

**ECONOMIC IMPACT OF
MILITARY FLIGHT TRAINING
IN LABRADOR AND
NORTHEASTERN QUEBEC**

Final Report

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**Institute for Environmental
Monitoring and Research**

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Executive Summary

Introduction

Since 1994, military flight training activities in the Happy Valley-Goose Bay area have undergone changes through cost reduction, downsizing and alternative service delivery (ASD). This study qualitatively and quantitatively assesses the economic impacts of military flight training on the Upper Lake Melville Area, Labrador, Northeastern Québec and the province of Newfoundland and Labrador. Accordingly, this study:

- Tracks employment patterns (military and civilian) at CFB Goose Bay;
- Tracks direct expenditures of the Department of National Defense (DND) to businesses in Central Labrador;
- Estimates the indirect expenditures (i.e. income expenditures) of Base personnel, including the allied and Canadian military trainees in Central Labrador;
- Determines the induced benefits of the project, if any, in terms of economic diversification and training in Central Labrador.
- Provides a comprehensive statement describing the past and current economy of the region against which project impacts are identified and evaluated, and
- Reviews DND's mitigation measures as outlined in the 1994 EIS as the Panel's recommendations and the Government's decision

The economic effects of military flight training were assessed primarily through the use of an input/output (I/O) model. The model uses data on direct impacts (purchases of goods and services by 5 Wing Goose Bay and direct employment on the base), estimates indirect impacts (those resulting from inter-industry purchases of goods and services) and induced impacts (consumer spending of incomes earned in both direct and indirect activities). The economic impact is assessed for both Labrador and the province of Newfoundland and Labrador. This summary focuses on the economic impact. Economic indicators, sector profiles, the non-wage economy, and mitigation measures are addressed in the body of the report.

In addition, key informants knowledgeable about both the military and their community were consulted. Their information helped in assessing economic effects of military flight training on various economic indicator sectors.

Economic Data

The following data was collected at 5 Wing Goose Bay for the operation of the input/output (I/O) model. In cases where direct information was not available, estimates were made using the best possible information coupled with the most logical inferences. All amounts are in millions of 1999 dollars.

Input Data from 5 Wing Goose Bay			
Employment		Salaries	
Military (DND)	91	Military Employee	\$6.7
Civilian (public funds)	24	Civilian Employee	\$0.8
Civilian (non-public funds, full time and part time)	60	Travel Allowance	\$0.56
Serco (Alternate service provider)	312	Non-Public Fund	\$1.187
Allied Permanent	419	Serco	\$11.769
		Allied Permanent (estimated)	\$7.271
Allied Numbers and Spending		Operations, Maintenance and Construction	
Allied Transients	8,000	Serco ASD Contract ¹	\$13.8297
Allied Spending (estimated)		Construction ²	\$7.5333
RAF	\$0.497	Other contracts ³	\$22.0052
GAF	\$3.315		
RNLAF	\$0.622		

1 Excludes wages and salary component. Includes successor rights ruling.

2 Includes construction done by Serco, Defense Construction Canada and Canadian Forces Housing Agency

3 Includes aviation fuel, liquid oxygen, electricity, central heating power plant fuel, payments in lieu of taxes, janitorial and other miscellaneous.

Economic Impact

This financial and employment information is fed into the I/O model and used to generate indirect and induced impacts. Results are summarized in the following table.

Summary of Economic Impacts of 5 Wing Goose Bay, Labrador				
(all dollar amounts in \$1999 millions)				
	Direct	Indirect	Induced	Total
Labrador				
Employment (PYs)	671.5	350.4	328.1	1,350
Gross Domestic Product	\$45.29	\$4.00	\$18.61	\$67.9
Government Revenues	-	\$8.03	\$13.42	\$21.45

Province of Newfoundland and Labrador				
Employment (PYs)	671.5	491.9	564.6	1,728
Gross Domestic Product	\$45.29	\$4.80	\$39.97	\$90.06
Government Revenues	-	\$9.65	\$18.81	\$28.46

The impact varies by industry. The following table indicates which sectors are affected and by how much; a more detailed discussion is provided below.

Indirect and Induced Economic and Employment Impact on each Sector (as Percentage of Total)				
	Labrador		Province of Newfoundland and Labrador	
	Sales	Employment	Sales	Employment
Agriculture, Forestry, Fishing, Oil and Quarries	0.4%	0.7%	1.4%	0.4%
Manufacturing	0.2%	0.2%	4.3%	3.9%
Construction	14.9%	12.4%	11.7%	9.6%
Transportation, Communications, and Utilities	9.6%	7.9%	10.5%	8.3%
Wholesale and Retail Trade	9.2%	34.9%	9.3%	30.8%
Services	12.4%	44.3%	15.8%	47.0%
Salary Expenditures [†]	53.3%	-	46.9%	-
TOTAL	100%	100%	100%	100%

[†] This is a collection of 'dummy industries' used to capture expenditures made by various industries, such as salaries. The use of dummy industries is a Statistics Canada convention for input/output modeling.

Impact – Primary Industries

The Base has limited economic impact on primary industries because of the limited volume harvested within the Study Area. The exception is forestry, which produces a significant volume in comparison to the other primary industries, and sells it to supply some of the Base's ongoing needs. Additional volume is purchased from the mainland, particularly Quebec. As expected, the I/O model attributes less than 1% of both the sales and employment impact on Labrador to all primary industries.

Impact – Secondary Industries

The Base has limited economic impact on secondary industries for a similar reason: low production volume. Because of recent downsizing at the Base resulting in one-time severance

packages as well as civilians moving off Base, a short-term escalation of residential construction and renovation occurred. However, on-going construction activities on the Base have been reduced, which were previously undertaken by Base personnel. In the future, as buildings become older, they will require increased maintenance. Additionally, allies could also require new or improved facilities. The model indicates little impact of manufacturing on the economy of Labrador, and only moderately more on that of the province of Newfoundland and Labrador. By contrast, construction comprises nearly 15% of the sales impact and 12.4% of the employment impact on Labrador.

Impact – Service Industries

In the context of the entire economy, the Base has limited direct economic impact on the service industries with the exception of local companies, which have aggressively sought to service the Base or companies, which have targeted military personnel for specific goods and services. As a result of downsizing, the volume of goods and services provided to the Base by local companies has been reduced in some cases, but in other cases it has remained stable, especially for those serving the Allies. Other service industries may not depend on the Base, but it contributes significantly to their profitability. These include the taxi business, local bars some restaurants and retail operations.

Of the total economic impact of the base, almost all is felt within the service industry. Trade accounts for 34.9% of the employment impact, while other services (except transportation, communications and utilities) accounts for 44.3%.

Transportation, communications and utilities; finance, insurance; public administration; assistance to business; social infrastructure and services; medical and health services and facilities; and tourism and recreation service and facilities do not depend and, therefore, have not been significantly impacted by the down sizing of military activities in Happy Valley-Goose Bay. They benefit indirectly as a result of a generally prosperous Study Area. The real estate sector has been directly and positively affected as the town readjusts to a new housing mix. Post secondary education has also been directly and positively affected as the military outsources some of its training and extra curricular needs.

Impact on Non-wage Economies of Labrador

Information on non-wage economies is difficult to quantify because many of the individuals who engage in this activity are members of the Innu Nation, the Labrador Inuit Association or the Metis Nation. As a matter of policy, these groups either will not or are reluctant to share quantitative data on resource harvesting in Labrador until Land Claims Agreements are sorted out. Even if the information was available, it is difficult to establish the value of resource harvesting. IEMR itself is now grappling with this issue.

Many key informants noted changes to resource availability and harvesting since the last study on this subject in 1993. They include: an increase in cabins, which is thought to increase the pressure on trout fishing and animals caught by traps; year round maintenance of the Trans Labrador highway, which has increased accessibility to resource harvesting areas between Churchill Falls and Labrador City-Wabush, and the movement of several thousand George River Caribou to Lake Melville area, which has resulted in increased harvesting of these animals by individuals living in the area.

Review of EIS Recommendations

The primary focus of the 1994 EIS recommendations was on training, recruitment and promotion; cooperation with local and regional business representatives, and avoidance of non-consumptive adventure tourism. It should be noted that since 1994, DND has downsized by 25% and the Base was the first in Canada to undergo the Alternate Service Delivery Process. As a consequence, employment on the Base is approximately one third of its previous size. These significant changes have overshadowed socio-economic mitigation efforts recommended by the EIS Panel and accepted by government.

Serco, which was awarded the contract for the delivery of goods and services at 5 Wing Goose Bay, has established several training committees to identify and meet training needs of displaced employees. It has also established training programs for the development of required skills for local employees who lack the necessary qualifications. Although attempts have been made to develop training programs for specific job descriptions, to date, Serco has not put in place any special training program initiatives for aboriginal people or women. There are no special initiatives targeted at employing aboriginal people. An Equity Plan, as required by the Equity Employment Act, was forwarded to Goose Bay from Corporate headquarters, but no follow through has been undertaken to date. Both the Labrador Metis Nation and the Labrador Inuit Association acknowledge that DND and Serco employ a substantial representation of their membership. The Happy Valley Women's Centre and Status of Women Association also acknowledge that women are well represented in the Base workforce, but not in the new or more advanced positions.

Cooperation between DND, Serco and local businesses appears to be good. The Labrador North Chamber of Commerce reported that no businesses have complained to the Chamber about Serco's business practices.

Several outfitting and adventure tourism businesses agreed that DND had cooperated fully in altering flight training paths which impinged on their activities in the country. They had not heard of any other operators who had difficulties with the flight training paths.

Recommendations for Future Studies

Recommendations, which would help simplify future such studies include: undertaking such a study immediately after the release of census data; annually collecting Base data necessary for such a study and continuing the practice of conducting qualitative interviews for both industry and non-wage economy data.

Summary

Low level flying activities at 5 Wing Goose Bay accounts for 1,350 person-years of employment in Labrador, adds \$67.9 million to Gross Domestic Product (GDP), and contributes \$21.45 million to government revenues. Considering the whole of the province of Newfoundland and Labrador, 1,728 person-years of employment are created, \$90.1 million is added to GDP, and \$28.5 million is contributed to government revenues. Economic effects on Quebec are minimal other than the purchasing of some goods and services for the Base.

1.0 INTRODUCTION

This study qualitatively and quantitatively assesses the economic impacts of military flight training on the Upper Lake Melville Area, Labrador, Northeastern Québec and the province of Newfoundland and Labrador.

1.1 BACKGROUND

In January 1994, an *Environmental Impact Statement on Military Flight Activities in Labrador and Québec* was submitted to the Canadian Environmental Assessment Agency. As a result of this submission, the Environmental Assessment Panel appointed to review these activities made a number of recommendations. One recommendation was to create the Institute for Environmental Monitoring and Research (IEMR). Established in December 1995, its purpose is to investigate the impact of allied low level flight training in Labrador and Northeastern Québec conducted from the Canadian Forces Base at Goose Bay.

By necessity, much of the Institute's activity since 1995 has focussed on environmental considerations. However, the In-Town Mitigation Working Group of the Institute as well as several groups, including local town councils and development corporations, have emphasized significance of the economic impact of military flight training to the economy of Labrador and Northeastern Québec, in general, and the Upper Lake Melville area, in particular.

The In-Town Working Group recommended to the Scientific Review Committee of the Institute that a study on the economic factors associated with low-level flying be undertaken to determine the effects on the local economy. Furthermore, it recommended the following:

- the study should be a priority of the Institute;
- the study's database should be dynamic and regularly updated;
- the study should be used in future research activities of the Institute,
- the study should be exhaustive and consider both Aboriginal and non-Aboriginal peoples.

The Review Committee approved proceeding with the study in May 1998 and a Terms of Reference was prepared. This study is a result of those Terms of Reference.

Since 1994, military flight training activities in the Happy Valley-Goose Bay area have undergone changes through cost reduction, additional downsizing and alternative service delivery (ASD). These changes appear to have significant impact on the economy of Upper Lake Melville and some impact on the economy of Labrador and northeastern Québec as well as on the province of Newfoundland and Labrador. Thus, this study is of additional importance. Not only does it try to measure the economic impact of military flight training activities on the Upper Lake Melville Study Area, but it also documents the changes that have occurred since 1993 and what that has meant to the Study Area.

This study is also significant in that it depended on and received cooperation from numerous individuals representing various constituencies including the military, aboriginal groups, municipalities, business, education and community services, to name a few. Thus, it sets a benchmark for on-going collection of socio-economic data, serves as a tool for future programs

and policies as well as future research for members of the In-Town Working Group, and it establishes a need for on-going current socio-economic research.

1.2 OBJECTIVES

The objectives of this study are to:

- track employment patterns (military and civilian) at CFB Goose Bay;
- track the direct expenditures authorized by the Department of National Defense (DND) to businesses in Central Labrador;
- estimate the indirect expenditures (i.e. income expenditures) expended by Base personnel including the military trainees in Central Labrador, and
- determine the induced benefits of the project, if any, in terms of economic diversification and training in Central Labrador.

In addition, this study:

- provides a comprehensive statement describing the past and current economy of the region against which project impacts are identified and evaluated, and
- reviews DND's mitigation measures as outlined in the 1994 EIS, the Panel's recommendations

1.3 METHODOLOGY

1.3.1 Issues Identification

The first step in the economic impact assessment was to determine the range of economic data and issues to be addressed. Standard economic indicators were used as well as key issues identified through consultations with public and key informants, review of the *1994 Technical Report 14* of the *EIS: Military Flight Training* as well as numerous economic assessments conducted by DND over the last several years.

1.3.2 Baseline Description

In order to quantitatively and qualitatively assess these impacts, baseline economic information that formed the economic profile of *Technical Report 14* has been updated and changes to CFB Goose Bay as outlined in Section 1.1 have been measured against that baseline. Baseline data was obtained from the following sources:

- secondary data primarily from Statistics Canada and the Newfoundland Statistics Agency on each of the principal economic sectors, and
- primary data from interviews of more than 90 individuals representing government agencies, knowledgeable observers and industry participants. This approach not only helped to ensure

accuracy in the reporting and verification processes, but also facilitated the incorporation of valuable anecdotal information.

Wherever possible, data was collected for the period 1993-1999. However, because of differing methods for collecting economic data, not all-economic sectors can be treated the same. As well, 1991 Statistics Canada data was unavailable for the 1994 EIS report. Thus, wherever possible, that data has been included in this report.

1.3.3 Effects Assessment

The economic effects of military flight training were assessed primarily through the use of an Input/output (I/O) model. The computer-based I/O model uses data collected on direct impacts (purchases of goods and services by 5 Wing Goose Bay and direct employment on the base), and uses an algorithm to estimate indirect impacts (those resulting from inter-industry purchases of goods and services) and induced impacts (consumer spending of incomes earned in both direct and indirect activities). The economic impact is assessed for both Labrador and the Province of Newfoundland and Labrador.

The I/O model estimates the gross-output and income flows associated with a specified economic activity by tracing the transmission of a demand shock throughout the economic system. The impacts are usually estimated in terms of increases in industry output, incomes earned by resource owners and employment. A full description of the I/O process is provided in Appendix D.

In addition, key informants knowledgeable about both the military and their community were consulted. Their information helped in assessing economic effects of military flight training on various economic indicator sectors. Where possible, distinction was made between military related “effects” and military related impacts. Effects are those changes in the economic environment attributable to the military. For example, downsizing results in military personnel leaving the Upper Lake Melville Study Area. Impacts are an estimate or judgement of the value that society places on those effects. If downsizing results in community buildings becoming permanently vacant, this would be an impact because society places a value on these condition changes. If, on the other hand, these buildings are sold to an exploration or hydro company, these changes would be considered effects rather than impacts.

Any change may be positive or negative. They may arise directly from military activity, or indirectly as a result of interaction with other major activities, such as construction of the Trans-Labrador Highway. Cumulative effects arising from the interaction between military activities and other major projects such as the development of Voisey’s Bay Nickel or the Labrador Hydro Project are considered as one type of indirect effect.

1.3.4 Limitations

Given the limitations of budget and time, the approach taken was to highlight economic changes in the Study Area between 1993 and 1999.

Most of the statistical data has been obtained from Statistics Canada and relies heavily on census data collected once every five years, which precludes using interim milestones by which

to assess short-term changes in economic indicators. Where possible, interim milestones have been collected from other sources such as provincial government departments.

Economic data on non-wage economies in the Study Area is difficult to obtain within the time frame and budget of this study. Therefore, the decision was made to try and determine what changes had occurred since *Technical Report #14* had been completed for the *EIS: Military Flight Training*.

Because qualitative economic data was collected from numerous sources, consistency in level of detail between those sources was difficult to obtain and, therefore, some economic indicators are provided in more detail than in others.

1.3.5 Study Approach

Both a geographic and temporal approach was used in this study to define the impacts of military activities. For ease of reading of the report, the Upper Lake Melville Study Area is referred to as the Study Area and 5 Wing (or CFB) Goose Bay is referred to as the Base.

1.3.6 Areas Affected by Low Level Flying Activity at CFB Goose Bay

As a military installation, Canadian Forces Base Goose Bay (the Base) has a distinct area of operation. At the Base, ground facilities, staff accommodations and support services are located at Happy Valley-Goose Bay (HV-GB). In the air, flight activity occurs over the Low Level Training Area (LLTA) and the Practice Target Area (PTA). As an economic installation -- one that purchases goods and services, and pays employee wages and salaries that are, in turn, used to purchase goods and services -- its area of operation is less well defined. While many benefits accrue to the local economy, the Base generates economic effects throughout the rest of the province of Newfoundland, parts of Québec, and the rest of Canada.

The Base may also induce economic changes at each of these areas. For example, activity in the LLTA may affect resource harvesting, itself an activity that may be either a commercial or a subsistence/ cultural activity. Either way, the impact is equally important, although the latter is more difficult to measure.

Financial expenditures at the Base occur to meet operating and maintenance costs. This money can originate from outside the community, used to purchase local goods, and hence enter the local economy as a 'new' dollar. Conversely, money spent for specialized items not locally produced is considered a 'leakage' from the local economy. The impact of these expenditures is assessed in this study using an Input-Output model (described below). It tracks direct, indirect and induced Base effects in Labrador, and allows for leakage by attributing those benefits to either the rest of Newfoundland or the rest of Canada.

1.3.7 Geographic and Temporal Scope

1.3.7.1 Geographical Boundaries

The study boundaries were established to ensure that all areas economically affected by low-level flying and training activities were included. The level or intensity of the effect determined the scope of the particular assessment: where the impact of the Base is strongest, the area received the closest scrutiny, and where the impact was low to minimal, the area received less attention. This approach reduces the possibility of overlooking areas where 'trickle-down' effects might occur, despite the sometimes-distant location of dedicated LLTA zones.

Accordingly, four impact areas are identified and described in decreasing level of detail prescribed for the study. Accompanying maps indicate their location.

1. Upper Lake Melville

When a runway was first installed on a plateau in Goose Bay, the accompanying community of Happy Valley was created as a residential and commercial service centre. As the Base became established in the community, its effects spread over a slightly wider area of the upper portion of Lake Melville. Therefore, the first impact area includes the incorporated towns of Happy Valley-Goose Bay and nearby North West River. The towns of Mud Lake and Sheshatshiu, also on the banks of Upper Lake Melville, complete this first impact area.

The Statistics Canada Consolidated Subdivision 10C includes Rigolet on the coast, and a vast, sparsely populated interior section (Unorganized CSD 10C). For statistical purposes, Mud Lake and Sheshatshiu are included in this unorganized section; however, only eight people are identified as residents outside of these two communities, so the entire region (excepting Rigolet) is included. Thus, the Upper Lake Melville area encompasses nearly 73,000 square kilometres, although the economic activity is concentrated in the 500 km² surrounding HV-GB. See Map 1.

The study of effects and impacts was focused on the Upper Lake Melville Study Area, and much of the baseline data and supporting qualitative information is supplied at this level. Because the accuracy of an I/O model diminishes considerably at the sub-provincial level, the quantitative economic assessment centres on the economy of Labrador. Given the concentration of activity in and around HV-GB, and to a lesser extent around Labrador City-Wabush, one can assume that much of the impact attributed by the I/O model to Labrador rests in the Upper Lake Melville Study Area.

2. Labrador

Labrador, that portion of the province of Newfoundland attached to mainland Canada, is composed of five sub-areas: Labrador North Coast, Western Labrador, Upper Lake Melville, Eastern Labrador and Labrador Straits. Totalling 265,400 km, Labrador is a sparsely populated and remote region of the country. The LLTA overpasses portions of Labrador. See Map 2.

As mentioned above, the I/O model quantifies the economic impact of low level flying activity on Labrador.

3. Newfoundland

Canada's newest province includes both Labrador and the island of Newfoundland. The impact of Base operations on all the province of Newfoundland forms the third study area. The I/O model used in this study assesses the economic impact on the province of Newfoundland and Labrador.

4. Québec

Québec has been included as a fourth study area for two reasons: first, the LLTA passes over the north and west of Labrador and, second, there are conceivably indirect or induced Base impacts on the economy of Québec. In trying to ensure all effects are captured, and given the dispersed nature of the population in this region of Québec, a large area was deliberately selected. It comprises two administrative regions. The first is Nord-du-Québec, an enormous tract of land (840,000 km²) north of the 49th parallel with only 0.5% of the Québec population. It extends west to James Bay, east to the border with Labrador, and north to Ungava Bay. The second is Côte-Nord, a region that borders the St. Lawrence to the South, and Labrador to the North. Its extensive coastline, from Tadoussac to Natashquan, runs for 1,300 km. Sparsely populated, 90% of the 106,000 habitants live on the shore of the river. Half the population lives in either Sept-Îles or Baie Comeau; both well removed from the LLTA. For the purpose of this study, this entire region is considered the Québec Study Area. See Map 3.

The Province of Québec has divided Côte-Nord into six sub-regions, and where applicable, comments are made regarding MRC du Minganie, the sub-region that overlaps with the southern tip of the LLTA.

Quebec is not included in the I/O model because insufficient details on the economy exist to accurately reflect direct, indirect and induced impacts.

1.3.7.2 Temporal Boundaries

The statistical work contained within this report has been assembled from numerous agencies and departments. Many of the background economic indicators rely on the Statistics Canada census, done every five years.¹ The last general census, 1996, is included in all relevant areas.

¹ Labrador is Census Division 10, while the Upper Lake Melville area is in Subdivision 10C. The Québec Study Area includes Subdivisions 95 through 99 inclusive, la Haute-Côte-Nord, Manicouagan, Sept-

It generally takes up to two years for census data at the sub-regional level to be assembled and made available to the public; hence the next time much of this data will be available will be sometime in 2002 or 2003. For other areas, data is compiled annually, and in these cases the most recent available statistics are used.

Wherever possible, data has been gathered between 1993 and 1999. The last economic baseline report in the Study Area was submitted in 1994.²

1.3.8 Public Consultation

In order to ensure that statistical information was balanced, enhanced and 'brought to life', a major interview process was established with key informants. In total, more than 95 individuals were consulted, the majority of whom were from the Study Area and were knowledgeable about one or more of the key economic indicators as well as Base activities. Approximately 50% of the interviews were conducted in person.

1.4 REPORT ORGANIZATION

This document is sub-divided into sections that deal separately with the wage and non-wage sectors in the Study Area, as well as economic impact and DND mitigation measures. Within the wage sector, pertinent economic indicators as well as past and present performances in the major sectors are described and analyzed. Because the majority of effects are experienced in the Study Area, data, description and analysis is focused at this level.

Sections 2 and 3 focus on the wage economy of the Study Area, Labrador, the province of Newfoundland and Labrador and Northeastern Québec. These two sections contain both quantitative and qualitative information about the economy. To improve the flow of the document, consideration of those service industries (section 3.4) not particularly affected by low-level flying has been reserved for the Appendix. While perhaps an unorthodox organization, this ensures that all industries are completely profiled while allowing the report to focus on those most affected by Base activities.

Section 4 describes the non-wage economies of the Study Area. Its primary focus is to update information presented in the 1994 *Technical Report No. 14* of the *EIS: Military Flight Training* to help determine if any significant changes have occurred in this sector.

Section 5 is the actual economic impact assessment of the Base on Labrador and the province of Newfoundland and Labrador. This section describes the economic features of the Base using employment, salaries, transient numbers and spending, operations and maintenance and construction of the Base as key economic indicators.

Rivières - Caniapiscau, Minganie - Basse-Côte-Nord, and Nord -du-Québec, respectively.

² *EIS: Military Flight Training, Technical Report 14, Economic Baseline*

Section 6 provides qualitative information about indirect and induced impacts by sector of the Base on the Study Area and, to a lesser degree, on the rest of Labrador, the province and Northeastern Québec.

Section 7 reviews the success to date of DND's mitigation measures as outlined in the 1994 EIS as well as the panel's recommendations and the government's decision.

Section 8 lists recommendations that should be considered if this study is to be updated on a regular basis.

Section 9 contains the conclusion, which is based on the previous eight sections.

Appendix A provides supporting data from which observations and conclusions were drawn for Labrador, the province of Newfoundland and Labrador and Québec Study Areas. Appendix B is the bibliography of reports and information used to prepare this study. Appendix C profiles those service industries not covered in the main body of the report. Appendix D provides additional details on the I/O model. Appendix E provides a list of those persons contacted throughout the research component of this report. Appendix G lists the type, source, year, method and other relevant information for the data gathered. Appendix G contains the recommendations and their status of the *Environmental Impact Statement on Military Flight Activities in Labrador and Quebec* (January 1994).

1.5 MILITARY BACKGROUND

Since September 1941, the Goose Bay military base has been located at the confluence of the Churchill River and Lake Melville. The area was first used as an airbase to support the Allied Ferry Command between Europe and the United States. In the 1950s, it became a support base for the Strategic Air Command and its population mushroomed to accommodate more than 12,000 military personnel and their dependents. In the 1960s, it was used for low level flight training, primarily for the Royal Air Force (RAF), but the Canadian presence was still very much felt.

By the 1980s, technology had advanced and the advantages of Goose Bay's location changed from being a mid-point to being one removed from civilization. Low level flight training escalated with the German Air Force (GAF) arriving in 1981 followed by the Royal Netherlands Air Force (RNLAf) in 1985. In 1986, a 10-year Multinational Memorandum of Understanding was signed between the Allies and the Canadian government, allowing the allies to station aircraft and personnel at Goose Bay. Shortly afterwards, the Canadian government proposed Goose Bay as a NATO Tactical Fighter and Weapons Training Centre, resulting in significant upgrading of the Base. However, when the Cold War abruptly ended in 1990, the NATO project was cancelled. From then on, activities on the Base were reduced:

- 1991: the United States Air Force (USAF) withdrew;
- 1995: a 25% cost reduction was ordered at the Canadian Base, and

- 1997: DND issued a request for proposals for delivery of goods and services at 5 Wing Goose Bay. This contract was awarded to Serco Facilities Management Inc.

Since the 1994 *Technical Report 14* was produced, the number of DND employees has been reduced from 1,500 to 113, with Serco employing an additional 312.³

2.0 SELECTED ECONOMIC PERFORMANCE INDICATORS

2.1 DEMOGRAPHICS

2.1.1 Population

Following the expansion of economic activity, a greater military presence, and increased decentralization of government services in the 1960s, Labrador's population rose from 8,500 in 1961 to nearly 29,000 in 1971. The population has remained relatively stable at 30,000 for the past 25 years.

	1986	1991	1996
Upper Lake Melville Study Area	8,490	10,050	10,240
Labrador	28,741	30,375	29,190
Prov. Of Newfoundland	568,349	568,474	551,792
Québec Study Area	132,955	143,180	144,694

Source: Statistics Canada 1996

Happy Valley-Goose Bay is the largest population centre, with 8655 residents, followed by Labrador City with 8455. Wabush supports 2018 people, Sheshatshiu has 933, and Nain, the largest coastal community, has 996. No other community has more than 650 residents. About three-quarters of the population lives in either Upper Lake Melville or Western Labrador.

The MRC du Minganie administrative area (Québec) supports just over 12,500 residents, a decrease of 1.3% since 1991. The two largest population centres in the Québec study area are Sept-Îles and Baie Comeau, each with 25,000 people. In total, the population of the Québec study area represents less than 2% of the population of the province of Québec.

2.1.2 Aboriginal Population

The aboriginal population in the Upper Lake Melville Study Area has been rising disproportionately faster than the total population.

	1986	1991	1996
Happy Valley-Goose Bay	1,365	2,235	2,700
North West River	295	230	310
Sheshatshiu & Mud Lake	640	845	960
Total (Upper Lake Melville Study Area)	2,300	3,310	3,970

Source: Statistics Canada

The aboriginal population in the Upper Lake Melville study area rose by nearly 20% in the five years between 1991 and 1996; this percentage increases to 35% in North West River.

2.1.3 Age Distribution

The Upper Lake Melville Study Area has a greater proportion of its residents in the age groups zero to nine and 30 to 39 than does the rest of Labrador, or the Province of Newfoundland and Labrador. This is partially due to the large labour force in the Study Area, many of whom would be 30 to 39 years of age, which is also the category likely to have children under the age of nine. It is also due to the increasing aboriginal population of child bearing age.

	Province of Newfoundland		Labrador		Upper Lake Melville Study Area	
	Male	Female	Male	Female	Male	Female
0 to 9	12.7%	11.8%	15.6%	15.8%	18.1%	18.7%
10 to 19	16.5%	15.5%	18.0%	18.1%	15.9%	15.6%
20 to 29	15.1%	15.0%	17.1%	17.5%	16.7%	18.3%
30 to 39	16.2%	16.8%	16.9%	18.0%	21.3%	21.0%
40 to 49	15.9%	15.6%	16.7%	16.7%	13.9%	13.0%
50 to 59	10.2%	9.8%	9.3%	8.2%	7.2%	7.1%
60 to 69	7.1%	7.1%	4.3%	3.5%	4.4%	3.8%
70 to 79	4.7%	5.5%	1.6%	1.7%	1.5%	1.8%
80+	1.7%	3.0%	0.5%	0.6%	0.7%	0.8%
Total	272,575	279,215	14,945	14,250	5,155	5,090

⁴ The Statistics Canada question relating to aboriginal population has changed with each census. The interpretation of the question may well lead to problems comparing aboriginal population data between two consecutive censuses. For a full explanation of the nuances contained of the data collection method, see Statistics Canada dictionary and guide publications.

Source: Statistics Canada

2.1.4 Education

Only half the population of 15 to 24-year-olds in the Upper Lake Melville Study Area is attending school, well below the average for both Labrador and Newfoundland.

	Province of Newfoundland	Labrador	Upper Lake Melville Study Area
Not Attending School	35.9%	41.0%	49.4%
School Full Time	60.5%	56.0%	48.4%
School Part Time	3.6%	3.1%	3.2%

Source: Statistics Canada

With respect to maximum level of education achieved, the Study Area is within a few percentage points of the regional and provincial average for each category.

	Newfoundland	Labrador	Upper Lake Melville Area
Less than grade 9	17.5%	13.9%	13.3%
Grades 9 to 13	37.8%	36.0%	35.3%
Trades certificate or diploma	2.9%	5.2%	5.0%
Other non-university education only	23.0%	27.5%	28.8%
University	18.8%	17.3%	17.6%
With bachelor's degree or higher	8.1%	6.7%	8.1%

Source: Statistics Canada

2.2 LABOUR FORCE

2.2.1 Major Industry Divisions

Labour force activity can be subdivided into components: primary, secondary and service.⁵ Of the 14,385-strong Labrador labour force, 73% are employed in the service industry. In Upper

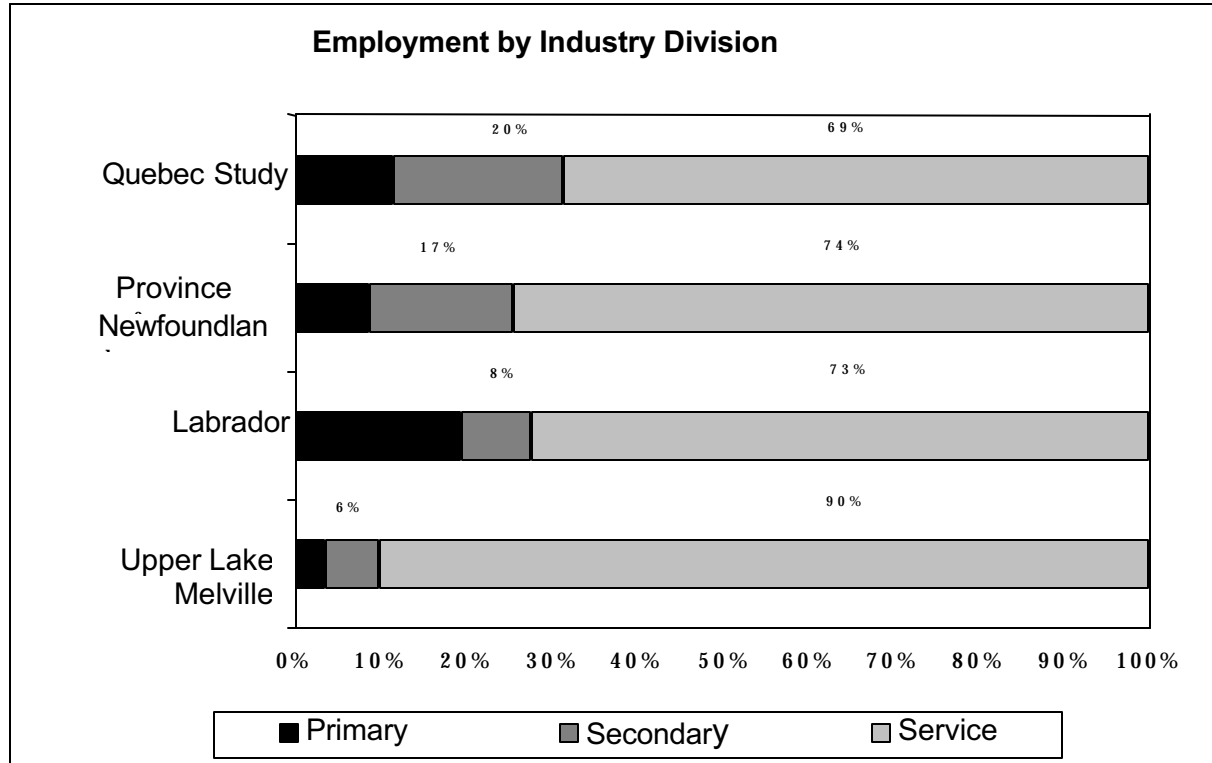
⁵ Primary: agriculture, forestry, fisheries, trapping, mines, milling and quarries.

Secondary: manufacturing and construction

Service: transportation, communication and other utilities; trade, finance, insurance and real estate; community, business and personal services; public administration; social services, accommodation, food and beverage service; and defence.

Lake Melville, the percentage rises to 90%. Nearly 30% of Labrador's entire work force is employed or seeking employment in the service sector in Upper Lake Melville. Employment in each industry division is detailed in Appendix A.

Figure 1:



Source: Statistics Canada
 Industrie et Commerce, Gouvernement du Québec

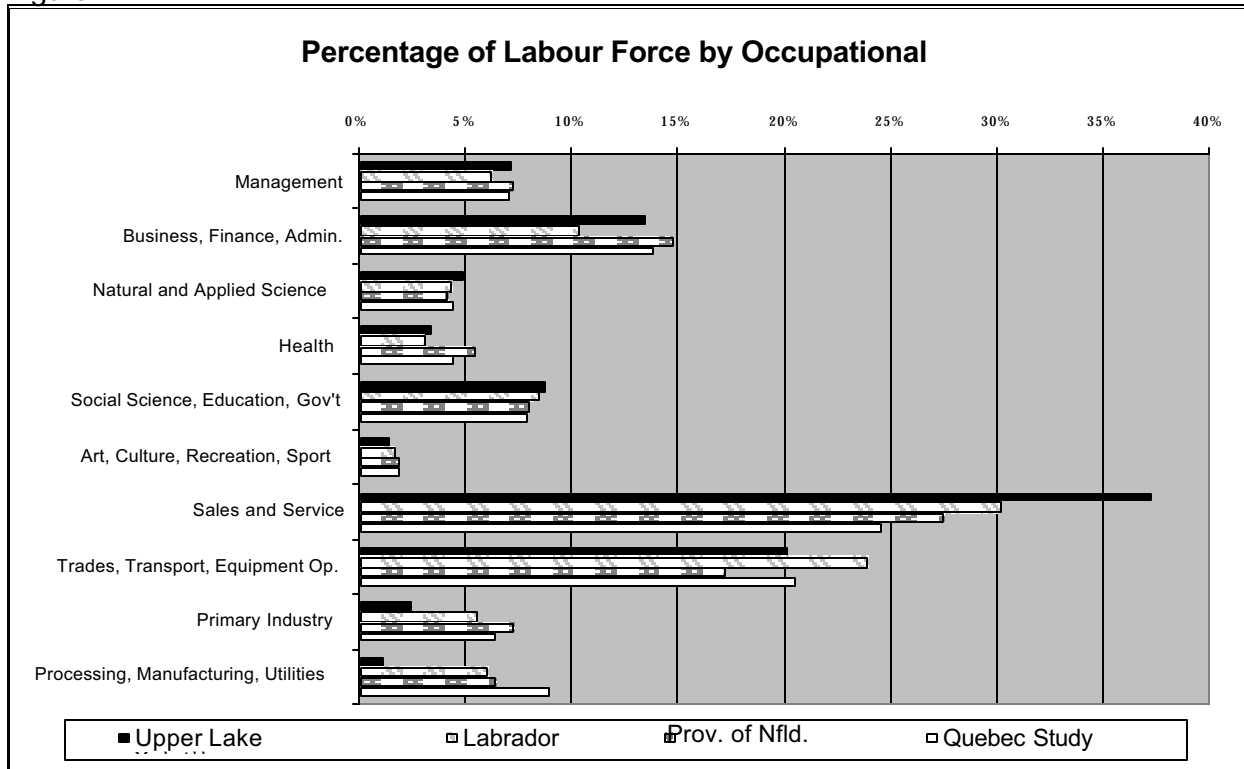
In the Labrador Straits, where the fishery is more prominent, a greater proportion of the population is employed in the primary and secondary sectors. In Western Labrador, mining dominates. In Labrador West's two population centres of Wabush and Labrador City, 38% of the labour force is employed directly in the mining and quarrying industries.

Primary industry is moderately more prominent in the Québec study area, employing 9% of the labour force in Côte Nord. In MRC du Minganie, this rises to 12%, reflecting the greater participation in forestry, mining, fishing and trapping. Services still employ the majority of the labour force.

2.2.2 Occupational Category

Most of the wage labour force in all four-study areas is represented in either the trades/transport/equipment operators, or sales and service occupational categories.

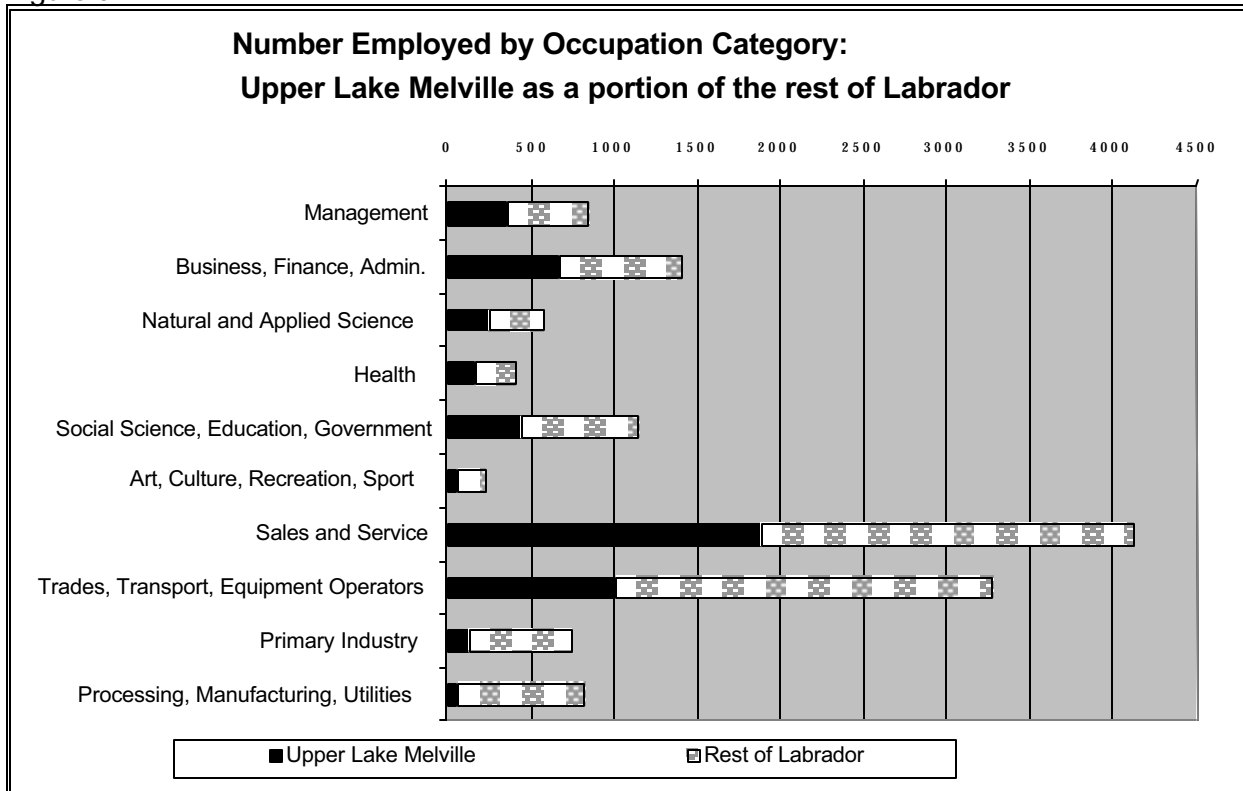
Figure 2:



Source: Statistics Canada

The Upper Lake Melville Study Area is the major employment area for a number of occupation categories. As the following Table indicates, of the 1,400 employed in business, finance and administration for all of Labrador, nearly half (or 680) are located in Upper Lake Melville Study Area. Similarly, nearly half of the sales and services employees are in the area. By contrast, only 8% of processing, manufacturing and utilities occupations are filled by Upper Lake Melville residents.

Figure 3:



Source: Statistics Canada

2.2.3 Gender and Labour Force

Males make up 57% of the Labrador labour force, and 55% of the Upper Lake Melville labour force.

	Male	Female	Total
Upper Lake Melville Area	54.7%	45.2%	5,320
Labrador	57.2%	42.8%	14,385
Province of Newfoundland	55.0%	45.0%	246,065
Québec Study Area	58.3%	41.7%	69,205

Source: Statistics Canada

2.3 PARTICIPATION RATE

As an indicator of the strength of an economy, participation rate measures the proportion of the working age population⁶ active in the labour force (working or actively seeking work). The male rate has fallen since 1980 while the female rate has risen sharply, reflecting a decline in sectors traditionally male-dominated (primary and secondary) and an increase in the more female-dominated service sector.

	1981	1986	1996
Male	80.4	74.9	73.0
Female	48.5	52.8	58.6
Total	65.2	64.2	65.5

Source: Statistics Canada

The labour participation rate in the Upper Lake Melville Study Area is the highest in Labrador, consistently higher than the average: total participation rate in 1996 is 72.4%. By comparison, the provincial rate is 56.3%. However, there is considerable disparity within the Upper Lake Melville Study Area, as the following table indicates.

	1986	1991	1996
Happy Valley-Goose Bay	72.9	79.8	75.8
North West River	56.5	61.6	59.6
Sheshatshiu & Mud Lake	37.0	42.9	43.2

Source: Statistics Canada

The participation rate of North West River, Sheshatshiu and Mud Lake are considerably lower than that within the town of Happy Valley-Goose Bay. The more populous town of Happy Valley-Goose Bay ensures that the overall average for the study area remains quite high.

Western Labrador (including Wabush and Labrador City) matched or slightly exceeded the Labrador average, while the coastal regions averaged below. The lower rates found along the coast can be partially explained by the relatively high proportion of subsistence activities (and

⁶ 15 years or older.

thus not included in the formal workforce), and the lack of wage employment opportunities in many coastal communities.

In the Québec study area, the participation rate is 64.4% (73.4% Male, 55.0% Female), and is fairly uniform across the constituent regions.

2.4 UNEMPLOYMENT RATES

The unemployment rate measures the proportion of persons in the labour force who are not employed but are actively seeking work. The distinction with participation rate lies in 'actively seeking'.⁷ The unemployment rate in Labrador has risen steadily, consistently higher than the rest of Canada. Rising unemployment in Labrador mirrors the decline of activity in the various resource sectors.

		1971	1981	1986	1996
Labrador	Male	4.0%	12.5%	20.0%	22.2%
	Female	7.5%	21.6%	31.3%	22.9%
Canada	Male	7.4%	6.5%	9.6%	10.2%
	Female	8.9%	8.7%	11.2%	10.0%

Source: Statistics Canada

The unemployment rate in the Upper Lake Melville Study Area is lower than that of the rest of Labrador. Both male and female rates are 15.8%, comparable to that found in the other major centres of Labrador City and Wabush. In many of the small population centres of Labrador, the unemployment rate is considerably higher, ranging from 22.7% in Nain to as high as 75% in Pinware on the Southeast coast.

	Male	Female	Overall
Upper Lake Melville Area	18.0	17.9	18.0
Labrador	22.2	25.3	23.5
Province of Newfoundland	26.9	22.9	25.1
Québec Study Area	17.4	14.6	16.2

Source: Statistics Canada.

⁷ Where there are few wage employment opportunities, potential workers may be sufficiently discouraged from seeking employment, depressing the participation rate. Unemployment rate is simply the percentage that are not employed.

As with the participation rate, considerable disparity exists within the Upper Lake Melville Study Area. Within Happy Valley-Goose Bay, unemployment is below the Study Area average, while unemployment reaches nearly 50% in Sheshatshiu and Mud Lake.

	1986	1991	1996
Happy Valley-Goose Bay	19.8	16.3	15.9
North West River	25.0	15.1	34.0
Sheshatshiu & Mud Lake	20.0	28.6	48.8

Source: Statistics Canada.

2.5 INCOME LEVEL

2.5.1 Composition of Total Income

Total income is a combination of employment income, government transfer payments and other.⁸

	Employment	Government	Other
Upper Lake Melville Area	82.7%	13.3%	4.0%
Labrador	83.3%	13.3%	3.3%
Province of Newfoundland	68.1%	24.6%	7.3%
Québec Study Area	79.5%	16.3%	4.3%

Source: Statistics Canada

Of every \$100 earned in Labrador, the average person earns \$83.30 from wages, \$13.30 from the government and \$3.30 from other; the numbers in both the Upper Lake Melville Study Area and the Québec study area closely match these proportions. The relative share of government income and other for the province of Newfoundland is much larger. A similar situation is found for

⁸ **Employment income:** wages, salaries, commissions, cash bonuses, tips, casual earnings, military pay and allowances.

Government Income: Old age security pension, guaranteed income supplement, spouse's allowance, Canada/ Québec pension plan benefits, Employment Insurance benefits, provincial income supplements, workers compensation, veterans pension, war veterans allowances, GST refund, disability supplements.

Other income: dividends from investments, interest from deposits, insurance interest, rent from real estate, estate or trust fund income, honoraria, employee pension plan, RRSP, RRIF, Armed Forces & government pensions, alimony, child support, scholarships, severance pay, royalties, strike pay.

the MRC du Minganie area of the Québec study area, where government provides 29.7% of total income.

The relative share of government transfers rises sharply outside the larger population centres of Happy Valley-Goose Bay, Labrador City, Wabush and Churchill Falls. There, government contribution to income can reach 30 to 40% of the total. This is partially explained by the seasonal nature of employment in more remote areas, resulting in a greater dependence on government to maintain income. There is also disparity amongst the towns and unincorporated areas of the Upper Lake Melville study area.

	Employment	Government	Other
Happy Valley-Goose Bay	84.2%	11.8%	4.0%
North West River	74.6%	19.7%	5.6%
Sheshatshiu & Mud Lake	57.8%	39.9%	2.3%

Source: Statistics Canada.

The prominence of government contribution to total income is considerably higher in North West River, Sheshatshiu and Mud Lake.

2.5.2 Average Income

The average income in the Upper Lake Melville Study Area is consistently higher than the provincial average.

	Male	Female	Average	Family
Upper Lake Melville Area	\$27,937	\$17,974	\$23,166	\$49,713
Labrador	\$31,880	\$15,339	\$24,325	\$52,972
Province of Newfoundland	\$24,602	\$14,529	\$19,710	\$42,993
Québec Study Area	\$31,458	\$16,366	\$24,546	\$51,770

Source: Statistics Canada

The income level in Upper Lake Melville is less than that in the mining-dominated west, where family income is greater than \$52,000. As might be expected, given the preponderance of male employment in the mining occupations, the female average income in Labrador City and Wabush is close to the Labrador average, while the male exceeds the provincial standard.

The variation of income levels within the Upper Lake Melville Study Area is pronounced, with income in Sheshatshiu and Mud Lake less than half that of income within the town of Happy Valley-Goose Bay.

	Male	Female	Average	Family
Happy Valley-Goose Bay	\$29,402	\$19,007	\$24,436	\$52,393
North West River	\$25,677	\$13,829	\$19,801	\$42,478
Sheshatshiu & Mud Lake	\$13,199	\$9,515	\$11,452	\$23,065

Source: Statistics Canada

2.6 TRANSFER INCOME

Various provincial and federal government programs provide supplemental income to families and individuals. Transfer income includes Employment Insurance, social assistance, Canada Pension Plan, Workers' Compensation, Old Age Security, Harmonized Sales Tax Credit, child tax benefits, and program-related monies (TAGS, The Atlantic Groundfish Strategy; NCARP, the Northern Cod Adjustment and Recovery Program).⁹ Less than 15% of all income earned by Upper Lake Melville families is categorized as transfer income.

2.6.1 Composition of Transfer Income

The two largest contributors to transfer income are Employment Insurance and Social Assistance.

	Upper Lake Melville Area	Province of Newfoundland
Employment Insurance (EI)	39.8	29.0
Social Assistance	19.7	12.9
Child Tax Benefits	10.5	5.3
TAGS/ NCARP	2.5	12.4
Other	27.5	40.4

Source: Government of Newfoundland and Labrador

The relatively small contribution of TAGS in the Upper Lake Melville Area, as compared with the rest of the province, indicates the lesser influence of the fishery in the area. The demographics of the area -- specifically, a younger age structure -- is reflected by the greater influence of Child Tax Benefits and the smaller 'Other' category, as the Old Age Security payment is less.

⁹ In 1994, Spousal Allowance and Guaranteed Income Supplement were included as part of Old Age Security, increasing both Old Age Security benefits and overall transfer contribution.

2.6.2 Provincial Social Assistance

	Upper Lake Melville Area ¹⁰			All Labrador		
	Caseload	Expenditure (\$)	\$/Case	Caseload	Expenditure (\$)	\$/Case
1992-93	5,104	2,436,049	477.28	11,790	5,219,597	442.71
1993-94	5,852	3,363,860	574.82	13,001	6,743,688	518.71
1994-95	7,114	4,077,782	573.21	15,838	8,181,731	516.59
1995-96	7,276	3,919,016	538.62	17,897	8,332,282	465.57
1996-97	7,335	3,852,404	525.21	19,184	8,660,881	451.46
1997-98	5,984	3,391,535 ¹¹	566.77	14,222	7,629,576	536.46
1998-99	5,455	3,257,788	597.21	13,234	7,646,815	577.82

Source: Government of Newfoundland and Labrador

The rising caseload and expenditure in 1992-93 through to 1994-95 can be largely attributed to the confluence of several events: the closure of the northern cod fishery, the end of NCARP, ineligibility of many fishers for TAGS, and license buyouts that end any attachment to the fishery. While these effects are more dramatic in the coastal areas, the lack of employment opportunities there has led to some in-migration to the Upper Lake Melville Area. In the estimation of the Department of Human Resources and Employment, implementation of Alternative Service Delivery at the Base has had no impact on income support caseloads, nor have there been any one significant event that has caused residents to seek income support assistance.

Over the longer term, social assistance payments in Labrador have been steadily rising. The above table begins at the fiscal year 1992-93; the following table indicates that the trend stretches further back.

1987/88	2.3
1988/89	2.5
1989/90	2.9
1990/91	3.6
1991/92	3.7

¹⁰ The Upper Lake Melville Area statistics combines the cases and budgets for Department of Human Resources and Employment offices in Happy Valley and Sheshatshiu. Mud Lake and Northwest River clients are serviced from one of these two offices. Statistics are not available by community; records are kept by district.

¹¹ Beginning with fiscal year 1997-98, Home Support Services are included with Family and Rehabilitation Services caseload expenditures; this program was transferred to the Department of Health and Community Services in April 1998.

3.0 INDUSTRIAL PROFILE

3.1 OVERVIEW

Labrador as a whole, and the Upper Lake Melville Study Area in particular, has experienced a better economy between 1993 and 1999 than the rest of the province, with the exception of the Avalon peninsula. However, on-going concern exists regarding the long-term prognosis of the region. This is a result of Labrador being dependent on resource-based activities, which makes it vulnerable to fluctuations in the price of these commodities.

The economy of the Québec Study Area, especially Nord-du-Québec, is based largely on the industrial development of natural resources, usually with investment from outside the region. This results in economic cycles, determined partly by commodity prices. This contributes to highs and lows over a relatively short period. For example, falling pulp prices, and export quotas to the U.S. cause temporary production halts.

Nord-du-Québec is regulated by the 1975 *Convention de la Baie-James et du Nord Québécois* (CBJNQ). In it, the Cree and Inuit gave up their ancestral rights in return for monetary compensation and exclusively held land (1.6% of the territory), as well as exclusive hunting and fishing rights over more than 18% of the land. Moreover, they obtained exclusive rights over certain game and fish in addition to preferential access to the rest of the territory. The Government of Québec made a commitment to promote the economic and social development of the Cree and Inuit, while guaranteeing their right to traditional means of subsistence.

Total investment in the Québec region, both public and private in 1995 was \$2.67 billion. Of this amount 46.5% was private and 51.5% was from the provincial government. 69.4% of the investment was in the tertiary sector.

3.2 PRIMARY INDUSTRIES

3.2.1 Agriculture

Labrador

Since 1993, the agriculture industry in the Study Area, as well as all of Labrador, has continued to remain underdeveloped due to limited access to technical expertise and a small agricultural base. The number of full-time farms has remained constant at about eight, including three greenhouse growers. Approximately 13 individuals are employed full-time and eight part-time or seasonally. However, since 1993, both variety and volume of products have increased to include cattle, sheep, organic vegetables and herbs as well as the traditional vegetables, eggs and flowers. Approximately 900 acres are available for agriculture in the Study Area; more than 200 acres have been cleared and slightly more than 100 acres are in production. Because of the small statistical sample, gross farm rates are unavailable. A number of part-time and hobby farms also exist as well as active community gardens.

With local farmers supplying less than 2% of the local market, demand for products far exceeds supply. However, because of the relatively high employment rate in the Study Area as well as the

cost and labour associated with crop and animal production, individuals have been reluctant to involve themselves in farming on more than a part-time basis.

In the rest of Labrador,¹² one full-time farm operates in the Straits. In addition, a green house is located in the Straits and another is located in Port Hope Simpson. Approximately five people are employed full-time and two part-time or seasonally in these three agricultural operations. Labrador West has an active community garden. In 1996, the total farm cash receipts and acreage farmed in both Labrador and the Northern Peninsula were less than \$617,000 and 2,101 acres respectively.¹³

Newfoundland and Labrador

The value of, and number of people employed in, the agriculture and agri-foods industry has grown steadily in Newfoundland and Labrador since 1993. Approximately 742 farms and 100 secondary food producers are located throughout the province employing approximately 4,000 people. The value of the total industry is approximately \$500 million with farm production contributing about \$75 million.^{14,15}

Québec

There is minimal agriculture activity in the region. Across the Quebec Study area, only 26 agricultural enterprises (five in Nord-du-Québec), employing 170 people, were noted in 1997.¹⁶

3.2.2 Forestry

Labrador is an important economic sector with potential for expansion. Lack of expansion continues to be a result of the same factors that existed in 1993: lack of road access, high transportation costs and inadequate infrastructure including docks. Lack of both markets and value added products have also contributed to an underdeveloped sector. Adding to difficulties is an incomplete planning process, which has been slowed due to a consensus required from all stakeholders.

The value and amount of forest products for the Study Area represent a significant proportion of the value and amount for all of Labrador. They are as follows:

¹² Note: Because of the small statistical sample, the Northern Peninsula and Labrador are grouped together.

¹³ Source: Department of Forest Resources and Agrifoods, Agrifoods Division, Happy Valley-Goose Bay

¹⁴ Source: Department of Forest Resources and Agrifoods, Agrifoods Division, St. John's

¹⁵ The total industry includes farm production, secondary food processing and related activities such as landscape gardeners and nurseries.

¹⁶ Source: Ministère de l'Industrie et du Commerce

	Volume (millions board feet)	Value (\$ million)	Pulpwood (m ³)	Value (\$ million)	Commercial m ³	Fuelwood *
HV-GB	3	1.2	30,000	1.5	500	15,000
Other areas of Labrador	1	0.4	5,000	0.5	-	-
Total Labrador	4	1.6	35,000	2.0	500	15,000

Source: Department of Forest Resources and Agrifoods

* does not include domestic fuelwood (non-commercial).

Local lumber products supply up to 60% of local demand for wood products (lumber) in Labrador. Pulpwood is shipped to the Island of Newfoundland. About 10,000 cords of fuelwood are used annually for domestic heating in Labrador.

Employment is about 60 people in the Study Area and 100 for all of Labrador. The industry contributes approximately \$6 million to the provincial economy.

The outlook is positive. As a result of improved transportation and a continuing wood shortage on the Island, regular wood shipments to Stephenville could commence in the near future. In addition, a chip market is developing, better utilization of the raw material is occurring and value added products could soon be realized.¹⁷

Newfoundland and Labrador

Saw milling throughout the province increased by 4.5% over the previous year to a record 115 million board feet. The primary suppliers of milled wood are eleven integrated mills, which have doubled their output over the previous decade resulting in a significant increase in employment in rural areas.

Newsprint shipments also increased by about 24% in 1999 over the previous year in which Abitibi-Consolidated experienced a prolonged strike. The value of newsprint to the province is approximately \$540 million.

¹⁷ Source: Department of Forest Resources and Agrifoods, District Ecosystem Unit, North West River

Québec

Partly due to its enormous size, considerable forest resources are found in Nord-du-Québec. In total, 16% of the forested area of Québec is in this region. In 1997, there were 84 forestry operations employing 880 people. Merchantable stands in 1995 were considered to be 1,361.4 million cubic metres, the total annual allowable cut was 11.696 million cubic metres and the harvest during 1994-1995 was 6.686 million cubic metres.¹⁸

3.2.3 Fishery

Labrador

The only commercial fishery in the Study Area was a small production operation of smelts in the early 1990s, which no longer operates. Other inland fish used for subsistence purposes include: speckled and lake trout, arctic char, northern pike and landlocked Atlantic salmon. No accurate figures can be given for the amount and value of this subsistence fishery, but additional information can be found in Section 4. An aquaculture feasibility study for the Upper Lake Melville Area has just been updated, and the possibility exists for a land-based char, salmon or steelhead operation.

The fishery of Labrador is important both as a source of wage income and as a subsistence food source. Following several years of declining catches and prices, the value of commercial fish landings has again risen.

1980	1991	1998 (preliminary)
\$12.2	\$4.6	\$13.6

Source: Department of Fisheries and Oceans

¹⁸ Source: Ministère de l'Industrie et du Commerce.

	Inshore Vessels (<35 feet)		Nearshore & Offshore Vessels (>35 feet)		Total All Vessels	
	Kg ('000s)	Value ('000s)	Kg ('000s)	Value ('000s)	Kg ('000s)	Value ('000s)
Shrimp	0	0	1,000	1,095.9	1,003	1,095.9
Queen/ Snow Crab	262	494.0	3,030	5,990.0	3,284	6,483.6
Atlantic Cod	173	258.6	1.12	1.1	174	259.8
Turbot	43	69.5	1,590	2,575.7	1,633	2,645.2
Scallops	762	1,304.6	803	1,309.4	1,565	2,614.0
Capelin	871	193.7	0	0	0,871	193.7
Other [†]	467	261.7	19.9	19.9	0,499	282.0
TOTAL	2,578	2,582.1	6,444	10,992.0	9,022	13,574.1

Source: Department of Fisheries and Oceans

* Numbers are independently rounded.

† Includes whelks, lobster, sea urchin, rock cod, redfish, halibut, American plaice, winter flounder, grenadier, seal, lumpfish roe, herring, mackerel and arctic char.

Newfoundland and Labrador

Historically, salmon and cod have been the most important stocks. By the early 1990s, landings of both had fallen to all-time lows. The coastal communities that depended on the fishery suffered and processing plants either closed or operated with reduced capacity. The low point came in 1992 as a harvesting moratorium was imposed on Northern Cod in an attempt to protect remaining stocks. The groundfish catch continued its decline.

In the years following the moratorium, the fishery changed as different species were caught, and shellfish and aquaculture became more of a focus. In Newfoundland and Labrador, the landed value of the fishing industry for 1998 was \$384 million, a 25% increase more than 1997. Total landings are also up; the 250,000 tonnes surpasses the 1997 total by 22%.¹⁹ Employment is up slightly on both the harvesting and processing side (peak period), although the number of plants continues to decline. Approximately a dozen fish plants remain in Labrador, concentrated on the southeast coast. Nearshore, midshore and offshore vessels are responsible for 81% of the fishery by value, largely because these vessels exploit the more lucrative shrimp and crab

¹⁹ Source: Department of Fisheries and Aquaculture, St. John's

stocks. Cod, once the most plentiful resources off Newfoundland and Labrador, is now worth less than 2% of the commercial catch value.

Of note is the rise in prominence of aquaculture in Newfoundland, focused primarily on steelhead, Atlantic salmon and blue mussels. There remains virtually no aquaculture activity in Labrador.²⁰

Québec

The fishery is one of the most important economic activities in Côte-Nord, valued at \$33 million in 1996; this represented 25% of all Québec landings in that year. There are an estimated 1,277 fishers working in Côte-Nord (1996).²¹ A 1997 survey of economic activity in the Quebec Study Region found 41 commercial fishing/trapping operations. Of that number, only one operation is listed in Nord-du-Québec. The fishery in Nord-du-Québec is virtually non-existent in the formal economy, worth only \$17,000 (1996).

3.2.4 Hunting and Trapping

Labrador

Hunting and trapping have remained essentially unchanged since 1993. Trapping as a commercial activity declined after the 1940s. Despite an improvement in trapping conditions in later years, pelt prices have not increased to merit an increase in activity. The decline in activity is directly related to the decreased price in furs over the past years.²²

Pine marten is the primary species trapped at an average of \$50 per pelt. Trapping of mink, wolves, beaver, otter and fox also occurs as well as a limited amount of weasel, lynx, squirrels and muskrat. Approximately 2,000 marten were trapped in 1998. The value of fur sales in 1998, as well as in the proceeding years, was about \$200,000 per year, a drop from 1991 of \$250,000. Approximately 500 trap licenses were sold in 1998, about the same number as 1993 and significantly below the 600-700 sold in 1986. However, only about 200 of these individuals are considered "serious trappers", down from 300 in 1991. The top income for a trapper in any one year still remains at about \$5,000, and the majority earns significantly below that level. Trapping is spread throughout Labrador, but the primary areas for trapping of pine marten occur near Churchill Falls and Cartwright.

Because caribou licenses are sold through vendors, it is difficult to track the number of licenses for a given area. However, for the past several years, approximately, 6,000 caribou licenses (two caribou per license) have been sold in Labrador and approximately 15,000 animals have been harvested. Between Québec and Labrador, some 36,000 caribou (approximately 5% of the

²⁰ Source: Department of Fisheries and Oceans, Ottawa

²¹ Source: Ministère de l'Industrie et du Commerce.

²² For more information on this sector, see Section 4.2.2.

George River Caribou population) are killed each year. The 3,000 animal discrepancy is a result of the aboriginal hunt for which a license is not required.

A variety of birds are killed for home consumption, primarily white partridge, black ducks and Canadian geese.²³

Newfoundland and Labrador

In 1996, Newfoundland had a 15.7% participation in hunting as a main or secondary activity. This is the highest percentage rate of any province or territory and is 10% above the Canadian average.²⁴ However, a low recruitment rate exists among provincial young hunters, a trend experienced throughout North America. Interest among non-resident hunters is increasing and the resource is stabilized.²⁵

Québec

Hunting and trapping is of greater importance to the non-wage sector. The number of hunting licenses sold province-wide to both residents and non-residents has been steadily rising. In 1987, 4,414 caribou licenses were sold to residents, and 3,686 to non-residents. Ten years later, these numbers had risen to 9,271 and 7,223, respectively. Moose license sales have dropped; 146, 673 were sold in 1987, and 126,926 were sold in 1997. Non-resident moose license sales dropped from 2,272 in 1987 to 1,815 in 1997. During the winter of 1998-99, and up to the end of 1999, 15,315 caribou had been harvested.²⁶

3.2.5 Hydro-electricity

Labrador

A stand-by thermal unit operates in Happy Valley-Goose Bay and another unit operates seasonally on the Base. In addition, 16 thermal units operate in remote communities.

There are three hydroelectric projects in Labrador: Churchill Falls, Twin Falls (mothballed), and IOCC's Menihék, which serves only Schefferville, Québec. Churchill Falls Limited Company (CF(L)Co) operates the hydro-electric generating plant and related transmission facilities in western Labrador. The rated capacity is 5428 MW and in 1996, CF(L)CO produced 28,998 GWH of power, which is sold to Hydro Québec under a 65-year lease due to expire in 2041.

Additional hydro-electricity power potential exists on the Lower Churchill at Gull Island (2300MW), Muskrat Falls (800MW) and Lobstick Lake (160 MW) for a total estimated capacity of 3,260 MW.

²³ Source: Department of Forest Resources and Agrifoods, Wildlife Division, Happy Valley-Goose Bay

²⁴ Source: Environment Canada, "The Importance of Nature to Canadians: Highlights"

²⁵ Source: Department of Forest Resources and Agrifoods, Wildlife Division

²⁶ Source: Société de la Faune et des Parcs du Québec.

Discussions have been actively underway with the province of Québec for the development of this major hydroelectric project. Estimated to cost approximately \$12 billion, this project was originally scheduled to begin in 2002 creating some 67,500 jobs or 13,200 person years during its development.²⁷ The decisions have recently been on hold. If the project proceeds economic spin-offs could include employment of local people, new business start-ups, existing business expansion, increased air and road traffic and the buying of local goods and services.

Newfoundland and Labrador

On the Island, there are 36 hydroelectric plants and 28 thermal plants, including 10 in remote communities. The island thermal plants, except those in remote communities and the Holyrood plant, operate as stand by units. Holyrood operates 9-10 months of the year. The three Hydro projects built and operating since 1993 are Star Lake (15 MW), Rattle Brook (4 MW) and Rose Blanche (6 MW).²⁸

Québec

Hydro-Québec invested \$2.7 billion in the James Bay Project, which now has 15,136 MW of installed power, representing half the hydro-electric production of Québec. Nord-du-Québec is considered to have the greatest unharnessed hydroelectric potential in Québec.

3.2.6 Mining

Labrador

Exploration

1996's high exploration value of \$76 million was fueled by the Voisey's Bay nickel discovery and 1999's low exploration value of approximately \$38 million can be attributed to the fluctuations in the stock market which directly affected the financing of Junior companies.²⁹

The significant change in mining in Labrador since 1993 is Voisey's Bay Nickel deposit. Discovered in 1995 by Archaean Resources Ltd. and located 35 km southwest of Nain, it is now owned by Inco Limited. The company forecasts the total project mineral resource at an estimated 150 million tonnes and the life of the mine for this project resource at approximately 25 years. Direct on-site employment could peak at approximately 580 during construction and about 1170 during operations,³⁰ although this figure could significantly change as the project evolves. Exploration has been on-going while awaiting resolution of differences between the

²⁷ Source: Mining Magazine, 1999

²⁸ Source: Department of Mines and Energy, Electricity Industry Development.

²⁹ See Table A 8 in Appendix A for the exploration value by year of Labrador's mining industry.

³⁰ Source: Voisey's Bay EIS, Project Description

province and Inco regarding production methods and location of a smelter. Approximate number of people involved in on-site exploration activity has been 100 with 6-12 diamond drills in operation at any one time. For 1999, that figure was approximately 45 people.³¹

Production

No production mining occurs in the Study Area, although two rock quarries, two gravel pits and 15 sand or minor gravel sites are located there. The number fluctuates each year depending on local activities.³²

Production mining activity takes place in Western Labrador. Iron Ore Company of Canada (IOCC) operates its Carol Lake Mine out of Labrador City and Wabush Mines operates its Scully Mines from the neighboring town of Wabush. The situation has not significantly changed since 1993 in terms of both mines being dependent on the fluctuations in the intentional market for steel and subsequently iron ore.

IOCC employs approximately 1600 people directly. However, due to technology advancements and the impending retirement of many long-term employees who were hired at the mine's start-up in the mid-1960's, direct employment is expected to drop to approximately 1200 in three years. IOCC also produces dolomite for its own use, but it contracts production to an outside company. 387,000 tonnes were produced in 1995.

Significant changes to these operations since 1993 include the following:

- North Limited of Australia acquired controlling interest of the company in 1997;
- IOCC's production capacity will increase from 18 to 21 million tonnes when a pellet plant comes on stream.
- A \$1.1 billion expansion is underway with a major portion of this amount directed at increasing production capability of the mining operations, concentrator and pellet plant at Labrador City and the reactivation of the pellet plant in Sept Isle. Production at the plant has been steadily increasing.

Wabush Mines is presently moving from a 6 to 7 tonne operational capacity. Its production has steadily been increasing. Wabush Mines also produces manganese, necessary for the production of steel. In 1997, 70,000 tonnes were produced.

Shabogamo Mining & Exploration Limited has a new silica mine in Labrador West, which began production in December 1999 and employs approximately 25 people. Contracted to produce 100,000 tons per year for the next ten years at \$50 per tonne, the owners are also discussing additional contracts with other buyers.

³¹ Source: Voisey's Bay Nickel Company Ltd.

³² Source: Department of Mines and Energy, St. John's

Other materials of interest in Labrador West are aggregate, nickel, gold and graphite. A large deposit of the latter exists 15 km from Labrador City, but markets remain weak for this product.

Since 1993, dimension stone has gained increased prominence in the province. In Labrador, the Labrador Inuit Development Corporation operates North Torngat Mining at Ten Mile Bay, eight km south of Nain. The company, which began mining anorthosite in 1990, now employs approximately 35 people on a seasonal basis. A second quarry, slated for start-up at Iglak Bay, is projected to employ between 25-30 by Spring 2001. Anorthosite too small to be exported in bulk is now processed in Hopedale. The total value of Dimension Stone in Labrador has remained constant for 1998 and 1999 at approximately \$2.3 million. In the province, the value has decreased slightly from \$378 million in 1998 to \$331 in 1999.

Newfoundland and Labrador

Low commodity prices and market downturns for key minerals occurred during 1999 resulting in decreasing value of export mineral commodities. Mineral expenditures on the Island increased during 1999 to \$18 million due to increased exploration of dimension stone sites, gold discoveries and an increased interest in base metal exploration. A decline in nickel exploration in Labrador reduced total exploration expenditures. However, market conditions are expected to improve during 2000.³³

Québec

Nord-du-Québec is a major producer of copper and zinc, and of all the regions, extracts the second most gold and the most nickel. Overall, Nord-du-Québec ranked third for ligneous matter extracted in 1992. This represents 15.8% of the mineral riches of Québec, with an estimated value of \$548.1 million.³⁴ The production value in Côte-Nord is considered 'confidential', but total investment in the Quebec Study area in 1996 was valued at \$666.6 million and employed 5,025. In 1997, 17 mining and pit operations were listed (four in Côte-Nord), employing 4,455.

3.3 SECONDARY INDUSTRIES

3.3.1 Manufacturing (Crafts, Dimension Stone, Other)

Labrador

Labrador's main manufacturing sectors continue to include resource-based activities (forest products and fish processing), discussed in sections 3.2.2 and 3.2.3 respectively.

The manufacturing sector of the Study Area continues to remain underdeveloped, but some growth has occurred since 1993. For example Pressure Pipe Steel Fabrication manufacturers

³³ Source: Department of Mines and Energy, St. John's

³⁴ Source: Ministère de l'Industrie et du Commerce

above-ground storage tanks and sells them to a variety of customers including utility and transportation companies as well as municipal and provincial governments. Started in 1991 to meet the anticipated need for fuel storage throughout Labrador, the company now employs ten people and continues to increase its sales each year. Other small recent manufacturing businesses include liquid oxygen as well as tent, fibreglass and food products.

The craft industry continues to remain important and integral to the Labrador economy because of the number of people involved in each community on a part-time basis. The industry is valued at approximately \$250,000 annually in the Study Area and has increased from approximately \$1.5 million annually (1994) for all of Labrador to \$2.5 million (1999) annually including full-time, part-time and hobbyist. Between 50-60% of all crafts are sold outside of the study Area, thereby bringing new money into the economy.

In the Study Area, approximately 12 crafts people are employed full-time and 30-50 on a part-time basis. 15 - 20 individuals provide producers with raw materials and are indirectly employed by the local industry. Six shops sell locally made crafts. In Labrador approximately 50-60 people work full-time in the industry and between 300-400 are part-time producers. Another 200 are considered hobbyists.

The industry has grown since 1993 as a result of significant changes including the establishment of the Labrador Craft Marketing Agency in 1996 and a craft course offered at the College of the North Atlantic, which resulted in eight of the ten graduates opening their own businesses in the Study Area. The craft industry has matured with more individuals operating year-round. Down time exists between January and March, but wholesaling as well as retailing helps in providing year-round cash flow. The industry continues its close ties with the tourism industry, both of which have demonstrated continued growth.³⁵

Newfoundland and Labrador

The value of the craft industry to the province is approximately \$25 million with approximately 500 production businesses and 2,000 full-time or significant part-time employees. The major change from 1993 is the increase in value of those who are engaged in crafts full-time or significant part-time.³⁶

Manufacturing in the province has matured considerably in the last several years. In 1998, the estimated value of manufacturing shipments from the province was a record \$1.76 billion, which has increased at an average annual rate of 5.4% since 1992. The 1999 value of manufacturing shipments from the province had already surpassed this figure by August 1999. Approximately 15,300 are employed in the sector province-wide. Primary products manufactured are fish, newsprint and iron ore.³⁷

³⁵ Source: Department of Development and Rural Renewal, Craft Division, Happy Valley-Goose Bay

³⁶ Source: Craft Council of Newfoundland and Labrador

³⁷ Source: Economic Review, 1999

Québec

Manufacturing is not particularly prominent in the Quebec Study Area. Most manufactured goods that are trucked to the Upper Lake Melville area originate from the more populous southwestern area of the province. In Nord-du-Québec, there are 21 manufacturing establishments, of which 14 have 49 or fewer employees. Only four have 200 or more employees. In Côte-Nord, there are 89 manufacturing establishments, of which 73 have 49 or fewer employees. Only six have 200 or more employees. In Minganie and Basse Côte-Nord, there are only four manufacturing establishments.

Secondary industry in total employs fewer than 10,000 in the Quebec Study Area.

1993	10,000
1994	10,600
1995	10,100
1996	9,600

3.3.2 Construction

Labrador

Conditions in the construction industry are similar to 1993. Labrador continues to lack major construction contractors and skilled labour is still imported for the larger construction jobs. However, an increase in construction has occurred since 1993 and, consequently, more local individuals are being hired.

Since 1993, 52 construction projects, valued at more than \$50,000 each, have taken place in the Study Area: 38 in Happy Valley-Goose Bay; one in North West River and 13 in Sheshatshiu. The total value of all these projects is \$92,450,500.³⁸ Since 1993, the most significant construction projects in the Study Area have been the new Melville Hospital valued at \$30,000,000 (1997-2000) and the residential home construction of 105 units valued at \$12,140,000 (1996).

The significant increase in construction value in 1996 was a result of residential construction in Happy Valley-Goose Bay.³⁹ 1997 saw the beginning of major infrastructure construction in Sheshatshiu, continued residential construction in Happy Valley-Goose Bay and the beginning of the new Melville hospital. Construction continued on these three projects during 1998 and 1999. Construction of these projects will continue in 2000 as well as construction of a new grade 7-12 high school in Happy Valley-Goose Bay. Future construction projects may include a hotel and shopping mall and a new hangar on the Base for the Italian Air Force. Major contractors in the Study Area are Glenn Corporation Ltd. and Labrador Construction Ltd.

³⁸ The total value of these projects per year can be found in Table A 9.

³⁹ For an analysis of this increase, see Section 6.3.3.

Between 1993-1999, 36 additional construction projects valued at more than \$50,000 occurred throughout the rest of Labrador. The total value of these projects was \$92,293,000.⁴⁰ Significant projects for 2000 include the upgrading of the Trans-Labrador Highway between Churchill Falls and Happy Valley-Goose Bay, construction and grading of the new road between Red Bay and Cartwright and local services for Natuashish. These projects should continue for several years. If agreements are reached for the development of either or both Voisey's Bay and the Lower Churchill within the next five years, significant growth should occur in this industry.

Road construction is having a significant impact on the Labrador economy. Major construction of the Trans-Labrador highway began in 1997. By 1998, 450 individuals were employed.⁴¹ Construction of the Red Bay to Cartwright highway began in 1999, which helped bring the total value of construction for that year in Labrador to \$25 million. In total, 755 individuals were employed directly on both the Trans-Labrador and the Red Bay to Cartwright highways from approximately May-late October, 1999. 418 were Labradorians and 327 were from the Island. Approximately the same number will be employed during 2000 and then the employment figures will decrease for the subsequent two years.

In Labrador West, H.J. O'Connell and H. & H. enterprises are the two major construction companies. Several smaller contractors operate in other parts of Labrador.

Newfoundland and Labrador

Construction throughout the province continued to increase in 1999, up approximately 15% over the previous year. In non-residential construction, an approximate 40% increase occurred, the highest growth rate of any province. Government spending on capital road construction was \$120 million, the highest value road program ever. Residential construction rose in St. John's and Grand Falls, but was down in all other communities from the previous year. According to Statistics Canada, the value of this market is approximately \$463 million.

This level of activity is anticipated to continue during 2000 with significant expenditures on school and health projects (\$70 million), roads (\$112 million) as well as capital works. The new museum and civic centre in St. John's as well as the port face-lift and increased capital works at Memorial University and Sir Wilfred Grenfell College are just a few of the planned major projects.

Growth in both residential and commercial construction is related to on-going oil and gas development as well as government and institutional construction programs.⁴²

Québec

⁴⁰ The total value of these projects per year can be found in Table A 9.

⁴¹ Source: Department of Works, Services and Transportation, St. John's

⁴² Source: Newfoundland and Labrador Construction Association and The Economic Review 99

The value of the construction industry in Nord-du-Québec is approximately \$6.5 million for residential and \$5.6 million for non-residential. In 1997, there were 38 construction establishments in Nord-du-Québec, employing 625 people, and 227 construction establishments in Côte-Nord, employing 2,145 individuals.⁴³

3.4 SERVICE INDUSTRIES

The high percentage of employment in government service and other industries reflect the Study Area's importance as a military base and as the regional administrative centre for central, northern and coastal Labrador.⁴⁴ The most significant change since 1993 is the decrease in the size of government departments and military presence and an increase in private sector service businesses.

The service industries profiled in this section include Transportation, Communications and Other Utilities; General Trade; and Defence. Other service industries have been fully profiled in Appendix C; these include Finance, Insurance and Real Estate; Public Administration; Assistance to Business; Social Infrastructure and Services; Medical and Health Services and Facilities; Educational Services and Facilities; and Tourism and Recreation Services and Facilities.

3.4.1 Transportation, Communications and Other Utilities

Labrador continues to have a limited road network and is still isolated from the rest of Canada, but the transportation distribution system is undergoing significant restructuring and improvements. The Trans-Labrador Highway is in the process of being upgraded between Churchill Falls and the Study Area. This is already resulting in ground transportation for passenger and freight becoming a cheaper and more convenient system for the distribution of goods and people to and from the Study Area as well as to the coast. As an example, perishable and bulk weight items, previously flown to the Study Area and then to the coast, can now be trucked to the Study Area at significant cost savings (in some cases as much as 80% per item). According to one user, costs for trucking have been substantially reduced from \$6,000 to \$3,500 per load on a full load⁴⁵. However, one trucking firm reported that trucking rates have only been reduced by about 15%.⁴⁶ Aside from cost, other benefits of an improved transportation system are:

- an increased variety of goods trucked into the Study Area;
- a significant reduction in travel time (e.g. Montreal to the Study Area has been reduced from approximately 33 hours to 25);

⁴³ Source: Ministère de l'Industrie et du Commerce

⁴⁴ The largest employers are listed in Table A 11

⁴⁵ Source: Woodward's Group of Companies

⁴⁶ Source: TST Overland Express

- less maintenance on both cars and trucks that regularly travel the Trans Labrador Highway, and
- loads trucked to/from Labrador West will be re-mixed for further destinations resulting in a new warehouse facility being built in Labrador West.

On-going challenges to the trucking industry include the high rate (90%) of empty back haul trailers. In addition, established trucking companies now face increased competition from other trucking companies moving into the area as a result of road improvements.

Other changes to the Labrador transportation system include construction of a road network connecting the Labrador Straits (through Red Bay) to the South coast of Labrador (Cartwright) and a recently privatized ferry system, which operates between the Island and Labrador. Eventually, movement of goods and people from the Island to Labrador will come across the Straits to Cartwright and hence by boat to the north Labrador coast or to the Study Area. A future possibility includes marine and possibly air corridors between Newfoundland, Labrador and the new territory of Nunavut at significant cost savings to the existing system.

With improvements to the transportation routes to Labrador, significant impacts will be felt in other industries. Lack of a cost effective year-round road transportation system has prevented the development of the forest industry and could impede the development of the burgeoning mining industry. In addition, as the circle route (through Nova Scotia and Newfoundland to Labrador and Québec) becomes a reality and the transportation corridor to Nunavut becomes established, Labrador has the potential of becoming more than an end destination for the movement of goods and goods. Finally, improved transportation increases the tourism potential to and from 'the last frontier'.

Both passenger and freight are down slightly to and from the Study Area (1996: 8,506 passengers and 26,253 metric tons; 1999: approximately 7,000 passengers and 8,900 metric tons),⁴⁷ as a result of improved road service. However, as was the case in 1993, transport of bulky items to the Labrador coast is still more economical and efficient using coastal freighters rather than air transport.

Since 1993, air transport has also changed, but primarily as a result of changing ownership rather than patterns. Both civilian and military aircraft use the airport located at CFB Goose Bay. Since April 1988, DND has had ownership and responsibility for operations and air navigation services. However, in October 1998, responsibility for civilian operations was transferred from Transport Canada to the Goose Bay Airport Corporation. The Corporation is a not-for-profit organization representing local businesses and the town.

The region is served by four commercial airlines, which provide scheduled, charter and cargo flights to the province as well as Québec. In addition, two private aircraft companies, two helicopter companies and a flight training school operate from the airport. Due to financial difficulties experienced by Canadian Airlines, it no longer operates out of the airport. However, the local carrier, Labrador Airways, has picked up some of the services. Other changes since

⁴⁷ Source: Marine Atlantic and Woodward Group of Companies

1993 include an increase in the number of private aircraft using the airport and a decrease in size of planes used by the regional and national carriers.

DND administers the low-level military flight training program through a 10-year Multinational Memorandum of Understanding (MMOU), which was signed in the fall of 1996 with the Royal Air Force (Britain); German Air Force Tactical Training Command Canada and the Royal Netherlands Air Force. The Italian Air Force signed the MMOU in 1999.

The volume of air passenger traffic in the Study Area has remained relatively constant between 1993 and 1999 at about 49,000 boarding and deplaning passengers per year from the three major airlines (Air Canada, Air Nova and Inter-Canadian),⁴⁸ with the exception of 1997 when it dropped to 40,700.⁴⁹ An increase of 19% occurred in the Study Area between 1998 and 1999 for a total of 49,198 passengers.⁵⁰ The volume of traffic is dependent on a number of factors including: the number of airlines servicing the region; the amount of available disposable income; the degree of military or economic activity in the area; budget restraints within governments and climatic factors resulting in delays to marine shipping. Although military related traffic is down,⁵¹ other traffic is up including passenger and "sorties" (Allied flight take-offs and landings).

Taxis are the only other form of public transportation in the Study Area. In 1993, one taxi company with 59 drivers and 22 vehicles was registered with the Town of Happy Valley-Goose Bay. In 1999, 50 drivers and 17 vehicles were registered with the Town. One taxi company has operated in North West River since 1981 and has three cars and five drivers; two taxi companies started in Sheshatshiu in 1999. A significant amount of the North West River/Sheshatshiu taxi business relates to hospital visits.

The Wabush airport reported 42,833 passengers (boarding or deplaning) between January and October 1999 for an increase of 89% from the previous year. A portion of this increase is due to an increase in the number of companies now serving Wabush airport (two in 1999 up from one in 1998). IOCC operates a passenger train service between Sept Iles, Québec and Labrador City/Wabush as part of their iron ore products' transportation network. A bus service operates out of Labrador West.

Transportation in Labrador will continue to change and improve. The effect of new road corridors will impact on both passengers and freight for both the air and marine sectors. In

⁴⁸ Note: the Department of Tourism does not monitor Statistics from Air Labrador and for military flights.

⁴⁹ The drop in air passengers in 1997 could be attributed to several factors including: Canadian closing their office at the end of 1995; less airlines competition resulting in higher prices; an improved Trans-Labrador Highway resulting in residents driving to the mainland rather than flying, and fewer families flying.

⁵⁰ Source: Department of Tourism, Culture and Recreation, Research and Planning Division

⁵¹ Hercules previously brought in goods twice a week; now goods are brought in once a week or once every two weeks. This is as a result of fewer staff, who require fewer goods, as well as ground transportation costs, which are far cheaper than air freight.

addition, air transportation will respond to both changes within the air industry and changes in Labrador's primary resource sectors.

CBC and CFCB operate out of the Study Area and Cable Labrador provides cable television with 36 channels. Staff rationalization continues in both the communication and utility sectors. However, both have substantially upgraded their systems in recent years, in response to increasing levels of economic activity in Labrador. This is expected to continue.

Newfoundland and Labrador

In 1999, air passenger traffic for the province as a whole increased 8.6% over the previous year, up 0.8% over the previous year. Non-resident automobile visitors increased 10.2% over the 1998 level, an increase of 4.5% over the previous year. All indications are that this figure will again increase this year. Marine Atlantic statistics indicate that between January and October 1999, 439,503 passengers and 138,383 passenger related vehicles were carried on the ferry system operating between Newfoundland and Nova Scotia. These volumes represent an increase of 7.1% and 7.7% respectively over the same time period during 1998.⁵²

3.4.2 General Trade

The majority of private sector firms in the Study Area are involved in retailing or service activity. This reflects Happy Valley-Goose Bay's position as a major service centre for the Study Area and for the North coast. However, as indicated by the Labrador North Chamber of Commerce, the Base was the economic driver for stores opening in the Study Area; subsequently, the Study Area became a government service area.

The Study Area has the following employers: two primary, 70 retail, 228 service and related, 13 wholesale, and 68 related to health and education, or federal, provincial and municipal governments, for a total of 381 employers.⁵³ This is up significantly from 1994 in which 133 retail (including service) and eight wholesalers were reported.⁵⁴ In addition, the number of home-based businesses has increased throughout the Study Area as well as throughout all of Labrador.

Serco Facilities Management Inc. (Serco) is the largest non-local service employer with approximately 312 employees; Woodward's Group of Companies, which provides fuel and supplies to DND and the Allies, is the largest local private sector employer with approximately 240 employees in the six companies located in the Study Area.

Unlike 1993, general consumer spending in the Study Area is up. In fact, major retailers reported an increase in sales since 1993; several of them indicated that 1999 Christmas sales were up approximately 15% from the previous year and a few said that they had not experienced the

⁵² Source: Department of Tourism, Culture and Recreation, Planning and Research Division

⁵³ Source: HRDC, Labrador City

⁵⁴ Source: *EIS: Military Flight Training, Technical Report 14.*

normal January-February lull in sales.⁵⁵ Since 1993 sales for most stores have been up and down depending on local confidence in the local economy. For the past several years, confidence has been good despite the strike. Two major projects, the Lower Churchill Hydro development and Voisey's Bay Nickel will positively affect general trade, if they proceed. However, many of the locally-owned stores recognize that increased prosperity creates competition, primarily from national chains.

The Trans-Labrador Highway has generally been positive for retailers, depending on the commodity. As an example, grocery sales have increased for the following reasons: decreased cost; greater variety, and fewer purchases outside the Study Area. Generally, residents are travelling more frequently by road, but they only purchase items not available in the Study Area on these trips.

One retailer expressed unreserved optimism for the economy despite the vagaries of resource development. He observed an increase in restaurant activity, new businesses, construction, new subdivisions, and two car families. Despite the Base decreasing its level of activity, the town has been growing. With that growth has come an increase in expectations of services and a rise in the number of professionals moving to the area such as lawyers, accountants and graphic designers. An indication of the optimistic outlook in the town is the doubling of size of Maxwell's, the largest local nightclub, which burned down in October 1999.

Labrador West has the following employers: five primary, 98 retail, 181 service and related, 22 wholesale and 52 related to health and education, or federal, provincial and municipal governments for a total of 358 employers.⁵⁶ The figure has increased significantly since 1993. Both IOCC and Wabush Mines have not been hiring in recent years. With significant retirements occurring at these companies within the next two years, out-migration is a factor, which could seriously affect that area's retail trade. However, these retirements will create career opportunities at both companies for young people in the area, providing they are qualified. With the recent modernization at both production facilities and an increased price for iron ore, the economic outlook in Labrador West should remain stable. However, the situation in Labrador West as well as in the Study Area illustrates the difficulties of operating in an economic climate dependent on resource projects. Sometimes boom or bust situations occur. As an example, many service companies geared up for the development of Voisey's Bay, only to have their hopes dashed and their finances strained.

3.4.3 Defence

Two activities occur at the Base in Goose Bay: Allied low-level flight training and the Department of National Defence's support role of that training. The British, Dutch and German air forces now train yearly at Goose Bay from March to October inclusive. They fly an average of 7,000 sorties per year, of which approximately 5,000 are low level. The Royal Air Force Unit Goose Bay employs approximately 110 permanent⁵⁷ personnel including nine officers. The Royal

⁵⁵ For reasons as to the increase in Christmas sales, see Section 6.3.2.

⁵⁶ Source: HRDC, Labrador City

⁵⁷ A permanent rotation is three years, actual time in the study area varies from 6 to 12 months out of

Netherlands Air Force has 17 full-time staff, nine full-time Canadians and 17 part-time Canadians. Approximately 120 men and women pass through the Base every two weeks during flying season. The German Air Force Tactical Training Centre at Goose Bay employs 39 permanently posted individuals and four civil servants of the German Administration Agency. Each of the Allies has hangars, offices, housing and recreational centres on Base.⁵⁸ The Italian Air Force will begin low level flight training in March 2000. Initially, they are expected to have a 10-15 person permanent detachment, 150 rotating personnel and about 800-1000 sorties. This could grow to about 250 rotating personnel and a 20-person detachment in succeeding years. The proposed program will cost about \$6 million (Cdn) in the first year and could increase to \$9-10 million per year as the program grows or nearly \$100 million over the life of the 10-year agreement.⁵⁹

In 1992, the Base directly employed more than 1,000 civilians, spent about \$53 million per year on wages and salaries and another \$75 million per year on operating and maintenance costs. About \$10 million of this amount was spent annually on the purchase of goods and services in central Labrador and another \$8 million per year was spent in other parts of the province.⁶⁰ Today, the Base employs a little more than 100 DND and military, Serco employs another 300 or more and operating costs have been reduced to approximately \$31.2 million and maintenance costs to between \$3 and \$7 million per year.⁶¹

In 1993, Base support costs to this low level flying activity were about \$80 million annually. With a result of alternative service delivery (ASD), these costs were projected to be reduced to approximately \$45 million. Many of the services were outsourced on a competitive bid to Serco Facilities Management Inc. for \$112 over five years, or about \$22.4 million per year. Since then, as a result of successor rights rulings and other changes, fewer savings will be gained than had been originally projected.⁶²

In order for low level military flight training to remain competitive, costs need to be shared among several Allies. If one of the Allied countries pulled out, that would affect the viability of the entire operation. Therefore, the town and province continually urge DND to market its Goose Bay capabilities to the European Allies.

each year.

⁵⁸ Source: DND Web site

⁵⁹ Source: DND news Release, September 7, 1999

⁶⁰ Source: *Technical Report 14, EIS: Military Flight Training*. Town of Happy Valley-Goose Bay report, *the Future of the Goose Bay Base*, 1999.

⁶¹ Source: 5 Wing Goose Bay

⁶² Source: DND Web Site

4.0 NON-WAGE ECONOMIES OF LABRADOR

4.1 INTRODUCTION

4.1.1 Purpose

This section describes the changes that have occurred to the non-wage economies of the Study Area since the last study was conducted on this subject in 1993.

4.1.2 Background

Chapter 6 of *Technical Report 14* of the EIS addressed the non-wage economies of the Labrador Peninsula, namely harvesting of wildlife, fish, wood and berries. Much of that information is still valid and, therefore, will not be repeated here. The EIS referred to a number of reports to provide a general and largely qualitative overview of harvesting activities. *Technical Report 11* provides additional background material on the magnitude and overall value of the goods harvested.

4.1.3 Methodology

Economic data derived from Statistics Canada do not include information about the nature and magnitude of non-commercial pursuits, which include hunting, fishing, sealing, trapping and wood and berry harvesting. Therefore, the study's authors interviewed selected hunters and trappers in the Study Area and received information from aboriginal organizations on the Labrador Peninsula who were willing to provide it. An advisor to the Innu Nation summarized this approach as follows:

The methodology for the baseline information in the EIS in regard to the non-wage economy was not rigorous enough to produce good data. While maps show distribution of resource use, they do not account for other areas, which may have been missed because of lack of informants. Because of the unreliability of the baseline information, it is problematic to measure changes against it. Even if the baseline was adequate, a full harvest study with proper methodology would be required to ascertain change which has solid quantitative data and credibility.⁶³

4.1.4 Limitations

As a matter of policy, the Innu Nation will not share quantitative data on resource harvesting in Labrador until it has reached a Land Claims Agreement and sorted out intellectual property rights. The Labrador Inuit have also been hesitant to gather or provide data on resource harvesting. The Labrador Inuit Association (LIA) stated at the Public Hearings of the Voisey's Bay Environmental Assessment that "Labrador Inuit resist, strongly, the counting of wildlife and fish taken for food, social and ceremonial purposes, which Inuit know from experience is linked

⁶³ Source: Peter Armitage (pers.com)

to quotas".⁶⁴ However, LIA recognizes that ongoing monitoring, by Inuit, of Inuit harvesting of renewable resources will be essential once a final land claims agreement is in effect.

IEMR is now grappling with the issue of resource harvesting and its value. It has held workshops to arrive at agreement between all stakeholders on what information should be gathered. Once an agreement is reached in the near future, IEMR plans to commission a resource harvesting study as recommended by the Panel (Recommendation 22).

Under the constraints of the IEMR contract, this study is, by necessity, limited to qualitative speculation about significant changes since 1993 in the non-wage, harvesting economy. Moreover, this study focuses on Central Labrador, where the bulk of low-level flying takes place.

4.2 CHANGES SINCE 1993

4.2.1 Resource Availability and Harvesting

Several hunters, trappers, fishers and gatherers of wood and berries were interviewed, each of whom has more than 50 years of experience throughout the region, from Groswater Bay in the east of Labrador to the height of land in Western Labrador. There was agreement on several points concerning changes since 1993 to resource availability and harvesting.

Three major factors have influenced resource harvesting in Central Labrador: cottage development, the Trans-Labrador Highway and caribou hunting.

- Throughout the 1990s the number of cabins built throughout the region has increased significantly. These are used primarily on weekends and holidays by wage earners and their families, especially in the Study Area. The cabins are a focus for trout fishing using hooks or nets and for setting of traps. Fishing is a recreational and food activity, pursued primarily to offset costs of operating skidoos. Although more of a weekend/ holiday activity than a serious pursuit, it is thought to place pressure on the resource.
- In the past few years, year round maintenance of the Trans Labrador Highway has also had significant effect on hunting. Increased access is now available to resource harvesting areas between Churchill Falls and Labrador City-Wabush.
- The movement of several thousand George River caribou to Lake Melville over the past few years as well as around and south of the Mealy Mountains has resulted in increased harvesting of these animals by those individuals living in the area. This movement has also resulted in greater access to caribou for hunters from Sandwich Bay and, via the Trans Labrador Highway, from Labrador West. The Newfoundland and Labrador Wildlife Division does not have quantitative data on these harvests but acknowledges that they have increased significantly.

⁶⁴ Source: LIA speaking notes, Voisey's Bay Public Hearing session on Impacts on Harvesting and Renewable Resources

4.2.2 Hunting and Trapping

From the mid-1940s to the present, the number of fur-bearing animals in central Labrador has remained basically the same within their regular cyclic fluctuations. The exception is the marten, which have increased and are more numerous now than at any other time during the 20th century. Because they are the one fur bearing animal with a high market value (ranging from \$50 to \$100 over the past four or five years), a few trappers in the Study Area and from Churchill Falls have harvested up to 100 animals during the 1999-2000 season. Wolves have also increased in central Labrador in the past few years as they follow the caribou into the area. Trappers observed that lynx is presently low and has been unusually slow in rebounding from its low cycle.

The numbers of moose moving into central Labrador have steadily increased and a draw exists for hunting them, but to date no significant harvest has occurred. Black bear appear to be more plentiful, but no active hunt occurs for them. They are considered a deterrent to berry pickers.

Most species of migratory birds remain plentiful in central Labrador except for various species of scoters, which have become scarce in the Study Area. Ptarmigan have been particularly abundant in recent winters.

Seals (primarily ringed seals) continue to be abundant in the Study Area. Spring hunting on the ice has increased in popularity and increases in numbers of seals have kept pace with increases in hunting effort. Because snowmobiles are so plentiful on Lake Melville, basking seals have become wary. Hunters now attempt to take them with darts (harpoons) as they emerge from their breathing holes. Seals are taken for their meat and entire families participate in this activity.

4.2.3 Fishing

Trout have become extremely scarce in the Study Area. This is attributed to heavy pressure by the increasing numbers of families visiting cabins throughout the area and who use nets in addition to hooks for a food fishery. Sea trout, which come into Upper Lake Melville from outside, are also reported to be more scarce. The increased numbers of seals and the lack of cod and capelin in Groswater Bay have also resulted in seals taking more trout. Local observers report seals in the bottom of Lake Melville in mid-winter and more than 20 miles up the Eagle River. Outfitters report that trout stocks at their inland lodges are abundant and that conservation measures help maintain the older age classes.

4.2.4 Food Harvesting

Harvest levels of all food resources have not diminished since the 1994 EIS reported on the non-wage economy. Long time hunters, trappers and fishers report, however, that a trend towards over-harvesting has occurred in the Study Area. Evidence of waste can be seen by the amount of country foods brought to town dumps when freezers are annually emptied.

4.2.5 Fuel Resources

Harvesting of firewood continues in the Study Area, particularly the abundant source of dry wood from past forest fires.⁶⁵ About 10,000 cords of fuelwood are used annually for domestic heating in Labrador.⁶⁶

4.2.6 Related Value Added Harvesting Activities

Harvesting of caribou is conducted for home consumption, but a pilot project is underway to create value-added products using caribou hides. Plans are in place to produce cold weather, practical clothing that is as warm and light as down, but will not collapse when wet. The North West River Industrial Association plans to create 15 full-time jobs based on the use of hair from 3,000 caribou per year. This enterprise plans to market this product to the armed forces, and the aircraft industry. The business is expected to be in full operation by 2001 or 2002 producing clothing wholesale worth \$1.6 million annually. Hides are anticipated to come from local hunters. Mr. Randy Babcock, a butcher and a commercial supplier of country foods in Happy Valley-Goose Bay, has applied for a federal license for a supply of caribou meat for up to 4,000 animals. If approved, this could provide a supply of hides for the NWRIA. The Québec Makkivik butchering plant can also supply hair from the 7,000 caribou in its annual harvest. The company hopes that DND and other local businesses will cooperate on both the testing and the purchase of such clothing.⁶⁷

4.2.7 The Value of Harvesting

In 1997, interveners from the coast of Labrador at the Voisey's Bay Environmental Assessment Hearings testified that harvesting of food and firewood resources continues to be an important component of their diet. LIA stated at these hearings that the value of edible country consumption per persons on the northern coast of Labrador remains the same proportionally to the figures presented in the 1994 Royal Commission on Aboriginal People. At that time, in Nain alone, more than 300,000 lbs. of country food, valued at an estimated \$2 million in 1993 dollars, was consumed. LIA made the point that, based on best estimates and in the absence of detailed quantitative data, renewable resource harvesting remains a significant part of the northern Labrador economy as well as providing a healthy diet.

5.0 5 WING GOOSE BAY ECONOMIC IMPACT ASSESSMENT

5.1 ECONOMIC DATA

The following data was collected at 5 Wing Goose Bay for the operation of the input/output (I/O) model. In cases where direct information was not available, estimates were made using the best possible information coupled with the most logical inferences. All amounts are in 1999

⁶⁵ Source: Louie Montague, Milton Crane and Robert Otto

⁶⁶ Source: Department of Forest Resources and Agrifoods, District Ecosystem Unit, North West River

⁶⁷ Source: North West River Industrial Association

dollars. A full list of the I/O data, complete with any assumptions detailed in full, is provided in Appendix D.

Table 23		
Employment -- Person Year Equivalent (PY)		
Military	91	Department of National Defence.
Civilian (public funds)	24	
Civilian (non-public funds)	0	The 60 NPF employed on base, both full and part time are captured as indirect and induced PYs as their salaries result from expenditure of Base families.
Serco	312	Service provider selected by competitive bid.
Allied Permanent	244.5	Total personnel of 419 is equivalent to 244.5 PY.
Total	731.5	

Table 24		
Salaries (\$ million)		
Military Employee	6.7	
Civilian Employee	0.8	
Travel Allowance	0.56	
Non-Public Fund	1.187	
Serco	11.769	
Allied Permanent	7.271	Uses estimates from 1993 study, adjusted for inflation and reduced to include only that portion that remains in Canada.
Total	\$28.29	

Table 25		
Transient Numbers and Spending		
Allied Transients	8,000	
Allied Permanent		
RAF	\$496,725	Spending for transients uses same estimates as for 1993 study, adjusted for inflation
GAF	\$3,315,000	
RNLAF	\$621,570	
Total spending (\$ million)	\$4.43	

Table 26		
Operations, Maintenance and Construction (\$ millions)		
Serco ASD Contract	13.8297	Excludes wages and salary component. Includes successor rights ruling.
Construction	7.5333	Includes construction done by Serco, Defense Construction Canada and Canadian Forces Housing Agency
Other contracts	22.0052	Includes aviation fuel, liquid oxygen, electricity, central heating power plant fuel, payments in lieu of taxes, janitorial and other miscellaneous.

Total	\$43.37
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5.2 INPUT/ OUTPUT MODEL

Features and Limitations

The objective of this section is to measure the economic activity associated with the operation of CFB Goose Bay. Economic impacts at the sub-provincial (Labrador) level are estimated using a privatized version of the Statistics Canada model. The impact run was custom designed for the Study Area. Many of its parameters were created from a survey of the local economy for the initial EIS of the proposed NATO facility in the mid 1980s. It was then updated and expanded for use in the 1993 *Technical Report 14*, and has again been updated for use by this study. This model is calibrated for a very specific economy and situation, and drawing conclusions about other situations or studies based on its outputs is not recommended.

In an input-output model, each industry in the local economy is dependent upon every other industry for the supply of intermediate goods. Industry production functions are linear and inputs must be used in fixed proportions -- economies and diseconomies of scale are not permitted. The other generally strict assumption of input-output models is that prices and wages are fixed, and the supply of both intermediate goods and final goods is unlimited.

The I/O model is not supply-oriented. It omits any consideration of pressures on resources, production bottlenecks, or input restrictions. In other words, an input-output model will not identify any negative aspects associated with the impact of a project or activity. The fixed price assumption and the lack of a dynamic time frame preclude any assessment of inflation impacts.

Two versions of the input-output model have been developed. In an 'open model' the household incomes generated in the production process are not re-spent. In other words, they are treated as leakage from the system. Only the inter-industry spending effects are analyzed. Alternatively, in a 'closed model', incomes generated in the production process are spent on goods and services, taxes and savings. The closed variant is generally 'closed' with respect to the household sector. Hence, incomes generated by final demands are re-spent by the household sector on consumer goods and services, and taxes, or are saved. In the closed model, personal income taxes and savings are leakages from the household sector.

The following assumptions and conditions form the basis of the model's operation:

- Total employment and income impacts consist of *direct impacts* (direct purchases of goods and services of salaries to personnel), *indirect impacts* (inter-industry purchases of goods and services, and *induced impacts* (consumer spending of incomes earned in both direct and indirect activities).
- Prices and wages are fixed and are measured in \$1999.
- The model assumes an increase in one industry's sales will result in the industry hiring more labour. In reality, an industry is unlikely to increase its labour in the same proportion as its sales have increased. In addition, if excess employment capacity is prevalent in the economic system, increased sales would really not require the same increased labour. Accordingly, model impact estimates should be considered as potential or high-end employment estimates.

- The model is based on fixed coefficients since it is calibrated as a point-in-time estimate. Therefore, the relationship between income and employment is linear.
- Imports into the region create leakages of monies outside of the regional economy. In an economy such as central Labrador, most goods are imported from outside the region.
- Military and civilian direct and indirect employees are treated in aggregate as a 'household'. The Base purchases the labour they provide.
- Employment is expressed in terms of person-years (PY). One person-year is equivalent to year-round, full-time employment for one person. Two people who work for six months of the year, or two people who each work half-time for a full year, are each equal to 1 PY.
- Income is measured in terms of gross domestic product (direct and indirect GDP) and is defined as the value of the gross output of the economy in question.

5.3 ECONOMIC IMPACT

The financial information summarized in 5.1 is fed into the I/O model and used to generate indirect and induced impacts. Results are summarized in the following table.

Table 27				
Summary of Economic Impacts of 5 Wing Goose Bay, Labrador				
(all dollar amounts in \$1999 millions)				
	Direct	Indirect	Induced	Total
Labrador				
Employment (PYs)	671.5	350.4	328.1	1,350
Gross Domestic Product	\$45.29	\$4.00	\$18.61	\$67.9
Government Revenues	-	\$8.03	\$13.42	\$21.45
Province of Newfoundland and Labrador				
Employment (PYs)	671.5	491.9	564.6	1,728
Gross Domestic Product	\$45.29	\$4.80	\$39.97	\$90.06
Government Revenues	-	\$9.65	\$18.81	\$28.46

The impact varies by industry. The following table indicates which sectors are affected and by how much; a detailed discussion is provided in the following section.

Table 28				
Indirect and Induced Economic and Employment Impact on each Sector (as Percentage of Total)				
	Labrador		Province of Newfoundland and Labrador	
	Sales	Employment	Sales	Employment
Agriculture, Forestry, Fishing, Oil and Quarries	0.4%	0.7%	1.4%	0.4%
Manufacturing	0.2%	0.2%	4.3%	3.9%
Construction	14.9%	12.4%	11.7%	9.6%
Transportation, Communications, and Utilities	9.6%	7.9%	10.5%	8.3%
Wholesale and Retail Trade	9.2%	34.9%	9.3%	30.8%
Services	12.4%	44.3%	15.8%	47.0%
Salary Expenditures [†]	53.3%	-	46.9%	-
TOTAL	100%	100%	100%	100%

[†] This is a collection of 'dummy industries' used to capture expenditures made by various industries, such as salaries. The use of dummy industries is a Statistics Canada convention for input/output modeling.

6.0 ECONOMIC IMPACT ON INDUSTRIAL SECTORS

6.1 PRIMARY INDUSTRIES

6.1.1 Agriculture

Because of the low volume of agricultural products produced in the Study Area, the Base does not buy products directly from local farmers. However, some civilian personnel may buy small quantities of farm products for their own use. Some locally produced manure is sold to the Base for bio-remediation of spills from tanks storing petroleum-related products.

Food Services at the Base are subcontracted from Serco to Sodexco. Their 1999/00 budget is \$2.87 million. Sodexco sources agricultural and secondary processed products from the Island and trucks or flies in products from the mainland, primarily from Québec.⁶⁸

The I/O model calculates the indirect and induced effects on agriculture to be 0.02% (Labrador) and 0.7% (Newfoundland) of overall sales impact of 5 Wing Goose Bay. Similarly, employment is 0.01% (Labrador) and 0.2% (Newfoundland) of the total employment impact. A portion of the sales within household expenditure (induced impact) would also be attributed to agriculture.

6.1.2 Forestry

Serco buys lumber for on-going needs on the Base. They source through three local lumber distributors who buy commodity lumber (2x3, 2x4, 2x6) locally whenever possible. Specialized

⁶⁸ Source: 5 Wing Goose Bay

and larger sizes, which are not available locally come primarily from Québec, although some comes from the Island. The DND account is significant to these stores, but is not necessarily the largest. The value to these stores is approximately \$250,000 each per year.⁶⁹

The I/O model calculates the indirect and induced effects on forestry to be 0.09% (Labrador) and 0.07% (Newfoundland) of overall sales impact of 5 Wing Goose Bay. Similarly, employment is 0.06% (Labrador) and 0.05% (Newfoundland) of the total employment impact. A portion of the sales within household expenditure (induced impact) would also be attributed to forestry.

6.1.3 Fishery

No commercial production of fish occurs in the Study Area. However, many civilians engage in a recreational fishery. Of the Allies, only members of the German Air Force participate in a recreational fishery to any extent using the facility at No Name Lake. One civilian is employed at that facility.

The I/O model calculates the indirect and induced effects on fishing to be 0.3% (Labrador) and 0.2% (Newfoundland) of overall sales impact of 5 Wing Goose Bay. Similarly, employment is 0.2% (Labrador) and 0.2% (Newfoundland) of the total employment impact. A portion of the sales within household expenditure (induced impact) would also be attributed to fishing.

6.1.4 Hunting and Trapping

Some civilians working and living on Base have hunting and/or trapping licenses. Approximately 20 members of the German Air Force have hunting licenses. However, a year's residency in Labrador is required before acquiring a license, which reduces the opportunity for the Allies to hunt. In total, approximately 50 individuals working and/or living on Base have caribou licenses. Members of the German Air Force are the primary buyers of furs, although the amount bought by them has decreased in recent years.

6.1.5 Hydro-electricity

If the Labrador Hydro Project proceeds, increased competition for both personnel and facilities could occur. However, given the recent downsizing at the Base, this is not anticipated to be a problem.

The I/O model calculates the indirect and induced effects on electrical and other utilities to be 5.5% (Labrador) and 6.0% (Newfoundland) of overall sales impact of 5 Wing Goose Bay. Similarly, employment is 2.8% (Labrador) and 3.0% (Newfoundland) of the total employment impact. A portion of the sales within household expenditure (induced impact) would also be attributed to electrical and other utilities.

⁶⁹ Source: 5 Wing Goose Bay, local suppliers.

6.1.6 Mining

Little direct economic impact on the mining industry occurs as a result of the military. Some use of sand and/or gravel pits might take place for road maintenance on the Base, but given the reduced level of Base related construction and maintenance activity, this is not likely to be significant.

The I/O model calculates the indirect and induced effects on oil and mining operations to be nonexistent (Labrador) and 0.5% (Newfoundland) of overall sales impact of 5 Wing Goose Bay. Employment impact is nonexistent for both Labrador and Newfoundland. A portion of the sales within household expenditure (induced impact) would also be attributed to oil and mining operations.

6.2 SECONDARY INDUSTRIES

6.2.1 Manufacturing (Crafts, Dimension Stone, Other)

Approximately 5% of the local tank manufacturer's business is directly related to the military. However, approximately 20% of its business is with the Woodward Group of Companies, which depend upon the Base for 60% of their business. The recent strike of Serco employees at 5 Wing Goose Bay did not affect their business. Companies whose primary clients are the Base account for approximately 30% of Pressure Pipe Steel Fabrication's business.

The Allies and related military personnel contribute to the craft industry. However, they are primarily interested in buying souvenirs reflecting the northern culture rather than the more expensive "one-of-a-kind" items. They are also more interested in representations of the north than in whether or not items are locally made. Since approximately 50-60% of all crafts made in Labrador is sold outside of the region, the contribution of the military, while important, is not significant, except to the retail sector, which brings in commercially made souvenirs.

The I/O model calculates the indirect and induced effects on manufacturing to be 0.2% (Labrador) and 4.3% (Newfoundland) of overall sales impact of 5 Wing Goose Bay. Similarly, employment is 0.2% (Labrador) and 3.9% (Newfoundland) of the total employment impact. A portion of the sales within household expenditure (induced impact) would also be attributed to manufacturing.

6.2.2 Construction

Since 1993 all major construction projects in the Study Area have been off Base. However, the Italian Air Force is rumoured to be considering building a new hangar at an approximate cost of \$25 million, as well as refurbishing some of the existing facilities.

Based on a standing offer procedure established through a competitive bid process at the beginning of each fiscal year, small local contractors carry out on-going repair and maintenance on the Base. According to one contractor, DND awarded contracts based on public tenders. However, Serco does not tender smaller jobs resulting in a change in the way and to whom these tenders are awarded.

Renovations in the Study Area increased as a result of the Base downsizing. Those who received 'the package' invested in renovations that they previously could not afford. Others who were retiring or would be living on fixed incomes realized they had to make economical changes to their homes such as installing wood stoves, new windows and new shingles to save money on heating bills.

In 1996 residential construction began increasing in the Study Area and has continued until recently. This growth is partially attributed to DND employees living on Base who take early retirement, lost their jobs through Alternative Service Delivery, or who have been told to move off Base within the next 10 years. Some of them have taken their severance packages and built houses in the Study Area.

The I/O model calculates the indirect and induced effects on construction to be 14.9% (Labrador) and 11.7% (Newfoundland) of overall sales impact of 5 Wing Goose Bay. Similarly, employment is 12.4% (Labrador) and 9.6% (Newfoundland) of the total employment impact. A portion of the sales within household expenditure (induced impact) would also be attributed to construction.

6.3 SERVICE INDUSTRIES

The I/O model calculates the indirect and induced effects on services (excluding transportation, communication and financial services) to be 7.0% (Labrador) and 9.7% (Newfoundland) of overall sales impact of 5 Wing Goose Bay. Similarly, employment is 38.0% (Labrador) and 40.1% (Newfoundland) of the total employment impact. A portion of the sales within household expenditure (induced impact) would also be attributed to these services.

6.3.1 Transportation, Communications and Other Utilities

The Base has little impact on the road system, except that it benefits from cost savings due to reduced road transportation costs. As well, approximately 20% of all freight destined for the Study Area is for the military.⁷⁰ As a result of downsizing on the Base, military flights, other than 'sorties', have been reduced. With reduced personnel on Base, the number of Temporary Duty (TD) personnel and military related personnel travelling to and from the Study Area on business, especially between Ottawa and Winnipeg and the Study Area, and Leave Travel Allowance (LTA) has been reduced. LTA and TD made up approximately 20% of all traffic to and from the airport prior to 1998. As a result of downsizing on the Base, the Hercules cargo planes fly less frequently, which, in turn, results in less staff needed to service these planes. Although figures are difficult to quantify, airport personnel estimate that in 1993, the ratio of military to civilian traffic was 55%-50% to 45%-50%. In 1999, this figure would have changed to approximately 32%/68%. According to Labrador Airways, approximately 5% of the scheduled passenger service is direct and 25% is indirect, whereas military represent 5% of the direct charter business and approximately 12% of the indirect business for a total expenditure of slightly less than \$500,000 directly and approximately \$2 million indirectly.

⁷⁰ Source: TST Overland Express

In Happy Valley-Goose Bay, the taxi business depends significantly on the April-October military flying season for its business. Military personnel use the service to buy goods and local services including food and souvenirs as well as to dine, visit night clubs, get a hair cut or sight see to North West River. The taxi business in North West River/Sheshatshiu is not military dependent.

The I/O model calculates the indirect and induced effects on transportation and communication to be 4.1% (Labrador) and 4.5% (Newfoundland) of overall sales impact of 5 Wing Goose Bay. Similarly, employment is 5.1% (Labrador) and 5.3% (Newfoundland) of the total employment impact. A portion of the sales within household expenditure (induced impact) would also be attributed to transportation and communication.

6.3.2 General Trade

Despite the presence of Canex, the military supply store, many military personnel buy off Base in order to purchase a greater variety of items and take advantage of sales items.

Some retailers have found, and subsequently strengthened, certain niche markets as a result of the military. As an example, some goods such as blue jeans and baseball bats are more costly in the Allies' countries and, therefore, military personnel buy significant quantities of these items in the Study Area during their rotations. Permanent members of the Allied detachment, who are posted to the Study Area for approximately three years, buy larger items such as snowmobiles, cars and trucks. Some stores, such as Burger King, employ children of Canadian military personnel. Some nightclubs, stores and restaurants are more frequented by the Allies and, therefore, will experience significant seasonal variations in sales.

The 1999 labour dispute at Serco underscored the importance of the military to the economy of the region. During the strike, some retailers reported a serious drop in sales between August when the strike occurred and December when sales significantly increased. However, larger retailers such as North Mart/Burger King monitored sales closely and reported no drop in sales.

Changes at the Base including downsizing, Alternative Service Delivery and a different method of public tendering have resulted in a change in the mix of companies supplying the Base. While this has negatively effected those who lost to Serco's winning bid or who are not on the preferred bidders list, others have benefited. Beneficiaries include companies that have started up to take advantage of the outsourcing initiative or companies such as Woodward's who have increased their existing services to Serco or to the new Airport Corporation and, as a result, have hired additional people. For a company such as Woodward's, approximately 90% of its ground handling business and 80% of its oil business depends on the military. If the military were to close down, their motor vehicle distributorship in the Study Area would also be directly affected.

Although the larger companies have not reported a drop in sales due to downsizing and ASD, some of the smaller businesses have been negatively affected. As an example, Freckles, a children's play centre, which opened in 1998, is now for sale. When 350 DND families left the Base, the center's customer base was reduced significantly.⁷¹

⁷¹ Source: CBC News, March 24, 2000.

At the beginning of each fiscal year, Serco establishes a standing offer for small amounts through a competitive bid process. For work of greater value, they go through a full bid process. The stated goal of Serco is to buy as much locally as possible to help mitigate the decrease in purchasing as a result of the downsizing.

In the Study Area, some individuals with specialized skills who have left or retired from the Base have pursued small-scale specialized business ventures.

While it is impossible to accurately estimate the amount of goods and services that “fell off the truck” when DND was at its height, the absence of such items has been noticed among those who received them. People now do without, find new “off the truck” sources or pay for them. If the latter is the case for even a portion of these goods and services, this could be a small reason why retailers have not experienced as great a down turn as one would expect from such a significant reduction in military related activities. One interesting note is that apparently no provision exists within the existing Serco contract for the buying of new vehicles. As a result, the automobile repair business has increased, and most vehicles will be 10-12 years old when the current contract ends in 2002.

The I/O model calculates the indirect and induced effects on wholesale and retail trade to be 9.2% (Labrador) and 9.3% (Newfoundland) of overall sales impact of 5 Wing Goose Bay. Similarly, employment is 34.9% (Labrador) and 30.8% (Newfoundland) of the total employment impact. A portion of the sales within household expenditure (induced impact) would also be attributed to wholesale and retail trade.

6.3.3 Finance, Insurance and Real Estate

A recent increase in the loan default rate was attributed by one loan company to the downsizing of military activities at 5 Wing Goose Bay as well as the strike during the summer of 1999.

Despite military personnel leaving the area, real estate activity has increased. This is due to several reasons. Some DND employees living on Base took early retirement or lost their jobs through Alternative Service Delivery. Using money from the severance packages they received, many of them built or bought houses in the Study Area. As well, until recently approximately 300 civilian personnel lived on Base and qualified for subsidized housing. After many of the DND services were restructured for Alternative Service Delivery, rent significantly increased on the Base resulting in some families moving to the town. Finally, the Base Commander recently announced the consolidation of housing on the Base. Civilians in "preferred" housing are being asked to move to less expensive "row" housing and then off the Base within the next ten years. To meet the housing demand caused by civilians leaving the Base, the town of Happy Valley-Goose Bay began rapidly building sub-divisions starting in 1996. As a result, during 1996 and 1997, a shortage of contractors existed in the Study Area.

As a result of military downsizing and ASD, significant excess housing exists on the Base. The Military Commander has indicated that DND wants to get out of the housing market. However, the open market would be flooded if this housing were put up for sale. Residents have expressed concern about the future of this housing.

The I/O model calculates the indirect and induced effects on financial services to be 5.4% (Labrador) and 6.2% (Newfoundland) of overall sales impact of 5 Wing Goose Bay. Similarly,

employment is 6.2% (Labrador) and 6.9% (Newfoundland) of the total employment impact. A portion of the sales within household expenditure (induced impact) would also be attributed to financial services.

6.3.4 Public Administration

Military activities have had little impact on public administration with the exception of DND, which is discussed elsewhere. However, as a result of downsizing and ASD activities on the Base during 1996-98, HRDC was directly affected in several ways. On the Base, HRDC established a Career Information Centre and held seminars. Other economic impacts felt by HRDC included three employees leaving the department as a result of husbands being transferred. This also occurred in other provincial and federal government departments.

During the implementation of ASD, an increase in Employment Insurance (E.I.) claims did not occur in the Study Area. This was because employees were evaluating several options including retirement, transfer to other government departments, early departure incentive or employment with the new service provider. According to HRDC, as a result of downsizing, between 300-350 families left the Study Area, which had more of an economic impact on the region than ASD, which resulted in many former military personnel being re-employed.

HRE also reported that the caseload did not increase as a result of downsizing and ASD.

6.3.5 Defence

Approximately 1500 Allies rotate through the Base at any one time. They participate in a two-week rigorous training schedule with one day off a week. Therefore, local purchases generally consist of phone calls, blue jeans, theatre tickets, coffee, drinks, food, personal items and small souvenirs. Although each Allied Air Force has its own bar on Base, occasionally members frequent some of the more than 13 local nightclubs.

More than fifty military families left the Base as a result of the downsizing of DND. Their move neither affected the population (they were not recorded in the census) nor the tax system of Happy Valley-Goose Bay. However, the local retail market felt the loss of their spending power.

6.3.6 Assistance to Business

Despite the Study Area having the potential of a bright future, economic development agencies said that the "Base is the glue that holds everything together." Several economic development officials and the Chamber of Commerce all commented that if the Allies left and, consequently, the Base closed, Happy Valley-Goose Bay would come to a halt. They contend that the Base is the only reality; everything else is "down the road."⁷²

6.3.7 Social Infrastructure and Services

⁷² Source: ACOA

ASD and downsizing did not result in any increase in E.I. claimants.⁷³ Neither HRDC nor HRE have administered programs as a result of military activities with the exception of providing information on the Base during Alternative Service Delivery.

6.3.8 Medical and Health Services and Facilities

Because of the age distribution of military personnel and their families (20s and 30s with children), they are not frequent users of the hospital. Relatively few births occur among military families while staying on Base and because of the age of the military personnel and their families, health issues related to aging are not a factor. Since 1993, the percentage of military personnel of the hospital's case load has decreased from approximately 15-20% to less than 5% as a result of restructuring of the Base. The Allies bring their own medical personnel with them and, therefore, make no demands on the HLC.

However, the economic impact of the military is significant as it relates to staffing. Often military spouses are in the health care field, which helps in lowering recruitment costs and in retention of staff. Without access to military spouses, HLC would have difficulty in meeting its staffing requirements because of the relatively isolated location of the Study Area combined with a relatively low salary and benefits package.⁷⁴

6.3.9 Educational Services and Facilities

Resource dependent regions are highly mobile and the Study Area is no exception. Families transfer in and out as a result of forestry and mining as well as military activities. Downsizing of the military has been countered with other families moving into the area. St. Michael's (K-9), located on the Base, was the main school to which military families sent their children.⁷⁵ However, as a result of restructuring of the denominational school system, another school has closed and St. Michael's has absorbed those students. It now provides education to students from the neighborhoods of Spruce Park, Hamilton Heights and the Base. If the military had not reduced in size, St. Michael's could not have accommodated the students from other schools.

The school population of St. Michael's has continued to increase since 1995 (from 240 to 283 students). As a result of downsizing and ASD, the number of Canadian Air Force students has decreased during that time period from 133 to 36. The number of students of allied personnel fluctuates each year depending on the age of the school children, but has generally remained stable. However, as a result of denominational school restructuring and ASD, the number of students of civilian personnel and families employed elsewhere has increased from 92 to 176.⁷⁶ Therefore, implications for teacher allocations are more a result of denominational restructuring than of downsizing of the military base.

⁷³ Source: Human Resources and Development Canada, Happy Valley-Goose Bay

⁷⁴ Source: Health Labrador Corporation

⁷⁵ Note: French program was offered at the Peacock Elementary School and Queen of Peace Elementary.

⁷⁶ Source: St. Michael's School

The College of the North Atlantic is economically impacted by military activities in a number of ways. Graduates of the college are employed on the Base. Of the approximately 150 students who have successfully completed certificates at the College either in the Study Area, Labrador North or the south coast during the last three years, nine have obtained jobs with Serco. However, many other CONA graduates are employed on the Base. In addition, CONA offers general interest courses at the college related to the military such as conversational German. Finally, the College contracts courses to Serco employees. Since June 1998, 286 Serco employees have been trained for a total contract amount of approximately \$17,500.⁷⁷

6.3.10 Tourism and Recreation Services and Facilities

Generally, military personnel do not use the services of Labrador outfitters with the occasional exception of the German Air Force. However, many of their personnel use the German Air Force Camp, located 10km from the Base. Built on crown land, it houses up to 25-30 people; has a complete kitchen, boats and other recreational equipment, and employs one person. Allied personnel on short-term training rotations have limited free time to sight see. Each allied air force has its own recreational facility and club. Administrative personnel occasionally sightsee, but primarily to other parts of Canada.

7.0 DND MITIGATION MEASURES

7.1 INTRODUCTION

7.1.1 Purpose

The study reviewed DND's mitigation measures in respect to the Panel recommendations (#16, 17 & 18) and the Government's response.

7.1.2 Background

Since 1994, DND has downsized by 25% and the Base was the first in Canada to undergo the Alternate Service Delivery Process which resulted in a private contractor, Serco Facilities Management Inc., replacing DND as the major provider of support services on the Base. Employment before and after downsizing and the ASD process are as follows:⁷⁸

Before downsizing and ASD: 482 military personnel

637 civilian personnel

349 non-public funds

After downsizing and ASD: 91 DND (Military)

⁷⁷ Source: College of the North Atlantic

⁷⁸ Source: DND

24 DND (Civilian) Public funds
25 DND full-time non-public funds
65 DND part-time non-public funds
312 Serco

As a result of ASD in 1997, the following personnel changes occurred to 339 DND employees:⁷⁹

162 transferred to Serco
21 core positions remaining within DND
69 early departure incentive
29 early retirement incentive
58 deployed to other government departments.

These significant changes in the employment structure in Central Labrador have overshadowed and taken precedence over mitigation efforts recommended by the Panel and accepted by government. Moreover, these recommendations were prior to equity employment measures becoming mandatory. In 1996, the Equity Employment Act came into force with the following purpose:

“The purpose of this Act is to achieve equality in the workplace so that no person shall be denied employment opportunities or benefits for reasons unrelated to ability and, in the fulfillment of that goal, to correct the conditions of disadvantage in employment experienced by women, aboriginal peoples, persons with disabilities and members of visible minorities by giving effect to the principle that employment equity means more than treating persons in the same way but also requires special measures and the accommodation of differences.”

7.1.3 Methodology

In order to ascertain to what degree the EIS recommendations have been acted upon, in the context of downsizing and the ASD process, this study interviewed or corresponded with 35 individuals representing DND, contractors and sub-contractors, unions, local businesses, aboriginal groups, women’s groups, and groups representing people with disabilities.

⁷⁹ Source: *Update on the ASD Review at 5 Wing Goose Bay*

7.2 REVIEW OF EIS RECOMMENDATIONS

7.2.1 Recommendation 16: Training, Recruitment and Promotion

7.2.1.1 Training

In order to identify and meet training needs of displaced employees in 1997, DND and Serco worked with other agencies in the area through two committees: the Joint Federal Council for Training, which included HRDC, RCMP, ACOA, the Coast Guard, DFO, and Customs, and the Community Adjustment Committee (CAC), which included the same membership minus the RCMP and with the addition of the two locals of the Union of National Defence Employers (UNDE), which are components of PSAC. The purpose of the committee was to ease in the transition of DND downsizing and the ASD process. CAC lasted two years, helped with job search techniques and assisted employees in finding other job placements.⁸⁰

In addition to sitting on these committees, Serco has consulted with both HRDC and CONA to help establish training programs for the development of required skills for local employees who lack the necessary qualifications. Examples are a request for an electronics course and a proposal to send air traffic controllers trainees to England. Some negative feelings toward Serco have occurred in the community as a result of the company bringing in middle and senior management positions, which have in some cases supplanted former DND employees. Some DND employees were offered other positions with Serco, but at lower level and lower pay. Additional negative feelings occurred as a result of some long term qualified technical employees being replaced because they did not have the paper qualifications in accordance with the job specifications of the contract. Many of these problems have been solved as a result of the ruling on Successor Rights and the new Collective Agreement, signed in the summer of 1999.⁸¹

Serco generally advertises for available positions. The company's primary interest is to develop local skills through training courses at the College of the North Atlantic or at other institutions elsewhere, if training is unavailable locally. Serco has focussed on the need for training in electronics and air traffic control in particular. The company is also visiting local schools to generate interest among students in preparing for specialized jobs.

Although attempts have been made to develop training programs for specific job descriptions, to date, Serco has put no special training program initiatives in place for aboriginal people or women. However, Lake Melville Community Employment, Inc. (LMCE) has placed persons with disabilities in positions with Serco and has provided mentors to assist them in developing job skills. The Labrador Inuit Association (LIA) and the Labrador Metis Nation (LMN) have both stated that no special training initiatives have been put in place for aboriginal employees for DND or Serco, but they also admit that their organizations have not actively sought such initiatives to date. The aboriginal organizations do have training funds from HRDC for apprenticeship programs, which can be provided to employers, including DND or Serco but they have not yet

⁸⁰ Source: HRDC, Happy Valley-Goose Bay

⁸¹ Source: DND, HRDC, CAN, Serco, Woodward Group of Companies

been used for this purpose. The LIA and the LMN plan to initiate meetings with DND and Serco to explore special training needs for aboriginal people.⁸²

7.2.1.2 Recruitment

Local quantitative data on equity employment figures is unavailable for both DND and Serco. However, corporate figures can be obtained for DND as a whole or for Serco's global operations. The number of aboriginal employees is determined, according to the Equity Employment Act, only on the basis of employees self-declaring themselves as aboriginal. To the best of their knowledge, Serco has not received any self-declaration from an employee, but they are aware that some employees are members of either LIA or LMN.

There are no special initiatives targeted at employing aboriginal people.

An estimated 40 to 50 women work for Serco, but only one at the senior management level. An Equity Plan, as required by the Act, was forwarded to Goose Bay from Corporate headquarters, but no follow through has been undertaken to date. Serco has been operating in Goose Bay only since April 1998 and has had to deal with start-up, normal growing pains and a strike during the summer of 1999. The company was required to hire 70% of former DND employees and there has been little turnover. However, UNDE Local 25 is concerned that Serco keeps equity groups at the low end of the scale with little incentive for advancement.

The LMN asserts that no evidence exists of active recruitment of aboriginal persons by Serco or its sub-contractors. Although the LMN has not implemented any recruiting initiatives with DND or its sub-contractors, they point out that DND must comply with the act. LMN is unaware of what pro-active measures have been taken by DND and Serco regarding promotion, recruitment, retention and advancement incentives of aboriginal people. Although it has its own training fund, LMN has not been approached by DND or Serco.

Members of the Innu Economic Development Enterprises Inc. (IED) said that to date DND has not approached IED or the Innu Nation on equity initiatives. To IED's knowledge, no Innu works for DND, its contractors or sub-contractors. Innu worked seasonally with DND in the late 1980s and early 90s, but few have applied in the last five or six years because applicants were turned down in earlier attempts. IED said that Innu would take employment with DND or its contractors, if they were qualified or offered training.

The LIA also said that no relationship exists between DNA and Serco and the LIA regarding recruitment or training. LIA has an HRDC Agreement, but has not targeted DND or Serco, in particular. LIA plans to approach DND, Serco and its sub-contractors in the near future. Its HRDC Agreement allows for cost sharing of employees, if they do not have the appropriate qualifications. The LIA office in Goose Bay has worked with some laid-off LIA members who requested assistance. The Human Resources Manager for Serco is a member of LIA and is familiar with LIA training programs.

⁸² Source: Lake Melville Community Employment, Inc. Labrador Inuit Association, Labrador Metis Association

7.2.1.3 Promotion

Both LMN and LIA acknowledge that DND and Serco employ a substantial representation of their membership.

The Happy Valley Women's Centre & Status of Women Association said that present representation of women in Serco and its sub-contractors is adequate, but they are concerned that gender equality is not increasing proportionally in new or more advanced positions. In general, the organization views the Collective Agreement with Serco as very good with respect to maternity benefits, sexual harassment and equity benefits including pay equity. They also believe that gender equality and respect for women are better in Serco than has been traditional in the military environment of DND. Their main concern is equal gender access for new employees. The organization also believes that racial issues are important and that priority needs to be given to gender as it relates to these issues.

7.2.1.4 Other Targeted Groups

Persons of disability and visible minorities are also included in the Employment Act. Few visible minorities exist in the Study Area (aboriginal people are considered separately). However, Lake Melville Community Employment, Inc. has 28 clients and the Canadian Paraplegic Association has 60 to 70 clients in the Study Area. They include individuals who are hearing impaired or have epilepsy, asthma, spinal cord injuries and learning or developmental challenges. Many of these clients are income support recipients, have minimal higher education and few specialized skills. Both organizations have taken initiatives to meet with DND and Serco, but maintain that no initiatives have originated from either DND or its contractors. Nonetheless, both organizations say that DND and Serco are responsive to their initiatives. LMCE has placed several employees with them in the past three years.

7.2.2 Recommendation 17: Cooperation with Local and Regional Business Representatives

DND and its contractors utilize local businesses when it is efficient and practical. The Labrador North Chamber of Commerce reported that no businesses have complained to the Chamber about Serco's business practices. The Chamber is unaware of any difficulties regarding cooperation between DND, contractors and local businesses. The Woodward Group of Companies reported that with the ASD process, it lost some of its wholesale business to DND, but its retail business increased significantly. Other businesses have lost on competitive bids as a result of a different bidding process being used and other local companies who bid and lost on the original ASD contract also experienced a financial loss. Employees of DND, the Allies and Serco all use local food outlets and other retail stores. In fact, as a result of ASD, CANEX has lost considerable business because of the reduction of Canadian military personnel.

With the opening of the Trans Labrador Highway in the winter, procurement of goods from Québec has increased dramatically. DND also stated that procuring goods and services locally makes good business sense, assuming competitive pricing, but it was not bound to do so, if substantial savings could be produced from contracting outside of the area. One example cited

was DND contracting a St. John's asphalt company for airstrip paving because it could piggyback on the company's other work in the area at significant cost savings.

Local outfitters all agreed that their clients are recruited from outside of Labrador and that DND and its Allies do not contribute to their businesses. DND has its own fishing lodge on No Name Lake, where military personnel fish. One local adventure tourist operator stated that the CAF competes with his kayak and canoe rental business by renting out the same equipment at one quarter of the price and by also providing instruction to local people. Although the adventure tourist operator has made presentations to all of the Allies, in five years, only one rental group has come from the RAF.⁸³

7.2.3 Recommendation 18: Avoidance of Non-consumptive Adventure Tourism

Three outfitting and adventure tourism businesses agreed that DND had cooperated fully in altering flight training paths which impinged on their activities in the country. They had not heard of any other operators who had difficulties with the flight training paths.⁸⁴

8.0 RECOMMENDATIONS FOR FUTURE STUDIES

The Terms of Reference for this study requested that the report use "methodology that can be easily repeated for future economic impact studies". The methodology applied throughout has been intended to be self-revealing and explanatory. Should such a study, or component of it, be required in the future, then the relevant section should be consulted. That said, there remain several points that bear repeating or further illumination.

8.1 ECONOMIC BASELINE DATA

The type of data collected was in almost every case identical to that of the 1994 EIS. In many cases, additional columns were added to reflect the additional years of data now available. In the future, such a method can be simply replicated. Much of the data is sourced from Statistics Canada from the general census. Since such data tends to be released around the 2nd or 3rd and the 6th or 7th of each decade, it makes most sense to collect the data immediately following. Therefore, the next such time will be 2003 or 2004.

8.2 INDUSTRY DATA

Industry data, both baseline and impact, took considerable effort to assemble. In most cases, the data is largely constricted to qualitative reporting. For future studies, the best approach is to interview as many key informants within each industry as possible to get as best a picture or impression of the sector as possible.

⁸³ Source: Break Away Adventures Limited

⁸⁴ Source: Break Away Adventures, Minipi Outfitters, Park Lake Lodge

8.3 EXPENDITURE DATA

Despite the best efforts of personnel at 5 Wing Goose Bay to provide needed data in a timely fashion, the collection of expenditure information required considerable effort. Much of this can be attributed to the complete reorganization of the Base, and, hence, what data is kept, where it is kept, who is responsible for its organization, and how and when it is collected (under ASD). The Institute for Environmental Monitoring and Research has the mandate to monitor the effects of 5 Wing Goose Bay on the area, including economic impact. To effectively fulfill this mandate, IEMR must have access to data. In many senses, the data collection exercise for this study informed base personnel as to what information is needed, and in what form it is useful. To run a similar I/O model in the future, the data that is presented in Section 5 and Appendix D must be collected.

There seems to be little to no communication between the Project Management Office in Ottawa and the IEMR for the maintenance of this data, and thus the responsibility for its collection falls to the few military and civilian personnel who remain at 5 Wing. **We strongly recommend that the data needed for this type of study be collected annually as a matter of course; the directive to undertake the initiative ought to come from the highest level required to ensure that those to be tasked to collect the data have the authority needed both to assemble and distribute the information without delay.** All told, the expenditure data output need not exceed a spreadsheet of five or six pages.

8.4 NON-WAGE ECONOMY

Quantifying non-wage economy data is extremely difficult to do with any accuracy. At the very least, it is a time-consuming exercise. Moreover, the task is made all the more challenging with the Labrador Inuit Association and the Labrador Metis Nation withholding data for reasons related to land claims and intellectual property rights. The true and full impact of low-level flying *must* include a consideration of the impact of the non-wage economy. Interviews with key informants who are long-standing participants in this activity are essential to understand the situation as best as is possible.

8.5 ON-GOING MONITORING

The timing of this study coincided with a higher than normal economic activity, particularly regarding construction and real estate, within the Study Area. This was partially the result of former Base employees using their severance packages to buy or construct new homes or upgrade old ones or to purchase large ticket items such as cars or appliances. Also, as a result of recent Base policy decisions, consolidation of Base housing is occurring and some Base personnel are opting to move into the town of Happy Valley-Goose Bay. This is also having a positive effect on the economy. Once this activity has finished, consideration should be given to measuring the on-going economic activity of the Study Area, which will provide a truer long term picture of the local economy.

9.0 CONCLUSIONS

As noted in Appendix D, Table D-3, nine reports over the past 15 years have attempted to quantify the impact of military operations in Happy Valley-Goose Bay. Some have focussed on the allies, others on the Department of National Defence. Some assess the impact on the host community, while others examine the national impact. Studies either assess the base as it was at the time, or the estimated impact with added activity (through the NATO training expansion), or less activity (base reduction). This has ensured that many numbers have been generated, none easily comparable to the others. This study has examined a military base that has undergone radical change first from a cost reduction program, then following the institution of alternative service delivery. Hence, this is the first study that estimates the impact of the base under new circumstances, the impact of which are just now being quantified, let alone understood. This study went considerably further than the provision of the outputs that result from base inputs. The suite of industries were each described in turn, and the effect of the base was estimated. Finally, the non-wage economy was included, as the study conducted dozens of interviews to gauge the importance of activities that are not ordinarily revealed by a straight economic study.

9.1 ECONOMIC SITUATION AND CONTEXT

It is important to recognize the changing circumstances on the Base since the last economic impact statement was prepared on military flight activities (1994). These changes include a downsizing of the Base and an outsourcing of goods and services previously undertaken by DND. Although these changes resulted in the movement of numerous military and civilian personnel away from the area, they also resulted in significant severance packages and movement by locals from the Base to the town of Happy Valley-Goose Bay. This resulted in abnormal economic activity which triggered increased consumer spending on large ticket items as well as home construction and renovation. However, in the longer term, these changes, if examined in isolation from other changes in the Study Area, will result in a decrease in economic activity and a drain of human resources from the Study Area.

While these activities were occurring, other economic stimulators in Labrador and, in particular, the Study Area, were occurring including the promise of the development of both Voisey's Bay Nickel and the Lower Churchill Hydro Projects. The Trans-Labrador Highway and the Red Bay-Cartwright Highway were also announced and partially constructed, resulting in new construction jobs. The Trans-Labrador Highway also resulted in increased volumes of goods and services being transported to and from the Study Area at lower costs. All these factors resulted in increased consumer confidence, which translated into an increase in consumer spending, despite the fact that the military had downsized. Thus, it is important to take all these factors into consideration when assessing the economic impact of the Base on the Study Area as well as on Labrador and Quebec.

9.2 OVERALL ECONOMIC IMPACT

Low level flying activities at 5 Wing Goose Bay accounts for 1,350 person-years of employment in Labrador, adds \$67.9 million to Gross Domestic Product (GDP), and contributes \$21.45 million to government revenues. Considering the whole of the province of Newfoundland and Labrador, 1,728 person-years of employment are created, \$90.1 million is added to GDP, and \$28.5 million is contributed to government revenues.

9.3 PRIMARY INDUSTRIES

The Base has limited economic impact on primary industries because of the limited volume harvested within the Study Area. The exception is forestry, which produces a significant volume in comparison to the other primary industries, and sells it to supply some of the Base's ongoing needs. Additional volume is purchased from the mainland, particularly Quebec. As expected, the I/O model attributes less than 1% of both the sales and employment impact on Labrador to all primary industries.

9.4 SECONDARY INDUSTRIES

The Base has limited economic impact on secondary industries for a similar reason: low production volume. Because of recent downsizing at the Base resulting in one-time severance packages as well as civilians moving off Base, a short-term escalation of residential construction and renovation occurred. However, on-going construction activities on Base have been reduced, which were previously undertaken by Base personnel. In the future, as buildings become older, they will require increased maintenance. Additional Allies could also require new or improved facilities. The model indicates little impact of manufacturing on the economy of Labrador, and only moderately more on that of the Province of Newfoundland and Labrador. By contrast, construction comprises nearly 15% of the sales impact and 12.4% of the employment impact on Labrador.

9.5 SERVICE INDUSTRIES

In the context of the entire economy, the Base has limited direct economic impact on the service industries. However, there are two exceptions: local companies, which have aggressively sought to service the Base and companies, which have targeted military personnel for specific goods and services. As a result of downsizing, the volume of goods and services provided to the Base by local companies has been reduced in some cases, but in other cases it has remained stable, especially for those serving the Allies. Other service industries may not depend on the Base, but it contributes significantly to their profitability. These include the taxi business, local bars and some restaurants. For the most part, they have not seen a significant drop in business. It is also important to remember that although the mix of companies supplying the Base has changed, the private supply and service sector has not been negatively affected as a result of the down sizing, with some exceptions noted in the body of the report.

Of the total economic impact of the base, almost all is felt within the service industry. Trade accounts for 34.9% of the employment impact, while other services (except transportation, communications and utilities) accounts for 44.3%.

Transportation, communications and utilities; finance, insurance; public administration; assistance to business; social infrastructure and services; medical and health services and facilities; and tourism and recreation service and facilities do not depend and, therefore, have not been significantly impacted by the down sizing of military activities in Happy Valley-Goose Bay. They benefit indirectly as a result of a generally prosperous Study Area. The real estate sector has been directly and positively affected as the town readjusts to a new housing mix. Post

secondary education has also been directly and positively affected as the military outsources some of its training and extra curricular needs.

In conclusion, the Study Area grew and developed as a result of the military base. Because of the Base and its demand for services and as a result of its central geographical location, the Study Area grew as a service centre. Today, the Study Area has matured with better transportation networks and with the promise of new resource developments. As a consequence, the military still is an important economic presence and “the glue that holds the area together”, but its economic hold on the region has been lessened.

APPENDIX A

Background Tables

Table A – 1**Employment – All Industries, 1996**

	Nfld. & Labrador	Labrador	Upper Lake Melville	Quebec Study Area
Division A – Agricultural and related service industries	2,130	10	0	205
Division B – Fishing and trapping industries	9,375	300	35	1,355
Division C – Logging and forestry industries	3,300	100	75	1,455
Division D – Mining (including milling), quarrying and oil well industries	4,640	2,225	40	4,815
TOTAL Primary	19,445	2,635	150	7,830
Division E – Manufacturing industries	22,090	565	100	9,785
Division F – Construction industries	17,215	545	210	4,130
TOTAL Secondary	39,305	1,110	310	13,915
Division G – Transportation and storage industries	10,215	690	430	3,195
Division H – Communication and other utility industries	7,300	570	140	2,850
Division I – Wholesale trade industries	8,110	300	135	1,520
Division J – Retail trade industries	31,765	1,750	690	7,945
Division K – Finance and insurance industries	4,250	130	50	1,270
Division L – Real estate operator and insurance agent industries	2,715	80	15	680
Division M – Business service industries	7,320	185	85	1,385
Division N – Government service industries	21,485	2,200	1,615	5,425
Division O – Educational service industries	20,715	1,210	395	5,305

Table A – 1 Continued

Employment – All industries, 1996:	Nfld. & Labrador	Labrador	Upper Lake Melville	Quebec Study Area
Division P – Health and social service industries	26,465	1,000	495	6,350
Division Q – Accommodation, food and beverage service industries	14,045	810	230	5,030
Division R – Other service industries	16,110	985	305	3,705
TOTAL Service	170,495	9,910	4,585	44,660
TOTAL	229,245	16,660	5,065	66,415

Source: Statistics Canada

Table A - 2

Employment 1991-1998, Côte-Nord and Nord-du-Québec (Thousands)								
	1991	1992	1993	1994	1995	1996	1997	1998
Agriculture	*	*	*	2.0	*	*	*	*
Forestry, fishing, mining, petroleum and gas	10.4	7.4	6.8	9.7	4.9	5.0	5.3	4.2
Utilities	*	2.0	1.8	*	2.4	2.5	2.7	*
Construction	3.4	2.3	2.1	2.1	3.4	1.9	2.9	2.1
Manufacturing	9.7	9.2	10.2	10.4	10.1	9.5	8.4	9.9
Total Goods-Producing	25.0	20.9	21.6	25.5	20.8	18.9	19.3	17.5
Wholesale and retail trade	7.4	7.1	6.6	6.9	7.3	7.1	8.5	8.8
Transportation & warehousing	1.9	2.8	2.5	2.4	2.9	3.0	2.2	2.7
Finance, insurance, real estate, renting, leasing	1.5	1.9	2.0	1.7	1.6	1.7	2.0	1.7
Science and technology service professionals	*	*	*	*	*	*	*	*
Management of companies and enterprises	*	*	*	*	*	*	*	*
Educational services	3.4	4.7	4.6	3.3	4.3	3.8	4.5	3.9
Health care and social assistance	4.8	4.7	4.9	4.7	6.7	6.0	5.7	5.0
Arts, entertainment, recreation, information and culture	*	*	*	*	*	*	*	*
Accommodation and food	3.5	3.7	3.5	2.6	3.5	4.3	3.1	4.0
Other Services (except public admin)	2.2	1.9	2.3	2.5	2.0	2.8	3.4	1.9
Public administration	3.6	4.6	4.5	2.8	5.2	4.6	4.4	4.5
Total Service	30.9	33.7	33.1	29.8	36.8	36.4	36.3	35.0
TOTAL	55.9	54.6	54.6	55.4	57.6	55.4	55.6	52.5

* Less than 1,500 employed.

Source: Ministère de l'Industrie et Commerce, Government of Québec

Table A - 3

Major Construction Investment Projects Announced or Current, 1996			
Project	Location	Description	Value (\$ million)
Hydro-Quebec (1994-2001)	Rivière Sainte Marguerite SM-3	Hydroelectric development	2,100
SEBJ (1993-1996)	Laforge-2	Hydroelectric development	855
Hydro-Quebec (1995-2000)	Manic 2	Hydroelectric development	60
Innergex	Sainte-Anne-de-Portneuf		34
Hydro-Quebec (1987-1998)	Bersimis 1	Hydroelectric development	30
Hydro-Quebec	Postes Lemoyne et Tilly	Electric powerlines	14
Innergex	Saint-Paul-du-Nord		13
Developpement Riverain	Les Escoumins	Real Estate project/ development	8
Hydro-Quebec	Baie-Comeau	Construction of central administration	5.5
Port de Sept-Iles	Sept-Iles	Wharf improvements	5

Source: Ministère de l'Industrie et Commerce

Table A - 4

Major Public Service Investment Projects Announced or Current, 1996			
Project	Location	Description	Value (\$ million)
Ministere des Transports du Quebec	De Havre Saint-Pierre a Natahquan	Lengthening of route 138	117
Ministeres des Ressources naturelles du Quebec	Gallix	Construction of an access to the Dam SM-3	58

Source: Ministère de l'Industrie et Commerce

Table A - 5

Major Forestry Investment Projects Announced or Current, 1996			
Project	Location	Description	Value (\$ million)
Domtar (1994-1996)	Lebel-sur Quevillon	Paper mill effluent treatment upgrade	270
Donohue	Baie Comeau	Paper mill effluent treatment	80
Scierie des Outardes	Baie Comeau	Modernization of sawmill	64
Kruger	Manicougan	Factory construction	40
Uniforet	Port Cartier	Paper mill modernization	25
Donahue	Baie Comeau	Paper mill environmental upgrade	22
Donahue	Baie Comeau	Paper mill modernization	20
Uniforet	Port Cartier	Decanting reservoir	14
Uniforet	Port Cartier	Expansion	12
Mishtuk and Domtar	Wasuanipi	Factory construction	5.8
Scierie des Outardes	Rivière aux Outardes	Modernization	5

Source: Ministère de l'Industrie et Commerce

Table A - 6

Major Investment Projects Announced or Current, 1996			
Project	Location	Description	Value (\$ million)
Falconbridge (1995-1997)	Katinniq	Mining infrastructure	486
Corporation miniere Inmet (1995-1997)	Chibougamau	Mining infrastructure	150
Ressources Vogue (1997-1998)	Port Cartier	Factory Construction for refinement (?) or conversion (?)	130
Cambior (1995-1996)	Lebel-sur-Quevillon	Mining Infrastructure	100
Aluminerie Alouetter (1996-1998)	Sept-Iles	Modernization of refinement/ conversion operation	100
Mines et exploration Noranda	Matagami	Mining Infrastructure	84

Source: Ministère de l'Industrie et Commerce

Table A - 7

Quebec Primary Industries		
	Total employment	Value (millions)
1993	7,000	69.69
1994	9,700	128.11
1995	5,000	206.23
1996	4,900 (2,765 in NQ)	233.59

Table A - 8

The Value of Exploration Expenditures of, and Mineral Shipment from, the Province			
Year	Mineral Shipments Value	Exploration Expenditures	Iron ore production (Western Labrador)
1993	\$698,872,000	\$8,905,864	614.4
1994	\$832,325,000	\$12,396,462	743.1
1995	\$881,469,000	\$71,100,000	795.8
1996	\$991,331,000	\$92,546,708	795.3
1997	\$1,010,131,000	\$71,752,000	919.4
1998	\$1,095,795	\$50,868,000	1,026.5
1999	\$832,790,000	\$30,492,699	766.1

Source: Government of Newfoundland and Labrador, Dept. of Mines and Energy.

Table A - 9

Construction

Construction projects (greater than \$50,000) (millions)		
	Upper Lake Melville	Labrador
1993	\$9.8	\$12.4
1994	6.9	-
1995	6.1	3.4
1996	14.5	6.5
1997	20.3	4.7
1998	19.1	31.6
1999	15.6	33.6

Source: Labrador Construction

Table A – 10

Air Passenger Statistics				
Wabush/Goose Bay – Air Passengers Statistics				
Year	Wabush Boarding	Wabush Deplaning	Goose Bay Boarding	Goose Bay Deplaning
1995	14975	15505	24720	23995
1996	11651	11863	24044	23763
1997	10754	10873	20706	19994
1998	13733	14441	24817	24424
1999	20821	22012	24470	24728
TOTAL	71934	74694	118757	116904

Source: Department of Tourism, Culture and Recreation; Planning and Research Division

Table A - 11

Employment Update of Upper Lake Melville Study Area - More than 25 Employees			
Employer	1986	1992	1999
Federal Government			
Canadian Broadcasting Corporation	28	13	16
Canada Post	20	14	28
Dept. of National Defense	411	716	113
Federal Government Depts.	498	55	95
Royal Canadian Mounted Police	60	28	28
Provincial Government			
College of the North Atlantic	52	98	90
Health Labrador Corporation*	147	168	383
Labrador School Board*	375	222	350
Newfoundland Hydro	34	31	31
Paddon Memorial Home*	75	84	
Provincial Gov't Depts.	160	260	233
Municipal Government & Private Sector			
Blizzard Corporation	?	?	28
Burden's Janitorial Services	35	19	0
Canada Catering	50	53	0
Canadian Helicopters	?	?	28
Glenn Corporation (seasonal)	0	0	52
Hudson's Bay/Northern	42	52	0

J.J.'s Trucking (seasonal)	?	?	54
Labrador Airways/Aviation	69	152	112
Labrador Construction (seasonal)	?	?	61
Labrador Inuit Health Commission (North West River)	?	?	50
Labrador Motors	?	?	27
Newfoundland Telephone Company	45	25	29
North Mart	0	0	147
Royal Bank	?	?	27
Serco	0	0	312
Terrington Co-op	30	39	46
Torngat Regional Housing Association	?	?	43
Town of Happy Valley-Goose Bay	40	42	55
Warr's Pharmacy	31	28	25
Woodward's Group of Companies	120	178	237

* formerly Labrador East Integrated School Board and Roman Catholic School Board.

* formerly Grenfell Regional Health Services; now includes long-term care and community services.

* Now incorporated into the Health Labrador Corporation.

Source: HRDC, Labrador City.

Table A - 12

Employment Update of All of Labrador (continued) – More than 25 Employees		
Employer 1999	Town	
Federal Government		
Royal Canadian Mounted Police	Nain	28
Provincial Government		
Churchill Falls Labrador Corporation	Churchill Falls	232
College of the North Atlantic	Labrador City	35
Health Labrador Corporation	Labrador City	134
Royal Newfoundland Constabulary	Labrador City	37
Labrador School Board	Labrador City/Wabush	350
Labrador School Board	Coast	280
Municipal Government and Private Sector		
Carol Wabush Co-op	Wabush	40
IGA	Labrador City	48
Iron Ore Company of Canada	Labrador City	1728
Labrador Inuit Association	Nain	38
Labrador School Board	Labrador City	211
LB Fishermen's Union Co-op (seasonal)	Cartwright	191
LB Fishermen's Union Shrimp Co. (seasonal)	Lanse au Loup	94
LB Fishermen's Union (seasonal)	Forteau	37
LoLo Foods	Labrador City	52
Marshal Industries	Labrador City	30

Table A – 12 Continued

Employer 1999	Town	
Northern Light Inn	Lanse au Clair	40
Northmart Store	Labrador City	48
Pizza Delight	Labrador City	28
Real Ste. Marie Limited	Labrador City	25
Sandwich Bay Timber	Cartwright	28
Smokey Mountain Ski Club (seasonal)	Labrador City	33
Tim Horton's Limited	Labrador City	43
Torngat Fish Producers Co-op (seasonal)	Nain	56
Torngat Fish Producers Co-op Society (seasonal)	Northern Labrador	352
Town of Labrador City	Labrador City	48
Town of Wabush	Wabush	43
Wabush Mines	Wabush	423

Source: HRDC, Labrador City

Table A - 13

Government Departments
<p>The following federal departments are located in the Upper Lake Melville Study Area:</p> <ul style="list-style-type: none">• Atlantic Canada Opportunities Agency• Customs Canada• Correctional Service Canada• Fisheries & Oceans• Human Resources Development Canada• National Defence• Occupational and Environmental Health Services• Transport Canada
<p>The following provincial departments are located in the Upper Lake Melville Study Area:</p> <ul style="list-style-type: none">• Education• Environment and Labour• Development and Rural Renewal• Fisheries and Aquaculture• Forest Resources and Agrifoods• Government Services and Lands• Health and Community Services• Human Resources and Employment• Justice• Municipal and Provincial Affairs• Tourism, Culture and Recreation• Works, Services and Transportation

Table A - 14

<p style="text-align: center;">St. Michael's School</p> <p style="text-align: center;">Information on Military Families and Military Employed Families</p> <p style="text-align: center;">Over the Past Five Years</p>					
Number of Families in the School	Number of CAF & %	Number of GAF & %	Number of RAF & %	Number of RNLAF & %	Number of CIV & %
1995-96					
240	133	4	10	1	92
	55%	1%	4.5%	.5%	39%
1996-97					
254	129	7	14	1	103
	51%	2%	5.5%	.5%	41%
1997-98					
261	102	12	10	2	135
	39%	4%	4%	1%	52%

Key

CAF - Canadian Air Force

GAF - German Air Force

RAF - Royal Air Force

RNLAF - Royal Netherlands Air Force

CIV - Civilian Personnel

Table A – 14 Continued

Number of Families in the school	Number of CAF & %	Number of GAF & %	Number of RAF & %	Number of RNLAF & %	Number of CIV Employed by DND & %	Number of CIV Employed by Serco & %	Number of CIV Employed Elsewhere & %
1998-99							
275	36	7	8	2	7	31	184
	14%	2%	3%	1%	2%	12%	66%
1999-2000							
283	36	9	21	3	7	31	176
	13%	3%	7%	1%	2%	11%	63%

Source: St. Michael's School

APPENDIX B

Information Sources

INFORMATION SOURCES

Accommodation Occupancy Data, Department of Tourism, Culture and Recreation (1995-1999)

Education Statistics, Elementary-Secondary, Department of Education, (1993-1999)

Importance of Native Canadians: Highlights a federal-provincial-territorial initiative by Environment Canada

Handbook of selected agricultural statistics, Government of Newfoundland and Labrador, Department of Forest Resources and Agrifoods

Labrador Auto/Train Exit Survey, Department of Tourism, Culture and Recreation 1995

Newfoundland and Labrador Mining Magazine, Vol. 5, Number 1, Summer 1999

Newfoundland and Labrador Air Exit Survey, Department of Tourism, Culture and Recreation (1997)

Newfoundland and Labrador Auto Exit Survey, Department of Tourism, Culture and Recreation 1997

Newfoundland and Labrador Construction Association Newsletter, January 21, 2000

Strategic Economic Plan: Zone 3, Central Labrador Economic Development Board Inc. (1997)

Technical Report 14, Economic Baseline, EIS: Military Flight Training, January 1994

The Economic Review, Economics and Statistics Branch, Department of Finance

The Economy 1999, Economics and Statistics Branch, Department of Finance

Travel/Tourism Indicators for Newfoundland & Labrador, Department of Tourism, Culture and Recreation (1997-1999)

Voisey's Bay Mine/Mill Project, Environmental Impact Statement, June 1, 1998

Note: A list of previous quantitative evaluations of 5 Wing Goose Bay are found in Appendix D

APPENDIX C

Baseline Information

Service Industries

BASELINE INFORMATION

SERVICE INDUSTRIES

Finance, Insurance and Real Estate

In the Study Area, two banks, one credit union, four financial agencies and two loan companies are directly involved in finance/lending; three are involved in insurance and four in real estate. A third bank has apparently bought land in the Study Area and credit unions have recently become involved in commercial lending. Two banks, one credit union and one loan company are located in Labrador West; one bank in Churchill Falls and one bank in Nain. Five insurance and three real estate companies are located in Labrador West.

Between 1993-1999, one lending institution reported an increase in loans throughout Labrador for business ventures.⁸⁵ Loan transactions have remained stable in the Study Area, decreased in Western Labrador and increased on the coast. The nature of loans has changed as a result of improved transportation. With less reliance on shipping and lower transportation costs, more people are moving into business ventures.

One loan company indicated a default rate of approximately 10%, a slight increase over recent years. However, loan defaults have not been attributed to the delay in the development of Voisey's Bay Nickel. Most of this activity originated in St. John's, with the Study Area being used primarily as a change point for people going north. Companies such as Woodward's have been the primary benefactors of this activity.

Since 1993, real estate activity has significantly increased, despite the population of Happy Valley-Goose Bay increasing by only 0.5% between 1991-1996 (8,610 to 8,655). Until 1996, one licensed real estate agent operated in the Study Area. As a result of an increase in housing activity⁸⁶, two other real estate agencies opened. Nonetheless, the initial agent has almost doubled business since 1993. The town has no immediate plans for development of additional sub-divisions, but it does have 20 housing lots for sale, 25 other lots have been purchased, but not yet developed and a local developer has 45 mini-homes lots for sale. An industrial park, located on the north side of the base, has yet to be developed. Demand for new housing has flattened as a result of recently built houses containing apartments. For the first time in many years, this has helped lower the waiting list for housing units owned by the Newfoundland and Labrador Housing Corporation.⁸⁷

The real estate market is expected to be buoyant for many years to come, especially if either or both the Lower Churchill hydro development or Voisey's Bay Nickel project is developed. If Voisey's Bay does eventually proceed, it is anticipated that new housing will be required for people working at the mine site. Some will move in from the coast to take advantage of their increased spending power and others will choose to relocate to the Study Area because of its housing, shopping and recreational amenities.

⁸⁵ Source: Labrador Community Development Corporation

⁸⁶ For an analysis of this increased housing activity, see Section 6.3.3.

⁸⁷ Source: Newfoundland and Labrador Housing Corporation

In Labrador West, the real estate market has experienced increasing growth as a result of company personnel buying since the 1970s and, therefore, selling homes previously owned by the iron ore companies. As a result of increased production and iron ore prices, and expansion into other minerals, Labrador West is experiencing a level of economic stability previously unknown. Despite IOCC reducing its workforce by approximately 500 within the next two years, the establishment of the Mining Centre of Excellence will mitigate some of the impact of people retiring elsewhere. The Centre provides an opportunity for young people to alternate schooling with work-terms at the iron ore companies, resulting in new hires and, therefore, a demand for housing. The two towns anticipate a possible housing shortage and have made provisions for future sub-divisions beyond in-fill.

Newfoundland and Labrador

In 1999, retail sales in the province increased 6.1% from the previous year, up 3% from 1997. The 1999 St. John's Board of Trade member survey indicated that business confidence was high in the province. Statistics Canada's 1999 help wanted index for Newfoundland, at its highest level in eight years, suggested that many firms wanted to expand and hire more workers. In 1999, strong economic growth, with real GDP up 5%, was a result of a record year for the fishing and tourism industries as well as increased oil related activity, construction spending and newsprint production. These same sectors are anticipated to grow in 2000 as are manufacturing and information technology, which will result in continued retail and service sector growth. St. John's and towns having productive fishing or newsprint operations are the most likely centres to experience this growth.

Québec

In 1997, the Ministère de l'Industrie et du Commerce reported 30 wholesale and 124 retail operations in Nord-du-Québec employing 1,890 individuals, and 111 wholesale and 523 retail -Nord employing 6,750 individuals. For the same year, 34 Finance, Insurance and Real Estate enterprises were listed in Nord-du-Québec, employing 415 individuals, and 160 were found in Côte-Nord, employing 1,435 individuals.

Public Administration

Happy Valley-Goose Bay is the largest incorporated area in the province with 308 km² encompassing CFB Goose Bay, the airport, the north side industrial park and residential areas.⁸⁸ A mayor, deputy mayor, five councilors and a town clerk administer the town, which employs 10 administrative staff, 32 permanent outside workers and approximately 40 seasonal workers. Happy Valley-Goose Bay's town plan was completed in 1988 and is currently under review. The tax rate is 9.5% residential and 10.5% commercial with an additional \$350 sewer rate charged per home or business and a metered rate for hotels/large businesses. Sheshatshiu has a population of 1,175 and is an unincorporated Innu community administered by a Band Chief and Council and Band manager. It employs 85 people full-time and approximately 20 part-time.⁸⁹ North West River is the oldest community in the Study Area, was incorporated in 1969, has a population of 567 and is administered by a mayor and council, and has two employees. Mud

⁸⁸ Source: Strategic Concepts 1994

⁸⁹ Source: Sheshatshiu Innu Band Council

Lake, across the Churchill River from Happy Valley-Goose Bay, is also an old community, is unincorporated and is administered by a volunteer committee.

The municipalities depend upon residential, retail, commercial and industrial taxes, provincial grants and subsidies and, in the case of Sheshatshiu, federal grants and subsidies. In addition, Happy Valley-Goose Bay receives payment-in-lieu-of-taxes from the federal government on behalf of CFB Goose Bay. In 1992 the amount was \$960,000 and in 1999 it was \$940,000. As a result of the Base and its central location to other Labrador communities, the Study Area continues to be an important government service centre. However, as was the case in 1993, the trend continues of downsizing of certain government departments and agencies. In 1986, 78% of employees who worked for firms or institutions with a payroll of twenty or more were civil servants; in 1992 that percentage had dropped to 73% and in 1999 it had further dropped to 30%. Furthermore, in 1999, civil servants represented only 20% of all employees in the Study Area.

Significant government related changes that have occurred in Labrador since 1993 include: downsizing of most federal and provincial departments, reorganization of the educational system into one Labrador School Board and reorganization of the health system into one health Labrador Corporation. In addition, the number of economic development agencies has decreased.⁹⁰

In 1998, 4,500 people were employed in the public service in the Quebec Study Area.⁹¹

Assistance to Business

In the Study Area, the Atlantic Canada Opportunities Agency (ACOA) and Human Resources Development Canada (HRDC) as well as the Department of Development and Rural Renewal and Human Resources and Employment are the two major federal and provincial agencies, respectively, which provide support to business and employment. In addition, the Labrador Community Development Corporation, the Central Labrador Economic Development Board, the Innu Economic Development Corporation, the Labrador Metis Nation and the Labrador Inuit Development Corporation provide support to business development. As well, several community organizations promote the region including the Labrador North Chamber of Commerce, the Lake Melville Tourism Association, and the Economic Development office of the town. Nonetheless, fewer economic development agencies exist now than in 1993 reflecting the change in both the federal and provincial government towards less duplication and a more integrated approach to economic development.

The Canada/Newfoundland Comprehensive Labrador Subsidiary Agreement, which focused on the economic development and infrastructure needs of Labrador, ended in 1997. No special federal/provincial agreement now exists for Labrador. Requests for business/economic development initiatives are now directed to the Canada/Newfoundland Comprehensive Economic Development Agreement, a five-year program that began in 1997, and the Canada/Newfoundland Labour Market Development Agreement, signed in 1997. The Central Labrador Economic Development Board has the responsibility for preparing and implementing strategic economic development plans for the region. If funds are required for economic development programs, proposals are submitted to one of these Agreements. The Fisheries Response and Adjustment Measures (FRAM) agreement is targeted at coastal Labrador.

⁹⁰ For a list of government agencies, see Table A 13.

⁹¹ Source: Ministère de l'Industrie et Commerce

Between 1996-1998, a total of 87 projects were funded in central Labrador by public sector lending institutions for a total value of \$2,790,181. The manufacturing sector had the greatest number of projects funded (18) and received the largest amount of money (\$670,387).⁹²

Social Infrastructure and Services

Human Resources Development Canada maintains a Human Resource Centre in Happy Valley-Goose Bay to service the Study Area. The Centre, with its staff of 36, assists clients with Employment Insurance inquiries and applications and provides a full range of programs and services. Since 1993, unemployment in the Study Area has remained constant at about 18%. However, the rate has decreased in Happy Valley-Goose Bay, but has increased in North West River and Sheshatshiu.

The unemployment rate in Labrador West continues to increase as a result of job stabilization and few opportunities. However, a significant portion of employees at both IOCC and Wabush Mines are due to retire in the next two years, which will result in new opportunities for appropriately educated and trained individuals.

Medical and Health Services and Facilities

The Health Labrador Corporation (HLC), located in Happy Valley-Goose Bay, administers health care for all of Labrador. In the Study Area, the Corporation administers the Melville Hospital, Community Health Services, dental services, the Paddon Memorial Home and public health services. The most significant change since 1993 is the reorganization of health care in Labrador, as well as throughout the province, into regional health boards. These boards have acquired new health related responsibilities including addictions services, child youth and family services. The referral pattern in Labrador has also changed with patients being sent to St. John's rather than St. Anthony as in the past. There has been no increase in staff, doctors, nurses or caseloads, other than those who came as a result of restructuring. The 36-bed hospital is located on the Base, but will be moving into a new facility in Happy Valley-Goose Bay in 2000.

HLC also operates the Captain William Jackman Memorial Hospital in Labrador West and nine nursing clinics in Nain, Hopedale, Davis Inlet, Makkovik, Postville, Rigolet, Churchill Falls, Cartwright and Black Tickle. It also provides addictions, mental health and public health services in Cartwright, Churchill Falls, Labrador West and Black Tickle. In aboriginal communities, HLC provides only clinical services; aboriginal groups provide community services.

The 1996 census reports that 6,350 were employed in the health and social service industry; by 1998, the Ministère de l'Industrie and Commerce reports that this number had fallen to 5,000.

⁹² Source: Central Labrador Economic Development Board

Educational Services and Facilities

Until the 1996-97 school year, the province operated under a denominational system. In the Upper Lake Melville Study Area, three schools were operated by the Labrador Roman Catholic School Board and six were operated by the Labrador East Integrated School Board. As a result of the dissolving of the denomination education system within the province and the resulting reorganization into the District 1 (Labrador) School Board during the 1996-97 school year, seven schools now operate in the Upper Lake Melville Study Area: four schools in Happy Valley-Goose Bay; one elementary school in Mud Lake; one all grade school in North West River and one all-grade school in Sheshatshiu. In the Study Area, the school age population has remained relatively constant between 1993-1999 at approximately 2,400 students, only dropping in 1998-99 to 2,293 students.

The College of the North Atlantic (CONA) has a campus in Happy Valley-Goose Bay, which employs 50 people and has more than 230 students. An extension division operates out of North West River and employs 17 people and 30 are employed in Labrador West.

CONA offers a number of programs related to trades, business, technology and early childhood education. In addition, Compu College School of Business offers diplomas in business related programs. Memorial University operates the Labrador Institute and offers programs through distance education.

For Labrador as a whole, the school population has continued to decrease each year. However, until 1998-1999, the percentage decrease in the number of Labrador students was the lowest in the province. Last year it was the third lowest out of 10 school districts. The school population for all of Labrador was 5,983 in 1995-96 and 5,516 in 1998-99. Of the total Labrador school age population, the Study Area has approximately 42% and Labrador has 35%. The remaining 23% attend school in the approximately 20 coastal Labrador communities.⁹³

The 1996 general census reports that 5,305 were employed in the educational services sector in the Quebec Study Area. Provincial estimates indicate 3,800 in 1996, and 3,900 in 1998.

Tourism and Recreation Services and Facilities

Labrador

In the Study Area, the number of hotels and bed and breakfasts has not significantly changed since 1993. However, hotel room nights available and their occupancy rate has continued to drop since 1995 from a high of 51,454 rooms available per night in 1996 and an 44.77% occupancy rate to a low of 12,693 rooms available per night in 1998 and a 45.52% occupancy rate.⁹⁴ Nonetheless, compared with the rest of Labrador, the Study Area has shown the least fluctuation. In the rest of Labrador, the number of hotel nights available and their occupancy rate has fluctuated depending on regional activities. In no case has any of the five zones experienced an occupancy rate above 50% in any one year with the exception of Zone 4 (Mary's Harbour to Cartwright) in 1999 (52.34%) and Zone 1 (Rigolet to Nain) in 1996 (50.08%). Labrador deplaning passengers has remained relative stable.⁹⁵ Labrador West visitation has continued to increase

⁹³ Source: Education Statistics – Elementary-Secondary, 1993-99.

⁹⁴ Source: Department of Tourism, Recreation and Culture, Planning and Research Division

⁹⁵ See Section 3.4.1.

by car (1,520 visitors signed the visitor information centre guest book in Wabush between June and August 1999, an increase of 45% over the level reported in 1998), but the number of motorcoaches has dropped from 10 to five, between 1998 and 1999.

Significant changes since 1993 include the completion of the Trans-Labrador Highway, the development of the Labrador Winter Trails, restoration and opening of Battle Harbour as a tourism destination and a small increase in the number of cruise ships visiting selected Labrador ports. Other changes include an end to the Comprehensive Labrador Subsidiary Agreement (1997) and its tourism component as well as end to Destination Labrador, a 7-year (August, 1990-December, 1999) marketing effort. Future changes include the completion of the road from Red Bay to Cartwright and a groomed winter trail system connecting the Labrador Straits with the south coast of Labrador and Central Labrador with routes to Western and Northern Labrador. The latter will cost approximately \$5.6 million, which is to be spent between 1999-2002 and will result in approximately 470 jobs.⁹⁶

Wilderness and adventure tourism has increased throughout the province as well as in Labrador. Approximately 46 outfitters offer hunting and fishing trips in Labrador, an increase of approximately 84% since 1994. One new high-end fishing lodge on the Eagle River has contributed significantly to the profile and interest in Labrador outfitting.

Newfoundland and Labrador

For the province as a whole, hotels achieved an occupancy rate of 70% between January and September 1999, up from 63% recorded the previous year as well as a 5% higher daily rate for the same time period (\$85.94 compared to \$82.03).

Deplaning air passengers for the Province as a whole has gradually increased and charter air traffic, which is primarily used by tourists, has continued to increase in the province.⁹⁷

The number of visitors to the province has continued to increase for the third consecutive year to an approximate 400,000. This increase is due to increased visibility through such special celebrations as Cabot '97, Soiree '99 and the upcoming Viking 2000.

The value of the Newfoundland nature related industry including recreational and tourism activities is \$193.7 million, which represents 9% of total Canadian expenditure by participants in nature-related activities. The average expenditure by Newfoundland participants in nature-related activities in 1996 was \$519, \$30 less than the Canadian average.⁹⁸

Quebec

Information regarding the outfitting industry for the Quebec region within the overall study area was difficult to obtain. Approximately 90-100 individuals are employed in northeastern Quebec and approximately 3000 visitors come to the region annually to hunt and fish. The price per week ranges between approximately \$2500-4000 per person. The industry is stable, but hunting could

⁹⁶ Source: Department of Development and Rural Renewal

⁹⁷ Source: Department of Development and Rural Planning.

⁹⁸ Source: Environment Canada, "The Importance of Nature to Canadians: Highlights"

experience a decline due to the age of the traditional hunters. East of the George River there are very few outfitters.⁹⁹

⁹⁹ Source: Denise Geoffrey, Naskapi Nation

APPENDIX D
Input-Output Models

INPUT-OUTPUT MODELS

General Description

Input-output or inter-industry analysis was developed by W. Leontief during the 1930s. The input-output method is an empirical representation of a general theory of production based on the notion of economic interdependence. Leontief's original table shows how each sector of the economy depends upon every other sector, either to supply its inputs or to purchase its outputs. This is still the basic characteristic of all input-output models.

Today, input-output tables are available for over fifty national economies, and the number of regional and local input-output tables is growing at a rapid rate. The development of computers and efficient computational methods permits a great deal of industrial disaggregation, providing a great deal of detail on the economic transactions that occur within a local economy, as well as offering some understanding of how demand shocks are transmitted throughout the economy.

In an input-output model each industry in the local economy is dependent upon every other industry for the supply of intermediate goods. Industry production functions are linear and inputs must be used in fixed proportions. (In other words, economies and diseconomies of scale are not permitted.) The other generally strict assumption of input-output models is that prices and wages are fixed, and the supply of both intermediate goods and final goods is unlimited.

Main Uses

In general, the input-output model has three distinguishable but related applications. These are impact analysis, structural simulation, and final demand conversion. Only the first of these is relevant for the analysis of compliance related expenditure.

The basic question traditionally asked in economic impact analysis is "what are the gross-output and income flows associated with a specified economic change?" An input-output model provides the answer by tracing the transmission of a demand shock throughout the economic system. The impacts are usually estimated in terms of increases in industry output, incomes earned by resource owners and employment.

As mentioned earlier, the models are not supply-oriented. They omit any consideration of pressures on resources, production bottlenecks, or input restrictions. In other words, an input-output model will not identify any negative aspects associated with the impact of a development project. The fixed price assumption and the lack of a dynamic time frame preclude any assessment of inflation impacts.

Two versions of the input-output model have been developed. In an open model the household incomes generated in the production process are not re-spent. In other words, they are treated as leakage from the system. Only the inter-industry spending effects are analyzed. Alternatively, in a closed model, incomes generated in the production process are spent on goods and services, taxes and savings. The closed variant is generally closed with respect to the household sector. Hence, incomes generated by final demands are re-spent by the household

sector on consumer goods and services, and taxes, or are saved. In the closed model, personal income taxes and savings are leakages from the household sector.

Conceptual Issues

The major conceptual problem associated with input-output modelling arises from the assumption of linear production functions. These imply that any changes introduced into the system cause an equiproportionate increase or decrease in the existing levels of resource use. The consequence, as mentioned above, is that linearity implies the absence of scale economies, which runs contrary to much of the theory underlying regional and urban economics and industrial organization.

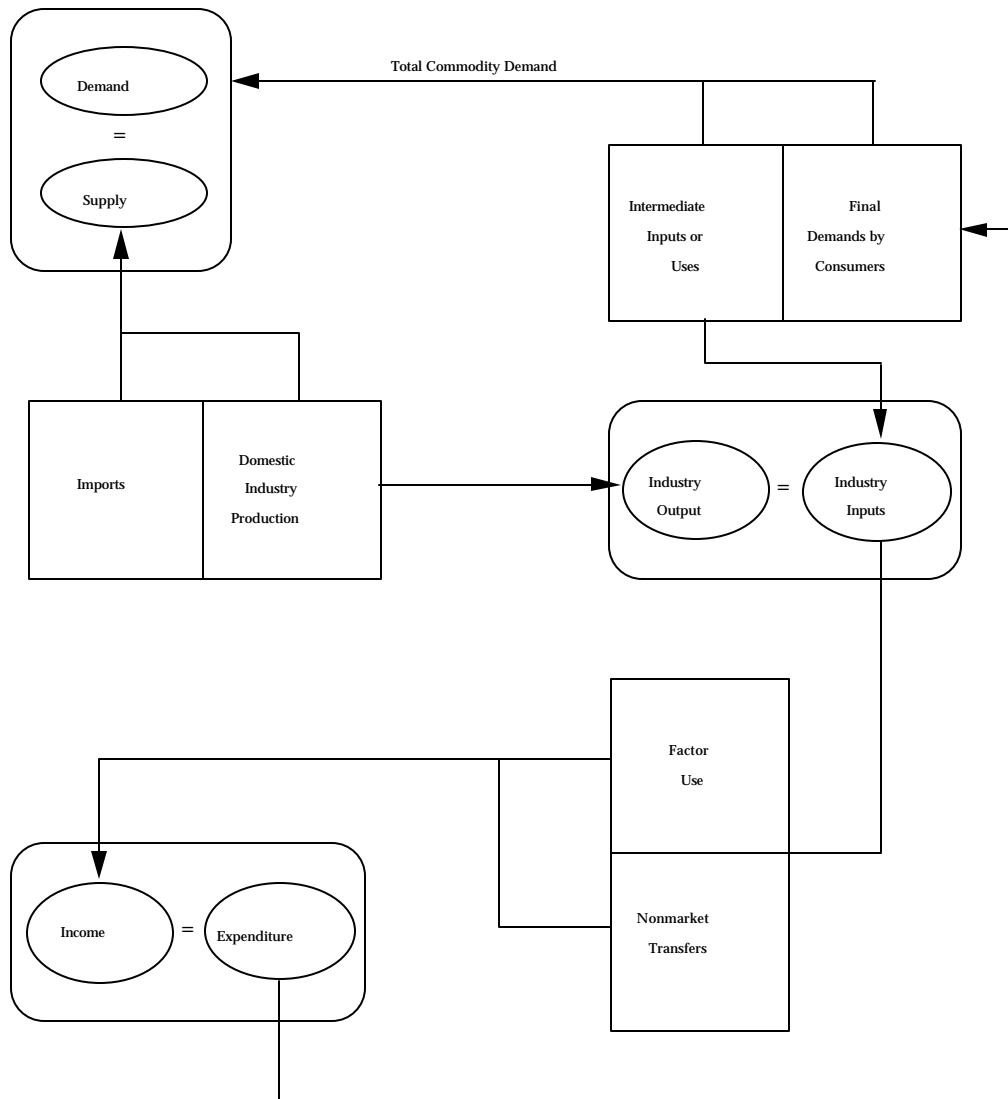
The technical coefficients that describe inter-industry transactions are assumed to be constant. This makes it difficult to represent technological change and productivity adjustments in the system. As well, the models are static and are therefore unable to deal with changes over time in their analysis.

For those models that are capable of dealing with the problem, the impact of a change in regional structure is difficult to assess because it is equivalent to adding a new row and column to the input-output table. This may necessitate calculating a number of new coefficients and possibly considerable data collection. This is not an issue for compliance analysis since spending for compliance related goods and services is placed in existing industries.

Summary

In sum, input-output analysis is based on the premise that there is an economic interdependence of each industry in the economy upon every other industry. A production process links the inputs of an industry to the corresponding output, and the supply of inputs to the production process is assumed to be perfectly elastic. The ultimate goal of the input-output model is to trace the transmission of demand through the economy. Figure D-1 illustrates the flow through an input-output model.

Figure D-1: General Schematic of an Input-Output Model



The input-output model is capable of carrying out three types of economic applications: impact analysis, structural simulations, and the conversion of final demand. A principal drawback of the model is its static nature. As a result, the model cannot examine industrial relationships through time. In addition, because the process of updating an input-output model is often a time consuming and expensive process, the model's coefficients may be historically valid but an inaccurate description of the current economy.

Expenditure Data from 5 Wing Goose Bay

Over a period of several months, from November 1999 to March 2000, expenditure data from 5 Wing (Department of National Defence, Serco and the Allies) was collected for input into the I/O model. Also provided is the commodity group to which each expenditure is assigned. Wherever possible, data for the 1999/2000 year was used, and where unavailable, budget numbers were used instead. All amounts are in 1999 Canadian dollars.

Table D-1 Expenditure Data, 5 Wing Goose Bay, 1999-2000

	\$M	I/O Commodity	Comments
Employment			
1 Military	91		
2 Civilian (public funds)	24		
3 Civilian (Nonpublic funds, Full time)	25		
4 Civilian (Nonpublic funds, Part time)	35		Total part time =65; this is estimated at 35 FY. Assumed that PT employees work either something less than FT during a week, or are employed only during the flight season (April-Oct.)
5 Serco	312		
6 Allied permanent	244.5		As personnel are in HVGB on average of 7 months out of 12, total personnel of 419 is equivalent to 244.5 full year.
TOTAL	731.5		FY equivalent.
7 Allied transient (estimated)	8,000		At Goose Bay on average two weeks.
Annual Budget (wages)			
8 Military Employee Wages	6.7	599	
9 Travel Allowance, Military employees	0.451	530	
10 Civilian Employee Wages	0.8	599	
11 Travel Allowance, Civilian employees	0.11	530	
12 Non-public Fund Employee Wages		Omit	Wages result from expenditure of military, civilian and allied wages already captured. Amount: \$1.187
13 Allied (permanent)	7.271171	599	Assumes same estimated salary as 1992 study (\$40,777), adjusted for inflation to \$45,059. This gives a total of \$11,016,925. Estimated at 33% of gross is immediately removed from Canada to the home country for taxes, savings and other non-Canadian expenditures.
Sub-total	15.33217		
Transient Spending			
14 Allied (transient)			Includes all spending (on-base and off-base), using same estimates as 1992 study for total amount spent, and variety of goods purchased. All numbers adjusted to current (1999) value. Numbers include TOTAL SPENDING, not the margin.
RAF	0.496725		34% to 571; 22% to 570; 44% to 553
GAF	3.315		20% to 571; 20% to 570; 10% to 544; 50% to 553
RNLAF	0.62157		20% to 571; 20% to 570; 10% to 544; 50% to 553
Sub-total	4.433295		

Table D-1 (continued)

Serco Contract				
15	Management	3.845894	576	Catch all for accounting services, mail delivery, health and safety, VIP visit arranging, etc.
16	Supply	0.852924	550	Strip wholesale margin. Supply refers to all consumable goods (I.e. lightbulbs, paper towel, etc.)
17	Aviation Weather Services	0.855843	576?	
18	Air traffic control services	1.292505	576?	
19	Transient services	0.802006	532?	All services and supplies to transient aircraft (refueling, de-icing, garbage disposal, etc.) Handled by Woodwards.
20	Telecommunications	0.574513	544	
21	Airfield communications maintenance	0.886623	532?	
22	Fire Protection	1.7375	599	Assumed to be wages. The total of this line item (\$2,316,667) assumes that 25% is equipment from outside region with no markup, and is thus removed.
23	Transportation maintenance	1.083631	550	The total of this line item (\$1,444,841) assumes that 25% is equipment from outside region with no markup, and is thus removed.
24	Security	0.814153	576	Subcontract to Commissionaires
25	Food services	2.868681	570	
26	Billeting	0.1523	569	
27	Janitorial	0.993049	576	
28	Utility management	0.15154	599	Operation of CHPP - assumed to be all wages and salaries.
29	Electrical generation		Omit	Supplemental power. Value: \$0.000238
30	Auxiliary power	0.267461	?	Direct impact. Produced on base (not from grid).
31	Electrical distribution	0.370208	50% to 546; 50% to 574	(to increase labour component of item)
32	Storm and Sanitary systems	0.321863	549	
33	CHPP generation and distribution	0.764446	549	
34	Potable water		Omit	Value: \$0.000657
35	Solid waste collection and disposal	0.128174	549	
36	Building and facility engineering	1.376944	566	
37	Building and facility maintenance	3.223406	70% to 524; 30% to 523	
38	Airfield, R & G Maintenance	1.834282	541	
39	Hazardous waste management	0.40095	549	
40	Performance fee		Omit	Up to \$1 million; actual amount is subject to considerable debate; treated as profit and as such will disappear from the local economy.
41	Indefinite quantity		Omit	Amount above or below agreed price, as determined by actual use of goods and services. Budgeted allowance of \$0.8801566. Actual amount not yet determined.
	Sub-total	25.5989		
CCC Contracts				
42	Janitorial RAF	0.293706	574	
43	Janitorial GAF	0.34973	574	
44	Janitorial RNLAf	0.391334	574	
	Sub-total	1.034771		

Table D-1 (continued)

Construction			Includes estimate for last quarter of FY 199/00, using data from preceding 3 quarters and FY 1998/99.
45	Construction (Serco)	1.416464	524
46	Construction (DCC)	4.173266	87% to 525; 10% to 524; 3% to 523
47	Construction (DCC for CFHA)	1.94357	523
	Sub-total	7.5333	
Percentage determined using list of Goose Bay Construction and Maintenance Projects larger than \$200,000 from Infrastructure and Project Status Reports (Common, Shared and Allied dedicated projects), FY 1993/94 - FY 1999/00.			
Contracts			
48	Fuel, aviation	13.2	Strip wholesale margin and maybe transportation margin (?)
49	Liquid Oxygen	0.7	417 or ? Produced locally.
50	Electricity	4.5	546 From the grid.
51	Fuel - CHPP	1.5	396 CHPP: Central Heating Power Plant. Steam system. Contract with Esso to provide #2 heating oil. Strip wholesale margin and maybe transportation margin?
52	Payments in lieu of taxes	0.94	598 (?) Paid directly to town of HVGB
53	Other contract costs	2.2	? Information forthcoming
	Sub-total	23.04	
54	TOTAL (\$ million)	\$76.97	1999 dollars

Input/ Output Results

The above expenditure data was fed into the Input/ Output model, producing the following results.

Table D-2

ECONOMIC IMPACT OF 5 WING GOOSE BAY						
	Open Simulation		Closed Simulation		Total Impacts	
	Indirect Impacts		Induced Impacts			
	Labrador	Newfoundland	Labrador	Newfoundland	Labrador	Newfoundland
Gross production (sales)						
AGRICULTURE	\$0.00	\$0.16	\$0.02	\$0.76	\$0.02	\$0.92
FORESTRY	\$0.02	\$0.02	\$0.06	\$0.07	\$0.08	\$0.09
FISHING	\$0.08	\$0.09	\$0.15	\$0.17	\$0.23	\$0.26
OIL, QUARRIES	\$0.00	\$0.62	\$0.00	\$0.07	\$0.00	\$0.69
MANUFACTUR.	\$0.08	\$2.36	\$0.10	\$3.60	\$0.18	\$5.96
CONSTRUCTION	\$8.33	\$10.03	\$5.12	\$6.18	\$13.45	\$16.21
TRANSPORT.	\$0.68	\$1.61	\$0.46	\$1.07	\$1.14	\$2.68
COMMUNICAT.	\$0.92	\$1.26	\$1.67	\$2.28	\$2.59	\$3.54
ELECT., UTILIT.	\$3.57	\$5.95	\$1.40	\$2.33	\$4.97	\$8.28
WHOLESALE TR	\$0.09	\$0.74	\$0.14	\$1.07	\$0.23	\$1.81
RETAIL TRADE	\$1.85	\$2.52	\$6.27	\$8.51	\$8.12	\$11.03
FINANCIAL	\$0.72	\$1.26	\$4.19	\$7.27	\$4.91	\$8.53
SERVICES	\$2.52	\$5.34	\$3.78	\$7.99	\$6.30	\$13.33
TRANSP.	\$0.16	\$0.19	\$0.16	\$0.24	\$0.32	\$0.43
OPERATING	\$0.63	\$0.75	\$0.59	\$0.89	\$1.22	\$1.64
TRAVEL	\$0.64	\$0.75	\$0.74	\$1.11	\$1.38	\$1.86
OWNER OCCUP.	\$0.00	\$0.00	\$2.87	\$3.86	\$2.87	\$3.86
ROYALTIES	\$0.19	\$0.22	\$0.03	\$0.06	\$0.22	\$0.28
HOUSEHOLDS	\$0.00	\$0.00	\$42.15	\$56.65	\$42.15	\$56.65
TOTAL	\$20.48	\$33.87	\$69.90	\$104.18	\$90.38	\$138.05
Total Direct Expenditures \$75.94 Million						

Table D-2 (continued)

Employment, Person-years	Newfoundland		Labrador		Total	
	Labrador	Newfoundland	Labrador	Newfoundland	Labrador	Newfoundland
AGRICULTURE	0.0	0.3	0.1	1.7	0.1	2.0
FORESTRY	0.1	0.1	0.3	0.4	0.4	0.5
FISHING	0.5	0.6	1.0	1.2	1.5	1.8
OIL, QUARRIES	0.0	0.0	0.0	0.0	0.0	0.0
MANUFACTUR.	0.5	15.4	0.8	25.4	1.3	40.8
CONSTRUCTION	51.4	61.9	32.9	39.6	84.3	101.5
TRANSPORT.	4.0	9.4	5.5	12.8	9.5	22.2
COMMUNICAT.	8.4	11.4	16.6	22.8	25.0	34.2
ELECT., UTILIT.	13.6	22.7	5.4	9.0	19.0	31.7
WHOLESALE TR	1.3	10.3	2.0	15.1	3.3	25.4
RETAIL TRADE ¹	92.2	107.3	141.6	192.6	233.8	299.9
FINANCIAL ²	6.2	10.9	35.8	61.7	42.0	72.6
SERVICES	172.2	241.6	86.1	182.3	258.3	423.9
TOTAL	350.4	491.9	328.1	564.6	678.5	1056.5
Direct Employment in Newfoundland is 671.5 PYs						
The 671.5 PYs in Direct Employment includes: 335.5 Military, 24 civilian, 312 Serco						
¹ Includes 50 NPF employees.						
² Includes: 60 PYs for janitorial and other contracts, 40 PYs for refuelling contract, 10 for NPF employees						
Gross Domestic Product						
	Labrador	Newfoundland	Labrador	Newfoundland	Labrador	Newfoundland
TOTAL	\$4.00	\$4.80	\$18.61	\$39.97	\$67.90	\$90.06
Direct GDP in Nfld.: \$45.29 million						
Government tax revenues						
	Labrador	Newfoundland	Labrador	Newfoundland	Labrador	Newfoundland
Federal	\$3.73	\$4.48	\$7.95	\$11.02	\$11.68	\$15.50
Provincial	\$4.30	\$5.17	\$5.47	\$7.79	\$9.77	\$12.96
TOTAL	\$8.03	\$9.65	\$13.42	\$18.81	\$21.45	\$28.46

Previous Quantitative Evaluations of 5 Wing Goose Bay

This section compares past studies on the impact of military activity on the Happy-Valley-Goose Bay area. Table D-3 summarizes the bibliographic information of each report and the type of evaluation done.¹⁰⁰ Table D-4 provides a more detailed breakdown of major report findings in several key impact areas. Since the level of military activity varies (training flights, staff size, etc.), the size of expenditure (and hence impact) varies as well.

Table D-3

Date	Author	Affiliation/ Commiss'd	Report Title	Impacts Studied	Abbrev. Title
1986	M. Lebreton	DND (ORAE 395)	The Socio-Economic Impact of Present and Future Military Activities in the Happy Valley-Goose Bay Region	Economic employment. I/O model used.	Lebreton 1986
1987	M Lebreton	DND (ORAE 418)	The Economic Impact of Allied Training in Canada	Economic employment.	Lebreton 1987
1989	Stone and Webster Canada	Dept. of Regional Industrial Expansion	Assessment of Economic Benefits Associated with Expansion of Military Activities in Goose Bay	Economic employment. I/O model used.	S&W 1989
1992	T. Wait, L Parai, M Rodgers, B. Solomon	DND (ORAE 583)	The Socio-economic Impacts of Military Installations on their Host Communities: Individual Assessments	Economic impacts of O&M and wages.	Wait 1992
1993	B. Orok	DND (ORA 641)	The Socio-economic Impacts of Allied Training in Canada	Economic employment.	Orok 1993
1993	Gardner Pinfold Consulting	DND	Technical Report: Economic Impacts of Low-Level Flying Activities, Goose Bay EIS	Economic employment. I/O model used.	GP 1993
1994	Strategic Concepts Inc.	Town of HV-GB	Happy Valley-Goose Bay: A Community Profile	Economic employment. I/O model used.	SC 1994
1994	T. Wait, D. Lalonde	DND (ORA 683)	The Socio-economic Impacts of Military Installations on their Host Communities: Updated Individual Assessments	Economic impacts of O&M and wages.	Wait 1994
1995	L. Parai, B. Solomon,	DND (ORA 9501)	The Socio-economic Impacts of Allied Military Training at CFB Goose Bay on	Economic employment. I/O	Parai 1995

¹⁰⁰ The Canadian Environmental Assessment Agency issued "Military Flying Activities in Labrador and Quebec: Report of the Environmental Assessment Panel" in 1995. It is not included as it used impact estimates contained within other reports analyzed here.

D. Lalonde 9501)

the Canadian Economy

model used.

Table D-4

Title	Inputs		Direct, Indirect and Induced Impacts			Comments
	Base Employment (person years)	Expenditures (millions)	Measurement tool	Employment (person years)	Income (millions)	
Lebreton 1986	DND: 275. Civilian (inc. NPF): 136. Allied permanent: 112. Transient: 5,500.	1985/86 budget: \$19.6 (of which \$12.0 is wages and salary and \$0.6 is NPF salary).	DND I/O model, Ver. 1.1 Employment multiplier 1.83 (region), 2.12 (Nfld.), 5.10 (Canada) (1986 Dollars)	Labrador: 858 Other (Nfld.): 138 Other (rest of Canada): 1394 TOTAL: 2,390	Labrador: \$37.65 Other (rest of Nfld.): \$7.53 Other (rest of Canada): \$80.87 TOTAL: \$126.05	Study also estimated the impacts of a proposed NATO Tactical Fighter Weapons Training Centre, and impacts of expected employment and expenditure increase from 1986 to 1989 of about 40-50%. "The employment and revenues generated in Labrador by present military activities at Goose Bay play a significant role in the strengthening of the economic base of the region".
Lebreton 1987	Permanent allies and DND & civilian directly supporting the allies: 199. Transient: 5,700	\$22.7 (allied spending only)	National and Interprovincial I/O models	Labrador: 416 Other (rest of Nfld.): 181 Other (rest of Canada): 322. TOTAL: 919	Labrador: \$19.02. Other (rest of Nfld.): \$11.51) Includes tax revenues. TOTAL: \$30.53	Examines the impact of the Allies (NOT all of DND) on Canadian economy; Goose Bay is one of four bases included in the study. "... it would be in our best economic interests to pursue this policy of welcoming our allies who wish to use our soil"
S&W 1989	DND: 792 Allies: 156 NPF: 98 850 used for analysis.	Salary: \$23.9 O&M: \$40.6 Other: \$59.5 TOTAL: \$124.0 (of this, \$90.6 is estimated as local expenditure).	Improved version of Statistics Canada model (Ecotech). Employment multiplier: 2.0 (Labrador), 2.9 (Nfld.) 3.7 (Canada)	Labrador: 1,712 Other (rest of Nfld.): 758 Other (rest of Canada): 711 TOTAL: 3,181	Labrador: \$53.2 Other (rest of Nfld.) \$31.0 Other (rest of Canada) \$61.7 Provincial revenue (all provincial gov'ts): \$17.2 Federal revenue: \$47.4 TOTAL: \$210.5.	"The presence of the great economic stabilizer which government employers are will insure that the area remains protected to a great extent from economic cycles".

Table D-4 (continued)

Title	Inputs		Direct, Indirect and Induced Impacts			Comments
	Base Employment (person years)	Expenditures (millions)	Measurement tool	Employment (person years)	Income (millions)	
Wait 1992	Military: 491 DND civilian: 777 NPF: 176 Spouses & children: 832	Gross salary: \$44.9 O&M \$49.9 (est. \$6.5 local). NPF spending: \$0.3 Cannex purchase: \$6.5	Direct and estimate of 'first round' indirect economic impacts.		HV-GB: \$24.3	Examined impacts on the host communities at 43 military installations across Canada. Does not include expenditures of allies.
Orok 1993	DND: 678 Perm. allies: 161 Allies (9 mo.): 209 Allied spouses & Children: 115 Transient: 7,404	Salary: \$31.2 O&M: \$29 (est. \$6.5 local) Grant in lieu of taxes: \$0.93	DSEA DIO 2.1 I/O model. 1992 dollars.	HV-GB: 678 (18.5% of labour force)	HV-GB: \$15.5 (22.9% of total spending). In addition, allies billed \$60.2 for personnel and O&M.	Update of Lebreton 1987. Examines the impact of the Allies on Canadian economy; Goose Bay is one of four bases included in the study.
GP 1993	DND: 1060 Allies: 159 Contractors & other government: 457 Transient: 8,500	Salary: \$52.99 Transient spending: \$4.25 O&M & construction: \$75.50 TOTAL: \$133.64	Arcadia (Version 1.0), Ecotech. 1992 Dollars.	Labrador: 2,287.7	Labrador: \$75.13 Government Revenue \$24.63 TOTAL: \$99.76	Also evaluated the impact of increasing training from 7,800 to 18,000 sorties per year, with one more allied user. Concluded that it "generates only modest income and employment impacts when compared to the 1992 situation".
SC 1994	DND: 1,060 Allies: 159 Other government : 222	Capital costs: \$15.0 Salary \$105.5 Other operating: \$33.1 TOTAL: \$153.6	Statistics Canada I/O model. 1992 Dollars Employment multiplier: Labrador: 1.55,	Labrador: 2,231 Other (Nfld.): 880 Other (Canada): 2,314 TOTAL: 5,425	Labrador: \$77.4 Other (Nfld.): \$50.9; Other (rest of Canada): \$154.2 TOTAL: \$282.5	The model "provides proof of the economic importance of the Base, but even it underestimates the full impacts". "With the exception of the Base and related military activities, there are no current or potential industries capable of supporting the population of the community".

		Nfid.: 2.16, Canada: 3.76	
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Table D-4 (continued)

Title	Inputs		Direct, Indirect and Induced Impacts			Comments
	Base Employment (person years)	Expenditures (millions)	Measurement tool	Employment (person years)	Income (millions)	
Wait 1994	Military: 523 DND civilian: 750 NPF: 140 Permanent allied: 161 Allied support: 209 Allied transient: 7404 Spouses & children: 925	Salary: \$31.1 O&M: \$68.5 (est. \$7.2 local) NPF spending: \$3.9 Cannex purchases: \$7.2	1992-93 FY data. Direct and estimate of 'first round' indirect economic impacts.		HV-GB (from Canada): \$34.43 HV-GB (from allies): \$15.5 TOTAL: \$49.9	Update of Wait 1992.
Parai 1995	DND: 1468 (pre- reduction); 1,181 (25% reduction)	Salary: \$40.3 O&M \$47.0 (local: \$7.6) Transient spending: \$3.0	DND I/O model: DIO Ver. 3.1	HV-GB: 1623 (25% reduction) Other (rest of Canada): 464 TOTAL: 2087	HV-GB: \$46.5 (includes O&M, salaries, transient, education) Gov't Revenue: \$21.0 Other (rest of Canada): \$46.6 TOTAL: \$114.1	Estimates impacts with 25% budget reduction. Evaluates the impact of environmental clean up (cost of \$30 million) following base closure at \$22.9 million in GDP and 505 PYs across Canada. Full cost of closure: \$119.5 million.

APPENDIX E

Interviews and Data Contacts

Interviews

Upper Lake Melville Area

Abbass, Doug	Principal, St. Michael's School, Happy Valley-Goose Bay
Andersen, Merv	Wildlife and Fisheries Officer, Labrador Inuit Association, Happy Valley-Goose Bay
Baikie, Leander	Central Labrador Economic Development Board, Happy Valley-Goose Bay
Jack, Bart	Innu Nation, Sheshatshiu
Beals, Jacinda	Assistant Coordinator, Happy Valley Women's Centre, Happy Valley-Goose Bay
Best, Carol	Executive Director, Central Labrador Economic Development Board, Happy Valley-Goose Bay
Bird, Silas	Community Liaison Officer, 5 Wing Goose Bay, Happy Valley-Goose Bay
Bradley, Larry	teacher and owner/guide for Break Away Adventures Ltd., Happy Valley-Goose Bay
Broomfield, Hilda	President, Pressure Pipe Steel Fabrication, Happy Valley-Goose Bay
Cabot, Emile	Manager, Newfoundland and Labrador Housing Corporation, Happy Valley-Goose Bay
Conley, Mene	President, Meaney's Ltd., Happy Valley-Goose Bay
Cooper, Jack	Owner/operator, Minipi Outfitters, Happy Valley-Goose Bay
Compton, Jackie	Vocational Employment Councillor, Canadian Parapalegic Association, Happy Valley-Goose Bay
Crane, Milton	Newfoundland Hydro mechanic; life long hunter, fisher, trapper, Happy Valley-Goose Bay
Dillon, Robert	Service Delivery Manager, Human Resources Development Canada, Happy Valley-Goose Bay
Durno, Al	Manager, Town of Happy Valley-Goose Bay
Dymond, Jan	Coordinator, Happy Valley Women's Centre and Status of Women's Association, Happy Valley-Goose Bay
Elliott, Yvonne	Manager, Harvey's Travel, Happy Valley-Goose Bay

Ford, Randy	President, Local 25 UNDE, a component of PSAC (representing Serco employees), Happy Valley-Goose Bay
Fraser, Percy	President, Labrador North Chamber of Commerce, Happy Valley-Goose Bay
Goudie, Rex	Regional Director of Labrador and Aboriginal Affairs, Government of Newfoundland and Labrador, Happy Valley-Goose Bay
Hinks, Lorraine	District Manager (Labrador), Human Resources Development Canada, Happy Valley-Goose Bay
Hollett, David	Owner Mokami Travel and Park Lake Fishing Lodge, Happy Valley-Goose Bay
Hughes, Gail	Executive Director, Labrador Community Development Corporation, Happy Valley-Goose Bay
Kean, Reg	Department of Development and Rural Renewal, Happy Valley-Goose Bay
Loder, Pat	Department of Forest Resources and Agrifoods, Agrifoods Division, Happy Valley-Goose Bay
Mansfield, Sam	Human Resources Manager, Serco, Happy Valley-Goose Bay
Marques, Maj. Carlos	Officer Commanding Quality Assurance, 5 Wing Goose Bay, Department of National Defence, Happy Valley-Goose Bay
McCabe, Col.	Commanding Officer, 5 Wing Goose Bay, Department of National Defence, Happy Valley-Goose Bay
McNeil, Tim	Education and Training programs Officer, Labrador Inuit Association, Happy Valley-Goose Bay
Michel, Ben	Chief Lands Negotiator, Innu Nation, Sheshatshiu
Montague, Gordon	NWR Taxi, North West River
Montague, Louie	Retired forester and life long hunter, trapper and fisher, Happy Valley-Goose Bay
Myrden, Chris	Senior Policy and Planning Analyst, Department of Tourism, Culture and Recreation, Happy Valley-Goose Bay
Nuna, Greg	Chief Executive Officer, Innu Economic Development Enterprises Inc., Sheshatshiu
Patey, Cal	Labrador School Board, Happy Valley-Goose Bay
Peck, Dennis	Director of Economic Development, Town of Happy Valley-Goose Bay

Penahsue, Peter	Chief, Innu Nation, Sheshatshiu
Penner, David	Corporate Business Manager, Innu Economic Development Enterprises, Sheshatshiu
Pelley, David	Manager, North Mart/Burger King, Happy Valley-Goose Bay
Peyton, Juanita	Manager, Air Nova, Happy Valley-Goose Bay
Peyton, Stirling	Manager, Field Operations, Atlantic Canada Opportunities Agency, Happy Valley-Goose Bay
Phillips, Frank	Department of Forest Resources and Agrifoods, Wildlife Division, Happy Valley-Goose Bay
Pike, Warwick	VP and COO, Air Labrador, Happy Valley-Goose Bay
Pittman, Larry	Airport Manager, Goose Bay Airport Corporation, Happy Valley-Goose Bay
Powers, Barney	President, Labrador Construction, Happy Valley-Goose Bay
Pye, Shirley	Administrator and Public Relations Officer, Labrador Metis Nation, Happy Valley-Goose Bay
Representative	Mother Lumber and Hardware, Happy Valley-Goose Bay
Roberts, Donna	Executive Director, Lake Melville Community Employment, Inc. Happy Valley-Goose Bay
Rowe, Boyd	Labrador Health Corporation, Happy Valley-Goose Bay
Rumboldt, Agnes	Director, Human Resources and Employment, Happy Valley-Goose Bay
Russell, Carter	Manager, Training Division, Labrador Metis Nation, Happy Valley-Goose Bay
Russell, Todd	President, Labrador Metis Nation, Happy Valley-Goose Bay
Sheppard, Christina	Sheppard's Real Estate, Happy Valley-Goose Bay
Simms, Robert	District Administrator, College of the North Atlantic, Happy Valley-Goose Bay
Spearing, Jim	Development Specialist, Craft Development Division, Department of Development and Rural Renewal, Happy Valley-Goose Bay
Taylor, Craig	Regional Director, Department of Fisheries and Aquaculture, Happy Valley-Goose Bay
Thomas, John	Department of Forest Resources and Agrifoods, North West River
Vantelligen, Anthony	Sire Director, Serco, Happy Valley-Goose Bay

Warr, Chris	Warr's Pharmacy, Happy Valley-Goose Bay
Wolsenhome, Jim	CEO, Health Labrador Corporation, Happy Valley-Goose Bay
Woodward, Melvin Jr.	Managing Director, Central Labrador Marine Services, Woodward Group of Companies, Happy Valley-Goose Bay
Woodward, Peter	Woodward Group of Companies, Happy Valley-Goose Bay

Interviews

Outside the Upper Lake Melville Study Area

Armitage, Peter	Advisor to the Innu Nation, St. John's
Doucette, Christine	Big Game Biologist, Wildlife Division, Department of Forest Resources and Agrifoods, St. John's
Gagnon, Roger	Manager, TST Overland Express, Wabush
Geoffry, Denise	Naskapie Nation (Outfitting Industry)
Gulliver, Rick	Department of Forest Resources and Agrifoods, Wildlife Division, St. John's
Hollet, Al	Director, Newfoundland Statistics Agency, St. John's
Houlihan, Darrell	Production and Marketing Division, Agrifoods; Department of Forest Resources and Agrifoods, St. John's
Jordan, Dawn	Manager, Data Dissemination, Newfoundland Statistics Agency, St. John's
Kirby, Fred	Department of Mines and Energy, St. John's
Loder, Judy	Manager, HRDC, Labrador City
Lyll, Peter	Quarry Master, Inuit Development Corporation, Nain
Maclean, Ernie	Minister of Government Services and MHA for Lake Melville District, St. John's
Manuel, Ann	Executive Director, Newfoundland and Labrador Craft Council, St. John's
McCarthy, Terry	ADM, Works, Services and Transportation, St. John's
Montague, Ed	Department of Mines and Energy, Labrador City
Morrisey, Ferd	Department of Mines and Energy, St. John's

Musial, Sgt. Alain	Access to Information Office, Department of National Defence Headquarters, Ottawa
Pinsent, Nicole	Human Resources and Development Canada, Labrador City
Ralph, Patsy	Community and Government Relations Officer, IOCC, Labrador City
Rowell, Judy	Environmental Advisor/ Land Claims Negotiator, Labrador Inuit Association, Nain
Russel, A.M.	Statistics Division, Department of Fisheries and Oceans, St. John's

Telephone Contacts/ Data Requests

Baikie, Melinda	Town Clerk, North West River
Bazeley, David	Director, Electricity Industry Development, Department of Mines and Energy, St. John's
Bennett, Darrell	Valley Taxi, Happy Valley-Goose Bay
Borden, Ted	5 Wing Goose Bay, Department of National Defence.
Burgess, Tony	Department of Mines and Energy, St. John's
Courage, Jack	Manager, J.J.'s Trucking, Happy Valley-Goose Bay
Representative	Hodge Brothers, Wabush
Representative	Statistics Canada, Halifax, Nova Scotia
Representative	Economic Research and Analysis, Newfoundland Department of Finance, St. John's
Representative	Newfoundland Department of Fisheries and Aquaculture, St. John's
Ypma, Al	Access to Information Office, Department of National Defence Headquarters, Ottawa

APPENDIX F
Data Source Matrix

DATA SOURCE MATRIX

Section	Data	Type	Source	Year	Method	Notes
2.0	Selected Economic Performance Indicators					
	Demographics	Quantitative	Statistics Canada	1996	Statistics	Most current data but outdated
	Labour Force	Quantitative	Statistics Canada	1996	Statistics	Most current data but outdated
	Unemployment	Quantitative	Statistics Canada	1996	Statistics	Most current data but outdated
	Income	Quantitative	Statistics Canada	1996	Statistics	Most current data but outdated
	Transfer Income	Quantitative	Government of Newfoundland	1999	Statistics	Most current data
	Provincial Social Assistance	Quantitative	Government of Newfoundland	1999	Statistics	Most current data updated annually
3.0	Industrial Profile Primary Industries					
	Agriculture	Qualitative	Dept. of Forest Resources and Agrifoods	1999	Interviews	Small statistical sample
	Forestry	Qualitative and Quantitative	Dept. of Forest Resources and Agrifoods	1999	Statistics	Reliable annual data
	Fishery	Qualitative and Quantitative	DFO	1998	Statistics	No local commercial production. Labrador stats. Annually updated
	Hunting and Trapping	Qualitative	Dept. of Forest Resources and Agrifoods	1999	Interviews	Guestimate
	Hydro-electricity	Qualitative	Dept. of Mines and Energy	1999	Interviews	Reliable. Annually updated
	Mining	Qualitative and Quantitative	Dept. of Mines and Energy	1999	Statistics and Interviews	Reliable. Annually updated. Some company data unavailable

3.3	Secondary Industries					
	Manufacturing	Qualitative	Dept. of Development and Rural Renewal	1999	Interviews	Small statistic sample. Craft data estimated
	Construction	Qualitative and Quantitative	Dept. of Works, Services and Transportation	1999	Interviews	Road construction and major projects updated annually. Housing construction guestimate
3.4	Service Industries					
	Transportation, Communication and other Utilities	Qualitative	Local sources	1999	Interviews	Status and some statistics gathered. Should be annually tracked
	General Trade	Qualitative	Local sources	1999	Interviews	Status and Trends. Should be annually tracked
	Defense	Qualitative & Quantitative	Local sources	1999	Interviews	Status and Trends. Should be annually tracked
	Finance, Insurance, and Real Estate	Qualitative	Local sources	1999	Interviews	Status and Trends. Should be annually tracked
	Public Administration	Qualitative	Local sources	1999	Interviews	Status and Trends. Should be annually tracked
	Assistance to Businesses	Qualitative	Local sources	1999	Interviews	Status and Trends. Should be annually tracked
	Social Infrastructure and Services	Qualitative	Local sources	1999	Interviews	Status and Trends. Data can be easily updated
	Medical and Health Services and Facilities	Qualitative	Local sources	1999	Interviews	Status and Trends. Should be annually tracked
	Educational Services and Facilities	Qualitative and Quantitative	Local sources	1999	Interviews	Status and Interviews. Data can be easily updated

	Tourism, Recreation Services and Facilities	Qualitative	Local sources	1999	Interviews	Status and Interviews. Data should be annually tracked
4.0	Non-Wage Economies					
	Hunting and Trapping	Qualitative	Local sources	1999	Interviews	Status & trends. Until land claims sorted out, data will be difficult to collect.
	Fishing	Qualitative	Local sources	1999	Interviews	Status & trends. Until land claims sorted out, data will be difficult to collect.
	Food Harvesting	Qualitative	Local sources	1999	Interviews	Status & trends. Until land claims sorted out, data will be difficult to collect.
	Fuel Resources	Qualitative	Local sources	1999	Interviews	Status & trends, Until land claims sorted out, data will be difficult to collect.
	Related Value Added Harvesting	Qualitative	Local sources	1999	Interviews	Status & trends. Until land claims sorted out, data will be difficult to collect.
	Value of Harvesting	Qualitative	Local sources	1999	Interviews	Status and trends. Until land claims sorted out, data will be difficult to collect.
5.0	5 Wing Goose Bay					
	Economic Data	Quantitative	Local sources	1999	Interviews	Statistics need to be gathered yearly
7.0	EIS Recommendations					
7.2	Training, Recruitment and Promotion					Status needs to be monitored
	Promotion	Quantitative	Local sources	1999	Interviews	Status needs to be monitored
	Cooperation in Business	Quantitative	Local sources	1999	Interviews	Status needs to be monitored

	Federal Tourism	Quantitative	Local sources	1999	Interviews	Status needs to be monitored
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APPENDIX G

**Socio-economic recommendations and their status of the
*EnvironmentImpact Statement on Military Flight Activities in
Labrador and Quebec (January 1994)***

PANEL RECOMMENDATIONS	GOVERNMENT DECISION	DND RESPONSE	STATUS
<p>ECONOMIC AND EMPLOYMENT IMPACT</p> <p>16. The panel recommends that:</p> <ul style="list-style-type: none"> • DND continue to work with the appropriate unions, local training institutions and Human Resources Development Canada to meet its training needs. • Employment equity programs be practised to ensure hiring of aboriginal people and women. In support of this initiative, DND should pursue such mechanisms as daycare and an apprenticeship program, as required. • Special attention be paid to the recruiting, training, and promotion of aboriginal employees 	<p>Government accepted this recommendation with explanatory comment.</p> <p>To implement them, it will initiate discussions with interested aboriginal groups with the intent of developing a concrete action plan that will make full use of existing employment and business opportunity development programs.</p>	<p>To optimize efficiencies and long-term employment prospects, DND has initiated Alternative Service Delivery (ASD) process. DND will ensure compliance with government policies as they relate to employment equity.</p>	<p>Action ongoing</p>
<p>17. The panel recommends that CFB Goose Bay work with interested business representatives from the various regional groups of the Quebec-Labrador peninsula to clarify Base procurement needs and identify prospective regional suppliers. In particular, the panel encourages DND to explore opportunities for increasing local/regional benefits for aboriginal groups.</p>	<p>Government accepted this recommendation as presented.</p>	<p>DND will continue to liaise with the Central Labrador Economic Development Board, which is also represented on the Institute Board of Directors. DND actively participates in the federal Procurement Strategy for Aboriginal Business, and will continue to update its database on available suppliers.</p>	<p>Action ongoing</p>

PANEL RECOMMENDATIONS	GOVERNMENT DECISION	DND RESPONSE	STATUS
<p>18. The panel recommends that the avoidance criteria for future non-consumptive adventure tourism within the low-level training area be reviewed on a case-by-case basis as the industry develops and that alternatives be considered for the avoidance of such activities as necessity requires.</p>	<p>Government accepted this recommendation. To be implemented as appropriate, following consultation with provincial authorities, the Institute, stakeholders or other agencies</p>	<p>To be assessed as need arises.</p>	<p>Action ongoing</p>
<p>SOCIAL IMPACTS 19. The panel recommends that DND continue to work closely with the town of Happy Valley-Goose Bay, the Newfoundland and Labrador Housing Corporation (NLHC) and the Melville Native Housing Association (MNHA) in monitoring housing demand.</p>	<p>Government accepted this recommendation as presented.</p>	<p>The situation existing at the time of Government decision (mid'95) has changed considerably. All on-base housing is now under the management of a separate Special Operating Agency (CFHA), with a mandate to liaise directly with local housing agencies and municipalities. Also see item 20 below.</p>	<p>Item closed</p>
<p>20. The panel recommends that DND ensure that timely information is received by those affected regarding its plans to displace civilians from Base housing.</p>	<p>Government accepted this recommendation as presented.</p>	<p>Another major change is that DND downsizing has resulted in a large housing surplus over last two years rather than previously-anticipated shortage.</p>	<p>Item closed – no longer applicable.</p>

PANEL RECOMMENDATIONS	GOVERNMENT DECISION	DND RESPONSE	STATUS
<p>21. The panel recommends that DND conduct crosscultural awareness training for all in-coming Canadian Forces, DND civilian employees and Allied Forces.</p>	<p>Government accepted this recommendation as presented.</p>	<p>An indoctrination program for Canadian and Allied personnel is in place. Process being included in Mitigation Orders.</p>	<p>Action ongoing</p>
<p>22. The panel recommends that the Institute undertake studies to determine the extent of resource harvesting activity on the land and the impact that low-level flying may have on aboriginal and non-aboriginal resource harvesting.</p>	<p>Government accepted this recommendation. Recommendation referred to the Institute.</p>	<p>As a related mitigative measure, and in response to an Innu Nation request, discussions are underway with DND to conclude bilateral arrangements which recognize and protect their harvesting.</p>	<p>Institute progressing-consultants hired to work with aboriginal groups.</p>
<p>23. The panel recommends that decisions and mitigative measures on proposed parks or reserves be formalized in the future, so as to ensure the protection of the natural environment and human activity within the parks and reserves.</p>	<p>Government accepted this recommendation. To be implemented as appropriate, following consultation with provincial authorities, the Institute, stakeholders or other agencies.</p>	<p>DND will consult with provinces to determine future plans in this regard.</p>	<p>Ongoing</p>