



The Daily

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Releases

Human activity and the environment: Climate change in Canada

1990 to 2005

Canada's emissions of greenhouse gases (GHGs), major contributors to climate change, rose 25% between 1990 and 2005. However, without increases in energy efficiency, the increase in emissions would have been even greater.

In 2005, human activities released the equivalent of 747 megatonnes of carbon dioxide into the atmosphere in Canada. This was up about 25% from emissions of 596 megatonnes in 1990.

One megatonne is equal to one million tonnes. To put this in perspective, driving a mid-size car about 5,000 kilometres results in about one tonne of emissions.

However, during the same 15-year period, the amount of GHGs emitted per unit of economic activity declined 18%, while the nation's population grew 17%, and energy use increased 23%.

This compilation of the most recent statistics related to climate change in Canada is published in the 2007 and 2008 edition of *Human Activity and the Environment*, Statistics Canada's compendium of information on how Canadians interact with their environment.

Energy production and use by far the biggest contributor

Energy production and consumption are by far the largest source of GHG emissions in Canada, accounting for more than 80% of emissions in 2005.

A lot of fossil fuels are burned to move people, and goods-transportation activities accounted for 27% of all emissions in 2005.

Canada is a trading nation and energy now makes up one-fifth of all merchandise exports. In both 1990 and 2003, the production of energy for export resulted in more GHG emissions than the production of any other exported commodity. These GHG emissions increased from 17% to 27% of all emissions associated with export production over this time period.

As worldwide demand for energy has surged since 1990, GHG emissions from the production of exported energy have jumped 146%.

Growth in investment in the oil sands has been rapid. Just a decade ago, investment by the industry was less than one-tenth that of the manufacturing sector.

In 2008, producers intend to invest \$19.7 billion in the oil sands, surpassing the \$19.6 billion planned investment by the entire manufacturing sector.

Canada among highest per capita GHG emitters

Canada has about 0.5% of the world's population, but contributes about 2% of the total global GHG emissions.

In 2005, just over 23 tonnes of GHGs were emitted for each person in Canada, an 8% per capita increase since 1990. Over the same period, Canada's economy grew by 30% in per capita terms.

Canadian per capita GHG emissions are comparable to those in the United States (24.4 tonnes). But they are markedly higher than those in Germany (12.1 tonnes), the United Kingdom (10.9 tonnes), Japan (10.6 tonnes) and France (9.2 tonnes).

As consumers, Canadians are indirectly responsible for the GHGs emitted by the companies that make the goods and services they buy. Between 1990 and 2003, industrial emissions associated with domestic products bought by Canadians increased by 15%, just more than the 14% increase in population over the period. In contrast, industrial emissions related to the production of goods and services for export increased 53%.

Impacts of climate change: Canada getting warmer

Canada has warmed in recent decades. The trend between 1948 and 2007 shows a 1.4 °C increase in annual temperatures in Canada. Temperature increases are greatest in the Yukon/North British Columbia Mountains region and the Mackenzie District of the Northwest Territories.

Glaciers in the Rocky Mountains are receding and thinning, resulting in decreases in flow during the critical driest months of the year in some rivers. Of the 853 glaciers inventoried in 1975 in the North and South Saskatchewan River basins, 328 have disappeared completely.

The total glacial area of the North Saskatchewan River Basin declined 22% from 1975 to 1998, while glacial cover decreased 36% in the South Saskatchewan River Basin.

The spread of the mountain pine beetle in the central interior of British Columbia has coincided with warmer winter extremes. This shift in the distribution of the beetle has had a large impact on the forestry industry.

By 2007, the area affected by the infestation covered almost 13 million hectares. The amount of

standing dead wood was estimated at about 530 million cubic metres in 2007. This represented about 40% of the merchantable pine and 12% of the province's total merchantable timber.

In 2004, the business sector spent \$955 million on environmental processes and technologies to reduce GHGs. The oil and gas industry, the wood products industry and the pulp, paper and paperboard mills industry each spent over \$140 million to reduce their GHG emissions.

About 26% of Canadian industries adopted new systems or equipment to reduce GHG emissions between 2002 and 2004.

While production of renewable energy other than hydro has increased six-fold in the past five years, it still contributes minimally to the total supply (0.3% in 2005).

Other environmental highlights

In addition to the feature article on climate change, *Human Activity and the Environment* also provides a comprehensive set of data describing how Canadians

interact with the environment. It includes data on topics such as climate, natural resources, ecosystems, and environmental practices.

Definitions, data sources and methods: survey number 5129.

The publication *Human Activity and the Environment; Annual Statistics, 2007 and 2008* (16-201-XWE, free) is now available online. From the *Publications* module of our website, under *Free Internet publications* choose *Environment*. A printed version of *Human Activity and the Environment; Annual Statistics, 2007 and 2008* (16-201-XPE, \$68) will soon be available. For information on how to order, contact Statistics Canada's National Contact Centre (toll-free 1-800-263-1136; infostats@statcan.ca).

For more information, or to enquire about the concepts methods or data quality of this release, contact the Information Officer (613-951-0297; fax: 613-951-0634; environ@statcan.ca), Environment Accounts and Statistics Division. ■

Study: Sleep patterns of Canadians

2005

On the whole, women get more sleep than men, but they also have a tougher time getting to sleep and staying asleep, according to a new study.

The study, "Who gets any sleep these days? Sleep patterns of Canadians," also showed that commuting has an impact on sleep, as does an individual's level of income and marital status.

On average, someone who made \$60,000 or more a year slept 40 minutes less on any given day in 2005 than someone who made \$20,000. High-income Canadians tend to dedicate more time to their paid work, spend less time with their children and less time engaged in leisure activities. As a result, their lifestyle has an impact on their sleep patterns.

The study, published today in the Spring 2008 edition of *Canadian Social Trends*, used data from the 2005 General Social Survey (GSS) on time use.

The GSS asked more than 19,500 respondents aged 15 and over to complete a detailed record of the time they spent on all activities on a given day. This diary included the time they fell asleep that evening and the time they woke up the next morning.

Men slept for an average of 8 hours and 7 minutes, about 11 minutes less than women. However, about 35% of women reported trouble falling asleep or staying asleep, compared with only 25% of men.

One of the main factors behind this gap was an individual's job status. Overall, the more we work, the less we sleep. According to the GSS diary, people who worked full time got 24 minutes less sleep than those who had no regular employment.

The diary also showed that working full time was a key factor associated with the gap in sleep between the sexes. Data showed that men who worked full time slept 14 minutes less than women who worked full time. That is the equivalent of about 85 hours, or 3.5 fewer days of sleep a year.

However, for Canadians who worked part time or had no employment, there was no difference between the sexes in terms of sleep time.

Kids deprive parents of sleep

On the whole, married Canadians and those in common-law unions sleep less than others. Specifically, people living with a partner slept about 8 hours, 5 minutes a night. Single people (never married) slept 8 hours 29 minutes a night, or 24 minutes longer.

The GSS found that Canadians with no children in the household got, on average, 8 hours and 18 minutes of sleep. In households with children under the age of 15, parents slept less. And the more children they had, the less sleep they got.

Those with at least two children slept 25 minutes less, while parents with only one child slept 17 minutes less.

The gender gap closes as men and women spend more time taking care of young children. Specifically, when men devoted up to 90 minutes of child care, they slept less than their female counterparts. When both parents devoted more than 90 minutes caring for their children, there was no statistically significant difference between the sleep duration of either parent.

Dual-parent families with children under 15 slept 16 minutes less than those without children. This is not surprising since families with children generally have busier schedules that prolong the day and may shorten the time parents have available for sleep.

However, the sleep times of Canadians without a spouse or partner were the same, whether or not there were younger children in the household.

People with long commutes sleep less than others

The study showed conclusively that people with long commutes sleep less than others.

People with long commutes of an hour or more per day reported that their sleep lasted about 7 hours and 41 minutes. People with short commutes, 1 to 30 minutes, slept on average 22 minutes longer. Again, men tended to sleep less than women.

Time stress reduces the amount of sleep everyone gets. Men who are highly time crunched get 35 minutes less than those who report little time stress; similarly, women get 25 minutes less sleep. On the whole, men still sleep fewer minutes per night than women, regardless of their time stress level.

Working long hours means getting less sleep. On average, people who had worked for more than 9 hours on the day they kept the diary slept for only 7 hours and 32 minutes. This was 41 minutes fewer per night than people who had worked for less than 4 hours.

And it was almost an hour's less sleep (55 minutes) than that reported by people who did not work any paid hours at all.

Definitions, data sources and methods: survey number 4503.

The report "Who gets any sleep these days? Sleep patterns of Canadians" is now available in

the April 2008 issue of *Canadian Social Trends*, no. 85 (11-008-XWE, free) from the *Publications* module of our website.

For more information, or to enquire about the concepts, methods or data quality of this

release, contact Client Services (613-951-5979; sasd-dssea@statcan.ca), Social and Aboriginal Statistics Division. ■

Natural gas sales

February 2008 (preliminary)

Natural gas sales volumes totalled 8 883 million cubic metres in February, up 0.6% from February 2007.

Industrial sales (including direct sales) volumes rose 5.3%, due largely to increased demand in Alberta. Sales volumes to the residential (-3.2%) and commercial (-3.5%) sectors declined, mainly as a result of warmer than normal temperatures in most provinces.

Definitions, data sources and methods: survey number 2149.

For more information, to order data, or to enquire about the concepts, methods or data quality of this release, contact the dissemination officer (toll-free 1-866-873-8789; 613-951-9497; energ@statcan.ca), Manufacturing, Construction and Energy Division.

Natural gas sales

	February 2008 ^P	February 2007	February 2007 to February 2008 % change
	thousands of cubic metres		
Total sales	8 882 630	8 829 985	0.6
Residential ¹	2 745 029	2 835 148	-3.2
Commercial ²	1 936 183	2 006 673	-3.5
Industrial ³ and direct sales ⁴	4 201 418	3 988 164	5.3

^P preliminary

1. Gas sold for domestic purposes, including space heating, water heating, cooking, to a residential dwelling unit.
2. Gas sold to customers engaged in wholesale or retail trade, governments, institutions, office buildings, etc.
3. Gas sold to customers engaged in a process that creates or changes raw or unfinished materials into another form or product. Includes mining and manufacturing establishments. Includes firm, interruptible and buy/sell agreements.
4. Represents direct, non-utility, sales for consumption, where the utility acts solely as the transporter.



New products

Canadian Social Trends, no. 85
Catalogue number 11-008-XWE
(free).

Human Activity and the Environment: Annual Statistics, 2007 and 2008
Catalogue number 16-201-XWE
(free).

Steel, Tubular Products and Steel Wire,
February 2008, Vol. 4, no. 2
Catalogue number 41-019-XWE
(free).

Canada's International Transactions in Securities,
February 2008, Vol. 74, no. 2
Catalogue number 67-002-XWE
(free).

All prices are in Canadian dollars and exclude sales tax. Additional shipping charges apply for delivery outside Canada.

Catalogue numbers with an -XWE, -XIB or an -XIE extension are Internet versions; those with -XMB or -XME are microfiche; -XPB or -XPE are paper versions; -XDB or -XDE are electronic versions on diskette; -XCB or -XCE are electronic versions on compact disc; -XVB or -XVE are electronic versions on DVD and -XBB or -XBE a database.

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Thursday, June 5, 1997 For release at 9:30 a.m.	
MAJOR RELEASES	
Urban transit, 1995 Despite the emphasis on taking urban transit, Canadians are using it less and less. In 1996, each Canadian took an average of about 25 trips on some form of urban transit, the lowest level in the past 25 years.	2
Productivity, hourly compensation and unit labour cost, 1995 Growth in productivity among Canadian businesses also noticeably weak again in 1996 accompanied by sluggish gains in employment and slow economic growth during the year.	4
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