



Registered Indian Population Projections *for* Canada *and* Regions



1998-2008

Canada

Published under the authority of the Minister
of Indian Affairs and Northern Development
Ottawa, 2000

<http://www.inac.gc.ca>

QS-3618-000-BB-A1

Catalogue No. R32-163/2000

ISBN 0-662-64763-7

© Minister of Public Works
and Government Services Canada

TABLE OF CONTENTS

What Are Population Projections and Why Do We Need Them?	2
How Can We Use These Projections?	3
What Is New In These Projections?	3
Registered Indian Population Could Exceed 798,000 By Year 2008	3
Greatest Increase in Registered Indian Population is in the Prairies	4
Registered Indian Population Increasing In the Working Age Group.	4
Registered Indian Population Is Getting Older and Living Longer	6
Age Structure: Gender Does Make a Difference	6
Composition of Total Reserve Population is Changing	7
Who Do I Contact For More Information?	8
Appendix	8
Projection Method	8
Base Population	8
Component Assumptions	8
Fertility	9
Mortality (Life Expectancy at Birth).	9
Migration	9
Reinstatements (Bill C-31)	9
Miscellaneous Additions	10
Status Inheritance	10
Limitations of the Projections	11
Definitions	12
Summary Table of Results By Canada and DIAND Regions, 1998 and 2008	14

WHAT ARE POPULATION PROJECTIONS AND WHY DO WE NEED THEM?

The Department of Indian Affairs and Northern Development (DIAND), in collaboration with Statistics Canada, prepares and regularly updates the *Registered Indian Population Projections for Canada and Regions*. The most recent series of projections covers the period from 1998 to 2008 and forms the latest annual update of Registered Indian projections.

The current projections are based on the 1998 Indian Register (IR), adjusted for late and under reporting of life events (births and deaths). The IR is based on registration of individuals who i) are entitled to be registered according to the *Indian Act*, ii) who have applied to be registered, and iii) whose entitlement has been verified.

The IR differs from Census of Population data in that it takes into account all individuals registered under the *Indian Act*, including Registered Indians (RI) in institutions, and those residing outside of Canada. Also, the Census is a self-reporting enumeration. For these reasons, population counts differ significantly between these two sources. The Indian Register is the authoritative source for both historical and current administrative data on all Registered Indians. From it, trends in fertility, mortality, reinstatements, status inheritance and miscellaneous additions are analyzed and projected to form the components of growth used in these projections.

Although these projections are not predictions, they represent future trends that the Registered Indian population will follow if the underlying assumptions (with respect to fertility, mortality, miscellaneous additions, migration, reinstatement, and status inheritance) prove to be correct. They help to determine population trends of Registered Indians and allow for a better understanding of the future population structure. DIAND produces RI population projections to help anticipate future demand for programs and services and to better understand the make-up of the RI population.



HOW CAN WE USE THESE PROJECTIONS?

Individuals involved in making Canada a better place for First Nations will find that the projections are a powerful planning tool. Demographic data are essential for planning in areas such as housing, water and sewer services, education and school facilities, and medical and family services.

For concrete examples of the benefits of population data projections, refer to *How Population Data Can Benefit Your First Nation* by visiting our web site at www.ainc-inac.gc.ca or contacting instat@inac.gc.ca.

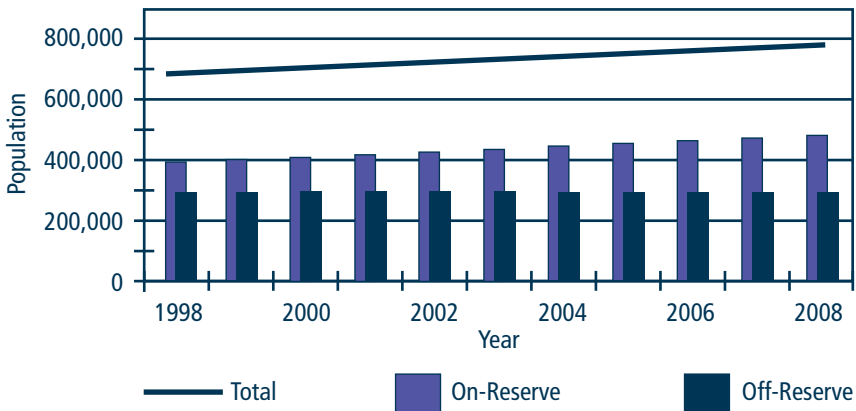
WHAT IS NEW IN THESE PROJECTIONS?

The current projections are an update of the previous 1996-2021 time series. To reflect the latest demographic trends of the Registered Indian population, the base population and the component assumptions have been updated from the 1996 time series to a 1998-base year. In addition, the assumptions on status inheritance and miscellaneous additions have also been revised. For the first time, an assumption on migration has also been incorporated in the current update.

Registered Indian Population Could Exceed 798,000 By Year 2008

The Registered Indian population could increase at an annual growth rate of 2% over the 10-year period from 658,000 in 1998 to 798,000 in 2008.

Projected Registered Indian Population
Canada, Average Growth, 1998-2008



The on-reserve RI population could increase from 387,900 in 1998 to 508,900 in 2008 with an annual growth rate of approximately 3%. The projected off-reserve growth rate, increasing from 270,000 in 1998 to 289,000 in 2008, is expected to be comparable to the Canadian annual growth rate of approximately 1% over the same period. The off-reserve population is expected to grow at a slower pace than the on-reserve, largely due to the inclusion of a migration assumption (net outflow to reserve communities annually from the off-reserve population). As well, lower fertility and mortality rates and higher out-marriage rates are observed off-reserve.

Greatest Increase in Registered Indian Population is in the Prairies

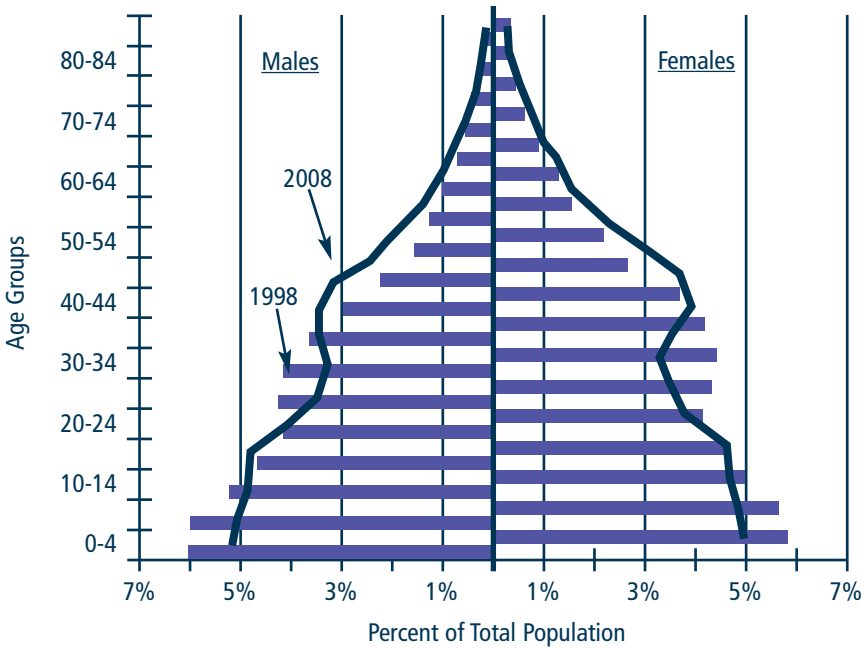
The regional distribution of Registered Indians is changing. Population growth is uneven across Canada. The Prairies are experiencing the largest growth, particularly in Manitoba, followed by Alberta and Saskatchewan. It is estimated that by 2008, Manitoba may have the second largest Registered Indian population in Canada, after Ontario. The Registered Indian population is expected to increase in these regions largely due to a higher projected fertility rate.

Registered Indian Population Increasing in the Working Age Group

The 1998 age distribution shows that young people 19 years of age and under, made up 42% of the Registered Indian population. By 2008, the 19 and under group is expected to decline to approximately 39% of the Registered Indian population. There will be a subsequent increase in the working age group (20 to 64 years) from 53% to 56% over the same ten year period. The 1998 age distribution of the RI Population shows that the group 65 years of age and over made up only 4%. By 2008, the 65 and over category will increase to 5%.



R.I. Age / Gender Pyramid, Average Growth,
1998 and 2008



These changes suggest that the Registered Indian population is moving into a different phase of the demographic cycle. As a result, there will be increasing pressures for employment, housing, and other services required for people entering the labour force. The median age for Registered Indians is expected to increase from 24.6 years in 1998 to 26.6 years in 2008. This is still far below the 1998 median age of 35.9 years for all Canadians.

Registered Indian Population Is Getting Older and Living Longer

Not only is there an increase in the Registered Indian population in the over 65 category, this population is also living longer. This will likely increase the need for special services required by the elderly. Also, the RI population is closing the gap with the Canadian population in terms of life expectancy. The following chart shows that by 2006, RI males and females will have lessened the gap by 1 & 1.8 years respectively if these assumptions prove to be true.

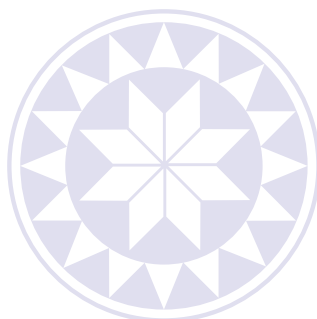
Registered Indian Life Expectancy Compared to Canadian Population						
	1996			2006		
	R.I.	Cnd.	Gap	R.I.	Cnd.	Gap
Males	68.3	75.5	7.2	71.3	77.5	6.2
Females	76.0	81.3	5.3	79.0	82.5	3.5

Note: 1996 and 2006 were used in the chart to be comparable with projections developed for the Canadian population.

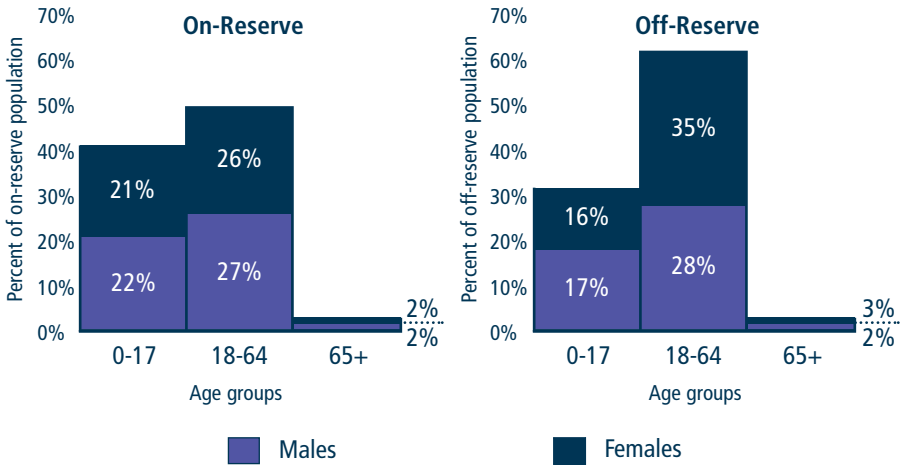
Age Structure: Gender Does Make a Difference

The proportion of male and female Registered Indians under the age of 18 is very similar for both on and off-reserve populations. However, this begins to change for the 18 to 64 age group. There are more Registered Indian women than men aged 18 to 64 living off reserve. On-reserve, there is little difference in the proportion of males and females in this age group. Over the age of 65, females consistently outnumber males, both on and off reserve.

In 2008, the gender distribution is projected to be relatively similar to that of 1998 with a few notable differences. The proportion of males between the ages of 18 to 64 living off reserve are projected to increase to 31% of the population (from 28%). As well, females 65 years of age and older are projected to make-up 5% of the off-reserve population (up from 3% in 1998).



Age Distribution of Registered Indians, On/Off Reserve, By Gender and Selected Age Groups, Average Growth Scenario, 1998



Composition of Total Reserve Population is Changing

The greatest change in composition on-reserve is in the non-registered population. With the 1985 amendments (Bill C-31) to the *Indian Act*, changes were made to the rules that determine how Registered Indian status is passed on from one generation to the next. Under these rules, the future population entitled to Indian registration will be determined by patterns of Indian/non-Indian parenting (i.e. out-marriage rates). In 1998, an estimated 2% of births to Registered Indians on reserve were ineligible for status. This is projected to increase to 4% by 2008. For the off-reserve population, the rate was 20% in 1998 and is projected to reach 27% by 2008.

Because of the 1985 changes to the *Indian Act*, there may be an increasing number of individuals living on reserve who are children of Registered Indian, but who are not eligible for registration under the *Indian Act*. Therefore, they will not appear in the Indian Register. This will have an impact on the future composition of the on-reserve community.

These changes in population composition may also affect the forecast of resource requirements for programs funded by DIAND. For instance, there are specific services, such as Post-Secondary Education and Non-Insured Health Benefits, which are funded solely for Registered Indians and eligible Inuit and Innu. However, DIAND may fund basic services, such as Social Assistance for all individuals living on reserve, regardless of eligibility for registration. Therefore, it is essential to understand the composition of the total on-reserve populations, both registered and non-registered. DIAND is planning to refine preliminary non-registered on-reserve population projections to provide a better understanding of the total on-reserve population.

WHO DO I CONTACT FOR MORE INFORMATION?

For methodology questions regarding these projections, contact Annette Vermaeten at (819) 953-7058, email: vermaetena@inac.gc.ca or Pierre Gauvin at (819) 953-7059, email: gauvinp@inac.gc.ca. For detailed results and for other statistical requests, contact the statistical line at (819) 953-9999, email: instat@inac.gc.ca.

APPENDIX

The following sections present the description of the methodology and component assumptions, definitions, and the limitations of these projections.

Projection Method

The projections were developed using a cohort component method, which involves the separate analysis and projection of each component of population change at the regional and place of residence (on/off reserve) levels. The components of growth that were projected include the standard three demographic factors: fertility, mortality, and migration. In the case of Registered Indians, other components need to be factored in, namely: reinstatements, miscellaneous additions, and status inheritance.

Base Population

The base population was the Registered Indian population by age, sex, region, and residence, as of December 31, 1998. The population was obtained from the Indian Register and was adjusted for late and under reporting of births and deaths. Although most birth events are reported within five years of their occurrence, some are reported much later. Consequently, in any given year, many of the births that are reported actually occurred in an earlier year. For example, it is estimated that of all the births reported in 1998, 70 per cent had actually occurred prior to 1998. A similar situation occurs with under reported deaths. For example, there are several individuals recorded in the Indian Register who are over 100 years of age. Consequently, even though the Register showed a population of 642,400, the adjusted population was 658,800, a difference of 3%. This series of population projections has been developed on the basis of the latter adjusted population. As with any population projection, Statistics Canada has developed a rigorous process of adjusting the base population for these deficiencies to more accurately reflect the actual population.

Component Assumptions

Following is a description of each of the components of growth used for the projections.

Fertility

The fertility assumption is based on the fertility patterns evidenced since 1972 in the IR. The 1996 Census was used to develop the residency (on/off reserve estimates) assumption. Also, these projections continue to use the moderate decline in fertility assumption that was used in the 1996-based projections, since comparisons of the updated 1998 time series with the 1996 series and projected number of births showed only minor discrepancies in number of births. Under this assumption, the total fertility rate (TFR) of Registered Indians is projected to decline from 2.67 children per woman in 1998 to 2.47 children by 2008.

Mortality (Life Expectancy at Birth)

The mortality assumption is based on the mortality patterns evidenced since 1972 in the IR. The time series data on deaths were also adjusted for late and under reporting of deaths based on the information for 1997 and 1998. 1997 and 1998, data do not suggest any new trend in the adjusted time series. Therefore, the 1996 life tables were not updated. As with the fertility assumption, 1996 Census data was used to develop the residency (on/off reserve estimates) assumption.

Migration

One of the limitations of the previous 1996-based projections was the non-inclusion of the migration component. The current update employs the intra-regional migration assumption developed by Clatworthy, *Developing Migration Assumptions to Support Annual Update of Population Projections: 1997-2007*. This assumption reflects a continuation of recent trends as identified in the 1996 Census, the 1991 Census, and the 1991 Aboriginal Peoples Survey (migration trends between 1986-1991 and 1991-1996). It assumes a continuation of net in-flows of Registered Indian migrants to reserves in the nine regions. According to the assumption, approximately 2,570 Registered Indians nationally (average growth scenario) could move from off reserve to on reserve annually (net inflow to reserve communities). This assumption refers only to migration between on and off reserve since only intraprovincial migration flows were measured.

Reinstatements (Bill C-31)

The number of individuals registering under this category will diminish over the years, since this category applies only to persons born prior to the April 17, 1985 amendments to the *Indian Act*.

The 1997 to 1999 data on Bill C-31 cumulative applicants and registrants for reinstatement indicate a new trend toward a slight decline in the number of applicants and registrants. The number of Bill C-31 registrants in 1998 was significantly lower than those projected in the 1996-based projections, due to a backlog of files. This anomaly was reversed in 1999, as the backlog was significantly reduced.

In order to incorporate the declining trend in the current update, the cumulative number of applicants projected in the 1996-based projections was revised downward. Then, to derive the projected cumulative registrants, the most recent, slightly lower, success rate of 51% was applied to the projected cumulative applicants. According to the revised assumption, between the inception of the amendments in 1985 and the end of the projection period (2008), approximately 124,000 entitlement registrants could be added to the Indian register.

Again, it is important to recognize that the reinstated population is an aging and finite population. It includes only those individuals born prior to 1985.

Miscellaneous Additions

Between 1989 and 1995, the annual number of miscellaneous additions to the Indian Register was steady at around 900 per year. However, a substantial declining trend emerged thereafter. By 1998, the number of miscellaneous additions registered was 350 annually.

In the previous 1996 projections, a constant number of miscellaneous additions was adopted in the projections to reflect the stable trend observed between 1989 and 1995. However, in light of the declining trend that emerged after 1995, the 1996-based assumption on this component was revised.

The revised assumption assumes that the rate of change observed between 1995 and 1998 will continue and reach zero within 60 years. Under this assumption, the population pool they originate from (persons born prior to the April 17, 1985 amendments to the *Indian Act*) will diminish as the projected number of miscellaneous additions reaches a small finite number. Accordingly, between 1999 and 2008, approximately 1,370 individuals will be added to the Indian Register as miscellaneous additions.

Status Inheritance

In the 1996-based projections, the assumptions on status inheritance were based on the data available at the time and did not incorporate a regional or place of residence breakdown. For the 1998-2008 projections, a regional and place of residence (on/off reserve) breakdown was incorporated in the assumptions. Also, the inclusion of more recent research on out-marriage rates among Registered Indians and its impact on eligibility for registration in the 1998-2008 annual update was used as part of the modeling of future Registered Indian growth.

According to the revised assumption, the proportions of births ineligible for registration would increase from around 2% in 1998 to 4% by 2008 for the on-reserve population. The corresponding proportions for the off-reserve population are much higher, since out-marriage rates are greater off-reserve, 20% in 1998 and 27% in 2008.

Chart: Summary of Component Assumptions Used in RI Population Projection, 1998 and 2008, Canada, Average Growth

	1998			2008		
	On	Off	Total	On	Off	Total
Fertility (TFR)	3.12	2.39	2.67	2.87	2.2	2.47
Mortality (life expectancy at birth)						
Males	67.1	71.1	68.5	69.2	72.3	70.3
Females	73.1	77.7	76.2	75.4	79.0	78.1
Migration (net in-flows of migrants to reserves)	2570	-2570	0	2570	-2570	0
Bill C-31 Registrants	635	2953	3588	87	401	488
Miscellaneous Additions	43	207	250	15	70	85
Status Inheritance	1.5%	19.6%	8.2%	4.1%	26.8%	12.3%

Limitations of the Projections

The accuracy of any projection depends on the reliability of the base population, the component data, the degree to which the underlying assumptions for each component successfully anticipate future trends, the population size, and the time horizon. In general, the uncertainty of future change in any population increases as the projection period lengthens, and is greatest for smaller populations, such as in the case of First Nations.

There are also other limitations, more specific to the Registered Indian population. For instance, the current projections are band affiliated. In other words, the individual's region of residence is tied to the region of the individual's band, or community. For example, if an individual registered to a band in Ontario lived off-reserve in another province, the Indian Register would still indicate Ontario as their region of residence. The projections do not incorporate interregional migration flows, and migration flows refer solely to movements between on and off reserve.

Also, as the Census does not capture data on the band affiliation of Registered Indians, the construction of the migration assumption based on the census migration data requires assumptions concerning the assignment of migrants and non-migrants to regional on and off-reserve populations. The migration assumption assumes that

the 5-year migration patterns experienced in 1986-1991 and 1991-1996 will remain constant during the 10-year projection period. Migration patterns for the 1-year period (1995-1996) are similar with respect to the general nature of on/off reserve migration flows, but differ with respect to inter-regional migration flows. The migration assumption based on the 5-year trend did not capture the recent net migration flows to Manitoba and net out migration from British Columbia. Incorporation of the migration flows depicted in the 1-year patterns would alter the projection outcomes significantly for these regions. It is difficult to determine whether the patterns captured in the 1-year or the 5-year period are indicative of a longer-term trend.

Census data was used in developing the migration assumption. This source of data is fundamentally different from IR data. For example, Census data is self-reported, does not include non-enumerated reserves, R.I., living in institutions or outside of Canada.

The Indian Register itself has certain limitations. Already mentioned is the need to adjust the data for late and under reporting of births and deaths. Also, the data includes Registered Indians only, and does not include non-Registered Indians living on-reserve.

These projections are limited to the IR as of December 31, 1998, and do not project other unknown factors, such as future Treaty Land Entitlement lands and Additions to Reserves.

Finally, in addition to these limitations, it should be emphasized that these projections are not predictions. They present the projected on/off reserve Registered Indian population for Canada and regions, if the underlying assumptions prove correct. These assumptions were developed based on past trends, using the adjusted time series, but it is difficult to anticipate factors that may affect their course in the future, and consequently, the projection results.

Definitions

Life Expectancy

This is a statistical measure that indicates the average years of life remaining for a person at a specific age, typically at birth, if the current age-specific mortality rates prevail for the remainder of that person's life.

Natural Increase

This is a change, either positive or negative, in a population size over a given period as a result of the difference between the number of births and deaths:

(Natural increase of population = Births minus Deaths)

On reserve

Is defined as on reserve and on crown lands in the Register.

Out-Marriage Rate

The out-marriage rate is defined as the probability of Indian/non-Indian parenting (i.e. Given that a RI produces a child, what is the probability that the other parent is non-Indian?).

Regions

The regions, defined by DIAND, coincide with provinces in all but three cases: i) the Ontario region includes some 3,000 Indians living in the Quebec portion of the Akwesasne reserve; ii) the Yukon region includes about 400 Indians from the Taku River Tlingit, and Liard River bands located in British Columbia; and iii) the Atlantic region comprises the Indian population of New Brunswick, Nova Scotia, Prince Edward Island, and Newfoundland.

Registered Indian

This is defined as any person who is considered to be an Indian under the *Indian Act*, and whose name is recorded in the Indian Register maintained by DIAND.

Reinstatements

In June 1985, amendments to the *Indian Act* (Bill C-31) were passed by Parliament. These amendments restored Indian status and membership rights to individuals and their children who had lost their status and rights because of discrimination clauses contained in the previous *Indian Act*.

Status Inheritance Estimates

These are regional and national estimates of the entitlement status of descendants of the on/off reserve RI populations.

Total Fertility Rate (TFR)

TFR indicates the average number of children that a woman would have if the current age-specific fertility rates prevail over her reproductive period. It is calculated by summing the age-specific fertility rates during a given year.

Summary Table of Results By Canada and DIAND Regions, Average Growth, 1998 and 2008

The estimated and projected total populations of Registered Indians by on/off reserve for Canada and DIAND Regions, 1998 and 2008 is presented in the following table (Average Scenario):

Region	1998			2008		
	Total	On	Off	Total	On	Off
Atlantic	25,544	16,828	8,716	29,717	20,882	8,834
Quebec	61,975	43,955	18,020	72,008	54,834	17,174
Ontario	150,806	78,416	72,390	173,780	98,030	75,750
Man.	102,674	67,800	34,874	132,502	93,668	38,834
Sask.	103,306	53,402	49,904	129,660	73,306	56,355
Alberta	82,501	55,025	27,476	105,447	75,361	30,086
Yukon	7,560	3,853	3,707	8,440	4,463	3,976
B.C.	109,513	57,725	51,788	129,390	75,275	54,114
NWT	14,945	10,874	4,071	17,268	13,058	4,210
Canada	658,824	387,878	270,946	798,211	508,876	289,334

