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Releases

Study: A demand perspective on greenhouse gases

1990 to 2002

Exports represented nearly half of the industrial emissions of greenhouse gases in Canada in 2002, the largest single share of emissions from a demand perspective, according to a new study.

Typically, emissions are reported from a supply perspective, showing how much pollutant is produced and by whom. While this supply perspective is important, it is also useful to look at emissions from a demand perspective. This shows how the consumption of goods and services for different purposes (household use, for example) drives the industrial production of greenhouse gas emissions.

The study found that between 1990 and 2002, total greenhouse gas emissions from industrial sources increased 18.4% to 573,843 kilotonnes. Exports accounted for the vast majority of this increase.

During this period, greenhouse gas emissions from the production of goods and services sent to international markets surged 49.9% to 264,358 kilotonnes.

After exports, the production of goods and services purchased by Canadian households was the second largest source of greenhouse gas emissions from a demand perspective. However, emissions associated with industrial production to meet this personal spending rose only 6.9% during this period to 209,787 kilotonnes.

Because of the far greater rate of growth in greenhouse gas emissions associated with exports, personal expenditure and exports switched positions in terms of their relative importance.

In 1990, exports accounted for 36.4% of industrial greenhouse gas emissions. By 2002, this proportion had jumped to 46.1%.

In contrast, in 1990, personal spending accounted for 40.5% of industrial greenhouse gas emissions. Twelve years later, this proportion had declined to 36.6%.

The remainder of industrial greenhouse gas emissions resulted from the production of goods and services for investments in construction, machinery and equipment, for government purchases, and for inventories.

Exports: Fossil fuels largest single source of greenhouse gas emissions

As globalization has led to better access to world markets, Canada has increased its overall trade with the rest of the world. While this has benefited the Canadian economy, it has also caused greenhouse gas production in Canada to increase.

Between 1990 and 2002, industrial greenhouse gas emissions from the production of goods and services sent to international markets increased 49.9%.

In contrast, there was only a 0.4% increase in industrial greenhouse gas emissions from other demand sources, that is, emissions caused by the production of goods and services to satisfy the demands of the domestic market.

Looking at exports more closely, the single largest source of greenhouse gas emissions was from the production of fossil fuels (coal, crude oil and natural gas) for export. In both 1990 and 2002, the production of these fuels for export emitted more greenhouse gases than any other exported commodity. Between the two years, greenhouse gas emissions from the production of exported fossil fuels jumped 135%, as worldwide demand for these fuels surged.

Imports also a source of emissions, but not at home

As exports overall have increased in quantity and value, so too have imports. The production of imported goods and services also creates greenhouse gases. However, these emissions are not produced in Canada and are not typically included in Canada's emissions estimates.

The study found that between 1990 and 2002, emissions outside the country associated with demand by Canadians for imported goods and services increased an estimated 15%.

Use of motor fuel largest factor in direct household greenhouse gas production

The study found that the use of fuel to power motor vehicles was by far the main source of greenhouse gas emissions associated directly with households.

These emissions are considered direct because they result from households' own use of fossil fuels. The other direct emissions from households are from the use of fuel oil and natural gas to heat homes.

Greenhouse gas emissions associated with the direct consumption of fuels by households amounted to 111,276 kilotonnes in 2002.

Direct greenhouse gas emissions from household use of heating and motor fuels accounted for about one-third of the total amount of greenhouse gases associated with households in 2002. Total household emissions include direct emissions plus the indirect industrial emissions associated with supplying household purchases.

The household purchase with the highest associated indirect industrial emissions was electricity, which accounted for 13.5% of total household emissions.

Total direct plus indirect household greenhouse gas emissions in 2002 amounted to almost half (46.9%) of total national greenhouse gas emissions.

Definitions, data sources and methods: survey number 5115.

The study, "A demand perspective on greenhouse gas emissions", part of *EnviroStats* (16-002-XWE, free), is now available from the *Publications* module of our website.

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

Sources of industrial greenhouse gas emissions from the demand perspective

Final demand category	1990	2002 ^P	1990 to 2002	1990	2002 ^P
	kilotonnes		% change	share of total in %	
Total domestic industrial emissions	484,640	573,843	18.4	100.0	100.0
Internal demand	308,276	309,485	0.4	63.6	53.9
Personal expenditure	196,193	209,787	6.9	40.5	36.6
Construction	43,853	42,490	-3.1	9.0	7.4
Machinery and equipment	11,005	10,505	-4.5	2.3	1.8
Government	42,710	41,641	-2.5	8.8	7.3
Inventories	14,515	5,062	-65.1	3.0	0.9
External demand					
Exports	176,363	264,358	49.9	36.4	46.1

^P preliminary

Direct and indirect emissions from personal expenditure

	1990	2002 ^P	1990	2002 ^P
	kilotonnes		share of total in %	
Total	293,046	321,064	100.0	100.0
Direct emissions	96,853	111,276	33.1	34.7
Motor fuels and lubricants	55,910	69,557	19.1	21.7
Heating, lighting and appliances	40,943	41,719	14.0	13.0
Indirect emissions	196,193	209,787	66.9	65.3
Electricity	35,839	43,343	12.2	13.5
Other services	31,177	39,011	10.6	12.2
Food and non-alcoholic beverages	46,228	38,874	15.8	12.1
Restaurants and hotels	12,777	15,972	4.4	5.0
Motor fuels and lubricants	13,933	15,554	4.8	4.8
Gross rent (imputed and paid)	11,004	14,555	3.8	4.5
Other non-durable goods	12,378	10,781	4.2	3.4
Natural gas	6,292	7,315	2.1	2.3
Other semi-durable goods	5,721	5,521	2.0	1.7
Motor vehicles, parts and repairs	4,083	5,023	1.4	1.6
Clothing and footwear	6,050	4,750	2.1	1.5
Other durable goods	3,310	3,741	1.1	1.2
Furniture and household appliances	3,238	3,066	1.1	1.0
Other fuels	4,163	2,281	1.4	0.7

^P preliminary

Study: Lawns and gardens and the environment

2006

The number of Canadian households using pesticides on their lawns and gardens has edged down, especially in Quebec, but two-thirds of households use polluting gas-powered lawn mowers, according to a new study.

The study examined the prevalence of a number of techniques for lawn and garden care with potential environmental or health impacts, including the use of pesticides, chemical fertilizers, and watering and lawn-mowing devices. The study was published today in *Envirostats*, Statistics Canada's new quarterly bulletin on environmental and sustainable development statistics.

The proportion of households using pesticides on their lawns and gardens dropped from 31% in 1994 to 29% in 2005. The trend was most pronounced in Quebec, where the proportion of homes using pesticides on their lawns and gardens was cut in half, from 30% in 1994 to 15% in 2005. This likely reflects the municipal pesticide bans put in place in the province in recent years.

Saskatchewan, Manitoba and Alberta led the country in pesticide use in 2005, with about 2 out of every 5 households using them on their lawns and gardens.

Although overall household pesticide use was highest in the Prairie Provinces, Manitoba (41%) and Saskatchewan (42%) had the lowest proportions of households using pesticides as part of a regular maintenance routine in 2005. The remaining households only applied pesticides when a problem arose.

Household use of chemical fertilizers, which can contain nitrogen, phosphorus and potassium, was also highest in the Prairies. Chemical fertilizer use was highest in Saskatoon (57%), Regina (54%), Calgary (49%) and Edmonton (48%), and lowest in Montreal (13%), Saguenay (15%), Sherbrooke (16%) and Trois-Rivières (17%).

Two-thirds of households with lawns and gardens owned a gas-powered lawn mower in 2006. In one year, the average gas-powered mower can emit the same amount of a key smog pollutant as the average car travelling about 3,300 kilometres.

More than 4 out of 5 households watered their gardens in 2005, and over half watered their lawns. While garden watering was relatively consistent across the country, lawn watering varied. In Prince Edward Island and New Brunswick, about 2 in 10 households watered their lawn, compared with 6 in 10 in Alberta, British Columbia, Saskatchewan and Ontario.

In 2005, nearly a quarter of households with lawns or gardens used sprinkler timers, which can reduce water use. Sprinkler usage rates were higher than the national average in only British Columbia and Quebec.

About 14% of households used water-conserving rain barrels and cisterns, a practice that was most common in the Prairie Provinces.

Lawn and garden care is a booming industry in Canada. Sales of related products and equipment hit more than \$2 billion in 2006, up by more than \$600 million from 2002.

Note: This study is based primarily on data from the 2006 Households and the Environment Survey, conducted as part of the Canadian Environmental Sustainability Indicators project. Household pesticide use data was also derived from the 1994 Households and the Environment Survey. Data on households with lawns or gardens, ownership of gas-powered lawn mowers and the use of rain barrels or cisterns is for 2006. Data on lawn and garden practices, such as pesticide and fertilizer application, lawn watering and the use of water sprinkler timers, is for 2005.

Definitions, data sources and methods: survey number 3881.

The study, "Canadian lawns and gardens: Where are they the 'greenest'?", part of *EnviroStats* (16-002-XWE, free), is now available from the *Publications* module of our website.

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

Farm Product Price Index

July 2007

The prices that farmers received for their commodities rose 8.4% in July from the same month in 2006, in the wake of a sharp rise in grain, oilseed and special crop prices, while overall prices for livestock increased slightly.

Prices for crops were up 17.3% in July compared with July 2006, according to the Farm Product Price Index (FPPI), continuing the upward trend in year-over-year price changes that began in September 2006. Farmers received higher prices for grains, oilseeds, special crops and fruit.

Overall, prices for livestock and animal products were 1.9% above the year-earlier level. Following five

consecutive declines, the livestock and animal products index has increased in the last six consecutive months. Stronger supply-managed commodity (poultry, eggs and milk) prices supported July's increase.

On a month-to-month basis, the prices that farmers received for their commodities dropped 0.7% in July, as both the overall crops index and the livestock and animal products index slipped.

The FPPI (1997=100) stood at 104.9 in July, down from a revised June index of 105.6.

The overall crops index was slightly lower in July compared with June, as prices for all commodities except oilseeds, vegetables and potatoes slipped. Despite dipping 1.6% in July, the grains index remained at the third highest level since August 2004, as concerns continued over tight world stocks and weather-reducing yields of new crop production in many major producing countries. These concerns also buoyed oilseed prices, which were up 1.8% over June.

Prices for livestock and animal products were down slightly in July from the revised June index, as lower prices for hogs, cattle and calves, and milk more than offset higher poultry and egg prices.

Hog prices were down in July, marking the fourth decrease in the last five months. Hog producers have

been plagued by rapidly rising feed grain prices and a strong Canadian dollar.

After making gains in the first four months of 2007, cattle and calf prices continued to slip, down slightly (-0.5%) in July. Canada's cattle herd declined for the second consecutive year as exports of live cattle continued to grow and producers were faced with rising feed grain costs.

Available on CANSIM: tables 002-0021 and 002-0022.

Definitions, data sources and methods: survey number 5040.

The July 2007 issue of *Farm Product Price Index*, Vol. 7, no. 7 (21-007-XWE, free) is now available. From the *Publications* module of our website, under *Free Internet publications*, choose *Agriculture*.

For more information or to order data, contact Client Services (toll-free 1-800-465-1991). To enquire about the concepts, methods or data quality of this release, contact Gail-Ann Breese (204-983-3445; fax: 204-983-7543; gail-ann.breese@statcan.ca), Agriculture Division.

Farm Product Price Index

	July 2006 ^r	June 2007 ^r	July 2007 ^p	July 2006 to July 2007	June to July 2007
	(1997=100)			% change	
Farm Product Price Index	96.8	105.6	104.9	8.4	-0.7
Crops	88.5	104.3	103.8	17.3	-0.5
Grains	73.9	101.9	100.3	35.7	-1.6
Oilseeds	71.8	95.1	96.8	34.8	1.8
Specialty crops	75.4	120.0	111.1	47.3	-7.4
Fruit	107.8	113.7	109.6	1.7	-3.6
Vegetables	122.7	120.7	121.9	-0.7	1.0
Potatoes	155.0	131.7	144.1	-7.0	9.4
Livestock and animal products	103.8	107.1	105.8	1.9	-1.2
Cattle and calves	108.1	107.7	107.2	-0.8	-0.5
Hogs	79.5	80.1	75.9	-4.5	-5.2
Poultry	94.7	103.1	103.3	9.1	0.2
Eggs	98.1	101.0	101.5	3.5	0.5
Dairy	124.7	133.6	132.7	6.4	-0.7

^r revised

^p preliminary

Railway carloadings

July 2007

A surge in summertime business for Canadian railways pushed their total freight to its highest monthly level for July in three years.

Canadian railways carried 24.6 million metric tonnes of freight in July, up from the 24.1 million metric tonnes

reported in June. July's level was the highest for the month since 2004.

This increase represented a rebound from a decline in June. It also marked the third consecutive year an increase has occurred in the month of July.

The intermodal portion, consisting of containers and trailers loaded on flat cars, increased 2.4% in July to 2.5 million metric tonnes.

The non-intermodal portion of the freight loaded also rose 2.4% to about 22.2 million metric tonnes.

The increase in non-intermodal loadings was the result of gains in tonnage in 35 commodities.

Among those commodities experiencing the largest increases were iron ores and concentrates, wheat, coal, fertilizers, and wood and pulp. These commodities accounted for over 44% of the tonnage movements in July.

Freight haulage either destined for or passing through Canada from the United States, recovered after a decline in June. Tonnage edged up by about 90,000 metric tonnes to 2.6 million metric tonnes.

On a year-over-year-basis, intermodal loadings in July climbed 5.7% from July 2006, while non-intermodal tonnage grew 3.1%. Traffic received from the United States also remained above last year's volume, rising 17.9% from July 2006.

Note: Data on intermodal loadings have been revised for 2007.

Available on CANSIM: table 404-0002.

Definitions, data sources and methods: survey number 2732.

The July 2007 issue of *Monthly Railway Carloadings*, Vol. 84, no. 7 (52-001-XWE, free) is now available from the *Publications* module of our website.

For more information, or to enquire about the concepts, methods or data quality of this release, contact the Dissemination Unit (toll-free 1-866-500-8400; fax: 613-951-0009; transportationstatistics@statcan.ca), Transportation Division. ■

Study: Economic depreciation and retirement of Canadian assets: a comprehensive empirical study 2007

Empirical studies of economic depreciation are critical for accurate measures of economic wealth and capital services. Although the neoclassical theory of capital accumulation has been rigorously developed since the 1960s, the empirical literature on depreciation has been much less fertile due to a lack of data. The absence of reliable empirical evidence has forced economists and statisticians to make assumptions on the forms and rates of depreciation for most of the assets in the economy.

This paper offers empirical evidence on the actual rates and forms of economic depreciation for a comprehensive set of assets. Using a Canadian micro-database on the purchase and disposal of capital goods from Statistics Canada's Capital Expenditure Survey, the study estimates depreciation rates for 36 asset categories, which represent half of the Canadian business capital stock. Depreciation rates for the remaining assets are calibrated using the average age-price relationship from the estimation and surveyed service lives obtained from the Capital Expenditure Survey. The impact of the estimated depreciation rates on the Canadian capital stock and depreciation allowances is also presented.

The study, *Economic Depreciation and Retirement of Canadian Assets: A Comprehensive Empirical Study*, (15-549-XIE, free), is now available from the *Publications* module of our website.

For more information, or to enquire about the concepts, methods and data quality of this release, contact André Patry (613-992-6359; fax: 613-996-0660; patry.andre@fin.gc.ca), Department of Finance Canada.

For more information about the impact of the results from this study on capital stock measures produced by Statistics Canada, contact Michel Labonté (613-951-9690; michel.labonte@statcan.ca), Investment and Capital Stock Division. ■

New products

Economic Depreciation and Retirement of Canadian Assets: A Comprehensive Empirical Study
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EnviroStats, Fall 2007, Vol. 1, no. 2
Catalogue number 16-002-XWE
(free).

Farm Product Price Index, July 2007, Vol. 7, no. 7
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
MAJOR RELEASES

- **Urban transit, 1996** 2
Despite the emphasis on taking urban transit, Canadians are using it less and less. In 1996, each Canadian took an average of about 20 trips on some form of urban transit, the lowest level in the past 25 years.
- **Productivity, hourly compensation and unit labour cost, 1996** 4
Growth in productivity among Canadian businesses was relatively weak again in 1996, accompanied by sluggish gains in employment and slow economic growth during the year.

OTHER RELEASES

- **Help-wanted index, May 1997** 3
- **Short-term Expectations Survey** 2
- **Steel primary forms, week ending May 31, 1997** 12
- **Egg production, Apr. 1997** 12

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