

LONG TERM POPULATION PROJECTIONS FOR
NEWFOUNDLAND AND LABRADOR:

A Consultative Approach

Final Report — DRAFT #2

A Joint Project Between

Economics and Statistics Branch, Department of Finance
Government of Newfoundland and Labrador

and

Planning and Coordination Branch, Atlantic Canada Opportunities Agency
Government of Canada

(November 2001)

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Foreward

In 1994, the Department of Finance's Economics and Statistics Branch began closely monitoring demographic changes that were already becoming of some concern. Out-migration began increasing in that year, and by 1996 it was clear that changes were going to have lasting impacts on the province. Since demographic change was such a vitally important issue affecting the province, in 1998/99 the Economics and Statistics Branch, as the central agency responsible for meeting the broad macroeconomic and statistical requirements of the Government of Newfoundland and Labrador and its agencies, initiated a formalized, comprehensive study of the issue.

The Province's demographic study sought to examine the underlying causes of demographic change and to anticipate future demographic changes and, in particular, what they might mean for the future of Newfoundland and Labrador. Among other things, the study would provide an understanding of the extent to which demographic trends could affect the future size, age structure and regional distribution of the population.

The regional component was viewed as being particularly important because of the uncertainties related to the future geographic distribution of the province's population. Clearly, it would not be enough to know how many people would be living in the province, rather information is also needed about where the population will be living in order to facilitate strategic planning and development in the areas of public service provision and regional economic development.

With this in mind, and also in view of the wide divergence of opinions among various agencies (e.g., Conference Board of Canada and Statistics Canada), a consultative approach to developing long term population projections was viewed as the most effective approach to accomplishing certain of the Study's objectives. The Atlantic Canada Opportunities Agency had expressed an interest in the province's Demographic Study, particularly in the regional component, and was offered a partnership in the public consultations that would result in regional population projections.

The joint project afforded an opportunity to build a consensus between the two levels of government on a base case set of population projections for the province, and also to develop a set of sub-provincial projections along zone boundary lines. There was also a desire to engage regional interest groups in a discussion of demographic trends.

The consultations took about a year to complete, mainly because of logistics with scheduling. This report marks the conclusion of the consultation and documents its process and results. Readers should note that all data used throughout this report, other than population projections, is from Statistics Canada as of April 2001 unless otherwise indicated.

DEMOGRAPHIC TRENDS AND PROJECT BACKGROUND

Within a single generation, Newfoundland and Labrador has gone from having the highest fertility rates in the Country to the lowest. In addition, the province has typically had the highest rates of net out-migration, with young people leaving their home communities to further their education and/or to seek employment. As a result of falling births and out-migration, generally of young people, Newfoundland's population has aged much more rapidly than Canada's over the last 30 years. In conjunction with aging, the number of deaths increased such that we are now at a point of zero, and even negative, natural population change (births minus deaths). The net result of declining births, rising deaths and relatively high levels of net out-migration throughout most of the 1990s was a 41,400 or 7.1% population decline from 1993 to 2000.

The demographic geography of the province is also changing. Population has declined in all regions since 1993 but the pattern of decline has been uneven, with fishery-dependent rural regions disproportionately impacted. Different rates of population decline across regions are largely explained by differences in out-migration rates, particularly out-migration of youth. Generally speaking, the extent of population decline and youth out-migration during the 1990s were highest in fishery dependent regions where the economic and social environment was most greatly impacted by the groundfish moratorium and UI/EI restructuring. Although the declines projected for the province's total population in the coming years are relatively modest, important geographic population shifts are projected to be ongoing, and rates of population aging are expected to continue diverging across regions.

Many of these demographic trends, particularly aging and inter-regional population shifts, are projected to continue for at least another decade or so. Since demographic trends are long-term in nature, it is important to have a reasonable set of long-term demographic projections to assist in the planning, policy and program areas. Regional population projections were deemed to be particularly important, and a consultative approach to developing long term projections was viewed as the most effective approach.

The Atlantic Canada Opportunities Agency had expressed an interest in the province's ongoing Demographic Study, and was offered a partnership in the regional consultation component in return for a contribution towards the overall cost. The consultation process was carried out in partnership between the provincial *Department of Finance* and the federal *Atlantic Canada Opportunities Agency*. The complete text of the agreement between the federal and provincial governments is contained in Appendix 1. Bev Carter (NF Finance) and Don Hogan (ACOA) advised on overall direction of the project. Dr. Doug May (MUN) was engaged to provide independent technical advice/support to the project, as well as coordination of the consultations. Patti Powers provided research assistance to the project.

The project took over a year to complete, mainly because of logistics with scheduling regional consultations. This report marks the conclusion of the joint project and documents the process by which its objectives, as set out in the proposal (see Appendix 1), were achieved .

ECONOMIC AND DEMOGRAPHIC PROJECTIONS

Parts I and II of the proposal called for the development of a set of three economic/demographic scenarios for Newfoundland and Labrador, with high, medium and low probabilities attached. As called for in the proposal, these scenarios varied mainly, though not entirely, along major project lines (e.g., oil & gas, mining, etc.)” and were built up around a set of assumptions that were generally agreed upon between ACOA and provincial Finance. The resulting scenarios are not, nor were they intended to be, a *view of the world* forecast (i.e., here’s how we think the future will unfold) but rather *what would happen if* projections based on the specific set of assumptions/inputs agreed upon.

These economic/demographic scenarios were developed using the Department of Finance’s models, but utilizing agreed upon assumptions. A summary of the methodology and key assumptions is provided below while details are contained in Appendix 2.

Methodology and Assumptions

The key issues for Newfoundland and Labrador’s long-term economic outlook revolve around assumptions for mega projects such as future oil developments, Voisey’s Bay and Labrador Power and assumptions for future labour productivity (output per worker) growth. Other important factors include the outlook for current resource industries, assumptions for real wage growth, population levels, and issues surrounding future labour supply including age and gender specific labour participation rates and the unemployment rate. All of these factors were varied across all three economic scenarios. The methodology and agreed upon assumptions are outlined in detail in Appendix 2, while a summary is provided below.

Mega Project Assumptions

Eight major projects were considered, and assumptions regarding the inclusion and/or timing of these projects were varied across the low, medium and high scenarios, as summarized in the following table (see Appendix 2 for additional details).

Potential Mega Projects			
Projects	Low	Medium	High
Voisey’s Bay	L ¹	M	H
Labrador Power		M	H
Terra Nova	L	M	H
Whiterose	L	M	H
Hebron/Ben Nevis		M	H
Undiscovered Oil 1		M	H
Undiscovered Oil 2			H
Gas Project		M ²	H ³

¹ Surface ovoid portion only.	² Starts in 2015	³ Starts in 2011
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Major Industry Assumptions

Next a set of assumptions regarding current industries operating in the Province were developed. For example, it was assumed in all three scenarios that real GDP in the retail trade industry would grow in line with real consumer spending and real GDP in the newsprint industry would remain stable at current levels. Assumptions for major provincial industries are provided in Appendix 2.

Output Per Worker Growth

Another important determinant of future labour demand is labour productivity or output per worker trends in the future. The assumptions used in each of the three scenarios, together with historical growth rates for Canada, the United States and Newfoundland and Labrador, are provided in Appendix 2. In general, historical growth rates have varied and the assumptions made in this area have significant implications for labour requirements projections.

Real Wages

Real wage rates for each industry were assumed to grow by a minimum of one percent per year. For industries where growth in output per worker is stronger than one percent per year, real wages were assumed to grow in line with real output per worker.

Labour Force

Once real output, employment, and wage rate growth were determined the economic forecast was nearly complete. The final pieces to complete the process are assumptions regarding participation rates (age specific participation rates) and the unemployment rate. Once these two factors are determined, then labour force and the population levels required to supply the labour force can be estimated.

The seasonal nature of many industries, and thus the over dependence on seasonal employment in Newfoundland and Labrador is a major reason why participation rates are lower than in either Canada or the US. The gaps were assumed to close, to some extent, over the forecast period.

Assumptions about the change in age-specific participation rates over the forecast period are summarized in the table below. For example, in the medium case, current age specific participation rates are assumed to increase gradually such that by 2020 one half of the current gap between Newfoundland and Canada would be eliminated. For the 55 to 64 age group, the gap between Newfoundland and the US gap was used as the benchmark.

Participation Rates by Age and Gender Assumptions for End of Projection Period	
Low	Increase by 25% of 2000 Can-NF Gap*
Medium	Increase by 50% of 2000 Can-NF Gap*
High	Increase by 75% of 2000 Can-NF Gap*
* Uses NF-US gap for 55 to 64 year age group.	

Economic Scenarios

The various combinations of assumptions produced three economic scenarios with differing labour force and population requirements in 2016, as summarized in the table below.

Economic Scenarios: Main Indicators 2000 and 2016

	Actual Value in 2000 ¹	Projected Value of Indicator in 2016		
		Low	Medium	High
Real GDP (\$92 Millions) Compound Growth	11,852 2.3%	13,618 0.87%	15,230 1.58%	15,952 1.87%
Employment ('000s) Compound Growth	204.6 1.0%	189 -0.048%	208 0.11%	229 0.70%
Unemployment Rate (%)	16.7	15.1	12.2	11.3
Labour Force ('000s) Compound Growth	245.6 1.2%	223 -0.6%	237 -0.2%	258 0.3%
Population Compound Growth	538.8 -0.2%	496.4 -0.5%	514.2 -0.3%	532.2 -0.1%
Average Output/PY (\$92) Compound Growth	57,928 1.2%	71,939 1.36%	73,186 1.47%	69,751 1.17%
Total Fertility Rate (TFR)	1.27	Trend to 1.0	Constant 1.27	Trend to 1.4

¹ Percent Change is average compound growth rate from 1976 to 2000.

The demographic scenarios based on these economic scenarios were developed by choosing three alternative fertility rate assumptions, and three alternative life expectancy assumptions and combining them with the economic scenarios. Through an iterative process between the Department of Finance's population projection model, POPPS, and NALEM, the population projections and the economic projections were adjusted back and forth, via net-migration in POPPS and via total population in NALEM, until the two were consistent. Details of the provincial population projections are provided in Appendices 8, 9 and 10 while a summary is provided in the table below:

Scenario	Assumptions	Population in 2016	% Change 2000-2016 ¹
Low	No new oil developments beyond Whiterose. Voisey's Bay development restricted to surface ovoid portion only; and no hydro developments in Labrador are assumed. Status quo is assumed for the rest of economy.	496,410	-7.9%
Medium	Low scenario assumptions plus Hebron-Ben Nevis and one other oil field development are assumed; full development of Voisey's Bay including underground mining and a smelter in the province; gas developed offshore starting in 2015; Labrador power is developed.	514,200	-4.6%
High	Medium case plus one other oil field; gas developed by 2011.	532,190	-1.2%
<p>¹ Calculations based on Statistics Canada's estimated population of 538,823 in 2000. Note: Assumptions are outlined more fully in Appendix 2.</p>			

All three scenarios were developed in an integrated framework to ensure consistency between the economic projections and corresponding population projections. The economic projections were necessary to take into account future labour supply and demand issues and how this could reasonably be expected to translate into future migration trends. This approach recognized the fact that economic and demographic developments are closely interrelated. Economic activity influences demographic developments mainly (and directly) through the migration component of population change, but could also influence natural population change (both directly and indirectly).

All of the scenarios call for a decline in population for Newfoundland and Labrador to 2016. The medium scenario suggests a gradual population loss to about 514 thousand by 2016. This 4.6% decrease follows a 7.1% decline from 1993 to 2000, suggesting a slowdown in the rate of out-migration, with positive migration numbers beyond 2006. The projections are consistent with Statistics Canada's base case and reflects the views of those who participated in the consultations. The medium scenario most closely coincides with what we heard during our consultation process with the regions.

REGIONAL CONSULTATION AND POPULATION PROJECTIONS

Part III of the proposal governing the joint work called for a set of three demographic projections by Economic Zone. These projections would be constrained to add up to those for the total province (i.e., as per Part II of project proposal), and thus would be consistent with the economic scenarios and agreed upon assumptions developed in Part I of the project. At the same time, however, the study group was reluctant to simply allocate the total population based historical shares but rather sought to ensure the sub-provincial regional projections were well-informed and incorporated the views of

knowledgeable people in the regions. In this regard, information/intelligence was gathered through a series of regional consultations conducted through provincial *Strategic Social Plan* boards. These consultations provided the mechanism by which the assumptions underlying regional population projections were examined by people in the respective region, and by which feedback was obtained and used to *fine tune* the projections which are presented in a subsequent section of this report.

PANEL OF EXPERT CONSULTATION

Part IV of the proposal called for a non-binding review of the economic/demographic projections through consultation with a Panel of Experts. The objective of this consultation stemmed from the outlook for total provincial population and the wide disparity of views which had existed for the past number of years between the Government of Newfoundland and Labrador and other agencies such as Statistics Canada and the Conference Board of Canada, as well as nationally recognized experts from the academic community (e.g. the authors of the AIMS report on population in Atlantic Canada). Pointing to an aging population, and assuming continued low fertility and high migration rates, national and regional forecasting agencies were calling for continuous population decline over the next 20+ years. Such *doom-and-gloom* demographic projections appeared to be inconsistent with the excellent prospects afforded the province by an expanding oil and gas industry, Voisey’s Bay nickel and Lower Churchill hydro potential. Agents such as these were essentially projecting a significant downward spiral for the province’s population over the next few decades. A meeting and consultation between the parties was sought to exchange information and views, the objective being to seek somewhat of a consensus view or, at minimum, a shared understanding of the way provincial demographics had unfolded in the past and were likely to unfold in the future.

The panel was convened in St John’s, Newfoundland on January 13 and 14, 2001. Its make-up, which was jointly agreed upon between ACOA and Provincial Finance, was as follows:

Attendance at the Panel of Experts Session

<u>Academic Panel</u> ¹	<u>Provincial Finance (E&SB)</u>	<u>Federal ACOA</u>
Dr. Doug May (MUN), Chair	Bev Carter (Presenter)	Don Hogan (Presenter)
Dr. Dane Rowlands (Carleton U)	Alton Hollett	Paul Parsons
Dr. Roy West (MUN Medical)	Rod Forsey	<u>Conference Board of Canada</u>
Dr. Stan Winer (Ottawa U)	Ken Hicks (Presenter)	Mario Lesebvre (Regional Unit)
Dr. Byron Spencer (McMaster U)	Linda Bartholomew (Presenter)	<u>Statistics Canada</u>
	Patti Powers	Francois Nault (Demography Unit)

¹Biographies for the panel are provided in Appendix 4.

The consultation with the panel was based on a series of presentations designed to provide an overview of key provincial and sub-provincial demographic trends by way of background — fertility rates and births; mortality rates and deaths; in-, out- and net-migration; population aging; migration; and finally the economic and demographic scenarios developed as part of the project (see Appendix 5 for charts detailing the presentations). As well, Dr. Byron Spencer provided an overview of the POPPS model which had been used to develop the detailed population projections (see Appendix

6). The panel was then asked to review and comment on the economic and demographic scenarios, assumptions, and methodology (see Appendix 7).

Generally speaking, none of the Panel members took issue with the major economic assumptions that had been made or the assumptions concerning fertility and mortality rates, which were very much in the same ball park as the others. There were questions about the migration assumptions, specifically about whether or not the assumption that net in-migration would occur in response to future labour market requirements was reasonable given historical trends. Some members felt it would be important to consider the implications of this not occurring (i.e., the in-migration needed under the economic scenarios presented), and thought it would be important to study how labour markets respond to shortages. Wage rate patterns of the past will not likely continue in the future. The province has remained competitive due to the low wage rates although inefficient in the presence of social and economic development policies aimed at maintaining status quo. If the province is to compete in the future, there will need to be convergence in productivity and wage rates as the labour market tightens up. It was also questioned whether or not the NALEM model was the best tool for analyzing long term (i.e., 25 years or more) demographic trends in the Province, and in that regard some panel members thought it would be best to focus on the medium term — 10-15 years.¹

During the discussion the Province maintained its confidence in the NALEM model as an analytical tool to be used in conjunction with the POPPS model, noting that it had been reviewed by Federal Finance a few years ago in connection with some joint work and met with that federal Department's approval. The province also maintained the view (i.e., assumption), agreed upon between ACOA/NF Finance when details of the projections were being worked out, that net in-migration would occur if jobs were available and wages were competitive with other parts of Canada. A key determinant of past out-migration was a shortage of jobs in relation to the number (or potential number) of new labour market entrants. This will not be an issue in the future due to attrition as current, aging workers begin to retire in large numbers. Any net employment growth would only add to the attrition-related demand for workers.

The underlying assumptions and projections are reasonable “*what would happen if scenario*”, as called for by the proposal, and this is confirmed by the regional consultations and the related population projections. The economic/demographic projections are based on participation rates approaching, though not reaching because of seasonality of employment, national levels. They also include assumptions of fairly low unemployment rates and assume fairly strong productivity growth that would see productivity levels in this province at, or above in some cases, national levels.

Both Statistics Canada and the Conference Board of Canada felt the province's analysis and projections were reasonable. Moreover, it is noted that while the formal consultation took place in

¹It is noted that the purpose of the project was to develop “*what would happen if*” scenarios (and not “*view of the world*” scenarios) under an ACOA/NF Finance agreed upon set of assumptions. Labour demands not being met was not one of the agreed upon assumptions, though it might be worth considering in future work with a different purpose in mind.

January 2001, informal discussions with the agencies represented began a year or more prior to that. The projections, and hence demographic views, of both Statistics Canada and the Conference Board of Canada much more closely approximate the province's now than they did a year ago, as illustrated in Appendix 11.

More detailed notes on the panel of experts consultation are provided in Appendix 7.

REGIONAL CONSULTATIONS

A series of regional consultations were held over a one year period beginning in April 2000. The consultations were held in conjunction and cooperation with the Strategic Social Plan Boards throughout the province, and covered all economic and social regions/zones (i.e., Economic Zones, Health and Education regions). Virtually all of the social sectors were represented and many of the economic sectors. In addition, all three levels of government (federal, provincial and municipal) were represented at most of the consultations. Youth were also represented.

The consultations were facilitated by Dr. Doug May, the project coordinator, and based on a series of presentations designed to provide an overview of key provincial and sub-provincial demographic trends by way of background, followed by a presentation which focused on demographics in the consultation region. The presentations were similar to those for the Panel of Experts but more condensed. Copies of the charts which guided the presentations are provided in Appendix 3.

Summary of Major Themes

There were several major themes which participants discussed at the regional consultations. The lack of job opportunities and the state of the economy in many rural areas was considered by participants to be a significant factor in the loss of youth in rural areas. For youth participants, social issues were important. Youth indicated they are more recently choosing to leave because of losses of their peer group, thus, the loss of social interaction in their communities. They are choosing post-secondary education more often than in the past and there were differences in the choices of males and females to participate in post-secondary education and also in the age in which they chose to migrate. Seniors were also beginning to move closer to services in small and medium sized service centers. Generally, the perception was that migration of both youth and older seniors is continuing in small rural communities and concerns were expressed about the impacts of the changing age structure of the population and the long-term survival of rural communities.

A decline in the size of the youth cohort has been projected for some time because of declining births, however, the decline was exacerbated in the 1990s by several shocks that had significant implications for rural parts of the province — the fishery collapse, EI reform, and government restraint. The fishery and government sectors had been important generators of new employment during the mid-1970s through mid-1980s period, so these shocks hit particularly hard, and increased net out-migration levels, mainly of young people, resulted .

EI reform and the perception that it will be increasingly difficult to obtain enough “stamps” to qualify for benefits, has created uncertainty for the province's highly seasonal rural economy. The fishery in the province has fundamentally changed since the early 1990s. Workers now have higher

incomes on average but fewer people work in the fishery. Thus EI benefits from seasonal work in the fisheries is accessible by fewer people.

The perception is that Governments, both federal and provincial, reduced their presence in the economy during most of the 1990's as fiscal restraint took priority over social spending. There is also a perception that there has been a tendency to consolidate services into larger centers, which in turn may be attracting people away from smaller, isolated communities.

In rural areas, the perception is that tourism has become a priority for economic development. Tourism often has lower wages than in the fishery, and there is a view that resource constraints are chipping away at traditional rural lifestyles. Draws to larger centres for retail and personal services are resulting in movement towards larger centres along the Trans Canada Highway. The view was that good transportation infrastructure should ensure survival of communities in close proximity to urban areas.

In urban areas the economic trends are different than rural. There is growth in St. John's as a result of offshore oil development. The new knowledge-based economy is growing and it requires a significant pool of educated labour. This is creating an urban bias. Connectivity is strongest in urban centres and cultural amenities continue to improve in urban areas. These factors are further decreasing populations in smaller communities as youth leave for work and the amenities of an urban lifestyle.

Loss of jobs in the fish processing and re-entry of older workers in the restructured fishery left youth without opportunities for work in their communities. Many have chosen to migrate to urban centres but more particularly out of the province to find employment.

Some of the themes that emerged during the consultations were particular to youth:

- Attachment to place is not as strong as it has been traditionally, with parents encouraging out-migration from smaller communities and youth seeing greater opportunity for social engagement in larger centers.
- Fewer youth has meant smaller enrollment in rural schools, which has translated into less variety in course selection, and less guidance counseling. IT solutions are being pursued. However distance education or e-learning necessitates increased bandwidth to rural and remote communities.
- There is some concern about the lack of career counseling available to rural youth. Many are unsure about what they should be pursuing after high school.
- For many rural youth, who have to leave home to pursue post-secondary education, the costs of post-secondary education are relatively high, putting pressure on graduates to move quickly to obtain higher wage employment than can be offered in their home communities.

The view that people will migrate into Newfoundland as jobs from retiring boomers become available was not echoed during the consultations in rural parts of the province. The feeling was that

in-migrants would gravitate towards larger population centres, particularly the northeast Avalon, rather than small communities in less urban regions of the province. The general view was that it would be difficult to attract labour back to or into smaller communities, so that businesses may have to adopt more labour saving technologies in order to maintain their operations.

The seniors' issue stood out as being of significant concern in virtually all regions. Availability of home care workers and health care professionals has already emerged as a critical issue for some of the more isolated areas of the Province. There was concern that without an economic anchor like the fishery, there will be a major shortage of people available to work in the low wage home care industry. Speculation was that many seniors may have little choice but to move in order to obtain home-care and other health services. There was also a suggestion that there will be an increase in the demand for "assisted living" accommodations as opposed to moving from private housing to seniors homes. With the impending exit of early boomers into retirement, this issue will become an increasingly important one over the next decade. Some echoed the view that considerable attention should be paid to the area of retirement planning.

Developing the Regional Population Projections

Following the presentations and question/answer periods, participants were divided into small groups covering each of the Economic Zones and each of the social sectors. Each group was provided with certain statistical demographic information about the zone, particularly pertaining to migration. Participants were then asked to formulate assumptions about the likely future path of migration, based on their knowledge of the region. These assumptions were then fed into the Department of Finance regional demographic projection model, and the results were given back to participants within an hour for discussion and input. The results of the consultations were a key input to the development of regional population projections.

Overall the provincial population was projected, on the basis of the regional consultations, to decline by 3.0% between 2000-2016; this decline falls about mid-way between the high and medium scenarios. It is noteworthy that the 3.0% decline estimated by the regions was based on their own estimate of the population in 2000 (they were asked to formulate estimates from 1996-2000-2016), and that this estimate was some 8,000 lower than the Statistics Canada estimate which existed at the time, perhaps a foreshadowing of what the 2001 Census may reveal.²

²Statistics Canada typically overestimates the provinces population between Census years because of missed migration, and then makes historical revisions once new Census information is available. The next Census is due in 2001.

Economic Zones versus Strategic Social Plan Regions



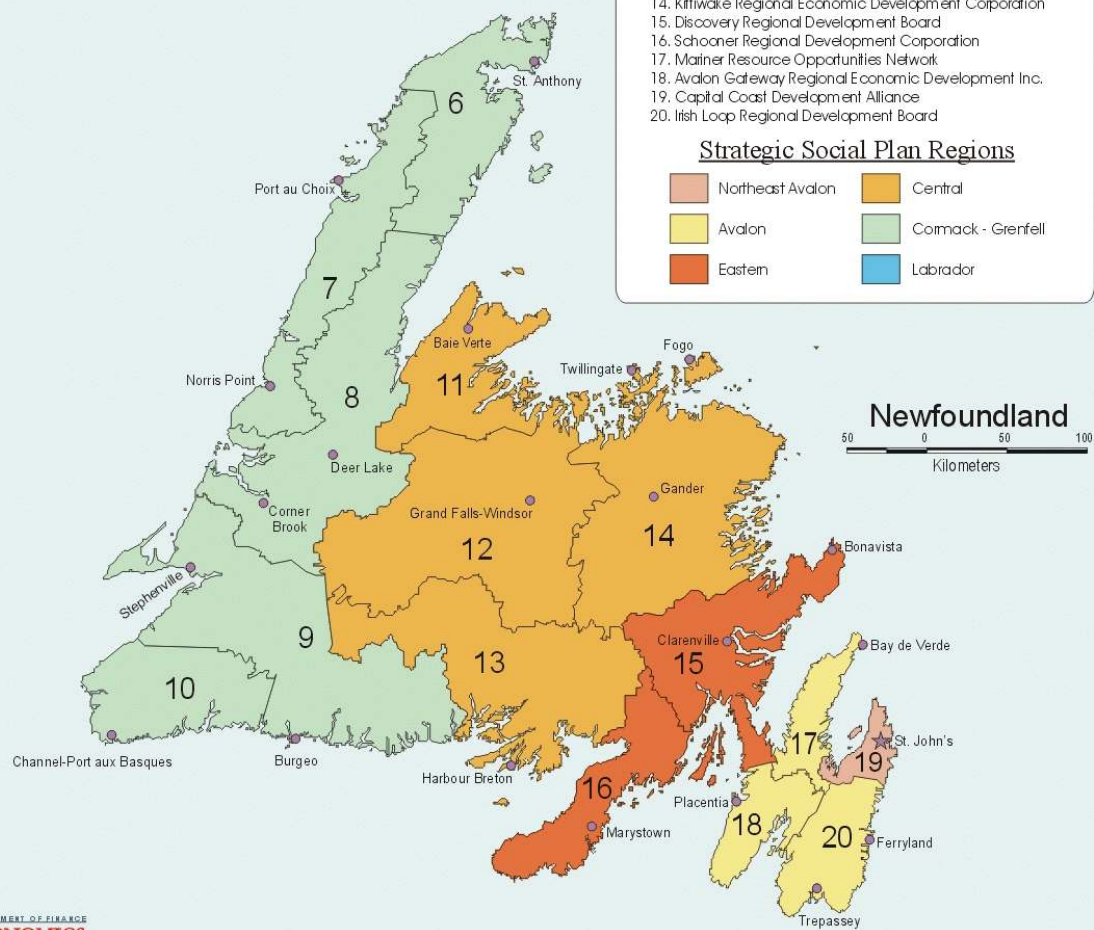
Legend

Economic Zones

1. Inukshuk Development Corporation
2. Hyron Regional Economic Development Corporation
3. Central Labrador Economic Development Corporation Inc.
4. Southeast Aurora Development Corporation
5. Labrador Straits Development Corporation
6. Nordic Economic Development Corporation
7. Red Ochre Regional Board Inc.
8. Humber Economic Development Board Inc.
9. Long Range Regional Economic Development Board
10. South Western Marine and Mountain Zone Corporation
11. Emerald Zone Corporation
12. Exploits Valley Economic Development Corporation
13. Coast of Bays Corporation
14. Kiltiwake Regional Economic Development Corporation
15. Discovery Regional Development Board
16. Schooner Regional Development Corporation
17. Mainier Resource Opportunities Network
18. Avalon Gateway Regional Economic Development Inc.
19. Capital Coast Development Alliance
20. Irish Loop Regional Development Board

Strategic Social Plan Regions

	Northeast Avalon		Central
	Avalon		Comack - Grenfell
	Eastern		Labrador



DEMOGRAPHIC OUTLOOK BY ECONOMIC ZONE

Change in population by Economic Zone for the 2000-2016 period, and for all three scenarios (low, medium and high) is summarized in the two charts on the following page. These projections reflect the input obtained during the regional consultations. As the charts show, variation in demographic trends among regions of the province is projected to continue in the future, with consequent implications for future regional differences in births and aging patterns (see map of the Economic Zones on previous page).

Zones Projecting Population Decline

Over half of the Economic Zones (13 out of 20) do not think their populations will level off beyond 2000. Losses are projected to continue throughout the next 10 or 15 years, at rates ranging between -3.7% and -21.7%. In absolute terms, projected declines in the size of the total population are relatively small in most Zones under the medium scenario (i.e., well below 5,000) but do range between 5,000 and 8,500 in several of the Zones. Restructuring of the fishery and reform of the EI program have had significant impacts on many of these Zones, and were most often cited as key reasons for the population outlook. Changing expectations of youth, who are pursuing higher education in greater numbers, was also important in the outlook.

Zones Projecting Population Growth

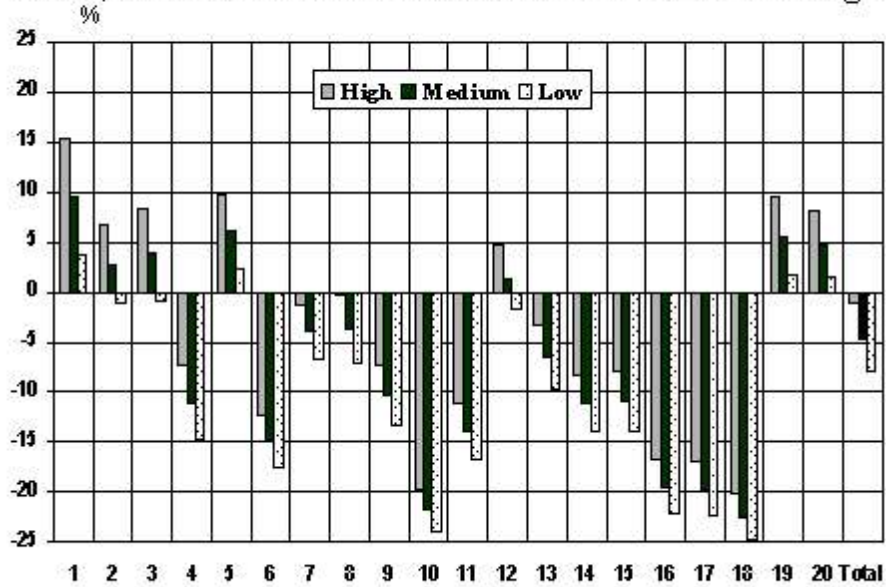
While only two zones, both in Labrador, experienced population growth from 1991-2000, seven of the twenty Economic Zones expect population growth from 2000-2016, ranging between 1.4% and 9.5% under the medium scenario over the period. In absolute terms, the growth in population is projected to be less than 1,000 in these Zones with the exception of Zone 19 which takes in the St. John's Census Metropolitan Area, where growth in the 10,000 range is projected.

Four of the population growth zones are in Labrador and reflect, among other things, optimism surrounding the completion of the Trans-Labrador Highway, continued growth in tourism related activity, potential for hydroelectric and mineral developments in the area and continuing growth in Aboriginal populations. It also reflects a belief that in the future, retirees will remain in the area to a much greater extent than has occurred in the past. The Grand Falls-Windsor zone, where the information technology sector is growing, and both zones on the eastern Avalon, where strong performance is expected in a number of sectors including the IT/Customer Contact and oil and gas sectors, are also expected to record population growth. Growth in these zones is also partly related to internal migration from other parts of the province, consistent with the expectation of continued urbanization in Newfoundland and Labrador. For instance, the St. John's region which comprises zone 19 accounted for 31.8% of the total provincial population, but under the Medium scenario this share will rise to 37.3% by 2016.

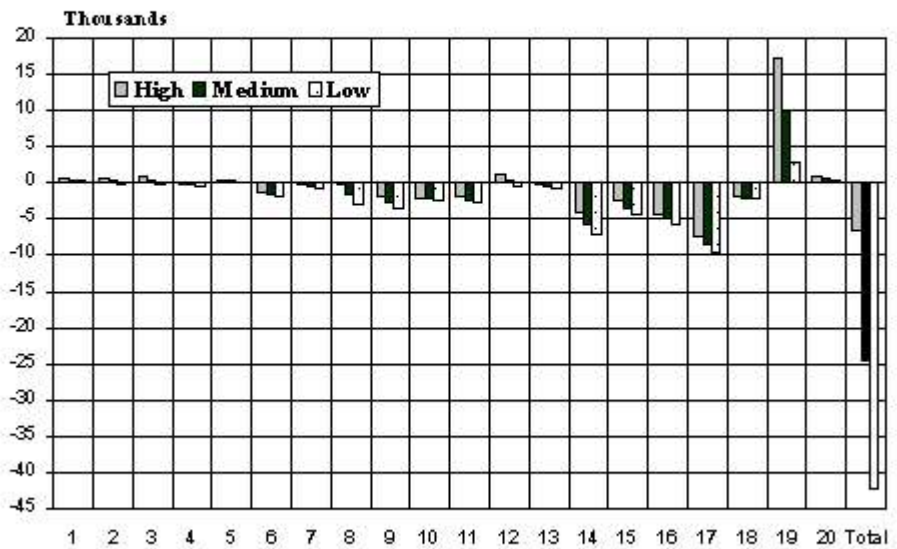
Overall Population Decline Projected

Overall, total population for the province as a whole is projected to continue declining, by some 4.6% between 2000-2016 under the medium scenario. Details of all three demographic scenarios, for both total province and the Economic Zones, are provided in Appendices 8-10 for the low, medium and high scenarios respectively.

Population by Economic Zone: 2000-2016
LOW, MEDIUM & HIGH SCENARIOS – % Change



Population by Economic Zone: 2000-2016
LOW, MEDIUM & HIGH SCENARIOS – Actual Change



Population and Labour Force Aging

The province's median age has risen continuously since the early 1970s, from 21.2 years in 1972 to 37.2 years in 2000. Under the medium scenario, the median age is projected to continue climbing and to reach 46.2 years in 2016.³ In other words, over half the province's population is projected to be older than 46 in 2016. These past and projected future changes are the result of significant shifts in the age structure of the province's population brought on by declining births and rising deaths pointing to negative natural population change in the near future, and net out-migration of young people which is not projected to become net in-migration until the end of this decade.

The province as a whole is expected to continue undergoing significant change in its age structure in the coming years. The child/youth population (i.e., 0-19 years of age) declined from 31.6% of the total population in 1991 to 25.0% in 2000. By 2016, under the medium scenario, the child/youth population is projected decline to 17.5% of the total population. For some Economic Zones, the decline will be even more pronounced than this (see chart on next page). For instance, in Economic Zone 10 (Channel-Port aux Basques), the child/youth population declined from 31.6% in 1991 to 22.7% in 2000, and is projected to decline to only 12.0% in 2016 under the medium scenario. Declines in the proportion of population in this age group are projected in all Economic Zones, however, the proportion projected in 2016 varies considerably across Zones — from 31.8% in Zone 1 (Northern Labrador) to about 12% in Zones 7 and 10.

At the same time that the relative size of the child/youth population has been declining, the population over 65 years of age has increased — from 9.6% of the total population in 1991 to 11.6% in 2000, and it is projected to rise to nearly 19% in 2016 under the medium scenario. As with the child/youth population, significant regional differences in aging patterns are expected. Zone 10 once again stands out, with the share of population 65+ rising from 9.0% in 1991 to 12.6% in 2000, and projected to rise to 26.8% in 2016 under the medium scenario (see chart on next page).

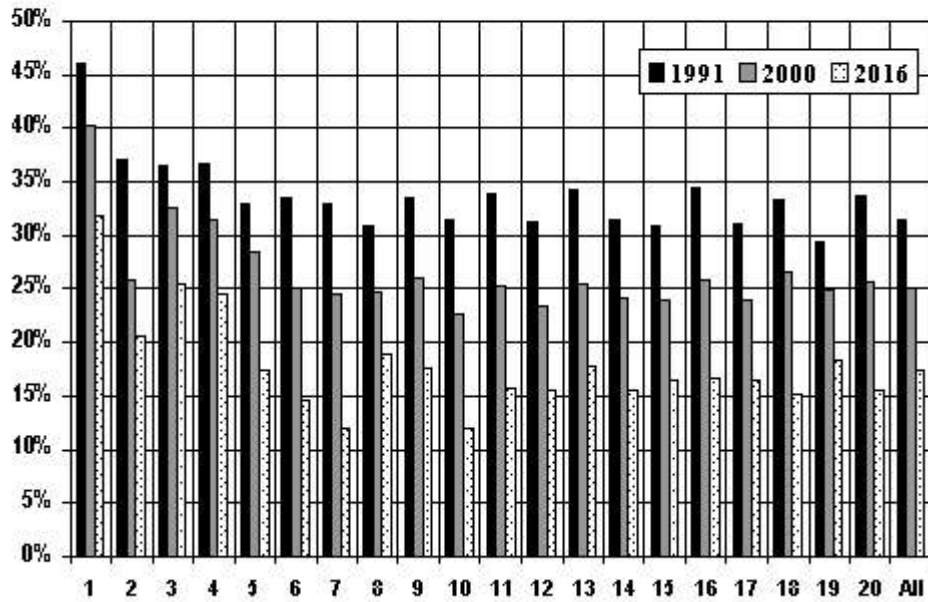
The prime labour force age population (i.e., those 20-64) is also projected to age over this period. Under the medium scenario, the total size of the 20-64 population is projected to decline marginally from 2000-2016 by just under 5%, however, the age structure of this group will undergo significant change. In 2000, those 20-44 comprised 60% of this age cohort whereas by 2016 it is projected to comprise only about 48%. The proportion 45-64, on the other hand, is projected to rise from 40% in 2000 to about 52% in 2016. These changes are illustrated on the last page of Appendix 9 for the medium scenario.

Interestingly, regional dependency ratios⁴ are expected to be virtually unaffected by this aging of the population other than the fact that a larger proportion of the “dependent” population will be 65+, and likely to have retirement income with which to support themselves.

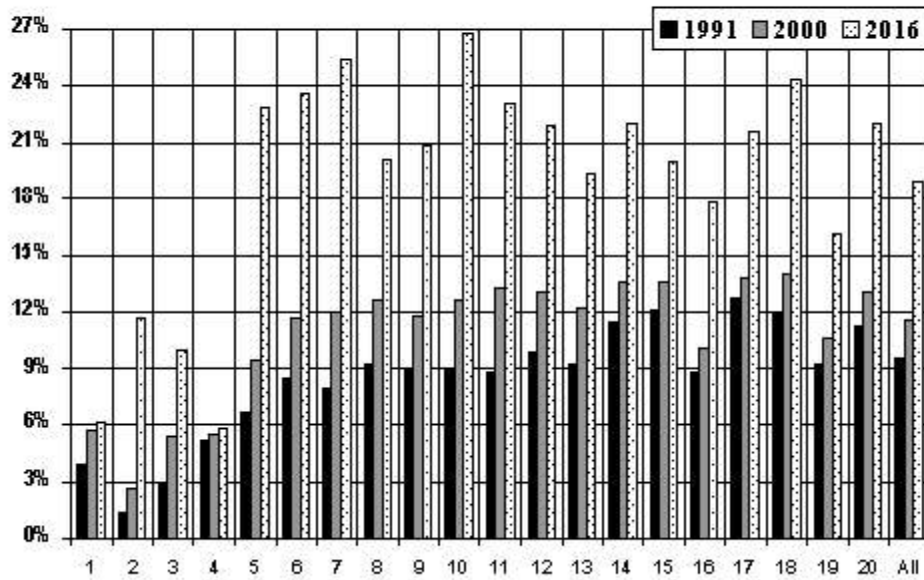
³ The median age can be thought of as the midpoint of the population age profile. It refers to the age at which 50% of the population would be younger and 50% would be older.

⁴The dependency ratio refers to the population 0-19 and 65+ as a proportion of the prime working age population 20-64 that is available to support the younger and older population.

**Children and Youth (0-19) will Continue to Decline
as a Proportion of the Total Population**
(will also decline in absolute numbers)



**Population 65+ will Continue to Increase
as a Proportion of the Total Population**
(will also increase in absolute numbers)



SUMMARY AND CONCLUSIONS

The province's population is projected to decline between 2000 and 2016 under all three scenarios, though at a more modest pace under the medium or base case scenario than has occurred over the past decade. This reflects the expectation that births will continue falling while the number of deaths will continue to rise with population aging. In the future, population decline will be more related to natural population changes as deaths exceed births for the first time in the province's history. Nevertheless, net out-migration (as a long term trend) is projected to continue until at least the turn of this decade, when labour shortages are projected to lead to back and/or in-migration. Projected declines for the province's total population range between -1.2% under the high scenario to -7.9% under the low scenario.

These demographic trends are expected to differ considerably across Economic Zones. It is expected that, in the midst of overall population decline, there will be pockets of population growth as rural parts of the province (especially fishery-dependent areas) are projected to continue losing population while urbanization continues and region-specific economic growth and diversification leads to net in-migration to some areas of the province.

All regions of the province are expected to continue aging, but as with total population change, the aging trend is expected to be more pronounced in some regions of the province than in others. The youth population is expected to decline in all parts of the province, however, projections call for more rapid decline of the rural youth population. For instance, the 5-19 year age cohort is projected under the medium scenario to decline by about 35% for the province as a whole whereas on the northeast Avalon the projected decline is about 25%. In Zones 6 and 7, on the other hand, projected declines are in the 50% range.

The implications of regional population shifts and differing trends across regions are likely to be significant. Assessing these implications was not, however, the purpose of this joint project but rather is the subject of the province's own internal *Demographic Study* since virtually all of the implications have to do with areas of provincial jurisdiction. The purpose of this joint project was, as stated in the terms of reference, *to develop well-informed projections of Newfoundland and Labrador's population, for provincial and sub-provincial levels*. This joint project has achieved that objective and has succeeded in building a consensus between the two levels of government on a base case set of population projections for the province. This process also engaged regional interests in a discussion of demographic trends which was key to the development of the set of sub-provincial projections along zone boundary lines. Moreover, the fact that we have been able to discuss this openly has assisted both the provincial and federal government's in their respective areas of interest. The consultations and discussions between the study group and the provinces's Strategic Social Plan Boards afforded both groups the opportunity to exchange a wealth of information and knowledge about the recent trends and future prospects within each region of the Province. In and of itself, this has been a good thing. School Boards, Health Boards, community and economic development groups, ACOA and the Department of Finance have, and continue to benefit from this exchange.