

# CANADA AND USA: DEMOGRAPHIC DYNAMICS AND SUSTAINABILITY

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**Keywords:** Canada and USA, population, environment

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## Summary

Population is one of the basic major components determining sustainability, along with economic development, life-styles, and conservation policies. The US and Canada are among the fastest in population growth of the industrialized countries, with the US the fastest growing of the ten largest industrial countries. Immigration is a major component for growth in both countries with illegal immigration a major problem, especially for the US. Both have major natural resources and are among the world leaders in most commodities, except tropical agricultural products. The large and growing population combined with the highest level of industrialization, and large commercial agriculture

dependent on fertilizers and pesticides, along with the highest consumer consumption contributes to high level of air and water pollution and environmental degradation. Despite significant success at environmental controls, the level of environmental damage is still very significant.

## **1. Introduction**

In a discussion of sustainability one must always take into account that virtually all development entails environmental change. Historically, this change has frequently resulted in resource exploitation or damage. Some environmental activists, especially in the First World, view any further environmental change as destructive, whereas in the Third World many feel that development, and subsequent improvement in living levels, is the paramount consideration. Some forms of development have no alternative, e.g., clearing of natural vegetation for cropland or pasture, or the extraction of minerals, but all forms of economic development should entail conservation methods and care in causing minimal damage to the environment. It would appear that environmental deterioration is essentially due to perhaps three factors:

- Population growth: increasing numbers of people place added pressure on both natural resources and the environment;
- The process of development: this seems to be especially true for industrialization, mining/drilling, the expansion of cropland and pasture, the use of fertilizers and pesticides in agriculture, and motor vehicles;
- Human behavior: especially consumption volume and patterns, and the attitudes and practices of society with regard to wilderness, parks, and conservation measures.

In Anglo-America (Canada and the United States) the factor of population is critical because the level of total and per capita consumption is so high (several times that of the Third World) that any increase in population increases the stress on resources and the environment far more than a comparable increase in population of Third World countries.

This chapter is concerned only with the demographic factor (see first point above), although the other factors are also of major consideration in endeavoring to achieve sustainability.

## **2. Historical Overview**

The population of Anglo-America was probably about a million or less until about the beginning of the eighteenth century, although there is controversy over the pre-Columbian population of the New World (some estimates place the pre-European population in what is now Anglo-America as high as 10 million, or perhaps even more). The process of colonization and settlement, in absolute terms, was relatively slow so that the population by 1800 was approximately 6 million. This increased to more than 25 million by mid-century (Table 1). The growth rate, in these early stages of settlement, was approximately 3 percent annually, i.e., very comparable to that prevailing in much of the Third World recently. The rate of population growth of

Anglo-America was the world's fastest regional growth during the last half of the eighteenth and about all of the nineteenth centuries when it was surpassed by Oceania and, soon thereafter, also by Latin America.

By 1900 the population exceeded 81 million but the growth rate had declined to less than 2 percent. By the advent of World War II (1940), the population was in excess of 143 million, but the slowest rate of the region's population growth ever attained occurred at that time.

During the eighteenth century the death rate was probably about 30 or higher (30 deaths annually per 1000 population) while fertility was in the 50s (50+ births annually per 1000 population). Therefore, the rate of natural increase was high. Life expectancy was short, less than 40 years, and infant mortality was extremely high, with probably a quarter to a third of infants dying before their first birthday. These rates are not found anywhere in the world presently, except under extreme and, generally, temporary conditions.

Beginning about 1820 in the US, and about mid-century in Canada, immigration from Europe to Anglo-America began to increase significantly. As mortality and fertility were both in the process of decline, immigration contributed significantly to the growth of both countries until the Great Depression of the 1930s and the ensuing World War II. In both countries peak immigration occurred during the first decade of this century. In the period 1820-1930 (until the first major decline in European immigration) more than 37 million immigrants entered the US and 6 million into Canada. In Canada, with a much smaller population than the US, immigration contributed relatively more to population growth than it did in the US.

In both countries there was a westward shift in population and later southward (in the US). In 1790 (the first US census), the population was evenly divided between the Northeast and the South. By the Civil War (1860) more than a quarter of the population was in the Mid-West and the West was beginning to be settled. Approximately 70% of the population was divided between the South and the Northeast. By 1900, the Mid-West, the South, and the Northeast were approximately comparable in population (a quarter to a third each of the total US population) and less than 6% was in the West. By the time of World War II (1940), the three major regions remained comparable in population size but the West then contained 11% of the total population.

In Canada, in 1851 (the first census there) Ontario and Quebec were almost comparable accounting for three-quarters of the total population, with the remainder in the Maritimes and 2% in British Columbia (BC). By 1901 the gap between Ontario & Quebec had increased but combined still contained 71% of the national population. The Maritimes' share gradually decreased to only one-sixth and the prairies had double BC's population—there was only 11% of the population in the West (prairies and British Columbia). By 1941 the gap between Ontario and Quebec was not as pronounced and they contained three-fifths of the total population. Less than a tenth of the population was in the Maritimes, one-fifth was in the prairies (now undergoing a relative decline), but BC had increased relatively to 7% of the total population.

Essentially, in both the US and Canada the high rate of natural increase, combined with foreign immigration, resulted in a gradual westward shift in the population. The sparse Amerindian population with generally extensive means of economic survival was gradually being displaced by a European-descended population with more intensive economic use of the land and its resources and, gradually, a more urbanized society.

There was also a relatively slow rate of urbanization until the middle of the nineteenth century. Both countries attained 50% urban around 1920 (Table 2). This is significant with regard to consumption patterns, since urban dwellers have a generally higher level of per capita consumption than do those in rural areas.

### **3. Recent Trends and Patterns**

During World War II the population growth rate of both countries attained the lowest level ever and the volume of immigration was the lowest in about a century. By that time, both mortality and fertility in both countries was very low and population growth was only about 1 percent annually. Mortality has continued to decline and continues to be among the lowest in the world. The same is true of infant mortality, where the rate presently is less than 7, with Canada slightly below the US level in both the crude death and infant mortality rates. Life expectancy has increased by more than half a dozen years to the high 70s since World War II.

In the immediate post-war period there was a resurgent in the birth rate (“the baby boom”) as family formation was reinvigorated to make up for the losses during the Great Depression and family separations during the war. Peak fertility occurred within a few years of the end of the war (1945) and was comparable to that prevailing in the early decades of the century. Since then, fertility has generally declined, although somewhat erratically. By the 1970s, both countries attained replacement-level fertility. In the mid-1990s both countries attained the lowest fertility levels ever recorded. As with mortality, the crude birth rate of Canada (11) is below that of the US (15) and both are somewhat above the levels prevailing in many countries of Europe and Japan. Presently the US has the highest population growth rate of any industrialized country.

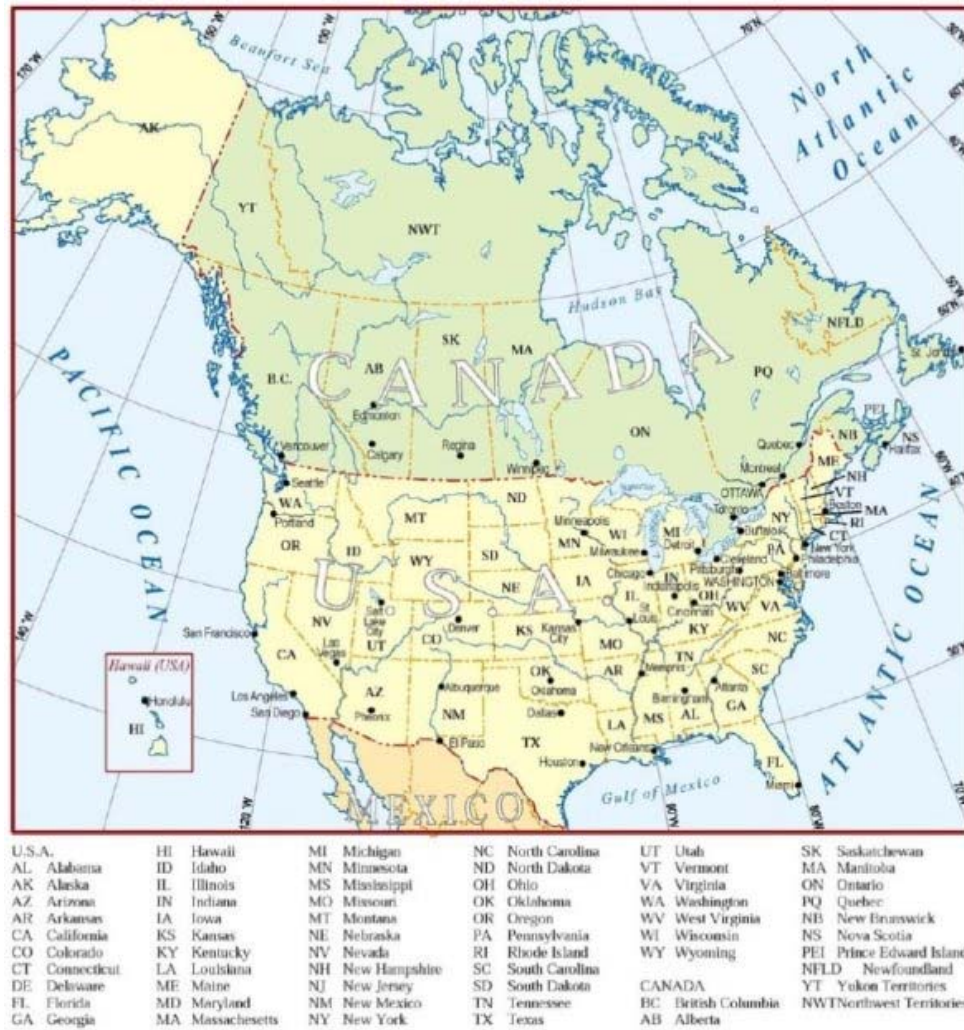


Figure 1. Map of the United States and Canada.

### 3.1. Immigration

Immigration into both countries resumed significantly with the end of World War II. The volume of immigrants has been comparable to the period of mass migrations at the close of the last century and the early decades of this century. However, the sources of the immigrants have shifted essentially from Europe to Latin America (less important in Canada) and Asia. Both countries have become increasingly multicultural in ethnic composition, especially in the post-WW II period. As then, Canada (overall now the second greatest recipient of immigrants) receives only a fraction of the volume entering the US. In the nineteenth and early twentieth centuries (when Canada was third in the world in immigration, after the US and Argentina) Canada received about a quarter to an eighth of the immigrants entering the US. In the post-World War II period, Canada received from slightly more than a half to recently only about a quarter of the immigrants entering the US. Generally more than three-quarters of a million immigrants enter the US annually and more than a fifth of a million into Canada. Immigration remains a significantly larger factor in Canada's population growth than it does in the US. In addition, it was estimated that in 1994 there were 3.5 to 4 million undocumented (illegal) immigrants in the US (most notably from Latin America, especially Mexico)

and this had increased to 5 million by 1996 and recently to possibly 8 million or more. Essentially immigration constitutes about half of the population growth of Canada and about a third or slightly more in the US.

### **3.2. Distribution of Population**

The pattern of redistribution of population continues in both countries. In the US by 1970, slightly less than one-quarter of the population resided in the Northeast and slightly more than that in the Mid-West, with the South accounting for almost a third. These regions all lost population relatively, while the West increased its proportion from 11% in 1940 to 17% in 1970. Between 1970 and 2000 the Northeast and the Mid-West both lost population relatively, while the South increased to more than a third and the West to more than a fifth of the national population. Obviously, the major internal migration movements are to the West and South.

In Canada, in the early post-WW II period, the Maritimes (including Newfoundland), Quebec, and the prairies (except for Alberta) were losing population relatively, while Ontario and British Columbia were gaining. The gap in 2002 between Ontario and Quebec has increased to more than four and a half million and Ontario accounts for nearly two-fifths of Canada's total population. BC now contains more than an eighth of the total population. The Northwest Territories, Nunavut, and the Yukon, although no longer growing more rapidly than the country overall, still account for less than one-half of 1% of the total.

### **3.3. Urbanization**

In both countries the process of urbanization has undergone a new phase in the postwar period. Although urbanization has increased, greater numbers have moved to suburban areas and beyond and created large metropolitan areas. Frequently, especially in the longer settled districts of both countries, the central city is stagnant in growth or even declines slightly. In 1970 the metropolitan population of the US amounted to slightly more than three-quarters of the US total population and by 2000 that had increased to four-fifths of the total. Nearly a fifth of the total urban population was in two metropolitan areas, New York City and Los Angeles.

In Canada the proportion of the total national population that resided in metropolitan areas had increased to slightly more than three-fifths by 2002. More than half of the total metropolitan population resides in the three largest centers: Toronto, Montreal, and Vancouver.

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### **Biographical Sketch**

Dr Alfonso Gonzalez is Professor Emeritus in Geography of the University of Calgary, Canada. Major specialization is Latin America, the Third World, and Spain, with particular interests in population, settlement, and socio-economic development. He has performed field and archival research in various countries of Hispanic America and Spain and has traveled in all the Spanish-speaking countries. Was a Senior Fulbright Scholar and has taught in Colombia and Ecuador. Has also traveled in Europe, the former USSR, the Middle East, and Japan. Has presented more than 40 professional papers and published a comparable number of articles and chapters in books. Is the co-editor, with Jim Norwine, of *The New Third World*. Continues an active interest in research and travel in Spain.

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