A SOCIO-ECONOMIC IMPACT STUDY OF THE FACTORY FREEZER TRAWLER THE *CAPE NORTH*

FOR
THE GOVERNMENT/INDUSTRY
STEERING GROUP, MONITORING
THE SOCIO-ECONOMIC IMPACTS
OF THE FACTORY FREEZER TRAWLER
CAPE NORTH

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July, 1987

Canada

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Prepared for:

Government Industry Steering Group for Monitoring Socio-Economic Impacts of the Factory Freezer Trawler, The Cape North

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Glossary

CBRT & GW	Canadian Brotherhood of Railway Transport and General Workers
CSAW	Canadian Seafood and Allied Workers
DFO	Department of Fisheries and Oceans
EA	Enterprise Allocations
FFT	Factory Freezer Trawler
H&G	Headed and Gutted
NSP	National Sea Products

ONE: INTRODUCTION

1.1 Perspective

The ability by foreign nations to harvest the fishery resource of the northwest Atlantic increased considerably during the 1950's with the introduction of stern trawlers incorporating on-board fish processing and quick-freezing techniques. The number of factory freezer trawlers (FFT's) in service in the northwest Atlantic grew rapidly during the 1960's and 1970's, as many European nations adopted the technology to increase their catches and to meet changing market requirements. These vessels fished more or less freely until 1977, when Canada introduced its 200-mile fisheries conservation zone.

The development of the Canadian offshore fishery followed a different course. In the period immediately following the second world war, the inshore sector perceived the use of offshore trawlers as a threat to its viability. The Canadian government initially supported this position by adopting measures designed to inhibit the development of a domestic trawler fleet. In order to maintain a competitive position internationally, Canada finally allowed the development of an offshore trawler fleet during the 1950's and 1960's. This fleet, a mixture of side and stern trawlers, grew to about 175 vessels by the early 1970's. All vessels were wetfish trawlers; given the proximity of the resource there was no need and no real interest in using FFT's. In 1973, concern was again expressed about total offshore capacity, and in response, the federal government placed a freeze on trawler licenses.

Prior to the introduction of the Cape North into the National Sea fleet, the only direct experience Canadians had with FFT's was a six-month trial conducted in 1977 by the federal Department of Fisheries and Oceans and National Sea Products. The first application by a Canadian company for a license to operate a FFT was made in 1978 following the extension of fisheries jurisdiction. It was turned down because of continuing concerns over excess fishing capacity and also due to the perceived threat to onshore employment and to the inshore fisheries. It was also felt in some quarters that if only one license were granted it would confer on the owner a commercial advantage in what was still a competitive fishery. Until 1985, all subsequent applications were also turned down.

Concern over excess capacity and the implications of competitive fishing among the offshore companies began to diminish in the early 1980's with the introduction of

enterprise allocations (EA). The EA system, giving each company a share of the offshore groundfish quota, was introduced as an experiment in 1982. The system was suspended in 1983 while the offshore companies were being restructured and then reintroduced in 1984 for a five-year trial period. Those interested in using FFT's argued that with an EA, choice of fishing technology should be left to the company since the type of vessel used would have no impact on the quantity harvested. The industry also argued that use of FFT technology was vital to remaining competitive in international markets. Following a review of it's FFT policy, the federal government decided in 1985 to make three licenses available on an experimental basis. One of these was granted to National Sea Products (NSP).

NSP purchased the "Scombrus", a then 10 year old FFT originally equipped for the North Sea herring fishery, from a West German firm. The vessel has been renamed the Cape North and has been refitted for the groundfish fishery on Canada's east coast The vessel's home port is Lunenburg.

According to NSP, the Cape North will allow the company more flexibility in harvesting and processing its enterprise allocations, and will contribute to the long term viability of the company. In granting the FFT license to NSP, the government attached several conditions including:

1) at least 50 percent of the catch must be made up of previously under-utilized enterprise allocations;

2) no more than 6,000 tonnes of northern cod can be harvested in one year;

3) the FFT will not be permitted to operate in the Gulf of St. Lawrence or the Bay of Fundy; and,

4) the company must retire or convert the equivalent length and capacity from its existing fleet.

In addition to these conditions, DFO stipulated NSP cooperate with the study of socio-economic impacts arising from the operation of a FFT. The uncertainty over socio-economic impacts provides the rationale for this study.

1.2 Objective

The uncertainty surrounding the possible economic impacts of the introduction of factory freezer technology to the Canadian fishing industry was recognized when the three factory freezer licenses were approved by the DFO. Consequently, evaluating the socio-

economic impact of the introduction and operation of FFT's was made a condition of the licenses. To date only NSP has taken advantage of the opportunity of operating an FFT. Still, with operating experience accumulating, it is important to address the economic impact issue before relevant baseline data are lost or distorted. Thus, according to our understanding the objective of this study is:

> *to conduct a quantitative and qualitative assessment of the socio-economic impact of the Cape North's operation on the Atlantic fishing and fish processing industry, with particular reference to the Lunenburg County area of Nova Scotia.*

The scope of work specified by the terms of reference for the study include:

- Documentation of the number of jobs generated and jobs lost, and the associated income gained and lost . The upshot of this analysis will be quantification of the net impact of the Cape North in terms of employment and income.

- Assess the changes in the composition of the continuing work force in fishing and fish processing, and the composition of those leaving the work force. The work force composition should be expressed in terms of variables such as age, sex, marital status and home location.

- Impact of using foreign crew for ship's officers such as the captain, first mate or other senior officers, and the subsequent Canadianization of the crew.

- Identify and evaluate any changes in the quality of life of workers affected by the introduction of the Cape North.

- Identify and estimate the job training and related transition costs associated with the breaking-in period and subsequent operation of the Cape North.

- Describe the employment policies and hiring practices of National Sea as they relate to the matching of the accumulated experience and skills of existing employees with the new requirements imposed by the Cape North.

- Assess the impact of the Cape North on existing union management relationships. The main thrust should be to identify the changes in existing union contracts, and to describe any new contracts, required to deal with the Cape North's operating circumstances. The implications of these changes for future union management relationships should be outlined and discussed.

The remainder of this study is organized as follows. Chapter Two outlines the setting in which the Cape North operates. The chapter includes a socio-economic profile of Lunenburg, the Cape North's home port, a brief outline of the company (National Sea

Products) and a description of the Cape North. The employment and income impacts of the Cape North during its first year of operation are examined in the first two sections of Chapter Three. Following this, the labour force composition of the crew and the foreign crewing issue are examined briefly. Section 3.4 provides a detailed review of the working conditions on the Cape North and discusses the findings of the crew and Lunenburg plant worker surveys carried out as part of the study. Employment policies are discussed in Section 3.5. The issues covered include hiring practices, training and management-union relationships. The summary and conclusions for the study are outlined in Chapter Four. Detailed information on various aspects of the study is provided in the Appendices.

TWO: THE SETTING

2.1 Lunenburg Community Profile

The county of Lunenburg comprises the towns of Lunenburg, Bridgewater and Mahone Bay, and the municipalities of Chester and Lunenburg. A map of the county is shown is Figure 2-1. Hereafter, unless otherwise specified, "Lunenburg" will refer to the town of Lunenburg. The discussion in this chapter is based on 1981 Census of Canada data, updated by more recent information as available.

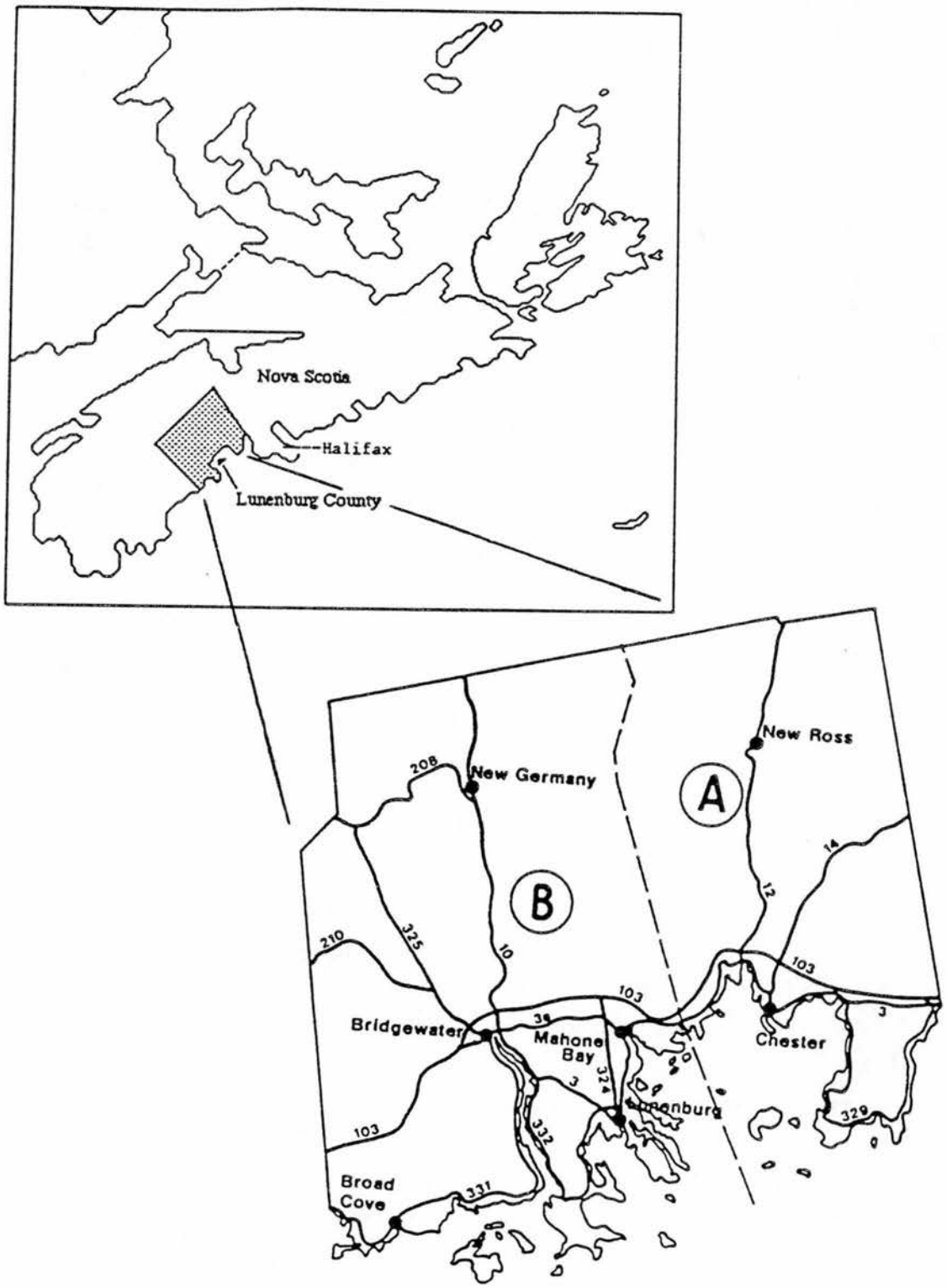
Population

The population of Lunenburg, numbering about 3,000 in 1981, accounts for about seven percent of the county's total population. The town's population has remained relatively stable over the past 25 years, registering just a one percent decline between 1961 and 1981. This stability is due primarily to the lack of any major industrial expansion in the town. This is in sharp contrast with Lunenburg County where the population has increased by 31 percent over the period. Most of the growth has occurred in Bridgewater and in the Municipality of Lunenburg and can be explained by the opening of the Michelin plant.

Labour Force

In 1981, 51 percent of Lunenburg's population over 15 years old was part of the labour force. Male participation rates were double that of female (70 and 35 percent respectively). Unemployment among males was low (two percent), especially in comparison with the seven percent unemployment rate for females. This would suggest that low participation rates among females might be in part due to the low availability of jobs. But whereas 74 percent of males in the labour force were married, only 35 percent of females were. Similarly, while 60 percent of women aged 15 to 24 were engaged in the labour force, this figure dropped to 29 percent for women older than 25. This suggests that the majority of Lunenburg women, once married, soon choose to stay home regardless of employment opportunities.

Figure 2-1
Lunenburg County



LEGEND

Census Subdivision A - Chester

Census Subdivision B - Lunenburg

Census Subdivision Boundary — — — —

Highway & Number 3

Both the participation and unemployment rates in Lunenburg county were higher than in the town of Lunenburg. County participation rates for males and females were each higher by three percentage points, and both male and female unemployment rates were also higher than in town. As in town, once married a woman was more likely to choose to remain at home. This change in labour force participation by women as they get older is in contrast with Nova Scotia as a whole where participation rates remains relatively constant across age groups.

Eleven percent of Lunenburg County's labour force was engaged in primary occupations in 1981 (Table 2-1). Processing jobs occupied 10 percent of the county labour force in 1981, up from 8 percent in 1971.[1] Fishing, hunting, and trapping accounted for an additional 6 percent of employment in 1971 and 1981. The total number of fishermen in Lunenburg county increased from 1,250 to 1,627 between 1979 and 1983 (Figure 2-2). Fishermen receiving between 76 and 100 percent of their income from fishing rose in number by approximately 500 over that period to about 1,200 while the number of part-time fishermen declined. In 1983, about 160 vessels used Lunenburg as their home port; 115 inshore vessels less than 13.7m and 48 offshore vessels greater than 19.8 m.

Industries

Of the 170 businesses located within the town limits 56 belong to the retail trade, followed by 44 in the service industry. A number of manufacturing firms also operate within the town boundary, though the major establishments (including the National Sea plant) are located outside. The most important manufacturing industries operating in Lunenburg county and the number of workers they employ are shown in Table 2-2.

A 1986 survey of 120 Lunenburg area businesses showed that industry (including the National Sea plant) was responsible for 1,250 of the 2,280 jobs generated by these businesses.[2] The rest of the surveyed businesses, which accounted for another 1,030

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1 Occupation breakdowns relate to the place of *residence* of the respondents. This can create cross-boundary problems where, for example, a portion of processing jobs held by county residents would be located outside the county limits.

2 Lunenburg Economic Development Commission, January, 1986.

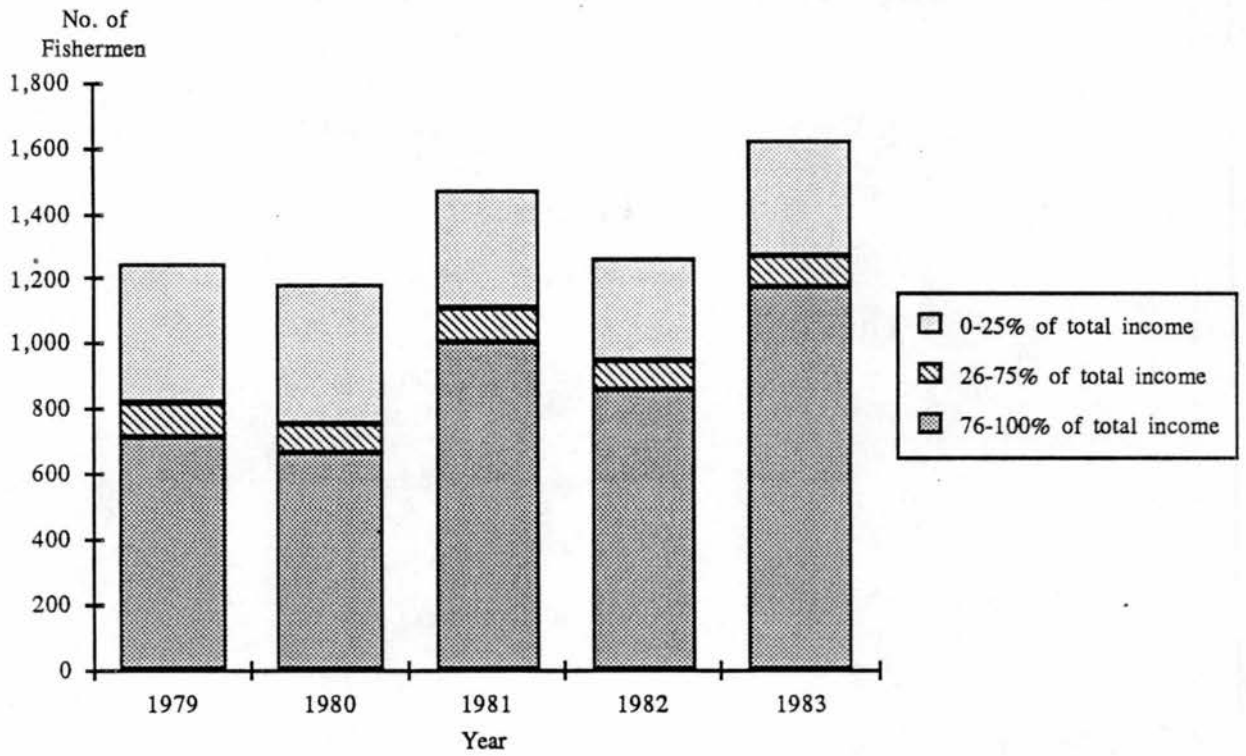
Table 2-1
Labour Force by Occupation Groups, Lunenburg Co., 1981

	Lunenburg County				Nova Scotia			
	Male	Female	Total	% of Total	Male	Female	Total	% of Total
Managerial, administrative and related	820	240	1,060	5.4	20,325	6,815	27,140	7.3
Teaching and related	245	440	685	3.5	7,110	10,525	17,635	4.7
Occupations in medicine and health	115	625	740	3.7	3,480	15,915	19,395	5.2
Technological, social, religious, artistic and related	605	230	835	4.2	15,010	6,270	21,280	5.7
Clerical and related	550	1,890	2,440	12.3	13,255	48,305	61,560	16.5
Sales occupations	990	855	1,845	9.3	19,225	15,105	34,330	9.2
Service occupations	780	1,125	1,905	9.6	28,145	26,375	54,520	14.6
Primary occupations (1)	2,100	115	2,215	11.2	23,265	2,310	25,575	6.9
Processing occupations	1,210	870	2,080	10.5	12,125	6,355	18,480	5.0
Machinery, product fabricating, assembling and repairing	2,295	240	2,535	12.8	26,215	2,825	29,040	7.8
Construction trades	1,680		1,680	8.5	27,980		27,980	7.5
Transport equipment operating	875		875	4.4	15,695		15,695	4.2
Other	745	155	900	4.5	16,260	3,705	19,965	5.4
Total Experienced Labour Force	13,010	6,785	19,795	100.0	228,090	144,505	372,595	100.0

Note: 1) Primary occupations include fishing, farming and mining occupations. In 1981, 6 percent of Lunenburg county's population was involved in fishing.

Source: Statistics Canada, Census of Canada, 1981.

Figure 2-2: Contribution of Fishing to Total Income, No. of Fishermen, 1979-1983



Source: N.S., Dept. of Dev., "Lunenburg County Statistical Profile", 1985
Prepared by Gardner Pinfold Consulting Economists Ltd.

Table 2-2
Manufacturing Industries With More Than 25 Employees by Town,
Lunenburg Co., 1986

	Population	Industry	Employees (1)
Blandford	227	Karlsen, Karl and Co.	90
Bridgewater	6,669	Bowater Mersey Paper Co. (2)	60
		Michelin Tires (Canada) Ltd.	n.a
		Acadia Road Contractors (2)	150
		Crockett McConnell Inc. (2)	33
		Lighthouse Publishing Ltd.	47
		Rafuse Equipment and Supply	27
		South Shore Ready Mix Ltd. (2)	29
Dayspring	643	Snyders Shipyard Ltd.	30
East River	201	Canexcell Inc.	322
Lunenburg	3,014	National Sea Products (3)	925
		ABCO Industrial Equipment Div.	70
		Atlantic Shipbuilding Div.	25
		Lunenburg Foundry and Engineer	85
		Scotia Trawler Equipment	65
Mahone Bay	1,228	ABCO Plastics Div.	140
New Germany	584	Suttles and Seawinds Ltd.	50
New Ross	372	Sanders, H.C. & Sons Ltd.	25
Voglers Cove	206	Newell, R.E., Fisheries Ltd.	50
Wileville	746	Snyder, Calvin L., Ltd.	32

Note: 1) Employees is an estimate of maximum employment when the business is operating at full capacity. For instance, Sanders HC and Son Ltd of New Ross Ross produce fir Christmas wreaths during the holiday season and employs up to 25 persons during that period.
2) Included within the Bridgewater Metropolitan Area.
3) Included withing the Lunenburg Metropolitan Area.

Source: NS, Dept. of Dev., "Directory of Nova Scotia Manufacturers 1986-1987", 1986.

jobs, were banks, offices, retail, recreation and general services. On average, about 35 percent of their employees resided in the town of Lunenburg.

Incomes

On average, Lunenburg residents are wealthier than county residents. In fact, Lunenburg residents rank higher than Nova Scotia as a whole in terms of per capita household income. In 1981, average town private household income was $24,000 in comparison with $20,000 for both county and province households, respectively.

Although enjoying higher average household income, 10 percent of Lunenburg families lived on relatively low income. This incidence is no different at the county level but is better than the 14 percent provincial average. In 1983, the ratio of transfer payment income to employment income, or economic dependency ratio, for the town of Lunenburg and eight surrounding incorporated settlements[3] was 19.3. When compared with a 18.5 ratio for the province, this suggests that an above average share of income in Lunenburg may come from transfer payments.[4] The number of unemployment insurance beneficiaries follows a clearly seasonal trend peaking between the months of November to June. This peak corresponds closely to the lack of fishing activity during that period.[5]

2.2 National Sea Products

Company Profile

National Sea Products Limited (NSP) is the largest Canadian based vertically-integrated fishing company. The company is involved in all aspects of the fishing industry including, harvesting, processing and marketing of fish and seafood products. NSP operates processing plants in each of the four Atlantic provinces. In addition the company

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3 These settlements are Blue Rocks, Heckmans Island, Stonehurst West, Stonehurst East, Eastern Points, Feltzen South, First South, and Corkums Island. Their population totalled 924 in 1981.

4 Raymond, Janice L. (ed) 1985. *Scotia-Fundy Region Fishing Community Profiles*. DFO. Canadian Data Report of Fisheries and Aquatic Sciences No. 540. 461 p.

5 Ibid.

operates several plants in the United States and also has interests in plants in Australia and Uruguay. The company employs a workforce of approximately 8,000 people in all aspects of its business, making it the second largest employer in Atlantic Canada (second only to Fishery Products International of Newfoundland). The company's harvesting and processing activity is concentrated in Nova Scotia and Newfoundland. Table 2-3 shows the distribution of employment by province in the Atlantic Provinces for 1986 on a full time equivalent basis. Over half the 5,000 person-years of employment created by the company activities are located in Nova Scotia.

Harvesting

NSP operates a fleet of 40 wetfish trawlers, 10 scallop draggers and one factory freezer trawler. The wetfish trawler fleet operates from five ports, three in Nova Scotia (Lunenburg, Louisbourg and Canso) and two in Newfoundland (St. John's and Burgeo). Lunenburg is the home port to the largest trawler fleet in Nova Scotia with 16 vessels. It should be noted that although vessels have designated home ports they may provide raw material to any NSP processing plant. The home port is likely the area where the vessel's crew resides. The trawler operations employ approximately 600 persons (including the Cape North crew) in Nova Scotia and 200 persons in Newfoundland. In addition to the trawler fleet the company's scallop dragger fleet employs approximately 200 persons and is based in Lunenburg. Table 2-4 shows the usual port of operation for the company's trawler fleet.

In 1986 NSP harvested a total of 142 thousand tonnes of groundfish. The wetfish trawler fleet landed 132,000 tonnes and the Cape North an additional 10 thousand tonnes (calendar year 1986). Cod accounted for 52 percent of total groundfish landings, with redfish and pollock accounting for 25 and 11 percent, respectively.

Processing

NSP operates 15 processing plants in Atlantic Canada, seven plants are considered year round facilities and eight are seasonal operations. (Table 2-5). The company produces a wide variety of fish products including; fresh, frozen, canned, battered or breaded pre-cooked and cooked form.

Table 2-3
National Sea Products - Employment by Province in Atlantic Canada
(person-years)

Nova Scotia	3300
New Brunswick	400
Newfoundland	1250
Prince Edward Island	50
Total	5000

Source: National Sea Products, 1987.

Table 2-4
National Sea Products - Number of Active Trawlers by Usual Port of Operation

Nova Scotia	
Lunenburg	16
Louisbourg	5
Canso	9
Newfoundland	
Burgeo	5
St. John's	6

Table 2-5
National Sea Products - Location of Processing Plants in Atlantic Canada

Nova Scotia		**Newfoundland**	
Canso	Year Round	Arnold's Cove	Seasonal
Lockeport	Year Round	Burgeo	Year Round
Louisbourg	Year Round	Lark Harbour	Seasonal
Lunenburg	Year Round	La Scie	Seasonal
North Sydney	Year Round	St. John's	Year Round
Woods Harbour	Seasonal		
New Brunswick		**Prince Edward Island**	
Shediac	Seasonal	Charlottetown	Seasonal
Shippegan	Seasonal	Morell	Seasonal

Source: National Sea Products, 1987.

NSP employs approximately 5,000 plant workers providing a total of 4,000 person-years of employment. The largest processing facility is operated at Battery Point located just outside the community of Lunenburg. This plant is the most modern and produces the highest value added products. Docking and storage facilities at this plant are used by the Cape North.

Marketing

NSP markets a diverse range of products in both domestic and international markets. In 1986 the company reported net sales valued at $516 million, representing an increase of almost 14 percent over 1985. About 25 percent of the company's sales occur in Canada. The United States is the largest market accounting for 65 percent of sales, while other foreign markets including Western and Eastern Europe, the Caribbean, Japan and Africa, account for the remaining 10 percent of sales.

2.3 The Cape North

The M/V Cape North is an ex-West German factory freezer trawler formerly called the "Scombrus". It was built in Bremerhaven in 1975. It has a gross registered tonnage of 2,650, and is powered by a 3,500 horsepower main engine. Its overall length is 81 m (265

ft). By comparison, the average wetfish trawler in the NSP fleet has a capacity of just under 700 gross registered tonnes, and is 49 m (160 ft) in length. The Cape North has a freezing capacity of 45 tonnes per day and storage for 750 tonnes of frozen product, as well as 300 tonnes of fish meal and 110 tonnes of fish oil.

First Year of Operation

Following the preparation of the vessel for the North Atlantic groundfish fishery, the Cape North sailed from Lunenburg on February 22, 1986, on its first trip for NSP. During the course of the first year a total of seven full trips were completed.[6] The trips ranged in length from 40 to 62 days. When the vessel arrived in Lunenburg on February 21, 1987, the first year of operations was complete. In the twelve-month period the vessel caught and processed 11.7 thousand tonnes of a variety of groundfish species. A breakdown of the catch by species in its first year of operation is shown in Table 2-6.[7]

Table 2-6

Cape North - Landings by Species in First Year of Operation
(Feb. 22, 1986 - Feb. 21, 1987)

Species	Landings (tonnes)	Percent
Cod	6814	58.4
Pollock	2816	24.1
Redfish	1950	16.7
American Plaice	35	0.3
Turbot	27	0.2
Greysole	11	0.1
Haddock	9	0.1
Flounder	2	0.0
Total	11664	

Source: National Sea Products, 1987.

6 An eighth trip was aborted after 14 days owing to mechanical difficulties.

7 The catch by species for calendar year 1986 is shown in Appendix A.

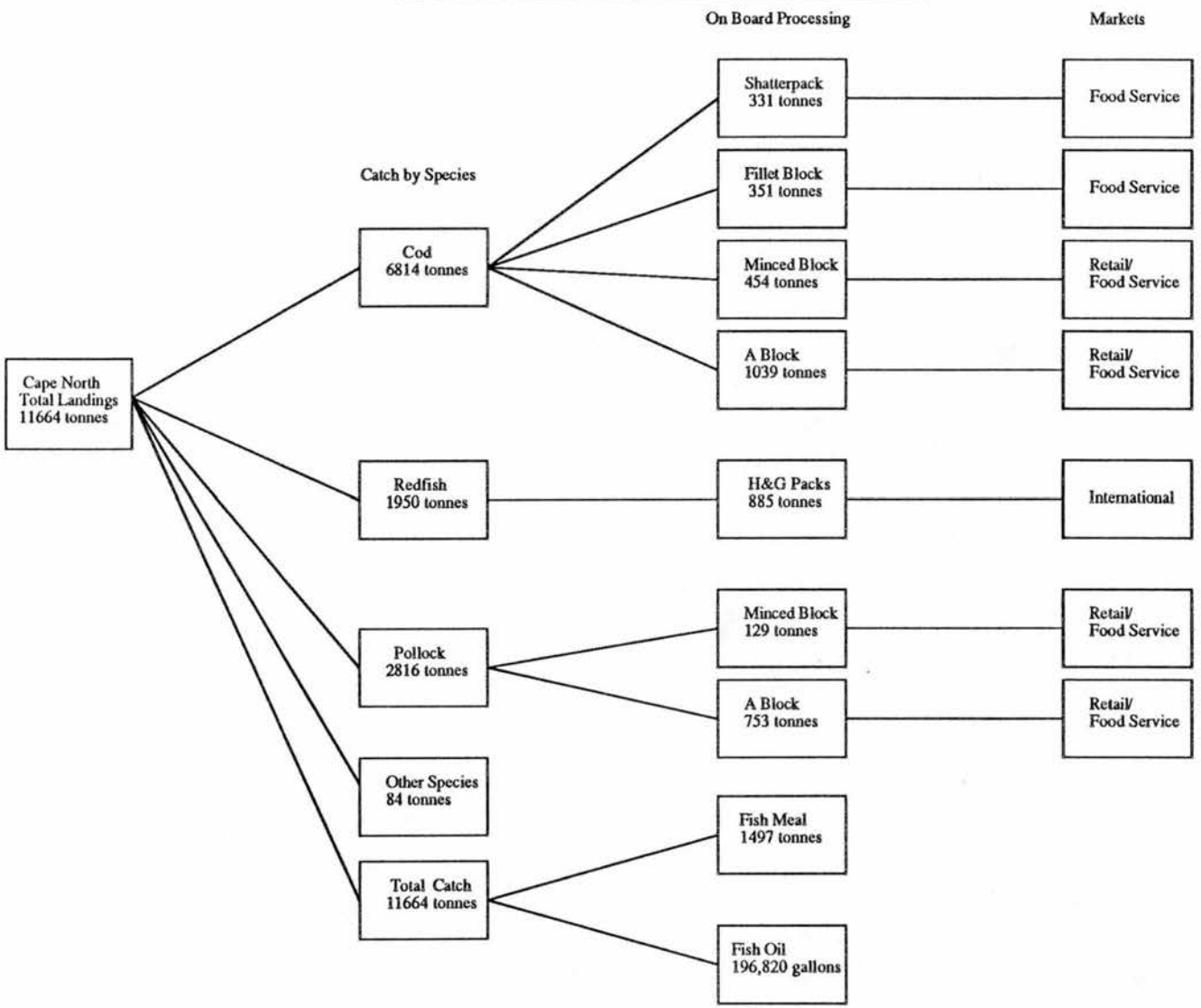
Cod is the most important species caught by the Cape North, accounting for 60 percent of the total catch in its first year of operation. In total, cod accounted almost 55 percent of production with Cod A Blocks the main product (26 percent of total production). The next most important product is headed and gutted (H&G) redfish, accounting for over 22 percent of production. The Cape North provides the company with a consistent supply of top quality H&G redfish for the Japanese market. The FFT technology preserves this product in a form suitable for this market. A summary of the Cape North's production by species and ultimate market destination for each product type processed is set out in Table 2-7. This information is depicted in a flow chart in Figure 2-3.

Table 2-7
Cape North - Total Production by Product Type and Market Destination in First Year of Operation
(Feb. 22, 1986 - Feb. 21, 1987)

	Product	Market	Total Production (tonnes)
Cod	Shatter Pack	Food Service	331
	Full Fillet Blocks	Food Service	351
	A Blocks	Retail/Food Service	1039
	Minced Blocks	Retail/Food Service	454
Total Cod			2175
Redfish	H&G	International	885
Pollock	A Blocks	Retail/Food Service	753
	Minced Blocks	Retail/Food Service	129
Total Pollock			882
Flatfish	H&G	International	11
Haddock	A Blocks	Retail/Food Service	2
Turbot	H&G	International	25
Other	Shatterpack	Food Service	4
	H&G	International	5
Total Other			9
Total Production			3989

Source : National Sea Products, 1987.

Figure 2-3: Cape North - Landings, Production and Market Destination



Source: National Sea Products, 1987.
Prepared by Gardner Pinfold Consulting Economists

THREE: THE IMPACTS

3.1 Defining The Impacts

3.1.1 Gross Versus Net Impacts

The employment and income impacts associated with the Cape North factory freezer trawler are estimated on a gross and net basis. *Gross Impact* refers to jobs created and income earned as a result of the operation of the Cape North. These impacts are measured before any allowance is made for reductions in employment and income arising from adjustments in the trawler fleet and/or reallocation of fish processing activities in response to the introduction of the Cape North. *Net Impact* takes into account any offsetting reductions in employment and income which may occur in the conventional trawler fleet and/or in shore-based processing operations. To determine the net impacts, a base case representing NSP fishing and processing operations without the Cape North is defined.

Estimating the gross impact of the Cape North's first year of operation is based on actual operating experience. NSP provided operations data including total landings, total production, total employment and income, as well as the cost of purchased inputs and other financial data concerning the vessel's first year of operation. This information is examined in detail to estimate the employment and income impacts as they relate specifically to the operation of the Cape North.

The Base Case

Estimating the difference between gross and net impacts requires the definition of a base case. In this study we define the base case as how the company might have operated in 1986 without the Cape North. The term "might have operated" is used deliberately, since it is impossible to say with complete confidence how NSP would have conducted its operations without the vessel. In the absence of complete certainty a number of assumptions have had to be made. Among the key factors considered in defining the base case are:

- The conditions attached by the DFO to the factory freezer trawler license are assessed to determine their effect on both the operation of the Cape North and the operation of the wetfish trawler fleet. These conditions are examined because they affect what the Cape North can actually catch.

- The company's harvesting and processing operations pre-Cape North and post-Cape North are examined to determine whether harvesting and

processing changes in 1986 can be attributed to the operation of the factory freezer trawler.

- The final base case factor is the views of NSP officials overseeing vessel and plant operation concerning how their operational behavior would have been different had the Cape North not been part of its trawler fleet in 1986. Drawing on all of this information a base case is defined and used to estimate the net impacts of the Cape North operations.

3.2 Estimating the Impacts

3.2.1 Gross Impacts

The gross employment, income and expenditure impacts of the Cape North in its first year of operation is estimated based on data collected from NSP.

The job and income generation impacts are related to the operation of the Cape North itself. The vessel employs a total crew of 86 persons with 59 aboard the vessel at one time (approximately one-third of crew members are on shore leave when the vessel is at sea).

The operation of the vessel also requires significant expenditure on a variety of purchased inputs including petroleum products, crew provisions, repairs and maintenance and other goods and services. The total expenditure on these products, net of imports to Nova Scotia, in the vessel's first year of operation is $2.5 million.

A second category of expenditure related to the vessel cover the vessel's annual fixed costs. Expenditure items include: insurance, general company administration and other costs which are not affected by the actual operation of the vessel. The total expenditure on these items, net of imports to Nova Scotia, for the first year of operation is $133,000.

Table 3-1 summarizes the expenditure impacts related directly to the Cape North's first year of operation.

Table 3-1

Cape North - Gross Economic Impacts(1) of the First Year of Operation

	Employment (person-years)	Gross Impacts ($'000)
Crew Wages and Benefits	86	3147
Purchased Inputs		2507
Other(2)		133
Total		5787

Note: 1) Impacts are net of imports.
2) Other includes insurance, onshore support and training and transition.

Calculated by Gardner Pinfold Consulting Economists Limited.

3.2.2 The Base Case

To determine the net impacts of the Cape North, a Base Case establishing the level of offsetting reductions in employment and income to the conventional trawler fleet and shore-based processing operations is examined. *The Base Case is essentially an estimate of the hypothetical economic impacts that would have occurred in the absence of the Cape North.* To estimate the potential Base Case impacts, several factors are examined.

License Conditions

The effect of the three license conditions imposed on the operation of the factory freezer trawler license are considered:

- the retirement of vessels from the company's trawler fleet with fishing capacity the equivalent of the Cape North;
- no more than 6,000 tonnes of a company's 2J,3KL (Northern) cod allocation can be harvested by a factory trawler in any one calendar year; and,

- fifty percent of the Cape North's catch must be taken from previously under-utilized enterprise allocations.

Equivalent Capacity

NSP has taken steps to meet the retirement of equivalent licensed capacity condition. To meet the condition, the company can give up either licenses of existing vessels (which may or may not be active) or licenses that are banked (no actual vessel exists but the company could construct a new vessel to operate with the banked license). According to the consultant's understanding, NSP has returned the licenses of the *Canso Dart*, *Canso Light*, and *Canso Mariner*, each with a 3,500 tonne annual catch capacity, and the *Burfish* and *Burhound*, each with a 2,500 tonne annual catch capacity. All of these vessels were licensed but not active. Thus, meeting the condition causes no reduction in active fishing capacity and has no effect on the Base Case.

Cod Constraint

Based on landings data for the calendar year 1986, the company complied with the second condition, that the Cape North harvest no more than 6,000 tonnes of the company's 2J,3KL cod allocations in any one year. Landings by species for calendar year 1986 are shown in Appendix A. For base case purposes, according to NSP officials, without the Cape North, cod from this area would have been caught by the conventional wetfish trawler fleet and therefore must be reflected in the Base Case. In other words, the Cape North displaced wetfish trawler landings from 2J,3KL on more or less a tonne for tonne basis in 1986.

Underutilized Enterprise Allocations

For the calendar year 1986, about 49 percent of the Cape North's catch consisted of species other than cod. Redfish and pollock, both species with previously underutilized EAs, account for 50 percent of the landings. Thus, the condition that at least 50 percent of the catch be underutilized EAs appears to be met. It is worth pointing out that the conditions attached to the license do not specify what is meant by an underutilized EA; whether the condition limits NSP to catching only that portion of the EA that was not utilized, or any amount up to the EA as long as there was some prior underutilization is not clear. For its part NSP has calculated the quantity the Cape North is allowed to catch as the

average underutilization in the two years (1984 and 1985) prior to the introduction of the vessel. This seems reasonable in light of the absence of a more specific definition.

In any case, it is not crucial for the impact analysis, since once again NSP indicates that all of the non-cod species would have been taken by the wetfish fleet in the absence of the Cape North. This appears to be a valid contention because 1985 landings data indicate the wetfish fleet was approaching full utilization of those EAs actually fished by the Cape North. They are considered underutilized by virtue of the averaging method which incorporates 1984 results.

NSP Operating Circumstances

Various factors other than the Cape North affected NSP's operations during 1986. The resulting changes in employment and operating levels complicate the assessment of the impact of the Cape North.

In 1986, landings in Lunenburg by the wetfish trawler fleet declined by 3,000 tonnes compared with 1985. This resulted in a decrease of 9,375 days of employment in primary fish processing at the plant compared with 1985.[8] According to NSP, the factors accounting for the reduction in raw material to Lunenburg include:

- the general reduction in quotas from 1985 to 1986;
- transfers of the NSP offshore quotas to inshore allocations; and,
- the conversion of Lunenburg based Fox Class trawlers vessels to containerization.

In addition, the Cape North must be a contributing factor since (see below) it caught fish that would have been harvested by the wetfish fleet.

In spite of the 3,000 tonne landings decrease and the consequent impact on *primary processing* employment, total employment at the Lunenburg plant actually increased in

8 The Lunenburg facility is comprised of two plants. The wetfish plant handles primary fish processing including activities like heading, skinning and filleting. The cooked fish plant carries out further processing such as cooking, breading and the preparation of frozen meals.

1986. According to company officials, in addition to the Cape North several factors affected plant employment levels. Increases in employment resulted from:

- greater emphasis on higher grade, premium products which are more labour intensive to produce; and,
- additional production lines of higher value-added cooked fish products were introduced in 1986.

On the other hand, employment was decreasing not only because of the reductions in landings by the wetfish fleet, but also because of:

- increased mechanization - in 1986, the company added two new filleting machines to the Lunenburg plant. Each machine directly displaced 16-18 production line positions.
- better allocation of fish among plant facilities, reducing overtime and second shift production.

On balance, the net result was an increase in the number of hourly paid plant jobs (measured on a full-time equivalent basis) from 710 in 1985 to 739 in 1986.

The Base Case impacts pertain to the hypothetical harvesting and processing situation without the Cape North. The assumptions necessary to define the Base Case were adopted after lengthy discussions with company officials. With the Cape North operating as part of its trawler fleet, NSP did make a variety of operational decisions they would not have made without the vessel. To review the year and anticipate operational behaviour in the absence of the Cape North was difficult. However, it was finally agreed that in all likelihood, given price and market conditions, without the Cape North all the groundfish caught by the Cape North would have been harvested by the wetfish trawler fleet. On this basis, the Base Case impacts are estimated using appropriate impact coefficients for wetfish trawler and processing plant operations.

To estimate the base case impacts, the wetfish fleet requirements to harvest the Cape North catch must be determined. During 1986, at least two NSP wetfish trawlers were out of service at all times. These vessels were lengthened to permit containerization with no change in carrying capacity. These conversions are part of an on-going program of fleet modernization. Without the Cape North, the timing of the conversions would have been different, although the exact difference is unclear. In any event, for the purposes of the impact study, it is assumed NSP could have caught the Cape North groundfish without

adding to its wetfish trawler capacity. Based on average annual wetfish trawler catches, 2.6 wetfish trawlers would have been required to harvest the groundfish landed by the Cape North.

Employment and Income

The average crew on a wetfish trawler consists of 16 members. Based on average rates, the total crew share and benefits payable to wetfish trawler crew members by landing the Cape North catch is $1.8 million. This corresponds to 42 person-years of employment.

Purchased Inputs

In addition, the operation of the wetfish trawlers also requires other expenditures on purchased inputs. These include petroleum products, ice, repairs and maintenance and other goods and services. The total expenditure on these products, net of imports to Nova Scotia, in the Base Case is $2.3 million.

Since for Base Case purposes, no additional wetfish trawlers are required in the NSP fleet, other overhead expenditures are assumed to be unchanged.

Processing

The fundamental difference between the factory freezer trawler operation and the wetfish operation is that all processing of the freezer trawler catch is done on board the ship. In the wetfish operation all processing takes place at a shore-based processing plant. The Base Case impact of processing the Cape North's catch at shore-based plants is estimated at $3.4 million in wages and salaries. The associated employment impact is approximately 177 full-time processing jobs, based on the average income level earned by processors in 1986. Other purchased inputs (packaging and so on), net of imports required in processing total $1.4 million.

Table 3-2 summarizes the expenditure impacts identified for the Base Case.

Table 3-2

Base Case - Economic Impacts(1) of Fish Harvesting and Onshore Processing (Feb. 22, 1986 - Feb. 21, 1987)

	Employment (person-years)	Base Case Impacts ($'000)
Wages and Benefits	219	5182
Purchased Inputs		3727
Other(2)		0
Total		8909

Note: 1) Impacts are net of imports.
2) Other includes insurance, onshore support and training and transition.

Calculated by Gardner Pinfold Consulting Economists Limited.

3.2.3 The Net Impacts

The employment and income impacts associated with the operation of the Cape North are estimated on a gross basis as well as for a Base Case situation in the two previous sections. The Gross Impact refers to what actually occurred as a result of the operation of the Cape North. The Base Case describes the assumed situation if NSP had not received a license to operate a factory freezer trawler in 1986. The Net Impacts related to the operation of the Cape North are measured by subtracting the (hypothetical) Base Case impacts from the Gross Impacts. The Net Impacts are set out in Table 3-3.

The operation of the Cape North created 86 person-years of employment in its first year of operation on a gross impact basis. Had the Cape North not operated (Base Case) the conventional NSP fishing fleet and processing facilities would have generated 219 person years of employment handling the factory trawler's catch. The net employment impact attributable to the Cape North is a decrease in employment of 133 person-years. Total wages and benefits decrease correspondingly by $2.0 million. Expenditures on purchased inputs (net of imports) also show a decrease of $1.2 million. Expenditures on

Table 3-3
Net Impacts of the Cape North's First Year of Operation
(Feb. 22, 1986 - Feb. 21, 1987)

	Cape North		Base Case		Net Impacts	
	Employment (person years)	Gross Impacts ($'000)	Employment (person years)	Impacts ($'000)	Employment (person years)	Impacts ($'000)
Wages and Benefits	86	3147	219	5182	-133	-2035
Purchased Inputs		2507		3727		-1220
Other (2)		133		0		133
Total		5787		8909		-3122

Note: 1) Impacts are net of imports.
2) Other includes; insurance, onshore support and training and transition.

Calculated by Gardner Pinfold Consulting Economists

other items such as insurance, onshore support, training and transition actually show a net increase of $133,000. Thus, the total Net Impact attributable to the operation of the Cape North in its first year is a reduction in the expenditures made to harvest and process its catch of $3.1 million.

In spite of the reduction in total wages and benefits paid, on an individual basis some workers aboard the Cape North earned higher incomes than their shore-based counterparts. For example, on average a processor on the Cape North who completed the two trips on, one trip off cycle, earned approximately $23,600 for about 2,640 hours worked. This compares with the average annual incomes of $17,500 earned by shore-based NSP plant workers in 1986 (for about 2,000 hours of work). On the other hand, trawlermen on the Cape North earned slightly less income on an annual basis than their counterparts in the wetfish fleet. Certified trawlermen in the wetfish fleet earned an average of $32,600 with 270 days spent at sea. The factory freezer trawlermen earned $32,000 for an average of 220 days at sea. Although, their incomes are slightly lower, the Cape North trawlermen worked 50 fewer days.

The operation of the Cape North also created new business opportunities. In the community of Lunenburg, a local stevedoring company acquired a contract with NSP to handle the discharge of product from the vessel to company storage facilities. In the course of the first year's operation this activity created 1,407 days of employment for 27 labourers. The employment generated by this activity is not included in the estimate of gross employment related to the Cape North, although the expenditures made by NSP to the stevedoring company are included in impacts related to purchased inputs. Although this is a relatively small impact, it does represent the emergence of a new economic activity which could develop further in the future.

3.3 Labour Force Composition

The main issues concerning labour force composition are the occupation composition of the Cape North's crew complement and the nationality of the crew members.

3.3.1 Occupational Composition

Since the Cape North is a factory freezer trawler both harvesting and processing fish on a continuous basis, its operating crew is much larger (59 positions versus 16) than that of a conventional wetfish trawler. The main difference lies in the processing and repair and maintenance requirements. The Cape North requires 4 positions for Supervision, 11 positions for Repair and Maintenance and 4 positions for Steward Services. Fishing operations are carried by the 12-person Trawler Crew and processing requires 28 positions. The occupational composition of the crew is shown in Table 3-4. Also shown is the total number of personnel on the payroll in each position. The latter figures include those on shore as well as those at sea.

3.3.2 Cape North German Crew

Initially NSP found that mastering the new technology represented by the factory freezer trawler would require a period of transition. Efficient operation of the vessel and suitable technology transfer required experienced hands. To this end, NSP filled 11 positions with experienced German officers and technicians:

- Captain
- First Officer
- Chief Engineer
- Production Managers (2)
- Radio Officer
- Processing Equipment Mechanic
- Fish Meal Operator
- Electrician
- Bosun
- Netmaker

Under the terms of the FFT license, NSP was given a period of two years to train suitably qualified Canadian personnel. Training has progressed smoothly. Canadian personnel are now serving as Captain, First Officer, Production Manager and Fish Meal Plant Operator. Owing to the installation of new shipboard communication equipment, the Radio Operator's position has been eliminated. As of March, 1987, four German crew members remain with the Cape North: Chief Engineer, Electrician, Processing Equipment Mechanic and Bosun. Training of Canadian counterparts to take over these four positions is continuing and it appears the two-year transition period will be met.

Table 3-4
Cape North - Occupational Composition

	Number of Positions(1)	Number in Crew(2)
Ship Supervision	4	9
Captain	1	
First Officier	1	
Second Officier	1	
Third Officier	1	
Processing Crew	28	41
Production Manager	1	
Production Foreman	1	
Processors	26	
Trawler Crew	12	16
Bosun	1	
Netmaker	1	
Trawlermen	10	
Repair and Maintenance	11	15
Chief Engineer	1	
Second Engineer	1	
Third Engineer	1	
Meal Plant Operator	2	
Electrician	2	
Oiler	2	
Mechanic	2	
Ship Steward	4	5
Chief Steward	1	
Assistant Cook	1	
Messmen	2	
Total	59	86

Note: 1) Represents those at sea at any one time.
2) Represents total number employed including those at sea and on shore.

Source: National Sea Products, 1987.

3.3.3 Cape North Canadian Crew

Canadian crew were hired to fill all of the positions shown in Table 3-4, except those filled by Germans as previously noted. By March, 1987, allowing for voluntary and invited terminations, a total of 103 people had served on the Cape North. Table 3-5 shows the distribution of these crew members by occupation. The sex distribution, marital status and average age for each occupation category is also indicated. The Cape North crew is predominantly male (87%). Of the 13 females, 11 occupied processing positions and 2 service positions. Married persons make up 52 percent of the crew members. The average age of the crew members was 31 years, with processing crew tending to be somewhat younger and service crew slightly older than the average. Initially, the Canadian positions covered the galley staff and engine crew, trawlermen and processing crew.

Special hiring policies, arrangements regarding temporary tryouts on the Cape North and training programs were established to encourage and assist Lunenburg area trawlermen and processing plant workers who wished to work on the Cape North. The details of these policies and schemes are discussed in Section 3.5.

3.4 Quality of Life

3.4.1 Objectives and Methodology

The objectives of this part of the study are to determine:

- what changes in the organization of work have occurred on the Cape North as compared with:

  a) conventional trawlers; and,
  b) shore-based processing jobs.

- the impact on the quality of life of individual workers; and,

- how families have responded and adjusted to the intermittent absence of the spouse working on the Cape North.

The main emphasis is placed on the identification of issues, concerns and potential mitigating factors (rather than on the quantification of impacts) at three levels: the individual worker, the worker's family, and, to a more limited extent, the community.

Table 3-5
Cape North - Canadian Crewmembers Demographic Charcteristics

	No. of Crewmembers	Sex	Marital Status	Average Age
Ship Supervision	7	7- Male	4-Married 3-Single	30
Processing Crew	55	11-Female 44-Male	26-Married 29-Single	29
Trawlermen	19	19-Male	10-Married 9-Single	33
Engine Repair & Maint.	15	15-Male	10-Married 5-Single	32
Service	7	2-Female 5-Male	4-Married 3-Single	36
Total	103	13-Female 90-Male	54-Married 49-Single	31

Note: Total refers to the number of people who served on the Cape North in its first year.

Source: National Sea Products, March 27, 1987.

Primary and secondary data sources were used. The primary sources were open-ended face-to-face interviews and two questionnaire surveys. The interviews were held with a total of 41 individuals from National Sea management, Cape North crew, the spouses of crew members, union representatives, onshore plant workers, Lunenburg area community representatives, and professional people outside of the industry and community with experience in social work (Appendix B). One questionnaire survey was sent out to 59 crew members and the other to 160 plant workers. Seventy-four percent of the crew survey and thirty-nine percent of the plant workers survey were returned.

This section presents the main issues that emerged from each of these primary sources. Details, including copies of the surveys, can be found in Appendix C. All interviews with National Sea non-management employees were conducted in confidence and all questionnaires were anonymous.

Secondary sources included relevant research on the social structure of the fishing industry, the oil and gas industry, and the Canadian Navy. The main emphasis has been placed on worker health and safety and spouse absence (the so-called Intermittent Spouse Syndrome).

Most of the information in the next section (3.4.2 Working on the Cape North) is drawn from the interviews with National Sea management, seven Cape North crew members, and three union representatives. The last part (3.4.2.6 Level of Satisfaction) reports the results of the crew questionnaire survey.

3.4.2 Working on the Cape North

3.4.2.1 Responsibilities and Supervision

Eighty-six officers and crew were employed on the Cape North at the end of the first year of operation. These numbers become outdated very quickly due mainly to the gradual departure of the German crew (Refer to Table 3-4 for complete list of positions on the vessel).

At the end of December after the German master, Captain Creuger, left, six Germans still held supervisory positions on board - First Officer, Chief Engineer, Processing Equipment Mechanic, Fishmeal Operator, Production Manager and Bosun.

The Master is responsible for the overall operation of the ship. Beneath him the Chief Engineer, Bosun, Production Manager, and Chief Steward are responsible for the principal areas of work on board - the engine room, fishing deck, processing area, galley and messroom, respectively.

During each trip about two-thirds of the crew are on board and one-third are on shore leave.

3.4.2.2 Working Environment

a) Schedule

When the ship began operations, National Sea projected that the ship would be at sea for an average of 312 days each year. Each individual crew member working two trips on and one off would be at sea for 210 days. Trips were expected to last 22 to 45 days and average 32 to 35 days (National Sea Products, January, 1986, Appendix D).

Since February, 1986, seven full trips have been completed. An additional one lasted only 14 days due to engine trouble, but the others have lasted from 40 to 62 days. Three trips have been 60 days or longer, and two of these were back to back. The ship has a turn-around time of five days between trips when the crew can go home. Apart from this short break, the crew members can probably count on 90 to 120 days at sea before they earn a 40 to 60 day rest period on shore.

On the fishing grounds, fishing and processing continue 24 hours a day, seven days a week. The crew on the fishing deck and processing area work in two shifts, six hours on/six hours off around the clock. For the Officers, engine room crew, and fishmeal plant operators, the schedule is 12 hours on and 12 off. When the ship is fully crewed, there are 14 processors and six trawlermen on each shift.

b) Breaks

For the processors and trawlermen there are no official breaks during the two six hour shifts. This is rigidly enforced in the processing room even when the ship is steaming and no fish are being processed. Trawlermen, on the other hand, may be able to take a few minutes break on deck during slow work periods.

c) Conditions

For the trawlermen, the working conditions are familiar and they had few complaints. There seem to be no serious problems with the work requirements, safety or supervision.

The processors interviewed made varying comments about the processing operations but several common aspects emerged:

- Initially, they found the German supervisors very hard to get on with and understand. Orders were given in German, were not translated, and clearly aggravation simmered. This problem diminished somewhat when the processors began to learn what the German terms meant.

- The processing equipment is dated, apparently, and is less efficient than those in the onshore plant. They broke down frequently but delays were minimized by the excellent processing equipment mechanic.

- The processors felt that, at times, product quality suffered unnecessarily because fish were still being caught when the holding area at the start of the production line was full, and many were crushed or in rigor before they could be processed. When the fish are stiff and twisted they don't go through the machines properly, bones get cut through, the fillets are poor, more time is needed at the trimming table, the production line slows down, and the high quality shatter packs cannot be produced. The processors felt that they were often blamed unfairly when this occurred.

- The arrangements of the processing room and storage could be improved. For example, the boxes of fillets are taken from the plant freezer, loaded into an elevator, taken down to the storage area, unloaded again and stored. In other vessels, chutes take boxes directly to the storage area thereby cutting out a lot of time and physical effort. Cleaning equipment was also considered inadequate despite the fact that cleanliness is stressed in the processing area. Since a moving vessel is fundamentally difficult to work on, there is a greater need for an efficient working environment in which frustrations and unnecessary expenditure of energy are minimized.

- People become tired quickly on a six on/six off shift unless they are very used to it. As the trip proceeds people become edgy, tempers flare, antagonisms develop and morale declines. When the work is steady and the hold is filling quickly, the crew know the trip will be short (40 to 45 days) and this helps to keep up morale. But when the fish are hard to find, time is lost in steaming and the plant doesn't have enough fish, the crew know they are in for a long trip (60 days or more) and morale plummets.

- A number of people have been out on the Cape North for several trips and represent the core of a stable working group. However, the efficiency of the processing section is undermined by the high turnover of personnel. New workers don't know the routine, they may have little experience, or may be psychologically unable to cope with the stress of working on board ship. The turnover rate on the Cape North averaged seven people per trip. This represents about 14 percent of the non-supervisory positions. In the Lunenburg plant about 18 people would be expected to leave in a 42 day period out of a workforce of about 800. This represents a two percent turnover rate.

- There is no safety committee on board. The Master has ultimate responsibility for the safety of the ship and the crew, but there is clearly a tension between the union's interpretation of its mandate and the traditional authority of the Master. The union delegates are in a vulnerable position because at sea they are almost completely out of contact with the union. They also do not seem to confer with each other. They appear to get little training or guidance from the union on how to handle situations that are new for all concerned.

d) Laundry

The processors are issued with two white coats at the beginning of the trip which would have to be washed daily if they were to be used as intended. There is only one washer and one dryer on board and these are meant to be used for all personal laundry as well. It is usually not possible to wash clothes every day. Many processors use rubber aprons instead of the coats, but the aprons do not fully protect their own clothing. Their regular clothes then have to be washed more often. There seems to be no economy of labour and unnecessary annoyance in this situation.

e) Accommodation

The Cape North has 62 berths. The crew share two or three berth cabins. Usually if there are two people in a cabin they work opposite shifts. In a three-person cabin, two people will be off shift at the same time and conflicts can develop when one wants to sleep and the other doesn't.

The two six-hour off periods are for all sleeping, eating, laundry, housekeeping and social activities. The crew members sleep in two to four hour snatches and seem to get an average of five to six hours of sleep each day.

f) Food

The comments about the food were varying. Most agreed that it was great in February, 1986, but had declined in quality and variety by Christmas. The main complaint was directed at the very repetitive menu and that nothing was fresh by the end of the trip. It appears that the ship is not reprovisioned often enough or with proper attention to normal dietary needs.

The meals are eaten immediately before and at the end of each shift. Consequently, people are either working or sleeping on a full stomach. Inefficiencies in the workplace and sleeping difficulties often accompany this situation.

g) Relaxation and Entertainment

The only room available for recreation is the messroom between meal times. A video machine is in the room and at the beginning of operations about 40 videos were available for the crew to view. Before Christmas, the number had dropped to eight and most people had seen them several times.

No newspapers or magazines are brought on board for the crew. After several weeks at sea they are completely out of touch with current events.

h) Communication with Home

Mail deliveries are irregular - not an uncommon situation on board ship. During the difficult Christmas trip the crew was depressed and angry because they were missing both Christmas Day and New Years Day. The isolation was heightened because of the inefficient mail delivery. Several said they came back on January 6 and found many letters and cards waiting for them in the National Sea office.

Private phone calls are possible but expensive. They cost $14.60 per minute. Ship to shore radio telephone linkage, not private but much cheaper, is no longer possible because the ship has no radio operator.

i) "Ironing Out" Problems

Despite the complaints, several crew members interviewed stated that it could be a good job "if a few of the problems get ironed out". There is potential satisfaction in working hard in an efficient team producing a high quality product, but at present difficult physical and psychological adjustments undermine the effort. The processors found it harder to be positive than the trawlermen because they felt they were subject to a lot of unfair criticism. One former processor said she felt her hard work was appreciated, but her positive attitude was an exception.

Several people stated that some unsuitable individuals were accepted to work on board. They could not cope and did not function properly at work. At least three people have had various degrees of psychological breakdown. One young man who became seriously disturbed was not restrained and was taken off the ship only after two weeks. It is difficult to predict in advance how people will respond under shipboard stress but a better screening process should be able to identify those who are at risk. The disruption created by people who cannot cope is resented because they cannot work properly, shifts are left shorthanded and the pressure on others increases.

3.4.2.3 Comparison with Wetfish Trawlers

For the trawlermen on the Cape North, the work is very familiar. The men are accustomed to the sea, the command structures and life on board ship. They work mainly on deck but also in the processing room when more hands are needed. The day to day working conditions compare well to trawlers. The Cape North may well be safer, they don't have to pay for their food, and the six on/six off shift is rarely broken. The main difference is the length of time at sea and the subsequent long periods on shore.

On a trawler the crew may ostensibly be working on a six on/six off shift but may in fact have to work for 18 hours at a stretch for several days in a row. Trawlers are usually at sea for 10 to 12 days and in port for two days before the next trip. Most average 18 to 22 trips a year though some make more, and some less. Trawlermen are likely to spend 240 to 260 days at sea each year as opposed to 210 on the Cape North. In some ways there is more flexibility working on trawlers since holidays and important family events can be accommodated by missing a trip. However, there is no money earned during this time off.

On a trawler the men earn 37 percent of the value of the catch divided into shares. They pay for their own food, for the ice, and for any entertainment they may want on board such as television . They are guaranteed $40 per day. Annual earnings are highly variable.

On the Cape North, trawlermen are guaranteed $101 for each day at sea and $81 for each day ashore (earned at the rate of one shore day for every two sea days). A productivity bonus may be added to this, dependent upon the size and quality of the catch and the length of the trip. By working 210 sea days and earning 105 shore days a trawlerman is guaranteed $29,715 a year before productivity bonuses are added. This is probably less than he could earn on a trawler in a good year but is good for guaranteed earnings.

3.4.2.4 Onshore Processing

In the Lunenburg plant, the processor works eight hour shifts each day, six days a week - as long as there is enough fish. They get one hour for lunch, 15 minute breaks in the morning and afternoon, and two short personal needs breaks.

They are supplied with a clean white coat from the plant laundry each day. The workers generally move from job to job around the plant and become experienced at several tasks. Changing jobs also lessens the risk of wear and tear injuries caused by continuous repetitive movements. The workers are closely supervised in order to keep productivity high. In recent years health and safety have been increasingly emphasized in the plant, and studies are underway to improve the efficiency of the workplace.

On average, a processor at the plant working full time earns about $17,500 a year. On the Cape North, processors are guaranteed $79 for each sea day and $63 for each earned onshore day. For 210 days at sea and 105 days onshore they are paid $23,205. Bonuses are calculated on the same basis as for trawlermen but paid at a different rate.

3.4.2.5 Questionnaire Responses

This part of the report deals with the responses to the crew and plant worker questionnaires. Only the main points are included in this text. Samples of the questionnaires can be found in Appendix C.

Crew Survey

Forty people returned completed questionnaires. Thirty-two were between the ages of 20 and 40, half were married, and one-quarter were single. Twenty-two have school-aged children at home. About half of the married respondents had spouses working outside the home. One-quarter of the respondents were trawlermen, just over half were processors, and the remainder were mainly repair and maintenance personnel. Only three people in supervisory positions participated.

Twenty-three people worked in the fish plant at some point before joining the ship. Five processors had no previous fish plant experience. Twenty-eight people had previous sea-going experience, including 12 processors.

All the respondents had completed at least two trips and had been on shore leave at least once. About one-third had completed four or five trips and had been on two shore leaves. Only two have been on from the start.

Job Commitment

Over half indicated no commitment to staying on board. The remainder were equally split between a commitment to stay and a willingness to try it for a few years. Most (75 percent) considered they did have other job options and thought their chances of getting other work were fair to good.

Reason for Joining the Cape North

When asked why they joined the Cape North, 60 percent replied they were expecting to earn more money. Fifty percent said the promise of good pay was the single most important reason for applying. The opportunity for steady employment and longer time off also ranked quite high.

Satisfaction

When asked to rate their level of satisfaction with the Cape North, most people indicated that working and living conditions on board were acceptable. Over three-quarters found the place of work, the shift length, and the amount of sleep satisfactory. Over 60

percent indicated that crew relations, shore leave, living quarters, supervision and safety were acceptable. Food, relaxation, and first aid received less overall approval, but still satisfied over half the respondents.

Dissatisfaction

The highest levels of dissatisfaction were with the bonus pay (87 percent), the sense of isolation from the outside world (80 percent) and poor communication with the family (62 percent). There was also general dissatisfaction with on-board entertainment (videos). A surprising number of respondents (30 percent) were ambivalent about the trip length, though 45 percent indicated dissatisfaction.

Living/Working Conditions

These results suggest that the shipboard living and working conditions are acceptable for most of those currently on board. However, they fit into an overall balance which includes loss represented by long periods with no normal family and social life, and gains obtained through good shore leave and better pay.

Turnover Rate

In the first year of operation, a total of 142 people served at one time or another on the Cape North filling the 86 supervisory and crew positions available.[9] Some have served the whole year and continue to be employed, others managed a few trips, while still others lasted less than one trip. In the aggregate, the rate of turnover is relatively high. The reasons for the terminations vary. Some (12 percent) were planned, as in the case of the German crew. Others (52 percent) were the result of action taken by the company arising from poor performance or for medical reasons. And a number (36 percent) were simply voluntary arising from such factors as dissatisfaction with the job, life at sea, and being away from home for extended periods. Virtually all those who were terminated or who quit were initially hired from within the company and returned to jobs onshore. Turnover figures by job category are summarized in Table 3-6.

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9 This figure, reported at a later date than the data in Table 3-5, includes the German crew members. Table 3-5 refers to Canadian crew only.

Table 3-6

Turnover Rate

	Number
Persons on Payroll in First Year	142
Positions on Vessel	86
Aggregate Turnover	56
Planned	7
Company Terminations	29
Volunteer Quits	20

Source: National Sea Products Limited.

The high turnover rate suggests that for many people the financial and other compensations are not enough to counter the disruption to their normal lives. Dissatisfaction with the bonus system was also reflected in comments made during interviews. Some people said they felt misled by the Company's optimistic "promises" of bonuses up to 40 percent of basic pay. Up until Christmas, 1986, the bonus for 10 months was a few hundred dollars.

Female Crew

In their comments about having women crew members on board, the respondents were equally split and expressed strong opinions both ways. The significant number opposed (14) may well make life uncomfortable for the women, but this is likely to be balanced out by those in favour (19). The polarized positions were each supported by comments, and seem to be based on the pre-conceived opinion about whether it would work, rather than on neutral observation.

Personal/Family Adjustment

In terms of personal adjustments to shore life, the general tone of comments was "no problem". This contradicts some of the comments made in interviews with medical professionals, social workers and crew members; and with the research data on the oil industry and the Canadian Navy (section 3.4.3 Impacts and Mitigation).

In response to a question about family adjustment, 92 percent of respondents did not answer and perhaps did not understand the question. In answer to a later question, most indicated that their families could get help from other family members or friends. Seventeen stated that their families managed independently.

Plant Worker Survey

Of the 60 respondents, 31 were women and 29 men. Thirty-two were married and 23 had children under the age of 19 living at home. Over two-thirds had worked at the plant for over three years, and half had worked there for six years or more. Most of the women were trimmers or packers, while the men reported a much greater variety of jobs. Most of the women earned between $10,000 and $20,000, while the men earn $15,000 to $25,000 or more.

Apply to Work on the Cape North

Only eight of the respondents had ever applied to work on the Cape North, and only one was accepted (he subsequently changed his mind). Five of the eight said that better pay was the main reason for applying. Only two people expressed current interest in a job on the Cape North.

Of the majority who did not apply, the reason cited most often was that they did not want to go to sea. Other common reasons were that the pay was not high enough, they were satisfied with their present job, they had family responsibilities, the trips were too long, they were likely to be seasick, or their partner did not want them to go. Twelve people cited family responsibilities as the most important reason. Thirteen people said that they might consider a job on a FFT at some future time if circumstances changed.

Plant vs. Cape North

Respondents were asked to compare their own job with working on the Cape North. Clearly some found this difficult, because for certain aspects almost half gave no answer. Opinion was more or less evenly split over the adequacy of the basic pay and the bonus system, but in all other respects respondents felt that working in the plant was better than working on the Cape North. Forty-four people said that the hours of work were better

in the plant, while only one said they were better on the Cape North. This was backed up by a number of comments suggesting that the pay on the ship was in fact low when all the hours worked were taken into consideration.

> *"The pay is not very good because you are working seven days a week for regular time. If they got overtime after 40 hours they would be making good money."*

A number of people also expressed concern about the effects FFTs may have on the amount of work in the fish plant.

In general, neither men nor women working in the fishplant see jobs on the Cape North as an attractive or feasible proposition. If the pay were increased and the trips shortened, more people might be willing to give it a try. But, as it stands, it appears likely that National Sea may not be able to continue recruiting experienced fish plants workers. If the high turnover of personnel continues on the Cape North, this could jeopardize the chances of retaining a skilled, stable crew.

3.4.3 Impacts and Mitigation

The main impacts on quality of life of the operation of the Cape North occur in the lives of the ordinary crew members and their families. Secondary impacts occur at the community level but are dispersed because the crew members do not all live in Lunenburg; they may also only appear when strains cannot be accommodated within the resilient structure of the family.

This first year of operations for the Cape North is hard to assess because it is unlikely to represent a typical year of operations. National Sea has never run a vessel of this size and complexity before and the company management has had to learn as much as anyone else about how to do it.

The company is clearly committed to FFT operations and to making the Cape North as successful as possible. Part of this success lies in building a stable, efficient crew of experienced people who know the ship, the equipment and each other very well. This can be accomplished when the turnover is low and the rewards are sufficient to keep the workforce coming back for several years. At present, these conditions do not seem to exist

on the Cape North. There is a small core of regular workers but the level of dissatisfaction on-board is too high for stability to be achieved.

Life aboard ships at sea for many weeks is unlike that on land. Special tensions develop because people are cooped up together, and there is little chance to get a break from each other or from the routine. If working relations are to stay at least tolerable and at best supportive, the source of those tensions must be identified, and measures must be put in place to mitigate them. This has been done in the oil and gas industry, in remote modern mining camps, in the Canadian Coast Guard, and the Navy. Some of these measures might also be usefully applied to the situation on the Cape North.

a) Individual Crew Members

For this discussion the proposition of Freda Paltiel (1981) is put forward as a useful working theory. Paltiel states that adults dealing with stress obtain support from three sources: work, family and friends. If one of these is lost or weakened, the other two can compensate, if they are strong. If two or more are threatened or lost, the individual becomes highly vulnerable to physical and/or psychological breakdowns of one type or another.

There is little doubt that working on the Cape North, particularly as a processor, is highly stressful. The crew works 84 hours a week for six to eight week periods, often under pressure, and is always reminded that the ship will not go back to port until the hold is sufficiently full. People who do not get up on deck every day can lose track of whether it is day or night. There is no opportunity for exercise other than that built into the job, no relief from the daily routine, no chance to catch up on lost sleep, and little choice of what or when to eat. Also, during the past year, the crude supervisory methods of some German crew members in the processing area have contributed significantly to the high stress levels.

During the long periods at sea, the working and living environment on board has to provide a substantial measure of the support which is lost through separation from family and friends on shore. Companionship and camaraderie become very important, and criticism and backbiting become very hard to take. Lack of appreciation and compensation, even in small things such as few videos and declining quality of food, can be a source of

much anger. Isolation is a hardship that needs to be actively compensated if good workers are to get enough satisfaction from their job to stick with it.

The Cape North itself provides severe constraints in terms of relieving some of the stresses. The accommodation is tight, there is no separate room for relaxation and recreation, the work schedule dictates a rigid meal schedule, and the layout of the processing area may be less than ideally efficient. Listed below are a number of measures that might generate a more supportive working environment:

- periodic meetings between the production crew and the master to iron out grievances and conflicts;
- improved training in human relations skills for supervisors;
- improved training for union delegates by the CBRT&GW;
- rethinking of the production and storage area layout to minimize unnecessary expenditure of labour;
- a better system for laundering protective work clothing;
- better cleaning equipment in the processing area;
- friendly competition, with rewards, for production teams;
- consideration of the occasional short shift or shift off during slack production periods;
- greater variety of food and attention to long term dietary requirements;
- wider range of recreational options such as a good selection of videos, games, and possibly a weekly group activity like bingo or a card social; and,
- magazines and newspapers renewed at regular intervals.

All of these, and other measures in the same vein, can help to relieve tension and promote positive group dynamics. Some come under the heading of morale boosters, but they can nonetheless make an important contribution to individual stability and work efficiency. The oil industry makes full use of excellent food, good accommodation, and recreational opportunities to keep up the morale on offshore drilling rigs. In addition they have a very regular schedule of work and rest, usually equal numbers of weeks on and off. While the logistical and economic operating constraints of the FFT are significantly different from an oil rig, the rationale for supporting crew morale is the same - stability is achieved, and the crew works more efficiently and effectively. The means by which this

would be accomplished would differ, particularly since the Cape North has no unused space that could be used for recreation. This problem, in particular, would have to be addressed in the future if new vessels are added or if this one is replaced.

To support the link with the family at home, improvements in the means, efficiency and cost of communication need to be examined. The Canadian Coast Guard obtains significantly lower rates for private phone calls by block purchase of time. Special attention needs to be paid to keeping the mail moving to and from the ship. The Military Family Support Centre in Halifax has experimented with making personal message videos in which a few minutes are recorded by individual families and are viewed privately by the crew member on board ship.

If only a few of these suggested changes can be undertaken, then the compensation may need to be in the form of improved pay. In this way, though individuals may be taking on certain sacrifices by being at sea, there is an overall feeling of advancement. Length of service on board could also be recognized through a special bonus system.

b) The Spouse and Family

The level of stress experienced by the spouse and family of the crew members depends upon a number of factors:

- the level of mutual support between husband and wife;
- the independence of the spouse at home and his/her ability to cope;
- the support network of family and friends;
- communication back and forth during the trips away; and,
- a mutual feeling of long term benefit despite the sacrifices.

Each of the crew member's wives who was interviewed clearly wanted to give her spouse a chance to try it out on the ship. Some also saw opportunities for advancement that they felt were hard to find in other areas of the fishing industry.

Each one found the irregularity of the trip length very hard to deal with, mainly because they could not find out from National Sea when the Cape North was coming in. During long trips (60 days or more), they might start to expect the ship after 40 days and be

unable to make plans or answer children's questions on the matter for nearly three weeks.[10] Improved direct communication with the company and the ship are essential if this type of frustration is to be minimized.

Despite the replies of the questionnaire respondents, current research on the oil and gas industry (Women and Oil Conference, St. John's, Newfoundland, 1985), and by the Canadian Navy indicates that "coming home" is a stressful time for both the individual and family.

During the crew member's absence, the family members develop a different independent routine which they may be reluctant to change when he or she comes home. There may be frustrations and problems to work through that have arisen during the separation. And the returning family member has to re-establish his or her position as spouse and parent. The homecoming can create new stresses which, if not resolved, can lead to alcohol abuse, violence, and family breakdown. Local health professionals find a high incidence of all three already in fishing families.

Mitigation of this syndrome can come in a variety of ways:

- shorter trips;
- trip on/trip off;
- better communication with the company and the ship; and,
- crew members arriving home with a tolerable stress level.

It may also be possible to arrange some counselling for the spouse and family of new crew members as part of the overall orientation. Counselling could deal with coping mechanisms during the absence, and difficulties that can be expected when the spouse returns home. A mutual support network could be encouraged by putting the spouses at home in touch with one another, and providing opportunities for face-to-face meetings, possible at periodic small receptions when the ship returns to port.

The Military Family Support Centre runs a variety of activities for navy families, and has developed videos for the children of sailors. The videos respond to the questions and fears young children have about the safety and work of the parent at sea. This outreach

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10 Daily landings range from as low as 5 tonnes to as high as 20 tonnes. The great unpredictability of these landings makes it every difficult to forecast trip length accurately.

effort has been put in place in recognition of the alienation that can develop between parents and children when they have to cope with long frequent separations.

c) The Community

The workforce on the Cape North represents a very small proportion of the total workforce in the Lunenburg area. The special problems that arise among individual and families are not likely to be different in quality to those already seen in the general population, and are unlikely to put any special strain on existing health care and social support agencies. If measures of the type suggested are put in place, the need for any assistance outside the family will be minimized.

Conclusion

It is recognized that many of the operational changes suggested here under impact mitigation are not normally found in the North American fishing industry. They represent a different management style and change in the traditional tenor of relations between management and crew. National Sea has demonstrated its willingness to improve communication between the different levels of the company, so these suggestions are seen as not so much a change of philosophy for the company as the introduction of new methods in keeping with its current direction in management.

3.5 Employment Policies

3.5.1 Hiring Practices

The skills and experience required to fill the 59 positions on the Cape North differed widely. The approach taken by National Sea to fill these positions differed accordingly. As a general policy, existing employees were given the first opportunity to fill the positions requiring conventional fishing, fish processing and vessel operations skills. These positions include trawlermen, processing crew, engine repair and maintenance, and vessel services. Since the vessel is based in Lunenburg, employees based there were given preference over the company's employees located in other parts of the Atlantic Provinces. The company was able initially to fill most positions with people from the Lunenburg area. For example, all members of the processing and trawler crews were drawn initially from the company's Lunenburg Division. Only about eight percent of the 142 people who

served on the vessel in the first year were hired from outside the company. They filled relatively low paying positions such as oilers and messmen.

With the turnover in personnel, the source of employees expanded to include the company's operations in other parts of Nova Scotia and Newfoundland. The distribution of the crew by place of residence over the first year of operations was on average roughly as follows:

Location	%
Lunenburg	65
Elsewhere in Nova Scotia	20
Germany	10
Newfoundland	5
	100

Several key positions could not be filled locally nor from elsewhere in the region. This was because the Cape North incorporated technology unfamiliar to the fishing industry in Atlantic Canada. Though there are obvious similarities in fishing effort between conventional wetfish trawlers and a FFT, there are important differences arising primarily from the Cape North's factory capacity and the need to maintain the proper balance between harvesting and processing. Twelve positions were filled by personnel from outside the company who had the requisite experience and skills. Eleven of these were filled by German officers and technicians. These were Captain, First Officer, Chief Engineer, Production Manager (two), Bosun, Radio Officer, Processing Equipment Mechanic, Fish Meal Plant Operator, Electrician, and Netmaker. The twelfth position, chief steward, was filled by an individual with extensive experience in the offshore oil and gas industry.

3.5.2 Training

Through its hiring practices, National Sea ensured all positions on the Cape North were filled by people with at least the *basic* skills and experience necessary to perform their jobs. For many, the additional training amounted to a reorientation of these basic job skills to the more complex and demanding environment imposed by an FFT. In addition, those whose jobs had hitherto been exclusively land-based were required to undergo training to familiarize them with sea-going operations.

Processing positions were open to both males and females, with personnel selected on the basis of their production skills, work history and their ability to get along with their

fellow workers. The latter was a critical attribute given the cramped conditions on the factory deck and the length of time the vessel would spend at sea. Since the members of the processing crew had no sea-going experience, all were required to participate in a training program designed to familiarize them with life at sea. The program dealt with a number of issues including shipboard life, fire-fighting, emergency procedures, safety-first aid, and sanitation and hygiene. Processors were also given intensive instruction in production techniques, given the considerable dissimilarities between production on a FFT and in a shore-based plant. Dockside training could only go so far in acquainting workers with these differences; much of the experience was gained on-the job while at sea.

All trawlermen hired had to be certified as such by the Atlantic Record Book Plan. This industry/union certification is earned after satisfactory service first as a learner and then as a deckhand. In hiring its trawlermen, the company wanted and was able to get the best from its Lunenburg wetfish fleet. The gear (the otter trawl) and fishing technique used by wetfish trawlers and the Cape North are broadly similar, though there are important differences. In general, shooting and hauling in the trawl on the Cape North is a more complex procedure than on a conventional wetfish trawler, so trawlermen required some training beyond their existing skills. This was acquired in the only way it could be: on-the-job. The approach to fishing taken by the Germans differed in certain respects from what the Canadians were used to and this also required some adjustment. Beyond this the main factor affecting harvesting practices was the importance of maintaining a balance between catch levels and the rate of production.

The supervisory positions required the most extensive training effort. These included the Captain, Chief Engineer, (who directs the repair and maintenance crew) Bosun (who directs the trawler crew), Production Manager (who directs the processing crew), the Fish Meal Plant Operator, and certain members of the repair and maintenance crew including the Electricians and Processing Equipment Mechanics. The approach taken to training Canadians for these positions was to establish counterpart positions for them and develop a succession plan whereby the German officers and crew would gradually be replaced. This approach has worked to the satisfaction of the company. In less than a year most of these positions are now filled by National Sea personnel. The training of Canadian crew members is continuing for the more technically advanced positions of chief engineer, electrician, mechanic and bosun.

3.5.3 Labour Relations

As a workplace combining both fishing and processing activities, the Cape North represented an interesting problem for labour and management. The employees of National Sea Products in Lunenburg belong to one of two unions. Plant workers belong to the Canadian Seafood and Allied Workers (CSAW), while the trawler fleet is represented by the Canadian Brotherhood of Railway, Transport and General Workers (CBRT&GW). The Cape North draws on members of both unions, though the terms and conditions of employment on the Cape North are governed by the collective agreement with the CBRT&GW.

One of the main problems facing members of the CSAW is whether to give up their membership and join the CBRT&GW. While technically this is not difficult it did pose a potential problem if the worker becomes dissatisfied with work on the Cape North and wishes to return to shore-based employment with the company. This potential problem was avoided through an informal agreement between the unions allowing the workers in question to belong to both unions for a trial period of two trips. At the end of this time, they were able to return to the plant with no loss of seniority, if they wished. If they continued on the ship, they lost their CSAW membership and all seniority benefits with the company. Moreover, they could expect no special consideration from National Sea if they applied for another shore job later on, though in practice the company has made every effort to place employees in shore jobs regardless of when they left the Cape North and whether they were terminated or left voluntarily.

Had the Cape North been a wetfish trawler it would have been covered by the existing agreement signed in 1985 and due to expire in 1988. The significant differences in operating characteristics between the Cape North and the wetfish trawlers in the National Sea fleet necessitated several amendments to this agreement. Many of these are minor dealing with such issues as training and the use of non-union crew members. The three major ones deal with the system of remuneration, shore time and the duties and responsibilities of the trawlermen and officers.

Remuneration

The Traditional practice on wetfish trawlers is to pay fishermen on the basis of the value of the catch. On National Sea's fleet the trawlermen and officers share equally a fixed percentage (37%) of the value of the catch (the shared stock) from which deductions

for provisions are made. In addition, the Officers, Engineers and Cook receive a commission based on varying percentages of the shared stock. This arrangement was amended for the Cape North with each crew classification paid not according to the value of the catch, but on the basis of the metric tonnes of finished product produced on the trip according to the "crew value per tonne" for the various packs.

Shore Time

Wetfish trawlers normally spend about 48 hours in port discharging the catch and taking on provisions and ice before commencing the next trip. The benefits for which crew members are eligible during this turnaround period are set out in detail in the agreement. The article specifying these benefits is not relevant for the Cape North and has been replaced in its entirety. The Cape North's crew earns one paid shore day for every two days at sea. The crew members make two consecutive trips and these trips earn one trip ashore.

Work in Port

The provisions in the collective agreement governing the crew's responsibilities and pay for work in port have been replaced in their entirety. The amended article sets out the basis for payment for any work in port and as well assigns certain responsibilities to trawlermen and officers including making and repairing nets and helping out when needed in processing operations.

These amendments were agreed to for a one year trial period and expired in February 1987. The company and union agree they entered into the initial agreement without a very clear idea of how it would work. For both it was a learning experience. But by maintaining a flexible attitude, both parties weathered the first year without the development of any major disagreements. Negotiations are now underway on a new contract. This agreement will be a separate one for the Cape North, not an amended version of the 1985 agreement covering wetfish trawlers. Both parties agree a separate contract is necessary given the differences in operating characteristics between wetfish and factory freezer trawlers.

FOUR: SUMMARY AND CONCLUSIONS

4.1 Summary

The purpose of this study was to examine the impacts of the factory freezer trawler, the Cape North, during its first year of operation. The period covered by the study runs from February 22, 1986, the sailing date of its first trip, to February 21,1987, the landing date of its seventh complete trip. An eighth trip was aborted after two weeks because of mechanical problems. During this period, the Cape North landed and processed 12,530 tonnes of fish, comprised of cod (60%), redfish (16%), pollock (23%) and mixed species (1%).

Employment and Income Impacts

The employment and income impacts are examined on a Gross and Net basis. The Gross Impacts refer to the employment and income generated by the Cape North itself. During the study period, the Cape North provided 86 person-years of employment (full-time equivalent basis) and $3.1 million in income. To estimate the Net Impacts, a Base Case outlining the employment and income associated with the hypothetical harvesting and processing situation without the Cape North is described. Based on discussions with NSP, the Base Case assumes that the 11,664 tonnes landed by the Cape North would have been caught by the wetfish fleet and processed on shore. These activities are estimated to generate 219 person-year of direct harvesting and processing employment and $5.2 million in income. Thus, the Net Impacts, estimated as the Gross Impacts less the Base Case, show a decline in employment by 133 person-years and an associated drop in income of $2.0 million. Purchased inputs, including items such as fuel, repair and maintenance and so on, declined by about $1.2 million.

Foreign and Canadian Crew

The initial crew for the Cape North included 11 German nationals. These people occupied positions where previous experience and/or technical expertise was required for efficient operation of the vessel. Six of these positions are now occupied by Canadian personnel (Captain, First Officer, Fish Plant Managers(2), Fish Meal Plant Operator, Netmaker). A seventh, the Radio Officer, has been eliminated by the installation of new shipboard communication equipment. Four positions (Chief Engineer, Electrician, Processing Equipment Mechanic, and Bosun) are still held by Germans, but training of

Canadian crew members is continuing. It appears that Canadian personnel will continue to take over these highly technical positions during the coming year.

Canadian crew have performed all of the duties of the trawlermen, processing workers and service (galley) personnel throughout the first year. As of March 27, 1987, the Cape North had 103 Canadian crew members, of whom 90 were male and 52 were married. Their average age was 31 years.

Quality of Life

On the fishing grounds, fishing and processing continues 24 hours a day, seven days a week. The fishing and processing crews work in two shifts, six hours on/six hours off around the clock. The officers, engine room crew and fish meal plant operators work 12 hours on and 12 off. Trawlermen working on the Cape North had no complaints about the work requirements, safety or supervision. Processors were more critical in a number of areas. There were clearly adjustment problems related to expectations and language between the German and Canadian crew members. They felt that quality suffered at times because fish were still being caught when the hold was full. People tire quickly on the six on/six off shift unless they are used to it. Morale becomes a problem when the crew know they are in for a long trip (60 days or more). Some people feel that the high turnover rate (an average of seven per trip) undermines the efficiency of the processing section. Most of those interviewed agreed that the quality of food had declined through 1986. The main complaint was a lack of variety in the menu and no fresh foods by the end of the trip. Entertainment facilities are limited (poor selection of videos) and no magazines or newspapers were cited as annoyances. Improved communications with home - more frequent mail deliveries and cheaper telephone calls - were mentioned frequently. These items become increasingly important as the days pass on long trips.

In spite of the criticisms, there was a general feeling that working on the Cape North could be a good job "if a few of the problems get ironed out". Trawlermen were generally more satisfied than processors; the latter felt they were subject to a lot of unfair criticism.

Wetfish Trawlers vs The Cape North

Trawlermen on the Cape North work a regular six on/six off shift, whereas on a wetfish trawler working for 18 hours a day for several days in a row is not unusual.

Moreover, trawlermen are likely to spend 240 to 260 days at sea per year as opposed to 210-220 on the Cape North. For these working days, annual earnings on a wetfish trawler are highly variable. A trawlerman is guaranteed $40 per day and must pay for his own food, for the ice and for any entertainment. On the Cape North, by working 220 days and earning 110 shore days, trawlermen averaged $32,000 in the first 12 months of operation. This compares with an average of $32,600 for 270 days at sea for the wetfish fleet over the same period.

On Shore Processing vs The Cape North

Provided there is enough fish, processors at the Lunenburg plant work eight hours per day, six days a week. For this, they earn an average of about $17,500 a year (2,000 hours worked). In 1986, processors on the Cape North earned, on average, $23,600 for 220 days at sea and 110 days onshore (2,640 hours worked).

Crew Survey

Forty people returned completed questionnaires. Over half indicated no commitment to staying on board. Asked about why they joined the Cape North, 60 percent replied they expected to earn more money. Fifty percent said the promise of good pay was the single most important reason for applying. Generally, most people were satisfied with working and living conditions on the Cape North. Specifically, the place of work, the shift length and the amount of sleep were satisfactory to over three-quarters of the respondents. The main areas of dissatisfaction were with the bonus pay (87 percent), the sense of isolation from the outside world (80 percent) and poor communication with the family (62 percent). The relatively high turnover rate on the vessel suggests that the financial and other compensations are insufficient for many people to counter the disruption to their normal lives. The presence of female crew members was strongly opposed by 14 people but favoured by 19 respondents. The views offered seemed to be based more on pre-conceived opinion than on neutral observation of the situation. Generally, the respondents indicated no problem with re-adjustment to shore life, although this contradicts the view offered by informed professionals and research data on the oil and gas industry and the Canadian navy.

Plant Worker Survey

Sixty workers replied to this survey. Only eight had ever applied for work on the Cape North, of which five said better pay was the main reason. Only two were still interested in a job on the Cape North. The majority who did not apply did not wish to go to sea. Generally, neither men nor women working in the fishplant see jobs on the Cape North as an attractive or a feasible alternative for them. Higher pay and shorter trips might increase the attractiveness of the vessel. Without such adjustments, continuing to recruit experienced fish plant workers to work on the Cape North may not be possible.

Quality of Life Impacts and Mitigation

The main impacts on quality of life of the operation of the Cape North occur in the lives of ordinary crew members and their families. Community level impacts are dispersed because not all of the crew members live in Lunenburg. Definitive conclusions are difficult to reach because the first year of operations is unlikely to represent typical operating year for the Cape North. NSP is clearly committed to FFT operations and to making the Cape North as successful as possible. Relieving some of the stresses connected with working on the Cape North could help in this regard. Some possible measures that might generate a more supportive working environment include:

- periodic meetings between the production crew and the master to iron out grievances and conflicts;
- improved training in human relations skills for supervisors;
- improved training for union delegates by the CBRT&GW;
- rethinking of the production and storage area layout to minimize unnecessary expenditure of labour;
- a better system for laundering protective work clothing;
- better cleaning equipment in the processing area;
- friendly competition, with rewards, for production teams;
- consideration of the occasional short shift or shift off during slack production periods;
- greater variety of food and attention to long term dietary requirements;

- wider range of recreational options such as a good selection of videos, games, and possibly a weekly group activity like bingo or a card social; and,
- magazines and newspapers renewed at regular intervals.

Improvements in the means, efficiency and cost of communications with crew members homes would also help.

Judging from the comments made in interviews and in the survey, improvement in pay may be an alternative if the suggested changes are not feasible.

Spouse and Family

Recent research indicates that "coming home" can be a stressful time for both the individual and the family. The replies to the questionnaires in this study do not reveal this as a problem for Cape North crew members. However, its presence is apparently well-established in other circumstances, such as the offshore oil and gas industry and the Canadian navy. Monitoring the situation would seem prudent and possibly arranging for counselling for the spouse and family of new crew members as part of the overall orientation could help to teach people how to cope effectively when the spouse is away and when he/she returns home.

The Community

The Cape North workforce accounts for a very small proportion of the total labour force in the Lunenburg area. The problems of individuals and families are unlikely to be different in quality from those already occurring in the general population, and are not likely to put any special strain on existing health care and social support agencies.

Employment Policies

Hiring Practices: NSP's general approach was to hire Canadians whenever possible. The first choice was to select crew from the Lunenburg plant and then the Lunenburg area (65%), elsewhere in Nova Scotia (20%) and finally Newfoundland (5%). Preference was given to NSP employees. The remaining 10 percent were Germans who occupied the senior positions demanding special technical expertise and/or experience such as Captain, First Officer, Chief Engineer and so on.

Training: All of the people hired had at least the basic skills required to perform their jobs. Training was primarily aimed at re-orienting these basic job skills to the more complex and demanding environment of the FFT. Furthermore, some people, like processors who were formerly land based, were give special training to introduce them to sea-going operations. The issues covered included shipboard life, fire-fighting, emergency procedures, safety-first aid, and sanitation and hygiene. On-the-job training was important for processors. Only experienced trawlermen, certified by the Atlantic Record Book Plan, were hired to work on the Cape North. On-the-job training was used to introduce these people to the more complex trawling activity on the Cape North as compared with a wetfish trawler. The supervisory positions required the most extensive training. Counterpart positions were created to train Canadians to replace the German officers. By the end of the first year of operation, five Germans had been replaced by Canadians, including the captain and first officer. The training of Canadian crew is continuing for the technically advanced positions of Chief Engineer, Electrician, Mechanic and Bosun.

Labour Relations

The Cape North draws on members of two unions. Plant workers belong to the Canadian Seafood and Allied Workers (CSFAW), while the trawler fleet is represented by the Canadian Brotherhood of Railway, Transport and General Workers (CBRT&GW). Vessel operations are governed by the collective agreement with the CBRT&GW. One potential problem was a member of the CSFAW giving up his/her membership to join the CBRT&GW when it was possible the worker would become dissatisfied with work on the Cape North and wish to return to shore-based employment with the company. This was avoided by allowing the workers in question to belong to both unions for an extended trial period. The collective agreement covering the Cape North is an amended version of the 1985 wetfish trawler agreement. Three major amendments were made to this Agreement. A remuneration package was designed such that each crew classification is paid on the basis of metric tonnes of finished product according to the "crew value per tonne" for the various packs. The Cape North crew earn one paid shore day for every two days at sea. Special provisions were designed to cover the basis for payment for any work in port and to assign certain responsibilities to trawlermen and officers including making and repairing nets and helping out when needed in processing operations.

4.2 Conclusion

This study covers the first year of operation, February 22, 1986, to February 21,1987, of the factory freezer trawler, the Cape North. The findings of the study must therefore be considered as indicative of the vessel's impacts but not necessarily a definitive description of the on-going impacts in subsequent operating years. The Cape North represents the introduction of technological change into Canada's north Atlantic fishery. The new technology combines harvesting and processing on a single vessel in a more capital intensive way than competing technologies. The new technology appears to use both capital and labour more efficiently than the conventional wetfish trawler onshore processing combination. Hence, it is not surprising that the Cape North generates negative direct employment and income impacts. In producing a high quality, market ready product the Cape North allows NSP to penetrate and hold American and other foreign markets successfully, thereby contributing to the on-going financial health of the company. In so doing, the Cape North provides higher average incomes for its processing crew than their onshore counterparts. During its first year, the trawlermen earned about the same average income as those on a wetfish trawler but worked about 50 fewer days at sea.

The transition from German to Canadian officers appears to have proceeded smoothly during the first year. Five German officers remain with the ship but training of their Canadian counterparts is continuing and further transition is expected in the coming year. Generally, based on the interviews and questionnaire responses, the fishing and processing crew members are satisfied with working and living conditions on the Cape North. Better bonus pay or an improved pay system, higher quality food service, better communications with home and improved recreation opportunities appear to be the main areas where enhancement would be beneficial from the crew's point of view.

The training program offered appears to have been adequate. Training will continue to be an important issue if the crew turnover rate stays at current levels. The modifications to the offshore collective agreement to deal with the special circumstances of Cape North operation were sufficiently flexible to allow the vessel to operate effectively.

All things considered, the first year was a learning experience for all concerned and may not be typical of coming years. The estimated employment and income impacts are consistent with the introduction of a more efficient fish harvesting/processing technology. No major problems were identified connected with the operation of the Cape North. Still,

harvesting and processing operations and the quality of life on board the Cape North can be expected to improve as the lessons learned during its first year are put into practice during the vessel's second year of operation.

APPENDIX A

CAPE NORTH LANDINGS
CALENDAR YEAR 1986

Table A-1
Cape North - Landings by Species
Calender Year 1986

Species	Landings (tonnes)	Percent
Cod	4565	48.6
Pollock	2817	30.0
Redfish	1930	20.6
American Plaice	32	0.3
Turbot	25	0.3
Greysole	9	0.1
Haddock	9	0.1
Flounder	2	0.0
Total	9389	

Source: National Sea Products, 1987.

APPENDIX B

LIST OF INTERVIEWS/CONTACTS

1. National Sea Products

Management

Robbie Shaw, Vice President
Kelly Nelson, Comptroller
Maureen Yeadon, Fleet Manager
Jim Moser, Industrial Relations/Safety Administrator
Dale Martin, Safety Officer
Bob Shupe, Safety Officer
Fran Burchell, Health Nurse

Plant Workers (onshore)

5 individuals

Cape North Crew Members

7 individuals

2. Family of Cape North Crew

4 individuals

3. Community Members

Dr. J. McQuigge, Family Medicine Practioner
Dr. Arthur Patterson, Family Medicine Practioner
Lawrence Mawhinney, Mayor of Lunenburg
Lee Nauss, Warden, Lunenburg County
Mr. Baker, Chief of Police, Lunenburg
John Thorpe, Managing Director, Lunenburg Economic Development Commission
Rev. Greg Pritchard, Fisheries Journalist
4 Members of LIFE, (Lunenburg Independent Fishermen's Enterprise)
Alma Houston, Past President, Board of Trade, Lunenburg
Mary MacPherson, Second Story, Bridgewater (Women's Centre)
Phyllis Price, Second Story, Bridgewater (Women's Centre)
Dan MacPherson, United Church Minister, Lunenburg
John Lantz, Director, Lunenburg Day Care Centre
Anne Hebb, Social Worker, Lunenburg Mental Health Clinic
Ed McLare, Lunenburg County Social Services, Bridgewater

4. Union Officials

Doug Janes (CBRT & GW)
Boyd Lee (CBRT & GW)
Marilyn Crook (CSAWU)

5. Halifax

Lt. Comm. Bill MacDonald, Military Family Support Centre

APPENDIX C

CAPE NORTH CREW SURVEY
AND
LUNENBURG PLANT WORK SURVEY

CAPE NORTH

CREW SURVEY

Dear Respondent:

The purpose of this survey is to see what Cape North crew members think about different aspects of their work aboard the factory freezer trawler.

This survey is part of a larger study to identify the social and economic impacts of the Cape North during its first year of operation. The study has been commissioned by the Department of Fisheries and Oceans. This survey is being carried out by Griffiths Muecke Associates on their behalf.

All the information you give is confidential. No individual will ever be identified in the results.

The questionnaire will not take long to fill out. Please take the time to complete it and return it in the stamped addressed envelope by March 27, 1987.

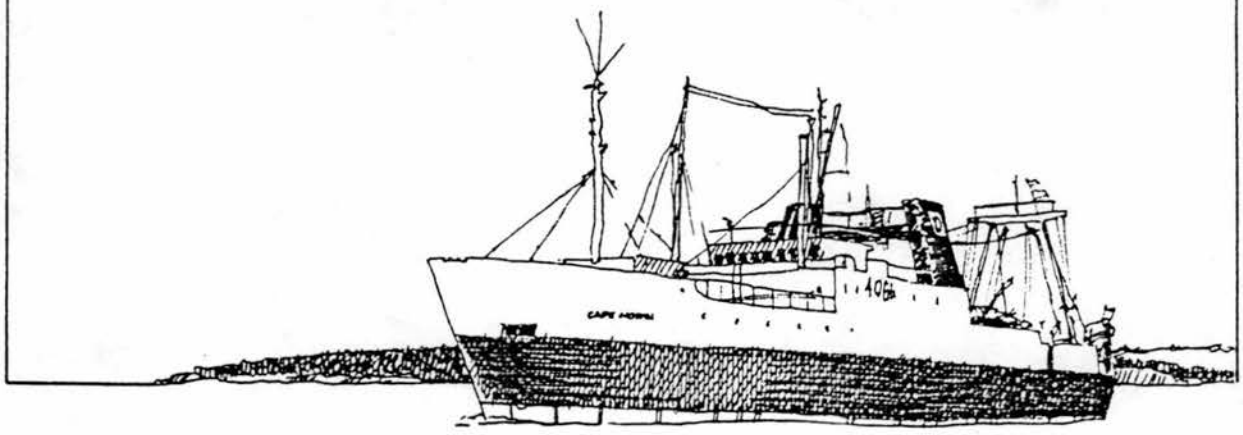
Thank you very much for your help.

Lesley Griffiths

Anne Muecke

Griffiths Muecke Associates
5194 Blower Street
Halifax, NS
B3J 1J4

(902) 423-8629



1. What is your age?

   a) less than 20 _____
   b) 20 - 29 _____
   c) 30 - 39 _____
   d) 40 - 49 _____
   e) 50 or more _____

2. Are you

   a) female _____
   b) male _____

3. Are you presently

   a) single _____
   b) married _____
   c) separated _____
   d) divorced _____
   e) widowed _____
   f) other _____

4. Do you have any children?

Ages	Sex	Living at home (Yes/No)

5. If you are married or living common-law, does your spouse or partner have a job?

   a) no _____
   b) yes, full time _____
   c) yes, part time _____

6. Where does he or she work? _____

7. What does he or she do? _____

8. What is his or her yearly income?

a) $0 - $4999 _____
b) $5000 - $9999 _____
c) $10,000 - $14,999 _____
d) $15,000 - $19,999 _____
e) $20,000 - $24,999 _____
f) $25,000 or more _____

9. What level of education have you completed?

a) grade school _____
b) high school (grade 12) _____
c) university _____
d) technical school _____
e) other _____

10. What type of job do you hold on the Cape North?

a) trawlerman _____
b) process worker _____
c) repair and maintenance _____
d) supervision _____

11. What do you think your yearly income will be?

a) $15,000 - $19,999 _____
b) $20,000 - $24,999 _____
c) $25,000 - $29,999 _____
d) $30,000 - $34,999 _____
e) $35,000 - $34,999 _____
f) $40,000 - $44,999 _____
g) $45,000 - $49,999 _____
i) $50,000 or more _____

12. What was your job before you joined the Cape North?

_____

13. If you were unemployed, what was the last job you held?

_____

14. Approximately how many years' experience have you had working in a fish plant?

_____

15. Approximately how many years' experience have you had in any kind of seagoing job?

_____

16. Have other relatives worked in fish processing?

a) yes _____
b) no _____

17. Have other relatives working in fishing?

a) yes _____
b) no _____

18. How many trips have you completed on the Cape North? _____

19. How many shore leaves have you had? _____

20. Which of these reasons best describe why you originally joined the Cape North? (Check as many as you wish.)

a) for the adventure _____
b) better pay _____
c) steady employment _____
d) longer time off _____
e) wanted to go to sea _____
f) wanted to see what it was like _____
g) was dissatisfied with previous job _____
h) was unemployed and needed work _____
i) other reasons (please specify) _____

21. Which of these reasons was the most important?

_____

22. How long do you intend to stay on the Cape North?

_____

23. If you were to leave the Cape North would you want to return to your previous job if possible?

a) yes _____
b) no _____

24. How would you describe your chances of finding a job if you were to leave your present job on the Cape North?

a) poor _____
b) fair _____
c) good _____
d) excellent _____

25. How would you rate your satisfaction with the following aspects of working on the Cape North?

	Very Satisfied	Satisfied	Neutral	Dissatisfied	Very Dissatisfied
a) basic pay	____	____	____	____	____
b) bonus system	____	____	____	____	____
c) length of trips	____	____	____	____	____
d) amount of shore leave	____	____	____	____	____
e) food	____	____	____	____	____
f) time for relaxation	____	____	____	____	____
g) entertainment	____	____	____	____	____
h) length of shift	____	____	____	____	____
i) amount of sleep	____	____	____	____	____
j) working conditions	____	____	____	____	____
k) living quarters	____	____	____	____	____
l) supervision	____	____	____	____	____
m) pace of work	____	____	____	____	____
n) sense of being a team	____	____	____	____	____
o) safety	____	____	____	____	____
p) first aid/ medical treatment	____	____	____	____	____
q) communication with family and friends	____	____	____	____	____
r) keeping in touch with the outside world	____	____	____	____	____
s) how well crew members get along	____	____	____	____	____

26. Have you additional comments on any of these aspects?

_____

_____

_____

27. Have you even been sick or injured as a result of working on the Cape North?

a) yes _____
b) no _____

28. If the answer is yes, please describe the problem and what treatment you received?

_____

_____

_____

29. Do you have a long-term medical problem, such as high blood pressure or a bad back?

_____

_____

30. Do you think this is caused in part, or in whole, by your work on the Cape North?

a) yes _____
b) no _____
c) don't know _____

31. Do you think that having both men and women on board the ship is a good idea?

a) yes _____
b) no _____
c) don't know _____

32. Why do you think it is or is not a good idea to have both men and women on board the ship?

_____

_____

33. Has your family made any major adjustments because you went to work on the Cape North (for example: family moved, spouse gave up job, etc.)? Please describe the adjustment.

_____

_____

_____

_____

34. When you are home on shore leave do you experience problems in any of these areas?

	No Problem	Some Problem	Very Difficult
a) eating	____	____	____
b) sleeping	____	____	____
c) relating to your children	____	____	____
d) relating to your spouse or partner	____	____	____
e) finding things to do	____	____	____
f) resuming your social life	____	____	____

35. Have you any comments on these or any other aspects of adjusting to shore leave?

_____

_____

36. Which of the following statements best describe your family's situation while you are away on the Cape North? (Check all that apply)

a) my family can get help from other family members living nearby ____
b) my family can get help from friends and neighbours living nearby ____
c) other families living nearby are also in the same situation ____
d) my spouse (or partner) manages independently ____
e) my spouse (or partner) gets little help from relatives or neighbours and finds it quite difficult while I am away ____
f) other (please specify) ____

_____

_____

37. What do you like most about working on the Cape North?

_____

_____

_____

_____

38. What do you like least about working on the Cape North?

_____

_____

_____

_____

39. Can you suggest any changes which would improve your job on the Cape North?

_____

_____

_____

_____

THANK YOU VERY MUCH FOR TAKING THE TIME TO COMPLETE THIS SURVEY.

YOUR HELP IS MUCH APPRECIATED.

CAPE NORTH

LUNENBURG PLANT WORKER SURVEY

Dear Respondent:

The purpose of this survey is to see what workers in the Lunenburg Fish Plant think about jobs on board the Cape North factory freezer trawler.
This survey is part of a larger study to identify the social and economic impacts of the Cape North during its first year of operation. The study has been commissioned by the Department of Fisheries and Oceans. This survey being being carried out by Griffiths Muecke Associates on their behalf.

All the information you give is confidential. No individual will ever be identified in the results.

The questionnaire will not take long to fill out. Please take the time to complete it and return it in the stamped addressed envelope by March 20, 1987.

Thank you very much for your help.

Lesley Griffiths

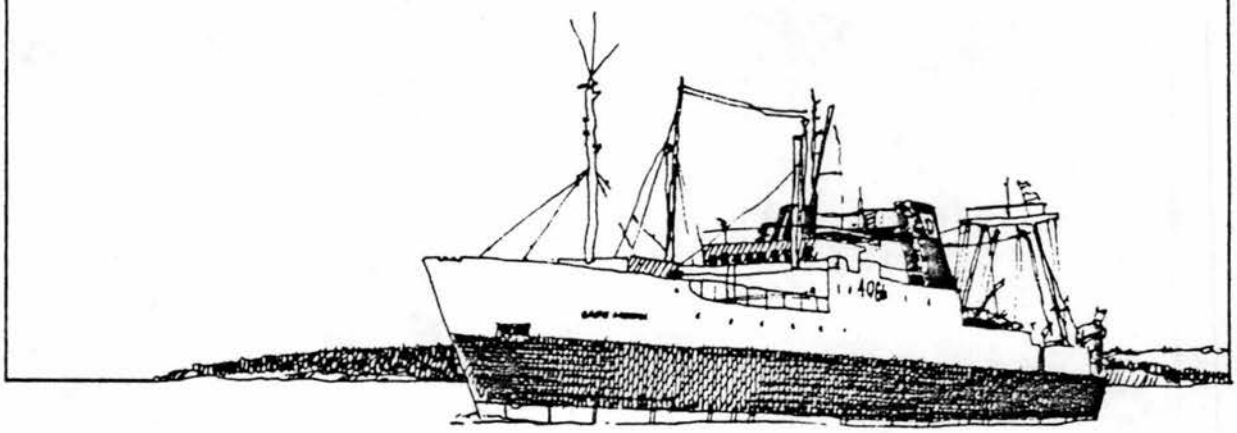
Anne Muecke

Lesley Griffiths

Anne Muecke

Griffiths Muecke Associates
5194 Blowers Street
Halifax, Nova Scotia
B3J 1J4

(902) 423-8629



1. What is your age?

a) less than 20 _____
b) 20 - 29 _____
c) 30 - 39 _____
d) 40 - 49 _____
e) 50 or more _____

2. Are you

a) female _____
b) male _____

3. Are you presently

a) single _____
b) married _____
c) separated _____
d) divorced _____
e) widowed _____
f) other _____

4. Do you have any children?

	Ages	Sex	Living at home (Yes/No)

5. What level of education have you completed?

a) grade school _____
b) high school (grade 12) _____
c) university _____
d) technical school _____
e) other _____

6. How long have you been working at the plant?

_____ (months/years)

7. Have you worked continuously or intermittently?

a) continuously _____
b) intermittently _____

8. What is your present job in the plant?

_____

9. What do you think your yearly income is?

a) $1 - $4,999 _____
b) $5,000 - $9,999 _____
c) $10,000 - $14,999 _____
d) $15,000 - $19,999 _____
e) $20,000 - $24,999 _____
f) $25,000 - $29,999 _____
g) $30,000 - $34,999 _____
h) $35,000 - $39,999 _____
i) $40,000 or more _____

10. Besides working in the plant, what other jobs have you had?

_____

_____

11. How long does it take you to travel to work?

_____ (minutes)

12. Have you ever held a seagoing job?

a) yes _____
b) no _____

13. If yes, what was it?

_____

14. Approximately how many years were you at sea? _____

15. If you are married or living common-law, does your spouse or partner have a job?

a) no _____
b) yes, full time _____
c) yes, part time _____

16. What is his or her occupation? _____

17. Where does he or she work? _____

18. What does he or she do? _____

19. What is his or her yearly income?

a) $1 - 4,999 _____
b) $5,000 - $9,999 _____
c) $10,000 - $14,999 _____
d) $15,000 - $19,999 _____
e) $20,000 - $24,999 _____
f) $25,000 - $29,999 _____
g) $30,000 - $34,999 _____
h) $35,000 - $39,999 _____
i) $40,000 or more _____
j) don't know _____

20. Have you ever applied to work on the Cape North?

a) yes _____ (go to Question 21)
b) no _____ (go to Question 27)

21. If you have ever applied, which of these reasons best describes wny you wanted to go? (Check as many as you wish)

a) for the adventure _____
b) better pay _____
c) steady employment _____
d) longer time off _____
e) wanted to go to sea _____
f) wanted to see what it was like _____
g) didn't like working in the plant _____
h) other reason (please specify) _____
_____

22. Which of these reasons was the most important?

_____

23. Were you accepted?

a) yes _____
b) no _____

24. If you were accepted, what happened?

_____

25. Are you still interested in working on the Cape North?

a) yes _____ (go to Question 31)
b) no _____

26. If you are not still interested, why not?

_____ (go to Question 31)

27. If you have not applied for a job on the Cape North which of these reasons best describes why you did not want to go? (Check as many as you wish.)

a) family responsibilities _____
b) health problems _____
c) trips too long _____
d) likely to be seasick _____
e) working conditions too hard _____
f) pay not high enough _____
g) satisfied with your present job _____
h) spouse or partner did not want you to go _____
i) did not have enough information about it _____
j) did not like shift system _____
k) inadequate recreation facilities _____
l) do not want to go to sea _____
m) need to change unions _____
n) possible loss of seniority in the plant _____
o) other (please specify) _____

28. Which of these reasons was the most important?

_____

29. Would you ever consider working on a factory freezer trawler?

a) yes _____
b) no _____

30. If your answer is yes, what would need to change either at home or with the job before you would work on a factory freezer trawler?

_____

_____

31. From what you know know, how do you think a job on the Cape North compares with your present job?

	Present Job better	Cape North better
a) basic pay	____	____
b) bonus system	____	____
c) hours of work	____	____
d) working conditions	____	____
e) time off	____	____
f) health and safety	____	____
g) pace of work	____	____
h) supervision	____	____
i) promotion opportunities	____	____

32. Have you other comments on any of these aspects?

_____

_____

33. Have you any other comments which you would like to make about the Cape North?

_____

_____

_____

THANK YOU VERY MUCH FOR TAKING THE TIME TO COMPLETE THIS SURVEY.

YOUR HELP IS MUCH APPRECIATED.

APPENDIX D

CAPE NORTH CREWING INFORMATION

NATIONAL SEA PRODUCTS LIMITED

1959 UPPER WATER STREET, P.O. BOX 2130, HALIFAX, N.S., B3J 3B7, CANADA (902) 422-9381

JAN. 1986

INFO ON CREWING ABOARD

THE FACTORY FREEZER TRAWLER M/V CAPE NORTH

This document has been prepared as an information package for National Sea employees who are considering applying for a position aboard the factory freezer trawler, M/V Cape North.

THE SHIP: The M/V Cape North is a ten year old ex-German factory freezer trawler formerly called the "Scombrus". It was built by Rickmers Shipyard, Bremerhaven in 1975. It has a 3500 hp MAK main engine, is 81.00m (265.75 ft.) long, 14.60m (47.90 ft.) wide and draws 5.30m (17.39 ft.).

It is a smaller vessel than we originally planned with berths for 62 persons.

DAYS AT SEA: The Cape North's success will depend on the dedication of all concerned to maximize the number of fishing days. Our objective will be 315 sea days in a 12-month period. An individual crew member can expect to spend 210 days of this time at sea with two trips on and one trip off. Days between trips must be reduced to a minimum and are expected to be 4 to 5 days.

CREW SELECTION: Based on the layout of washrooms, toilets and showers the vessel was designed for men only. However, gender will not be a factor in crew selection. The Company will select persons on their ability, sea experience, agility and health and their desire for a life at sea, their willingness to be flexible or sharing in a variety of jobs aboard the vessel and their personality and compatibility to be part of a hard working dedicated team. All crew members must be prepared to carry out any work including cleaning as directed by the CAPTAIN.

The basic fishing crew will be expected to not only carry out the normal fishing operation of a stern trawler, but will be making nets and gear as well as helping out when needed in the processing operation and cleaning of the vessel. Only qualified trawlermen should apply. The Company will select the officers and those who will be training for key positions.

The Company will attempt to interview all applicants, but the final selection will be the responsibility of Captain Earl Demone, Vice President of Fleet Operations, and the Captain of the M/V Cape North, Captain Hans Crueger. (Captain Crueger is one of the best Captains from the West German Fleet.)

FOREIGN CREW: In order to train Canadians in the operation of a factory freezer trawler we expect to have eight or nine other Germans in key positions. They will be with us for at least a year and some will remain for a full two years. Besides the Captain the other positions are likely to be: 1st Officer, 1st Engineer, Chief Electrician, Processing Manager, Processing Foreman, Baader Mechanic, Bosun and Meal Plant Operator. The normal two trips on and one trip off will not apply as after 4 to 6 months with us these persons will return home for one month on a staggered basis.

WORKING CONDITIONS: The vessel will be fishing and processing 24 hours a day in a variety of weather and sea conditions. Watches will be six hours on and six hours off.

During the off hours, crew members will sleep, wash, shower, clean laundry and eat. VCR tapes and cards will be available for recreation. Crew members should bring on board their own preferred reading material.

Liquor and drugs will not be permitted to be brought on board.

Length of trips will vary according to finished product produced. This could be from 24 days to 44 days or more, but an average of 32 to 35 days is likely.

CLOTHES AND PERSONAL EFFECTS: All crew members will be expected to take sufficient clothes with them to keep warm and clean. They will be expected to take all personal effects including hand towels, bath towels, face cloths, soap, detergents and all bed clothes. The Company will supply mattresses and mattress covers. There will be washing machines and dryers on board for the crew to use. The Company will supply all necessary items listed in the plant clothing policy. Extensive cleaning and concern for personal hygiene will be emphasized. All food products being produced must be of the highest possible quality with minimum bacteria counts. An annual clothing allowance of $150.00 will be paid to each crew member after 90 sea days.

SAFETY: It will be mandatory that all crew members participate in periodical life boat, fire and anchor drills. There will be one survival suit for each crew member on board.

COMMUNICATIONS: Crew members will have the opportunity to communicate with their families at home at least once a week. The Company will arrange the contact with the nearest land station, but the crew member will be responsible for the land based long distance telephone charges.

UNION: The CBRT & GW has the certification for all crew members on vessels owned by the Company and regularly operated out of the port of Lunenburg. Therefore, it is the Union the Company is presently negotiating with in regard to the crew members of the M/V Cape North. However, we are hopeful this Union and the CSAWU can work out a trial period for any plant workers selected as crew members whereby any returning to the plant will not lose their seniority. The Company will grant a leave of absence for this purpose.

PAY METHOD: Each position or classification will be paid on an incentive basis with a price per metric ton on various finished packs. There will be a base guarantee for each position. The price per ton and base guarantee will include payments of all types such as vacations, holidays, time off days, shore time, etc. The base pay is a guaranteed rate per sea day below which earnings cannot fall. The shore

pay per day shall be 80% of the sea day guarantee. This shore pay includes all vacation, statutory holiday and time-off days as well as all severance or legal vacation pay of any kind where applicable and is part of the price per ton or the base guarantee, when two consecutive trips are taken.

SHORE PAY: Crew members are expected to sail for two consecutive trips in order to be eligible for the full shore pay. For every two sea days one shore day is earned. Should only one trip be made then only one half shore day shall be earned for every two sea days.

FOOD: All food will be supplied and paid for by the Company up to $10/sea day per crew member.

PAY EXAMPLES: Trawlermen - A trawlerman at $101 per sea day and $81 per shore day will have a base guarantee, if he sails 210 sea days of 210 x $101 plus 105 earned shore days at $81 = $21,210 + $8,505 = $29,715. Should the vessel be successful he may earn about 40% more than this on the price per finished metric ton basis or about $41,600. This is for 210 days at sea and is above average for the fleet where trawlermen normally fish 240 to 260 days.

The $8,505 amount above is the time off pay and is over 20% of the total expected earnings and is about 40% of the sea day base guarantee in a year. In all cases it is possible to make more or less than the total incentive named above. This incentive is not guaranteed.

Processing Crew Members - processing crew members at $79 per sea day and $63 per shore day will have a base guarantee if they sail 210 sea days of 210 x $79 plus 105 earned shore days at $63 = $16,950 + $6,615 = $23,205. Should the vessel be successful they may each earn about 40% more than this on the price per finished metric ton basis or about $32,500. This is for 210 days at sea and will be more or less according to the actual sea day and the degree of success of the vessel.

Other Positions - No other positions on the M/V Cape North can be compared to any existing jobs on wet fish trawlers or on land. Complete job descriptions are being prepared and will soon be available along with the potential base sea day and shore day guarantees. Those applying may meet the full requirements and others will require on-the-job training so earnings may have to be adjusted according to qualifications. Captain Crueger will be the sole judge as to meeting the requirements of the job while at sea.

Where No Pay Exists - Unusual breakdowns or refits will result in no pay except where crew members are assigned work during the repair period. This does not affect the shore pay that has been earned.

PAY ADVANCES: Crew members can sign suitable authorizations prior to sailing to permit the Company to make advances to a person or a bank account every two weeks while the crew members are at sea. Authorized advances plus Foodmaster credit cannot exceed 15 times sea day base guarantee.

POCKET MONEY ON BOARD: A "slop chest" or canteen will be available on board where candy, pop, chocolate bars, etc. can be purchased. Off shift or midnight snacks will be available between meals free of charge.

EMERGENCIES: All emergencies shall be dealt with at sea. Operating costs in the vicinity of $30,000 per day does not permit this vessel to divert from its designed efforts. A hospital room is available on board and officers are trained in first aid and the on-board hospital equipment. Mechnical and electrical equipment breakdowns are also repaired at sea. It has been known for factory freezer trawlers to change a piston in the main engine while at sea.

CHRISTMAS: The Company will attempt to have the vessel in port on either Christmas Day or New Year's Day but not both. No bonuses will be paid for sailing in this season.

For further information - contact Jim Mosher at National Sea Head Office in Halifax.