

PROJECTIONS OF THE POPULATION WITH ABORIGINAL IDENTITY, CANADA, 1991-2016

SUMMARY REPORT

September, 1996

***Prepared by:
Mary Jane Norris
Don Kerr
François Nault***

***Population Projections Section
Demography Division
Statistics Canada***

***for:
Andrew J. Siggner
Special Advisor, Research Statistics
Royal Commission on Aboriginal Peoples***

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PURPOSE

This report represents a summary of the more comprehensive and technical background document “Projections of the Population with Aboriginal Identity in Canada, 1991-2016” (Norris, Kerr and Nault, 1995), prepared for the Royal Commission on Aboriginal Peoples. The current report focuses on the projection results; the reader is referred to the background report for a more detailed account on the assumptions and methodology used in developing estimates and projections of the population with Aboriginal identity.

ACKNOWLEDGEMENTS

This report, commissioned by the Canada Mortgage and Housing Corporation (CMHC), represents a summary of the more comprehensive and technical background document “Projections of the Population with Aboriginal Identity in Canada, 1991-2016”, by Mary Jane Norris, Don Kerr and François Nault. These projections, initiated and sponsored by the Royal Commission on Aboriginal Peoples (RCAP), were completed by the Population Projections Section of the Demography Division, Statistics Canada, in consultation with Andy Siggner, who had the managerial responsibility for the project within the Royal Commission. The following persons contributed to the project: H. Basque, V. Kawka, P. Johnston, N. Kopustas, J.F. Michaud, D. St-Germain, L. Wise and the late S. Coyne, of the Demography Division; M.V. George, Chief, Population Projections Section; R. Lachapelle, Director of the Demography Division and B. Laroche, former Director; C. Cardillo and E. Langlet of Postcensal Surveys, Statistics Canada; P. Gauvin of Indian and Northern Affairs; J.P. Bourdeau of RCAP; and S. Clatworthy of Four Directions Consulting Group.

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EXECUTIVE SUMMARY

Projections of the population with Aboriginal identity were developed using information derived from the 1991 Aboriginal Peoples Survey (APS). The APS is a postcensal survey which was conducted in the Fall of 1991, following the national census in June. According to the APS, an estimated 625,710 of the 1,002,675 persons in the 1991 Census reporting Aboriginal origins (North American Indian, Metis or Inuit) and/or being registered under the Indian Act, stated that they identified with these groups, and/or were registered Indians. Adjustments of this population, for incomplete enumeration of reserves and settlement in the Census and APS, and for net census undercoverage, yielded an additional 95,740 persons (56,220 persons for incomplete enumeration and 39,520 for undercoverage). This results in a total base population of 720,600, for this set of projections.

The projections were prepared using Statistics Canada's regional cohort component approach: that is the 1991 base population, for each Aboriginal group, is projected by age and sex, using assumptions about the components of growth by province/region and territories, and by place of residence (on reserve, off reserve, rural and urban) over a 25-year period from 1991 to 2016. Assumptions were developed for four major components of growth: fertility; mortality; migration by province/region and territory, by place of residence (except for Inuit); and, reinstatements and status inheritance rules of the Indian Act revised under Bill C-31 legislation (projected to affect specifically the registered and non-status Indian populations). Component assumptions were developed separately for four major Aboriginal groups: registered Indians, non-status Indians, Metis and Inuit. In consultation with the Commission staff, four projections were chosen (out of a possible 12) to provide a range of growth, including the continuation of current trends. The four projections encompass three tempos of growth: low, medium-low (continuation of current trends) and high. Highlights of the projection results are presented below.

Population growth

The population with Aboriginal identity is projected to grow by about 373,000 persons or 52% over the next 25 years, from an estimated 720,600 in 1991 to 1,093,400, assuming the continuation of recent demographic trends. The range in projected growth is between a low of 1,071,300 and a high of 1,207,100, by 2016. The average annual growth rate of the total Aboriginal population is expected to slow down, under all projections over the projection period.

Significant increase is projected for each Aboriginal group: given the continuation of recent demographic trends, the Inuit population is

projected to grow the most rapidly, from 37,800 in 1991 to 60,300 by 2016; the non-status from 112,600 in 1991 to 178,400; the registered Indian population from 438,000 in 1991 to 665,600; and the Metis projected to grow the slowest from 139,400 in 1991 to 199,400.

Indian Act/Bill C-31 legislation

Both demographics and Bill C-31 legislation, are important considerations in the future size and growth of the registered and non-status Indian populations. For registered Indians, reinstatements of mainly non-status Indians (both origin and identity) represent an additional component of population growth with an assumed inflow of some 63,000 persons over the projection period. In contrast, the registered population is projected to lose about 43,000 children, born to parents where one parent is a status Indian and one is not, over two generations of out-marriage, and who consequently would not be eligible for registration status, under the Indian Act. Conversely, the non-status Indian identity population on the one hand, projected to lose some 16,500 persons through reinstatements to Indian status, on the other hand will gain significant population from the 43,000 children, not eligible for status, who were transferred from the registered population.

Age structure

The total Aboriginal identity population will continue to age over the projection period, especially in relation to a growing proportion of the population in the older working age group, 35-64. Between 1991 and 2016, under the continuation of current trends, the percentage of the population with Aboriginal identity, aged 0-14, is projected to decline steadily from 37% to 24%, with less pronounced declines for the 15-24 and 25-34 group, from 20% to 16%, and 19% to 17%, respectively. In contrast, increases in the shares of older age groups are projected, especially for the 35-64 working age group, from 22% to 36%. For seniors, 65+, the percentage is projected to increase from 3% to 7%.

Unlike the Canadian population in general, which is aging into retirement, the Aboriginal population is aging more from youth into the working age group. The median age of the population with Aboriginal identity is expected to increase from 22.6 years in 1991 to 32.4 by 2016.

In absolute terms, the population with Aboriginal identity is expected to increase in all age groups. If current trends continue, the number of children, under the age of 15, would increase only slightly, from 263,000 in 1991, to 267,000 in 2016, due to declining fertility; the working-age (15-64) population, would grow substantially from 434,000 persons in 1991, to 753,000 by 2016, due mainly to the projected increase of the 35-64 age group; and the population aged 65 and over, numbering some 23,000 in 1991, would more than triple to almost 74,000 by 2016.

The extent of aging varies by Aboriginal group and place of residence, due to fertility differentials, migration and/or Indian Act (Bill C-31) assumptions.

Regional population growth

Positive growth is expected for all provinces or regions and territories over the projection period (current-trend with migration). The relative size of regional identity populations is projected to shift over the projection period. In 1991, Ontario was clearly the province with the largest Aboriginal population, about 143,000, followed by British Columbia (121,000) and Alberta (118,000). By 2016, if current trends and migration continue, the Aboriginal population of both Ontario and Alberta are projected to surpass 200,000, followed by 187,100 in British Columbia.

Under the contribution of current trends, the total Aboriginal population in the far north is expected to increase from 70,000 in 1991 to 106,000 by 2016; in the mid-north from 190,000 to 289,000 and in the south from 460,000 to 698,000.

Population growth by place of residence

Projected growth of Aboriginal populations varies by place of residence. For example, assuming the continuation of current trends and migration, the registered Indian population is projected to grow most rapidly on reserves, by 64%, from an estimated 254,600 in 1991 to 418,700 by 2016; to decline significantly, in rural areas off reserve, by 32%, from 34,900 to 23,800, due to net out-migration; and to increase significantly in urban areas, by 50%, from 148,500 to 223,100.

Corresponding to these projected figures, the proportion of registered Indians residing on reserve could increase from 58% in 1991 to 63% by 2016, while the proportion residing in urban areas would remain relatively stable, around 34%, and, in rural areas decline from 8% to 4%.

Share of population

Canada's share of population with Aboriginal ancestry and Aboriginal identity is expected to increase over the next 25 years. Given the continuation of current trends, the proportion of Canada's population with Aboriginal identity could increase from 2.6% in 1991 to 3% by 2016 (under Statistics Canada's medium growth national projection) (Norris, et al., 1995).

With respect to regional level shares, clearly the Northwest Territories is projected to maintain its highest share of regional population with Aboriginal identity (63% by 2016), followed by Manitoba (14%) and Saskatchewan (13%) while Quebec and Ontario are projected to retain the smallest proportion with Aboriginal identity (just over 1% by 2016).

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CHAPTER 1 - INTRODUCTION

This report represents a summary of the more comprehensive and technical background document titled *“Projections of the Population with Aboriginal Identity in Canada, 1991-2016”*, available through CMHC. The current report focuses on the projection results; the reader is referred to the background report for a more detailed account on the assumptions and methodology used in developing estimates and projections of the populations with Aboriginal identity.

Projections of the population with Aboriginal identity were developed using information derived from the 1991 Aboriginal Peoples Survey (APS).¹ The APS is a postcensal survey which was conducted in the Fall of 1991, following the national census in June. The present report relies upon this survey in defining the population for the base year of the population projection. Since the APS measures the Aboriginal population in a different manner from the Census, the size of the projected Aboriginal population is substantially different from what has been reported elsewhere.²

For the first time the APS made available a question on Aboriginal self-identification. Furthermore, this question differs from the cultural origin question on the national census. While the census asked Aboriginal persons to indicate to what cultural group their ancestors belonged, the APS asks these same persons whether they identify with this ancestry.

According to the APS, an estimated 625,710 of the 1,002,675 persons in the 1991 Census reporting Aboriginal origins and/or being registered under the Indian Act, stated that they identified with

these origins and/or were status Indians. A large sample of individuals who reported in the 1991 Census as having *Aboriginal origin(s) and/or being registered under the Indian Act*, were selected for the APS and then asked the identity question — see Chart 1 in Appendix. The Royal Commission on Aboriginal Peoples requested that a set of projections be prepared for the population that identified with their Aboriginal origins.

Projections have been prepared for persons who identify with any of the following groups: (i) the North American Indian population, (ii) the Metis, and (iii) the Inuit. With respect to the North American Indian population, this group is further delineated according to legal status, i.e., whether they are registered or non-status (as defined by the Indian Act).³ Separate projections of each group are made for regions of the country — provinces and territories either separate or grouped — further broken down by place of residence (i.e. on reserve, off reserve, rural and urban). A brief description of these projections is provided in Chart 2 of the Appendix for each Aboriginal group.

These projections are not predictions — their accuracy depends on the reliability of the base population and the degree to which assumptions about the components of population change, such as fertility and mortality, represent future trends. Therefore, prior to the presentation of projection results, a discussion is provided about projection methodology and development of the base population and component assumptions. A more detailed account is available in the technical report.

CHAPTER 2 - METHODOLOGY

The projections are produced using a regional cohort component approach.⁴ In so doing, a separate analysis of each component of population change is considered — fertility, mortality, and migration — making use of appropriate demographic parameters. These parameters, usually in the form of rates and ratios, are extrapolated, and then added or applied to the base population, starting with the year 1991. The impact of Bill C-31, an amendment to the Indian Act, is also directly considered in the present report, because substantial numbers have regained status through this legislation and the eligibility for status of future generations is affected. The

result is a projected population through to the year 2016, by age and sex for each region by place of residence. National figures are obtained by aggregating these projections across regions and places of residence for each year.

The following projections represent future trends only in so far as their underlying assumptions are true with respect to fertility, mortality and migration. Consequently, a number of alternatives are proposed, including three assumptions on fertility, two assumptions on mortality, two assumptions on internal migration, and one assumption on Bill C-31 reinstatements and births.

CHAPTER 3 - BASE POPULATION

The accuracy of any projection depends on the reliability of the base population as well as the degree to which underlying component assumptions represent the actual trend. Assessing the reliability of the base population in Aboriginal projections involves two considerations: limitations associated with ethnic origin or identity data; and, coverage problems in both the 1991 Census and APS which affect population counts. In the case of the latter factor, APS data were evaluated and adjusted in order to derive suitable base populations for the projections.

Ethnic Origin and Identity Data

The difficulties in establishing a quantitative fix on the size of the Aboriginal population in Canada have long been recognized by analysts at Statistics Canada (Boxhill, 1984; Pryor, 1984). With respect to the inherent limitations associated with ancestry or cultural origin data, Boxhill emphasizes the extent to which social research depends upon "subjective self-identification". Analyses of past census results show how volatile responses to the ethnic origin question can be. Furthermore, the new concept of "self-identity" on which these projections are based, is probably also vulnerable to fluctuations in response over time. It is impossible to predict what will be the response in future censuses.

Evaluation and Adjustment of APS Data

In order to derive a reliable base population for projections, it was necessary to adjust the 1991 APS population by age and sex, due to data quality problems associated mostly with incomplete enumeration and undercoverage during the 1991 Census and APS. However, before presenting how the population has been adjusted, the following provides a brief review of the published unadjusted counts of Aboriginal persons in the 1991 Census and APS.

Unadjusted Population

In the 1991 Census, about 4% of Canada's population (1,002,675) reported Aboriginal origins. This involved 783,980 persons reporting North American Indian ancestry, 212,650

reporting Metis ancestry, and 49,255 reporting Inuit ancestry.⁵ These figures are substantially higher than the respective figures from the Aboriginal Peoples Survey, with just over 2% of Canada's population reporting that they identify with their Aboriginal ancestry. The APS definition of the Aboriginal population is substantially narrower than the census, as only about 58% of North American Indians (460,680), 64% of Metis (135,265), and 74% of Inuit (36,215) are in the APS population base.⁶

Population Missed due to Incomplete Enumeration and Undercoverage

Dwellings or individuals missed due to "coverage" problems encountered in both the 1991 Census (which acted as the sampling frame) and in the APS, affect population counts. Some Indian reserves and settlements were either partially or incompletely enumerated, because enumeration was either: not permitted or was interrupted before it could be completed; was late; or, was such that the quality of collected data was considered inadequate. In addition, errors occurred due to undercoverage in general, when dwellings and/or individuals were missed. As a result of these problems a total of 95,740 people were estimated to be missed as follows: incomplete enumeration of reserves and settlements resulted in 34,340 persons being missed in the Census and another 21,880 in the APS; undercoverage in the 1991 Census (based on the Reverse Record Check) yielded an estimated 26,980 missed persons on reserves and settlements, and another 12,540 off reserves.

Adjusted Population

Table 1 presents the APS base population before and after the adjustments, which were made in consultation with both Commission staff and APS methodologists. Overall, the largest adjustment is associated with the status on-reserve population, which has been augmented by 45.4% of which 30.4% is due to incomplete enumeration and 15% is due to undercoverage. The off-reserve status population is adjusted by only 3.1%, the non-status North American Indian by 4.7%, the Metis by 3.1%, and the Inuit by 4.4%.⁷ Overall,

the total population with Aboriginal identity has been adjusted upwards from 625,700 to 720,650.

Base Populations by Aboriginal Groups and Total Aboriginal

The base population for this set of projections is the adjusted 1991 APS population, by single years of age (0, 1, 2..., 74, 75+), sex, region, place of residence and Aboriginal group. Total base population counts are given in Table 1, at the Canada level, for each of the four Aboriginal groups, i.e. (i) the status of registered North American Indian population, by on and off reserve, (ii) the non-status North American Indian population, (iii) the Metis, and (iv) the Inuit populations.

The APS encountered a small percentage — less than 1% of the total Aboriginal population who

reported more than one Aboriginal identity response.⁸ An estimated 4,000 persons in the unadjusted APS population of 625,700, gave identities of both North American Indian (non-status) and Metis, 1,660 persons reported both North American Indian (status) and Metis, about 400 persons reported being both North American Indian and Inuit, 245 reported being both Inuit and Metis, and fewer than 100 reported being North American Indian, Metis and Inuit. With adjustments for multiples as well as underenumeration and undercoverage, the final adjusted 1991 base year total population came to 720,650 for the total Aboriginal population. Without adjustment for multiples the total of the four Aboriginal groups sums to 727,900 (Table 1, Column C).

Table 1:

APS Population and Adjustments for Incompletely Enumerated Reserves and Undercoverage, by Aboriginal Group, Canada, 1991

Aboriginal Population (APS)	Aboriginal Identity Population			Percent Increase due to		
	1991 APS Count (Unadjusted)	Adjusted for Incomplete Enumeration	Adjusted for Both Incomplete Enumeration and Undercoverage	Adjustment for Incomplete Enumeration	Adjustments for Undercoverage	All Adjustments (Incomplete Enumeration and Undercoverage)⁴
North American Indians¹	A	B	C	D	E	F
Status¹	353,055	406,755	438,030	15.2	8.9	24.1
- On Reserve ²	175,120	228,365	254,580	30.4	15.0	45.4
- Off Reserve	177,940	178,395	183,455	0.3	2.8	3.1
Non-status¹	107,625	109,050	112,640	1.3	3.3	4.7
Metis¹	135,260	136,070	139,395	0.6	2.5	3.1
Inuit¹	36,215	36,250	37,825	0.1	4.3	4.4
Total Aboriginal Without Multiples³	625,700	681,940	720,650	9.0	6.2	15.2
Total Aboriginal With Multiples	632,160	688,130	727,895	8.8	6.3	15.1
Adjustments	N/A	56,220	95,740			

Notes:

1. Aboriginal group counts above, do contain some minor double counting of those giving more than one identity response (e.g. those giving a Metis and North American Indian identity and status response are counted as both Metis and as North American Indian status).
2. The definition of "on reserve" required for the Royal Commission is slightly different from the Census definition as it includes some additional Aboriginal communities which are affiliated with Indian bands. For a full listing of these additional communities, see Appendix B.
3. Total Aboriginal without multiples does not double count multiple Aboriginal identity responses. Therefore, individual group counts above do not add up to this total.
4. All adjustments include a) incomplete enumeration of reserves and additional Aboriginal communities; and b) adjustments for undercoverage of the population residing on participating reserves or in non-reserve areas.

Source: Unadjusted data: Statistics Canada, 1991 Aboriginal Peoples Survey, special tabulations.
Adjusted data: Statistics Canada, Demography Division, Population Projections Section.

CHAPTER 4 - PROJECTION ASSUMPTIONS

In these population projections, assumptions have been developed for four major components of growth: fertility; mortality; migration, by place of residence and by province or region; and, Bill C-31 legislation, concerning reinstatements and status inheritance rules of the Indian Act. While fertility and mortality projections are developed for all Aboriginal groups, the Bill C-31 component is projected to affect growth of specifically the registered and non-status Indian populations, and migration is projected for all Aboriginal groups except Inuit.

In addition to component assumptions, implicit assumptions concerning identity underly projections of the populations with Aboriginal identity. Before presenting the component assumptions, a discussion of identity assumptions is provided.

Identity Assumptions

The projections have two major implicit assumptions concerning identity, as follows:

1. That identity is inherited (i.e. that all of the offspring of individuals who identify with their Aboriginal origins in 1991 will do so in the future, and furthermore will identify with the same Aboriginal origins) and,
2. That identity can be gained but not lost during the period (i.e. that in addition to the offspring mentioned above, other individuals who did not identify in 1991 will do so in the future).

For example, in the case of Bill C-31 projections, it is assumed that future C-31s, that is, reinstatements, will be sourced from the population which does not currently identify with its Aboriginal origins; and as well, that those individuals, born to registered Indians, but who do not qualify for registered status, due to the C-31 inheritance rules, will still identify with their North American Indian origins.

Components of Growth Assumptions

Assumptions were developed for three components of growth: fertility, mortality and internal migration. Details on the development of each component projection, levels and past trends,

and component assumptions are provided in Appendix B.

Assumptions for each of the three components are summarized briefly as follows:

Fertility Assumptions

Two fertility assumptions developed for each group, can be summarized as follows: under the rapid decline assumption, considered to be the most plausible, fertility converges to below the TFR replacement level of 2.1 children per woman, for most Aboriginal sub-populations by 2016; under the constant assumption, a clear departure from recent trends, the fertility level is projected to remain constant at the levels observed in 1991, for each Aboriginal group (see Table 2), representing in the present projections, an upper bound for fertility.

Mortality Assumptions

Two mortality assumptions were developed for each Aboriginal group, by place of residence, at the national level. The assumptions can be summarized as follows: under the assumption of a decline in mortality, life expectancy at birth is assumed to climb, although all projections remain below the Canadian average, across all Aboriginal populations. Under the constant mortality assumption, considered unlikely in light of recent trends, survival rates for 1991 are held constant throughout the projection period for all Aboriginal groups, across all geographic areas, and represent an upper bound for mortality in the projections.

Internal Migration Assumptions

The internal migration component involves two sets of geography: interprovincial/regional and place of residence (reserve, rural and urban areas off reserve). Migration projections were developed for three of the four aboriginal groups: registered Indian, non-status Indian and Metis. In the case of the Inuit, migration was assumed to be nil since migration as a component of growth for the Inuit population among their four large regions was thought to be negligible (Clatworthy, 1994).

Two sets of migration assumptions, by region and place of residence, were employed in the projections: zero migration; and, the continuation

of current patterns, based on the 1986-91 period, held constant over the projection period. For registered Indians, the continuation of current migration patterns by place of residence, over the projection period, results in: reserves having modest net inflows of population; rural areas, significant losses; and urban areas, relatively minor net outflows. For both non-status Indians and Metis, population gain due to migration in urban areas with corresponding loss in rural areas, was projected throughout most of the projection period. Interprovincial migration assumptions reflect the continuation of migration patterns observed for each Aboriginal group over the 1986-91 period: for registered Indians, it is the continuation of a "westward" trend, in which net inflows of migrants are projected for Alberta and British Columbia throughout the 25-year projection period; for non-status Indians, the continuation of net inflows of migrants to Ontario, Alberta, and the Territories is assumed; and for the Metis population, a continued net outflow of migrants from Ontario, with net inflows to Alberta, British Columbia and the Territories.

Bill C-31 Assumptions

Revisions to the Indian Act, under Bill C-31 legislation, are also important considerations, in addition to demographics, in the future size and growth of the registered and non-status Indian populations. For registered Indians, reinstatements of mainly non-status Indians (both origin and identity) represent an additional component of population growth, given current and projected inflows of reinstated persons; in contrast, those children who are born to parents where one parent is a status Indian and one is not, over two generations of out-marriage, represent a loss in population because they are not eligible for registration status, under the Indian Act. Conversely, the non-status Indian identity population on the one hand, projected to lose persons through reinstatements to Indian status, on the other hand will gain significant population from the children, not eligible for status, and transferred from the registered population.

Bill C-31 Reinstatements

The Indian Act amendments passed as Bill C-31 in June 1985 provide for the restoration of Indian

status to individuals (and their children) who had lost status under the provisions of the previous Act. The impact of adding persons to the status population, due to these reinstatements, not only increases the size of the registered Indian population, but also leads to a reduction in the number of non-status Indians, as a substantial proportion of this latter population gain status.

Over the past 10 years, the annual number of Bill C-31 registrants increased from about 1,600 per year in 1985 to a peak of around 20,600 per year in 1987. This was followed by a sharp decline to approximately 5,400 per year by 1993. According to the most recent counts from INAC's Reinstatement of Status Information System there were about 4,700 registrants in 1994. Thus, from 1985 to 1994, approximately 96,000 persons were reinstated as a result of the amendments.

Generally, the age-sex distribution of Bill C-31 registrants continues to differ sharply from the registered population. The distribution evolved from a population that in 1985 was highly asymmetrical having a preponderance of women, especially at older ages, to one that has become much more symmetrical in recent years. Women registrants, however, still outnumbered men, but to a significantly lesser extent.

Reinstatement Assumptions

The assumption about the future number of reinstatements was developed in consultation with INAC staff. The number of registrants is projected to decline gradually, from about 6,000 registrants in 1995 to 1,800 by the year 2002 (Figure 1). After 2002, it is assumed that the number of applicants will decline from 1,800 to 1,000 per year by 2006, and remain constant thereafter, thereby resulting in a projected 47,300 reinstatements, for the 1995-2016 period. This projected figure, combined with an observed 96,000 reinstatements for 1985-1994, yields a grand total of some 143,300 persons who could be reinstated, under the revised Indian Act, from 1985 to the year 2016. The total number of reinstatements projected for the 1991-2016 period are 69,300, of which 91%, or 63,200 persons have been added to the registered North American Indian population. About 30% of projected reinstatements were allocated to the reserve population.

It is thought that most of the reinstated persons, have been, and will continue to be sourced from the non-status Indian population. It is assumed that of the some 63,000 persons, who would be added as reinstatements to the registered Indian group, between 1991 and 2016, about a quarter of them (16,500), would be sourced from the non-status identity population and, the remaining three-quarters assumed to come from the non-status origin population.⁹

Bill C-31 Status Inheritance Rules

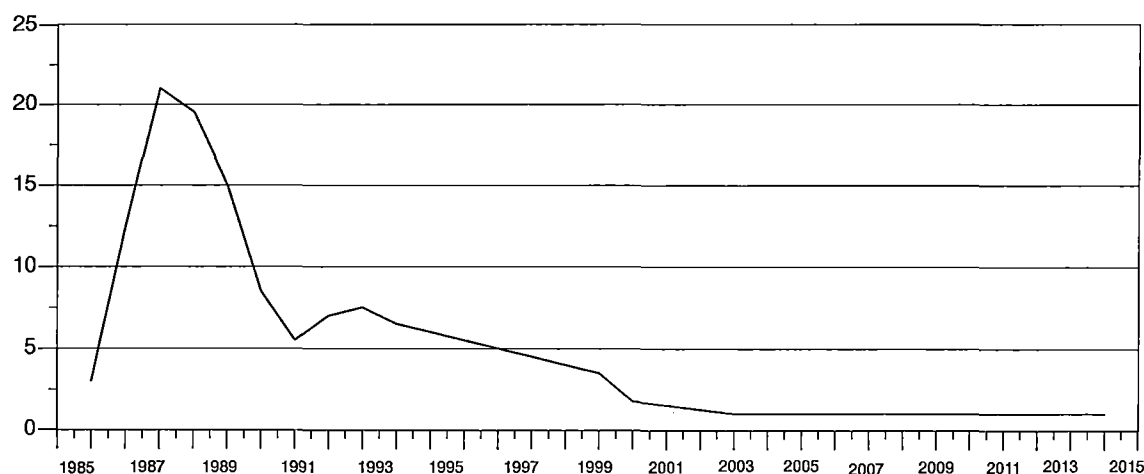
Due to rules introduced via Bill C-31, the projected size of the registered Indian population in Canada will be strongly influenced by future rates of out-marriage. In other words, Bill C-31 includes a set of descent rules which establish entitlement to Indian status at birth. These rules result in two classifications of registered Indian, the first entitled to register under Section 6(1) of the Indian Act of Canada, and the second registered under Section 6(2). According to the set of descent rules, that establish entitlement to Indian status at birth, on the basis of out-marriage to non-registered individuals, offspring from parental combinations involving a non-registered parent and a parent registered (or entitled to be registered) under Section 6(2) of Bill C-31, are not entitled to Indian registration (Clatworthy, 1994:3). Thus in the projection model, based on

assumptions about out-marriage, those resulting Bill C-31 births to status Indian women, that are not entitled to status, are transferred to the non-status Indian group, resulting in a population loss to the registered Indian group, but a potential gain to the non-status Indian group.

Bill C-31 Status Inheritance Assumptions

On the basis of Clatworthy's research, the projection model transfers over the projection period an increasing proportion of all births from the registered Indian population directly into the non-status North American Indian population. Assuming that the outmarriage rate remains constant at 25%, Clatworthy estimated that the percentage retaining status at birth would decline from about 92% at the beginning of the projection period through to about 75% by the end; in other words, the percentage of births to status Indian women that are allocated to the non-status population are projected to increase from 8% to 25%. Based on these assumptions, close to 43,000 births to status Indians would be transferred to the non-status Indian population over the 25-year projection period, under the continuation of current trends. Since, legislative change can have a dramatic impact upon these population projections, the present report assumes no further amendments with respect to inheritance rules.

Figure 1:
Bill C-31 Reinstatements, Canada, 1985-2015



Source: Population Projections of Registered Indians, 1991-2016, Table 2.4

CHAPTER 5 - CHOICE OF PROJECTION SCENARIOS

The combination of the three fertility assumptions, the two mortality assumptions and the two migration assumptions with the single Bill C-31 (birth/reinstatement) assumption, yields a total of twelve possible projections for each Aboriginal group. In consultation with the Commission staff, four were chosen to provide a range of growth, including the continuation of current trends. The four projections encompass three tempos of growth: low, medium-low and high as follows: two medium-low growth scenarios (with and without migration) combine a rapid decline in fertility with a decrease in mortality, representing a continuation of current trends in fertility and mortality; the high-growth combines constant fertility with declining mortality and current

migration; and the low-growth combines a rapid decline in fertility with constant mortality and current migration. For all scenarios with migration, current migration patterns are held constant over the projection period.

These four growth scenarios, projections 1 through 4, are summarized with respect to fertility, mortality and migration in Chart 1. All four projections incorporate the Bill C-31 birth and reinstatement assumptions. A more detailed summary of the four selected projections by all the various component assumptions and corresponding values is provided in Table 2 for each Aboriginal group.

Chart 1:

Summary of Projection Growth Scenarios

Projection No.	Projection Growth Scenarios	Component Assumptions		
		Fertility	Mortality	Migration
1.	Medium-Low Growth (current trends) without Migration	Declining (rapid)	Declining	Zero
2.	Medium-Low Growth (current trends) with Migration	Declining (rapid)	Declining	Current patterns
3.	High Growth	Constant	Declining	Current patterns
4.	Low Growth	Declining (rapid)	Constant	Current patterns

CHAPTER 6 - PROJECTION RESULTS

Projections of Aboriginal populations provide information on what the future size and growth of Aboriginal groups could be, if the underlying projection assumptions prove to be correct. While results are presented for all projections, the main focus in the following analysis is Projection 2, which generally reflects “the continuation of current-trends” by combining the rapid fertility decline and declining mortality with migration. The analysis also shows the expected contributions of the various components to population size and growth over the next 25 years, the changing regional and residential distributions of Aboriginal groups, and what their age-sex structure will look like as the population ages.

Population Size and Growth

Total Aboriginal

The population with Aboriginal identity (adjusted for various undercoverage problems) is projected to grow from an estimated 720,600 in 1991, to over a million, (1,093,400) by 2016, an increase of 52%, if current trends and migration continue (Projection 2). The projected population by 2016 would range from 1,071,300 under the low growth scenario (Projection 4) to 1,207,100 with the high scenario (Projection 3); in other words plus 114,000 or minus 22,000 in relation to the current trend scenario (Projection 2). The “current-trend” projection, a medium-low growth scenario, differs relatively little from the low-growth scenario, the only difference between the two projections being a difference in mortality assumptions, a relatively small impact in comparison to other component assumptions. The range in population between the high and low range projections of some 135,000, represents about 12% of the population projected under the current-trend scenario (Table 3a).

The projected growth rates of the total Aboriginal identity population decline steadily throughout the projection period. For example, for the current-trend projection, this growth rate declines from 2.4% annually between 1991 and 1996 to 1.3% between 2011 and 2016. Corresponding rates under low-growth Projection 4 are from 2.4% to

1.1%; and under the high- growth Projection 3, from 2.6% to 1.8% (Table 3a).

Aboriginal groups

Significant population increase is projected for each Aboriginal group. Over the 25-year projection period, the Inuit population is projected to grow the most rapidly, followed closely by the non-status Indian population, (each with an increase of about 59%). The corresponding growth for the registered Indian group is slightly lower at 52%, while the projected growth of the Metis is lowest at 43%. The Inuit have the highest increase because of higher fertility in comparison to other Aboriginal groups.

Growth of the non-status Indian population is positively affected by the Bill C-31 assumptions; namely, the fact that the number of births reallocated from a status to non-status classification is greater, than the loss of population resulting from the reinstatements of non-status Indians to the status Indian population. The converse is true of registered Indians. In relation to assumptions in the projection model dealing with Bill C-31 births (children born to a registered Indian parent, who do not qualify for status), the model assigns those children, born to status Indian mothers of a mixed marriage (that is, only one parent is a status Indian), to the non-status Indian category, under certain conditions of out-marriage. Depending on the level of “status classification” of the Indian person (ie. whether they are 6(1) or 6(2) according to the Indian Act), his/her marriage to a non-status person could result in either their children or their grandchildren, assuming two successive generations of out-marriage, losing status.

Range in Projected Growth

The registered Indian identity population is projected to grow from an estimated 438,000 in 1991, to 665,600 (Projection 2), with a range between 650,600, under the low projection; and 727,000, for the high projection, representing about 12% of the current-trend projection. Similarly, by 2016, given current trends, the non-status Indian population is projected to increase from 112,600 in 1991, to 178,400, with a

Table 2:

Projections Generated by the Combination of the Component Assumptions by Aboriginal Identity Group, Canada, 2016

Aboriginal Group	1991	2016			
		Projection 1 Current trends without migration	Projection 2 Current trends with migration	Projection 3 High growth	Projection 4 Low growth
Registered Indians					
Total fertility rate (births per woman):	2.9	2.2	2.2	2.9	2.2
Life expectancy at birth (in years):					
Male	66.9	72.9	72.9	72.9	66.9
Female	74.0	80.1	80.1	80.1	74.0
Cumulated total number of Bill C-31 reinstatements		63,200	63,200	63,200	63,200
Cumulated total number of Bill C-31 births		-42,800	-42,600	-55,400	-42,400
Internal Migration		Zero	Current trend	Current trend	Current trend
Non-status Indians					
Total fertility rate (births per woman) :	2.1	1.6	1.6	2.1	1.6
Life expectancy at birth (in years) :					
Male	71.4	76.2	76.2	76.2	71.4
Female	77.9	82.3	82.3	82.3	77.9
Cumulated total number of Bill C-31 reinstatements		-16,550	-16,550	-16,550	-16,550
Cumulated total number of Bill C-31 births		42,800	42,600	55,400	42,400
Internal Migration		Zero	Current trend	Current trend	Current trend
Metis					
Total fertility rate (births per woman) :	2.5	1.8	1.8	2.5	1.8
Life expectancy at birth (in years) :					
Male	70.4	75.5	75.5	75.5	70.4
Female	76.9	81.3	81.3	81.3	76.9
Internal Migration		Zero	Current trend	Current trend	Current trend
Inuit					
Total fertility rate (births per woman) :	3.4	2.5	2.5	3.4	2.5
Life expectancy at birth (in years):					
Male	57.6	63.6	63.6	63.6	57.6
Female	68.8	76.3	76.3	76.3	68.8
Internal Migration		Zero	Current trend	Current trend	Current trend
Notes:					
1. Internal Migration by place of residence and region based on patterns from the 1986-91 census period which are assumed to be constant over the projection period.					
2. Zero international migration.					

low and high projected population of 176,000 and 204,100 respectively, yielding a range of about 16% of the current-trend projection. The Metis identity population under the current-trend (Projection 2) is projected to increase from 139,400 to 199,400, with a 12% range in projected growth, between the low (196,200) and high scenario (219,100). The Inuit identity population, which is the smallest, is clearly the fastest growing with a projected increase of 60% (under current trends) from 37,800 in 1991 to over 60,300 by 2016. The corresponding range in projected growth is about 16%, between a low projection of 58,600 and a high projection of 68,100 (Table 3a).

Growth by Place of Residence

Projected growth by place of residence is clearly affected by the migration assumptions, as well as by those for fertility and mortality. The impact of migration differs by Aboriginal group: for registered Indians, the projected pattern of migration is most favourable to reserves, highly negative for rural non-reserve areas, and slightly negative for urban areas; for non-status Indians and Metis, migration tends to be positive for rural areas and negative for urban areas.¹⁰

Registered Indians

Between 1991 and 2016, given the continuation of current trends, (Projection 2), the registered Indian population is projected to grow most rapidly on reserves, by some 64%, from 254,600 to 418,700; whereas, in sharp contrast, the population is expected to decline dramatically, by nearly a third, in rural areas, from 34,900 to 23,800; and in urban areas could increase by 50%, from 148,500 to 223,100. Should fertility rates remain constant instead of declining (Projection 3), then the numbers of registered Indians living on reserves and in urban areas could increase even more

dramatically to 461,000 and 241,400, respectively. If internal migration is assumed to be nil (Projection 1), a sharply different projection emerges: population in rural areas can be expected to increase 61% over the 25-year period, while urban growth, at 58%, will surpass that projected for reserves at 48% (Table 3b).

Non-status Indians

Between 1991 and 2016, the population of non-status Indians can be expected to more than double, from some 35,000 to about 74,500, in rural areas, and to increase by just over a third in urban areas, from 77,800 to 103,900 (Projection 2). It is the only Aboriginal group population for which annual growth rates are increasing over the projection period, due to the significant positive impact of Bill C-31 births. Unlike the registered Indian population, migration among non-status Indians does not appear to be nearly as important in terms of population growth by place of residence. Growth rates without migration (Projection 1) do not differ significantly from those with migration. Overall, migration tends to favour rural areas at the expense of the urban population (Table 3b).

Metis

If current trends and constant migration continue, the Metis will increase by 57% from 49,300 to 77,400 in rural areas by 2016, and by 35% from 90,100 to 122,000 in urban areas. Compared with the non-status population, migration contributes more to the residential distribution of the Metis population, yet not to the same extent as it does with registered Indians. If zero migration is assumed, then the rural population will have a lower growth of 45%, (without the positive impact of migration on rural areas (similar to non-status)), while projected growth in urban areas would be higher without migration, at 42% (Table 3b).

Table 3a:

Population with Aboriginal Identity and 5-year Average Annual Growth Rate, by Aboriginal Total and Group, by Projection, Canada, 1991 to 2016

	Population projection				5-year average annual (%)			
	Proj. 1 Current Zero Migration	Proj. 2 Current With Migration	Proj. 3 High	Proj. 4 Low	Proj. 1 Current Zero Migration	Proj. 2 Current With Migration	Proj. 3 High	Proj. 4 Low
Total Aboriginal¹	(in thousands)							
1991	720.6	720.6	720.6	720.6	—	—	—	—
1996	811.4	811.4	818.4	810.9	2.4	2.4	2.6	2.4
2001	890.6	890.5	914.4	887.9	1.9	1.9	2.2	1.8
2006	959.6	959.1	1,006.7	952.4	1.5	1.5	1.9	1.4
2011	1,028.7	1,027.5	1,104.6	1,014.5	1.4	1.4	1.9	1.3
2016	1,095.9	1,093.4	1,207.1	1,071.3	1.3	1.3	1.8	1.1
North American Indians								
Registered								
1991	438.0	438.0	438.0	438.0	—	—	—	—
1996	505.7	505.7	509.9	505.3	2.9	2.9	3.1	2.9
2001	561.5	561.3	575.8	559.5	2.1	2.1	2.5	2.1
2006	601.7	601.1	629.0	596.5	1.4	1.4	1.8	1.3
2011	636.8	635.5	679.0	626.7	1.1	1.1	1.5	1.0
2016	667.7	665.6	727.0	650.6	1.0	0.9	1.4	0.8
Non-status								
1991	112.6	112.6	112.6	112.6	—	—	—	—
1996	118.3	118.3	119.4	118.3	1.0	1.0	1.2	1.0
2001	126.0	126.1	130.0	125.8	1.3	1.3	1.7	1.2
2006	139.6	139.7	148.4	139.0	2.1	2.1	2.7	2.0
2011	157.7	157.7	173.5	156.4	2.5	2.5	3.2	2.4
2016	178.6	178.4	204.1	176.0	2.5	2.5	3.3	2.4
Metis								
1991	139.4	139.4	139.4	139.4	—	—	—	—
1996	152.8	152.8	154.1	152.8	1.9	1.9	2.0	1.9
2001	165.0	165.0	169.2	164.6	1.5	1.5	1.9	1.5
2006	176.7	176.7	185.1	175.8	1.4	1.4	1.8	1.3
2011	188.6	188.6	202.1	186.7	1.3	1.3	1.8	1.2
2016	199.5	199.4	219.1	196.2	1.1	1.1	1.6	1.0

Table 3a - cont'd:

Population with Aboriginal Identity and 5-year Average Annual Growth Rate, by Aboriginal Total and Group, by Projection, Canada, 1991 to 2016

	Population projection				5-year average annual(%)			
	Proj. 1	Proj. 2	Proj. 3	Proj. 4	Proj. 1	Proj. 2	Proj. 3	Proj. 4
	Current Zero Migration	Current With Migration	High	Low	Current Zero Migration	Current With Migration	High	Low
Inuit								
1991	37.8	37.8	37.8	37.8	—	—	—	—
1996	42.5	42.5	43.0	42.5	2.4	2.4	2.6	2.4
2001	46.6	46.6	48.1	46.4	1.9	1.9	2.3	1.8
2006	50.7	50.7	53.7	50.2	1.7	1.7	2.2	1.6
2011	55.3	55.3	60.4	54.3	1.8	1.8	2.4	1.6
2016	60.3	60.3	68.1	58.6	1.7	1.7	2.4	1.5
Notes:					Source: Statistics Canada, Demography Division, Population Projections Section.			
1. The total aboriginal population has been adjusted for multiple identities to avoid double counting. Therefore, the sum for the individual Aboriginal groups, which include multiples, is greater than the total Aboriginal count.								

Components of Population Growth

At the national level, the growth of Aboriginal population is affected by: births, deaths, and in the case of registered and non-status Indians, Bill C-31 assumptions on births and reinstatements. At the residential level, migration is an additional component of growth. For the Aboriginal population as a whole, natural increase (births minus deaths) is the major component of annual growth. In addition to natural increase, the reinstatement of persons to Indian status through Bill C-31 is expected to continue as a component of growth, throughout the projection period, for the total Aboriginal population, and for the registered Indian population specifically. A substantial percentage (75%) of the projected C-31 status Indians is assumed to come from the ancestry-based Aboriginal population, i.e. outside of the Aboriginal identity population.

Assuming the continuation of current trends (Projection 2), natural increase accounts for about 79% of the annual growth in the total Aboriginal population, at the beginning of the projection period (1991-92), while Bill C-31 reinstatements account for the remaining 21%. By the end of the projection period (2015-16), natural increase accounts for 95% of the annual growth in the total Aboriginal population, due to the projected decline

in Bill C-31 reinstatements. Overall, annual growth is projected to decline over the projection period, mainly due to the decline in natural increase, as the population ages.

The impact of the different components of growth varies across Aboriginal groups. For the registered Indian population specifically, Bill C-31 reinstatements represent a major component of projected growth, especially at the beginning of the projection period, representing about 39% of total growth during 1991-92, with natural increase accounting for the remaining 61%. Given the projected decline in the number of Bill C-31 reinstatements, their contribution to total annual growth would decrease to 16% by 2015-16.

The annual growth of the registered Indian population is also projected to decline over the period, due to the decline in natural increase, and the outflow of Bill C-31 births. Like the registered Indian population, the projected growth of the non-status population is affected both positively and negatively by Bill C-31, but in opposite directions, with reinstatements having a negative, but declining impact, and Bill C-31 births having a positive and significantly more pronounced impact. Unlike other Aboriginal groups, the annual number of births in the non-status population is projected to increase by 74% over

the projection period, of which a significant proportion (46%) is attributable to the inflow of Bill C-31 births.

The projected growth of both the Metis and Inuit

populations is based solely on natural increase. In the case of the Metis, annual growth decreases over the projection period due to a decline in births combined with an increase in deaths. In

Table 3b:

Population with Aboriginal Identity and 5-year Average Annual Growth Rate, by Aboriginal Group and Place of Residence, by Projection, Canada, 1991 to 2016

		Population projection				5-year average annual rate of population change			
		Proj. 1 Current Zero Migration	Proj. 2 Current With Migration	Proj. 3 High	Proj. 4 Low	Proj. 1 Current Zero Migration	Proj. 2 Current With Migration	Proj. 3 High	Proj. 4 Low
North American Indians		(in thousands)							
Registered									
Reserve	1991	254.6	254.6	254.6	254.6	—	—	—	—
	1996	286.0	297.9	300.6	297.6	2.4	3.2	3.4	3.2
	2001	313.2	335.8	345.1	334.4	1.8	2.4	2.8	2.4
	2006	335.9	367.2	385.6	363.7	1.4	1.8	2.2	1.7
	2011	356.9	394.7	423.8	388.0	1.2	1.5	1.9	1.3
	2016	376.0	418.7	460.1	407.5	1.0	1.2	1.7	1.0
Rural	1991	35.0	35.0	35.0	35.0	—	—	—	—
	1996	41.9	26.6	26.8	26.6	3.7	-5.3	-5.2	-5.3
	2001	47.8	24.7	25.2	24.6	2.7	-1.5	-1.2	-1.6
	2006	51.4	23.6	24.5	23.5	1.5	-0.9	-0.6	-0.9
	2011	54.2	23.5	24.8	23.2	1.1	-0.1	0.2	-0.3
	2016	56.4	23.8	25.6	23.3	0.8	0.3	0.6	0.1
Urban	1991	148.5	148.5	148.5	148.5	—	—	—	—
	1996	177.8	181.2	182.6	181.1	3.7	4.1	4.2	4.0
	2001	200.5	200.8	205.4	200.5	2.4	2.1	2.5	2.1
	2006	214.3	210.3	218.8	209.3	1.3	0.9	1.3	0.9
	2011	225.8	217.4	230.4	215.4	1.1	0.7	1.0	0.6
	2016	235.3	223.1	241.4	219.8	0.8	0.5	0.9	0.4
Non-status									
Rural	1991	34.9	34.9	34.9	34.9	—	—	—	—
	1996	37.5	39.7	40.2	39.7	1.4	2.6	2.9	2.6
	2001	41.5	45.1	47.0	45.0	2.0	2.6	3.2	2.5
	2006	48.9	53.1	57.3	52.8	3.3	3.3	4.0	3.2
	2011	59.4	63.1	70.9	62.5	4.0	3.5	4.4	3.4
	2016	72.8	74.5	87.4	73.3	4.2	3.4	4.3	3.2
Urban	1991	77.8	77.8	77.8	77.8	—	—	—	—
	1996	80.8	78.6	79.2	78.6	0.8	0.2	0.4	0.2
	2001	84.5	80.9	83.0	80.8	0.9	0.6	0.9	0.6
	2006	90.7	86.6	91.1	86.2	1.4	1.4	1.9	1.3
	2011	98.2	94.6	102.6	93.9	1.6	1.8	2.4	1.7
	2016	105.8	103.9	116.7	102.7	1.5	1.9	2.6	1.8

Table 3b - cont'd:

Population with Aboriginal Identity and 5-year Average Annual Growth Rate, by Aboriginal Group and Place of Residence, by Projection, Canada, 1991 to 2016

		Population projection				5-year average annual rate of population change			
		Proj. 1	Proj. 2	Proj. 3	Proj. 4	Proj. 1	Proj. 2	Proj. 3	Proj. 4
		Current	Current			Current	Current		
		Zero	With	High	Low	Zero	With	High	Low
		Migration	Migration			Migration	Migration		
Metis									
Rural	1991	49.3	49.3	49.3	49.3	—	—	—	—
	1996	53.9	56.1	56.5	56.0	1.8	2.6	2.8	2.6
	2001	58.3	61.9	63.6	61.7	1.6	2.0	2.4	2.0
	2006	62.6	67.3	70.7	66.9	1.4	1.7	2.1	1.6
	2011	67.2	72.6	78.1	71.7	1.4	1.5	2.0	1.4
	2016	71.6	77.4	85.5	76.0	1.3	1.3	1.8	1.2
Urban	1991	90.1	90.1	90.1	90.1	—	—	—	—
	1996	98.9	96.7	97.5	96.7	1.9	1.4	1.6	1.4
	2001	106.7	103.0	105.6	102.8	1.5	1.3	1.6	1.2
	2006	114.1	109.4	114.4	108.9	1.4	1.2	1.6	1.2
	2011	121.4	116.0	124.0	115.0	1.2	1.2	1.6	1.1
	2016	127.9	122.0	133.6	120.2	1.0	1.0	1.5	0.9
Note:					Source:				
1. The Inuit population was not projected by place of residence.					Statistics Canada, Demography Division, Population Projections Section.				

contrast, annual growth remains more or less stable for the Inuit, due to a slower increase in deaths combined with a small increase in births.

Migration is projected to affect the growth of Aboriginal populations by place of residence. For example, among registered Indians, about 27% of their projected annual growth on reserve is attributable to gains due to migration; while the projected decline in their rural population is due to the significant net outflow of migrants (Projection 2). For non-status Indians, migration tends to be of lesser importance than other components (natural increase and Bill C-31), and more pronounced in urban than rural areas. For the Metis, migration has a greater impact in rural than urban areas.

Impact of Bill C-31 on Projected Population

Bill C-31 legislation, as well as demographics, is expected to affect the future growth of both

registered and non-status Indian identity populations. The impact of the Bill C-31 status inheritance assumption is to almost double the projected number of non-status Indian births, over the projection period, from some 47,600 (without the assumption of Bill C-31 births) to 92,500 (Projection 1), while correspondingly reducing the number of registered Indian births from 297,000 (without Bill C-31 births) to 252,000 (Projection 1).¹¹ The assumption on Bill C-31 reinstatements yields an additional 63,000 persons to the registered Indian population over the projection period, and a corresponding loss of 16,500 reinstatements from the non-status population. For non-status Indians, the projected gain in population, due to additional Bill C-31 births, over the projection period, would outweigh the loss due to reinstatements; conversely, for registered Indians, the gain due to reinstatements would outweigh the loss due to Bill C-31 births.(Projections 1 and 2). Obviously, the status

inheritance assumption concerning Bill C-31 births is a significant factor in the projected growth of the non-status Indian population.

Age and Sex Structure

Over the next twenty-five years significant shifts are expected to occur in the age structure of the Aboriginal population, as the population ages, especially in relation to an increasing proportion of the population in the older working age group, 35-64. For example, between 1991 and 2016, under the continuation of current trends, the percentage of the population aged 0-14 is projected to decline steadily from 37% to 24%, with less pronounced declines for the 15-24 and 25-34 group, from 20% to 16%, and 19% to 17%, respectively. In contrast, increases in older age groups are projected, especially for the 35-64 working age group, from 22% to 36%. For seniors, 65+, the percentage is projected to increase from 3% to 7% (Figure 3).

The 1991 and 2016 age-structures of the Aboriginal population are contrasted in Figures 2a and 2b. The 2016 pyramids are generally narrower at the base, representing children and youth, and wider at the middle and old ages. The evolution of the age structure from a pyramidal to rectangular shape reflects the aging process. Unlike the Canadian population in general, which is aging into retirement, the Aboriginal population is aging more from youth into the working age groups.

The extent of population aging is not always the same for all Aboriginal/residential groups due to migration or Bill C-31 factors, which can either reduce or accelerate the aging caused by declining fertility and mortality. Aging is less pronounced among the non-status Indian population, particularly in rural areas, due to the impact at younger ages of Bill C-31 births. Migration can also contribute to aging, such as in rural areas, due to large outflows of young adult migrants. For example, the aging of the registered Indian population in rural areas is accelerated by the net outflow of young adult migrants and its subsequent dampening effect on births.

Sex Ratios

Overall the ratio of males to females in the Aboriginal identity population remains constant throughout the projection period, with 96 males per 100 females. But the size and trend of the sex ratio varies by Aboriginal group and place of residence due to the projected impacts of male/female mortality, Bill C-31 reinstatements and migration. For example, among registered Indians on reserve, males outnumbered females at 111 to 100 in 1991, while there were fewer males than females off reserve, with only 78 males in urban areas and 82 in rural, due to more females than males moving from reserves. By 2016, the sex ratio on reserve is projected to decline to 102 males per 100 females, and increase off reserve (to 85 in urban areas, 87 in rural areas). The drop in the sex ratio on reserve, reflects the impact of aging and the excess male mortality in later life. The trend toward a more balanced sex ratio off reserve reflects the lessening impact of more female than male in-migrants over time.

Selected Age Groups

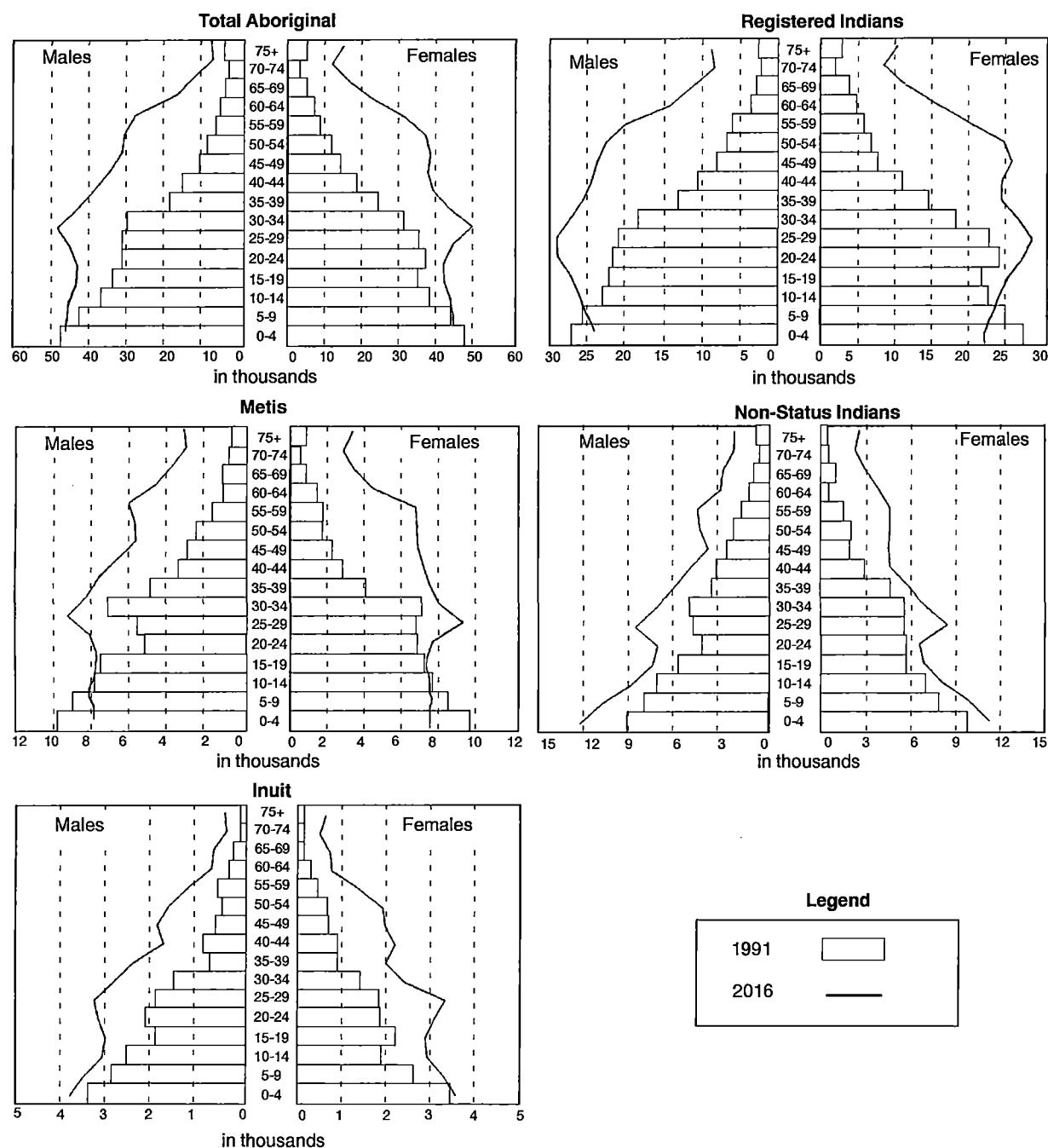
Children, Age 0-14

In 1991 there were close to 263,000 children under the age of 15 with Aboriginal identity. If current trends continue, this population would increase by only 1.5% to 266,800 in 2016 (Table 4). This small increase is a reflection of the rapid decline in fertility and its impact on the size of future child-bearing cohorts. While higher fertility of the 1960s among the Indian population contributed to the later growth of the 0-14 population, the sharp decline in fertility observed during the 1970s and into the 1980s can be expected to contribute to a slower growth of the 0-14 population.

There are significant differences in the projected growth of children among the various Aboriginal populations. As shown in Table 4 and Figure 4, between 1991 and 2016, the number of registered Indian children is projected to decline by 6%, whereas children in the non-status Indian population are projected to increase by 35%, reflecting the impact of Bill C-31 births. Over the same period, the number of Metis children are projected to decrease by 11% while Inuit children are projected to increase by 15%.

Figure 2a:

Age and Sex Structure of the Population with Aboriginal Identity by Aboriginal Total and Group, Projection 2, 1991 and 2016



Source: Statistics Canada, Demography Division, Population Projections Section

Figure 2b:

Age and Sex Structure of the Population With Aboriginal Identity by Aboriginal Group and Place of Residence, Projection 2, Canada, 1991 and 2016

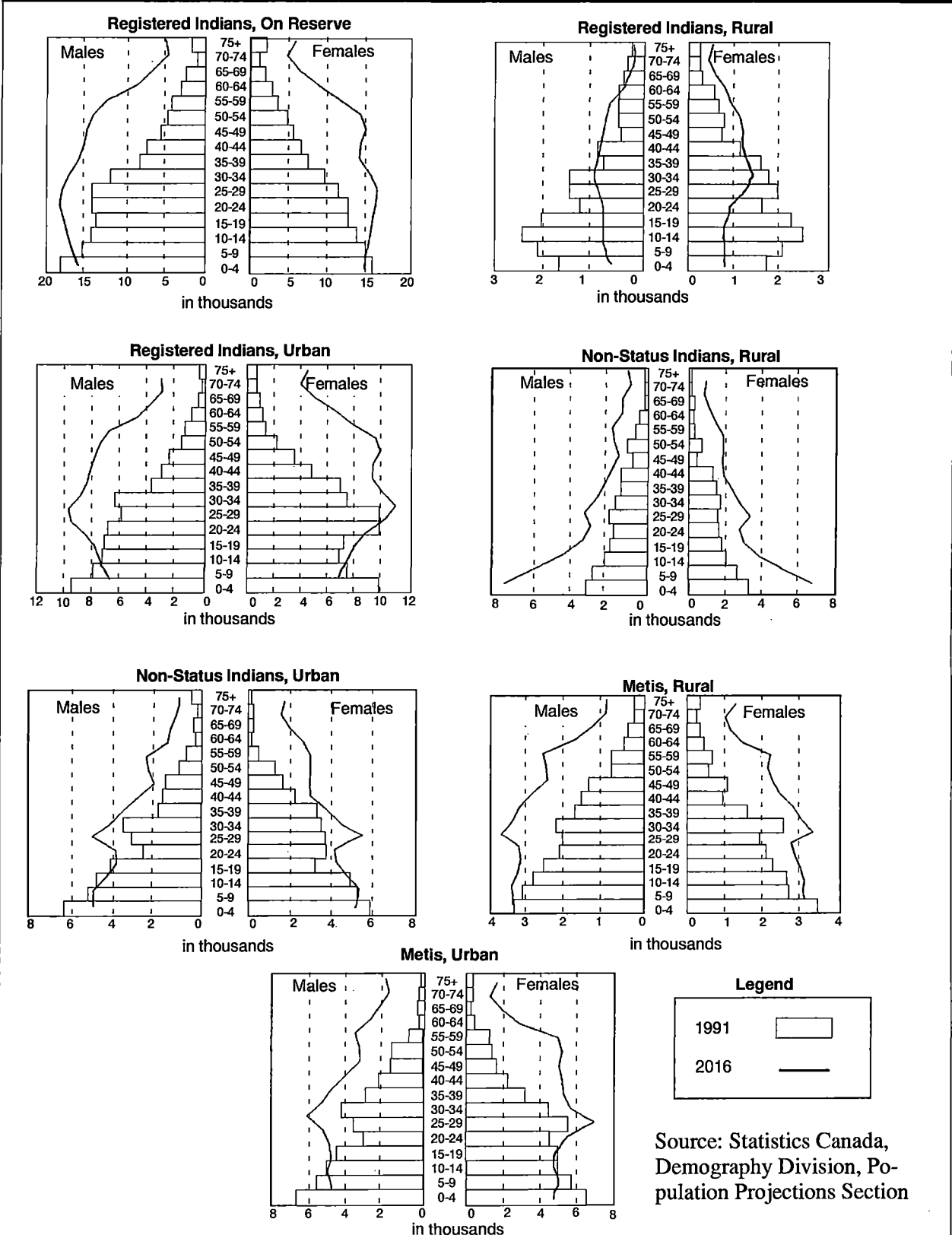
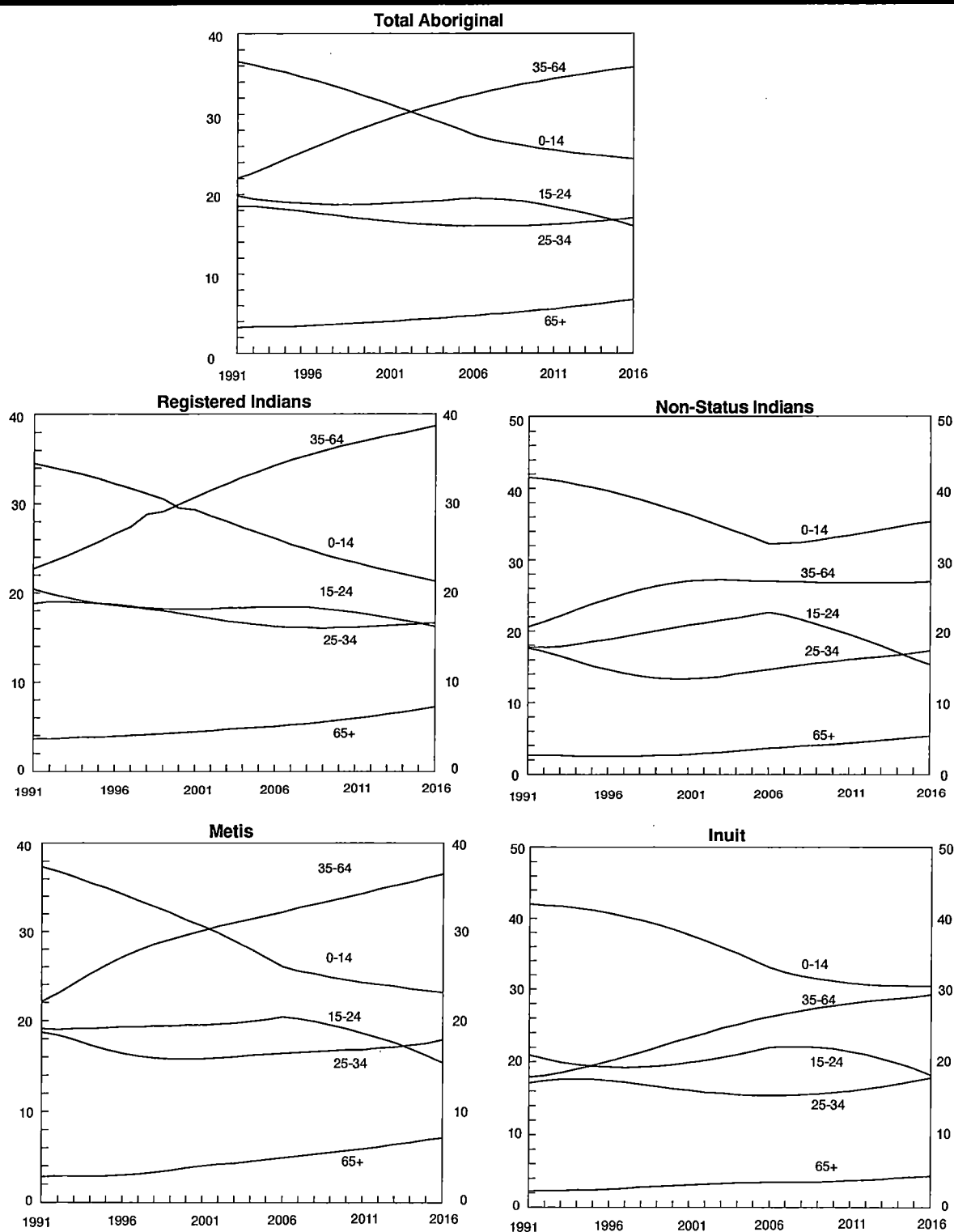


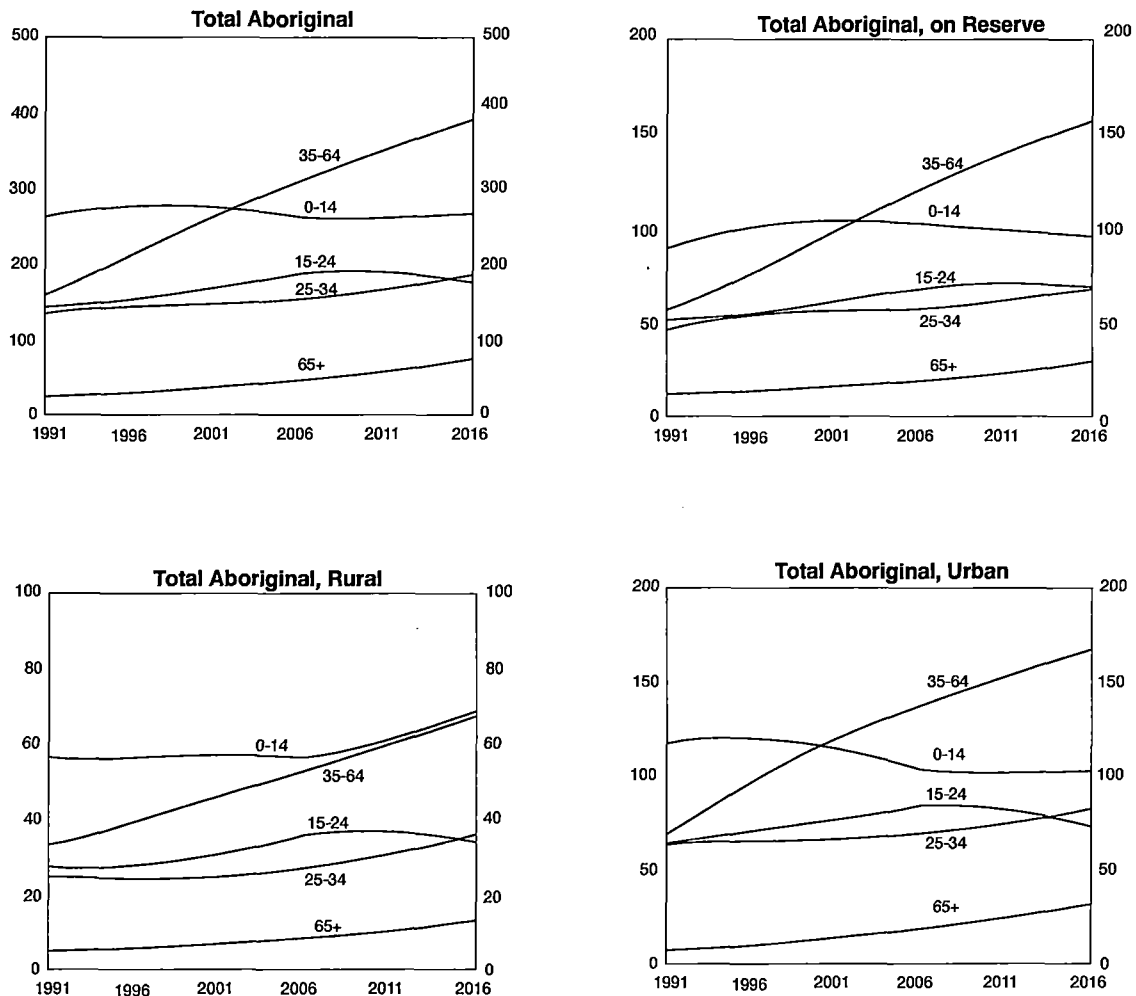
Figure 3:

Percent Distribution of Population With Aboriginal Identity by Selected Age Groups, Aboriginal Group and Total, Projection 2, Canada, 1991-2016



Source: Statistics Canada, Demography Division, Population Projections Section.

Figure 4:
Population with Aboriginal Identity by Selected Age Groups and Place of Residence,
Projection 2, Canada, 1991 to 2016 (in thousands)



Source: Statistics Canada, Demography Division, Population Projections Section.

Within each Aboriginal group, there are residential variations. For example, among registered Indians, the child-aged population is projected to grow by 7% on reserve, but decrease in rural and urban areas by 64% and 16%, respectively (Table 4).

The Labour Force Age Group, Age 15-64

In 1991 there were some 434,000 persons of roughly working-age (15 to 64 years) in Canada's Aboriginal identity population. If current trends continue, the size of this group is expected to grow

substantially, by 73%, to 753,000 in 2016. Among the three sub-groups of the labour force, 15-24, 25-34, and 35-64, the latter is projected to increase the most at 147%, while the 15-24 age group would increase the least at 23%.

The working age population is projected to increase over the projection period, for all Aboriginal groups and places of residence by at least 50%. The only exception to this generalization is with registered Indians in rural areas, where the working age population could

Table 4:

**Population with Aboriginal Identity by Selected Age Groups by Aboriginal Total and Group,
Projection 2, Canada, 1991 and 2016**

		Projection 2					
		Age Group					
		0-14	15-24	25-34	35-64	65+	Total
Total Aboriginal		(in thousands)					
	1991	262.8	142.4	133.5	158.5	23.4	720.6
	2016	266.8	175.5	185.7	391.9	73.5	1,093.4
North American Indians							
Registered	1991	151.1	89.4	82.5	99.2	15.8	438.0
	2016	141.8	108.0	110.6	257.3	47.9	665.6
Non-status	1991	46.8	19.9	19.8	23.2	3.0	112.6
	2016	63.0	27.2	30.7	47.9	9.5	178.4
Metis	1991	52.0	26.6	26.1	30.8	4.0	139.4
	2016	46.1	30.8	35.6	72.8	14.2	199.4
Inuit	1991	15.9	7.9	6.5	6.8	0.9	37.8
	2016	18.3	11.0	10.7	17.6	2.6	60.3
North American Indians							
Registered							
On Reserve	1991	89.5	51.2	45.8	56.5	11.6	254.6
	2016	95.9	68.8	67.6	157.3	29.1	418.7
Rural	1991	12.0	6.8	6.1	8.8	1.3	35.0
	2016	4.2	3.3	4.2	10.0	2.0	23.8
Urban	1991	49.6	31.4	30.6	33.9	2.9	148.5
	2016	41.7	35.9	38.8	89.9	16.8	223.1
Non-status							
Rural	1991	14.9	5.7	5.4	7.9	0.9	34.9
	2016	32.1	10.8	10.7	17.2	3.6	74.5
Urban	1991	31.9	14.2	14.4	15.3	2.0	77.8
	2016	30.9	16.4	20.0	30.7	5.9	103.9
Metis							
Rural	1991	18.2	9.2	8.4	11.5	2.0	49.3
	2016	19.0	11.8	13.4	27.7	5.5	77.4
Urban	1991	33.8	17.4	17.7	19.3	2.0	90.1
	2016	27.0	18.9	22.3	45.1	8.7	122.0
Inuit							
Total Only	1991	15.9	7.9	6.5	6.8	0.9	37.8
	2016	18.3	11.0	10.7	17.6	2.6	60.3
Source: Statistics Canada, Demography Division, Population Projections Section.							

decline by 19%. In contrast, among registered Indians on reserve the 15-64 population is projected to almost double by 2016. Again among the non-status Indians in rural areas, the population is projected to double.

The Elderly Population, Age 65 and Over

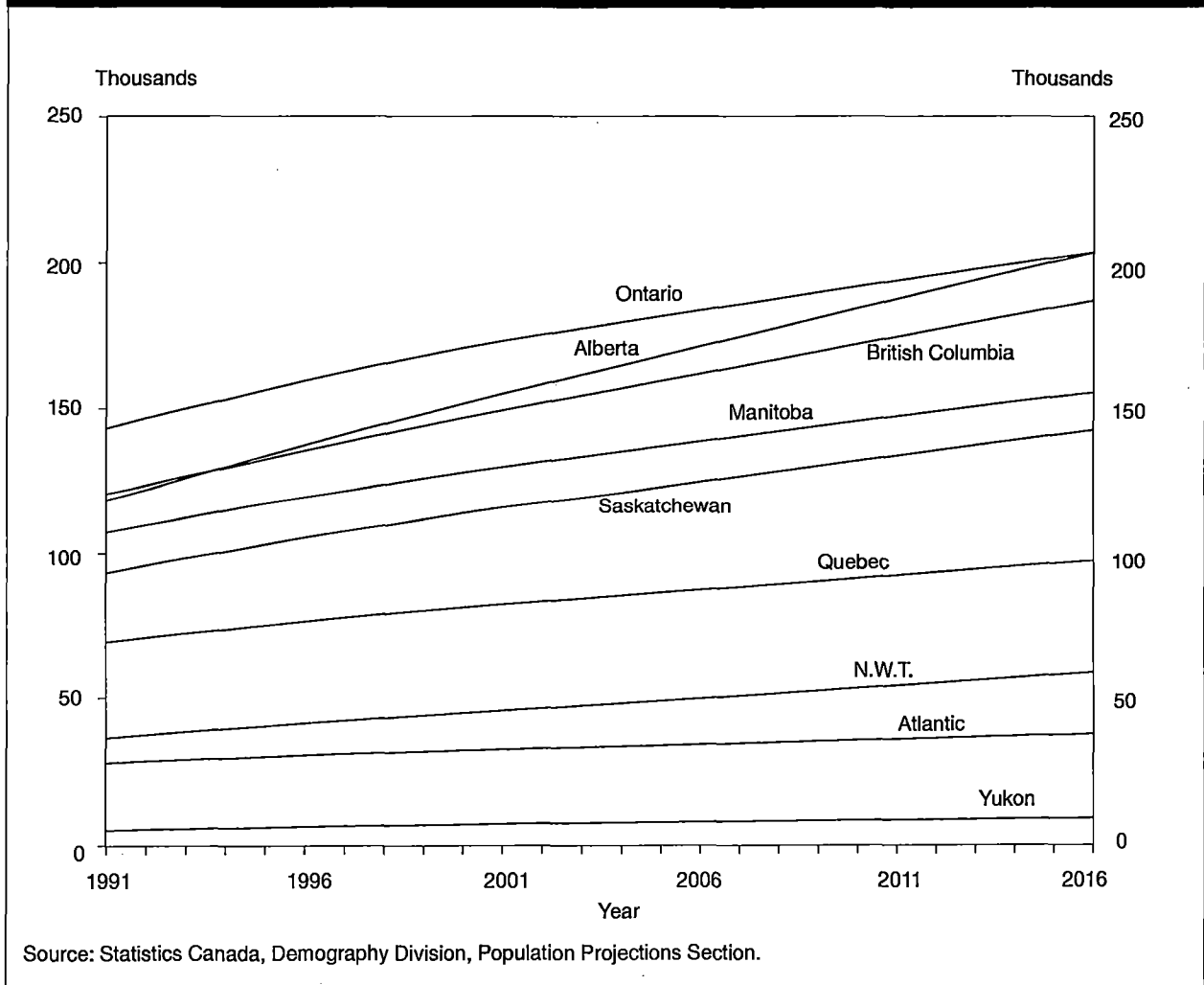
The Aboriginal identity population aged 65 and over, numbering some 23,000 in 1991 is expected to more than triple to almost 74,000 by 2016. The projected growth of seniors varies by Aboriginal group and place of residence. The increase is projected to be most pronounced among the urban populations of registered Indians and Metis, with projected increases of 479% and 335%,

respectively. Projected growth of the 65+ age group is lowest among registered Indians in rural areas, at 53%.

Regional Projections

As can be seen from Figure 5 positive growth is expected for all regions over the projection period (current-trend with migration). The relative size of regional populations is projected to shift over the projection period. In 1991 Ontario was clearly the province with the largest Aboriginal population, about 143,000, followed by British Columbia (121,000) and Alberta (118,000). By 2016, the Aboriginal populations of both Ontario and

Figure 5:
Distribution of the Population With Aboriginal Identity by Region, Projection 2, Canada,
1991 to 2016



Alberta are projected to surpass 200,000, followed by 187,000 in British Columbia.

Over half of the Aboriginal identity population was located within three provinces in 1991. The largest concentration was in Ontario (20%), followed by British Columbia with 17%, Alberta at 16%, Manitoba 15%, Saskatchewan 13%, and Quebec 10%. The Atlantic region (4%), Yukon (1%), and Northwest Territories (5%) had much smaller shares.

Regional Aboriginal populations and distributions projected for 2016 depend on the migration assumptions within the different projections.

Under the assumption of current trends and zero migration (Projection 1), the Aboriginal identity population is projected to increase the most (74%) in Saskatchewan, (reflecting the highest regional fertility), with the province's share increasing to 15%; and the least (37%) in British Columbia, the lowest fertility region, with its regional share decreasing from 17% to 15%. In contrast, if current migration patterns are assumed (Projection 2) then Saskatchewan's population would increase less, at 53%, and its share of the Canadian population would remain stable at 13%, while British Columbia's population would rise more rapidly, at 55%, with a slightly increased share. With the continuation of current trends and migration, Alberta's Aboriginal identity population is projected to grow the most (72%), and the Atlantic region is to grow the least (34%).

Aboriginal Groups

As shown in Table 5, the four Aboriginal groups differ in their regional distribution. In 1991, registered Indians were almost equally concentrated in the provinces of Ontario (21%), and British Columbia (20%), followed by

Manitoba (15%), Saskatchewan and Alberta (both at 14%). By comparison, more than a third of non-status Indians were concentrated in Ontario (35%), followed by British Columbia (21%) and Alberta (16%). Unlike either the registered or non-status Indian populations, almost three-quarters of the Metis were concentrated in the Prairie provinces, with the largest proportions in Alberta (28%), Manitoba (25%) and Saskatchewan (20%). The majority of Inuit live in the Northwest Territories (59%), followed by Northern Quebec (19%), and Labrador (13%), while only 9% live in the rest of Canada.

Regional projections of the four Aboriginal groups also differ according to the migration assumptions. For example, by the year 2016, if current migration trends continue (Projection 2), then British Columbia's registered Indian population would increase 58% by 2016, with its share increasing from 14% to 21% (because of the projected net inflow of migrants), while Saskatchewan's increase would be less at 54% with its share remaining stable at 14%. If no migration is assumed (Projection 1), the registered Indian population is projected to grow the most in Saskatchewan (73%), and the least in British Columbia (36%). Similar comparisons for non-status Indians and Metis also show, that under the continuation of current migration trends, the population growth of certain regions, such as Saskatchewan, is less pronounced than it would be if no migration was assumed (Table 6).

In the case of the Inuit, zero migration was assumed. The regional projections show little change in distribution, except for a slight increase in proportion residing in the "Remainder" of Canada, with a corresponding decline in Labrador from 13% to 11%.

Table 5:

Regional Distribution of Population with Aboriginal Identity by Aboriginal Total and Group, Projection 1 (Without Migration) and Projection 2 (With Migration) for Canada, Provinces and Territories, 1991 to 2016

	1991		2016		Percent Increase 1991-2016	2016		Percent Increase 1991-2016
	Number	Percent Distribution	Number	Percent Distribution		Number	Percent Distribution	
Projection 1					Projection 2			
Total Aboriginal								
Atlantic	27.7	3.9	43.3	3.9	55.9	37.3	3.4	34.7
Quebec	69.3	9.6	100.5	9.2	45.1	97.3	8.9	40.4
Ontario	143.1	19.9	203.2	18.5	42.0	203.3	18.6	42.1
Manitoba	107.1	14.9	169.3	15.5	58.1	155.4	14.2	45.1
Saskatchewan	93.2	12.9	162.0	14.8	73.8	142.4	13.0	52.8
Alberta	118.2	16.4	187.7	17.1	58.9	203.3	18.6	72.0
B.C.	120.7	16.7	165.6	15.1	37.2	186.9	17.1	54.8
Yukon	5.1	0.7	8.2	0.7	59.0	8.9	0.8	74.5
N.W.T.	36.2	5.0	56.1	5.1	55.1	58.7	5.4	62.2
Canada	720.6	100.0	1,095.9	100.0	52.1	1,093.4	100.0	51.7
North American Indians								
Registered								
Atlantic	15.8	3.6	25.0	3.7	58.6	21.7	3.3	37.3
Quebec	43.7	10.0	64.1	9.6	46.6	61.9	9.3	41.6
Ontario	91.5	20.9	132.6	19.9	45.0	130.1	19.5	42.2
Manitoba	65.1	14.9	104.2	15.6	59.9	96.3	14.5	47.9
Saskatchewan	59.9	13.7	103.4	15.5	72.6	92.2	13.9	53.9
Alberta	60.4	13.8	97.2	14.6	61.0	101.2	15.2	67.5
B.C.	87.9	20.1	119.9	18.0	36.4	139.2	20.9	58.4
Yukon	4.4	1.0	7.0	1.0	57.7	7.3	1.1	65.9
N.W.T.	9.3	2.1	14.2	2.1	53.2	15.8	2.4	69.9
Canada	438.0	100.0	667.7	100.0	52.4	665.6	100.0	52.0
Non-status								
Atlantic	4.8	4.2	8.1	4.5	69.4	6.1	3.4	27.1
Quebec	9.8	8.7	14.1	7.9	43.1	13.6	7.6	38.8
Ontario	39.6	35.2	53.6	30.0	35.3	59.4	33.3	50.0
Manitoba	8.5	7.6	17.7	9.9	108.1	14.8	8.3	74.1
Saskatchewan	6.5	5.8	16.7	9.3	157.2	13.6	7.6	109.2
Alberta	18.4	16.3	32.2	18.0	75.5	34.2	19.2	85.9
B.C.	23.8	21.1	33.9	19.0	42.8	33.2	18.6	39.5
Territories	1.3	1.2	2.3	1.3	79.3	3.5	2.0	169.2
Canada	112.6	100.0	178.6	100.0	58.6	178.4	100.0	58.4

Table 5 - cont'd

Regional Distribution of Population with Aboriginal Identity by Aboriginal Total and Group, Projection 1 (Without Migration) and Projection 2 (With Migration) for Canada, Provinces and Territories, 1991 to 2016

	1991		2016		Percent Increase 1991-2016	2016		Percent Increase 1991-2016
	Number	Percent Distribution	Number	Percent Distribution		Number	Percent Distribution	
	Projection 1					Projection 2		
Metis								
Atlantic	2.5	1.8	3.7	1.8	44.8	3.0	1.5	20.0
Quebec	9.1	6.5	11.2	5.6	23.8	10.7	5.3	17.6
Ontario	12.8	9.1	17.4	8.7	36.8	14.4	7.2	12.5
Manitoba	34.1	24.5	48.1	24.1	41.1	44.9	22.5	31.7
Saskatchewan	27.5	19.8	43.0	21.6	56.3	37.5	18.8	36.4
Alberta	39.6	28.4	58.0	29.1	46.6	67.9	34.0	71.5
B.C.	9.4	6.8	12.0	6.0	27.6	14.8	7.4	57.4
Territories	4.4	3.1	5.9	3.0	35.6	6.3	3.1	43.2
Canada	139.4	100.0	199.5	100.0	43.1	199.4	100.0	43.0
Inuit								
Labrador	4.8	12.7	6.7	11.1	38.6	6.7	11.1	39.6
Northern Quebec	7.2	19.1	11.9	19.7	64.2	11.9	19.7	65.3
N.W.T.	22.2	58.8	35.2	58.5	58.6	35.2	58.5	58.6
Remainder	3.6	9.4	6.5	10.8	83.1	6.5	10.8	80.6
Canada	37.8	100.0	60.3	100.0	59.4	60.3	100.0	59.5

Source: Statistics Canada, Demography Division, Population Projections Section.

Aboriginal Population as a Percentage of Regional Total Population

In 1991, the Aboriginal identity population made up about 2.6% of the total population of Canada. This percentage is expected to increase to 3% of the projected Canadian population by 2016, under Statistics Canada's medium-growth national projection (Figure 6). Registered Indians accounted for 1.6% of Canada's population, followed by Metis with 0.5%, non-status with 0.4% and Inuit at 0.1%. By 2016, under Projection 2 with migration, the corresponding figures are 1.8% for registered Indians, 0.5% for both Metis and non-status Indians, and almost 0.2% for Inuit.

In most regions, with the exception of the Territories, the Aboriginal population represents a fairly small proportion of the total regional population. In the Atlantic region, Ontario and Quebec, the population with Aboriginal identity made up about 1% of the total regional population

in 1991, and is projected to either increase slightly or remain stable by 2016. The proportions are larger in Western Canada, with about 10% in Manitoba and Saskatchewan, and about 4% in Alberta and British Columbia. These proportions are projected to increase, especially for Saskatchewan where the Aboriginal population could represent 14% of the total provincial population by 2016, if current trends with migration continue. In the Yukon the Aboriginal population accounted for almost 18% in 1991, and is projected to increase to around 22% by 2016. Persons with Aboriginal identity represented the majority (59%) of the population in the Northwest Territories, with a projected share of 62% by 2016.

For all Aboriginal groups, their proportion in Atlantic and Central Canada is projected to remain low - with either a slight increase, stability, or as in the case of the Metis in Ontario, a slight decline by 2016. Increased shares in regional populations

of Western Canada and the Territories are projected for all Aboriginal groups with the exception of the Metis in the Territories.

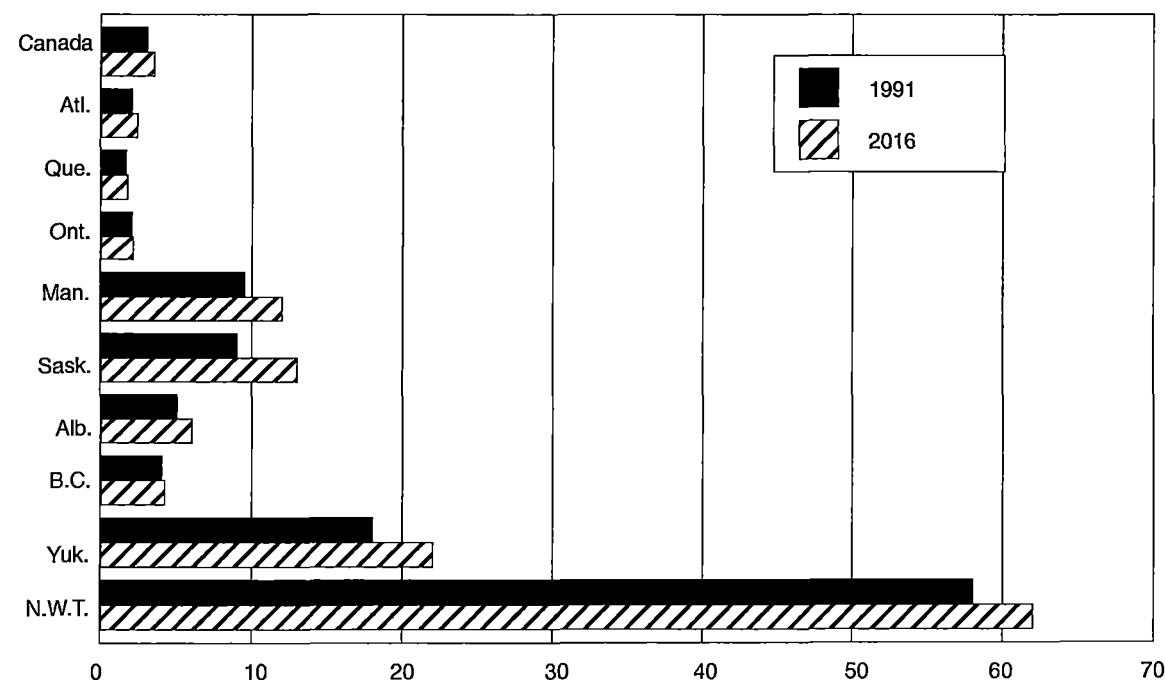
Distributions by Place of Residence

If current migration patterns continue, a shift is projected in the residential distribution of the population over the next 25 years. Under the assumption of current migration patterns (Projection 2), the proportion living on reserve would increase from 35% in 1991 to 38% by 2016, with a corresponding decrease in the urban share from 44.4% in 1991 to 41.8%, and the rural share remaining relatively stable at around 20% (Table 6). If current trends continue with no migration (Projection 1), the shift in residential distribution is less, for reserve and urban areas, with 1% point decreases in their respective share, accompanied by a corresponding increase in the rural share to 22%.

The impact of migration on residential distributions varies across Aboriginal groups. If current migration trends are assumed

(Projection 2), then the percentage of registered Indians residing on reserves increases over the projection period from 58% to 63%, the rural share declines from 8% to 4%, and the urban decreases only slightly from 34% to 33.5%. Assuming no migration (Projection 1), the proportion residing on reserves would decline by two percentage points, with corresponding increases in the rural and urban populations. In the case of non-status Indians the proportion residing in urban areas would decline to almost the same extent with or without migration, from 69% in 1991 to 58% (under constant migration) by 2016. This decrease reflects the more rapid growth of rural than urban areas, due to the positive impact of Bill C-31 births assigned to the non-status population in rural areas, from registered Indians on reserves. There is practically no change in the rural/urban distribution of the Metis population under the assumption of zero migration. If current migration is assumed then the percentage of Metis residing in urban areas is projected to decrease from 64% in 1991 to 61% by 2016.

Figure 6:
Population With Aboriginal Identity as a Percentage of Total Population, Projection 2, Canada and Regions, 1991 and 2016



Source: Statistics Canada, Demography Division, Population Projections Section.

Table 6:

Residential Distribution of Population with Aboriginal Identity by Aboriginal Total and Group for Current Trend Projections, (With and Without Migration), Canada, 1991 and 2016

	1991		2016			
	Number	Percent	Without Migration		With Migration	
			Number	Percent	Number	Percent
	(⁰ 000)	%	(⁰ 000)	%	(⁰ 000)	%
Total Aboriginal						
Reserve	254.6	35.3	376.0	34.3	418.7	38.2
Rural	146.1	20.3	243.7	22.3	218.2	20.0
Urban	320.0	44.4	476.2	43.5	456.6	41.8
Total	720.6	100.0	1,095.9	100.0	1,093.4	100.0
North American Indians						
Registered						
Reserve	254.6	58.1	376.0	56.3	418.7	62.9
Rural	35.0	8.0	56.4	8.4	23.8	3.6
Urban	148.5	33.9	235.3	35.2	223.1	33.5
Total	438.0	100.0	667.7	100.0	665.6	100.0
Non-status						
Rural	34.9	31.0	72.8	40.8	74.5	41.8
Urban	77.8	69.0	105.8	59.2	103.9	58.2
Total	112.6	100.0	178.6	100.0	178.4	100.0
Metis						
Rural	49.3	35.4	71.6	35.9	77.4	38.8
Urban	90.1	64.6	127.9	64.1	122.0	61.2
Total	139.4	100.0	199.5	100.0	199.4	100.0
Inuit						
Total	37.8	100.0	60.3	100.0	60.3	100.0
Source: Statistics Canada, Demography Division, Population Projections Section.						

CHAPTER 7 - PROJECTIONS BY NORTH/SOUTH ZONES

Projections of the Aboriginal identity population by selected north/south zones were developed in consultation with Commission staff. Projections were done at the Canada-level only for three zones: far north, mid-north and south (geographic descriptions, based on Census Divisions (CDs), of these zones, as defined by the Commission, are given in Appendix E of the main report (Norris, Kerr and Nault, 1995)). The population of each Aboriginal group, as well as total, was projected according to these zones by three broad age groups, <15, 15-54, and 55+, by sex, using Projection 2 as the basis for extrapolation.

Development of North/South Projections

North/south projections were developed using a ratio technique, rather than the cohort-component approach that was used for the projections by region and place of residence. For each Aboriginal identity group and the total Aboriginal population, north/south populations were obtained by applying age-sex specific proportions of population residing in each zone to the corresponding regional-based projections by age and sex for Canada. These age-sex specific proportions were derived from 1991 APS data (unadjusted for incomplete enumeration and undercoverage) on the distribution of the Aboriginal identity population by north/south zones. The 1991-based proportions, held constant over the projection period, were applied to their respective projected populations.

Patterns

An analysis of north/south proportions by Aboriginal group and total shows that, among the adult population, a higher proportion of women reside in the south compared to men. Not surprisingly, there are variations in north/south distributions among the different Aboriginal groups. In the case of Aboriginal women, for example, most, 81%, of non-status Indian women reside in the southern zone, compared to 71% of Metis, 63% of registered Indian and only 12% of Inuit women (Table 7).

Assumptions

Based on Commission specifications, north/south projections were developed for one set of assumptions, the continuation of current trends, as used in Projection 2. The application of north/south proportions at their 1991 values throughout the projection period assumes that there will no change in the north/south distributions of the different Aboriginal groups—that is, projected migration patterns or fertility differentials among regions in north/south zones will not alter the current 1991 north/south distributions of the groups. The lack of data on trends in north/south distributions of Aboriginal populations, was a constraint in the development of north/south projections, with the result that only the constant 1991 assumption was employed. As well, this north/south projection represents only one possibility in terms of growth assumptions—for example, the high- and low-growth scenarios, used in projections 3 and 4 respectively, could also have been incorporated.

Table 7:

Percent Distribution of Population with Aboriginal Identity by North-South Zones, by Sex, by Aboriginal Total and Group, Canada, 1991

North-South Zones	Aboriginal Group, Sex									
	Total Aboriginals		Registered Indian		Non-status Indian		Metis		Inuit	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
(in percent)										
Far North	10.1	9.3	6.2	5.7	2.1	2.0	4.7	4.3	89.6	86.0
Mid North	26.9	25.9	32.9	31.5	18.1	17.0	25.0	24.3	0.7	1.7
South	63.0	64.8	60.9	62.8	79.8	81.0	70.3	71.4	9.7	12.3
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Statistics Canada, 1991 APS, unpublished data.

Results

Projected total populations for north/south zones, based on Projection 2, are given in Table 8 for Aboriginal groups and total. The total Aboriginal population in each region is projected to increase about 52% by the year 2016 for each of the three zones. In the far north the population is expected to increase from 70,000 in 1991 to 106,000 by 2016; in the mid-north from 190,000 to 289,000 and in the south from 460,000 to 698,000. For registered Indians and Inuit, the percentage increase in their populations over the 25-year period, is projected to be higher in the far north, 55% and 61% respectively, compared to increases in the south of 52% and 46% respectively. The

converse is true for non-status Indians and Metis, with lower percentage increases in population in the far north, 48% and 40% respectively, compared to growth in their southern populations, of 58% and 43% respectively. These variations among Aboriginal groups in the projected growth of their north/south populations reflect regional differentials in fertility and migration patterns. In terms of age-sex, projection results reflect the impact of the 1991 APS-based north/south proportions which were held constant throughout the projection period. In effect, among the adult population, slightly higher proportions of women than men are assumed to reside in the southern zone (Norris et al, 1995).

Table 8:

North-South Projections of Population With Aboriginal Identity by Aboriginal Total and Group, Canada, 1991, 2001 and 2016

		Far North	Mid North	Total South	Total
Total Aboriginal	1991	70.1	190.3	460.2	720.6
	2016	106.0	289.2	698.2	1,093.4
Status Indians	1991	26.0	141.1	271.0	438.0
	2016	40.2	213.2	412.1	665.6
Non-status Indians	1991	2.1	19.7	90.8	112.6
	2016	3.1	31.5	143.8	178.4
Metis	1991	6.2	34.3	98.9	139.4
	2016	8.7	49.3	141.4	199.4
Inuit	1991	34.0	0.2	3.7	37.8
	2016	54.7	0.2	5.4	60.3

Source: Statistics Canada, Demography Division, Population Projections Section.

CHAPTER 8 - COMPARISON WITH PREVIOUS PROJECTIONS

While this is the first time that Demography Division of Statistics Canada has produced projections of the population with Aboriginal identity, previous projections of Aboriginal populations have also been prepared. Some of the more recent reports include projections of registered Indians prepared for INAC (Nault et al. 1993); and projections, by Aboriginal groups, for the population with Aboriginal Ancestry prepared for the Employment Equity (EE) working group (Loh, 1995). These projections are not directly comparable to the current projections because of the differences in base populations and component assumptions.

The base populations of Aboriginal groups used in the current identity-based projections differ significantly from those in the EE ancestry-based projections (with the exception of registered Indians). The Aboriginal population derived from the 1991 APS is substantially different from the 1991 Census counts based on Aboriginal ancestry.

Unlike the current or ancestry-based projections, the INAC projections are for registered Indians only. They are developed using adjusted data from INAC's Indian register. Census/APS counts of registered Indians are lower than INAC-based counts due to a number of factors, such as differences in definition and self-reporting in the Census; coverage in the Census and APS which excludes the origins and Aboriginal identity of prison inmates, chronic care residents, those in rooming houses, hotels, etc and registered Indians living outside Canada, which by contrast, the INAC Indian register includes.

In addition to differences in Aboriginal group base populations with other projections, the current set of projections also differ in some of the component assumptions, such as Bill C-31 births and migration by both place of residence and region, which were introduced for the first time in the current projections. In this respect the identity-based projections are distinct from the EE ancestry-based projections.

CHAPTER 9 - LIMITATIONS OF PROJECTIONS

As indicated at the outset of this report, the accuracy of any projection depends on the reliability of the base population and the degree to which the underlying assumption on each component represents the actual trend. Both factors should be considered in the use of the current projections. The definition of the Aboriginal identity population used in the current projections, depends upon the respondents' subjective perceptions of their affiliation with their Aboriginal origins. This affiliation can be affected by various factors, such as legislative changes, awareness of cultural and traditional values, and group cohesiveness. Furthermore, in order to derive a base population, it was necessary to adjust the 1991 APS population by age and sex, for the effects of undercoverage and incomplete enumeration.

In terms of the demographic components, direct measures of fertility and mortality are available only for registered Indians and Inuit in Northern Quebec, such that estimates had to be developed for the Metis and non-status Indians. Assumptions for these groups are limited to the extent that current measures have to be estimated. With respect to migration, only one assumption on migration by place of residence and region was developed (apart from zero migration), using estimates derived from one time period, 1986-91. Since internal migration, particularly interprovincial, can be volatile as observed for the population in general, ideally more than one assumption would have been preferable. However, given the limitations of a historical series on Aboriginal migration data and that migration measures had to be estimated to some extent, more than one assumption was not considered feasible for the current set of projections.

The Bill C-31 assumptions on births and reinstatements reflect an attempt to model to some extent the impact of the Indian Act legislation on the projected growth of both status and non-status Indian populations. It is difficult to assess how realistic these assumptions are, particularly in relation to the assignment of Bill C-31 births from status to non-status populations, since this assumption is based on other assumptions

concerning out-marriage of status Indians. Furthermore, it is also assumed that for those births assigned from status to non-status, Indian identity will be maintained.

The impact of Aboriginal out-marriage in general, has not been modelled in these projections. Out-marriage could negatively affect the growth of the population with Aboriginal identity. On the other hand, this factor could be offset, by increased awareness of and identification with Aboriginal origins, among the Canadian population.

In the case of north/south projections, it was assumed that the 1991 geographic distributions of Aboriginal groups by north/south zones, would remain constant, by age and sex, over the projection period. This simplifying assumption is a limiting factor in these projections. As well, this north/south projection is based on only one extrapolation, the current-trend projection and represents only one possibility in terms of assumptions — since high- and low-growth projections could also have been incorporated.

Finally, in addition to these limitations, it should be emphasised that these projections are not predictions. Rather they represent an attempt to establish 25-year scenarios based on stated component assumptions, which are subject to varying degrees of uncertainty. Given that the uncertainty of future change in any population can be expected to increase over the projection period, and to be greater for smaller populations, a range of plausible projections are provided rather than just one projection. The selection of a specific projection and the interpretation of its data are the responsibility of the user.

Availability of Unpublished Projections

Details on selected projection data are available in the tables of the unpublished main background report, available through CMHC. More complete and detailed unpublished data, by age and sex, for regions/provinces and territories, by place of residence, can be requested, on a cost recovery basis, from the Population Projections Section, Demography Division (telephone (613) 951-2304 or (613) 951-2316).

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END NOTES

Chapter 1

1. The APS followed extensive consultations, held jointly with Statistics Canada and representatives from the Assembly of First Nations, the former Native Council of Canada, Metis National Council, the Inuit Tapirisat of Canada, as well as representatives from numerous research and service organisations and the federal, provincial and territorial governments.
2. For example, Demography Division has also prepared Aboriginal population projections relying exclusively on the 1991 Census data on Aboriginal origins (Nault et al, 1993; Loh, 1995).
3. At the request of the Royal Commission, the classification of “registered” is applied only to those reporting North American Indian identity. This was done in order to give primary focus to the cultural identity of North American Indians, while being able to recognize the size of the non-status Indian population. This latter group does not have access to many of the benefits of registered Indians. All persons who report themselves as Metis but who are also reported being registered according to the Indian Act, are treated as if they are Metis (and Metis alone). Similarly, if persons report themselves as both Inuit and registered Indian, they are treated as Inuit (and Inuit alone) in the projections. This differs from the practice followed by Statistics Canada in releasing its data on the registered Indian population in Canada, as all persons with this legal distinction are included in the status population.

Chapter 2

4. For a discussion on the regional cohort component method, see: STATISTICS CANADA (1994). Population Projections for Canada, Provinces and Territories, 1993-2016. Ottawa: Minister of Industry, Science and Technology, Catalogue 91-520, Occasional.

Chapter 3

5. These figures add up to slightly more than the total, due to a small percentage of multiple responses across Aboriginal categories. They also exclude persons residing on incompletely enumerated reserves and do not take into account other undercoverage in the Census.
6. These figures exclude persons residing on incompletely enumerated reserves in the 1991 Census and APS, nor is undercoverage taken into account.
7. Adjustments of the off reserve population use undercoverage rates for the Canadian population in general, in the absence of rates specific to the Aboriginal population off reserve.
8. If a person responded that he/she identified with more than one Aboriginal group (e.g. North American Indian and Metis) this person was included in each population count. For projection purposes, only the total Aboriginal population is adjusted for the multiple responses, by allocating them into one of the Aboriginal groups, in order to not overstate the total population count.

Chapter 4

9. Anecdotal evidence suggests that persons with Aboriginal ancestry who currently do not identify may come forward to seek Indian status if they think that they are eligible according to Bill C-31 criteria. This assumption of drawing into the C-31 pool from both the non-status Indian ancestry and identity pools is also contingent on the projected number of C-31 applicants. If the identity population were solely used to supply the C-31

pool, this APS based non-status population would be quickly depleted. This scenario, which is considered highly unlikely, can be avoided by expanding the potential pool.

Chapter 6

10. The urban classification used in these projections combines both large (CMA) and small urban areas, and hence observed inflows into CMAs are masked by large net outflows from smaller urban areas.
11. The transfer of Bill C-31 births from status to non-status population also has an indirect impact on the number of births later on in the projection period (through births to Bill C-31 births).

APPENDIX A

SUMMARY CHARTS

Chart 1. APS Identity Question

Identity - Your census Questionnaire indicated that you have some Aboriginal ancestors or that you are a registered Indian, as defined by the Indian Act of Canada. By Aboriginal, I mean North American Indian, Inuit or Metis.

A1. With which Aboriginal group do you identify?

1. North American Indian
2. Inuit
3. Metis
4. Another Aboriginal group - specify:

5. Don't identify with an Aboriginal group

1a. Are you a registered Indian, as defined by the Indian Act of Canada?

Chart 2. Projections of Aboriginal Groups by Province/Region and by Place of Residence

North American Indians - Registered

This population was projected separately for non-reserve rural, urban and on-reserve areas. This was done for each of Canada's provinces and territories. The only exception to this was in Atlantic Canada, whereby Newfoundland, PEI, Nova Scotia and New Brunswick were collapsed into one region. This yields 27 distinct areas in the regional cohort component model (9 regions by 3 places of residence). This population is referred to as either registered or status Indian throughout the report.

North American Indians - Non-status

This population was projected separately, for non-reserve rural and urban areas, for each of Canada's provinces. The only exceptions to this were in the Atlantic provinces (whereby all provinces were collapsed into one region) and the two territories. Due to small numbers of non-status Indians living in the Yukon, the two territories were collapsed into one region. No attempt was made to separately project the on-reserve population, which was included in the rural population, due to small numbers. This yields 16 distinct areas in the regional cohort component model (8 regions by 2 places of residence). Throughout the report this group is referred to as either non-status or non-registered Indians.

Metis

This population was projected separately in rural and urban areas in each of Canada's provinces. The only exception to this was in the Atlantic provinces (where all provinces were collapsed into one region) and in Canada's north. Due to small numbers of Metis living in the Yukon, the two territories were collapsed into one region. No attempt was made to separately project the on-reserve population, which was included in the rural population, due to small numbers. This yields 16 distinct areas in the regional cohort component model (8 regions by 2 places of residence).

Inuit

Due to small numbers, this population was projected separately in only four regions. More specifically, four separate projections were made using the regional cohort component model with the N.W.T, Quebec, Labrador and a residual category that involved the remainder of the Inuit population. Place of residence was dropped due to small numbers.

APPENDIX B

COMPONENT OF GROWTH ASSUMPTIONS

Fertility Assumptions

Development of Fertility Projections

The development of fertility projections first required some estimation of current levels of fertility for each Aboriginal group by place of residence. Direct data on the fertility of Aboriginal persons are not available for all Aboriginal groups. The only direct sources of birth data are for registered Indians (based on the Indian Register maintained by Indian and Northern Affairs Canada (INAC), and the Inuit of Northern Quebec; none exist for Metis and non-status Indians. Estimates of total fertility rates (TFRs)¹² for 1991, were developed using APS data on “children ever born” in combination with INAC-based estimates for registered Indians.

Levels and Past Trends

According to estimates of TFRs for 1991, the fertility of the Inuit appears substantially higher than other Aboriginal groups, followed by the status Indian population, Metis and non-status Indians. With respect to place of residence, APS - based estimates also indicate that fertility levels are higher on reserves, followed by rural areas off reserve, and lowest in urban areas for all Aboriginal groups. For example, in 1991, the TFR of Inuit is estimated to be 3.4 compared to 2.9 for registered Indians, 2.0 for non-status Indians, and 2.5 for Metis.

Aboriginal fertility, which is higher than the Canadian fertility level in general, has been declining since the 1960's (Romaniuc, 1987). Declining fertility levels of registered Indians are converging toward Canadian levels: from a TFR of 4.2 in 1975 to 2.8 in 1991, compared to corresponding TFRs of 1.8 and 1.7, for the total Canadian population (Nault et al.). Fertility levels among non-status Indians, Metis and Inuit are also converging toward national levels (Ram, 1991), such that the relative ranking of TFRs across groups, as observed for 1991, has remained relatively consistent over time.

Assumptions

Assumptions about future fertility were developed for Aboriginal groups, by place of residence, based on: TFRs already projected for registered Indians in previous INAC-based projections

(Nault et al); and estimates of current fertility, from the 1991 APS data. Three fertility assumptions (a rapid decline, a constant level and a slow decline) were developed for each Aboriginal group and place of residence, first at the national level and then projected by region. However, only two (the rapid decline and constant level) of the three fertility assumptions, were used for the final set of projections. The relative rankings of the Aboriginal groups, in terms of TFRs, with Inuit having the highest fertility, followed by registered Indians, Metis and non-status Indians are maintained throughout the projection period. Also, the variation in fertility estimated by place of residence, such that fertility is highest on reserves, followed by rural areas off reserve and lowest in urban areas, is projected throughout the period. Assumptions in terms of projected TFRs, for 1991 and 2016, are summarized by Aboriginal group in Table 2 of Section 4.

The two fertility assumptions can be summarized as follows: under the rapid decline assumption is considered to be the most plausible, fertility converges to below the TFR replacement level of 2.1 children per woman, for most Aboriginal sub-populations by 2016; under the constant assumption, a clear departure from recent trends, the fertility level is projected to remain constant at the level observed in 1991, representing in the present projections, an upper bound for fertility.

Mortality Assumptions

Development of Mortality Projections

For the current projections, mortality had to be estimated and projected for Aboriginal sub-populations, defined by place of residence, using death data available only for status Indian and Inuit populations. As with fertility, direct data on Aboriginal deaths are produced only for registered Indians and Inuit. Estimated and projected life expectancy at birth, e_0 ,¹³ {average number of years expected to live at birth} were derived for status Indians based on reported death data from INAC's register (Nault et al. 1993), and for the Inuit of Nouveau-Québec, based on data from a population register maintained by the Ministère de la Santé et des Services Sociaux du Québec (Létourneau, 1994). APS data on the level of schooling attained among the population aged

15 to 49 were used to help estimate the e_0 of each Aboriginal sub-population relative to these estimates presently available.

Levels and Past Trends

Estimates for 1991 indicate that life expectancy at birth is expected to be higher in urban than rural areas, and in rural areas than on reserves. It is also expected to be higher for non-status Indians than Metis, and for Metis than status Indians. In rural areas, e_0 is virtually the same for status and non-status Indians and Metis, but in urban areas, status and non-status Indian have higher life expectancies than the Metis. The estimated life expectancy across Aboriginal sub-populations therefore, varies within a relatively wide range. For example, in 1991 the e_0 of males varied from 57.6 for Inuit to 72.5 for North American Indians in urban settings — a difference of almost 15 years. The corresponding figures for females are 68.8 and 79.0 — a difference of 10.2 years. These mortality figures can be seen as intermediate between the better-known mortality of the status Indians, Inuit and total Canadian populations.

Historical data on the mortality of registered Indians and Inuit indicate that the mortality of Aboriginal people has declined significantly over the past century, although still notably higher than that of the Canadian population in general. An analysis of past trends in the mortality of registered Indians (Nault et al, 1993) has demonstrated that gains recently witnessed have somewhat narrowed the gap between registered Indian mortality and that of the rest of the Canadian population. For example, between 1975 and 1990, the male life expectancy at birth for Indians, is estimated to have increased by eight years, from about 59 to 67; while infant mortality declined from 39 to 12 deaths per 1,000.

Assumptions

Two mortality assumptions were developed for each Aboriginal group, by place of residence, at the national level. The assumptions can be summarized as follows: under the assumption of a decline in mortality, life expectancy at birth is assumed to climb, although all projections remain

below the Canadian average, across all Aboriginal populations, since a large proportion of Aboriginal persons will continue to live in remote areas under harsh climatic conditions. It is assumed that the greatest decline is for the Inuit and status on-reserve populations, and that mortality will continue to be higher in rural areas than urban, and higher on reserve than off reserve. Under the constant mortality assumption, considered unlikely in light of recent trends, survival rates for 1991 are held constant throughout the projection period for all Aboriginal groups, across all geographic areas, and represent an upper bound for mortality in the projections.

Internal Migration¹⁴ Assumptions

The internal migration component involves two sets of geography: interprovincial/regional and place of residence (reserve, rural and urban areas off reserve). The projection of Aboriginal migration by both place of residence and region is undertaken here for the first time. Compared to the overall Canadian population, interprovincial migration currently is not as major a component of regional growth among the Aboriginal population (Clatworthy, 1994). However, over a 25-year projection period, as fertility rapidly declines, migration can become a more significant factor in both regional and residential growth.

Development of Migration Projections

Migration projections were developed for three of the four aboriginal groups: registered Indian, non-status Indian and Metis. In the case of the Inuit, migration was assumed to be nil since migration as a component of growth for the Inuit population among their four large regions was thought to be negligible (Clatworthy, 1994). Assumptions were formulated by Aboriginal group, by region and place of residence, using age-sex specific out-migration rates and origin-destination proportions developed from an analysis of APS migration data. Once assumptions are applied in the population projection model, they are then assessed in terms of the resulting levels of net migration (in-migrants minus out-migrants) for each region and place of residence.¹⁵

Migration Patterns and Trends

Migration by Place of Residence

The propensity to migrate from one community to another varied considerably by both place of residence and Aboriginal group over the 1986-91 period which saw some 60,200 registered Indians, 24,600 non-status Indians and 27,800 Metis (aged 5 years and over) change communities. For registered Indians, the net effect of residential migration over the 1986-91 period is a net inflow of almost 8,000 migrants to reserves, a small net inflow of just over a 1,000 to urban areas, and a significantly large net outflow of close to 9,000 migrants from rural areas.¹⁶ The relative impact in terms of net gain or loss of registered Indian population was most significant for rural areas. Compared to registered Indians, the net impact of migration, for both non-status Indian and Metis residential populations, was less pronounced, being favourable, for rural areas, and yielding losses in urban areas.

Interregional Migration

Perhaps the overall pattern of interregional or interprovincial migration among the Aboriginal identity population between 1986 and 1991 might be best described as a 'westward' flow, more or less typical of that observed for the Canadian population over the same period. However, there are significant variations among each Aboriginal group in terms of provincial destinations and population gains/losses due to migration, such that migration flows of registered Indians resulted in a net gain of population to British Columbia and Alberta, with most other provinces/regions sustaining net losses; whereas for non-status Indians, Ontario, Alberta and the Territories, saw net inflows; while among Metis, Alberta gained a significant net inflow of population, combined with a significant net outflow from Ontario.

Assumptions

Future migration is difficult to project, in that it is affected by a number of socio-economic factors, as well as age and gender considerations. For example, migration to and from reserves is influenced by housing availability on reserves, economic and employment opportunities on and off reserve, and education levels. Given the

difficulty of forecasting the factors underlying migration patterns, and that analyses of past trends are limited, current patterns of migration were used as the basis for developing migration assumptions.

Two sets of migration assumptions, by region and place of residence, were employed in the projections: zero migration; and, the continuation of current patterns, based on the 1986-91 period, held constant over the projection period. The application of the "zero" migration assumption in one set of projections makes it possible to assess the impact of the "current-based" migration assumption on future growth of Aboriginal populations by region and place of residence.

For registered Indians, the current migration scenario by place of residence reflects patterns observed over the 1986-91 period which are also similar to patterns estimated for registered Indians from earlier census periods — namely a net inflow to reserves and a net outflow from rural areas (Norris, 1995).¹⁷ Over the projection period, reserves have modest net inflows of population, rural areas, significant losses, and urban areas, relatively minor net outflows. For both non-status Indians and Metis, the pattern of population gain due to migration in urban areas with corresponding population loss in rural areas, was projected throughout most of the projection period. The impact of net migration, relative to population size by place of residence, is projected to decline each year over the projection period for all Aboriginal groups.

Interprovincial migration assumptions reflect the continuation of migration patterns observed for each Aboriginal group over the 1986-91 period. For registered Indians, assumptions reflect the continuation of a "westward" trend, in which net inflows of migrants are projected for Alberta and British Columbia throughout the 25-year projection period, for non-status Indians, the continuation of net inflows of migrants to Ontario, Alberta, and the Territories is assumed; and for the Metis population, a continued net outflow of migrants from Ontario, with net inflows to Alberta, British Columbia and the Territories. The impact of interregional migration relative to population size, is generally projected to either remain stable or decline over the projection period.

END NOTES - APPENDIX

Appendix B

12. Total Fertility Rate: The sum of single-year age-specific fertility rates during a given year. It indicates the average number of children that a woman would have if the current age-specific fertility rates prevail over her reproductive period.
13. A statistical measure derived from the life table indicating the average years of life remaining for a person at the specified ages, if current age-specific mortality rates prevail for the remainder of that person's life (e_0 refers to life expectancy at birth).
14. There are two types of migration: international migration and internal migration. For projection purposes, it is assumed that the Aboriginal population is not affected by international migration. According to 1991 APS data, of some 115,000 Aboriginal migrants who lived in a different community 5 years ago, only about 2,000 had lived outside Canada.
15. Due to small numbers, sample size, and data suppression, out-migration rates and origin-destination proportions could not be calculated directly from the observed APS migration data. Estimation procedures were developed to derive the required out-migration rates and proportions. Because of the necessity for these estimation procedures, some caution is advised particularly for regions with small populations, in the interpretation of rates, proportions and resulting net migration levels.
16. In order to get a truer estimate of the inflow of migrants from reserves to non-reserve urban and rural areas, this analysis includes some 2,000 migrants whose place of residence five years ago was an incompletely enumerated reserve. As a consequence, net migration levels differ somewhat, but not significantly, from those reported in Clatworthy's (1996) analysis which excluded migrants from incompletely enumerated reserves.
17. In the case of registered Indians there was a range in the estimation of out-migration rates, due to the impact of adjustments for undercoverage and incomplete enumeration of reserves in settlement. Based on discussions with Commission staff, a migration scenario was developed within the range of estimated community out-migration rates that provides the "most favourable" possible scenario for urban areas in terms of modest losses, the least favourable for rural areas in terms of large net outflows, and a relatively conservative projection of net inflows to reserves. The basic pattern of net migration was not significantly altered by the choice of estimates.

