

EnviroStats



Summer 2010

Vol. 4, no. 2

In this issue:

	<u>Page</u>
Public transit in Canada, 2007: This study looks at access to and use of public transit in 2007, using data from the Households and the Environment Survey. Many Canadian households reported that they lived within five minutes of public transit, and four out of every ten households with nearby public transit had used it regularly.	3
Natural resource wealth, 1990 to 2009: Natural resources such as oil and gas, timber and minerals are an important component of Canada's wealth, generating income, employment and exports. This article examines growth in resource wealth. From 1990 to 2009, the current dollar value of Canada's natural resource wealth, on average, grew by 6% per year.	9
Ecoregion profile: St-Laurent Lowlands: The St-Laurent Lowlands ecoregion profile is the third in a series of ecoregion profiles. The information presented includes a brief description of the physical setting, a snapshot of land cover and use as well as selected statistics on the changing socio-economy in the region. This is Canada's third most densely populated ecoregion.	13
Environment and sustainable development indicators: The data found in these tables will be updated each quarter, to ensure that readers have access to the most recent environmental statistics available.	18
Updates: Read about recent and upcoming releases, and new activities in the areas of environmental and sustainable development statistics.	22

Latest indicators			
Population 2008 to 2009 Percentage change	1.2%	Particulate matter (PM _{2.5}) 2000 to 2007	No significant trend
Gross domestic product, monthly March 2010 Percentage change	0.6%	Ground-level ozone 1990 to 2007 Median percent change per year	0.8%
Greenhouse gas emissions 2007 to 2008 Percentage change	-2.1%	Natural resource wealth 2008 to 2009 Percentage change	-37.8%



EnviroStats

Summer 2010

Vol. 4, no.2

EnviroStats is produced under the direction of Michael Bordt, Acting Director, Environment Accounts and Statistics Division.

Editor-in-Chief

Carolyn Cahill

Editor

Michelle Tait

Acknowledgements

Gord Baldwin, Fred Barzyk, Gilbert Côté, Monique Deschambault, Gordon Dewis, John Flanders, Joan Forbes, Paula Gherasim, Laurie Jong, Marc Lavergne, Ministère des Transports du Québec, Luc Moquin, Marc Saner, Doug Trant, Tom Vradenburg and Michael Wright.

EnviroStats:

June 2010

Catalogue no. 16-002-X

ISSN 1913-4320

Frequency: Quarterly

Ottawa

Published by authority of the Minister responsible for Statistics Canada

© Minister of Industry, 2010

All rights reserved. The content of this electronic publication may be reproduced, in whole or in part, and by any means, without further permission from Statistics Canada, subject to the following conditions: that it be done solely for the purposes of private study, research, criticism, review or newspaper summary, and/or for non-commercial purposes; and that Statistics Canada be fully acknowledged as follows: Source (or "Adapted from", if appropriate): Statistics Canada, year of publication, name of product, catalogue number, volume and issue numbers, reference period and page(s). Otherwise, no part of this publication may be reproduced, stored in a retrieval system or transmitted in any form, by any means—electronic, mechanical or photocopy—or for any purposes without prior written permission of Licensing Services, Client Services Division, Statistics Canada, Ottawa, Ontario, Canada K1A 0T6.

Version française de cette publication disponible sur demande (n° [16-002-X](#) au catalogue).

Note of appreciation

Canada owes the success of its statistical system to a long-standing partnership between Statistics Canada, the citizens of Canada, its businesses, governments and other institutions. Accurate and timely statistical information could not be produced without their continued co-operation and good will.

Accessing and ordering information

This product, catalogue no. 16-002-X, is available for free in electronic format. To obtain a single issue, visit our website at www.statcan.gc.ca and select Publications.

How to obtain more information

For information about this product or the wide range of services and data available from Statistics Canada visit our website at www.statcan.gc.ca or contact us by email at infostats@statcan.gc.ca or by phone from 8:30am to 4:30pm Monday to Friday at:

Statistics Canada National Contact Centre

Toll-free telephone (Canada and the United States):

Inquiries line	1-800-263-1136
National telecommunications device for the hearing impaired	1-800-363-7629
Fax line	1-877-287-4369
Depository Services Program inquiries line	1-800-635-7943
Depository Services Program fax line	1-800-565-7757

Local or international calls :

Inquiries line	1-613-951-8116
Fax line	1-613-951-0581

Subscription request

To receive notification of the release of this and other related publications, subscribe to *The Daily* by subject (Environment) at <http://www.statcan.gc.ca/dai-quo/sub-abo-eng.htm>.

To access this and other related publications, please see: www.statcan.gc.ca/environment.

Standards of service to the public

Statistics Canada is committed to serving its clients in a prompt, reliable and courteous manner. To this end, the Agency has developed standards of service which its employees observe in serving its clients. To obtain a copy of these service standards, please contact Statistics Canada toll free at 1-800-263-1136. The service standards are also published on www.statcan.gc.ca under About us > Providing services to Canadians.

Symbols

The following standard symbols are used in Statistics Canada publications:

.	not available for any reference period
..	not available for a specific reference period
...	not applicable
0	true zero or a value rounded to zero
0 ^s	value rounded to 0 (zero) where there is a meaningful distinction between true zero and the value that was rounded
P	preliminary
r	revised
X	suppressed to meet the confidentiality requirements of the <i>Statistics Act</i>
E	use with caution
F	too unreliable to be published

Public transit in Canada, 2007

A. Munro, Environment Accounts and Statistics Division

When Canadians need to go somewhere, they have many transportation choices: they can use private vehicles, bicycles, buses, trains or any combination of modes. This study looks at access to and use of public transit in 2007, using data from the Households and the Environment Survey.

The percentage of Canadians using public transit for the commute to work has increased slightly since the mid-nineties.¹ Data from the Households and the Environment Survey (HES) show that many households used public transit for non-work travel as well: close to half of households that regularly used public transit in 2007 used it only for non-work purposes.

Households in areas with wide transit availability were more likely to have used public transit regularly and more likely to have used it to travel to work. Household characteristics were also related to transit use: the households that were most likely to have used transit regularly were those without a vehicle, those that contained teenagers, and those in the lowest income category.

When households were asked why they did not use transit regularly, by far the most common response was that they had not used it because they had access to a car. Households were least likely to say that they had not used public transit regularly because it was too expensive.

Who had access to nearby public transit?

In 2007, 68% of Canadian households reported having access to public transit within five minutes of their home (Table 1). Access to public transit was one of the key factors that determined whether a household had used public transit regularly.

Households were more than twice as likely to have reported having nearby public transit when they lived in a metropolitan area: 85% of households living in a census metropolitan area (CMA) had access to nearby public transit compared to only

What you should know about this study

This study is based on data from the 2007 [Households and the Environment Survey](#) (HES), conducted as part of the Canadian Environmental Sustainability Indicators project. Respondents were asked whether the household had nearby access to a public transit system during the work week, defined as access within five minutes of their home either by foot or by car.

Households with access were asked whether anyone in the household used public transit as a main mode of travel to work or regularly outside of work. Regular use of public transit for non-work travel was described as using public transit 1 to 3 times a week or more over the previous 12 months. Households that did not use public transit were asked to indicate the reasons that had prevented them from doing so.

Also used in this study is 1996 and 2006 Census of Population information on the main mode of transportation to work. This question on the census refers to persons 15 years of age or older that worked outside of their homes and refers to the main means a person used to travel between his or her home and his or her place of work. As it refers to individuals rather than households, no direct comparison can be made between these data and the 2007 HES data.

32% of non-CMA households. Those in CMAs were also more likely to have regularly used nearby public transit when they had it: 44% of CMA households did so versus 23% of non-CMA households.

How did households use public transit?

Much of the available information on public transit refers to the use of public transit for the journey to and from work. Since 1996, journey-to-work data from the Census of Population show a slight increase in the proportion of commuters using public transit as their main mode of travel to work; between 1996 and 2006, the percentage of commuters using this method rose from 10% to 11%.²

Data from the HES show a similar increase: in 2007, 15% of households used public transit regularly as one of their main modes of transportation to work, up only slightly from 14% in

1. Statistics Canada, 2007, *Place of Work Highlight Tables, 2006 Census of Population*, www12.statcan.gc.ca/census-recensement/2006/dp-pd/hlt/97-561/index-eng.cfm (accessed April 4, 2010).

2. Statistics Canada, 2007, *Place of Work Highlight Tables, 2006 Census of Population*, www12.statcan.gc.ca/census-recensement/2006/dp-pd/hlt/97-561/index-eng.cfm (accessed April 4, 2010).

Table 1
Availability and use of nearby public transit by province

	Used public transit to travel to work (all households)		Had nearby access to public transit	Of those that used public transit			
	1994	2007		Used public transit (households with nearby access)	Used for both work and non-work	Used only for work	Used only for non-work
	percent						
Canada	14	15	68	41	37	16	47
Newfoundland and Labrador	F	F	31	24 ^E	F	F	F
Prince Edward Island	F	F	23	F	F	F	F
Nova Scotia	7	F	46	35	F	F	58
New Brunswick	3	F	37	19 ^E	F	F	67
Quebec	15	14	64	40	41	16	43
Ontario	16	18	74	45	37	18	44
Manitoba	10	11	62	48	26	F	64
Saskatchewan	4	F	53	24	F	F	63
Alberta	11	11	67	36	30	18 ^E	52
British Columbia	14	16	78	42	38	13	49

Source(s):

Statistics Canada, Environment Accounts and Statistics Division, Households and the Environment Survey, 1994 and 2007.

1994 (Table 1).³

Examining the use of transit for non-work purposes adds context, as does looking only at households with access to nearby public transit. When work and non-work travel is combined, results show that 41% of households with access used public transit regularly in 2007 (Table 1). Travel to work did not dominate the use of public transit on a household level: close to half of households using public transit regularly in 2007 were using it for non-work travel only (Table 1). Overall, 84% of households using public transit were using it for regular non-work travel, with 53% using it for regular travel to and from work.

There was significant overlap between the categories: a household using public transit for one purpose was almost twice as likely on average to also use it for the other purpose. For example, 68% of households that used public transit regularly to travel to work also used it regularly for non-work travel.

3. Differences observed between the HES and census percentages most likely reflect the fact that the census records only the primary mode used for travelling to work while the HES allows respondents to indicate multiple modes.

Availability of transit

At the CMA level, the availability of public transit was approximated by looking at the percentage of households in each CMA reporting nearby public transit. With this measure, the likelihood that a household had used public transit regularly tended to be higher in areas where public transit was more widely available (Table 2).

One example is Toronto, where nearby public transit was available to 90% of households and 59% of those households used public transit regularly. Another example is the CMA of Québec, where 79% of households had access but only 31% used public transit regularly.

The purposes for which households used transit also varied with the availability of transit. In CMAs where access was limited, most households that used transit used it only for non-work travel. As the availability of transit increased, so did the percentage of households that used transit for the journey to work (Chart 1). This could also be related to the size of the transit network: small networks might be more compatible with non-work travel than with the regimented journey to work.

Table 2
Availability and use of nearby public transit
for selected census metropolitan areas, 2007

	Had nearby access to public transit	Used public transit (households with nearby access)	Used only for non-work travel (households that used public transit)
	percent		
Canada	68	41	47
Halifax	80	45	54
Québec	79	31	55
Montréal	88	49	42
Ottawa–Gatineau	86	45	40
Oshawa	88	35	57
Toronto	90	59	41
Hamilton	79	34	72
Kitchener	90	27	56
London	81	32	74
Winnipeg	90	53	65
Saskatoon	83	35 ^E	63
Calgary	79	44	48
Edmonton	86	36	66
Vancouver	90	51	44
Victoria	91	40	57

Source(s):

Statistics Canada, Environment Accounts and Statistics Division, Households and the Environment Survey, 2007.

Who was most likely to use public transit?

Some household characteristics—the availability of a household vehicle, household composition, and household income—were connected to the likelihood that a household would use public transit. These characteristics were also related to the purpose for which public transit was used.

The presence of a vehicle owned or leased by the household was key: households without a vehicle were almost twice as likely to have used public transit regularly. When households with a vehicle did use public transit, they were three times as likely as those without to have used transit regularly only for travel to work (Table 3).

Household composition also showed a relationship with public transit use. Households with teenagers were more likely to have made use of public transit. Households in these categories were also generally

more likely than adult-only households to have used transit regularly solely for non-work travel.

Household income had a less direct relationship with public transit usage. In general, households in the lowest income category were more likely to have used public transit and also more likely to have used it only for non-work travel. Households in higher income categories were more likely than those in lower income categories to use public transit only to travel to work.

What kept households from using public transit?

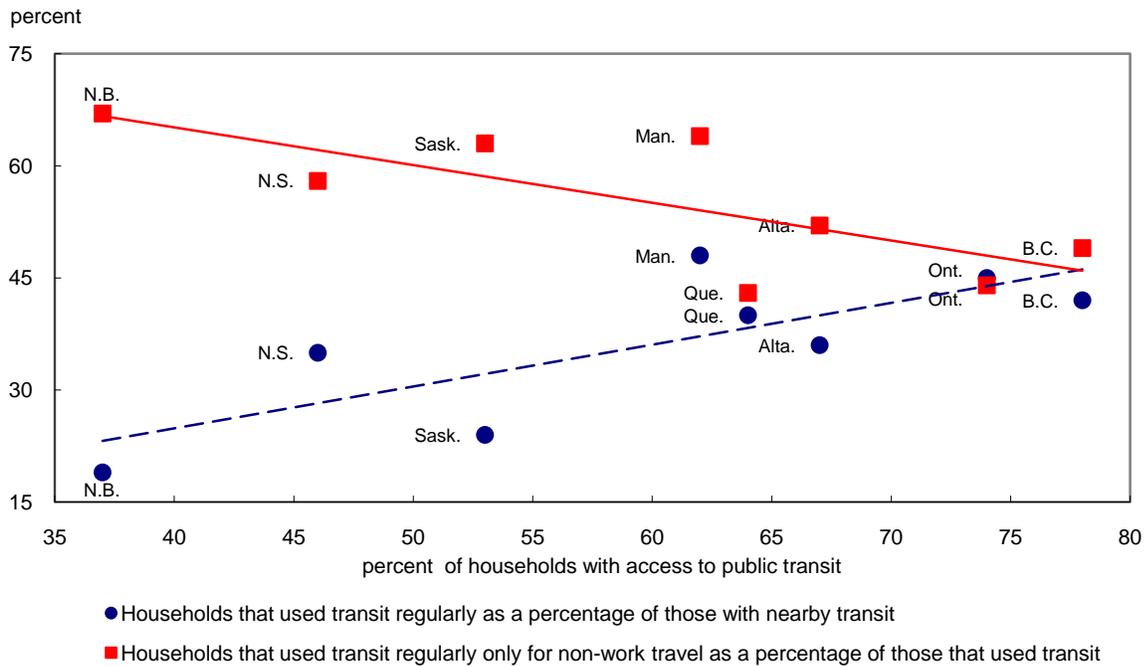
In the 2007 HES, for the first time, households that did not use public transit were asked to identify some of the reasons that had prevented them from doing so. Households were most likely to report that they had not used public transit because they had access to a car: almost three-quarters of households gave this as their reason (Table 4).

Although having access to a car was by far the most common answer, about one quarter of households also indicated one of four other reasons for not using public transit: inconvenient scheduling (27%), living too close to their destinations to need transit (23%), transit being too slow (21%), and the service being too infrequent (21%) (Table 4 and Chart 2). Comparatively few households (4%) indicated that the cost of public transit had been a barrier.

Even households without a vehicle did not always use public transit regularly: households without a vehicle made up 8% of all households not using transit. These households were most likely to have said that they did not use public transit regularly because they lived too close to their travel destinations to need it (Table 4 and Chart 2). However, 28% of households without a vehicle still reported that they did not use public transit regularly because they had access to a car.

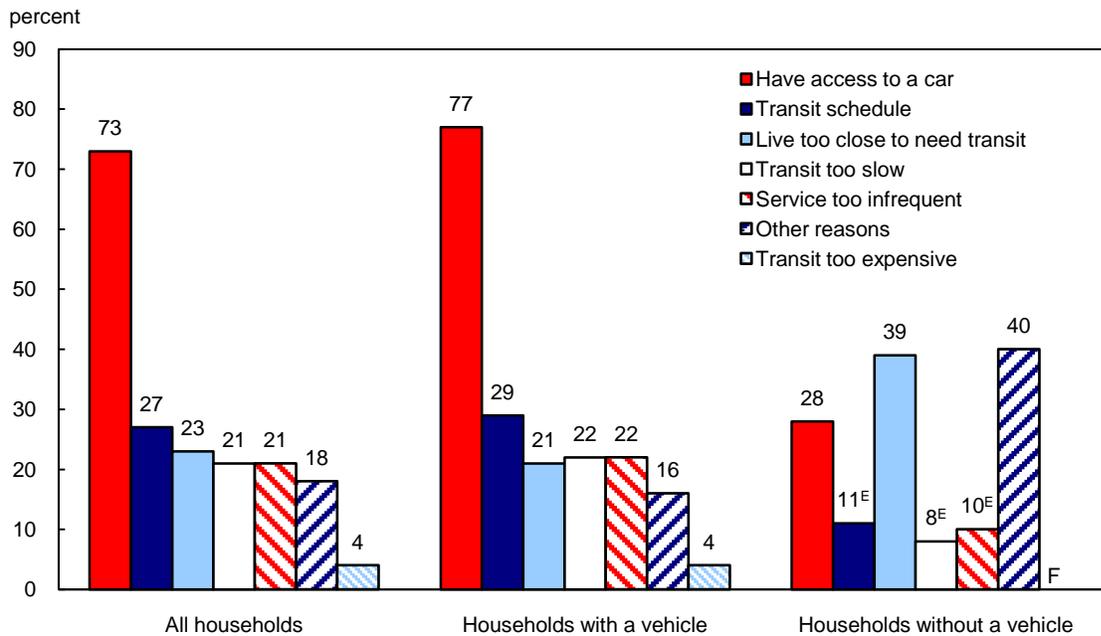
In all areas, having access to a car was the most common reason given for not using public transit. More variation existed with respect to other barriers: for example, households in Manitoba, Saskatchewan and Alberta were more likely than those in any other province to say that public transit was too slow. Likewise, 44% of non-transit-using households in P.E.I. said that they did not use public transit because the schedule was inconvenient, compared to only 27% of households nationally.

Chart 1
Public transit usage and access to public transit, 2007



Source(s):
Statistics Canada, Environment Accounts and Statistics Division, Households and the Environment Survey, 2007.

Chart 2
Barriers to public transit use, 2007



Source(s):
Statistics Canada, Environment Accounts and Statistics Division, Households and the Environment Survey, 2007.

Table 3
Use of public transit by selected household characteristics, 2007

	Of those that used public transit			
	Used public transit	Used for work and non-work	Used only for work	Used only for non-work
	percent			
Canada	41	37	16	47
Lease or own a vehicle				
Had a vehicle	36	36	20	44
Had no vehicle	69	40	6 ^E	54
Household composition				
Adults and members 0 to 19 years	58	34	14 ^E	52
Adults and teenagers 13 to 19 years	65	43	13	43
Adults and children 0 to 12 years	36	34	26	40
25 to 44 year old members only	44	45	20 ^E	35
45 to 64 year old members only	32	40	20 ^E	40
65 and greater year old members only	23	F	F	95
Income				
Less than \$20,000 (includes income loss)	47	19 ^E	F	77
\$20,000 to less than \$40,000	40	44	11 ^E	45
\$40,000 to less than \$60,000	39	49	14	37
\$60,000 to less than \$80,000	40	41	20	39
\$80,000 to less than \$100,000	39	36	31 ^E	33
\$100,000 to less than \$150,000	42	34	23	42
\$150,000 and over	42	27	28	45

Source(s):

Statistics Canada, Environment Accounts and Statistics Division, Households and the Environment Survey, 2007.

Table 4
Barriers to public transit use by province, 2007

	Have access to a car	Transit schedule	Live too close to need transit	Transit too slow	Service too infrequent	Other reasons	Transit too expensive
	percent						
	percent						
Canada	73	27	23	21	21	18	4
Newfoundland and Labrador	73	26 ^E	F	F	F	F	F
Prince Edward Island	69	44	29 ^E	F	F	F	F
Nova Scotia	72	23 ^E	17 ^E	F	14 ^E	23 ^E	F
New Brunswick	78	31 ^E	17 ^E	F	26 ^E	19 ^E	F
Quebec	63	24	22	17	16	20	4 ^E
Ontario	75	23	20	21	21	18	4
Manitoba	81	33	27	26	24	14 ^E	F
Saskatchewan	80	38	28	29	23	14	F
Alberta	82	35	26	26	23	15	6 ^E
British Columbia	72	32	28	21	29	19	4 ^E
Had a vehicle	77	29	21	22	22	16	4
Did not have a vehicle	28	11 ^E	39	8 ^E	10 ^E	40	F

Source(s):

Statistics Canada, Environment Accounts and Statistics Division, Households and the Environment Survey, 2007.

Summary

In 2007, 68% of Canadian households reported that they lived within five minutes of public transit, and 41% of those households used it regularly. Of those households, almost half used it regularly only for non-work travel while the rest used it regularly for work travel or for both purposes.

Households were more likely to have used public transit in areas where transit was more widely available, and also more likely under those circumstances to have used it regularly for the journey to work. Households that did not own or lease a vehicle, households with teenagers, and

households in the lowest income category were all more likely to have used public transit. In general, when other types of households had used public transit regularly, they were more likely to have used it only for work travel.

Most households not using public transit said that having access to a car prevented them from using public transit regularly. Those that did not own or lease a vehicle were most likely to say that they lived too close to need public transit, although more than a quarter still reported that they did not use it because they had access to a car. Households were least likely to say that the expense of public transit kept them from using public transit regularly.

Natural resource wealth, 1990 to 2009

Kazi Islam and Patrick Adams, Environment Accounts and Statistics Division

Canada is rich in natural resources such as oil and gas, timber, and minerals. Like buildings and bridges, these resources are an important component of Canada's wealth, generating income, employment and exports.¹ In 2009, Canada's natural resource wealth—the dollar value of selected² natural resource stocks—stood at \$1,107 billion (Chart 1).³ From 2005 to 2009, natural resource wealth per capita averaged about \$39,000; over the same period produced wealth⁴ stood at \$121,000 per capita.⁵

Natural resource wealth tends to fluctuate more than produced wealth over time. This is due to a variety of factors such as the volatility of energy and mineral prices on world markets and changes in the amount of accessible reserves. For this reason, it can be more instructive to view the value of resources over the longer term, by focusing on the general trends rather than on the yearly ebb and flow. Using data from Canada's Natural Resource Stock Accounts, this article provides a brief summary of natural resource wealth trends from 1990 to 2009.

Natural resource wealth in two decades

Natural resource prices are driven by global demand and supply, while the prices of produced assets are often affected by local economic conditions.⁶ As well, physical reserves of energy and mineral

What you should know about this study

This study uses data from the Natural Resource Stock Accounts. These accounts measure the value of natural resource assets, for example, as reserves of metal ore in the ground or as accessible stands of timber in forests. For mineral and energy resources, reserves are defined by the amount of proven and probable stocks that are profitable to extract using available technology. For timber resources, only the stocks that are physically accessible and available for harvesting are accounted for.

The approach taken to value resources is similar to that of valuing annuities—a resource's value is equated to the stream of income that can be generated from extracting it over its useful lifetime.

The first step to estimating the stream of income involves calculating the current year's income from extraction. Income, also known as 'resource rent,' is equal to total revenue received from sales throughout the year minus all costs incurred during extraction. Costs include operating costs, like fuel and labour, as well as capital costs, such as wear-and-tear on machinery. Apart from these costs, businesses also pay fees, taxes and royalties to various levels of government. These payments implicitly represent rent and, hence, are not deducted from sales revenue.

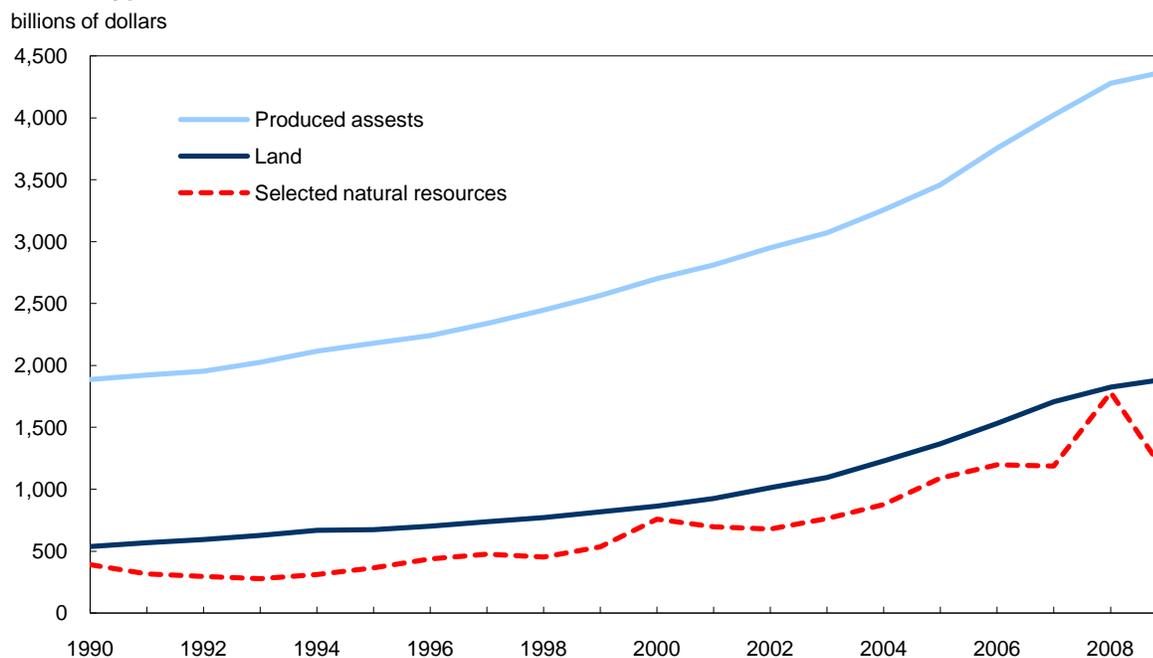
Next, for the sake of simplicity, it is assumed that the quantity extracted as well as the rent generated from extracting the resource will remain constant in each successive year until reserves are exhausted. A final step in valuation is to calculate the present value of this stream of income. Since any rent that will be received in the future is worth less than it would be if it were in hand today, all future rents must be discounted before being summed together.

Two limitations of this approach are the assumption that the quantity of extraction will remain constant over the life of a resource and the assumption that the difference between sales revenue and extraction costs will remain the same through time. Oftentimes, the price of a natural resource is more volatile than labour and capital costs. These limitations tend to be magnified during periods of extreme volatility in resource prices. Such was the case when record high prices were observed for much of 2008 and were then followed by sharp price declines. Despite these limitations, this method has been widely used by other countries given the difficulty in accurately forecasting commodity prices. Current estimates are based on 14 different resources for which data on reserves, revenues and extraction costs are available.

For more information, see: [Definitions, data sources and methods: Natural Resource Stock Accounts](#).

1. For more information, see: P. Cross, 2008, "The role of natural resources in Canada's economy," *Canadian Economic Observer*, Statistics Canada Catalogue no. [11-010-X011086300167](#), Vol. 21, no.11.
2. The selected natural resources consist of energy, minerals and timber. Energy resources include natural gas, crude oil, crude bitumen (oil sands) and coal. Mineral resources include gold, nickel, copper, zinc, lead, iron, molybdenum, uranium, potash and diamonds. A number of natural resource stocks such as water and ecosystems, are not currently valued by Statistics Canada, owing to data limitations.
3. All the values mentioned in this article are in current dollars as opposed to constant dollars.
4. Produced wealth includes residential and non-residential structures, machinery and equipment, consumer durables and inventories.
5. Statistics Canada, CANSIM tables [378-0005](#) and [051-0001](#) (accessed June 29, 2010).
6. Extraction costs of natural resources are relatively stable as they depend mostly on local markets of various factors of production, such as labour and capital.

Chart 1
Various types of wealth, 1990 to 2009



Source(s):
 Statistics Canada, CANSIM table [378-0005](#) (accessed June 29, 2010).

resources may change when their prices change. For example, when the price of a given resource increases, it often encourages greater exploration efforts which in turn can lead to more discoveries and ultimately an increase in reserves.⁷ Both of these factors make natural resource wealth highly volatile.

In 1990, natural resource wealth stood at \$391 billion, or \$14,000 per capita.⁸ For the next two decades, the average annual growth rate of natural resource wealth was 6%. Although there were substantial fluctuations over this period, the long-term trend for natural resource wealth was similar to that for produced assets (5%) and land (7%) (Chart 1).

Some bumps in the road:

During the two decades, 1990 to 2009, overall natural resource wealth declined several times: first, in the early 1990s as a result of a recession in North

America; second, in 1998, in the wake of the East Asian financial crisis;⁹ and, third in the early 2000s, during the economic slowdown that followed the events of September 11, 2001.¹⁰ Most recently, in 2009, resource values declined sharply in the face of the global economic downturn.

In all other periods, the value of resources was buoyed by either increased reserves and/or increased prices fuelled by growing world demand.

For instance, from 1999 to 2000, natural resource wealth grew as a result of an increase in reserves of natural gas, crude oil and crude bitumen (oil sands). At the same time, higher prices for these resources added to growth in wealth.

From 2003 to 2008, natural resource wealth exhibited sustained growth, propelled by record

9. International Monetary Fund, 1998, "Global Repercussions of the Asian Crisis and Other Issues in the Current Conjuncture," *World Economic Outlook*, www.imf.org/external/pubs/ft/weo/weo0598/pdf/0598ch2.pdf (accessed March 22, 2010).

10. International Monetary Fund, 2001, "The Global economy after September 11," *World Economic Outlook*, www.imf.org/external/pubs/ft/weo/2001/03/index.htm (accessed March 22, 2010).

growth in prices for energy and minerals due in large part to increased world demand, particularly from burgeoning economies such as China's.¹¹

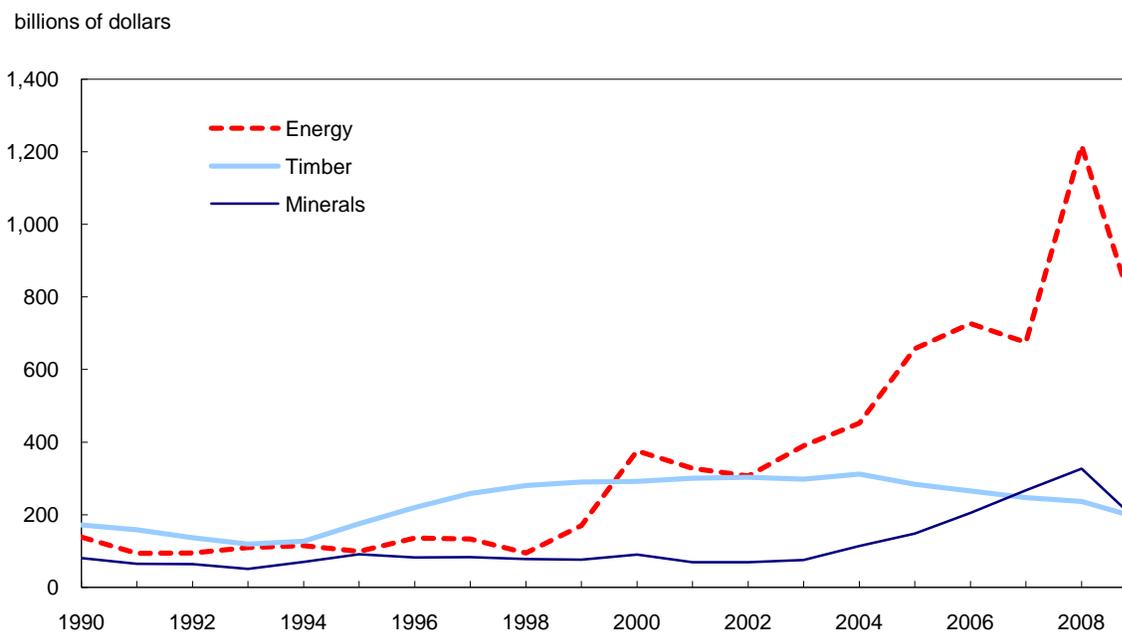
Components of natural resource wealth

Resource wealth includes timber, mineral and energy wealth. Since 2000, energy resources have contributed the most to the overall value of natural resources, but they have also been subject to the most volatility (Chart 2).

Until 2004, timber resource wealth grew steadily—on average 4% per year. However, in recent years its value has been declining on account of a number of factors, such as the softwood lumber dispute with the U.S., the recent U.S. housing market decline, and the mountain pine beetle infestation in British Columbia.¹²

Mineral resource wealth remained relatively constant from 1990 until 2002. From 2003 to 2008, the value of mineral assets grew significantly as a result of increased world prices of minerals resources. These high prices have led to increased exploration and development and the discovery of new deposits.¹³ In 2008, mineral resource wealth was \$327 billion; in 2009, this wealth dropped to \$183 billion. A similar drop was also recorded for energy resources, which accounted for two-thirds of total resource wealth in 2009.

Chart 2
Wealth from energy, timber and minerals, 1990 to 2009



Source(s):

Statistics Canada, CANSIM table [378-0005](#) (accessed June 29, 2010).

11. Statistics Canada, 2007, *International Merchandise Trade Annual Review, 2006*, Catalogue no. [65-208-X](#).

12. In 2003, the beetle infested around 4.2 million hectares in British Columbia. British Columbia Ministry of Forests, 2003, *Timber Supply and Mountain Pine Beetle Infestation in British Columbia*, www.for.gov.bc.ca/hfp/mountain_pine_beetle/historical.htm (accessed September 10, 2009).

13. A. Reed, 2007, "Canadian Reserves of Selected Major Metals, and Recent Production Decisions," *Canadian Minerals Yearbook, 2006*, Natural Resources Canada Catalogue no. M38-5/55E-PDF, www.nrcan-rncan.gc.ca/mms-smm/busi-indu/cmy-amc/2006cmy-eng.htm (accessed December 10, 2009).

Oil sands dominate energy wealth

Until 2005, natural gas had the highest value among energy resources, which also include coal, crude oil, and crude bitumen. Since 2006, the wealth from oil sands has exceeded that from other energy resources, mainly on account of increased reserves (Chart 3).¹⁴

Canada's oil sands in Northern Alberta contain vast quantities of crude bitumen; they are one of the largest hydrocarbon deposits in the world. In 1990, the value of crude bitumen from oil sands represented \$19 billion or 13% of energy resource wealth. In 2009, the value of crude bitumen reserves was \$441 billion—more than the combined value of coal, crude oil and natural gas.

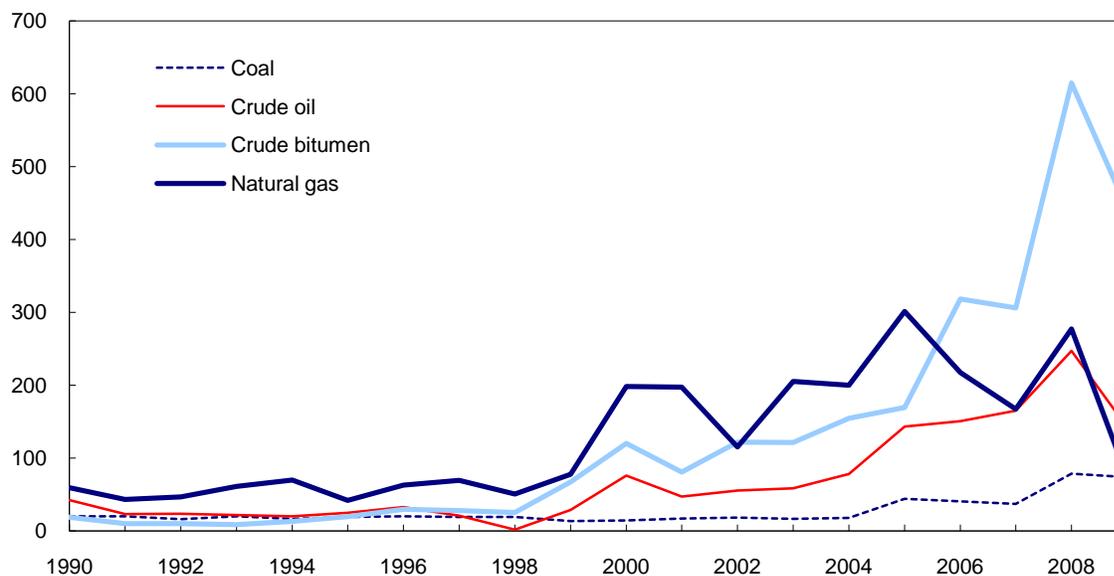
Summary

From 1990 to 2009, Canada's natural resource wealth, on average, grew by 6% per year. Our abundance of natural resources—such as timber, potash, uranium, oil and gas and gold—as well as increasing demand for natural resource commodities worldwide are among the factors that have contributed to this growth.

Like produced wealth, natural resource wealth is an important indicator of economic performance; it generates income and employment. Therefore, monitoring our natural resource wealth is important because this information allows individuals and institutions alike to make informed decisions.

Chart 3
Value of energy resource stocks, 1990 to 2009

billions of dollars



Source(s):

Statistics Canada, Environment Accounts and Statistics Division.

14. In 2006, estimates of oil sands reserves under active development doubled as compared to 2005. See Alberta Energy and Utilities Board, 2007, *Alberta's Energy Reserves 2006 and Supply/Demand Outlook 2007-2016*, Report no. ST 98-2007, table 2.1, www.ercb.ca/docs/products/STs/st98-2007.pdf (accessed September 14, 2009).

Ecoregion profile: St-Laurent Lowlands

Hugo Larocque, Doug Trant and Giuseppe Filoso, Environment Accounts and Statistics Division

The St-Laurent Lowlands ecoregion (Map 1) is one of Canada's 194 ecoregions. It covers a total area of over 40,000 square kilometres, slightly less than the Canadian average.¹ The ecoregion extends from Brockville, Ontario to Québec along the St. Lawrence River, and also includes a portion of the Ottawa River valley.

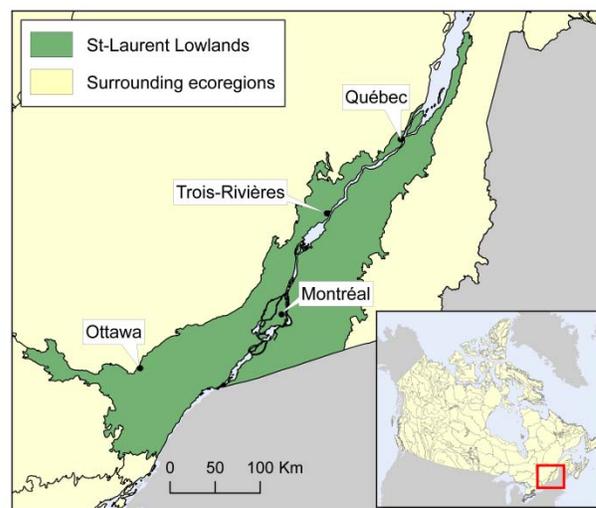


In the 2006 Census, the St-Laurent Lowlands had the third highest population density in the country, with 158 persons per square kilometre. The two ecoregions with the highest population density were the Lower Mainland ecoregion of British Columbia² and the Lake Erie Lowland ecoregion.³ Despite its high density, with 21% of the Canada's inhabitants, the population of the St-Laurent Lowlands ecoregion grew only 31% between 1971 and 2006, while that of Canada as a whole grew 47% (Table 1). The main population centres in this ecoregion are the Ottawa–Gatineau, Montréal, Trois-Rivières and Québec metropolitan areas.

The St-Laurent Lowlands ecoregion is suitable for agriculture given its predominantly clay soil type and proximity to the St. Lawrence River and other bodies of water. It is also a relatively flat area, with the exception of the Monteregian Hills. The land cover is mainly agriculture, forest and developed land (Chart 1 and Map 2). Farmland and forests make up over 80% of the total land area of the St-Laurent Lowlands ecoregion.

1. The Canadian average is approximately 45,000 square kilometres.
2. D. Trant, H. Larocque and G. Filoso, 2009, "Ecoregion profile: Lower Mainland of British Columbia," *EnviroStats*, Statistics Canada Catalogue no. [16-002-X200900411031](#), Vol. 3, no. 4.
3. G. Filoso and H. Larocque, 2010, "Ecoregion profile: Lake Erie Lowland," *EnviroStats*, Statistics Canada Catalogue no. [16-002-X201000111135](#), Vol. 4, no. 1.

Map 1
St-Laurent Lowlands ecoregion



Source(s):

Agriculture and Agri-Food Canada, 2008, *A National Ecological Framework for Canada*, <http://sis.agr.gc.ca/cansis/nsdb/ecostrat/intro.html> (accessed February 19, 2010).

The main crop is corn. In 2006, the area under corn cultivation in this ecoregion accounted for 39% of the total corn cropland in the country. From 1971 to 2006, soy cultivation grew considerably: the area in soy rose from approximately 600 hectares in 1971 to over 240,000 in 2006. The region also produces maple syrup: the 8 million maple tree taps in the region, accounted for 23% of the total taps in Canada in 2006 (Table 1).

The ecoregion contains a large number of dairy farms. Despite a 56% decline in the number of dairy cows between 1971 and 2006, the St-Laurent Lowlands ecoregion still accounted for 33% of the country's dairy cows in 2006. The number of pigs in this ecoregion jumped 193% from 1971 to 2006. During this period, the proportion of pigs in this ecoregion rose from 13% to 24% of the total number of pigs in the country (Table 1).

Table 1
St-Laurent Lowlands

	St-Laurent Lowlands ecoregion	Canada	Percentage of Canada total
Total area (km²)	41,770	9,976,182	0.4
Land cover circa 2000¹			
Annual cropland and perennial cropland (km ²)	21,496	..	...
Developed land (km ²)	2,884	..	...
Exposed land (km ²)	773	..	...
Forest (km ²)	12,240	..	...
Grasses-herbaceous (km ²)	1,724	..	...
Other classes (km ²)	12	..	...
Shrubland (km ²)	703	..	...
Water (km ²)	1,106	..	...
Wetland (km ²)	832	..	...
Agricultural land			
Area of dependable agricultural land ² (km ²)	20,504	454,630	4.5
Proportion of area in dependable land (percent)	49.1	4.6	...
Population			
Population in 1971 (number)	5,011,683	21,568,310	23.2
Population in 1981 (number)	5,353,916	24,343,181	22.0
Population in 1991 (number)	5,917,826	27,296,859	21.7
Population in 1996 (number)	6,146,869	28,846,761	21.3
Population in 2001 (number)	6,305,435	30,007,094	21.0
Population in 2006 (number)	6,586,347	31,612,895	20.8
Population density in 2006 (people/km ²)	157.7	3.2	...
Population change 1971 to 2006 (percent)	31.4	46.6	...
Agriculture			
Area of farmland in 1971 (hectares)	2,738,361	68,662,444	4.0
Area of farmland in 2006 (hectares)	2,273,967	67,586,739	3.4
Change (percent)	-17.0	-1.6	...
Farms in 1971 (number)	43,758	366,128	12.0
Farms in 2006 (number)	24,100	229,373	10.5
Change (percent)	-44.9	-37.4	...
Area of cropland in 1971 (hectares)	1,339,930	27,828,479	4.8
Area of cropland in 2006 (hectares)	1,576,613	35,912,247	4.4
Change (percent)	17.7	29.0	...
Corn in 1971 (hectares)	168,327	891,076	18.9
Corn in 2006 (hectares)	516,024	1,339,628	38.5
Change (percent)	206.6	50.3	...
Farms reporting corn in 1971 (number)	17,620	66,185	26.6
Farms reporting corn in 2006 (number)	12,743	39,447	32.3
Change (percent)	-27.7	-40.4	...
Soy in 1971 (hectares)	606	149,900	0.4
Soy in 2006 (hectares)	242,561	1,184,970	20.5
Change (percent)	39,913.4	690.5	...
Farms reporting soy in 1971 (number)	177	7,857	2.3
Farms reporting soy in 2006 (number)	6,433	24,981	25.8
Change (percent)	3,534.5	217.9	...

Table 1 (continued)
St-Laurent Lowlands

	St-Laurent Lowlands ecoregion	Canada	Percentage of Canada total
Maple syrup production in 1971 (taps)	4,417,450	13,106,879	33.7
Maple syrup production in 2006 (taps)	7,979,557	35,254,915	22.6
Change (percent)	80.6	169.0	...
Farms reporting maple syrup in 1971 (number)	3,591	9,979	36.0
Farms reporting maple syrup in 2006 (number)	2,960	9,811	30.2
Change (percent)	-17.6	-1.7	...
Dairy cows in 1971 (number)	689,264	2,241,584	30.7
Dairy cows in 2006 (number)	300,859	913,611	32.9
Change (percent)	-56.4	-59.2	...
Dairy farms in 1971 (number)	28,030	145,011	19.3
Dairy farms in 2006 (number)	5,571	17,556	31.7
Change (percent)	-80.1	-87.9	...
Pigs in 1971 (number)	1,024,291	8,068,186	12.7
Pigs in 2006 (number)	3,002,130	12,726,573	23.6
Change (percent)	193.1	57.7	...
Farms reporting pigs in 1971 (number)	10,236	122,259	8.4
Farms reporting pigs in 2006 (number)	1,966	11,680	16.8
Change (percent)	-80.8	-90.4	...

1. Land cover classes are aggregated. Forest area contains all types of forest. 'Developed land' includes built-up areas, lawns, road surfaces, industrial sites and farmsteads. In this ecoregion, 'exposed land' refers primarily to mudflats. 'Other' refers to unclassified land types due to shadow and clouds in the satellite imagery. Land cover is based on LANDSAT satellite data from 1996 to 2003.

2. Dependable agricultural land is defined as land designated as Class 1, Class 2 and Class 3 by the Canada Land Inventory.

Source(s):

Statistics Canada, CANSIM tables [153-0057](#) and [153-0058](#) (accessed October 8, 2009).

Statistics Canada, Census of Population and Census of Agriculture.

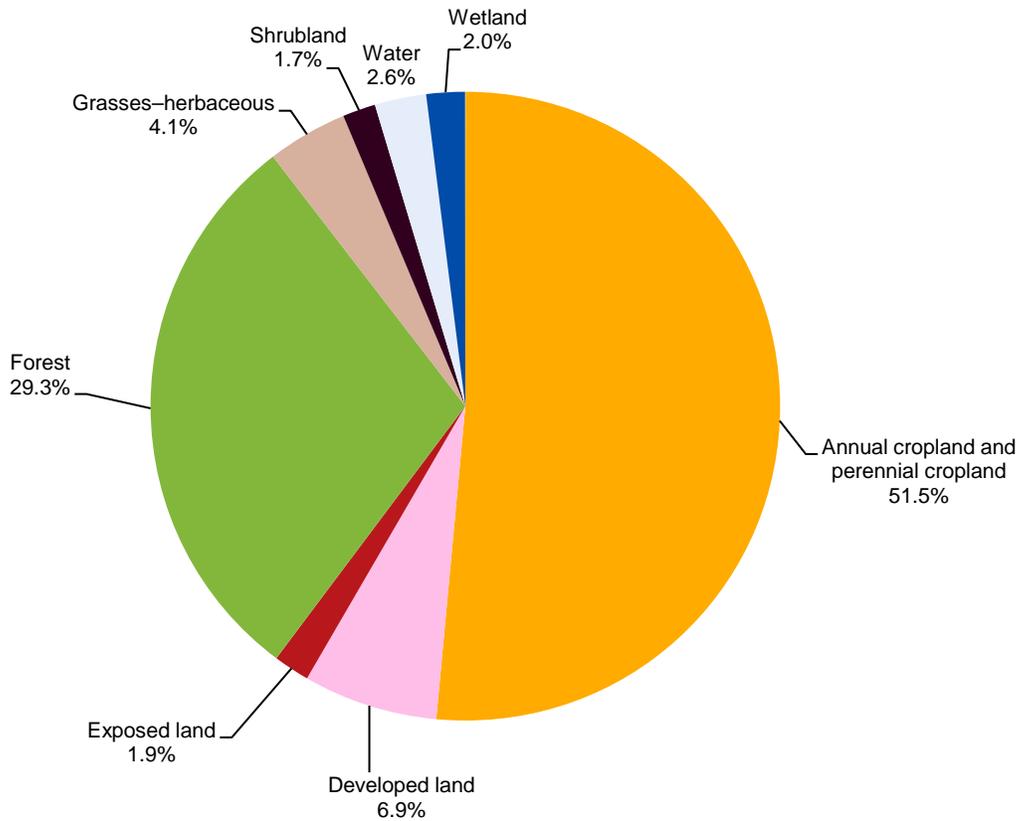
Statistics Canada, Environment Accounts and Statistics Division, Spatial Environmental Information System.

Natural Resources Canada, n.d., *Canada Land Inventory—Land Capability for Agriculture (1968 to 1990)*, Earth Sciences Sector, <http://www.geogratis.ca/geogratis/en/collection/cli.html> (accessed October 8, 2009).

Natural Resources Canada, 2009, *Land cover, Circa 2000-Vector (LCC2000-v)*, Earth Sciences Sector, www.geobase.ca (accessed October 8, 2009).

Agriculture and Agri-Food Canada, 2008, *A National Ecological Framework for Canada*, <http://sis.agr.gc.ca/cansis/nsdb/ecostrat/intro.html> (accessed February 19, 2010).

Chart 1
St-Laurent Lowlands ecoregion, by type of land cover, circa 2000



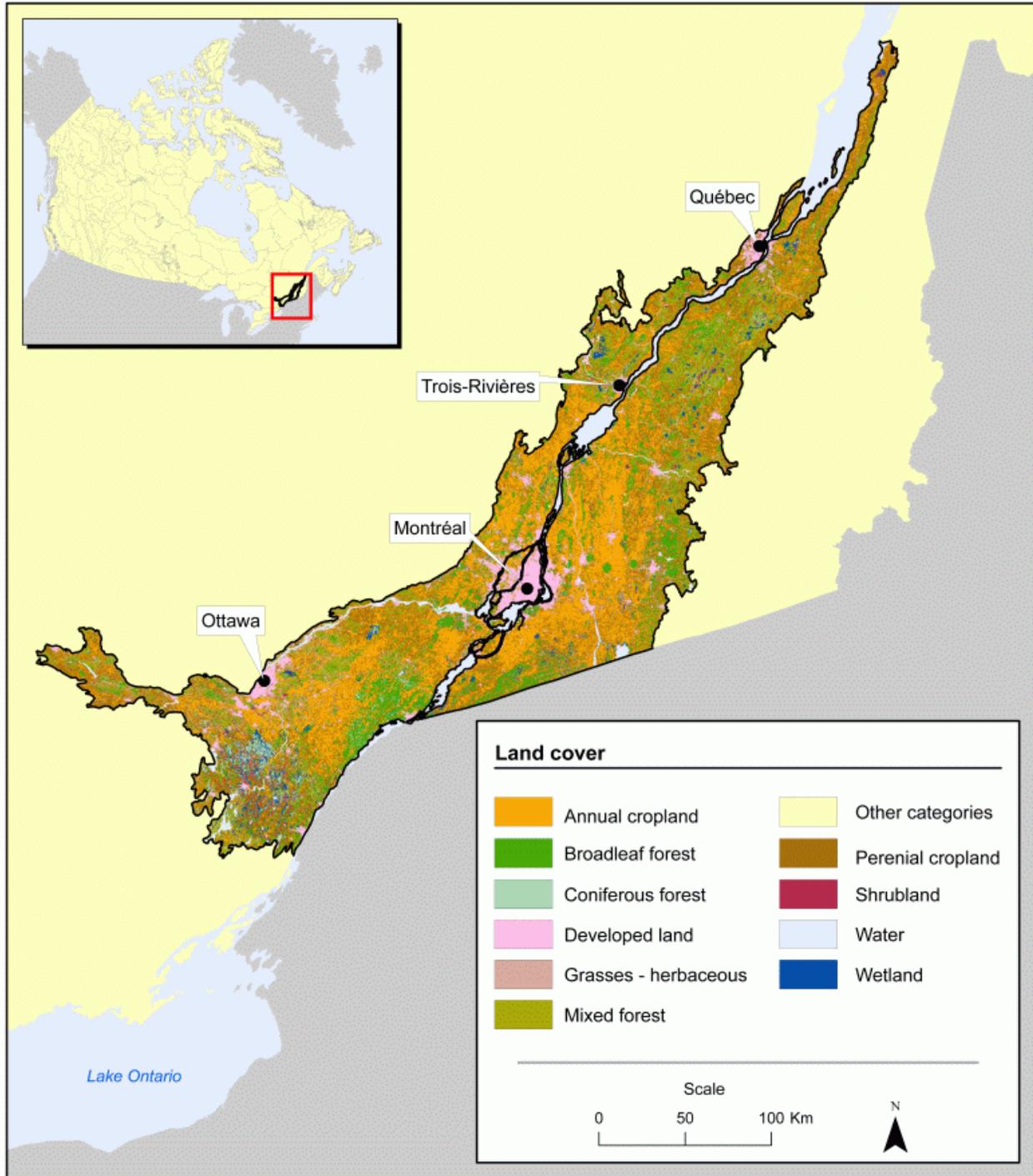
Note(s):

'Developed land' includes built-up areas, lawns, road surfaces, industrial sites and farmsteads. In this ecoregion, 'exposed land' refers primarily to mudflats. 'Other' refers to unclassified land types due to shadow and clouds in the satellite imagery. Land cover is based on LANDSAT satellite data from 1996 to 2003.

Source(s):

Natural Resources Canada, 2009, *Land cover, Circa 2000-Vector (LCC2000-v)*, Earth Sciences Sector, www.geobase.ca (accessed October 8, 2009).

Map 2
Land cover, St-Laurent Lowlands ecoregion, circa 2000



Source(s):

Natural Resources Canada, n.d., *Canada Land Inventory—Land Capability for Agriculture (1968 to 1990)*, Earth Sciences Sector, <http://www.geogratis.ca/geogratis/en/collection/cli.html> (accessed October 8, 2009).

Agriculture and Agri-Food Canada, 2008, *A National Ecological Framework for Canada*, <http://sis.agr.gc.ca/cansis/nsdb/ecostrat/intro.html> (accessed February 19, 2010).

Environment and sustainable development indicators

Table 1
Population indicators

	2004	2005	2006	2007	2008	2009
Population (number) ¹	31,940,676	32,245,209	32,576,074	32,931,956	33,327,337	33,739,859
Percentage change	1.0	1.0	1.0	1.1	1.2	1.2
Aged 65 and over (percent of total)	13.0	13.1	13.3	13.5	13.7	13.9
Population in census metropolitan areas and census agglomerations (percent of total) ²	..	..	81.1	..	..	..
Density (per square kilometre)	3.5	3.6	3.6	3.7	3.7	3.7

1. Population data is based on the Estimates of Population program, except for data on population in census metropolitan areas and census agglomerations, which is based on the Census of Population.

2. Area consisting of one or more neighbouring municipalities situated around a major urban core. A census metropolitan area must have a total population of at least 100,000 of which 50,000 or more live in the urban core. A census agglomeration must have an urban core population of at least 10,000.

Note(s):

For 2003 data, see: Statistics Canada, 2010, *EnviroStats*, Catalogue no. [16-002-X2010001](#). For 2002 data, see: Statistics Canada, 2009, *EnviroStats*, Catalogue no. [16-002-X2009001](#).

Source(s):

Statistics Canada, CANSIM table [051-0001](#) (accessed May 21, 2010).
Statistics Canada, 2007, *Population and Dwelling Count Highlight Tables, 2006 Census*, <http://www12.statcan.ca/english/census06/data/popdwell/Tables.cfm> (accessed May 21, 2010).

Table 2
Economy indicators

	2004	2005	2006	2007	2008	2009
Gross Domestic Product (million chained 2002 dollars)	1,211,239	1,247,807	1,283,419	1,315,907	1,321,360	1,286,431
Percentage change	3.1	3.0	2.9	2.5	0.4	-2.6
Per capita (chained 2002 dollars)	37,922	38,697	39,398	39,958	39,648	38,128
Consumer Price Index (2002 = 100)	104.7	107.0	109.1	111.5	114.1	114.4
Unemployment rate (percent)	7.2	6.8	6.3	6.0	6.1	8.3

Note(s):

For 2003 data, see: Statistics Canada, 2010, *EnviroStats*, Catalogue no. [16-002-X2010001](#). For 2002 data, see: Statistics Canada, 2009, *EnviroStats*, Catalogue no. [16-002-X2009001](#).

Source(s):

Statistics Canada, CANSIM tables [380-0017](#), [051-0001](#), [326-0021](#) and [282-0002](#) (accessed May 21, 2010).

Table 3
Social indicators

	2004	2005	2006	2007	2008	2009
Average household spending ¹ (current dollars)						
Total	62,464	65,575	67,736	69,946	71,364	..
Water and sewage	204	211	221	253	251	..
Electricity	1,040	1,070	1,111	1,147	1,162	..
Food	6,772	6,978	7,046	7,305	7,435	..
Gasoline and other motor fuels	1,854	2,024	2,079	2,223	2,233	..
Personal expenditure on consumer goods and services (million chained 2002 dollars)	697,566	723,146	752,727	787,063	810,723	812,205
Residential waste						
Production per capita (kilograms)	386 ^f	..	399	..	..	..
Disposal (tonnes)	8,961,583 ^f	..	9,238,376	..	..	..
Disposal per capita (kilograms)	281 ^f	..	284	..	..	..
Diversion (tonnes)	3,363,803 ^f	..	3,744,843	..	..	..
Diversion per capita (kilograms)	105 ^f	..	115	..	..	..
Diversion rate (percent of waste production)	27 ^f	..	29	..	..	..
Distance driven by light vehicles ² (million kilometres)	285,164	289,717	296,871	300,203	294,361	..
Asthma (percent of population age 12 and over)	..	8.3	..	8.1	8.4	..

1. Data on average household spending is based on the Survey of Household Spending (SHS). For information on the difference between the SHS and personal expenditure data please see: Statistics Canada, 2008, *Guide to the Income and Expenditure Accounts*, Catalogue no. [13-017-X](#).

2. Distance driven for vehicles weighing less than 4.5 tonnes, excluding the territories.

Note(s):

For 2003 data, see: Statistics Canada, 2010, *EnviroStats*, Catalogue no. [16-002-X2010001](#). For 2002 data, see: Statistics Canada, 2009, *EnviroStats*, Catalogue no. [16-002-X2009001](#).

Source(s):

Statistics Canada, CANSIM tables [203-0001](#), [203-0003](#), [203-0002](#), [203-0007](#), [380-0017](#), [153-0041](#), [153-0042](#), [051-0001](#), [405-0063](#) and [105-0501](#) (accessed May 21, 2010).

Table 4
Energy indicators

	2004	2005	2006	2007	2008	2009
Primary energy availability (terajoules)	11,527,500	11,307,113	11,176,879	11,969,050	11,545,145	..
Primary and secondary energy (terajoules)						
Export	9,810,695	9,641,137	9,833,549	10,308,635	10,186,895	..
Residential consumption	1,313,015	1,296,644	1,243,425	1,336,452	1,360,303	..
Established reserve, closing stock ¹						
Crude bitumen (million cubic metres)	1,660	1,620	3,340	3,500	4,300	..
Crude oil (million cubic metres)	603.8	752.3	712.6	721.8	..	..
Natural gas (billion cubic metres)	1,497.5	1,553.7	1,577.7	1,534.3	..	..
Recoverable reserves, closing stock ¹						
Coal (million tonnes)	4,666.3 ^r	4,560.4 ^r	4,468.8	4,395.1	4,331.5	..
Uranium (tonnes)	444,000	431,000	423,400	482,000	..	..
Total electricity generation (megawatt hours)	571,291,905	597,810,875	585,097,531	603,572,420	601,719,256	575,051,195
Hydro (percent of total)	58.7	60.1	60.0	60.6	62.0	63.2
Nuclear (percent of total)	14.9	14.5	15.8	14.6	14.7	14.8
Generation from fossil fuel and other fuel combustion (percent of total)	26.4	25.4	24.2	24.8	23.3	22.0

1. The size of the reserve at year-end.

Note(s):

For 2003 data, see: Statistics Canada, 2010, *EnviroStats*, Catalogue no. [16-002-X2010001](#). For 2002 data, see: Statistics Canada, 2009, *EnviroStats*, Catalogue no. [16-002-X2009001](#).

Source(s):

Statistics Canada, CANSIM tables [128-0009](#), [153-0012](#), [153-0013](#), [153-0014](#), [153-0017](#), [153-0018](#), [153-0019](#), [127-0001](#) and [127-0002](#) (accessed May 21, 2010).

Table 5
Environment and natural resources indicators

	2004	2005	2006	2007	2008	2009
Total greenhouse gas (GHG) emissions, Canada (megatonnes of carbon dioxide equivalent)	741	731	718	750	734	..
GHG emissions per capita (tonnes)	23.2	22.7	22.0	22.8	22.0	..
GHG emissions by final demand						
Total household ¹ (megatonnes of carbon dioxide equivalent)	423	415	411 ^P	..	..	..
Total household per capita (tonnes)	13.2	12.9	12.6 ^P	..	..	..
Direct household ² (megatonnes of carbon dioxide equivalent)	110	111	109 ^P	..	..	..
Indirect household ³ (megatonnes of carbon dioxide equivalent)	313	304	302 ^P	..	..	..
Exports (megatonnes of carbon dioxide equivalent)	277	274	264 ^P	..	..	..
Annual temperature departures, ⁴ Canada (degrees Celsius)	0.1	1.7	2.4	0.9	0.7	0.8
Value of selected natural resources (million current dollars)						
Land	1,227,819	1,367,002	1,532,193	1,708,196	1,824,120	1,891,438
Timber	311,771	283,572	265,747	246,713	236,556	192,660
Subsoil resource stocks	566,179	805,761	931,530	941,765	1,543,864	914,173
Average farm pesticide expenditures (current dollars)	7,602	7,792	8,268	9,147	11,361	..
Air quality ⁵						
Ozone (population-weighted, parts per billion)	36	40	38	39	..	..
PM _{2.5} (population-weighted, micrograms per cubic metre)	9	10	8	8	..	..

1. Total household greenhouse gas emissions are the sum of direct plus indirect household greenhouse gas emissions.

2. Direct household greenhouse gas emissions include all greenhouse gas emissions due to energy use in the home and for private motor vehicles.

3. Indirect household greenhouse gas emissions are those business-sector emissions due to the production of the goods and services purchased by households. An estimate of the greenhouse gas emissions from foreign companies due to the production of the imported goods purchased by Canadian households is included.

4. Annual departures from the 1951-1980 temperature normals.

5. Ground-level ozone and fine particulate matter (PM_{2.5}) are two key components of smog that have been linked to health impacts ranging from minor respiratory problems to hospitalizations and premature death. Exposure studies indicate that adverse health effects can occur even with low concentrations of these pollutants in the air. Annual data are revised, based on the latest release of the *Canadian Environmental Sustainability Indicators* report.

Note(s):

For 2003 data, see: Statistics Canada, 2010, *EnviroStats*, Catalogue no. [16-002-X2010001](#). For 2002 data, see: Statistics Canada, 2009, *EnviroStats*, Catalogue no. [16-002-X2009001](#).

Source(s):

Statistics Canada, CANSIM tables [051-0001](#), [153-0046](#), [378-0005](#), and [002-0044](#) (accessed May 21, 2010).

Environment Canada, 2010, *A Summary of Trends: 1990-2008*, www.ec.gc.ca/ges-ghg/default.asp?lang=En&n=0590640B-1 (accessed May 21, 2010).

Environment Canada, 2010, *Climate Trends and Variations Bulletin - Annual 2009*, <http://ec.gc.ca/adsc-cmda/default.asp?lang=en&n=4961E0BB-1#1> (accessed May 21, 2010).

Environment Canada, 2010, *Measuring Sustainability: Canadian Environmental Sustainability Indicators*, www.ec.gc.ca/indicateurs-indicators/default.asp?lang=en&n=B4B7C8F6-1#AIRchart1Edetails (accessed June 9, 2010).

Statistics Canada, Environment Accounts and Statistics Division, Material and Energy Flow Accounts.

Updates

New releases

Survey of Environmental Goods and Services, 2008

The Survey of Environmental Goods and Services presents estimates of national economic activity of the environment industry in Canada, including the revenues earned from the production of environmental goods, the provision of environmental services and the undertaking of environment-related construction activities.

The environment industry is composed of establishments operating in a variety of industries that produce environmental goods and services. Environmental goods and services are goods and services that are used, or can potentially be used to measure, prevent, limit or correct environmental damage (both natural or by human activity) to water, air, soil as well as problems related to waste, noise and ecosystems. They also include clean or resource-efficient (eco-efficient) technologies that decrease material inputs, reduce energy consumption, recover valuable by-products, reduce emissions and/or minimise waste disposal problems.

Released June 28, 2010.

Households and the Environment Survey: Public Use Microdata File, 2007

The 2007 Households and the Environment: Public Use Microdata File is now available. Data were collected from over 21,000 Canadian households.

The file provides data for Canada, the provinces and census metropolitan areas and includes information on a wide range of topics, including water quality concerns; consumption and conservation of water; energy use and home heating and cooling; pesticide and fertilizer use on lawns and gardens; recycling, composting and waste disposal practices; motor vehicle use. It also provides information on the socio-demographic, income and labour force characteristics of the population.

Released June 7, 2010 (Statistics Canada Catalogue no. [16M0001X](#); \$100).

CANSIM tables and updates

CANSIM is Statistics Canada's key socio-economic database.

Updates have been made to the following CANSIM tables:

CANSIM table [153-0031](#), Direct plus indirect energy intensity, by industry, annual

CANSIM table [153-0032](#), Energy use, by sector, annual

CANSIM table [153-0033](#), Direct plus indirect greenhouse gas emissions intensity, by industry, annual

CANSIM table [153-0034](#), Greenhouse gas emissions, by sector, annual

CANSIM table [153-0046](#), Direct and indirect household energy use and household greenhouse gas emissions, annual

The following tables have been added to CANSIM:

CANSIM tables [153-0047 to 153-0051](#) and [153-0067 to 153-0097](#), Industrial Water Survey – 2005 (volumes or dollars, as applicable)

Upcoming releases

Recycling by Canadian Households, 2007

Recycling has become a common habit for most Canadian households. These households have many choices when it comes to recycling: they decide whether or not to recycle, how much to recycle, and what methods to use when they do. Using data from the 2007 Households and the Environment Survey, the paper examines the recycling decisions made by Canadian households, some of the reasoning behind those decisions, and the relationship between recycling behaviour and a selection of demographic factors.

To be released July 7, 2010 (Statistics Canada Catalogue no. [16-001-M](#)).

Canadian Health Measures Survey

The Canadian Health Measures Survey (CHMS) will be releasing laboratory data on environment contaminants, including bisphenol A, metals, perfluorinated compounds, polybrominated diphenyl ethers (PBDEs), polychlorinated biphenyls (PCBs) and organophosphate pesticides. These data are part of the third release from the CHMS cycle 1, which collected key information relevant to the health of Canadians by means of direct physical measurements and collection of blood and urine samples.

Accompanying this third data release will be an analytical article in *Health Reports* ([82-003-X](#)) on lead and bisphenol A levels in Canadians, as well as three fact sheets ([82-625-X](#)) respectively highlighting lead, mercury and bisphenol A levels in Canadians. The data release is also accompanied by data tables ([82-623-X](#)), a user guide and derived variable documentation. These can all be accessed through the Health in Canada portal at www.statcan.gc.ca/health.

To be released August 16, 2010. For additional information about the CHMS, please contact Client Services (toll free 1-888-253-1087; chms-ecms@statcan.gc.ca) or visit the website www.statcan.gc.ca/chms.

Industrial Water Use, 2007

The information collected for the Industrial Water Survey measures, by volume, the sources of water used, the purposes of water use, whether or not water was re-circulated or re-used, where the water was discharged, the types of treatments locations applied to intake water prior to use and the types of treatments locations applied to their wastewater prior to discharge. Water acquisition costs, treatment costs and operating and maintenance expenses related to water intake and discharge are also collected.

The results of this survey are used in the development of environmental accounts, aid in tracking the state of stocks of water and contribute to national indicators of water quality.

To be released shortly (Statistics Canada Catalogue no. [16-401-X](#)).

Socio-economic Conference 2010

The Statistics Canada Socio-economic Conference provides an annual forum for empirical research focusing on issues of concern in Canadian public policy. At the April 26-27, 2010 conference there were seven environment-related presentations. The titles of the presentations listed here are written in the language in which they were presented.

Resource Rent and Return to Produced Capital—Is Iron Brighter than Gold?

Kazi Islam, Environment Accounts and Statistics Division, Statistics Canada

Multicriteria Evaluation of Vulnerable Coastal Communities to Climate Change

Hooman Mostofi Camare, University of Ottawa, Ottawa, Ontario

Looking at Consumers as GHG Emitters

Hans Messenger, Industry Accounts Division, Statistics Canada, Joe St. Lawrence, Environment Accounts and Statistics Division, Statistics Canada and Chantal Hicks, Modelling Division, Statistics Canada

A New Research Project on Canadian Settlements: Initial Geographic Results

Nancy Hofmann, Akmal Elgarawany, Giuseppe Filoso, Hugo Larocque and Tim Dennis, Environment Accounts and Statistics Division, Statistics Canada

Geographic Systems and Systems Dynamics—Modeling the Impacts of Climate Change on Coastal Communities

Maxx Hartt, University of Ottawa, Ottawa, Ontario

Economic Indicators as Potential Surrogates for Environmental Indicators: A Case Study

Zhen Yu Li, Philip Astles, Allison Bone, Matthew Prescott, Joe St. Lawrence, Laleh Yerushalmi and Soheil Rastan, Environment Accounts and Statistics Division, Statistics Canada

Evaluating the Impacts of Environmental Change on Coastal Communities

Sahar Pakdel, University of Ottawa, Ottawa, Ontario

The complete program is available on Statistics Canada's website at:

www.statcan.gc.ca/conferences/socioecon2010/index-eng.htm. For further information please contact the presenters directly.

New developments

Human Activity and the Environment: Freshwater Supply and Demand in Canada

To be effective at reducing our collective impact on the environment we need systematic, accessible and relevant information. The annual *Human Activity and the Environment* (HAE) publications meet this need with a collection of environmental statistics brought together from many sources. The HAE publications paint a statistical portrait of Canada's environment with special emphasis on human activity and its relationship to natural systems—air, water, soil, plants and animals.

In the past, each annual issue of HAE began with a feature article on an environmental topic of concern

to Canadians, followed by a compendium of statistical tables. Starting in 2010, the analytical article and statistical tables will be published separately, with the article continuing to be released annually. The statistical tables will be released every two years with the first release planned for 2011.

The topic of the 2010 analytical article is “Freshwater Supply and Demand in Canada,” and provides information on Canada's freshwater supply as well as the demands placed on it. New research done within Statistics Canada is complimented by information from other sources, including other federal government departments, international bodies and scientific journals.