show three distinct settlements including Leading Ticks East and West and Cull's Island.

The fishery, being the mainstay of the local economy, employed 111 men in 1884 including some 58 men engaged in the Labrador fishery (TNH 2000). Increasingly, as men diversified into the lumber industry and seal harvesting, the Leading Ticks area became known as a commercial center with two merchants and three traders.

A decline in the fishery in the early 1900s saw many inhabitants leaving for Botwood, Grand Falls, Lewisporte and the mainland in search of employment. By the early 1970s there was an economic recovery in the fishery and the population of Leading Ticks had risen to 650 individuals by the early 1980s. Improvements to fish plant facilities and upgrades to fishing vessels soon followed. In the early 1990s, census reports still indicated most residents made their living from inshore fisheries for cod and lobster or by logging for sawmills in the area and cutting pulpwood for the mill in Grand Falls-Windsor. The remainder work in various service industries within the community and in neighboring communities.

Throughout Newfoundland culture the church has always been an important symbol in many communities. The community's denominational makeup was predominantly Church of England, until the arrival of the Salvation Army in 1935 and the Pentecostal Assemblies in the 1970s. Presently there are two churches in the community. Two

schools have been built, the first in 1891 and the second in 1901. The present elementary school is located in Leading Ticks and the high school is located in Point Lemington.

The community of Leading Ticks is located at the end of Route 350, which branches off Route 1 near Bishop's Falls. Route 350 is approximately 71 km in length and was last upgraded between 1970 and 1990. No future upgrades are scheduled, however, sections of Route 350 have been given high priority in the Provincial capital program (R. Churchill *pers. comm.*). A causeway built in 1969 links Cull's Island to the mainland portion of Newfoundland. This causeway is approximately 100 m from shore to shore and includes a bridge. Although in need of minor cosmetic work, the causeway is still in good driving condition.

The town of Leading Ticks does not presently own any land to develop. An application to the provincial Department of Government Services and Lands, Crown Lands Administration, would be required if the town would require additional land to develop.

The Town of Leading Ticks does not have access to the internet via telephone lines (with the exception of a high speed DSL). The town is currently connected to a single-phase power system, with Newfoundland and Labrador Power as the utility supplier.

There are no aboriginal land claims or settlements within Leading Ticks or the surrounding region.

3.2 Glovers Harbour

Located 12.5 km from Leading Ticks, Glovers Harbour is a basin situated at the head of the northeastern arm of Seal Bay south of Leading Ticks and is entered by a group of islands known as Thimble Tickle (TNH 2000). The unincorporated community was not connected by road until 1962 and has primarily relied on the cod fishery as the main source of employment, supplemented by seasonal work. The population was estimated at 121 individuals in 1996 (NSA 2001).

Named after former Newfoundland governor Sir John Glover, the town was settled in the late 1800s by Joseph Martin who established a fishing station and raised vegetables and livestock.

Glovers Harbor made its mark on the world when on November 2, 1878 Joseph Martin discovered a 333 kg Atlantic giant squid washed ashore. Its body measured 6.1 m long with one tentacle measured at 10.7 m in length. This element of history is recorded in the Guinness Book of World Records and is currently the community's main tourist attraction.

For the tiny community of 70 people, the small boat inshore fishery was the main source of employment, supplemented by winter work in the woods, until the late 1960s and early 1970s. Records of participation in the Labrador fishery and seal hunt, as well as the

operation of lobster factories and a commercial family-owned sawmill are also documented.

The advancement of opportunity increased within the community with the opening of the road to Route 350 in 1962. Fish products could be transported to markets in Leading Ticks and Point Leamington, businesses and services offered by larger centers were easily accessible, and many families decided on resettlement from other nearby communities. By 1971, mainly as a result of a government resettlement program, the community's population reached 145 people (ENL 1997). This influx of new residents from Lockesporte, Winter House Cove and Ward's Point increased and altered the needs and services in the community.

After individuals moved from Lockesporte, Glovers Harbour eventually became a predominantly Salvation Army community. A citadel was erected which served as a church and a school. The Anglican Church from Winter House Cove was relocated to the community and also served as a chapel and school. Both schools eventually closed and students were bussed to the schools in Leading Ticks and Point Leamington. Both denominations continue to practice in the community.

4.0 HUMAN USE AND DEVELOPMENT

4.1 Fisheries

Traditionally a predominantly salt cod trade, early fishermen in Notre Dame Bay engaged in an inshore fixed-gear fishery. In more recent years however, the fishery in Leading Ticks and Glovers Harbour has been dominated not only by cod, but also by lobster, capelin, squid and queen/snow crab.

Between 1987-1991 the total landed value of the area fishery was estimated at \$2,045,077, and between 1992-1996 and 1997-2001, approximately \$2,321,984 and \$5,751,697 respectively (however some landed values were not yet available for 2001) (A.Russell *pers. comm.*). Between these same time periods lobster represented 40.9% (\$4,137,838) of the landed value and crab represented 36.2% (\$3,660,393). Cod represented 7% (\$710,945), capelin represented 6.8% (\$689,547), and squid represented 3.6% (\$363,221) of the landed value. Catch values for crab are attributed to the changes in the Newfoundland and Labrador fishery after the announcement of the groundfish moratorium in 1992. The harvesting of queen/snow crab was not initiated until 1995 and since then, as a result of fisheries diversification and high market value and demand for crab products, this species has been harvested intensely.

The community of Leading Ticks has one fish plant owned by the Leading Ticks/Glovers Harbour Fisherpersons Committee who then lease it to an operating company. The lack of infrastructure for bait holding and cold storage and the lack of three-phase power have been issues in the recent past (Butt 2001). However, there is now a bait storage facility in operation in Leading Ticks.

An estimated 80 individuals are directly involved in catching fish and an additional 20 are employed at the local fish plant (S. Ward and S. Hannam *pers. comm.*).

Since the collapse of the cod stocks and closure of the cod fishery various departments in government have begun to look at alternative ideas in developing long-term employment for coastal communities. The development of new fisheries or enhancement of under-utilized fisheries has been one avenue where government has been trying to diversify the future fisheries of the province.

Commercial fisheries are managed by DFO in consultation with various stakeholders.

4.2 Aquaculture

In 2000, Newfoundland and Labrador produced 2,724 metric tonnes of aquaculture product with a total farm gate value of \$13,732,294 (DFA 2000). The province's primary species include blue mussels, Atlantic salmon, rainbow/steelhead trout and Atlantic cod. In 1999, the aquaculture industry employed approximately 261 people full time and 210 people part time. Four commercial aquaculture operations operate in the vicinity of Leading Tickles and include sites at Fortune Harbour, Botwood, Ward Island and Seal Bay.

Many businesses in the Exploits Valley have benefited from the aquaculture industry including restaurants and equipment suppliers. Cod grow out, blue mussel and sea urchin roe enhancement have all been identified as potential aquaculture related opportunities in the Leading Tickles area.

The provincial Department of Fisheries and Aquaculture (DFA) is the central licensing body for the industry and DFO also promote and support the development of the industry. The Canadian Coast Guard (CCG) also works with DFA to ensure safe navigation associated with aquaculture and the Newfoundland Aquaculture Industry Association (NAIA) acts as an industry advocate.

4.3 Marine Flora

Harvesting of green, brown and red "seaweeds" traditionally occurs after storm-wash activity, and common usage is for soil conditioner and feed supplement for livestock. Presently there is no active industry for seaweed harvesting in or around Leading Tickles, Glovers Harbour or Notre Dame Bay.

There has been some research regarding the development of a kelp and seaweed resource industry since there are worldwide markets for such products associated with agriculture, pharmaceuticals, food industries and industrial purposes. Surveys have not been completed in Notre Dame Bay regarding quantity of seaweed biomass available to support a commercial industry (E. Way *pers. comm.*).

4.4 Marine Mammals

Presently primary use of marine mammals is either for harvesting or tourism purposes. During summer months in Notre Dame Bay, whales are quite easily spotted and have been the focus of tourism campaigns. Seals have been the focus of harvesting for subsistence and commercial value.

Eco-tourism, or nature-based tourism is an expanding field and Notre Dame Bay may have the potential to expand its tour guide and whale watching industry.

DFO is responsible for managing marine mammals under the *Fisheries Act*. Within this *Act*, the Marine Mammals Regulations section outlines the management and control of fishing for marine mammals and related activities.

4.5 Marine Birds

Newfoundland and Labrador has one of the world's largest populations of seabirds due to the combination of productive, nutrient rich marine environments and suitable physical terrain on many coastal islands. In accordance, certain species of birds have traditionally been the focus of subsistence hunting and egg gathering, and recently aggressive attempts have been made to market seabirds as tourism assets in many coastal communities (EVEDC 2002a).

Notre Dame Bay has been the focus of seabird and waterfowl harvesting by natives, explorers, colonizers and residents over the years. Present day residents target thick billed and common murre and common eider ducks in fall and winter.

There are no recorded seabird colonies around Leading Tickles other than those noted seabird sites in the CCRI. Sculpin Island, Green Island and Mouse Island have been identified by local residents as locations where specific species nest.

Bird watching offers opportunities for eco-tourism and local tourism operators give guided tours of colonies and point out various species to visitors when on the look out for whales and icebergs. The Canadian Wildlife Service coordinates migratory bird management.

4.6 Tourism and Recreation

Tourism is an essential component of the economy of Newfoundland and Labrador. Each year expenditures, including resident and non-resident travel (auto, air and cruise) total more than \$600 million (GNL 2001a). Notre Dame Bay is well known in spring and summer months as a place where huge icebergs and spectacular whale sightings can be photographed. The breathtaking scenery, of a rugged coastline and nearby iceberg alley improve the nature experience people are looking for. A number of operators currently

offer interactive guided tours including whale, iceberg and bird watching as well as educational aquaculture tours. Outdoor recreational pursuits such as sea kayaking and scuba diving can be undertaken in the many coves and inlets of the bay.

The central Newfoundland region hosts many summer festivals such as the Exploits Valley Salmon Festival and local community days such as those held in Leading Ticks and Glovers Harbour. Leading Ticks also operates a municipal park (Ocean View Park) on the northeast side of Cull's Island with camping, BBQ pits, a playground, three sandy beaches and a hiking trail. The town also promotes two hiking trails, the East Tickle Trail and Oceanside Nature Trail. There is also an unmarked trail near Glovers Harbour called Rowsell's Trail. Glovers Harbour is known for its replica of the giant squid and associated heritage center.

The abundant wildlife within the Exploits Valley provides opportunity for both consumptive and non-consumptive tourism. Big game outfitting is an important sector of the Newfoundland and Labrador economy and draws an annual \$40-44 million (D. Chaisson *pers. comm.*). There are many such outfitters that operate within the Exploits Valley.

Leading Ticks and Glovers Harbour recognize the potential their communities have to offer visitors and the potential tourism has at creating significant seasonal employment (EVEDC 1997 and BAI&RN 2000). In recent years both communities have attempted to promote their area as a potential tourist destination (EVEDC 1997; Butt 2001, Carberry 2001; L. Rowsell *pers. comm.*; J. Preston *pers. comm.*).

4.7 Forestry

Historically, forestry has been an important economic sector in the Newfoundland and Labrador economy. Development of logging and sawmill industries in central Newfoundland have played important roles in the social and economic make-up of the area, especially for residents in and around the Grand-Falls-Windsor Paper Mill, currently operated by Abitibi-Consolidated Inc.. The current forest industry is centered on primary commodity products (e.g. newsprint and lumber). Domestic harvesting for fuel wood has also been a common practice by residents of Leading Ticks and Glovers Harbour.

The Leading Ticks study area is located in the provincial Forest Management District 8 which covers a total area of 282,800 Ha, of which approximately 212,800 Ha (75.12%) is forested and 128,000 Ha (60.2%) is considered productive forest. The Annual Allowable Cut (AAC) established by Newfoundland Forest Service for District 8 is 760,000 m³ solid (total volume of wood fibre). However, this figure is under review. A total of 122 sawmills were operating in District 8 from 1999-2000. The number of domestic fuel wood permits issued in District 8 for 2001 was 2700, for a total of 45,815 m³ solid (A. Boyde *pers. comm.*).

At the district level three plans are prepared to guide forest management and planning. Planning teams comprised of resource managers, local groups and the general public assist the district manager in preparing management and operational plans.

4.8 Agriculture

Commercial farming is not present in Leading Ticks or Glovers Harbour. Traditionally, early settlers of Glovers Harbour cleared small amounts of land for raising vegetables and livestock. Historically, nearby Point Leamington and Pleasantview were engaged in the agricultural sector.

According to an Agrifoods representative, the topography and soil quality surrounding Leading Ticks is not suitable to commercial rootcrop activities (B. Rowsell *pers. comm.*).

Presently, the closest commercial farming activity is in Point Leamington where there is a hog farm and poultry farm as well as an assortment of root crops.

4.9 Mining and Mineral Processing

Central Newfoundland has been at the forefront of exploration and development activities in commercial mining since the late 1800s (EVEDC 2002b). Due to the tremendous mineral potential in the region, there are presently in excess of 30 companies exploring areas of the Exploits Valley. Historically the Lockport mine, located near Glovers Harbour, was the site of small-scale mining operations in the late 19th century (ENL 1997). Currently, Altius Minerals Corporation has claim to the property and has been conducting a number of successful surveys in the area. At the present time Altius Minerals Corporation is concentrating on other projects and is in search of new partners for future development of the Lockport site. Company officials maintain that the site still has excellent potential and they will maintain a close working relationship with individuals in the community (R. Churchill *pers. comm.*). Any future economic spin-off from the operations of mineral development are sure to be directed towards the Leading Ticks and Glovers Harbour area.

4.10 Offshore Oil and Gas Development

Oil and gas activity in the province has recently been experiencing significant developments and opportunity, expanding wealth for Newfoundland and Labrador. However, the potential for development of this industry in the Leading Ticks area is extremely low (D. Hicks *pers. comm.*).

4.11 Manufacturing

The Exploits Valley Region is recognized as a leader across Canada in development and diversification of non resource-based manufacturing. The Exploits Manufacturing Initiative (Bishop's Falls Development Corporation) lists approximately 39 manufacturing businesses in the Exploits Valley Region (EVMI 2001).

There are currently no manufacturing activities in Leading Ticks and Glovers Harbour (J. Fancy *pers. comm.*). In Leading Ticks, the lack of three phase power has hindered opportunities for future investment in the manufacturing sector, including expansion of the local fish plant and the establishment of a tannery proposed by Superior Gloves Ltd., located in nearby Point Leamington.

5.0 MANAGEMENT ISSUES

5.1 Pollution

Globally there is considerable concern about onshore and nearshore discharges of domestic sewage and industrial effluents, their effect on the marine and coastal environments, and their users. Many communities around Newfoundland, including Leading Ticks and Glovers Harbour, lack primary and secondary sewage treatment facilities. In Leading Ticks, the community has 5 separate outfalls that discharge raw sewage into the marine environment. Key issues relate to bacterial contamination of shellfish and decreases in aesthetic value, resulting in a loss of recreational tourism benefits.

Pollution from other point sources, including designated landfill sites, agriculture, forestry, mining and minerals processing, offal and detritus from fish processing and aquaculture operations, construction, and periodic industrial activity can present a range of marine pollution problems. DFO is currently in the process of identifying MEQ concerns for the Leading Ticks study area.

Considering the population around Leading Ticks has been declining since the early 1990s, and will most likely continue to decline, future increases in domestic sewage are unlikely. Also, considering the local fish plant has seen a decline in the amount of fish processing and is not considered a core fish processor, future increases in associated fish processing wastes are unlikely. As such, an expensive sewage treatment facility is unlikely to be supported by levels of government unless new technologies become available.

5.2 Other Marine Use Conflicts

Open space competition and navigational conflicts resulting from possible collisions are important issues in marine water bodies. Surrounding the Leading Ticks study area, a number of vessels utilize the waters of Notre Dame Bay. Local fishing vessels, recreational pleasure craft, and vessels shipping paper products and importing oil products to the port at Botwood comprise the bulk of traffic.

Pollution concerns resulting from minor, major or chronic oil spills are also important issues in marine water bodies and a great deal of legislation applies to oil and gas related activities in Canadian waters. Concerns over oil spills in marine areas surrounding Leading Ticks have not been addressed or identified in any published or unpublished sources.

Aquaculture operations can also present a significant navigational hazard to vessel users. Aquaculture operations are required to meet regulations stipulated in the Aquaculture Act and *Navigable Waters Act*. However, potential exists for other users who lack knowledge of navigational rules concerning aquaculture, to damage not only aquaculture gear but also their vessels.

There are also potential conflicts between different fisheries and between fishing and aquaculture. For example, conflicts between fisheries may result from the disposal of fish waste into shallow water. This act, which provides an alternative food source, may have an impact on lobster catches.

In general conflicts are resolved using discussion, compromise, and following the provincial Sharing Coastal Resources management plan (DFA 1998; B. Tompkins *pers. comm.*).

5.3 Onshore Use Conflicts

Specific onshore resource use conflicts (e.g. forestry, mining, and agriculture) have not been identified through published or unpublished sources.

6.0 SUMMARY AND RECOMMENDATIONS

The information highlighted in the previous sections, detail the social, economic, historical and cultural elements of human activities related to the Leading Ticks AOI. With this information at hand, stakeholders can identify management and planning issues and determine how the establishment of an MPA would be affected by the presence of these human aspects. Consequently, assessing the effects of establishing an MPA in Leading Ticks/Glovers Harbour is beyond the scope of this report and further collaboration between DFO and stakeholders is needed before a socio-economic assessment can be prepared.

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