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*IMPLICATIONS OF RESOURCE CRISIS
FOR
NEWFOUNDLAND'S FISH PROCESSING SECTOR*

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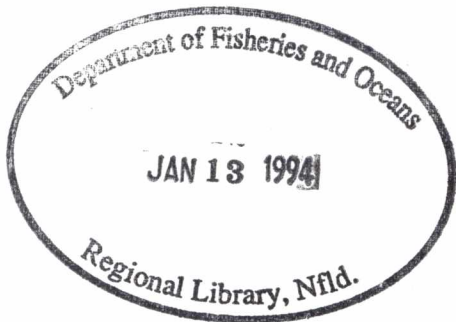
DISCUSSION PAPER

IMPLICATIONS OF RESOURCE CRISIS

FOR

NEWFOUNDLAND'S FISH PROCESSING SECTOR

*n/c
from RDG office*



TRIPARTITE COMMITTEE-NEWFOUNDLAND
AND LABRADOR FISH PROCESSING SECTOR

DECEMBER, 1992

FORWARD

The resource reductions experienced and anticipated for Atlantic groundfish are causing severe difficulties for most sectors of the Atlantic Coast fishery.

In the case of the Northern Cod stock and the moratorium placed on commercial fishing of this key resource on July 2, 1992, the economic and social impacts have been particularly severe. A financial response program by the Federal Department of Fisheries and Oceans has gone a long way to ameliorate the hardship inflicted on fisherpersons and processing sector workers. In addition, program elements of this response package provide for retraining and retirement options for both fisherpersons and plant workers, a principal objective of which is to reduce the number of participants in the fishing industry, thus providing improved prospects for future industry stability.

The processing sector of the fishing industry has not been included in the Federal Government's Northern Cod Adjustment Response Program; however, the need for rationalization has been fully recognized in a number of industry assessments carried out in recent years.

The purpose of this Discussion Paper is to document the need for industry rationalization, to examine the options for industry restructuring and to provide a focus for public and private sector decision makers.

This Paper has been prepared by an "ad hoc" industry - government committee comprised of representatives of the Federal and Provincial fisheries departments and representatives of the Action Group of Newfoundland and Labrador Inshore Fish Processors. This Committee is referred to as the Tripartite Committee on the Newfoundland and Labrador Fish Processing Industry.

It is expected that this Discussion Paper will assist in formulating an appropriate response to the crisis faced by the fish processing sector. Those directly involved in the industry (processors) and those responsible for its management and development (governments) have committed to continue their collaborative efforts toward development of a collective view as to where the industry should be going and how its journey might best be charted.

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1.0 BACKGROUND

The fish processing sector of the Newfoundland Fishery consists of approximately two hundred and forty production units, 163 of which are inshore groundfish plants. These operations source raw material from approximately 13,000 independent fisherpersons operating vessels ranging in length from 5.5 metres to almost 20 metres. In addition, there are eleven "offshore" plants operating as components of integrated harvesting, processing and marketing seafood firms; three of these offshore plants have been permanently decommissioned as groundfish processing facilities.

The role of fish processing activity in the social and economic fabric of Newfoundland has been as an avenue for sale of fisherpersons' catches and a source of onshore employment. Estimated processing sector employment in the predominant inshore sector has consistently exceeded 20,000 persons over the past decade.

Fishing and fishery related activities have historically been highly volatile due to fluctuations in resource migrations, environmental changes and uncertain markets. The industry has seen a long series of "Boom and Bust" cycles which are neither balanced or predictable. Industry studies arising from these periodic crises usually point to the need for improved quality, increased diversification, improved labour productivity, reduced seasonality and more intensive marketing programs. There has also been a clear recognition that the industry has been severely overcapitalized; that is to say that there are too many plants and too much productive capacity relative to the availability of raw material.

2.0 HISTORICAL PERSPECTIVE

Overcapacity in fish processing dates back to the mid seventies when foreign overfishing had reduced fish stocks to the brink of total collapse. During the early seventies, the number of licensed fish processing establishments almost doubled from 56 in 1970 to 109 in 1974, primarily through publicly supported conversions of feeder plants to freezer plants. Requirements for financial assistance to keep plants in operation became pervasive and, by 1975, the Province decided that no new processing licences would be issued if sufficient capacity existed in any given region to handle available landings.

Implementation of the 200 mile economic zone in 1977 generated renewed optimism in both the public and private sectors that expanded opportunities would emerge in the fishing industry. In 1978, the Province of Newfoundland embarked on development of "A Regional Strategy for Development of the Newfoundland Fishing Industry to 1985". This study entitled "Setting A Course" culminated in the release by the Government of Newfoundland and Labrador of a "White Paper on Strategies and Programs for Fisheries Development to 1985". The projected requirements for developing harvesting and processing sector infrastructure were predicated on an estimated " increase in the total provincial catch from 400,000 metric tons to 1,000,000 metric tons over the 1978-1985 period". Despite these optimistic projections and anticipated major increases in harvesting and processing sector employment, the White Paper warned against adding further processing capacity. A reference on page 15 reads " Although major increases are projected in fish landings over the 1977-1985 period, existing and planned plant capacity, excluding meal capacity, is projected to be sufficient in most regions to handle projected landings."

The Federal Department of Fisheries and Oceans (D.F.O) were also anxious to ensure that the potential benefits emerging from the 200 mile extension of Canadian fisheries jurisdiction were not "dissipated by trying to resolve all the economic and social problems of the Atlantic Coast with the limited fishery resources." (Toward a Policy for the Utilization of Northern Cod - Department of Fisheries and Oceans, September 28, 1979). This paper outlined the Federal Governments' Management Philosophy for Northern Cod, and anticipated a stock recovery by 1985, sufficient to support a Total Allowable Catch (T.A.C.) of, at least, 350,000 metric tons. It also examined policy options for harvesting, processing and marketing this restored fishery. This paper emerged from a series of studies carried out by D.F.O. on Northern Cod which were reviewed at an industry-government seminar at Corner Brook, Newfoundland on August 28-30, 1979. With respect to processing capacity, this Seminar acknowledged that "Except for the Labrador Coast, there was a feeling that present and planned plant capacity was adequate" to handle the projected increases in Northern Cod landings from 140,000 metric tons in 1978 to 350,000 m.t. in 1985.

The Province of Newfoundland's strategic plan of 1980 entitled "Managing All Our Resources" recognized the relevance of processing sector capacity utilization and, on page 65, noted that "In awarding processing licences, cognizance will be taken of appropriate regional levels of processing capacity. The objective is to prevent excessive processing capacity, which would endanger the commercial viability of all firms, while ensuring that enough capacity exists to provide healthy competition among fish buyers and processors". The strike in the fishery in 1980 and the subsequent analysis of the industry carried out by a 1981 Royal Commission to Inquire into the Inshore Fishery revealed that the competitive environment was anything but healthy. This study found that the processing sector could not afford to pay higher fish prices and pointed out that the sector suffered from low productivity attributed to seasonality, low quality raw material,

locational factors and poor management. The most significant barriers to processing sector viability were identified as underutilized plant capacity, seasonal operations and financial weakness.

Notwithstanding the vision of the Provincial White Paper and the Federal Government's Northern Cod Policy Document with respect to acknowledging that processing plant capacity was adequate to meet projected resource recoveries, the number of processing plants continued to increase. In fact, the number of licensed processing establishments again doubled from 109 plants in 1975 to 220 in 1981. It is important to note that not all plants were licensed for groundfish production. In the late seventies, the Province began differentiating licenses by species and, in 1981, the number of groundfish licences was 167. Many of the new plants were licensed to process pelagic species, primarily herring and capelin and invertebrates (squid). However "over time....., a number of these blast freezing plants requested and, for a number of reasons, received groundfish processing approvals. (Fish Plant Licensing Policy Review, Vol 2 of 4, Appendix 2. This study was conducted for the Provincial Department of Fisheries by the LINK Group in 1987).

In its 1982 Fisheries Policy Paper entitled " The Fishery: A Business and Way of Life", the Province reported that processing capacity growth was primarily for pelagic species. This paper also reported that "In the frozen groundfish sector, the increase in capacity has been less significant, but was still 31.6% in freezing capacity between 1977 and 1981. This was almost exclusively placed on the northeast coast in anticipation of the restoration of the Northern Cod Stock." The Province's policy position was, therefore, to extend indefinitely the freeze imposed in 1981 on the licensing of all additional processing capacity. Furthermore, the Province announced in the 1982 Policy Document its intention to "closely regulate all expansions of existing plants". However,

effectiveness in achieving this restriction is challenged by an assessment by the Department of Fisheries and Oceans in a September 2, 1992 Discussion Paper for the Tripartite Processing Sector Committee: ... "in the 4 year period 1983-87, we have estimated that freezer capacity for groundfish increased by over 40% and by almost 100% for pelagics."

The Federal Government's 1982 "Task Force on Atlantic Fisheries" (Kirby Report) entitled "Navigating Troubled Waters" also addressed and reported on the level of excess processing capacity in the fishery, noting the particularly serious dilemma of very short seasons for plant operations on Newfoundland's East Coast. The Kirby Task Force analyzed the industry within the context of an expanding resource base, where Northern Cod TAC levels were projected to increase from 215,000 mt. in 1982 to 380,000 mt. in 1987. Despite this expectation, the Task Force anticipated requirements to reduce processing capacity and to extend the harvesting season, especially for Northern Cod, through a Resource Short Plant Program and alternative harvesting strategies.

In January, 1987, the Provincial Department of Fisheries awarded a contract to the LINK Group, a consortium of three Newfoundland consulting firms to undertake a comprehensive review of the policies and procedures of processing sector licensing and to provide recommendations for future direction. This study was carried out in collaboration with the Federal Government through a joint funding arrangement. The Study Team carried out an exhaustive review of the evolution of processing activity, past and present policy positions, capacity utilization, socio-economic considerations and options for revising the policy/program framework to provide for a more coherent and rational development of the industry. The capacity report provides detailed regional breakdowns of plate and blast freezer capability and utilization levels by month. The summary findings are attached as Appendix "A". Based on 1986 data compiled by the Department of Fisheries

and Oceans, the utilization rate for plate freezing capacity averaged 41 percent while blast freezers were operating at 35 percent utilization levels. Utilization rates for the inshore sector were estimated at 31 percent for plate freezers and 19 percent for blast freezers over the main four month operating season.

The recommendations of the LINK Study were never formally accepted or rejected by the Provincial Government. However, certain policies and actions resulted from the study findings. For example, the regulatory system for enforcing limitations on plant expansions was strengthened in 1987. To date, however, there has not been any enforcement action taken with respect to processors who have expanded without receiving licensing authority. A survey carried out by the Provincial Department of Fisheries in 1991 reveals that roughly 50% of licensed processing establishments have processing capacity in excess of that for which they are authorized by licence. Curiously, however, the remaining 50% frequently have lower processing capacity than their authorized limits. Some of this discrepancy might be explained by the absence of accurate capacity measurements used in the original licensing procedures, and may also reflect overinflated values provided to the Department in 1987/88 by processors in order to provide a cushion for expansion, if needed.

3.0 CURRENT INDUSTRY ENVIRONMENT

The Province's fishery experienced relative stability from 1986 until 1989, when the first reductions in Northern Cod allocations were imposed as a result of revised scientific assessments of stock biomass levels. Since then, quotas and catches have been severely reduced and several major offshore plants have been permanently closed. Most recently, the Northern Cod fishery has been completely shut down until June 1994 in an effort to ensure the future commercial viability of Newfoundland's most important fishery resource. The situation on the Province's West Coast is almost as severe with quotas for the prime cod stock (NAFO area 4RS, 3Pn) now reduced to less than forty percent of the levels prevailing throughout the early and mid eighties.

The existence of fish processing overcapacity is not a new phenomena as the references above clearly show. All major studies or assessments have acknowledged the seriousness of the overcapacity problem and its negative implications for the incomes and employment stability of fisherpersons and plant workers. Yet, the problem persists and continues to become more pronounced. Regulatory efforts to control the number of processing establishments have been somewhat effective since 1981. In 1992, the Provincial Department of Fisheries reports licensing 250 establishments, only 173 of which are authorize to process groundfish. While this represents considerable growth since 1986 when 209 plants (165 groundfish plants) were registered, most of these new establishments are either secondary processing, retail operations or aquaculture related ventures. A number of these newly licensed secondary processing and retail operations, however, have engaged in some primary processing of groundfish. While production of groundfish has not been significant in volume terms, these new entrants constitute a serious irritant in the short term and a potential longer term threat to established groundfish processors. The primary concern is that these operations will

eventually find their way through a similar "crack in the wall" that permitted pelagic plants to acquire authorization to engage in primary production of groundfish. It must also be remembered that productive capacity, within many of the plants licensed throughout the sixties, seventies and eighties, has grown.

The 1990 assessment of plant capacity carried out by the Provincial Department of Fisheries has been used to illustrate average capacity utilization rates during the 1988 - 1990 period for the inshore sector (See Appendix "B"). This illustration shows that average capacity utilization for all processing plants was roughly 22 percent. In addition, the amount of redundant processing capacity associated with target utilization rates of 30, 35 and 40 percent is estimated. These tables show that there is variation in the range of capacity utilization rates throughout the Province. Most regions, however experienced utilization rates lower than 30 percent. The exception is NAFO area 3Ps where overall capacity utilization averaged 54 percent.

In this analysis, capacity was determined by surveying all inshore processing firms and asking how much fish could be processed in a 24 hour period. The constraints on production were not identified or measured. This survey provides a proxy of the practical capacities of the industry as perceived by plant operators. Other analysis, including the 1987 LINK Study and a 1991 survey by the Provincial Department of Fisheries, attempts to measure both plate and blast freezing capacity. This measurement has come to be regarded as the most reasonable indicator of capacity because it normally represents the "bottleneck" limitation on processing throughput and because it is possible to precisely measure freezing capacity based on refrigeration system design.

The methodologies used in the DFO survey of 1986 (used as the basis of analysis in the LINK Study) and those used in the 1990 survey by the Provincial Department of Fisheries are different and the

results therefore, not directly comparable. However, the approach taken in each case appears to have a reasonable basis for providing valid results. The "order of magnitude" difference reflects the alternative approaches and the four year time span between these assessments. In any event, the salient point is that capacity utilization levels were extremely low in 1986 and in 1990.

In 1989, Canadian Northern Cod quotas dropped from 266,000 m.t. to 235,000 m.t.. Since then, the decline has been precipitous and, from 1992 to 1994, there will be no commercial fishing in this key stock. Other important inshore stocks have also declined in quota and catch levels. The more important groundfish stocks and their respective quotas and catches are reflected in Appendix "C". In reviewing these tables, it is evident that the most serious problem area is the Northeast Coast due to the Northern Cod moratorium and the reduced catches of 2J3KL Turbot where 1986 catches were only 46 percent of 1981 levels and 1991 catches, are only 34 percent of 1981 levels. The West Coast of the Province has also experienced major reductions in cod quotas and catches (NAFO area 4 RS, 3Pn). Catches in 1986 were 82 percent of 1981 levels and, in 1991, are only 34 percent of 1981 levels. Offsetting these reductions to some degree is the recovery of 4RST redfish; however, much of the benefit of this recovery has accrued to plants based outside Newfoundland. For the Newfoundland offshore sector as a whole, however, reductions in quotas and catches have been equally severe. Total groundfish landings for the Newfoundland offshore fleet exceeded 200,000 metric tons for all species during the mid eighties. In 1989, catches dropped to 159,000 metric tons and, by 1991, only 120,000 metric tons were landed. Total catches for 1992 will be considerably less than 100,000 tons. Certain key offshore quotas, particularly American Plaice, have been sharply reduced and further reductions are anticipated. Similarly, historically important offshore stocks such as 3LNO Yellowtail and 3NO Cod are reduced in catch to less than half 1985 levels. Redfish in NAFO Area 2+3K is no longer a commercial fishery. By far, however, the most serious problem for the offshore fleet is Northern Cod quota

reductions; this stock provided roughly half of total offshore landings during the 1986-1988 period.

Considering the dominant groundfish stock, Northern Cod, and noting that the 1991 quota reverted to the same level as 1981, and that '91 catches were approximately eighty four percent of '81 levels, it is quite obvious that capacity expansions over the past ten years have exacerbated what was then described by the 1981 Royal Commission, the Kirby Task Force and the 1982 Provincial Policy Document as a very serious overcapacity problem. The reality of the two year Moratorium on this stock highlights the alarming consequences of having undergone a major expansion in processing capacity for anticipated resource growth which has not only failed to materialize, but, in fact, has actually declined for most stocks.

4.0 PROCESSING SECTOR DEVELOPMENT POLICIES AND OBJECTIVES

Province of Newfoundland

The Provincial policy objectives for the fish processing sector, as articulated in the "White Paper" of 1982, were:

1. The development of an appropriate regional balance between processing capacity and harvesting capacity consistent with social and economic considerations.
2. The development of a competitive processing sector which will enhance the acceptance of the Province's fish products in various export markets.
3. The reduction, insofar as harvesting strategies permit, of the seasonality and underutilization of plant capacity.
4. The promotion of realistic levels of processing activity to ensure that maximum product values and maximum levels of employment are generated by any given volume of fish landings.
5. The provision of sufficient support infrastructure to facilitate the holding and distribution of fish landings and fish products, particularly during "peak" production periods.

The chief criticism made by the Link Study was that these objectives were not prioritized and, as a consequence, the Study observed that " those charged with implementing policy find themselves trying to be all things to all people". Link suggested a clearer set of policy objectives and recommended that these objectives be ranked as to priority.

Federal Policy Objectives

Federal Policy objectives for the processing sector are not explicitly put forth in any public documents. Essentially, the Federal Department of Fisheries and Oceans defers to the Province's

jurisdiction in this matter. However, as described in the Draft Public Investment Policy document provided to the Tripartite Committee dated September 2, 1992, the Department describes its goals and objectives for the processing sector. The emphasis since the Kirby Task Force review has been to "orient (financial) assistance programming away from plant construction and expansion toward improving the viability of capacity already in place. D.F.O. has supported directly, and through other Federal Government funding agencies, plant modernization projects which were designed to result in improved productivity, quality, yields, product diversification, as well as value - added and underutilized species processing."

Notwithstanding a committed effort to achieve consistency in the analysis and processing of funding applications, the Department acknowledges that funding programs may have had the undesired effect of increasing processing capacity in some projects designed to advance technological efficiency and productivity (ie. improved freezing equipment or automated filleting). Additionally, some plant expansions which were rationalized as value added projects, such as secondary processing, are suspected of being masked efforts to expand primary processing capability.

From a policy perspective, D.F.O. and other Federal Departments and Agencies are supportive of policies that restrict capacity expansion and are intended to assist the processing sector improve quality, diversify product lines and achieve better utilization of available resources.

Industry Policy Objectives

Collectively, the Province's fish processing sector, through its industry associations, makes representations to Government with respect to all matters pertained to the development and regulation of the industry.

The collective wisdom of the industry, however, at times, appears to be inconsistent with that of individual processing firms. Over time, industry groups have collectively made strong representations to Government supporting the need to prevent the industry from expanding and diversifying without regulatory approval. Also, the industry has argued that sector activity should not be subsidized and that individual firms should not be recipients of "bail outs". The industry has long argued against the licensing of new participants for purposes of producing pelagic or unutilized species, conducting secondary processing or, for retail trade activity. Similarly, industry has supported the licensing policy objectives of the Province with respect to restricting plant expansions.

Individual firms, however, have sought government support during difficult financial times, and expanded productive capacity as opportunity permitted. These apparent inconsistencies have caused misunderstanding and confusion by public sector officials responsible for administering fisheries development and regulatory programs. In the public consultation exercise carried out through the LINK Study, for example, processors responding to a questionnaire argued that the industry should have no new entrants because of overcapacity. Yet, two thirds of the processors felt that industry participants should not be prevented from expanding their own capacity. This likely reflects processors' fear of compromising their ability to maximize their respective shares of available raw material supply, as discussed further in Section 4.2.1..

4.1 COMMON POLICIES - COMMON CHALLENGES

The policy objectives articulated by both the Province and the Federal Government are generally compatible. Both orders of Government desire a stable, competitive industry with minimal requirements for public sector support. In major policy reviews of

the industry, the findings of both Federal and Provincial Task Forces, Royal Commissions and Internal Policy/Program reviews have been consistent. As noted in Section 2.0, both orders of Government have identified industry weaknesses as emanating from excess capacity, undercapitalization, low productivity, seasonality and weak management and marketing skills. Similarly, there is strong agreement on the need to diversify product and species production, improve quality, maintain technological competitiveness and optimize use of resources through improved processing yields and by-catch/by-product development. Frequently, however, there is conflict, arising from recurring crises and the inevitable defensiveness which follows when each order of government is brought to task as to the role their action or inaction may have played in causing or accelerating the overcapacity problem.

The jurisdictional demarcation points between governments have been at the core of these conflicts. This is especially the case with respect to industry overcapacity in both the harvesting and processing sectors. Whereas the Province has exclusive responsibility for processing regulation, it has been suggested that the Federal Government's industry support programs have been instrumental in financing capacity expansion by processing firms. Similarly, the Federal Government's exclusive jurisdiction over resource allocations and licensing matters sometimes brings criticism as to past growth in the number of fisherpersons and expansion of harvesting capacity. For their part, federal officials have argued that Provincial Government Loan and Bounty programs for fisherpersons have been instrumental in maintaining and expanding harvesting capacity. Clearly, better policy co-ordination is desirable.

4.2 CAUSES FOR EXPANSION AND OVERCAPACITY

There has rarely been a time when incomes and profits in the fishing industry were considered adequate for the majority of

industry participants. Yet, in the absence of adequate returns, both the harvesting and processing sectors of the fishing industry chose to expand capacity almost at every opportunity. Availability of public sector financial support has, without doubt, been a facilitating factor. However, capital expenditures carry high levels of personal and corporate financial responsibility, through downpayment requirements and liability to repay loans, even if these are subject to public sector "guarantee". From a broad perspective, this behaviour appears irrational.

4.2.1 COMMON PROPERTY

Plant owners and fisherpersons expand their efforts and capacity based on their individual circumstances and competitive drive. The oft reported analogy to the "tragedy of the commons" is given as the explanation for this individualistic behaviour. Fisherpersons expand their effort through larger vessels and by deploying more fishing gear because they need larger volumes to achieve viability and generate improved returns and incomes. By expanding capacity, they hope to garner a larger share of the available, "common property" fish resource and thus improve their circumstances. Many theorists have put forward this argument as to why fisherpersons do not limit their investment, even in the face of diminishing resources and financial returns.

While the philosophical underpinnings of the "common property" theory may not be directly applicable to processing sector activity, the observed behaviour of the industry is a powerful argument for suggesting that the same forces and considerations apply. In the same fashion that fisherpersons expand their effort despite the knowledge that quotas are limited, the processing sector expands knowing that catches are limited. In an environment characterized by excessive capacity and low or negative returns, each processor reasons that the only way to survive is to capture a larger share of the limited resource. Capacity is expanded to

ensure an ability to buy all the fish that might be available at any given time within a reasonable distance of the plant location.

Improved transportation infrastructure, containerization of raw material and better communications have extended the procurement boundaries of all processors to the entire coastline of the Province, except coastal Labrador. Over the past ten to fifteen years, "inshore" fisherpersons have also become more mobile as a larger percentage of the annual groundfish catch has been landed by the "35 - 65 foot" fleet sector. These more recent developments in harvesting and transportation infrastructure further exacerbate the difficulty of matching regional processing capacity to regional landings and, at the same time, encourages processors to continue their individual expansion strategies.

4.2.2 LACK OF ALTERNATIVES

The role of the fishery in sustaining the coastal settlement patterns of Newfoundland has been well documented and the paucity of alternative employment and income generating opportunities are also well known. Despite the risks of low incomes brought on by poor catches and low fish prices, there is very strong resistance to leaving the industry.

To stop fishing or to decide not to participate in fish processing activities is not simply a decision to change careers. It represents a decision to either become a permanent "ward of the state" through welfare programs or a decision to move outside the region. As there are virtually no buoyant areas of economic activity within the Province, this choice becomes one of changing lifestyles and culture and severing personal and family ties; hardly a desirable alternative.

At the risk of oversimplification, the choices for those who participate as owner/operators in the processing sector of the fishing industry are similarly restricted. Most processing

establishments are family ventures with long standing ties to the community and the fishing industry. The opportunity to sell one's interest in a fish processing business at a reasonable return is either limited or non-existent. Consequently, the option of moving outside the region may be as problematic for fish plant owners as it is for fisherpersons or plant workers. This may partially explain why processors do not give up the "business" in the face of ongoing adversity and may also indicate a requirement to provide further inducement to cause owner-operators of low viability plants to leave the sector. It must be remembered that, despite the volatility of the processing sector, most owner operators, on average, appear to enjoy reasonably good incomes and lifestyles. Absent the opportunity to obtain an adequate return on their investments, it can be anticipated that most owner operators of fish processing firms will strongly resist leaving the sector for an even more uncertain future.

4.2.3 GOVERNMENT SUPPORT PROGRAMS

While the analogy to "common property" and "lack of alternatives" may have application to both the harvesting and processing sectors of the fishing industry, the issue of Government support programs as they relate to personal income are only directly applicable to those engaged as fisherpersons and processing sector workers. The primary instrument of industry income support is the Unemployment Insurance Program. The role of this program in sustaining the fishing industry and its participants is well illustrated in the background paper provided to the Tripartite Committee showing the regional distribution of industry beneficiaries of the program in March 1992 (attached as Appendix D). During this month, ninety two percent of fisherpersons receiving U.I. payments had benefits based on less than twenty weeks. For fish plant workers, the corresponding percentage of qualifying weeks worked was eighty-one.

While plant owners do not qualify for direct payments of income through this program, it is evident that their businesses might experience difficulty in sourcing raw material and attracting and retaining workers unless their suppliers (fisherpersons) and employees were recipients of U.I. benefits or an alternative income support mechanism. In this context, it is sometimes argued that these payments constitute a subsidy to the fish processing sector of the fishing industry.

It is also important to acknowledge the perversity of the U.I. program as it relates to employee turnover, productivity and artificially induced seasonality. The negative impacts of the U.I. Program as an income stabilization scheme for a seasonal industry have been identified by the Province's House Royal Commission and the Federal Government's Forget Commission. The U.I. Program was designed to respond to brief, unpredictable interruptions in work within an industrialized, manufacturing based environment. Its application to seasonal employment patterns in Newfoundland's inshore fishery has proven a rather blunt instrument for stabilizing incomes and frequently serves to act as a disincentive to fully avail of opportunities to extend employment beyond the minimum number of "qualifying" weeks.

Beyond the U.I. Program, which itself contributes some \$150-200 million annually to fisherpersons and plant workers, other support programs such as low interest, "soft" loans from the Province's Loan Board also play a significant role in maintaining the inshore harvesting sector. Widespread access to financial assistance programs for industrial capitalization incentives, technological innovation, training, market research, and promotion activities also contain a support element in the maintenance of processing establishments. Through the late 1970's and early, 1980;s, the Federal Government Regional Development Programs were widely used to finance rebuilding and expansion programs in fish processing. Although much more widespread in the past, the Province's Loan

Deficiency Guarantee Program constitutes a form of safety net for the processing sector. Term financing, through Enterprise Newfoundland and Labrador and the Federal Business Development Bank, as a matter of policy, provides funding not normally accessible through private commercial lenders.

In addition to wage support and industrial incentives, another element in public sector financing of fish plant expansions has been the establishment, expansion and modernization of processing facilities by community groups, particularly Regional Development Associations. These organizations have been especially forceful in obtaining public sector financing for processing related activities. While the success rate of ventures established through such means has not been high, the fact that a licensed facility exists, virtually cost free, is a powerful incentive for processors to become involved, even though the requirement for the processing capacity is non-existent. In such cases, processors fear that, if they don't agree to operate these facilities, someone else will and the level of competition for area landings will increase.

4.2.4 INSHORE COD "GLUTS"

The inshore fishery has historically used fixed gear in its harvesting functions. These passive technologies include gillnets, hook and line, jigging and traps. Introduced in 1876, cod traps have become the predominant inshore fishing method for many coastal regions. This technology has always proved very successful at harvesting large volumes of fish, if and when fish are available inshore.

Migration patterns of cod are influenced by a number of environmental factors including water temperatures and the availability of prey species. Very few areas along the Province's Northeast Coast experience consistent availability of cod to inshore fishing grounds on a year to year basis. When cod is

available, catches are extremely high for several weeks. These erratic periods of abundance generate extremely high demand for processing capacity. In order to ensure that local markets are in place to handle these peak landings, fish processors have targeted their capacity growth to meet these historic peak levels. The consequence of the unpredictable availability of inshore cod has been that every region and bay is equipped with processing capacity sufficient to handle this three - four week interval of cod trap landings, even though it is known that these peaks will not occur in every region in any given year.

Further complicating factors are the improved transportation infrastructure and the more mobile inshore fleet of large longliners which facilitate movement of fish from region to region. Additionally, many processors have some opportunity to effectively move capacity from region to region by moving processing equipment such as Baader filleting machines or utilizing sheds for "saltbulk" production. As a consequence, this improved mobility of fish and processing equipment negates the historic need, or perceived need, for peak capacity in every region.

The unpredictable nature of inshore fish migration patterns and the changing structure of inshore vessel and fishing gear technology underscore the importance of co-ordinating the development and administration of resource management, stock allocation and processing sector licensing policies.

4.2.5 ENTREPRENEURIAL OPTIMISM

At each and every glimmer of opportunity to earn profit arising from either improved resource or market prospects, a new wave of capital investment occurs in the processing sector.

The response to the 1977 extended fisheries jurisdiction represented the period of greatest expansion and new investment.

The resource prospects were extremely positive and, despite warnings that adequate processing capacity was already in place to handle this anticipated increase in landings, virtually all processors attempted to position themselves to handle much higher volumes than in the past. Similarly, improved market prices, such as were experienced in 1986 and 1987, generated great enthusiasm in the industry and many processors responded by improving their equipment and capacity.

In short, it can be said that those operating fish processing facilities in rural Newfoundland are not deficient in entrepreneurial spirit. Despite repeated setbacks and disappointments, positive signals, however dim or short lived, never go unheeded.

5.0 NEED FOR RATIONALIZATION

5.1 PUBLIC SECTOR PERSPECTIVE

Without considering the impact of the Northern Cod Moratorium, the capacity utilization levels shown in Appendix "A" demonstrate the extremely serious levels of surplus capacity existent throughout the Province in the mid eighties. The consequences of this surplus relative to the stated objectives of the Province, the Federal Department of Fisheries and Oceans and the fishing industry itself are of paramount importance.

There is widespread acceptance by all fishing industry stakeholders that the overcapacity levels in both harvesting and processing must be reduced. The overriding objective has been articulated by all as the need to achieve a viable, self-sustaining industry capable of providing reasonable and stable incomes and returns for its participants. The Kirby Task Force identified three objectives for Atlantic Fishing Policy in order of priority, the first two of which affirm the need to pursue rationalization.

Kirby Task Force, 1982 (p.60)

- Objective 1:** The Atlantic fishing industry should be economically viable on an ongoing basis, where to be viable implies an ability to survive downturns with only a normal business failure rate and without government assistance.
- Objective 2:** Employment in the Atlantic fishing industry should be maximized subject to the constraint that those employed receive a reasonable income as a result of fishery-related activities, including fishery-related income transfer payments.
- Objective 3:** Fish within the 200-mile Canadian zone should be harvested and processed by Canadians in firms owned by Canadians wherever this is consistent with Objectives 1 and 2 and with Canada's international treaty obligations.

More recently, the Province of Newfoundland engaged in an extensive consultation process with respect to the formulation of its Strategic Economic Plan. This process involved a public consultation process, a report of public perceptions and views, and the publication of the Strategic Economic Plan in June of 1992. It is instructive to note that, with respect to the fishing industry, the April 1992 report on the public's perceptions of the draft plan made several references to the issue of capacity and industry development.

Most felt that subsidies are inappropriate and act as a deterrent to development; they stated that the principles of competitiveness and viability must be adopted within the industry. Priority must be focused on stock enhancement and the production of quality products, not simply the number of people employed.

Most people agreed that there is overcapacity in the harvesting and processing sectors of the industry. The predominant view was that the industry can viably sustain only 50-60% of its present workforce and, therefore, rationalization is necessary.

In a similar vein, those responding to the consultation document prepared by the Province further advised:

There should be a review of the harvesting and plant licensing systems to make it less political. Because of overcapacity, the Federal Government should not issue any more harvesting licenses, and the Province should stop issuing processing licenses.

This advice, provided through the public consultation process, is reflected in the Fisheries Strategy Statement (p. 58) contained in the Strategic Economic Plan.

Strategy Statement. The Province will initiate a fisheries action program which will strengthen the fishery and the economy generally. A viable fishery is one which is stable and competitive in the absence of government subsidies, where a reduced fisheries workforce can earn an adequate income without excessive dependence on income support, and where the workforce can be professionalised to obtain high productivity levels. This action program involves two broad elements; first, the revitalization of the fishery itself, and second, diversification within and outside the fishery. Fishery revitalization will include measures to rebuild and protect the resource base, to restore and preserve the environment as it relates to fishery resources, and to increase economic efficiency through improved operational flexibility, capacity control, technological innovation and better quality control. Education and training of industry participants will be an integral part of the entire fishery revitalization program. Diversification will focus on new opportunities in secondary processing, aquaculture, and the harvesting and processing of underutilized fishery resources.

The references to a reduced fisheries workforce and capacity control are a clear acknowledgement by the Province of the need to achieve industry rationalization in both the harvesting and processing sectors. The Strategic Plan was developed and released prior to the announcement of the Northern Cod Moratorium; however, this document recognized the implications of the resource crisis. On page 57, in the introduction to the fisheries section, the report reads:

"Today, the Newfoundland fishery is experiencing a crisis arising from the collapse of the resource base which will have the effect of accelerating the process of structural adjustment. This is particularly true for groundfish operators in both the inshore and offshore sectors.

Policies and programs must be developed which will guide the fishery through its current crisis and toward a more viable future. Key concerns are resource conservation and rebuilding, and Federal/Provincial policy co-ordination. A further challenge to government is to promote the development of an economically viable and competitive fishery, while at the same time providing training and education, and encouraging the development of alternative economic opportunities for the people in the numerous communities which in the past have depended solely on the fishery."

These statements are very similar in spirit and intent to the first two objectives for fisheries development as contained in the Kirby Task Force Report. The ranking, however, with respect to the primacy of achieving viability at the expense of employment generation is less explicit in the broad policy statements of the Province's Strategic Economic Plan.

5.2 INDUSTRY OPERATING ENVIRONMENT

Beyond the policy perspectives of the public sector and the perceptions of those responding to the Province's Strategic Economic Plan consultations, it is useful to examine the overall state of affairs of the processing sector as it has existed in recent years.

5.2.1 CAPACITY UTILIZATION

TABLES A and B (See Section 6.0) show past and projected quotas, catches and resultant processing capacity utilization rates, by area, for the inshore fishery and, on a Province wide basis, for the offshore fishery. Capacity in the processing sector is defined as the amount of fish in metric tons that can be processed in a 24 hour period; annual capacity for the inshore sector is based on a twenty week production season and, for the offshore sector, the capacity estimates assume a forty week operating season.

On this basis, capacity utilization levels in the inshore sector averaged 17.4 percent in the late eighties. The rates of utilization ranged from about 13 percent in NAFO area 4R to almost 29 percent in NAFO area 3Ps. The offshore sector, despite its longer operating season and requirements, would have operated at the 50 percent level, absent the three plants recently subject to permanent closure as groundfish plants.

Future projections, as contained in TABLES A & B, are discussed later as is the analysis of the estimated requirements for capacity removal. The reader should focus, at this stage, on the levels of capacity utilization, as they existed in the recent past and reflect how these low utilization levels have influenced the operating environment of the fishing industry.

5.2.2. PROFITABILITY

To provide a sense of what this level of capacity utilization really means in industry viability terms, a figure used in the NewLantic Group study for D.F.O.'s Stein Task Force (p.20, June, 1990 Report) shows that industry profitability had declined significantly from 1986 and 1987 through to the 1988-1990 period. The picture which emerges is an industry where more than fifty percent of the processing establishments, operating in NAFO area 2J3KL, were either unable to sustain profitability, or were viewed as being doubtful as to their viability. This analysis by The NewLantic Group was carried out using computer modelling techniques. The validity of the results were confirmed by D.F.O personnel by comparing actual financial results with the computer modelled estimates on a plant specific basis. It should be noted that coding systems were used to protect the corporate confidentiality of individual firms. Also, it must be remembered that this analysis was carried out only for Northeast Coast plants and may not, therefore, accurately reflect the financial profile of the processing sector throughout the Province.

CLASSIFICATION OF ALL PLANTS
BY ABILITY TO SUSTAIN PROFITABILITY & EMPLOYMENT
1986 - 1992

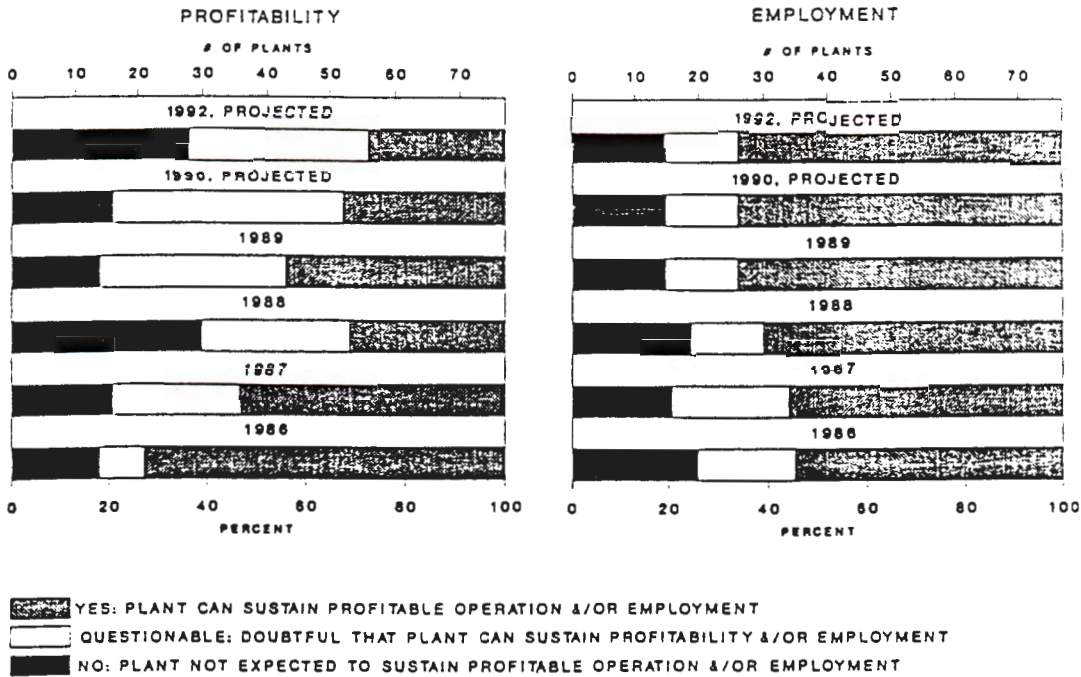
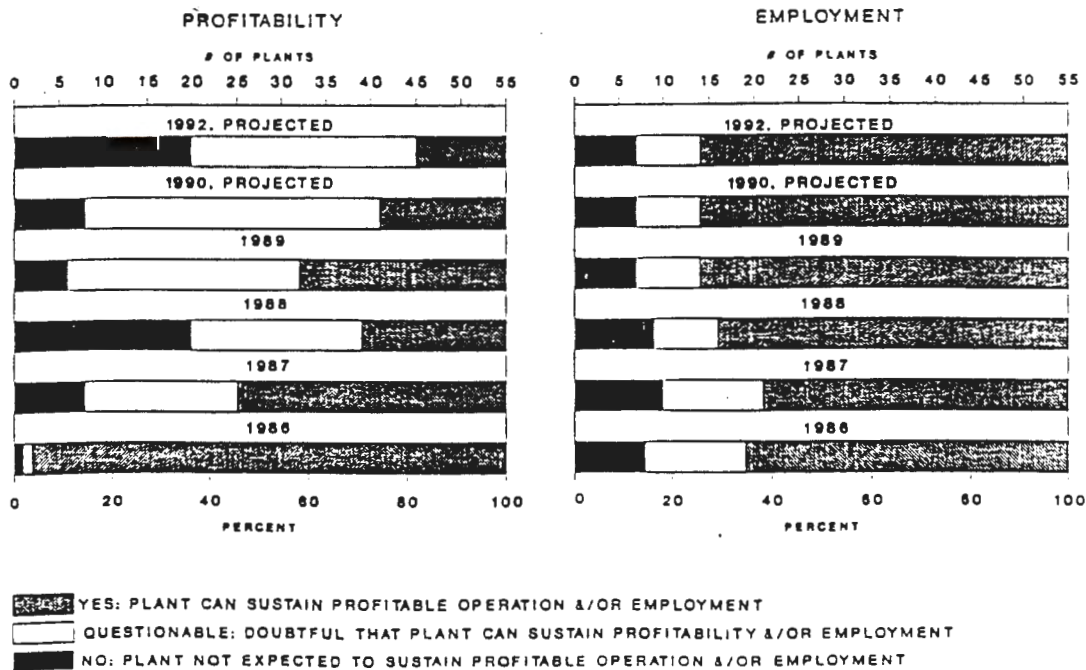


FIGURE 2

CLASSIFICATION OF FREEZING PLANTS
BY ABILITY TO SUSTAIN PROFITABILITY & EMPLOYMENT
1986 - 1992



5.2.3. INDUSTRY BUYING PRACTICES (PORT PRICE COMPETITION)

Processing sector demand for raw material has consistently outstripped supply, especially over the past ten years or so. This competition has become so severe, in recent years, that prices established through the collective bargaining process are now regarded as nothing more than "reference" or "floor" prices. The true cost of fish has, at times, exceeded negotiated prices by as much as fifty percent. In addition, a complex web of "non-price" competition has become prevalent through processor investment in boats and fishing gear, provision of free bait, reduced fuel prices, and preferred access to employment for family members of fisherpersons. As a consequence of the reduced profitability of the industry during the 1988 - 1990 period, industry buying practices became total undisciplined as processors struggled to obtain adequate raw material to continue their operations.

5.2.4 QUALITY PRACTICES - MARKET IMPLICATIONS

The issues surrounding the quality image of Newfoundland's fishing industry have much to do with the competitive environment for raw material. Despite numerous and attractive public sector support programs aimed at improving the landed quality of raw material, it is painfully evident that further improvement is needed. The boxing of fish at sea is carried out by only a few inshore longliners; even those equipped for boxing, in many cases, do not use them because the competitive price environment ensures that high prices are attainable and are not necessarily linked to quality. The use of prongs to discharge vessels is still practised in some communities equipped with electric cranes provided under government port infrastructure programs. Quality standards are either relaxed or totally ignored in the destructive competition for raw material which arises from "too many processors chasing too few fish". The consequence of these practices is that large proportions of Newfoundland's groundfish production remain destined for low value U.S. commodity markets. Canadian groundfish products, particularly cod, remain lower priced commodities in the

U.S. market than that of our Scandinavian competitors. From another perspective, gadoid species, such as Alaskan Pollack and South American Hakes, are displacing cod in the lower end of the market by offering consistent quality and lower prices. The effect is that Canadian groundfish, especially Atlantic Cod, is losing its traditional market share to better quality cod and to intrinsically inferior gadoid species having consistently higher quality and lower prices.

To compete at the upper end of the price spectrum, Canadian cod must be competitively priced, available year round and be of consistently high quality. Pursuit of such a marketing strategy has far reaching implications in terms of harvesting and processing activities. Quality must become, at least, as important as quantity.

5.2.5 PRODUCTIVITY

The highly seasonal nature of inshore processing activity has frequently been noted in industry studies as the principle impediment to increased productivity. Assessments carried out at various intervals have shown that the offshore sector of the processing industry consistently enjoys higher levels of worker productivity (output) than the inshore sector. Industry managers, having experience in both the inshore and offshore processing sectors, estimate that worker productivity in offshore plants is roughly ten to twenty percent higher than inshore plants. Productivity, however, is also very much a function of technology and management systems. The inshore sector, especially larger operations, have taken measures to improve productivity; however, the perception remains that many firms in the inshore sector have not experienced adequate financial returns to make the investments needed to achieve optimum productivity gains. In some cases, however, the extremely short operating seasons of inshore plants may not justify such investments. The need for productivity gains is illustrated in a 1991 Productivity Audit of inshore groundfish processing establishments carried out for the Provincial Department

of Fisheries by Dr. David Steward of Memorial University's Faculty of Business Administration. This study found that almost seventy percent of the 65 plants audited believed that they were experiencing significant problems with respect to productivity in their operation. Most of the plants which believed they had no productivity problems were small "feeder plants".

5.2.6 PRODUCT DEVELOPMENT / DIVERSIFICATION

Since the early 1980's, both the federal and provincial departments responsible for fisheries management and administration have encouraged the inshore processing sector to diversify product lines and pack mixes as a means of expanding production, increasing revenue and, thus, improving overall viability. The gains achieved through these initiatives have been limited. The industry is driven by the imperative of achieving maximum access to traditional groundfish and pelagic species. Constraints to diversifying products include insufficient funds (profits) with which to finance such activities, the relatively low quality of certain inshore groundfish landings and the limited access to in-house managerial and technical personnel to develop products, adopt or adapt technology and develop and execute marketing programs. Public sector financial incentives serve to reduce these constraints to some extent. However, the structural weakness of the industry appears to serve as the principal limiting factor to better utilization and more value-added development of available fishery resources.

5.2.7 MANAGEMENT/TECHNICAL EXPERTISE

Past industry studies by Provincial and Federal Task Forces and Royal Commissions have emphasized the need for improved management within the Province's inshore fishery. The primary need for improved technical and managerial expertise is at the middle management level. Most owner operators within the inshore sector are extremely competent and experienced individuals; however, the nature of their business is such that, physically, they cannot

effectively carry out all management functions on their own. Seasonality, affordability and, in some cases, remoteness of plant locations have been impediments to attracting well educated, technically competent personnel to middle management careers in the processing sector. Some success has been achieved in recent years through industry collaboration with government and, in particular, the Marine Institute. However, the industry's ability to attract and retain key management and technical personnel remains limited. As a consequence, advancements in productivity, quality assurance and diversification are not fully realized.

5.2.8 COST STRUCTURE

As noted above, undisciplined buying practices within the inshore sector see high prices paid for raw material of less than desirable quality. Lower and/or inconsistent quality reduces the opportunity to upgrade product pack mixes, reduces yields and increases unit labour costs. Wage rates have increased considerably over the past five years or so. The larger, integrated offshore sector saw wage rates move from \$8.00 per hour to more than \$ 10.00 per hour over a three year collective agreement. These wage expectations were carried forward to many unionized inshore operations and also influenced the cost of labour in non-union plants. For many processors, these increases have far exceeded their ability to pay, given raw material price increases, short operating seasons and market returns. As a consequence, wage rates have actually been rolled back in a number of processing plants or scheduled increases deferred. This is not to say that the rates themselves are higher than workers need; the implication is that industrial wage rates and benefits are difficult to afford within a structurally weak industry with very low levels of profitability.

Other cost items experiencing increases include electrical charges, taxes, workers' compensation rates, employers' share of U.I. premiums as well as imposition of several new taxes, most notably payroll taxes which have imposed a significantly higher burden than the previous School Tax regime. In addition, most other costs have

also increased for direct cost items (e.g. packaging materials) and overhead items (e.g. insurance). The effect of the industry's inability to pass on these increased costs to the marketplace is illustrated in the declining industry profitability shown in the chart from the NewLantic Study.

5.2.9 RESOURCE MANAGEMENT - FISH SIZE/SEASONALITY

Fish size is an important consideration with respect to product quality and mix, unit labour costs, value added options and market diversity. Larger size fish are generally more desirable from all these perspectives. In addition, one suspects that a more mature fish biomass will be more prolific and thus, safer from a resource stability perspective. As a consequence, it is important to ensure that future resource management and harvesting strategies provide means of sustaining industry access to larger fish.

Seasonality of inshore harvesting wreaks havoc with marketing strategies, financing requirements, labour productivity and capital planning. Seasonality, in itself, is a major contributor to low levels of capacity utilization and thus, low levels of profitability.

To the extent that future fisheries management policies are successful in improving the average size of fish harvested and reducing the seasonal availability of the catch, the opportunity for industry viability will be substantially improved.

5.2.10 CONCLUSION

To achieve stability and reasonable levels of profits, the industry must achieve gains in raw material quality and labour productivity and also take full advantage of all opportunities to improve revenues from product development and diversification opportunities. Costs must be brought in line with revenues, such that adequate profits are realized to ensure ongoing viability. Industry profitability and stability are needed to effect these

advancements and also to provide the human resources necessary to optimize full realization of development opportunities. These benefits, which are more fully described and estimated in Section 8.2, can largely be realized by achieving better utilization of the industry's productive capacity.

6.0 RATIONALIZATION TARGETS

In order to precisely determine an appropriate balance between resource availability and processing capacity, it is necessary to have a reasonably accurate projection of future resource availability and an appreciation of how these resources are to be allocated among fleet sectors. It is also possible that more stringent conservation measures will be introduced which may alter the share of resources harvested by these fleet sectors. An important consideration is the likely distribution of resources within key stocks such as Northern Cod (i.e. what proportion of the stock will be harvested and landed for processing within each of the sub-regional zones 2J, 3K and 3L?)

Clearly, there is so much uncertainty as to the pace of future stock recovery and how the benefits of this recovery might be distributed geographically and among fleet sectors, that any estimates of future resource availability can only be regarded as speculative. However, to provide a sense of "order of magnitude" levels of capacity reduction required, the Committee has estimated annual processing capacity and utilization at a projected level of 1997 groundfish landings. These estimates use the Province's 1990 survey of processing throughput capacity to calculate capacity utilization. The projections of future stock availability to the Newfoundland fishing industry are based on discussions with various personnel within the Provincial and Federal fisheries departments, including a published report by DFO Science Sector, dated June 23, 1992 Titled " Atlantic Canadian Fish Resources - Status and Trends".

The reader should note that these projections are based on the best information available within the public sector and recognize that their use in this exercise is to illustrate the processing sector capacity requirements five years from now. TABLE A shows an estimated range of groundfish resource availability for stocks important to Newfoundland. For these stocks, the estimate of

TABLE 'A'

Projected TACS and NFLD. Shares for Certain Groundfish Stocks, 1997.

Species/ Stock	Average TAC (mt) 1988-1990	Avg. NFLD. Catch (Mt) 1988 - 1990		Projected TAC Range 1997	Midpoint	NFLD. Share
		Inshore	Offshore			
Cod						
2J3KL	233,400	104,113	87,087	80,000-140,000	110,000	110,000
3Ps	37,300	18,851	2,856	25,000-35,000	30,000	25,300
3NO	27,900	304	9,664	10,000-20,000	15,000	5,950
4RS,3Pn	69,500	26,946	1,683	35,000-45,000	40,000	28,480
4VSW	36,100	0	3,702	18,000-28,000	23,000	2,300
Redfish						
3P	13,300	1,902	3,968	20,000-30,000	25,000	14,170
4RST	56,700	3,016	2,630	55,000-65,000	60,000	7,200
4VWX	30,000	0	4,065	9,000-11,000	10,000	2,400
Turbot						
O+1+2GH	41,700	0		38,000-45,000	40,000	7,700
2J3KL	54,200	6,240	1,975	40,000-60,000	50,000	13,300
Am. Ptarmigan						
3LNO	31,700	1,971	23,077	10,000-14,000	12,000	11,800
Yellowtail						
3LNO	8,300	0	6,660	5,000-10,000	7,000	7,000
Minor Stocks				15,000-19,000	17,000	17,000
Total:	640,100	163,343	147,367		439,000	252,600

Assumptions:

- O+1+2GH Turbot split 60% inshore, 40% offshore.
- NFLD. Inshore & Offshore TAC reflects historic portion of catch taken by non-NFLD. interests. Approximately 75,000 tonnes of these resources are for non-NFLD. interests.
- All figures are expressed in metric tonnes, and have been prorated based upon historical splits (1988 - 1990), except in the case of Northern Cod. In the latter case inshore/offshore splits were selected for illustrative purposes. Reader should note that stock projections used are not based on either scientific advice or future resource allocations policies.
- Projected redfish quotas reflect new stock areas.

TABLE "B"

Annual Processing Capacity and Capacity Utilization Based on Actual and Projected Future Regional Groundfish Landings.

Area	Annual Capacity (Mt.) Inshore	Actual AVG. (1988-1990) Groundfish Landings (Mt.)	Actual Utilization Rate	Excess Capacity	% Capacity to be Removed	Projected Future Groundfish Landings (Mt.)	Actual Utilization Rate %	Excess Capacity	% Capacity to be Removed
2J	66,200	16,136	24.37%	20,097	30.36%	13,000	19.64%	29,057	43.89%
3K	214,200	29,210	13.64%	130,743	61.04%	23,000	10.74%	148,486	69.32%
3L	375,500	67,282	17.92%	183,266	48.81%	57,000	15.18%	212,643	56.63%
3Ps	67,200	19,231	28.62%	12,254	18.24%	24,000	35.71%	(1,371)	-2.04%
3Pn	52,400	10,466	19.97%	22,497	42.93%	13,000	24.81%	15,257	29.12%
4R	163,100	21,018	12.89%	103,049	63.18%	21,560	13.22%	101,500	62.23%
Sub Total:	938,600	163,343	17.40%	471,906	50.28%	151,560	16.15%	505,571	53.86%
Offshore	298,802	147,367	49.32%	72,084	24.12%	101,040	33.82%	143,356	47.98%
Total:	1,237,402	310,710	25.11%	543,990	43.96%	252,600	20.41%	648,927	52.44%

- Notes:**
- 3NO inshore cod is landed in 3L
 - 4RST redfish is landed in 3Pn
 - O + 1 + 2GH Turbot is split 60% inshore 40% offshore.
 - Offshore capacity utilization reflects the operations of 8 plants.
Plant capacities at St. John's, Trepassey, and Grand Bank are assumed to remain inactive as groundfish processing facilities.
 - All Figures are expressed in metric tonnes, and have been prorated based upon historical splits (1988 - 1990).
 - Annual capacity Inshore assumes a 20 week groundfish production period, with 6 days production per week, 2 shifts per day.
 - Annual capacity Offshore assumes a 40 week groundfish production period, with 5 days production per week, 2 shifts per day.
 - Excess Capacity is based on a target utilization rate of 35% inshore and 65% offshore.

resource availability is 439,000 metric tons, of which the total Newfoundland share would be 252,600 metric tons.

6.1 INSHORE SECTOR

Based on historic distribution of quotas and catches, an estimate of the inshore sector's proportionate share of future quotas has been developed on a regional basis. This estimate, shown in Table "B", totals 151,560 tons, sixty percent of the total Newfoundland Share.

This projected range of stock recovery and distribution to the inshore sector can be interpreted to mean that, by 1997, the resource will have experienced a reasonably strong recovery to levels approximating ninety-three percent of the landings prevailing in the 1988 - 1990 period. Note from TABLE B that the average inshore groundfish landings during this period were 163,000 metric tons. In this context, and in consideration of the considerable uncertainty as to the prospects for stock recovery, it should be understood that actual future results could be quite different from what are shown here. For the purpose of this analysis, however, it is felt that these estimates provide a valid proxy of the industry's future prospects. Using the Provincial Department of Fisheries' 1990 capacity survey and the resource projections from TABLE A, estimates of anticipated plant capacity utilization rates have been generated, together with estimates of the amount of capacity which must be removed to achieve viability.

A critical issue in this analysis is the level of capacity utilization needed to achieve overall industry viability. Much depends on how viability is defined in terms of levels of profits needed (e.g. Return on sales of 3% or Return on Investment of 15% etc.). A number of factors will influence target or desired capacity utilization levels such as raw material costs and quality, the amount of debt owing, product mix, unit labour costs, alternative processing opportunities (i.e. pelagics, crab etc.), plant overhead costs, management competency, market returns and so

on. The actual level of capacity utilization needed to achieve viability will vary from plant to plant, even with a standardized definition of viability.

Extensive analysis would be required to determine the precise level of capacity utilization required for each plant to be viable. In addition, the analysis might be extremely subjective and assumption prone, given the sensitivity of the influencing factors noted above. As part of its 1990 study, the Province asked each processor to define the number of weeks of production, (one shift per day), needed to be viable. The average response was equivalent to thirteen weeks of production activity. Total capacity, from an industrial engineering perspective, and in recognition of the seasonal nature of the inshore industry, has been defined as twenty weeks at 2 shifts per day. The approximate level of capacity utilization needed for viability, therefore, would be about 33 percent ($13 \times 6 = 78$ divided by $20 \times 6 \times 2 = 240$). Other information obtained from industry sources suggest a slightly higher number equating to 36 or 37 percent. For the purpose of this analysis, therefore, a target capacity utilization number of 35 percent is used. Finally, the reader will observe that the 1986 LINK Study estimated inshore capacity utilization levels in plate freezing, which is principally used for groundfish products, as 31 percent. It should also be noted that the NewLantic Study illustration, which itself is focused primarily on groundfish plants, shows that the industry was profitable during the 1986 and 1987 periods. Caution is required here in interpretation of these indices. A variety of other market and resource factors influenced profitability during the mid eighties; nevertheless, these data further support the contention that capacity utilization levels should be targeted in the thirty to forty percent range, if financial viability is desired. Referring again to TABLE "B", the analysis shows that the amount of capacity that would have to be removed from the inshore processing industry to achieve a 35 percent capacity utilization rate during the 1988-1990 period is approximately fifty percent. Based on future resource projections of 151,560 metric tons, the percentage of excess capacity, at the

target utilization rate, is roughly fifty-four percent. This suggests that, as many as 88 inshore groundfish plants must be removed from the industry, if a representative distribution of various sizes and types of plants were to be decommissioned. Areas requiring higher levels of rationalization include plants adjacent to NAFO areas 3K, 4R, 3L, 2J and 3Pn. No capacity reduction is indicated for NAFO Area 3Ps.

Notwithstanding the need to achieve viability by reducing surplus capacity, it is important to acknowledge that, within the twenty week inshore production season, approximately 50 percent of total production will be processed within a one month period due to the effect of cod trap "glut" landings. Assuming that seasonal harvesting peaks in future will follow past patterns, it is evident that consideration must be given to this peak production period.

Within NAFO Area 2J3KL, the prime cod trap landings region, most trap landings in any given area will occur within a three week period. The regional landings pattern usually see the southern region of 3L experience the first trap landings by mid to late June with the season beginning progressively later throughout northern regions of 2J and 3K such that trap landings are still at regional peaks in southern Labrador in mid August. Therefore, for NAFO area 2J3KL, as a whole, the total trap season is roughly two months.

Using the projected 1997 landings and present industry capacity estimates, it is possible to determine a rough calculation of the need to limit processing sector rationalization in order to accommodate trap landings.

Future Quotas 2J3KL groundfish	-	93,000 m.t.
Trap Landings (est. 33%)	-	30,690 m.t.
Monthly Capacity requirement (2 month season)	-	15,345 m.t.
Annual Processing Capacity 2J3KL	-	655,900 m.t.
Plate Freezing Capacity (50%est.)	-	327,950 m.t.
Monthly Capacity	-	27,329 m.t.

Acknowledging that the above represents a very crude analysis, the indication is that about 56 percent (15,345 divided by 27,329 x 100) of present groundfish capacity in NAFO Area 2J3KL must be retained in order to cope with peak landing periods. Given the considerable margin of error for this type of analysis, and, to provide a cushion for further growth, it may be prudent to contemplate removing no more than forty percent of the present industry capacity, even though a higher level of reduction has been suggested as desirable from an optimum viability perspective.

6.2 OFFSHORE SECTOR

The analysis of capacity utilization levels for the offshore sector includes two fundamental distinctions from the approach outlined above:

- A) The annual offshore capacity assumes a forty week operating season;

- B) The target capacity utilization rate for the offshore sector is sixty-five percent versus thirty-five percent for the inshore sector. This reflects higher operating and overhead cost structures for the offshore sector and the relatively low level of species diversification (i.e. most plants are exclusively groundfish).

For the offshore sector, it has been assumed that three of the eleven offshore plants (St. John's, Trepassey and Grand Bank) will not be reactivated as groundfish plants. Had these plants not operated in the 1988-1990 period, the level of capacity reduction required would have been approximately twenty-four percent. Based on anticipated offshore quota levels of 101,040 metric tons in 1997, roughly forty-eight percent of the offshore sector's productive capacity will be redundant.

Removal of this much surplus capacity would indicate that as many as four of the offshore sector's present plants must also be closed. This assumes that industry viability will be pursued and that viability requires a forty week production season where the available capacity during this period is utilized sixty-five percent of the time.

7.0 BENEFITS-COSTS OF RESTRUCTURING

The Tripartite Committee has examined the benefit and cost implications of a major restructuring of the processing sector through consultation with economists in the Provincial Government and the conduct of a preliminary analysis by The Newlantic Group, based on this firm's previous work on this issue for the Department of Fisheries and Oceans' Stein Task Force.

7.1 PUBLIC SECTOR BENEFITS/COSTS

Economists from the Government of Newfoundland and Labrador's Executive Council (Economic Research and Analysis Division) and the Economic Recovery Commission were asked to consider the economic implications of a significant downsizing of the fish processing sector. Their analysis is appended to this report as Appendix E. Highlights from the analysis by the Province's economists can be summarized as follows:

BENEFITS:

- Rationalization would result in fewer, larger plants able to take advantage of economies of scale and productivity gains;
- Incomes would improve for those remaining in the industry;
- Remaining plants would be more profitable, thus better positioned to invest in new technology, effecting reduced costs or increased "value added" production. These gains could further improve profitability and viability and contribute to employment and income growth over the long term;
- A stronger, more economically viable industry, having fewer plants, could mean a decrease in Government grants and subsidies to the industry;

- Assuming the same volumes of raw material being processed in fewer plants, the effect on Gross Domestic Product for the Province would not be significant. In fact, G.D.P may increase because of efficiency gains in the long term.

COSTS:

- The most significant cost is the loss of employment which would increase pressure on governments to find alternative employment and to increase retraining and adjustment programs for individuals and communities affected;
- To the extent that larger numbers of workers may fail to qualify for U.I. benefits, there may be an increased demand placed on the Province to provide social assistance and job creation programs. This represents a shift in financial burden from the Federal Government to the Province. This could result in increased Provincial borrowing to finance income security payments and to offset losses in retail sales and/or income taxes associated with reduced output; however, if the total provincial population remains the same, about 70 percent of these losses would be made up by increased federal equalization payments.

This analysis also discusses the potential costs and benefits of possible relocation within the Province. There are gains associated with improved economies of scale and from growth in regional centres. These could be offset, in the short term, by increased demand for public infrastructure in larger communities. Should relocation mean out-migration, the Province would incur revenue losses associated with reduced equalization and other transfer payments, in addition to the losses from income taxes and retail sales taxes.

Apart from the macro economic impacts outlined above, a rationalization of the fish processing sector would have implications for the public sector expenditure requirements of federal and provincial governments, relative to the fishing industry. Some notable impacts would include:

FISHERIES ADMINISTRATION - Fewer processing plants could mean a requirement for a reduced number of fisheries inspection personnel and reduced development funding requirements for the processing sector. Alternatively, the personnel and financial resources now deployed could be more effective in achieving their program objectives and goals since the level of service would be increased.

SPECIAL ASSISTANCE PROGRAMS - Demands for special "make work" type programs and major assistance schemes (eg. A.F.A.P, Ice Compensation, etc.) would be reduced, and hopefully, eliminated for processing sector participants. In recent years, the Federal Departments of Fisheries and Oceans, Employment and Immigration, and the Atlantic Canada Opportunities Agency have participated in a myriad of "adjustment and development" programs for the fishing industry including the following:

Program	Cost (\$M)
Atlantic Fisheries Adjustment Program (AFAP)	584.0
Northern Cod Moratorium Response (approx.)	750.0
Catch Failure/Ice Compensation - 1991	57.0
Newfoundland Inshore Fisheries Development Agreement	<u>42.0</u>
Total	1,433.0

The AFAP program is an Atlantic wide measure; however, the benefit to Newfoundland likely represents a large share of the total Program's expenditures. In addition, there are a number of other Federal initiatives related to industrial incentives, employment generation and price support mechanisms targeted for the fishing industry. Achieving a saving of upwards of

forty percent on processing sector related costs, through reduced dependency on such programs, would be an extremely significant benefit to Government.

U.I PROGRAM - Presently, the level of U.I. benefits paid out to Newfoundland fishing industry workers (both fisherpersons and plant workers) is roughly \$200 million annually. Assuming half this cost is attributable to the processing sector and, that upwards of forty percent of those now involved in processing are displaced, the effect could be as high as \$40 million annually. While it must be acknowledged that this benefit may simply show up elsewhere as a cost to either the Province or the Federal Government, a downsized industry would be much easier to accommodate in terms of designing appropriate long term, income stabilization schemes that would not contain the disincentives to extending work periods which are a hallmark of the present UI Program.

7.2 INDUSTRY BENEFITS

The work carried out by the Newlantic Group for the Stein Task Force provides an ideal model for assessing the impact of restructuring on the various sizes and configurations of individual firms relative to species produced, etc, and also, the collective impact on the fishing industry.

Efforts to utilize this model to generate a preliminary estimate of total industry impacts in terms of profitability and viability were actively pursued. However, this model cannot be used to generate meaningful and reliable results on a "quick and dirty" basis. As a result, it was decided to focus on generating an estimate of total industry benefit that would be achieved if the number of firms participating in the industry were reduced by forty percent and the quotas available to the industry are as estimated in TABLE A. The results of this analysis are presented in a separate report which is attached as Appendix F.

In these estimates of Total Industry Net Benefits from Rationalization of the inshore groundfish sector, a number of key assumptions have been made:

1. All the groundfish harvested is processed into fillets;
2. Fixed overhead costs are prorated on a 50/50 basis between groundfish and all other species (ie. pelagics, crab);
3. Productivity gains that might be realized are largely a function of the length of time worked. At the 35 percent capacity utilization level, workers could increase the number of weeks worked, on average, from seven or eight weeks to about 12 or 13 weeks. The basic assumption being made in this analysis is that the pattern of inshore harvesting does not change with respect to seasonal variations;
4. At the time of carrying out this analysis, it was not known how many plants would be affected. The detailed illustrations shown in Appendix F assume a forty percent level of rationalization which would equate to about 65 plants. Further sensitivities based on thirty and fifty percent reductions are included;
5. The industry's cost structure is derived from the analysis carried out for the Stein Task Force by Newlantic. This analysis was based on 1989 data; however, it is believed that industry cost relationships have not changed markedly since then and should be valid in projecting future impacts.

The benefits that would be realized by the processing sector from rationalization include two types:

DIRECT BENEFITS - Fixed overhead costs include items such as depreciation, insurance and debt servicing. By reducing the number of plants, the remaining industry participants have higher throughputs and thus lower unit fixed costs. Lower fixed costs provide higher contributions to overhead and profit. These benefits constitute the larger share of total benefits and will be fully realized as a direct consequence of downsizing.

INDUCED BENEFITS - For the purpose of this analysis, the types of induced benefits that would accrue from rationalization and the estimated benefit of each are as follows:

<u>BENEFIT ITEM</u>	<u>BENEFIT FACTORS</u>		
	<u>Best Guess</u>	<u>Optimistic</u>	<u>Pessimistic</u>
Higher Labour Productivity	1.0500	1.0750	1.0250
Higher Yields	1.0125	1.0188	1.0063
Higher Selling Prices	1.0050	1.0075	1.0025
Higher Value Pack Mix	1.0100	1.0150	1.0050

The level of benefits estimated are believed to be generally conservative and realistic. The single largest benefit is productivity induced; the "Best Guess" estimate provides for a five percent improvement. The other benefits, although less significant individually, are driven mostly by quality considerations and pricing issues.

Interpretation of the results of the analysis contained in Appendix F is most easily achieved from examination of TABLES 1-4. Referring to TABLES 3 and B-2, a resource recovery of 151,560 metric tons would see the inshore processing industry having a total revenue of \$240,260,500 and an overall, industry wide, net operating income of \$870,600, without rationalization. Removal of forty percent of the total number of inshore groundfish processing plants (about 65) would improve sales to almost \$247 million and reduce costs for a combined effect of \$21.6 million in net operating income.

The net industry benefit, therefore, after rationalization is about \$20.8 million.

The analysis described above is based solely on the benefits realized by removing forty percent of all groundfish plants and reallocating the groundfish raw material that these plants would have processed to the remaining sixty percent of the industry which would continue to operate.

The principal benefits realized through a rationalization program are the direct benefits arising from Fixed Overhead and the fixed portion of Manufacturing Overhead. The "groundfish only" analysis assumes that 50 percent of these overheads are influenced by groundfish. However, it also follows that plants continuing to operate after rationalization will benefit from processing other species such as capelin and herring that would have been processed by those plants removed from the industry. To estimate the effect of increased production of species, other than groundfish, the NewLantic Group has generated a further series of Tables (2 and 4), which show the benefit of having 90 percent of Direct Benefits distributed over increased production of groundfish and other species. It is assumed that 10 percent of the direct benefits derived from rationalization will accrue to the fifty-seven non-groundfish plants now licensed. The assumption being made here is that rationalization will occur only within the groundfish sector.

The benefit consequences for the groundfish processing sector, following rationalization, are estimated to total about \$29.8 million under the "Best Guess", forty percent reduction scenario. It should be observed that most of the benefits of rationalization will occur as a direct consequence of removing surplus capacity. For example, under the scenario described above, Table 2 shows that roughly \$19.2 million of the total \$29.8 million benefit arises from General Overhead reallocations. Almost \$9.0 million is derived from improved Production Efficiency, while the \$1.7 million in Plant Overhead includes both a fixed and variable portion.

Overall, therefore, more than two-thirds of the total benefits are Direct Benefits while Induced Benefits account for the remainder.

Summary Tables, 1 and 2, should be referenced to compare the industry benefits achieved based on groundfish production only versus production of all species. These tables also illustrate a range of benefits that might be achieved based on Optimistic vs. Pessimistic forecasts and also show the sensitivity of removing somewhat higher and lower proportions of the industry's capacity; impact estimates for 30 percent and 50 percent capacity reduction options are provided. The reader should note that the reasons for showing "groundfish only" benefits was to carry out the assessment of induced benefits. The more realistic estimate, therefore, of industry benefits arising from rationalization is based on all species and is shown in Table 2.

As a final point on this assessment of industry benefits, the NewLantic Group has calculated the Gross Margin applicable to rationalization under the Best Guess, forty percent reduction option and what the industry's Gross Margin would be without rationalization, assuming the quotas projected in TABLE A. The results are a Gross Margin of 16.25 percent for the inshore sector, as a whole, following rationalization, as compared to a 12 percent Gross Margin, without rationalization. This improvement is very significant and reflects a thirty-five percent gain in the industry's Gross Margin.

The purpose of having these ratios calculated, in part, was to reference the 19 percent Gross Margin target recommended by the Kirby Task Force in its "Targets for a Profitable Processing Industry" chapter, (p.47). Kirby suggested that a Gross Margin higher than nineteen percent would be needed for trawler plants and somewhat lower for inshore-fed plants. It appears, therefore, that the forty percent reduction option yielding a Gross Margin of 16.25 percent, is very close to what was advocated by the Kirby Task Force.

Notwithstanding the preliminary nature of this analysis and the sensitivity of using various estimates of future resource availability and target capacity utilization levels, this analysis shows that the total benefits that would be realized by the industry through a forty percent rationalization of groundfish plants would range from \$24.5 million to \$35.0 million annually, most or all of which would be industry wide profits. Relative to industry sales of \$240 million, the benefits of removing 40% of the industry's capacity are equivalent to 10-15 percent of total sales. It can be expected that these profits would not be shared by all industry participants proportionately. Some firms may incur losses while others could enjoy high levels of profitability. As discussed earlier, the determination of how these results might be distributed by region, plant size and type would require a more rigorous and time consuming analysis.

8.0 MEANS OF RATIONALIZATION

The Tripartite Committee has considered various means of achieving a rationalization of the processing sector involving the removal of surplus processing capacity and movement of the industry toward the commonly held industry-government objective of a self-sustaining, viable processing sector.

A variety of options were defined and examined. In the final analysis, it was agreed that the fundamental choices include:

A. Intervention

This would see some form of joint industry-government intervention in the industry aimed at effecting the selective removal of surplus capacity by providing monetary inducements to processors who would agree to permanently relinquish licences for specific processing facilities.

B. Status-Quo

This effectively reflects a non-intervention approach where government would react to each plant closure on an individual basis and, generally speaking, attempt to accommodate those processors experiencing difficulties in continuing their operations.

C. Modified "Status Quo"

Under this approach, Government would simultaneously eliminate all flexibility respecting licensing and seriously restrict access to financial support programs.

D. Deregulation

This would represent a fundamental shift in thinking whereby any individual could establish, expand, consolidate or close processing establishments without any form of regulatory

restriction. In effect, there would be no "limited entry" licensing system for any type of processing activity.

E. Deferment

Recognizing that there is great uncertainty at present with respect to future resource prospects, Governments could "wait and see" the unfolding of events over the next year or so prior to arriving at a strategic policy decision. During this interim period, therefore, Deferment essentially represents the "Status Quo" option, with the proviso that future action of some kind is being considered.

Prior to considering the pros and cons of these alternatives, it is important to understand the financial circumstances of the processing sector as determined by the research activities of the Committee and through the findings of the Peat Marwick Thorne Study of the industry.

8.1 INDUSTRY'S FINANCIAL CIRCUMSTANCES

The fishing industry avails of financing primarily from commercial banks and public sector financial corporations. Trade accounts also represent a means of financing short term working capital requirements.

8.1.1 COMMERCIAL BANKS

Historically, the commercial banking community has played a large role in financing the capital requirements of the industry. However, over the past ten years or so, commercial banks have resisted approving "term" loans or other capital financing instruments in the inshore fishery because of the industry's volatility. The Newfoundland chapter of the Canadian Bankers Association (C.B.A.) reports that member banks now hold very little "term" debt in the industry. Processing firms that have been successful in obtaining capital financing are viewed as being the

more profitable and successful industry participants, and therefore, the least likely to experience failure.

Equipment financing by the commercial banks is more common but such loans are secured by chattels on the respective equipment which, in many cases, is easily removed (i.e. forklifts, filleting machines, etc.). In addition, most loans of this nature are guaranteed by the Federal Government's Small Business Loans Act, normally at eighty-five percent of the outstanding principal owing.

Working capital has also been traditionally sourced from commercial banks. In recent years, however, the industry's lack of consistent profitability and uncertain prospects have caused banks to significantly reduce their exposure. This has been accomplished, in part, by refusing to provide working capital for some firms unless guarantees could be obtained from the Province of Newfoundland's Guaranteed Loan Deficiency Program. Also, for many processors, the "margin" coverage provided on financing of inventory and receivables was reduced from seventy-five to fifty percent.

The consequence of these commercial banking practices over the past few years is that the commercial banks do not hold a significant portfolio of loans in the fish processing sector and, for those loans provided to "credit worthy" clients, many are backed up by loan guarantees, personal guarantees and reduced margin coverage on working capital.

In discussions with the C.B.A., the concept of licence removals by Government, for those plants or companies placed in receivership, was examined as a potential means of achieving industry restructuring. Response to this concept was that, in those few cases where banks may be inclined to proceed with receivership action, the low likelihood of achieving a recovery of funds is already a powerful deterrent. Plants are viewed as having very limited market value and receiverships often prove expensive, if assets cannot be disposed of quickly. Costs of maintenance,

insurance, security, receivership fees, etc. can easily outstrip any potential gains. Receivership action in the case of the fish processing industry would likely only be taken in the event of abuse by the owner in terms of not maintaining the assets in good condition or being seen to take actions to avoid debt repayment. The effect of adding the further deterrent of removing the processing licence on a "bankrupt" plant would effectively mean that receivership action would probably not even be contemplated, under almost any circumstances.

For future consideration, the C.B.A. advise that the fish processing industry can anticipate increased difficulty obtaining working capital financing in the present industry environment, assuming that no actions are taken to improve the overall viability of the industry or otherwise reduce the unacceptably high risk now associated with the fish processing sector. Similarly, for the longer term, the industry can anticipate difficulty in obtaining all forms of financing, absent some means of placing the industry on a sound footing with reasonable prospects for stability and viability.

8.1.2 PUBLIC SECTOR FINANCIAL CORPORATIONS

Discussions with Enterprise Newfoundland and Labrador (E.N.L.) and the Federal Business Development Bank (F.B.D.B.) portray a somewhat different set of circumstances and considerations. As "lenders of last resort", these Federal and Provincial Crown Agencies have been more supportive of the financing needs of the fish processing industry.

Loans provided by these Agencies normally finance capital investments in plant and equipment. In the case of E.N.L., some debt may have been converted to equity for certain clients. Officials of both agencies expressed serious concerns as to the repayment capability of the fish processing sector and, in both cases, internal reviews and external audits have been carried out to determine how to best cope with the seriousness of the

circumstances in the processing sector. While none of the management personnel interviewed would commit to expressing official policy on the possibility of foreclosure or receivership action, the views expressed were completely consistent with those of the commercial banking representatives; the merits of attempting to recover outstanding debts in the Newfoundland fish processing sector are extremely questionable. For public sector agencies, there is some degree of additional sensitivity associated with government agencies adopting aggressive debt recovery actions, especially given that the present crisis in the fish processing sector has arisen from resource problems which were clearly beyond the abilities of fish plant owners to control or anticipate. The "unofficial" position of both agencies is that recovery actions, such as receiverships, are most improbable, except in the case of extreme abuse.

The position of both Crown Agencies, as to the potential impact of a public policy to cancel processing licences for plants subject to receivership action, was also consistent with that of the commercial banks. Such a policy would effectively mean that only one foreclosure will occur, after which, other means of pursuing debt recovery would be considered, such as encouraging the sale or lease of the facility by the current owner. Officials of both Crown agencies were reluctant to discuss the values of their respective fish processing sector loan portfolio. However, the number of firms having loans in place was provided. FBDB reports that they have financing in place for approximately 20 processors, and in most cases, this would represent small to medium, single plant operations. The average "term" loan is valued at about \$275,000. For E.N.L., the client profile is similar but the number of accounts is higher at forty-seven with the total loans outstanding at about \$10.0 million. It is difficult to estimate the proportion of the groundfish industry which is financed through these agencies. However, sixty-five to seventy processing firms represents a sizeable proportion of the total number of inshore fish processing firms. The total debt outstanding to Crown Agencies is roughly \$15.0 million.

8.1.3 TRADE FINANCING

Two forms of "trade financing" are available to the fish processing sector. Typically, processors establish credit with a variety of supplier firms for materials such as packaging, fishing gear, freezer supplies, lubricants, and so on. The second form of trade financing, which is believed to have become much more prevalent in recent years, is provision of cash advances by large marketing firms.

Supplier account financing can be an important means of minimizing working capital requirements during peak production periods. With a tightening of working capital "margins" by commercial banks, it seems likely that processors have had to more fully avail of access to supplier accounts. For this reason, it may be the case that the present difficulties experienced by processors are being shared, to a large degree, with industry support firms. Indeed, the C.B.A. reports that a number of industry supplier firms and truckers have sought assistance from commercial banks in rescheduling loan payments on principal for the duration of the Northern Cod Moratorium.

Large fishing firms (eg. F.P.I.) and international marketing firms (eg. Connors Brothers, ABBA, etc.) frequently provide working capital advances to processors as part of commercial transactions involving purchase of final production. This is beneficial to buyers as it assures their access to raw material. Such arrangements are sometimes referred to as "co-packer" agreements. For the processor, it represents, in some cases, their only means of operating, given the resistance by the commercial banking community to provide adequate working capital financing.

Through access to buyers' advances on production, it is believed that many processing firms will continue to operate as long as there is fish available to them. Similarly, many firms reliant on Northern Cod production could conceivably resume operations relatively easily upon resumption of fishing activity in this zone,

even in the absence of working capital financing from the commercial banking industry.

8.1.4 FINANCING IMPLICATIONS

The likelihood that financial forces will be instrumental in achieving the targeted level of rationalization of the fish processing sector seem remote, unless the public sector agencies decided against leniency in dealing with delinquency of their industry clients. For this to occur, it would likely require political intervention in the case of both E.N.L. and F.B.D.B., since these organizations can be expected to avoid foreclosure actions for the reasons noted above. For "term" debt financing, it appears that the best prospects of seeing recovery of outstanding fish processor loans is to assist clients in maintaining their operations in the hope that future stock recovery will be sufficient to provide profitability and, thus, debt repayment.

This profile of industry financing circumstances suggests that the number of firms and plants which might be removed from the industry through creditor actions might be very limited. If such actions were to provoke licence cancellations, it can be expected that almost no rationalization would occur in the foreseeable future. Over the long term, however, and in the total absence of public and private sector financing, it must be assumed that market forces could eventually prevail, to some extent, as plant and equipment becomes older. Eventually, the industry's ability to compete in world markets will cause some form of rationalization to occur. This approach would involve a long and painful process, and cannot be considered a desirable rationalization strategy for achieving the early restoration of industry stability and profitability.

8.1.5 PEAT MARWICK THORNE STUDY

Following the announcement of the Northern Cod Moratorium, the Action Group of Inshore Fish Processors, with financial support from the federal and provincial governments, commissioned a

detailed analysis of the financial impact of the moratorium on the processing sector.

This work involved the administration of a detailed survey of the Province's groundfish processors. Of the 167 processing units surveyed, responses were received from 94, representing 87 percent of the 1991 inshore production volume of Northern Cod. Responses by region and plant size were representative of the total industry.

Analysis was carried out on two distinct groups of processing operations. Multiple Plant Operations include 36 plants representing 42.5 percent of total inshore 1991 Northern Cod production. The analysis for this group was conducted on a group basis only because it was not possible to obtain or develop individual Balance Sheets for these plants, given that they are part of larger corporate structures. The other grouping of Entrepreneurial Class operations included 58 establishments representing 57.5% of total inshore 1991 production volume. It is this latter group which has furnished the detailed data needed to complete a comprehensive analysis of the industry's financial circumstances.

The approach taken was one of determining the "survivability" of these plants. Under Optimistic versus Pessimistic assumptions, where the principle difference relates to the ability to defer debt repayment, P.M.T. has determined that anywhere from 50-70 percent of this group will be "out of business" at the end of the moratorium period. Plants are determined to be candidates for shut down when current liabilities exceed current assets and when owners equity becomes negative. The impact of these closures can be expected to be evenly distributed throughout the Province and among the various size processing operations.

Other findings are:

- the processing sector has been placed in a weak position partially because of expenditures made in preparation for a 1992 fishery which did not occur;

- the financial results of the multiple plant group are very similar to those of the entrepreneurial group;
- plant operators having the financial capacity to survive and continue operating at a low or "mothballed" level throughout the moratorium may be better off shutting down operations at the earliest opportunity rather than invest further on the risky prospect of a return to profitability after the Moratorium;
- the fish processing sector does not have a high level of long term debt, largely because the commercial banking community has long since decided not to provide "term" financing to the industry;
- the industry has a relatively weak "working capital" position, due, in part, to the practice of financing capital expenditures out of operating funds;
- the firms which are likely to remain in operation are those which are in the strongest financial position at the beginning of the Moratorium. It is likely that these are not the firms which have made recent investments in new plant and technology. In this sense, the plants which run out of money are not necessarily the worst plants in terms of physical plant, use of new technology, management competency, adherence to high quality standards, etc.;
- those firms going out of business because of lack of cash are unlikely to be forced out by bankers or creditors. Consequently, it is entirely possible that most, if not all, of these operations could resume business again, in future, assuming that they can find a source of operating capital.

8.2 OPTION "A" - INTERVENTION

Given the foregoing discussion and findings on the nature of the debt and financing position of the fish processing sector, it is not at all clear how the industry might be rationalized and over what period of time. Certainly, creditors are unlikely to take measures to place processing firms in a receivership position. As for the prospects of these firms resuming operations at the end of the Moratorium, it is possible that some form of trade and/or market financing could be made available. It is also possible that additional shareholder investment might be found. As noted by P.M.T. "It is important to understand that this segment of the industry is characterized by a long established entrepreneurial class in the Province of Newfoundland. These operations have managed to survive the cyclical nature of the industry in the past. The ability to develop innovative solutions to continue to survive should not be underestimated".(p.33)

This Option assumes that individual plant owners and their creditors can be persuaded to relinquish processing licenses and that these licences would not be made available to new operators or community groups. The means of persuasion which seems plausible is to provide financial compensation for the return of licensing authorizations and to settle with the financiers of these establishments.

8.2.1 COST

The cost of this "Intervention" option can be estimated by examining the average amounts of shareholders' equity and debt levels as determined through the P.M.T. study. Using the Balance Sheet information for Plants that May Not Survive (Appendix F of the P.M.T. Study), the Optimistic Scenario projects survival of only 24 of the 51 Entrepreneurial plants analyzed. The 27 plants that "may not survive" had very low levels of Shareholders' Equity, only \$7,291,858. Total Long Term Debt for these plants was \$10,641,756 for a Total Equity and Debt Value of \$17,933,614, as of

the most recent financial statements, prior to the Northern Cod Moratorium. Average value per plant is approximately \$664,000.

These 27 plants were already in a negative "working capital" position prior to the Moratorium. If we assume that this deficiency could be covered by the residual value of Plant and Equipment following a de-licensing, Intervention process, the total cost to be borne per plant under this Option is \$664,000. It should also be noted that the financial results reported for the Multiple Plant operations appear to be very similar to those of the Entrepreneurial Class, thus lending credence to the applicability of this average cost estimate for all plants that might be removed from the industry under this option.

Reverting to the base case Rationalization Target in Section 6.0, and assuming that P.M.T.'s "Non-Survivors" were to constitute the forty percent of the groundfish processing capacity (65 plants) to be removed from the industry, this Option would have a total cost of \$43.2 million. Given the dire and uncertain circumstances facing many processing firms, it may be possible that a number of these companies and their bankers might be willing to accept a portion of the respective equity and debt values; however, it is very important to ensure that any rationalization strategy be fully implemented in order to be effective in attaining industry viability, hence the need to make the option described herein attractive to, at least, forty percent of the industry.

8.2.2 FINANCING

This Intervention option would, of necessity, have to be cost shared between the Federal and Provincial Governments with participation by the processing sector in repaying governments for a portion of the cost. This assumes that the Federal Government would absorb a significant portion of the cost, as would be normal for cost sharing arrangements for Federal-Provincial Development Agreements. The Province would be required to finance some portion of the cost of this Intervention Option which could be recovered

from the processing sector, over time, through a levy on production or as increased licensing fees.

It must also be noted that the public sector financing agencies, namely E.N.L. and F.B.D.B., hold roughly \$15.0 million in "term debt" to the processing sector. In this context, it is likely that a significant portion of the cost of this option to governments may effectively mean a "write off" of debt instead of cash outlays.

8.2.3 PROCESS

From an organizational and administrative perspective, an autonomous entity comprised of representatives of governments, industry and community groups would offer a mechanism capable of reflecting the interests of, and being fully accountable to each of the parties. A corporate body, controlled by an Independent Board of Directors, could be structured to negotiate and consummate the de-licensing and decommissioning of the required number of plants, in accordance with the stated principles and priorities of industry and government. The term of this entity's existence would be pre-determined to ensure the timely completion of its activities. Most likely, a one year period would be sufficient. Bearing in mind the desirability of distributing employment opportunities as evenly as possible throughout the Province and the necessity of using a voluntary program, the process would involve:

- A) defining the present surpluses in processing capacity on a region or sub-regional level, using the planning zones defined in the Province of Newfoundland's Strategic Economic Plan;
- B) inviting processors in the respective regions to respond to a Request For Proposals (R.F.P.) outlining how their respective processing operations could be restructured to respond to industry rationalization requirements. Individual firms would indicate their intention, either to :

- 1) consolidate their regional operations on an intracompany basis and a specific proposal as to the cost and feasibility of this plan; or,
- 2) to consolidate their regional operations with other firms and the specific plan showing the costs, merits and feasibility for intercompany consolidation; or,
- 3) accept an "Intervention" offer and close the business permanently as a fish processing facility; or,
- 4) to reject all consolidation and "Intervention" options and to continue operating their business without financial support.

8.2.4 PROGRAM GUIDELINES

Guidelines would be used to ensure that the level of financial support offered would be equitable. The following are illustrative examples of guidelines which might be used:

- 1) Financial assistance offered would not exceed:
 - a) a certain percentage of the "depreciated" replacement cost of the assets being displaced;
 - b) a fixed dollar value per unit of capacity removed (eg. \$20,000 per ton/day);
- 2) Proceeds would first be applied to a negotiated settlement of all outstanding federal and provincial taxes and fees, wages, salaries and benefits, term debt, working capital debt and accounts payable;
- 3) Balance of proceeds, if any, would be distributed to all shareholders proportionate to their share holdings;

- 4) In the event of either intracompany or intercompany consolidations, the balance of funds available following disbursements in (2) above, could be applied to modernization and/or diversification projects, provided, of course, that such activities do not effect an increase in productive capacity.

8.2.5 PROS AND CONS

The Intervention Option offers an expeditious means of effecting an orderly removal of surplus capacity within a short period of time. The total program cost of removing forty percent of the industry's groundfish processing capacity could be in the order of \$43 million, which might be considered a relatively low cost.

The downside of this approach would be the possible perception that individual firms were being compensated to eliminate employment opportunities. This, of course, would not be the case but communities and individuals displaced may well feel that public sector funds should not be used to permit the decommissioning of processing plants. It is important to acknowledge here that the employment losses associated with removal of plants through Intervention would be equivalent to those which must be incurred if the processing sector is to become a viable, self sustaining industry, although the displacement of workers would occur over a shorter time frame than might be the case under other options.

The chief advantage of the Intervention option is that it represents a managed solution to a serious crisis would remove much of the considerable uncertainty now resident within the processing sector and the Province's rural society. Also, this option would ensure that rationalization will occur and that firms remaining in the industry would not have to undergo a financially draining period of destructive competition when fishing activity returns to normal.

8.3 OPTION "B" - STATUS-QUO

This approach would reflect a Non-Intervention approach where governments would respond to plant closures, either temporary or permanent, on an individual basis, with a view to reducing industry capacity, where possible.

At present, there is no public sector mechanism readily available to processing firms facing financial difficulty. The Province's Guaranteed Loans Program is now all but non-existent with respect to new clients. The Province has recently initiated a temporary freeze on renewals of processing licenses in cases where the licences have been inactive or were not renewed for 1992. However, financial incentives towards development of new species and products, as well as quality and productivity related initiatives, are still being entertained and funded by both orders of government.

This Status-Quo option would represent a continuation of these policies and would not see governments take any overt actions to precipitate the closure of processing plants and/or their removal from the industry. The consequences of this approach would be most uncertain. It could be the case that a certain level of rationalization would occur, over time, but the probability that significant and permanent removal of surplus capacity would result, over the foreseeable future, appears remote.

8.3.1 PROS AND CONS

The chief benefit of this approach is that there would be no direct costs to governments, per se, and that the public sector would not appear to be inflicting further economic and social pain within economically depressed communities and regions, arising from industry downsizing.

The Status-Quo Option would effectively mean no response on the part of governments and a recognition that the processing sector must fix itself. Within the Committee discussions, it was generally agreed that this approach would be unlikely to see the industry achieve the required level of rationalization over the short to medium term (3-5 years). Some of the consequences of a protracted period of business decline within the processing sector might include:

8.3.1.1. Impact on Most Viable Firms

Assuming that a protracted period of intense and destructive competition would be required to achieve restructuring, those firms which have historically been more successful would be engaged in price competition with those so desperate, that they would pay higher prices for raw material than warranted by markets or quality. Firms with "nothing to lose" could inflict a lot of damage to those firms that eventually survive. Over several years, the capital base of the historically successful firms could be seriously, if not completely, eroded. The results of the P.M.T. study show that the firms which may survive the Moratorium will incur a loss of 50 percent of shareholders' equity from the most recent financial statement to July 2, 1994, and see Working Capital eroded from roughly \$13.0 million to \$1.8 million over this period (Optimistic Scenario).

8.3.1.2. Market Impacts

Firms which are financially weak and may have paid too much for raw material, cannot afford to hold inventories. As was the case in 1981 and 1982, as described by the Kirby Task Force, this behaviour could have the effect of reducing overall market prices. The depth of this problem again is a function of how long such firms could hold on.

8.3.1.3. Development Impacts

Any industry wide or firm specific gains which might be possible relative to quality, productivity, value added processing and development of underutilized species etc. would not be fully realized until the processing sector is repositioned as a stable, cost competitive and viable industry. A reduced level of "take up" on various Federal and Provincial development programs is already being noticed by program managers and administrators.

8.3.1.4. Moratorium Program

The Federal Government's announced assistance in compensating fisherpersons and processing workers, displaced by the closure of the Northern Cod fishery until June 1994, is projected to cost \$ 700 - 800 million. A fundamental strategy of this program, besides providing replacement income, is to facilitate a restructuring of the harvesting component of the industry and to encourage the professionalization of those involved in harvesting and processing by upgrading skills and basic education levels.

In the absence of processing sector restructuring, the ability of the processing sector to participate in this process and provide support for professionalization will be minimal. Furthermore, individual fisherpersons and plant workers are unlikely to commit themselves to making the best use of this compensation program, if the processing sector is in serious decline and plant shutdowns (not necessarily permanent) are occurring periodically, and without notice. In this context, the potential long term benefits of the Moratorium Fund, especially its training provisions for processing sector workers, may be adversely impacted. Individual processing sector workers cannot be expected to make informed decisions about critical career issues without knowing or understanding the future prospects for the industry. In the absence of tangible evidence that the processing sector will likely include fewer plants and workers, it is probable that most individuals will choose to remain in the sector and await a resource recovery which, most believe, will fall far short of requirements to re-employ the processing sectors' bloated numbers.

Amid a confusing and non-directed response to the crisis facing the fish processing sector, this "window of opportunity" to place the inshore fishery on solid footing for the long term may not be used to full advantage. In a similar vein, sector workers electing to pursue professionalization training may not fully benefit from education programs aimed at improving one's ability to perform and manage in a stable work environment.

8.4 OPTION 'C' - MODIFIED STATUS QUO

This approach would see governments establish and enforce very stringent regulatory and financial support requirements for the processing sector as a means of accelerating the desired movement toward targeted capacity utilization levels.

In specific terms, for example, it could mean absolutely no flexibility in licensing and, perhaps, the immediate removal of licences where plants seem to be "shut down". The difficulty here, however, is that many viable firms may elect to shut down given the high probability of incurring greater losses while operating than while "mothballed". This is one of the P.M.T. findings and, when considered in the context of passive debt recovery actions by banks, the result is that governments would not have a "trigger point" with which to judge which plants are shut permanently or temporarily. All operators, of course, would suggest that their closure is a temporary move.

Tightening up financial assistance programs, beyond present levels, would likely produce only a marginal impact. The Province's Loan Guarantee Program, as well as its lending programs through E.N.L., are already extremely difficult to access. It may be possible for governments to direct the public sector lending agencies, both E.N.L and F.B.D.B., to take aggressive debt recovery actions and, thus, force their clients out of the industry. Such a policy however, would hardly be equitable as these agencies have been mandated to serve as "lenders of last resort" and, by convention, have always demonstrated greater leniency than commercial banks.

Other measures which would be characteristics of a Modified "tightening up" approach might include:

- the sale and/or decommissioning of public sector owned processing plants (See Section 9.2);
- total elimination of "loan guarantee" programs for the processing sector;
- stringent enforcement of capacity control measures; retroactively, if possible;
- a freeze on all licensing flexibility including new licences, transfers, expansions and so on.

8.4.1 PROS AND CONS

The approach again offers a "no direct cost" option for governments but would likely be seen to be harsh treatment of an industry struggling to survive. Governments would be seen to be casting "leaded" lines to drowning firms.

Some considerable time would be required to achieve the desired result. During this period, the negative consequences outlined in 8.3 above would apply. In addition, a very restrictive policy of financial support would probably have the undesirable effect of discouraging or delaying worthwhile and viable development initiatives. From another perspective, a gradual rationalization process, as envisaged under this option, would provide for a extended period of employment adjustment.

8.5 OPTION "D" - DEREGULATION

A deregulated fish processing sector would be characterized as being total unrestrictive in terms of entry with little or no financial support from governments.

Given the challenge of attempting to match the level of industry effort and capacity to a widely fluctuating resource base, it is tempting to contemplate the merits of allowing the industry to seek its own level in terms of viability, size, products, number of plants, locations and so on. An industry comprised of small, undercapitalized firms might become the industry standard with larger, mostly out of Province firms, playing a greater role in purchasing and marketing.

The potential consequences of such an approach are most difficult to predict. One might expect an increased level of participation in the industry and perhaps an increased turnover in terms of new, albeit shortlived, entrants. Certainly, the industry would, to some extent, be even more volatile than it is at present. Adherence to quality standards could be very difficult to encourage and enforce.

Benefits might include certain savings to governments with respect to plant registrations and licensing costs; these, however, might be relatively inconsequential. Industry participants which are well established may perceive a greater opportunity to expand their business.

Critical to the consideration of this option is the rationale for regulating industry in the first place. The assumption is that regulation provides for greater stability, a higher standard of service or quality and an equitable means of distributing the benefits of a "common property" resource.

If these objectives are no longer relevant or, if the negative consequences outweigh the benefits, then consideration should be given to de-regulating the industry.

8.5.1 PROS AND CONS

This option has certain philosophical attractiveness for those who advocate a totally "free market" economy. The difficulty in

considering this option is the tremendous uncertainty as to what might be the short and long term impacts.

Regulation of entry into the industry provides a means of offering stability and an opportunity to direct the activities of the industry toward desirable goals such as product and market development.

If it is found that industry stability and output is not improved by regulation, the Deregulation Option appears attractive. The Tripartite Committee entertained this option, not solely because of its philosophical merits, but rather the questionable enforceability of the present regulatory regime, particularly as it relates to processing capacity. This issue is also discussed in Chapter 10.

8.6 OPTION "E" - DEFERMENT

The Deferment Option suggests that the level of uncertainty as to resource prospects, industry viability and natural attrition rates is such that forward planning is not advisable.

In considering this choice, one would need to identify the demarcation and departure points over the next year or so which would permit a more reasoned or informed judgement on how to respond to the crisis in the processing sector. On this point, it seems unlikely that definitive knowledge will emerge with respect to future resource prospects, at least in the short term. As to the effects of this option within the processing sector, further delay in provision of a definitive policy on future government policy with respect to the industry would serve to frustrate industry participants and cause those now hanging on to continue in the hope of some future assistance.

Absent the provision of new information at some future point, it appears that industry and governments must proceed now to outline their strategic directions for the processing sector, even in the

absence of fundamental information, such as definitive advise on future quotas of groundfish. It is noted that the moratorium on Northern Cod fishing has now been in place for some five months. Industry stakeholders are anxious to know the financial and regulatory environment which awaits them.

9.0 FURTHER POLICY CONSIDERATIONS

9.1 FINANCIAL ASSISTANCE

The ability of both orders of government to resist provision of financial assistance aimed at increasing processing sector capacity has improved considerably in recent years. While project-specific funding aimed at improving productivity or quality may have some capacity implications, there is no evidence that direct financial assistance has been a factor in capacity expansion for some time. Provision of financing, however, through agencies, such as Enterprise Newfoundland and Labrador and the Federal Business Development Bank may have been instrumental in maintaining processing capacity at levels far in excess of industry requirements. The Government of Newfoundland and Labrador's Loan Guarantee Program, while its use by fish processing firms has declined in recent years, has also been a factor in maintaining surplus capacity.

The Tripartite Committee has considered the issue of public sector financial assistance to the processing sector based on the need to achieve industry rationalization. A list of possible guidelines are attached as Appendix "G". The main thrust of these guidelines is to place tight restrictions on access to government programs to ensure that financial assistance is directed toward development initiatives and cannot be used to create or maintain excess processing capacity. In addition, these guidelines would prevent use of public funds for operating subsidies and limit development assistance to interest buy-down and tax credit mechanisms.

Generally speaking, these guidelines would serve to re-enforce the existing policy and program frameworks of both the Federal and Provincial governments. Furthermore they are consistent with the broad development strategies of both governments and should reduce public sector expenditures, which is clearly desirable from a deficit reduction perspective.

It is important, however, to consider the role and requirements for financial support programs in the context of the regulatory regime for the industry. If the real problem with industry expansion is an ineffective system of regulating capacity, even the elimination of all public sector support may not resolve the challenge of matching processing capacity to available resources. In fact, it may be the case that restricting or eliminating public sector development programs could bring the worst possible result where overcapacity or inappropriate capacity is maintained and desirable development initiatives are not pursued. A balance is needed and can only be achieved with clearly defined criteria for funding programs which are compatible with the regulatory and market environment within which the fish processing industry is operating.

Committee members are also concerned about the frequent involvement of development groups in the establishment or expansion of fish processing activities. These organizations include groups such as Development Associations and Community Futures Committees which have proven very successful at lobbying governments to finance capital investments in fish processing, following which plant operators are enticed to participate with various subsidies under the guise of job sharing or training schemes.

The intent of these local development groups is laudable in many respects; however, the results are damaging to an already seriously overcapitalized industry. Frequently, these organizations turn over these assets, paid for by public funds, to independent operators without an adequate cost recovery mechanism. On occasion, these assets have found their way into the inventory of processing establishments owned and/or operated by the Province of Newfoundland.

9.2 GOVERNMENT OWNED PLANTS

Over time, the Province of Newfoundland has acquired, through Federal Government infrastructure programs, business failures of private firms and "development" initiatives of community groups, approximately twenty seven processing establishments. The Federal Government owns three processing plants, two of which are Canadian Saltfish Corporation facilities. Besides the direct ownership of processing plants by Government, other public sector groups such as Development Associations and Community Councils own an additional 22 plants. Collectively, therefore, 52 processing plants are owned by the public sector. Almost all of these facilities, however, are operated by private sector firms through lease or lease purchase arrangements.

The perception which exists among private sector processing firms which own their facilities is that public sector provision of processing facilities on favourable lease terms to competitors is patently "unfair", in that those operating leased premises have not been required to make capital investments and are not exposed to "term debt" obligations. Prior to the Moratorium, the Province of Newfoundland had already accelerated it's divestiture efforts, in recognition of industry concerns.

Given the present circumstances in the industry and the commonly held view that the industry has far too much capacity, continued ownership for processing plants by the public sector seems unwarranted.

The principal public policy objective being pursued through public ownership of fish processing plants appears to be generation of insurable U.I. earnings in areas where these facilities are located. Noting the industry's serious overcapacity problem, it is evident that new or additional employment is not being created. Continued public sector ownership, therefore, merely constitutes a subsidy to the leasee. In so doing, these plants may present unfair competition to processing establishments which are financed by private investment and/or term debt.

Governments and other public sector agencies should consider moving to either sell these facilities at fair value in accordance with contractual lease agreements to existing operators or commit to non-renewal of leases and plant decommissioning upon expiry of the lease.

9.3 INTERIM MEASURES

In the event that capacity in the industry is reduced, it is important to recognize that the financial benefits envisaged in the foregoing analyses will not be fully realized until the forecast levels of resource availability are achieved. However, these benefits would begin to be felt by the industry upon rationalization and would be of progressively greater value as resource prospects and catches improve.

In the case of Northern Cod dependent plants, processing activity will be extremely limited until 1994 and can be expected to be at a relatively low level over the ensuing 2-4 year period. Even with an expeditious implementation of a rationalization program, the firms and processing plants that elect to remain in the industry would require some type of interim support. For Northern Cod dependent plants, the minimum requirement is to maintain facilities through to June, 1994. Rationalization, in the order of magnitude contemplated in this paper, would reduce the number of groundfish processing firms along the Northeast Coast from about 110 to 66, assuming that any rationalization strategy taken will be proportionately allocated.

If Fixed Overhead costs average \$200,000 annually per plant, the total financial requirement during the term of a Moratorium could be $66 \text{ plants} \times \$200,000 = \$13.2 \text{ million (approx)}$. If half of these overhead costs can be absorbed by shareholder investment or through crab and pelagic production, the restructured processing sector on the Northeast Coast would need financial support of \$13.2 million over the two year moratorium.

A preferable alternative to subsidization of industry overheads may be the concept of public sector financing support toward the purchase of "offshore" sources of groundfish, such as Barents Sea Cod, for processing and marketing by those processing firms choosing to remain in the downsized fishing industry of the future. This could generate the funds needed to offset fixed overheads, maintain human and capital resources and offset the risk of losing long established markets by maintaining continuity of supply.

10.0 FUTURE LICENSING POLICY

Section 2.0 of this paper notes that public sector licensing policies for the fishing industry have not been consistently implemented. Despite the stated objectives of governments and the consistent findings of successive industry studies pointing to the desirability of restricting and, in some cases, reducing processing sector capacity, it has been evident for some time that the licensing system has not effectively controlled capacity.

The reasons for the ineffectiveness of the licensing regime are varied but likely have much to do with the absence of clearly defined objectives and priorities. As the authors of the 1987 LINK Study observed..."trying to be all things to all people...leads to inconsistency in application and an uncertainty as to whether fair treatment has been afforded. On occasion, this vagueness and lack of certainty forces political decisions rather than allowing for fair application of a known set of rules. In such cases, the absence of a definitive position leaves the Minister exposed and potentially vulnerable". For this reason, it might be useful to consider the development of a prioritized set of objectives to, guide future licensing decisions as derived from the Provinces' Strategic Economic Plan and the Kirby Task Force:

1. To develop an economically viable and competitive fishery, capable of being self sustaining;
2. To optimize generation of meaningful, professional and secure employment opportunities;
3. To fully avail of all opportunities to expand the benefits derived from fisheries resources through species and product development/diversification activities.

To further assist the attainment of a more effective regulatory regime, it is recommended that consideration be given to the simplification of licensing categories. The following is provided for illustrative purposes.

1. Primary Production
 - a) groundfish and pelagics
 - b) pelagics only
 - c) speciality products (ie. crab, shrimp)

2. Secondary Production
 - a) secondary processing (ie. value added)
 - b) retail processing
 - c) aquaculture ventures

Specific licensing issues which have been considered by the Committee include:

10.1 LICENCE REMOVALS

This contemplates the removal of licences from processing establishments for reasons beyond the control of the licence holder - eg. stock declines. While there may be cases where such action is desirable, the risk of licence removals constitutes a further deterrent to private sector enterprises, which are already operating in a high risk business sector;

10.2 LICENCE LAPSES

The present policy provides for a period of two years for holders of inactive licences to resume processing operations, after which time the licence may be permanently cancelled. Given the present surplus in processing capacity and the anticipated slow recovery of groundfish stocks, there appears to be little reason to nurture inactive operations. Consequently, licences which are inactive during the normal production season in their region should be permanently cancelled following formal notification to the principals of the firm. Provision of a brief period of grace (eg. one month) within which to renew/resume operations could be considered;

10.3 LICENCE RENEWALS

The considerations here are similar to Licence Removals above. Licence holders in good standing and in full compliance with all regulatory requirements should reasonably expect to have their licences renewed. Should the licence regime evolve to some form of performance based system whereby licence holders were held to account for achievement of certain commitments (eg. to establish added value product lines or develop by-products) there would be a basis for considering the non-renewal of a licence;

10.4 LICENCE TRANSFERS

Transfers of Licences has provided a means for processors to react to changing market and resource circumstances and to respond to emerging opportunities. However, within the context of a simplified set of licensing categories, and the surplus productive capacity in place for all species and regions, it would appear that the justification for transfers, in future, will be highly questionable, if indeed, any justification exists;

10.5 BUYERS LICENCES

It is probable that Buyers Licences were needed in the past when transportation and communications infrastructure prevented individual processing firms from accessing all areas of the Province. This is no longer the case and the requirement for Buyers Licences for firms, other than those dealing directly with fisherpersons (primary Processors) may no longer exist. Provision of Buyers Licences to Primary Processing firms only would eliminate much of the apprehension by processors surrounding the issuances of processing licences for Secondary Processing and Retail Licences.

10.6 RETAIL LICENCES

These licences were issued for circumstances where fish products are destined for domestic consumption. Industry concern is focused on the potential evolution of these "mini" plants as feeder plants. By eliminating access to Buyers Licences for this group, the industry suggests that those wishing to produce small quantities for domestic markets could easily arrange their procurement

activity among the many primary processors throughout the Province.

10.7 SECONDARY PROCESSING LICENCES

The comments above respecting Retail Licences also apply. Generally speaking, the industry suggests that there should be no restriction to the number of participants in this activity, provided that procurement of raw material is conducted through a licensed primary processor. It may be necessary to establish guidelines for primary processors requiring that access to Raw material will not be unreasonably withheld from Secondary and/or Retail Licence operators.

10.8 REQUIREMENTS FOR INDEPENDENT FISH LICENSING AGENCY

The Tripartite Fish Processing Committee has explored the desirability of establishing an independent agency to administer the regulation of the fish processing sector. The primary advantage of an independent agency is perceived to be the elimination of political influence in decisions as to licence applications for establishing, expanding or diversifying operations. The issue is one of attempting to ensure that the decision maker (Minister of Fisheries) is not subject to political pressures. Clearly, it will always be difficult for politicians to be seen to be unresponsive to their constituents. The use of separate Boards or Agencies to perform regulatory functions is prevalent in many areas of public administration. Within the Province of Newfoundland, matters such as hydroelectricity and trucking rates, licensing of liquor establishments and welfare institutions as well as fire and life safety are subject to licensing decisions by autonomous administrative and legislative bodies. The motivation is to remove the potential for the perception of political influence. Political leaders have relinquished authority for regulatory functions, in many cases, because, irrespective of their sincerity and integrity in adhering to established and accepted policies, those dissatisfied with decisions, invariably allege political interference. For

decisions, invariably allege political interference. For politicians in these circumstances, (i.e "dammed if you do and dammed if you don't"), the logical choice is to let others do it.

Another key feature and highly desirable result of using independent licensing agencies is that the process is open to public scrutiny.

It is instructive to note that the Federal Department of Fisheries and Oceans has already announced its intention to reform its licensing and allocations systems. The November, 1991 Proposal for Reforming Licensing and Allocation Systems puts forward an outline of the rationale for a separate licensing authority and briefly explains how the system would work. The key tenet is that the Minister of Fisheries and Oceans continues to provide the broad policy framework and retains "responsibility for assuring the conservation of the resource". In this sense, the Minister "continues to set annual harvest levels and establishes management measures required to meet conservation goals". The new Regional Fisheries Management Agencies would be responsible for all licensing and allocation decisions, subject to Ministerial policy direction.

Given the sensitivity of fish processing in the Province of Newfoundland and its implications for community and regional employment, there would seem to be, at least as compelling an argument for establishing a separate processing licensing agency as there is for federal licensing of harvesting activities. Aside from the separate jurisdictional responsibilities of the federal and provincial governments in these activities, (including the division of the Province into separate Federal management regions), there may be significant benefits to be realized by closely co-ordinating harvesting and processing licensing functions. Since a primary policy objective is to match processing capacity to available resources, it is highly desirable, if not essential, that these regulatory functions be integrated in some way.

In the absence of Federal-Provincial fisheries joint management, it appears that the Province should consider instituting its own Independent Licensing Authority for processing sector regulations. It is envisaged that such a Licensing Agency would be responsible for approving the renewal and issuance of all processing licences on an annual basis, subject to broad policy direction from the Minister of Fisheries. This direction would relate to such matters as the categories of licences, policies on capacity expansion by species and region, and fee structures. Within this broad framework, the Licensing Agency would consider specific applications for renewals, expansions, transfers, and so on.

Membership on this Agency might best be comprised of individuals knowledgeable about the processing sector of the fishing industry, but having no vested interest or perceived conflict, as well as business and community leaders. The secretariat functions could be handled by officials of the Department of Fisheries who would be responsible for bringing forward applications for consideration and providing analytical support services. This would serve to ensure a linkage between the Department in its enforcement and analytical functions and the licensing decisions of the Independent Agency; also, administrative costs could be kept to a minimum through this process.

A further consideration with respect to Independent Licensing Agencies is that Autonomous Crown corporations are now used by both orders of government to administer financial assistance programs to industry generally. Enterprise Newfoundland and Labrador and the Atlantic Canada Opportunities Agency exist as independent organizations, at least in part, to ensure that political interference is neither practised, nor perceived. In this sense, it must be acknowledged that, if it is desirable to provide autonomy for public sector developmental support, it is equally desirable and valid to provide autonomy for public sector regulatory support.

10.9 CAPACITY CONTROL MECHANISMS

Up to the present, government regulators and industry analysts have identified freezing capacity as the primary mechanism for measuring and monitoring the industry's processing capacity. While it is theoretically possible to precisely measure freezing capacity, the practical application of this measurement device has been problematic.

A key difficulty arises with respect to use of various freezing technologies and establishing equivalent capacities among such things as blast vs. plate vs. tunnel freezers, especially when the volume to be frozen, within a fixed period, largely depends on the species being frozen and its product form. Additionally, processors would like to have the capacity to utilize these various technologies at different times without restricting their overall production limits; however, this would provide each operator with the opportunity to process larger volumes, thus negating the use of freezing capacity as the control mechanism.

Technological innovation also plays a part in freezing capacity as new materials and equipment are developed and introduced. Carbon Dioxide and Cryogenic freezers are examples of recent developments which impact on freezing throughput capacities. Clearly, government does not wish to restrict technological innovation in its application of regulatory control.

Beyond the challenges of appropriately monitoring freezing capacity, one of the chief impediments to the use of this means of capacity control is that it obviously does not apply to saltfish production. The limiting factor in salt fish production is primarily physical space. Again, however, it is very difficult to restrict the space used by processing firms. For saltbulk production, tractor trailer units and fisherperson's premises (sheds) can serve as plant extensions on a temporary basis. Forcing processors to avoid bringing their production of saltfish into their own premises where all activities are subject to

government quality inspection procedures is clearly undesirable. As a consequence, the issue of controlling saltfish production from a regulatory perspective remains challenging.

A clear definition of industry capacity and a practical means of monitoring and enforcing capacity is a fundamental prerequisite to achieving an effective regulatory regime. That this has not been achieved in the past (Reference Chapter 2) likely reflects either, a lack of political will to regulate, or an inability to find a technically sound and equitable means of capacity measurement and control. It is difficult to conclude that the latter case applies. Other dynamic industrial sectors have been and are now regulated such as utilities, transportation, communications, insurance, banking, stock markets, etc. No doubt, each of these sectors present challenges with respect to standardization of services, measurement systems, monitoring and enforcement. An alternate means of regulating the capacity of the fishing industry was considered by the Committee and is discussed in the next section. However, this should not be interpreted to imply that the Committee has discounted the rehabilitation of the existing regime of monitoring and controlling productive capacity.

As a final point, it is noted that there are not likely to be any expansionary moves made by industry over the next year or two, during which time governments and industry can collaborate to finalize a regulatory regime that will fully respond to the technical and socio-economic challenges of regulating an industry where the cumulative consequences of its well being are of far greater social and economic import than the mere value of its production.

10.9.1 PRODUCTION QUOTAS

The Committee has discussed the merits of addressing the regulatory challenge of capacity control by focusing on the volume of raw material each processor would be authorized to process rather than the physical plant and equipment within the operation.

Conceptually, this idea is analogous to the use of Enterprise Allocation and Individual Transferable Quotas mechanisms to control capacity in the harvesting sector. Many of the same considerations apply where it becomes very difficult to physically measure, monitor and control productive capacity within a highly competitive group of innovative entrepreneurs.

In the case of the processing sector, past production (ie. performance) could be used to establish the initial share each plant would be authorized to process. This amount could be adjusted proportionately to changes in resource availability such that a balance could eventually be struck between productive capacity and resource availability.

Obviously, this approach would represent a major departure in the way the processing sector is now regulated. The application of these principles to the harvesting sector have proven manageable and the results, in terms of capacity reductions, have proven successful, in most cases.

Clear advantages to the use of Production Quotas would be:

- governments would not be required to regulate and control technology and innovation;
- financial incentives aimed at improved quality, productivity and diversification activities would not have any potential for contributing to excess capacity;
- production monitoring systems already in place could be used to furnish the information base needed to implement this system; therefore, there would be no additional costs to be incurred by government or industry.

Given the apparent usefulness and appropriateness of Production Quota systems to the challenges of processing sector capacity control, it is evident that the practical merits of this concept should be further evaluated and considered by governments and industry.

11.0 SUMMARY OF FINDINGS

1. Overcapacity in the fish processing sector dates back to the mid-seventies when foreign overfishing reduced most groundfish stocks to the brink of total collapse.
2. The number of licensed fish processing establishments doubled during the early seventies from 56 in 1970 to 109 in 1974, primarily through publicly supported conversions of feeder plants to freezer plants. In 1975, the Province decided against issuing new processing licences, if sufficient capacity existed in any given region to handle available landings.
3. Implementation of the 200 mile economic zone in 1977 generated renewed optimism and enthusiasm. Major policy and planning initiatives by the Province of Newfoundland and the Federal Department of Fisheries and Oceans analyzed the opportunities likely to emerge from the displacement of foreign fishing effort and the recovery of key groundfish stocks. These planning documents explicitly acknowledged that adequate processing capacity was in place in the late seventies to handle the very optimistic forecasts of stock recovery through to 1985.
4. Despite the 1975 restriction on new entrants to the processing sector and the acknowledgements that adequate processing capacity was in place to handle projected future landings, the number of licensed processing establishments again doubled from 109 plants in 1975 to 220 plants in 1981, 167 of which were groundfish plants. Many of these new plants were established to process pelagic species; however, over time, a number of these plants were approved by the Province to process groundfish.

5. The Province imposed a freeze on the licensing of all additional processing capacity in 1981 and announced its intention "to closely regulate all expansions of existing plants". There is little evidence to suggest that plant expansions have been monitored. A survey by the Department of Fisheries and Oceans found that: "in the 4 year period 1983-87, we have estimated that freezing capacity for groundfish increased by over 40 percent and by almost 100 percent for pelagics." Despite a strengthening of the regulatory system for enforcing limitations on plant expansions in 1987, there has never been any fines or convictions imposed with respect to processors who have expanded without receiving licensing authority.
6. All key groundfish stocks are experiencing declines in stock abundance and availability. 1991 catches of 2J3KL Turbot are only 28 percent of 1981 levels. Cod catches in 4RS,3Pn in 1991 were 34 percent of 1981 levels. Prior to the imposition of the Northern Cod Moratorium, 1991 catches for this stock had dropped to sixty-four percent of 1986 levels and eighty-four percent of 1981 levels. The implications for the processing sector are that the unwarranted and uncontrolled capacity expansions of the past fifteen years, combined with reduced resource prospects, have produced an industry where most of its productive capacity is redundant.
7. Both orders of government have similar policy objectives for the processing sector. Governments desire a stable, competitive industry with minimal requirements for public sector support. There is strong agreement on the need to diversify product forms and species production, improve processing yields and expand by-catch/by-product utilization.
8. Reasons for expansion and/or maintenance of surplus capacity on the part of plant owners and operators include:

Common Property - In a industry environment characterized by excessive capacity and low or negative returns, each processor reasons that the only way to survive is to capture a larger share of the limited resource; this behaviour mirrors that of fishermen exploiting a "common property" resource base.

Lack of Alternatives - Owners of most processing firms have long standing ties to the fishery and to rural Newfoundland. Opportunities to sell one's interest in a processing business often do not exist. Owner-operators continue efforts to develop their businesses, in part, because no better alternatives appears to exist in their community/region.

Government Support Programs - Financial support to fisherpersons and plant workers, through the U.I. Program, frequently act as disincentives to fully avail of opportunities to extend employment beyond the minimum number of "qualifying" weeks. Nevertheless, many processing establishments would have great difficulty operating if these benefits were not available to their suppliers (fisherpersons) and work force (plant workers). Historically, industrial incentives through programs such as DREE, DRIE and most recently, ACOA have been instrumental in financing industry expansion. Other public sector financial support programs, as are available through E.N.L. and F.B.D.B., provide term financing not normally available through private sector commercial lenders.

Inshore Cod "Gluts" - Along the Northeast Coast in particular, processors have targeted their capacity growth to meet the historic peak landings in their bay or community. Consequently, every region and bay is equipped to handle the three-four week interval of trap

landings, even though it is known that these peaks will not occur in every region in any given year.

Entrepreneurial Optimism - Given the first sign or glimmer of hope, the entrepreneurial spirit of the processing sector causes new investment and expansion within the industry.

9. Improved transportation infrastructure, a more mobile inshore fleet and, to some extent, the movement of processing equipment from region to region collectively have had the effect of negating the need, or perceived need, to have the capacity to handle peak "glut" periods in every region.
10. Throughout the 1988-1990 period, the inshore processing sector averaged only a 17.4 percent utilization level, where capacity was defined as twenty weeks production at six days and two shifts per day. The offshore sector, by comparison, would have achieved a fifty percent utilization rate, assuming a forty week production schedule and removing the capacity of the three offshore plants closed in 1990. To achieve industry stability and reasonable levels of profitability, the industry's productive capacity must be more fully utilized. This, in turn, will lead to gains in raw material quality, labour productivity, better cost controls and increased product development and diversification activities.
11. The actual level of capacity utilization needed to achieve viability will vary from plant to plant, even with a standardized definition of viability. Based on an industry survey by the Provincial Department of Fisheries, together with information presented in other industry studies and assessments, the requisite level of capacity utilization needed to attain viability in an inshore processing plant is believed to be about thirty-five percent (equivalent to 13 weeks production, 5 days per week and 1 shift per day). The offshore sector, however, has a much different cost structure

and requires a capacity utilization level of sixty-five percent over 40 weeks to be viable.

12. To achieve stability and viability through attainment of a thirty-five percent level of capacity utilization, it will be necessary to remove about fifty-four percent of the present inshore capacity. The reduction required in NAFO area 3Ps is negligible, whereas reduction requirements in Areas 2J,3K and 3L are very significant at 44, 69 and 57 percent respectively. Reduction requirements on the West Coast are also high with 62 percent of the processing sector's capacity surplus to projected future requirements.
13. Inshore groundfish landings are influenced by seasonal peaks, arising from the inshore trap fishery. To ensure that adequate capacity remains in place to handle these seasonal peaks on an ongoing basis, and to provide a cushion for higher growth than anticipated, it may be prudent to remove no more than forty percent of industry's processing capacity at this time.
14. Rationalization of the Processing Sector is absolutely essential if a self sustaining, viable industry is to be realized. All members of the Tripartite Committee concur with the need to significantly reduce industry capacity.
15. A downsized industry would be much easier to accommodate in terms of designing appropriate long term, income stabilization schemes that would not contain the disincentives to extending work periods which are a hallmark of the present UI Program.
16. The Status Quo Option is unlikely to result in substantial reduction in processing capacity at least, over the short to medium term. The fish processing industry has not availed of "term" financing, largely because the commercial banks have not provided capital financing to the industry. Financing provided by commercial banks to the fish processing sector is

usually available only to the industry's most credit worthy participants, oftentimes carrying government guarantees and, when offered for working capital, the level of margin coverage provided is usually no more than fifty percent. Historically, the inshore processing sector has not been viewed as "a place to lend money" by the commercial banking sector. Public Sector financial organizations such as E.N.L. and F.B.D.B. have provided some term financing; however, the total amount is not significant, likely, less than \$15.0 million for the entire industry, Province wide.

Foreclosure on delinquent accounts is not being contemplated by either public or private sector lenders. Virtually no "market" exists for the physical assets of fish processing firms. Receivership costs, including maintenance, security and other fixed overheads, would undoubtedly outstrip any benefits that might be achieved.

The likelihood is that processing firms, having expended all cash reserves, will proceed to a hibernation phase and re-emerge as resource is available. Funding to resume operations is unlikely to come from the banking community; however, there is evidence to suggest that fish marketing firms will provide "start up" funding as a means of securing supply.

17. A Non-Interventionist Strategy could prove damaging to all industry participants, particularly the more viable firms, as the resource recovers and buying practices neither follow the dictates of economics or those of quality requirements. Development initiatives related to quality, productivity and underutilized and value added product development will not be fully realized until the industry has been stabilized.
18. The present mix of industry debt and equity indicates that natural market, resource and financial forces are unlikely to effect any meaningful reduction in the number of processing plants over the short to medium term (3-5 years).

19. Options for effecting a reduction in processing capacity include:

A. Intervention

This would see some form of joint industry-government intervention in the industry aimed at effecting the selective removal of surplus capacity by providing monetary inducements to processors who would agree to permanently relinquish their licences.

B. Status-Quo

This effectively reflects a non-intervention approach where government would react to each plant closure on an individual basis and, generally speaking, attempt to accommodate those processors experiencing difficulties in continuing their operations.

C. Modified "Status Quo"

Under this approach, Government would simultaneously eliminate all flexibility respecting licensing and seriously restrict access to financial support programs.

D. Deregulation

This would represent a fundamental shift in thinking whereby any individual could establish, expand consolidate or close processing establishments without any form of regulatory restriction.

E. Deferment

Recognizing that there is great uncertainty at present with respect to future resource prospects, Governments could "wait and see" the unfolding of events over the next couple of years prior to arriving at a strategic policy decision.

20. The Canadian Bankers Association advise that the fish processing industry can anticipate increased difficulty obtaining working capital financing in the present industry environment, assuming that no actions are taken to improve the overall viability of the industry or otherwise reduce the unacceptably high risk now associated with the fish processing sector. Similarly, for the longer term, the industry can anticipate difficulty in obtaining all forms of financing, absent some means of placing the industry on a sound footing with reasonable prospects for stability and viability.
21. Public Sector benefits of restructuring the processing sector could be very significant as the industry stabilizes, becomes less reliant on public sector support, and generates improved incomes and profits. The principal cost item for the public sector relates to the loss of employment. Assuming a forty percent reduction in capacity and a corresponding employment loss, approximately 6-7,200 individuals (40% x 15-18,000) could be displaced. This level of displacement will be realized, at some point in time, irrespective of the response to this crisis by industry and government.
22. Some of the negative impact of employment reductions could be mitigated by the Plant Workers Adjustment Program or the Older Workers Adjustment Program. There are approximately 2,000 plant workers in the 55-65 age group who could be eligible for an early retirement program. Others can avail of retraining and relocation programs.
23. Industry Benefits attainable from removal of forty percent of present industry capacity are estimated to be in the \$25-35 million range, depending on how fixed overheads are reallocated among remaining processing plants. At this level of benefit, the industry would be profitable overall, although individual firms may still experience losses.

24. It is important to consider the requirements for financial support to the industry in the context of the regulatory regime. It may be the case that restricting or eliminating public sector development programs could bring the worst possible result where overcapacity or inappropriate capacity is maintained and desirable development initiatives are not pursued.
25. Approximately twenty percent of the licensed processing establishments are owned by government and other public sector groups. As there seems to be no public policy objective being served by this phenomena, it would be desirable to privatize or decommission these facilities.
26. The Committee's consideration of future public sector financial assistance to the processing sector resulted in a list of possible guidelines aimed at placing tight restrictions on access to government programs so as to ensure that financial assistance is directed toward development initiatives and cannot be used to create or maintain surplus capacity. These guidelines would prevent use of public funds for operating subsidies and limit development assistance to interest buy down and tax credit mechanisms. In addition, it is critically important that financial assistance not be provided to community development groups, to assist their participation in fish processing.
27. A preferable alternative to subsidization of industry overheads may be the concept of public sector financing support toward the purchase of "offshore" sources of groundfish, such as Barents Sea Cod, for processing and marketing by those processing firms choosing to remain in the downsized fishing industry of the future. This could generate the funds needed to offset fixed overheads, maintain human and capital resources and offset the risk of losing long established markets by maintaining continuity of supply.

28. An Independent Licensing Agency would serve to eliminate the perception of political interference in the regulation of the fish processing sector and to remove the political pressure arising from the efforts of community groups and individuals to generate local employment benefits. The Minister's role would be to provide broad policy direction on licensing matters to the Independent Agency for implementation.

29. A simplified Licensing structure should be considered which would maintain restrictions on entry and capacity of all primary production plants. Buyers Licences would be available only to primary producers. Secondary Licences could remain unrestricted, provided that close monitoring is in place to ensure full compliance with licence authorizations. Certain measures may be needed to ensure that secondary operations are provided with adequate and reasonable access to raw material through primary producers as holders of Buyers Licences.

30. One of the shortcomings of the present method of regulating processing capacity is the difficulty of measuring and monitoring freezing capacity, especially given technological changes in this field and the inapplicability of this measurement to saltfish production. One alternative may be Production Quotas which would be administered similarly to Enterprise Allocations. This alternative should be further evaluated and other options explored with a view of finalizing a new monitoring and enforcement regime over the next year or so.

APPENDIX " A "

PROCESSING SECTOR CAPACITY UTILIZATION
LEVELS - LINK STUDY - 1987

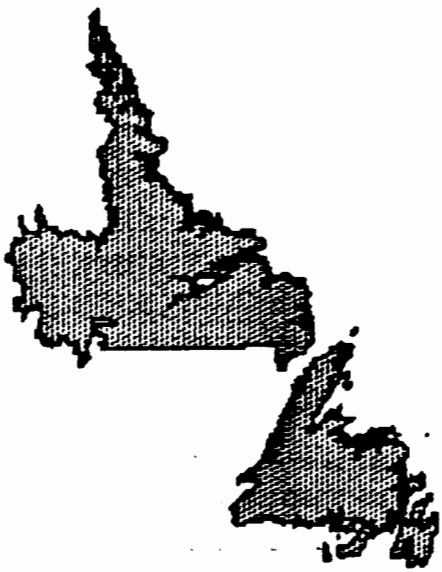
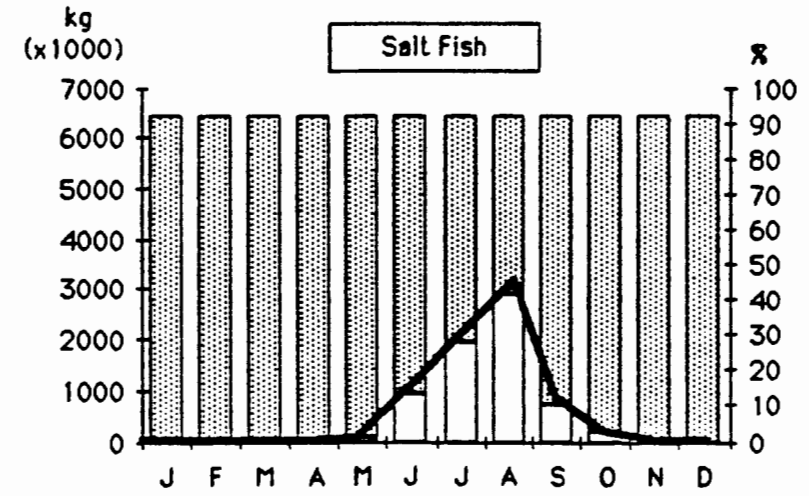
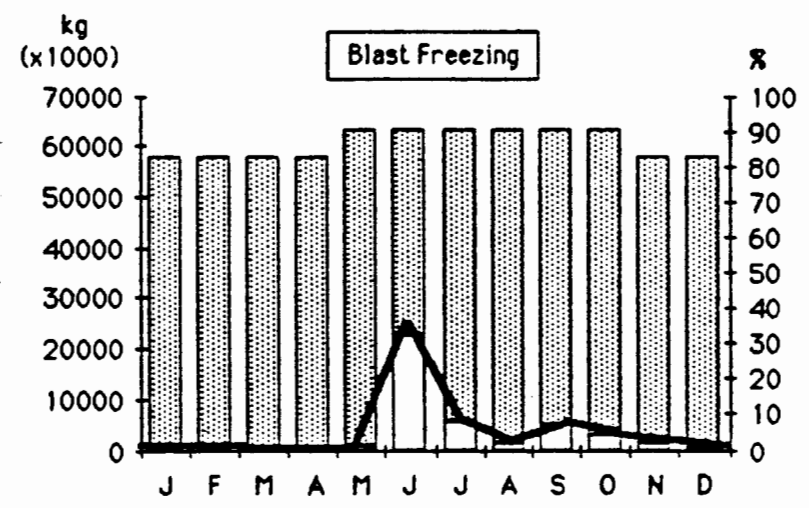
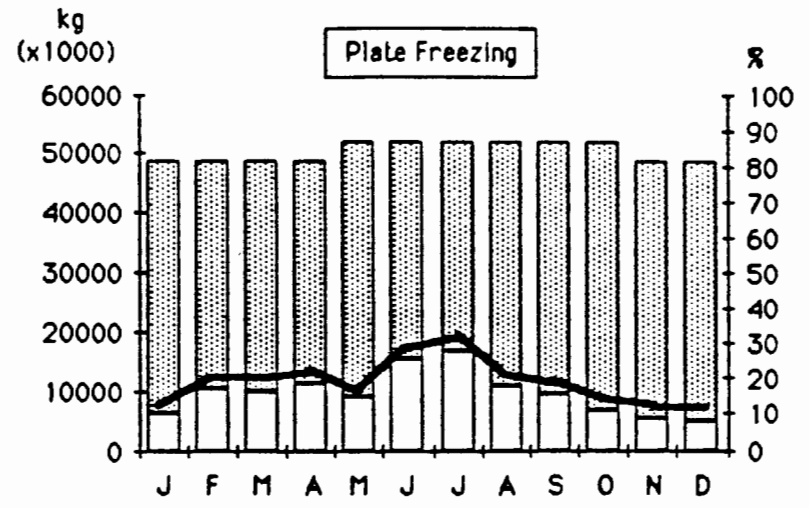
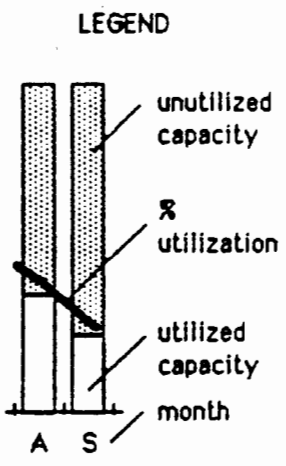


Figure 6
Capacity Utilization for
1986
Newfoundland & Labrador



Data Source : Dept. of Fisheries and Oceans

TABLE 1
 PLATE- FREEZING CAPACITY UTILIZATION
 PEAK MONTH - 1986

* AREA	PEAK MONTH	FREEZING CAPACITY (000 Kg.)	PLATE PRODUCTION (000 Kg.)	UTILIZATION RATE %
1	July	3 261	1 392	43
2	July	2 839	1 179	42
3	July	2 353	899	38
4	February	5 664	2 549	45
5	June	9 912	3 240	33
6	June	6 152	1 915	31
7	June	2 723	1 129	42
8	July	2 739	787	29
9	April	6 608	2 718	41
10	April	3 893	2 019	52
11	March	3 974	1 172	30
12		0	0	-
13	July	2 942	2 573	88
**14	July	N/A	N/A	80
**15	September	N/A	N/A	80
16		0	0	
PROVINCE		53 060	21 572	41

* See Figure 2
 ** Data unavailable due to confidentiality requirements.

TABLE 2
BLAST- FREEZING CAPACITY UTILIZATION
PEAK MONTH - 1986

* AREA	PEAK MONTH	MONTHLY PLATE FREEZING CAPACITY (000 Kg.)	PLATE PRODUCTION (000 Kg.)	UTILIZATION RATE %
1	June	10 771	2 229	21
2	June	2 507	1 143	46
3	June	6 162	2 504	41
4	June	3 870	1 251	32
5	June	19 161	8 405	44
6	June	7 012	2 389	34
7	June	2 920	987	34
8	June	3 878	1 405	36
9	June	2 434	294	12
10	June	957	167	18
11	June	1 581	174	11
12	June	2 365	1 372	58
13	June	2 135	422	20
14		0	0	-
15		0	0	-
**16	July	N/A	N/A	39
PROVINCE		65 753	22 742	35

* See Figure 2

** Data unavailable due to confidentiality requirements.

APPENDIX " B "

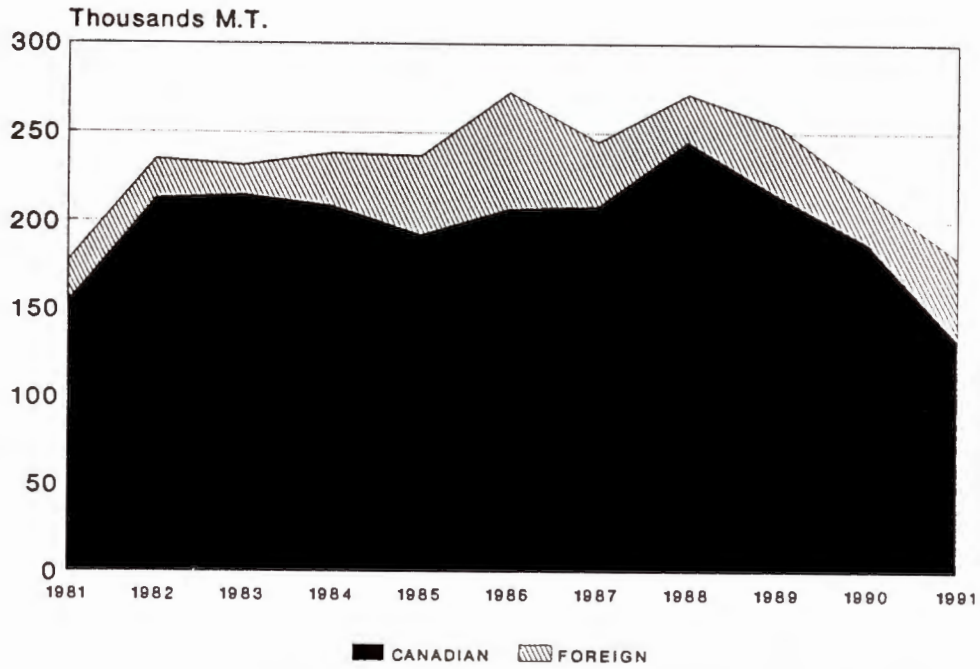
**PROCESSING SECTOR CAPACITY UTILIZATION
LEVELS BY STATISTICAL AREA AND IMPACT
OF CAPACITY REDUCTIONS BASED ON
AVERAGE PRODUCTION LEVELS 1988 - 90
PROVINCIAL FISHERIES**

AREA	Annual Capacity (Mt) Inshore	Average Prod 88-90	Average Util. Rate 88-90	Absolute Reduction to = 30%	Reduction AS A %	Absolute Reduction to = 35%	Reduction AS A %	Absolute Reduction to = 40%	Reduction AS A %
(A)*	31,344	8,721	27.82%	2,275	7.26%	6,428	20.51%	9,542	30.44%
B	32,332	6,833	21.13%	9,555	29.55%	12,809	39.62%	15,249	47.17%
3K**	63,676	15,554	24.43%	11,830	18.58%	19,237	30.21%	24,792	38.93%
C	22,183	5,796	26.13%	2,862	12.90%	5,622	25.34%	7,692	34.68%
D	27,572	5,705	20.69%	8,555	31.03%	11,272	40.88%	13,309	48.27%
E	29,368	6,922	23.57%	6,296	21.44%	9,592	32.66%	12,064	41.08%
F	32,961	7,896	23.96%	6,639	20.14%	10,400	31.55%	13,220	40.11%
G	11,819	1,643	13.90%	6,342	53.66%	7,125	60.28%	7,712	65.25%
3L	123,904	27,963	22.57%	30,695	24.77%	44,010	35.52%	53,997	43.58%
H	18,753	10,068	53.69%	(14,807)	-78.96%	(10,013)	-53.39%	(6,417)	-34.22%
I	1,617	360	22.26%	417	25.78%	588	36.39%	717	44.34%
J	1,796	1,475	82.13%	(3,121)	-173.76%	(2,419)	-134.65%	(1,892)	-105.32%
3PS	22,165	11,903	53.70%	(17,511)	-79.00%	(11,843)	-53.43%	(7,592)	-34.25%
J	17,280	3,785	21.90%	4,664	26.99%	6,467	37.42%	7,818	45.25%
3PN	17,280	3,785	21.90%	4,664	26.99%	6,467	37.42%	7,818	45.25%
(A)	4,778	0	0.00%	4,778	100.00%	4,778	100.00%	4,778	100.00%
K	5,928	114	1.93%	5,547	93.58%	5,601	94.49%	5,642	95.18%
L	7,005	95	1.35%	6,690	95.50%	6,735	96.14%	6,769	96.62%
M	8,891	168	1.89%	8,330	93.69%	8,410	94.59%	8,470	95.26%
N	21,213	2,685	12.66%	12,263	57.81%	13,542	63.84%	14,501	68.36%
O	6,017	858	14.26%	3,158	52.48%	3,566	59.27%	3,873	64.36%
4R	53,833	3,920	7.28%	40,766	75.73%	42,632	79.19%	44,032	81.79%
O	18,771	2,466	13.14%	10,550	56.20%	11,724	62.46%	12,605	67.15%
P	3,072	240	7.83%	2,270	73.90%	2,385	77.63%	2,471	80.43%
2J	21,843	2,707	12.39%	12,821	58.69%	14,110	64.60%	15,076	69.02%
TOTAL	302,700	65,831	21.75%	83,264	27.51%	114,612	37.86%	138,123	45.63%

APPENDIX " C "

GROUND FISH QUOTA/CATCH LEVELS
(BY REGION AND YEAR)
PROVINCIAL FISHERIES

CATCHES FOR 2J,3KL COD



	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992*	1993*
Allocations - TAC	200,000	237,000	260,000	266,000	266,000	266,000	266,000	266,000	235,000	199,262	180,000	120,000	10,000

Foreign/NAFO Quota	10,000	16,700	20,000	20,000	16,300	16,300	9,600		2,960	2,262	2,140	1,988	
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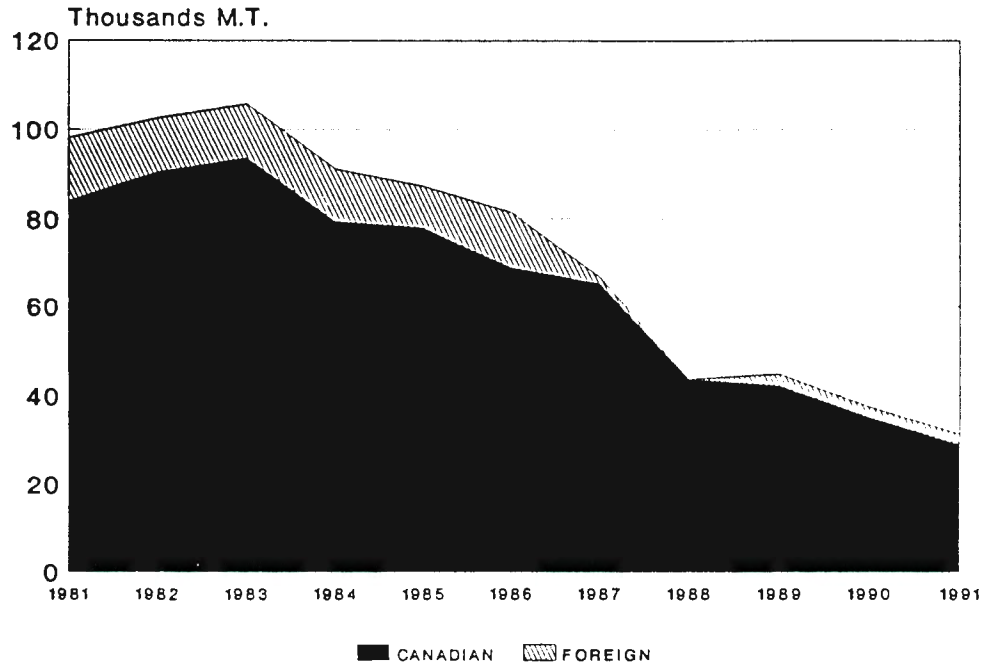
Canadian Quota:													
fg <65'	120,000	115,000	115,000	115,000	115,000	115,000	115,000	115,000	115,000	115,000	115,000	70,789	
mg <65'		5,000	5,000	5,000	5,000	5,000	5,000	5,000	3,975			2,623	
fg 65-100'	2,500	1,000	3,000	3,000	3,000	3,000	3,000	4,180	3,320	2,545	783	1,474	
mg 65-100'		1,500	1,000	1,000	1,000	1,000	1,000	1,000	785	610	232	353	
vessels >100'	67,500	98,800	106,000	112,000	115,700	121,500	112,150	121,200	96,320	73,845	71,845	42,763	
RSPP			10,000	10,000	10,000	10,000	8,300	15,350	12,200	5,000			
fg >100'(MD)						1,200	1,050	4,270	3,380				
Total Canadian Quota	180,000	221,300	240,000	246,000	249,700	266,700	246,600	266,000	235,000	187,000	187,860	118,002	

Canadian Catch:													Jul. 8/92
fg <65'	77,277	112,144	105,319	85,876	78,941	71,351	78,175	88,032	85,000	111,539	74,053	16	
mg <65'	185	362	1,451	3,711	2,380	4,823	4,208	4,028	3,993				
fg 65-100'	705	765	1,109	2,018	779	1,090	3,576	3,455	3,231	2,321	771	80	
mg 65-100'	30		4	124	374	266	378	498	306	291	227	163	
vessels >100'	75,965	99,261	106,910	89,949	101,551	120,551	112,046	120,748	87,324	69,144	57,828	14,133	
RSPP				6,965	8,803	8,570	9,235	14,247	12,180	4,943			
fg >100'(MD)						511	1,237	4,071	3,284			13	
Total Canadian Catch	154,162	212,532	214,793	208,743	182,828	207,162	208,857	245,081	215,318	188,238	132,980	14,405	

Foreign/NAFO Catch	23,677	22,122	16,552	29,562	44,199	65,752	36,075	26,807	38,798	27,832	47,000		
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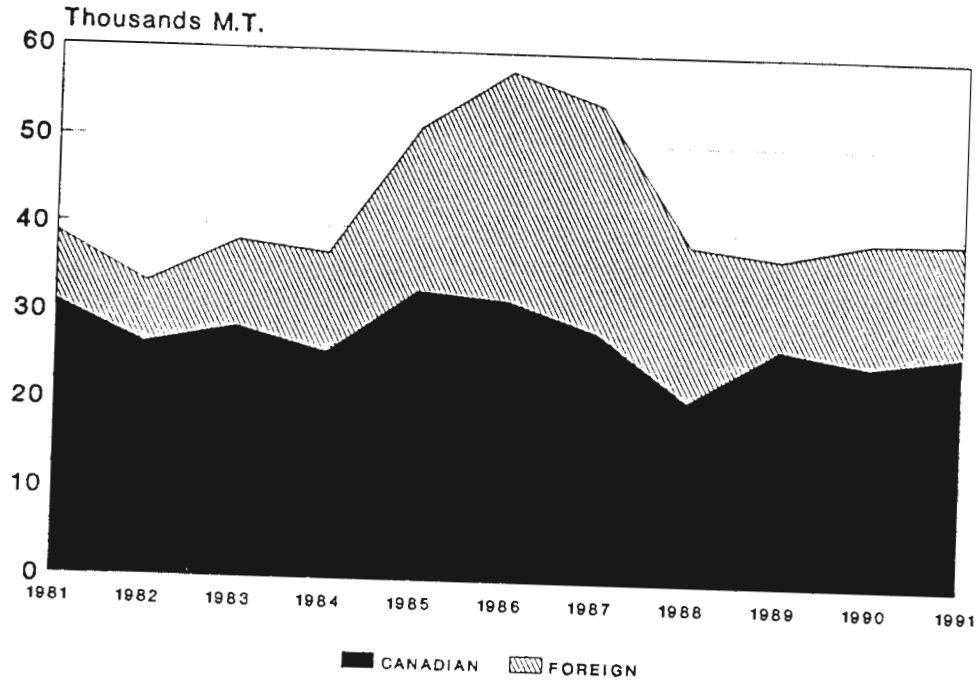
Total Catch	177,839	234,654	231,345	238,305	237,027	272,914	244,932	271,888	254,117	216,070	179,980	14,405	
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CATCHES FOR 4RS,3Pn COD



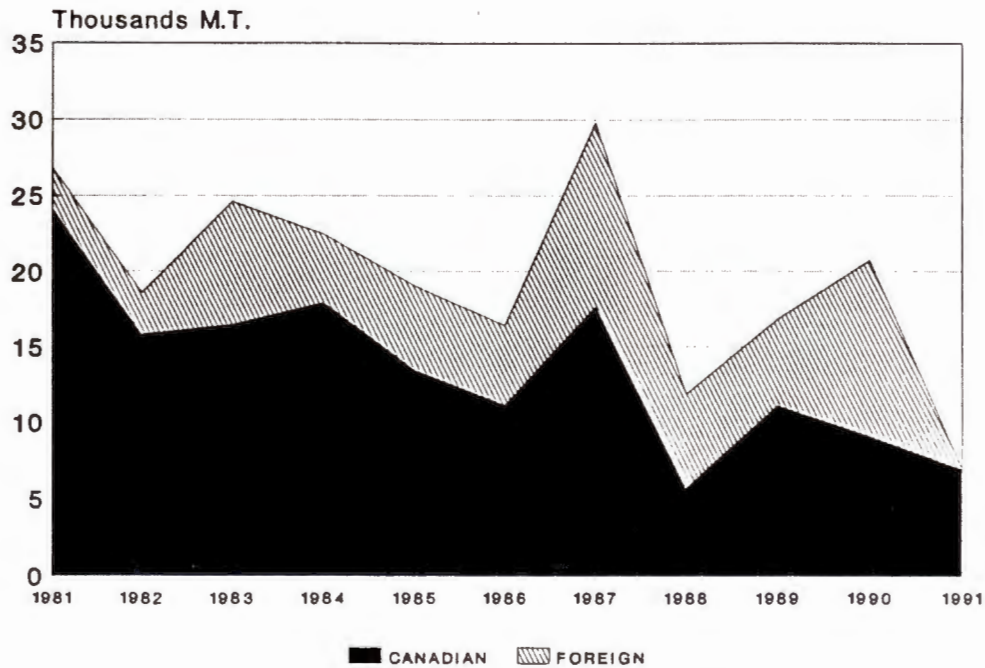
	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	
Allocations - TAC	75,000	83,000	100,000	100,000	100,000	82,100	80,300	73,900	76,540	58,000	36,000	36,000	
Foreign/NAFO Quota	13,500	13,500	13,500	13,500	13,500	13,500	2,300		2,640	2,640	2,400	2,400	
Canadian Quota:													
fg <65'	28,000	37,700	40,500	40,500	40,500	37,000	36,700	34,760	34,620	25,840	12,507	12,257	
mg <65'	25,500	33,600	36,500	36,500	36,500	33,000	32,750	30,980	31,165	23,390	16,101	16,851	
mg 65-100'	3,000	2,500	3,500	3,500	3,500	3,200	3,200	3,065	2,601	1,830	1,218	1,218	
vessels >100'	5,000	6,000	6,000	6,000	6,000	5,400	5,350	5,085	5,514	4,200	2,774	2,774	
Danish seiners (4R,3Pn)												500	
Total Canadian Quota	61,500	79,800	86,500	86,500	86,500	78,600	78,000	73,900	73,900	55,360	32,600	32,600	
Canadian Catch:													
fg <65'	44,720	49,130	49,332	38,834	35,700	25,872	24,578	15,882	12,288	7,378	10,286		
mg <65'	32,638	33,065	36,526	33,285	35,649	34,614	32,820	22,868	26,447	22,651	15,447		
mg 65-100'	2,550	2,854	3,097	2,942	3,051	3,691	3,066	1,612	1,368	1,830	800		
vessels >100'	4,003	5,339	4,640	3,342	3,656	4,740	4,685	3,224	2,096	3,240	2,403		
Total Canadian Catch	83,911	90,388	93,595	79,513	78,056	68,917	65,149	43,686	42,199	35,099	28,046		
Foreign/NAFO Catch	14,089	12,160	12,107	11,623	8,185	12,573	1,585		2,581	2,420	2,383		
Total Catch	98,000	102,548	106,702	91,136	87,241	81,490	66,734	43,686	44,790	37,519	31,439		

CATCHES FOR 3Ps COD



	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
Allocations - TAC	30,000	33,000	33,000	33,000	41,000	41,000	41,000	41,000	35,400	35,400	35,400	35,400
Foreign/NAFO Quota	4,700	5,170	5,170	5,170	6,400	6,400	6,400	6,400	5,525	5,525	5,525	5,525
Canadian Quota:												
fg < 65'	21,800	22,380	22,390	22,390	25,510	27,100	27,100	27,100	23,400	23,400	23,400	23,400
mg < 65'	400	500	500	500	1,120	1,700	1,700	1,700	1,470	1,470	1,470	1,470
fg 65-100'		300	300	300	870	700	700	700	600	600	705	600
vessels > 100'	3,100	4,100	4,100	4,100	7,100	5,100	5,100	5,100	4,405	4,405	4,300	4,405
Total Canadian Quota	25,300	27,290	27,290	27,290	34,600	34,600	34,600	34,600	29,875	29,875	29,875	29,875
Canadian Catch:												
fg < 65'	26,710	21,404	23,937	22,894	25,060	25,080	22,084	15,281	22,347	19,919	20,940	
mg < 65'	484	198	202	159	604	1,742	625	416	637	282	754	
fg 65-100'		987	773	131	148	211	721	459	622	602	696	
vessels > 100'	3,882	3,830	3,543	2,634	7,148	4,971	5,084	4,755	3,384	4,441	4,311	
Total Canadian Catch	31,086	26,419	28,455	25,818	32,960	32,004	28,524	20,921	27,000	25,244	26,701	
Foreign/NAFO Catch	7,807	6,964	9,850	11,221	18,508	25,981	25,819	17,670	10,282	14,122	12,815	
Total Catch	38,893	33,383	38,305	37,039	51,468	57,985	54,343	38,591	37,282	39,366	39,516	

CATCHES FOR 2J3KL GREENLAND HALIBUT



	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
Allocations - TAC	55,000	55,000	55,000	55,000	55,000	65,000	65,000	65,000	65,000	32,500	32,500	32,500	32,500

Foreign/NAFO Quota	6,500	6,500	6,500	6,500	6,500	6,800	7,700	6,700	6,700	3,000	3,000	3,000	3,000
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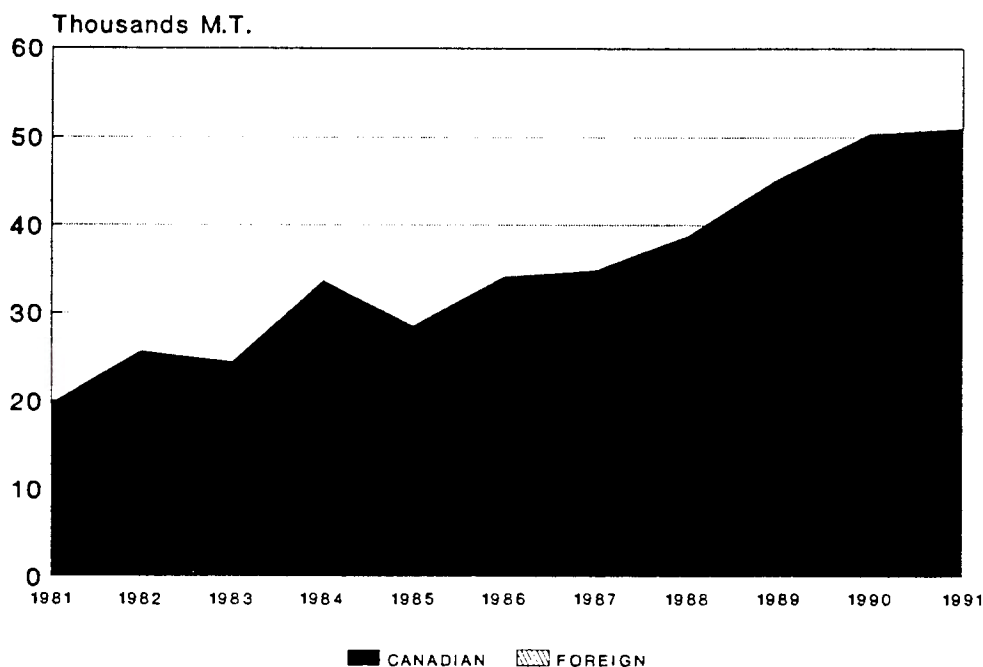
Canadian Quota:														
Developmental*											12,480	12,480	12,480	12,480
fg < 65'	30,000	29,900	29,900	29,400	29,400	37,000	34,000	34,000	34,000	34,000	9,050	9,050	9,050	9,050
mg < 65'		100	100	100	100	1,000	1,000	1,000	1,000	1,000	20	20	20	20
fg 65-100'	2,000	500	500	1,000	1,000	1,500	1,500	1,500	1,500	1,500	1,000	1,000	1,000	1,000
mg 65-100'		100	100	100	100	200	200	200	200	200	20	20	20	20
vessels > 100'		17,900	13,900	13,900	13,900	18,000	16,600	16,600	16,600	16,600	5,000	5,000	5,000	5,000
RSPP			4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	1,650	1,650	1,650	1,650
fg > 100'(IMD)								2,000	2,000	2,000	280	280	280	280
mg	16,500													
Total Canadian Quota	48,500	48,500	48,500	48,500	48,500	61,700	57,300	59,300	59,300	29,500	29,500	29,500	29,500	

Canadian Catch:														
fg < 65'	17,322	9,855	9,609	10,335	7,401	6,010	9,023	4,305	8,811	5,586	2,475			
mg < 65'	9	2	5	2			1		18		255			
fg 65-100'	166	627	418	501	69		594	27	646	108	267			
mg 65-100'									5					
vessels > 100'	6,861	5,322	6,396	4,455	5,978	5,016	3,819	855	865	2,286	2,885			
RSPP				2,615	47	16	4,199		192	443	274			
developmental										686	774			
fg > 100'(IMD)						151		537	605					
Total Canadian Catch	24,158	15,806	16,428	17,908	13,495	11,193	17,636	5,724	11,142	9,109	6,930			

Foreign/NAFO Catch	2,688	2,802	8,184	4,562	5,540	5,195	12,163	6,176	5,656	11,632			
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Total Catch	26,846	18,608	24,612	22,470	19,035	16,388	29,799	11,900	16,798	20,741	6,930		
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CATCHES FOR 4RST REDFISH



	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
Allocations - TAC	20,000	28,000	31,000	50,600	50,600	55,600	50,000	56,000	57,000	57,000	57,000		

Foreign/NAFO Quota	600	600	600	600	600	600							
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Canadian Quota:	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
fg < 65'		700	700	300	300	300	300	500	500	500	500	500	500
mg < 65'		3,900	4,200						2,800	4,300	8,000	8,000	8,000
fg 65-100'													
mg 65-100'		8,900	8,600						11,400	2,331	2,628	3,831	3,831
vessels > 100'	10,400	13,800	17,900	37,600	37,500	42,600	37,500	37,500	34,600	43,668	42,072	40,668	40,668
RSPP								6,000	6,000	4,500	2,800	3,000	3,000
fg > 100'(MD)													
mg < 100'	8,000			12,200	12,200	12,200	12,200	12,000	1,800	1,800			
Total Canadian Quota	18,400	27,400	32,400	50,000	50,000	55,000	50,000	56,000	57,000	57,000	57,000	57,000	57,000

Canadian Catch:	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993
fg < 65'		89	193	126	66	89	391	296	296	217	238		
mg < 65'			1,238					1,893	4,628	8,704	7,720		
fg 65-100'													
mg 65-100'			6,916					3,107	901	85	1,236		
vessels > 100'	10,485	15,877	16,180	24,727	23,297	28,753	28,926	32,366	36,898	37,840	38,131		
RSPP									1,580	2,686	2,622		
fg > 100'(MD)													
mg < 100'				8778	5277	5226	5501	991	922	792			
vessels < 100'	8217	8696						67					
Total Canadian Catch	18,702	25,662	24,526	33,632	28,642	34,078	34,818	38,709	45,226	50,324	50,847		

Foreign/NAFO Catch	10	21		7	2	14	7		20	2	28		
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Total Catch	18,712	25,683	24,526	33,639	28,642	34,092	34,825	38,709	45,246	50,326	50,875		
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APPENDIX " D "

LEVEL OF U.I. PROGRAM DEPENDENCY
CANADA EMPLOYMENT AND IMMGRATION

- Main CEC
- Branch CEC

C.E.C. AREAS 1992

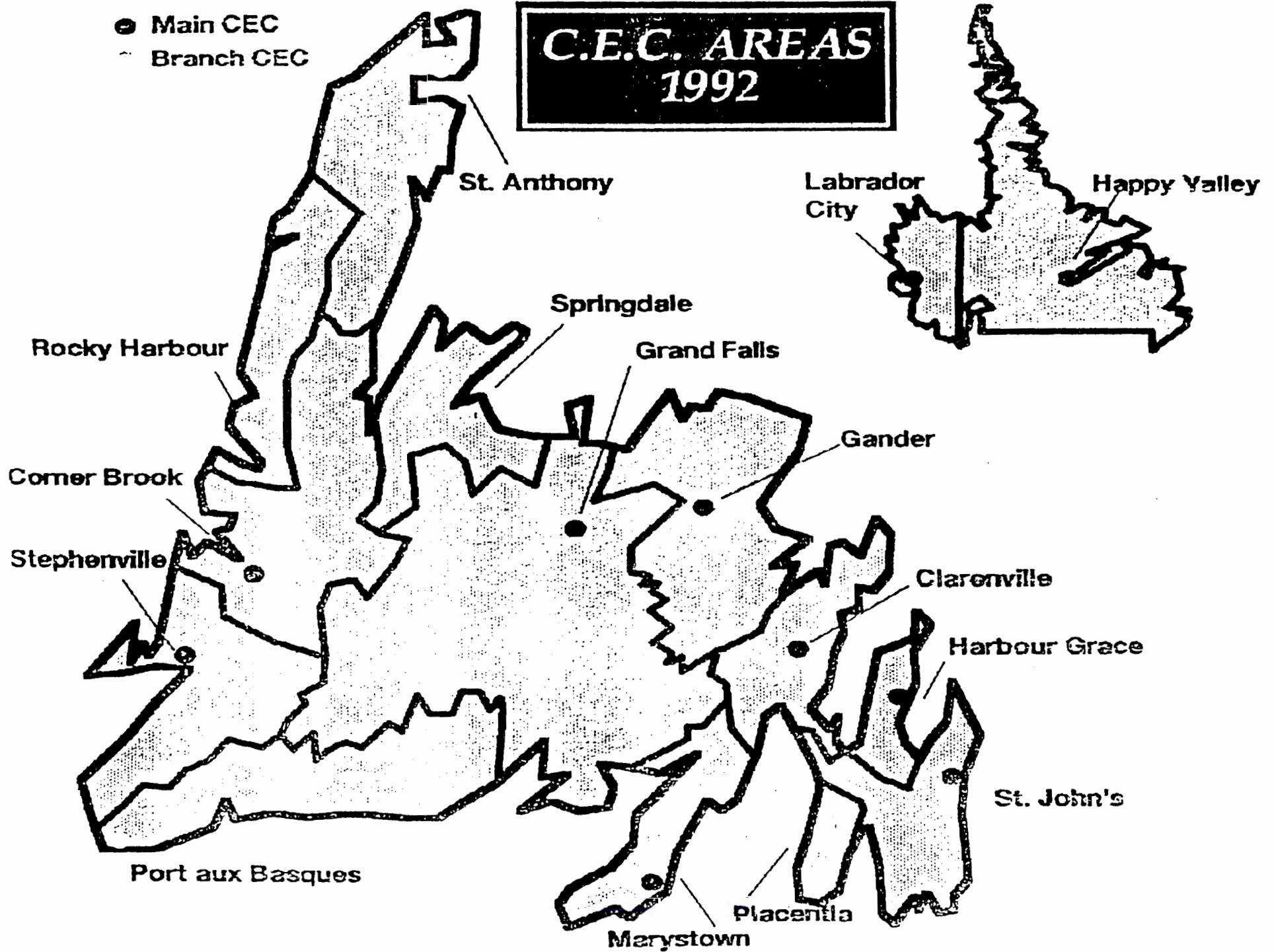


TABLE 9
FISHING BENEFICIARIES - MARCH 1992
BY CEC AND WEEKS EMPLOYED
NEWFOUNDLAND

Frequency Percent Row Pct Col Pct	10 WEEKS	11-14 WEEKS	15-19 WEEKS	20-29 WEEKS	30-39 WEEKS	40-49 WEEKS	50 + WEEKS	TOTAL
PORT AUX BASQUES	172 1.49 56.77 2.64	98 0.76 29.04 4.11	32 0.28 10.56 1.6	10 0.09 3.3 1.17	0 0 0 0	0 0 0 0	1 0.01 0.33 33.33	303 2.63
SPRINGDALE	589 5.11 51.49 9.04	202 1.75 17.66 9.43	284 2.46 24.83 14.21	69 0.6 6.03 8.1	0 0 0 0	0 0 0 0	0 0 0 0	1144 9.92
LAB CITY	0 0 0 0	0 0 0 0	0 0 0 0	1 0.01 50 0.12	0 0 0 0	1 0.01 50 100	0 0 0 0	2 0.02
METRO	790 6.85 58.52 12.13	360 3.12 26.67 16.8	110 0.95 8.15 5.51	85 0.74 6.3 9.98	4 0.03 0.3 22.22	0 0 0 0	1 0.01 0.07 33.33	1350 11.71
PLACENTIA	114 0.99 39.45 1.75	34 0.29 11.76 1.59	85 0.74 29.41 4.25	55 0.48 19.03 6.46	0 0 0 0	0 0 0 0	1 0.01 0.35 33.33	289 2.51
CLARENVILLE	661 5.73 51.88 10.15	241 2.09 18.92 11.25	283 2.45 22.21 14.16	88 0.76 6.91 10.33	1 0.01 0.08 5.56	0 0 0 0	0 0 0 0	1274 11.05
HAPPY VALLEY	333 2.89 62.36 5.11	122 1.06 22.85 5.69	63 0.55 11.8 3.15	16 0.14 3 1.88	0 0 0 0	0 0 0 0	0 0 0 0	534 4.63
ROCKY HARBOUR	272 2.36 62.96 4.17	76 0.66 17.59 3.55	65 0.56 15.05 3.25	19 0.16 4.4 2.23	0 0 0 0	0 0 0 0	0 0 0 0	432 3.75
ST. ANTHONY	599 5.2 60.02 9.19	148 1.28 14.83 6.91	186 1.61 18.64 9.31	65 0.56 6.51 7.63	0 0 0 0	0 0 0 0	0 0 0 0	998 8.66

TABLE 9 (continued)
 FISHING BENEFICIARIES - MARCH 1992
 BY CEC AND WEEKS EMPLOYED
 NEWFOUNDLAND

Frequency Percent Row Pct Col Pct	10 WEEKS	11-14 WEEKS	15-19 WEEKS	20-29 WEEKS	30-39 WEEKS	40-49 WEEKS	50 + WEEKS	TOTAL
HARBOUR GRACE	560	241	191	67	4	0	0	1063
	4.96	2.09	1.66	0.58	0.03	0	0	9.22
	52.68	22.67	17.97	6.3	0.38	0	0	
	8.6	11.25	9.56	7.86	22.22	0	0	
GANDER	1400	248	347	45	0	0	0	2040
	12.14	2.15	3.01	0.39	0	0	0	17.69
	68.63	12.16	17.01	2.21	0	0	0	
	21.49	11.57	17.37	5.28	0	0	0	
MARYSTOWN	319	118	161	123	0	0	0	721
	2.77	1.02	1.4	1.07	0	0	0	6.25
	44.24	16.37	22.33	17.06	0	0	0	
	4.9	5.51	8.06	14.44	0	0	0	
GRAND FALLS	240	138	94	138	8	0	0	618
	2.08	1.2	0.82	1.2	0.07	0	0	5.36
	38.83	22.33	15.21	22.33	1.29	0	0	
	3.68	6.44	4.7	16.2	44.44	0	0	
STEPHENVILLE	324	68	52	57	1	0	0	502
	2.81	0.59	0.45	0.49	0.01	0	0	4.35
	64.54	13.55	10.36	11.35	0.2	0	0	
	4.97	3.17	2.6	6.69	5.56	0	0	
CORNER BROOK	139	59	45	14	0	0	0	257
	1.21	0.51	0.39	0.12	0	0	0	2.23
	54.09	22.96	17.51	5.45	0	0	0	
	2.13	2.75	2.25	1.64	0	0	0	
UNCLASSIFIED	3	0	0	0	0	0	0	3
	0.03	0	0	0	0	0	0	0.03
	100	0	0	0	0	0	0	
	0.05	0	0	0	0	0	0	
Total	6515	2143	1998	852	18	1	3	11530
	56.5	18.59	17.33	7.39	0.16	0.01	0.03	100

TABLE 10
 U. I. BENEFICIARIES - MARCH 1992
 FISH PLANT WORKERS
 BY CEC AND WEEKS EMPLOYED
 NEWFOUNDLAND

Frequency Percent Row Pct Col Pct	10 WEEKS	11-14 WEEKS	15-19 WEEKS	20-29 WEEKS	30-39 WEEKS	40-49 WEEKS	50 + WEEKS	TOTAL
PORT AUX BASQUES	161 1.35 24.62 2.99	216 1.31 33.03 7.76	150 1.26 22.94 10.17	118 0.99 18.04 8.26	9 0.08 1.38 1.43	0 0 0 0	0 0 0 0	654 5.43
SPRINGDALE	187 1.57 25.48 3.48	182 1.52 24.8 6.54	122 1.02 16.62 8.27	131 1.1 17.85 9.17	80 0.67 10.9 12.74	21 0.18 2.86 10.94	11 0.09 1.5 18.33	734 6.14
METRO	592 4.96 40.16 11.01	448 3.75 30.39 16.09	241 2.02 16.35 16.34	136 1.14 9.23 9.52	32 0.27 2.17 5.1	16 0.13 1.09 8.33	9 0.08 0.61 15	1474 12.34
PLACENTIA	140 1.17 73.68 2.6	37 0.31 19.47 1.33	6 0.05 3.16 0.41	5 0.04 2.63 0.35	2 0.02 1.05 0.32	0 0 0 0	0 0 0 0	190 1.59
CLARENVILLE	578 4.84 29.54 10.75	388 3.25 19.83 13.94	250 2.09 12.77 16.95	372 3.11 19.01 26.05	274 2.29 14 43.63	83 0.69 4.24 43.23	12 0.1 0.61 20	1957 16.38
HAPPY VALLEY	84 0.7 56.76 1.56	47 0.39 31.76 1.69	5 0.04 3.38 0.34	6 0.05 4.05 0.42	4 0.03 2.7 0.64	2 0.02 1.35 1.04	0 0 0 0	148 1.24
ROCKY HARBOUR	151 1.26 41.03 2.81	98 0.82 26.63 3.52	39 0.33 10.6 2.64	76 0.64 20.65 5.32	2 0.02 0.54 0.32	1 0.01 0.27 0.52	1 0.01 0.27 1.67	368 3.08
ST. ANTHONY	654 5.48 61.06 12.16	271 2.27 25.3 9.73	104 0.87 9.71 7.05	34 0.28 3.17 2.38	6 0.05 0.56 0.96	0 0 0 0	2 0.02 0.19 3.33	1071 8.97

TABLE 10 (continued)
 U.I. BENEFICIARIES - MARCH 1992
 FISH PLANT WORKERS
 BY CEC AND WEEKS EMPLOYED
 NEWFOUNDLAND

Frequency Percent Row Pct Col Pct	10 WEEKS	11-14 WEEKS	15-19 WEEKS	20-29 WEEKS	30-39 WEEKS	40-49 WEEKS	50 + WEEKS	TOTAL
HARBOUR GRACE	1156 9.76 54.33 21.68	477 3.99 22.23 17.13	380 2.34 13.05 18.98	202 1.69 9.41 14.15	12 0.1 0.56 1.91	5 0.04 0.23 2.6	4 0.03 0.19 6.67	2146 17.97
GANDER	1262 10.57 69.65 23.47	368 3.08 20.31 13.22	99 0.83 5.46 6.71	60 0.5 3.31 4.2	12 0.1 0.66 1.91	6 0.05 0.33 3.12	5 0.04 0.28 8.33	1812 15.17
MARYSTOWN	220 1.84 36.85 4.09	68 0.57 11.39 2.44	63 0.53 10.55 4.27	131 1.1 21.94 9.17	93 0.78 15.58 14.81	19 0.16 3.18 9.9	3 0.03 0.5 5	597 5
GRAND FALLS	20 0.17 7.12 0.37	23 0.19 8.19 0.83	26 0.22 9.25 1.76	74 0.62 26.33 5.18	91 0.76 32.38 14.49	38 0.32 13.52 19.79	9 0.08 3.2 15	291 2.35
STEPHENVILLE	73 0.61 34.27 1.36	53 0.44 24.88 1.9	26 0.22 12.21 1.76	49 0.41 23 3.43	7 0.06 3.29 1.11	1 0.01 0.47 0.52	4 0.03 1.88 6.67	213 1.78
CORNER BROOK	88 0.74 29.63 1.64	107 0.9 36.03 3.84	64 0.54 21.55 4.34	34 0.28 11.45 2.38	4 0.03 1.35 0.64	0 0 0 0	0 0 0 0	297 2.49
UNCLASSIFIED	2 0.02 66.67 0.04	1 0.01 33.33 0.04	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0	3 0.03
Total	5378 45.02	2784 23.31	1475 12.35	1428 11.95	628 5.26	192 1.61	60 0.5	11945 100

APPENDIX "E"

**DISCUSSION OF
PUBLIC SECTOR BENEFITS/COSTS
PROVINCE OF NEWFOUNDLAND ECONOMISTS**

Items to Consider in Assessing the Costs/Benefits of Fish Plant Closures

It is likely that many of the impacts that could be expected to result from a fish plant closure will be the same whether the fish plant closes because of natural market forces or because of direct Government policy intervention.

The costs of adjusting to a fish plant closure will not likely be greatly different in total whether the plant is "selected" for closure on the basis of some predetermined criteria or whether the closure results from market forces, perhaps precipitated by the withdrawal (partial or otherwise) of Government support. The key difference could be in terms of timing of the impacts, and the incidence of the costs, that is, whether the costs are born largely by the private sector or largely by the public sector.

A planned closure would probably speed up the adjustment costs and compress the financial and economic costs into a shorter, up-front, period of time. It could be argued that the costs/benefits would be different under a planned versus a market driven rationalization of the industry. It is not clear, however, that this would be the case in any substantive or quantifiable way unless Government decided to intervene in major ways with the market process, for example, by financially supporting firms that would otherwise fail, or by resisting plant consolidations in order to avert a closure in a specific area; etc.

In the case of the incidence of the costs of closure, it is likely that there would be greater pressure on Government to assume virtually all of the adjustment costs of a closure if the closure is viewed as the result of a direct Government policy intervention.¹ It may well be argued that if, perhaps because of market failures, Government becomes involved in the rationalization and downsizing, then by virtue of its assuming responsibility for the initiative, Government will be expected to bear the costs. This could necessitate increased borrowing over a relatively short period of time. Alternatively, a large share of the costs could fall on the private sector in the event that rationalization is allowed to take its natural course. The speed of the adjustment of closure would be affected by the level (withdrawal) of Government support (e.g., bailouts, loan guarantees, etc); and also by the generosity and longevity of, and regulations governing income security payments, especially UI.

With these things in mind, what follows is a brief and point form highlight of the major types of costs and benefits that might arise with a fish plant closure. The list is by no means exhaustive and it probably omits items which are specific and unique to the fishing industry and its nuances, items which specialists within

¹It is quite likely that the costs would also be overstated if it was believed that Government was paying for the costs.

the Department of Fisheries will be well aware of and will have well covered. As well, there are social factors and social costs which would need to be considered, and which could have economic or fiscal consequences.

- The first and most obvious cost of a fish plant closure is the loss of employment in a dependent community. Such a loss would reduce the Province's employment base.
- The loss of employment will result in lower earned income in the Province and an increased dependency on UI in the sense that a larger number of workers will require UI for a longer period of time (i.e., a full year as opposed to only part of the year). This will result in the slowing of economic activity due to lower incomes.
- Once UI benefits have been exhausted, many workers may be forced to seek Social Assistance. This will result in even lower income levels² and a shifting of at least part of the costs of the employment losses to the Provincial Government. On the other hand, it would contribute to a lowering of the cost of operating and administering the UI program as fewer workers would be able to qualify.
- The shifting of the burden of employment losses from the Federal to the Provincial Government will ultimately result in increased borrowing to finance income security payments (i.e., Social Assistance and Job Creation), losses of retail sales taxes, income taxes, etc. that will be associated with the reduced output. It should be noted, of course, that as long as the population base of the Province is not eroded through out-migration, about 70 percent of the lost revenues will be made up by equalization payments.
- Additional costs that may need to be considered are the costs of retraining, and the costs of additional economic development funds that may be sought by affected communities.
- As well, the level of Government commitment to individual plants (e.g., direct loans, loan guarantees) would have to be considered. Also, in the case of default on non-guaranteed private sector loans and/or creditors, Government could incur some liability in the case of a policy determined closure.
- On the plus side, it is likely that the rationalization of the processing industry by either means will result in fewer, larger plants able to take advantage of economies of scale and productivity gains. While this may mean less employment required to process the same amount of fish, incomes for those

²UI benefits are invariably more generous than Social Assistance benefits.

working could be expected to be higher, reflecting higher productivity and hence the spinoffs of the higher incomes would be greater. It could also result in more employment during glut in other areas of the Province that were not affected by a plant closure.

- Additionally, consideration might be given to the possibility that larger (i.e., relatively more fish to process after rationalization), more productive plants would be more profitable and hence better able to make investments in the fishing industry in the long term. Investments, especially in new technology of a cost saving nature or investments made with a view to producing more "value added" products, could further enhance the profitability and economic viability of the industry, and contribute to employment and income growth in the Province over the long term.
- In the case of a community failure, Government relocation assistance may be required. In the case of net population loss to the Province due to out-migration, further revenue losses could be anticipated by the Province (e.g., equalization, RST, PIT, CIT).
- There would also be indirect effects on regional economies (i.e., other surrounding communities that may be indirectly affected). For example, suppliers to the plant and local creditors could be affected.
- On the savings side, requirements for municipal grants, economic development funds, other government programs that are ongoing as well as the costs associated with the provision of Government services could be expected to diminish in the long term if there is some movement of population from affected to unaffected communities. These savings could result from agglomeration economies or economies of scale. In the short term, however, there could be an increased need for infrastructure in the population-receiving communities.
- While the costs of rationalization, through either means, may be high in the short to medium term, the result could very well be a stronger, more economically viable industry in the long run.
- Fewer plants could mean a decrease in Government grants and subsidies.
- As long as the amount of fish processed and exported is the same whether there are more or fewer plants, then the impact of plant closures on total GDP in the Province is likely to be quite small; and in fact, it could increase because of efficiency gains in the long term.

APPENDIX "F"

**PROCESSING SECTOR BENEFITS/COSTS
THE NEWLANTIC GROUP**

The NewLantic Group

Business Advisory & Industrial Engineering Services

THE IMPLICATIONS OF A REDUCTION IN CAPACITY FOR NEWFOUNDLAND'S INSHORE FISH PROCESSING INDUSTRY

**SUBMITTED TO: TRIPARTITE PROCESSING SECTOR COMMITTEE
ST. JOHN'S, NEWFOUNDLAND**

**SUBMITTED BY: THE NEWLANTIC GROUP
P. O. BOX 13067
ST. JOHN'S, NEWFOUNDLAND
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OCTOBER, 1992

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INTRODUCTION

BACKGROUND

The Tripartite Processing Sector Committee ("the Committee") includes representatives of the Canadian Federal and Newfoundland Provincial Governments and Newfoundland's fish processing industry. It is set up to consider adjustments that need to be made in the industry in response to decreases in abundance of the groundfish stocks of major commercial importance to the Province that have occurred over the past few years.

THIS PROJECT

One of the possible adjustments being considered is a reduction in processing capacity. To help it understand the implications of a decrease in capacity, the Committee retained **The NewLantic Group** to analyze the profitability of Newfoundland's inshore fish processing industry should the number of plants in operation be reduced by 30%, 40%, or 50%. We prepared "best guess", "optimistic", and "pessimistic" estimates of the benefits that can be expected from these reductions in the number of plants involved in processing groundfish.

We based our analyses on a computer model we developed during 1989-90 as part of a project undertaken for the Task Force on Northern Cod set up by the Federal Government. A brief description of that model is contained in Appendix A. The model itself was not used during this project, because it was set up to analyze data related to individual plants, something that was beyond the scope of the present work. However, data from the model were used as part of our analyses.

The work done and results obtained are described in the material that follows.

IMPORTANT ASSUMPTIONS

For the purposes of this project, we were provided with some assumptions by the Tripartite Processing Sector Committee. These included the following:

1. there is currently a total of 220 inshore fish plants in Newfoundland and Labrador, including 163 involved in processing groundfish and 57 that are not;
2. in 1997, there will be a total of 151,560 metric tonnes of groundfish landings available to the Province's inshore fish plants, made up of
 - 128,190 tonnes of cod,
 - 7,290 tonnes of redfish,
 - 15,050 tonnes of turbot, and

INTRODUCTION

- 1,030 tonnes of American plaice; and
- 3. the raw materials available will be distributed among those plants that remain in operation.

For the present exercise, our analyses were confined to the 163 plants that process groundfish. Consistent with the assumptions provided by the Task Force, we considered scenarios in which the number of these plants would be reduced as follows:

<u>%</u>	<u>NO. OF PLANTS</u>
30	49
40	65
50	82

For each reduction in the number of groundfish plants, it was assumed that all the groundfish landings available would be redistributed among the plants remaining in operation. Many plants involved in processing groundfish process other species, as well. It was assumed that 90% of the species other than groundfish processed at the plants not continuing to operate would be redistributed among the groundfish plants still in business, with the remaining 10% being redistributed among the 57 plants not involved in processing groundfish.

We assumed that all cod would be processed only into frozen products. This was different from our earlier work, where some was allocated to salted and dried products.

In addition to these assumptions, others previously built into our computer model continued to be part of the analysis. These were described in our reports to the Task Force on Northern Cod and the descriptions are not repeated here. Assumptions related to product selling prices, costs for raw materials and packaging, wage rates, and other variables were those used in the projections for 1992 that were prepared for the Task Force in 1990.

THE RESULTS

BENEFITS FROM PROCESSING GROUND FISH AT FEWER PLANTS

A summary of the projected net benefits expected to be realized from processing groundfish only is presented in Table 1. In the table, the magnitude of the total benefits varies, depending on the percentage of existing plants expected to leave the industry and on the degree of optimism of the estimate.

Considering groundfish species only, profitability of Newfoundland's inshore groundfish processing industry is expected to improve by \$18.3 million, \$20.8 million, or \$23.3 million, if the existing number of groundfish plants is reduced by 30%, 40%, or 50%, respectively. However, the improvement attributable to a 30% reduction in the number of plants could range from a pessimistic level of \$12.9 million to an optimistic level of \$23.5 million. Similarly, the range for a 40% reduction could run from a low of \$15.5 million to a high of \$26.0 million, while that for a 50% reduction could span from \$18.0 million to \$28.5 million.

BENEFITS FROM REDISTRIBUTION OF OTHER SPECIES

Plants involved in processing groundfish do not necessarily process only groundfish. Therefore, landings of species other than groundfish currently processed at plants that cease operations will also be redistributed among the plants that remain in operation.

This means that the plants that continue to operate should be able to earn extra contributions to their profitability from processing additional volumes of non-groundfish species. It also means that the portion of the industry's overhead costs presently associated with processing of such species in the plants not continuing to operate will no longer be incurred.

Table 2 presents a summary of the benefits similar to that presented in Table 1, including processing activities related to species other than groundfish in the analysis.

Taking all species into account, the industry's profitability is expected to improve by approximately \$25.1 million, if 30% of the existing plants leave the industry. That is \$6.8 million more than if only the benefits attributable to processing groundfish are considered. The pessimistic and optimistic estimates indicate that the improvement could range from \$19.8 million to \$30.3 million.

Should there be a reduction of 40% in the number of plants, the improvement in profitability from all species could range from \$24.5 million to \$35.1 million, with our best

TABLE 1

SUMMARY OF PROJECTED OVERALL NET BENEFIT FROM GROUND FISH, INSHORE PLANTS, \$000
 151,560 MT INSHORE GROUND FISH ALLOCATION

File: TASKCOST

	BEST GUESS	OPTIMISTIC SCENARIO	PESSIMISTIC SCENARIO
PRODUCTION EFFICIENCY	8,975.9	13,413.0	4,506.5
PLANT OVERHEAD	1,709.2	2,504.2	875.5
GENERAL OVERHEAD			
50% of Groundfish Plants Removed	12,608.7	12,608.7	12,608.7
40% of Groundfish Plants Removed	10,086.9	10,086.9	10,086.9
30% of Groundfish Plants Removed	7,565.2	7,565.2	7,565.2
TOTAL BENEFIT			
50% of Groundfish Plants Removed	23,293.9	28,525.9	17,990.6
40% of Groundfish Plants Removed	20,772.1	26,004.1	15,468.9
30% of Groundfish Plants Removed	18,250.4	23,482.4	12,947.2

TABLE 2

SUMMARY OF PROJECTED OVERALL NET BENEFIT ALL SPECIES, INSHORE PLANTS, \$000
151,560 MT INSHORE GROUND FISH ALLOCATION

File: TASKCOST

	BEST GUESS	OPTIMISTIC SCENARIO	PESSIMISTIC SCENARIO
PRODUCTION EFFICIENCY	8,975.9	13,413.0	4,506.5
PLANT OVERHEAD	1,709.2	2,504.2	875.5
GENERAL OVERHEAD			
50% of Groundfish Plants Removed	23,956.5	23,956.5	23,956.5
40% of Groundfish Plants Removed	19,165.2	19,165.2	19,165.2
30% of Groundfish Plants Removed	14,373.9	14,373.9	14,373.9
TOTAL BENEFIT			
50% of Groundfish Plants Removed	34,641.7	39,873.7	29,338.4
40% of Groundfish Plants Removed	29,850.4	35,082.4	24,547.1
30% of Groundfish Plants Removed	25,059.1	30,291.1	19,755.8

TABLE 3

**PROJECTED INDUSTRY NET BENEFIT FROM GROUND FISH, INSHORE PLANTS
151,560 MT INSHORE GROUND FISH ALLOCATION, 40% OF ALL GROUND FISH PLANTS REMOVED**

File: TASKCOST

	PRODUCT SALES \$000	PRODUCTION COST, \$000				PROFITABILITY, \$000			NET OP. INCOME	
		RAW MATERIAL	LABOUR	PACKAGING MATERIAL	TOTAL	GROSS MARGIN	CONT. TO GEN. O/H	NET OP. INCOME	\$/lb. - FP	\$/lb. - RM
NO RATIONALIZATION, Base Case Scenario	240,260.5	116,872.9	55,384.5	6,021.2	178,278.5	61,982.0	26,087.9	870.6	0.007	0.003
BEST GUEST SCENARIO										
- HIGHER LABOUR PRODUCTIVITY	0.0	0.0	(2,637.4)	0.0	(2,637.4)	2,637.4	4,346.6	14,433.5	0.116	0.043
- HIGHER YIELDS	2,862.1	0.0	(0.0)	69.1	69.1	2,793.0	2,793.0	12,880.0	0.102	0.039
- HIGHER SELLING PRICES	1,201.3	0.0	0.0	0.0	0.0	1,201.3	1,201.3	11,288.3	0.091	0.034
- HIGHER PACK MIX	2,289.7	0.0	0.0	0.0	0.0	2,289.7	2,289.7	12,376.7	0.100	0.037
- COMBINATION OF THE ABOVE	6,407.7	0.0	(2,637.4)	69.1	(2,568.3)	8,975.9	10,685.2	20,772.1	0.165	0.062
OPTIMISTIC SCENARIO										
- HIGHER LABOUR PRODUCTIVITY	0.0	0.0	(3,864.0)	0.0	(3,864.0)	3,864.0	6,368.3	16,455.2	0.132	0.049
- HIGHER YIELDS	4,293.2	0.0	(0.0)	103.6	103.6	4,189.6	4,189.6	14,276.5	0.113	0.043
- HIGHER SELLING PRICES	1,802.0	0.0	0.0	0.0	0.0	1,802.0	1,802.0	11,888.9	0.096	0.036
- HIGHER PACK MIX	3,434.6	0.0	0.0	0.0	0.0	3,434.6	3,434.6	13,521.5	0.109	0.040
- COMBINATION OF THE ABOVE	9,652.5	0.0	(3,864.0)	103.6	(3,760.4)	13,413.0	15,917.2	26,004.1	0.206	0.078
PESSIMISTIC SCENARIO										
- HIGHER LABOUR PRODUCTIVITY	0.0	0.0	(1,350.8)	0.0	(1,350.8)	1,350.8	2,226.3	12,313.3	0.099	0.037
- HIGHER YIELDS	1,431.1	0.0	(0.0)	34.5	34.5	1,396.5	1,396.5	11,483.5	0.092	0.034
- HIGHER SELLING PRICES	600.7	0.0	0.0	0.0	0.0	600.7	600.7	10,687.6	0.086	0.032
- HIGHER PACK MIX	1,144.9	0.0	0.0	0.0	0.0	1,144.9	1,144.9	11,231.8	0.090	0.034
- COMBINATION OF THE ABOVE	3,190.2	0.0	(1,350.8)	34.5	(1,316.3)	4,506.5	5,381.9	15,468.9	0.124	0.046

TABLE 4

PROJECTED NET BENEFIT FROM ALL SPECIES, INSHORE PLANTS
151,560 MT INSHORE GROUND FISH ALLOCATION, 40% OF ALL GROUND FISH PLANTS REMOVED

File: TASKCOST

	PRODUCT SALES \$000	PRODUCTION COST, \$000				PROFITABILITY, \$000		
		RAW MATERIAL	LABOUR	PACKAGING MATERIAL	TOTAL	GROSS MARGIN	CONT. TO GEN. O/H	NET OP. INCOME
BEST GUEST SCENARIO								
- HIGHER LABOUR PRODUCTIVITY	0.0	0.0	(2,637.4)	0.0	(2,637.4)	2,637.4	4,346.6	23,511.8
- HIGHER YIELDS	2,862.1	0.0	(0.0)	69.1	69.1	2,793.0	2,793.0	21,958.3
- HIGHER SELLING PRICES	1,201.3	0.0	0.0	0.0	0.0	1,201.3	1,201.3	20,366.5
- HIGHER PACK MIX	2,289.7	0.0	0.0	0.0	0.0	2,289.7	2,289.7	21,454.9
- COMBINATION OF THE ABOVE	6,407.7	0.0	(2,637.4)	69.1	(2,568.3)	8,975.9	10,685.2	29,850.4
OPTIMISTIC SCENARIO								
- HIGHER LABOUR PRODUCTIVITY	0.0	0.0	(3,864.0)	0.0	(3,864.0)	3,864.0	6,368.3	25,533.5
- HIGHER YIELDS	4,293.2	0.0	(0.0)	103.6	103.6	4,189.6	4,189.6	23,354.8
- HIGHER SELLING PRICES	1,802.0	0.0	0.0	0.0	0.0	1,802.0	1,802.0	20,967.2
- HIGHER PACK MIX	3,434.6	0.0	0.0	0.0	0.0	3,434.6	3,434.6	22,599.8
- COMBINATION OF THE ABOVE	9,652.5	0.0	(3,864.0)	103.6	(3,760.4)	13,413.0	15,917.2	35,082.4
PESSIMISTIC SCENARIO								
- HIGHER LABOUR PRODUCTIVITY	0.0	0.0	(1,350.8)	0.0	(1,350.8)	1,350.8	2,226.3	21,391.5
- HIGHER YIELDS	1,431.1	0.0	(0.0)	34.5	34.5	1,396.5	1,396.5	20,561.7
- HIGHER SELLING PRICES	600.7	0.0	0.0	0.0	0.0	600.7	600.7	19,765.9
- HIGHER PACK MIX	1,144.9	0.0	0.0	0.0	0.0	1,144.9	1,144.9	20,310.1
- COMBINATION OF THE ABOVE	3,190.2	0.0	(1,350.8)	34.5	(1,316.3)	4,506.5	5,381.9	24,547.1

NOTE: 10% of the benefits derived from species other than groundfish have been deleted.

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guess being \$29.9 million. If the reduction is 50%, profitability should improve somewhere between \$29.4 million and \$39.9 million, with the most likely amount being approximately \$34.6 million.

REASONS FOR IMPROVED PROFITABILITY

In Tables 1 and 2, the overall net benefits are shown to be made up of

- improved production efficiency,
- reduced plant overhead costs, and
- reduced general overhead costs.

For nearly all of the scenarios analyzed, the largest portion of the profitability improvement is due to a reduction in the industry's general overhead costs that must be recovered through processing activities. That is because the fixed overhead costs associated with operation of companies and plants will not be incurred, if they do not continue to operate,

In addition to the reduction in overhead costs, there should be operational benefits from industry rationalization, which will enhance contributions to overhead costs and profitability. Reducing the number of plants can be expected to result in both improved utilization of processing capacity and increased production efficiency at the plants that remain.

Benefits from better production efficiency are considered to be measurable in terms of the following:

1. higher labour productivity;
2. higher product yields;
3. higher value pack mixes; and
4. higher average selling prices.

Table 3 compares sales revenues, production costs, and 3 different measures of profitability from groundfish processing - gross margin, contribution to general overhead costs, and net operating income - **assuming there is no rationalization**, with the **changes** in these items that can be expected under different circumstances, should 40% of the existing groundfish plants

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not continue to operate. The figures presented show that, without rationalization, the industry as a whole can be expected to have a net operating income of approximately \$0.9 million.

If 40% of the presently existing plants are no longer in operation, our best guess is that the industry should show an improvement in profitability of \$20.8 million. That amount is made up of the \$10.1 million reduction in general overhead costs, the increase in contributions of \$9.0 million due to improved production efficiency, and a reduction of \$1.7 million in plant overhead costs. The contributions of improved operational performance to these amounts are shown, by performance measure, in the table. It is worth noting that the changes indicated as being attributable to each performance factor are independent of those attributable to other performance factors.

Table 4 provides a similar summarization of the benefits of rationalization, when landings of all species are taken into account.

All of the estimated benefits from improved production efficiency included in the tables are considered to be attributable to better performance by production workers, due to their having longer periods of work during the year. It is a well-known phenomenon that the more often people perform a task, the more proficient they become in doing it.

Newfoundland's inshore fish processing industry has historically operated for a relatively short season. In recent years, virtually everyone employed in the industry has been working for a period of 8 to 12 weeks each year. Therefore, people employed in the industry have fairly long gaps between periods of work and their skills deteriorate during the layoff.

With a reduction in the number of plants, about half the people employed will continue to work for 8 to 12 weeks, because of seasonal peaks in activity. However, we expect the other half will be employed for 18 to 20 weeks and it will be these people who will provide the increased production efficiency.

We also expect that very few, if any, jobs will be created in the plants that continue to operate, should the industry be rationalized. Essentially, the extra work at these plants will be performed by people employed for longer periods in a year than they are now.

All of the benefits from improved production efficiency are considered to be attributable to groundfish. Plants engaged in processing crab were assumed not to leave the industry as a result of rationalization. Historically, they have been more profitable than plants processing other species only. Pelagic species are typically available for only relatively short seasons

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and extending those seasons by 1 or 2 weeks as a result of industry rationalization was not considered likely to have much of an impact on production efficiency.

APPENDIX A THE COMPUTER MODEL

DESCRIPTION

The computer model on which the analyses during this project was based is a representation of the economic characteristics of a multi-species fish processing operation. It allows for processing of cod, flounder, turbot, herring, mackerel, capelin, crab, shrimp, and lumpfish roe into a range of end product packs, including fresh, frozen, salted, and cured products. Essentially, it operates through multiplying quantity factors - such as fish landings, labour productivity, and output weight - by pricing factors - such as raw material purchase prices, wage rates, and product selling prices.

Originally, the model was used to analyze the relative contributions different species and products made to the operations of 77 inshore fish plants during the period from 1986 to 1988, in terms of

- revenue from sale of products,
- contribution to overhead costs and profitability,
- employment, and
- labour income

and to prepare a profile of the inshore sector of the fish processing industry on the Northeast coast of Newfoundland and Labrador. Subsequently, the model was used to do similar analyses for 1989 and to prepare projections of the same variables for 1990 and 1992.

USE OF DATA FROM THE MODEL DURING THIS PROJECT

Many of the assumptions used in the model were used during this project. However, production efficiency was estimated to improve due to rationalization as follows:

VARIABLE	BEST GUESS	VARIATION
Labour Productivity, lb/labour-hr	5	±2.5
Yield, % of input weight	1.25	±0.625
Selling prices, \$/lb output	5	±2.5
Pack mix, % of output value	1	±0.5

The variations indicated in this table indicate the upper and lower limits of the ranges used to prepare the "pessimistic" and "optimistic" estimates of the benefits of rationalization.

During our work for the Task Force on Northern Cod, we completed analyses related to 77 inshore fish plants on the Northeast Coast of Newfoundland and Labrador. These plants were divided into a number of different categories, depending on the characteristics of their facilities and operations. The categories were significant, because plants in the different categories were attributed different overhead cost burdens.

For this project, we were asked to generalize the analysis by considering all plants in the Province. To do that, we assumed that the 163 plants involved in processing groundfish could be categorized in the same proportions as the 77 plants on the Northeast Coast. Using this categorization, it was projected that general overhead costs for the 163 plants would amount to approximately \$50,435,000.

General overhead costs are incurred simply by virtue of a company's being in operation. Typically, they are related to a period of time and vary only to a small degree with the quantity of production. They include corporate administrative expenses - such as salaries, communications, and office supplies - as well as depreciation charges and interest on borrowed funds.

Although all 163 existing plants covered by the analyses are involved in processing groundfish, many of these plants also process other species. Based on output weight, 50% of the general overhead costs, amounting to \$25,217,500, were considered to be attributable to groundfish processing, with the remaining 50% attributable to other species. Should 40% of the plants no longer be in operation in 1997, the general overhead costs attributable to groundfish would, therefore, be 40% less, at \$15,130,500. In other words, processing of the groundfish landings available to the plants remaining in operation would have to cover \$15,130,500 in overhead costs and contribute to overall profitability of the industry.

Plant overhead costs vary, more or less, with the quantity of production. Typically, they have a small fixed component, representing the cost of having the plant ready for operation and a much larger variable component, which is incurred only when there is production activity.

**APPENDIX B
PROJECTIONS OF PROFITABILITY,
WITHOUT RATIONALIZATION AND
WITH 40% OF EXISTING GROUND FISH PLANTS REMOVED**

To illustrate how the figures presented in this report were derived, Tables B-1 and B-2 show details of the calculations included in the analyses related to the scenarios in which 40% of the groundfish plants cease to operate. Table B-1 shows the calculation of gross margins, before and after rationalization, based on unit selling prices and production costs. Table B-2 then extends on that calculation, by showing the corresponding totals for product sales and production costs.

The figures in the tables indicate that total industry-wide gross margins from processing groundfish would increase by approximately \$6.9 million as a result of rationalization. In the base scenario, the gross margin was calculated to be \$47,551,000. Should the industry be rationalized, by reducing the number of plants by 40%, that margin is expected to increase to \$54,418,200.

TABLE B-2

PROJECTED PROFITABILITY FROM GROUND FISH PROCESSING, INSHORE PLANTS
151,560 MT INSHORE GROUND FISH ALLOCATION, 40% OF ALL GROUND FISH PLANTS REMOVED

File: TASKCOST

	PRODUCT SALES \$000	PRODUCTION COST, \$000			PROFITABILITY, \$000			NET OP. INCOME		
		RAW MATERIAL	LABOUR	PACKAGING MATERIAL	TOTAL	GROSS MARGIN	CONT. TO GEN. O/H	NET OP. INCOME	\$/lb. - FP	\$/lb. - RM
PRIOR TO RATIONALIZATION										
COD										
- Primary	200,639.9	102,584.3	46,677.2	4,562.2	153,823.6	46,816.3				
- Minced	11,289.9	0.0	1,281.9	494.6	1,776.4	9,513.5				
Total Cod	211,929.8	102,584.3	47,959.0	5,056.7	155,600.1	56,329.7				
REDFISH	5,816.7	2,604.6	2,096.7	221.9	4,923.1	893.6				
TURBOT	21,308.7	10,981.8	4,920.0	710.7	16,612.5	4,696.2				
FLOUNDERS & SOLES	1,205.3	702.2	408.8	31.9	1,142.8	62.4				
TOTAL	240,260.5	116,872.9	55,384.5	6,021.2	178,278.5	61,982.0	26,087.9	870.6	0.007	0.003
AFTER RATIONALIZATION, Best Guess Scenario										
COD										
- Primary	206,205.3	102,584.3	44,454.4	4,619.2	151,657.9	54,547.3				
- Minced	11,346.4	0.0	1,220.8	494.6	1,715.4	9,631.0				
Total Cod	217,551.6	102,584.3	45,675.3	5,113.8	153,373.3	64,178.3				
REDFISH	5,978.0	2,604.6	1,996.8	224.6	4,826.0	1,152.0				
TURBOT	21,899.8	10,981.8	4,685.7	719.6	16,387.1	5,512.7				
FLOUNDERS & SOLES	1,238.7	702.2	389.3	32.3	1,123.8	114.9				
TOTAL	246,668.2	116,872.9	52,747.1	6,090.2	175,710.2	70,957.9	36,773.1	21,642.7	0.172	0.065
DIFFERENCE	6,407.7	0.0	(2,637.4)	69.1	(2,568.3)	8,975.9	10,685.2	20,772.1	0.165	0.062

NOTE: The effects of income taxes have been ignored.

APPENDIX "G"

POSSIBLE FINANCIAL
GUIDELINES FOR PUBLIC SECTOR
FINANCIAL PROGRAMS

September 3, 1992

FORMS OF FINANCIAL ASSISTANCE

If the fish processing sector is to be rationalized, any form of government assistance must be applied on a very selective basis.

1. There should be no up-front capital or operating grants.
2. There should be no government loan guarantees for acquisition or construction of facilities.
3. Any government funds for new technology equipment or systems should be provided only in the form of interest buy-down.
4. Government funds to development associations must not be permitted for use related to fish and seafood processing.
5. Financing through FBDB and Enterprise NF should only be provided on commercial terms and rates. This funding should not be permitted for acquisition of fish and seafood processing facilities or if financing has been withdrawn from a commercial lending facility.
6. Tax credits should be the main focus of government assistance.
7. The use of government loan guarantees for operating requirements should be very selective and eased out.
8. Government and industry should consider the establishment of a commercial lending mechanism designed to meet the special needs of the processing sector.
9. All government programs which can provide assistance should be streamlined and packaged with a single access channel.