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Environment Industry Survey: Business Sector, 2000

Environment Industry Survey Business Sector, 2000

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Preface

This report presents estimates pertaining to businesses in the environment industry, obtained from the *Environment Industry Survey, 2000* as well as a number of other surveys carried out by Statistics Canada. The data from these sources have been combined in order to provide a more complete picture of businesses that, in 2000, produced environmental goods, provided environmental services or undertook environment-related construction activities in Canada.

Acknowledgements

The cooperation of survey respondents and industry groups was critical to the successful completion of this project and is gratefully acknowledged.

This report was prepared by the Environment Accounts and Statistics Division, under the direction of Claude Simard, Director, Alice Born, Assistant Director and Bruce Mitchell, Chief, Environmental Protection Accounts and Surveys. Data collection for the surveys was conducted by the Operations and Integration Division (M. Jones, Director) and the Environment Accounts and Statistics Division. Other data were supplied by Services Division (L.M. Ducharme, Director).

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Symbols

The following standard symbols are used in Statistics Canada publications:

- .. figures not available
- ... figures not appropriate or not applicable
- nil or zero
- amount too small to be expressed
- x confidential to meet secrecy requirements of the *Statistics Act*

1 Highlights and Introduction

1.1 Highlights

- Revenues derived from environment-related activities reached \$14.4 billion in 2000, representing 55% of the total revenues reported by firms that made up Canada's environment industry.
- Accounting for 44% of total environmental revenues, environmental services slightly surpassed the environmental goods category which accounted for 43% of total environmental revenues. Environment-related construction services made up the remaining share 13% of the total environmental revenues.
- Most of the environmental services revenues originated from the waste services category (\$3.9 billion), accounting for 63% of total environmental services revenues.
- The "other" goods category posted the top environmental goods revenues in 2000 (\$3.9 billion), owing mainly to recyclable materials sales by the Wholesale Trade industry. This category accounted for 63% of total environmental goods revenues.
- Four industry groups led Canada's environment industry, posting a combined share of nearly three-quarters of business sector total environmental revenues: Wholesale Trade (30%); Waste Management and Remediation Services (21%); Engineering Services (14%); and Construction Services (11%).
- As in the previous years, businesses in Ontario and Quebec were the biggest earners of revenues from environment-related activities. Ontario's environmental revenues were \$6.2 billion in 2000 and those of Quebec were estimated at \$3.2 billion. Other top performers during the period were firms in Alberta (\$1.9 billion) and British Columbia (\$1.7 billion).
- Small and medium-sized establishments continued to dominate the Canadian environment industry. In particular, small establishments made up 96% of all establishments in the industry during the period.
- Environmental goods and services were supplied mainly by small establishments while environment-related construction services were provided mostly by medium-sized establishments.

- Export markets represented 9% of environmental revenues in 2000. Total environmental export revenues reached \$1.3 billion, mostly in the form of environmental goods (\$0.9 billion).
- Providing environmental export revenues of \$900.3 million, the United States remained the biggest export market for Canada's environment industry, followed by Europe (\$127.1 million) and Asia (\$77.9 million).
- Total employment of businesses that reported environment-related activities reached 159,269 in 2000. This total includes all workers who performed environmental and non-environmental activities.

1.2 Introduction

Why is there a need to collect information on the environment industry?

The importance of environmental issues generates a parallel interest in evaluating the relationship between environmental efforts (done through regulations or voluntary actions) and economic activity. Governments and businesses, for example, look at the impacts of these environmental efforts on trade opportunities, both domestic and international (see Text Box 1.1).

Tracing its roots from the "command and control" regimes of the 1970s that spurred the demand for environmental goods and services, the environment industry has evolved into a complex and rapidly changing industry. Environmental goods are no longer limited to "end-of-pipe" equipment used to treat pollutants that have been released in air, water and soil. The past decade has seen the continued development of more "integrated process" equipment that prevent the release of pollutants and also reuse materials and energy during the production process. Similarly, the array of environmental services has gone beyond waste management and wastewater treatment services. An extensive variety of engineering, analytical and design services are now available in the market to help businesses incorporate environmental considerations into their production processes.

This report presents the 2000 estimates for Canada's **business sector environment industry**. It covers all businesses operating in Canada (at the establishment level) that either produced environmental goods, provided environmental services or undertook environment-related construction activities. A more extensive description of these goods and services is found in Section 2 - Concepts and Definitions.

Text Box 1.1

Environment Industry: Changing Conditions and Industry Responses

The environment industry is a beneficiary of the increasing pressure on firms in all sectors to achieve higher standards of environmental performance. Firms are feeling pressure, not only from concerned citizens and governments, but also from lenders and investors who are worried about possible liability for environmental damage. As a result, there is a growing demand for pollution control technologies and processes that will help firms efficiently improve their environmental performance.

The increasing pressure on industry to demonstrate its commitment to sustainable development - development that meets the needs of the present without compromising the ability of future generations to meet their own needs - presents growth opportunities for the evolving environment industry.

Canada's environment industry has been characterized as an *enabling sector*; that is, a sector helping make other industries more efficient and productive while also helping them meet environmental standards and regulations. By developing efficient solutions to environmental problems, the industry can make an important contribution to improving the performance of many industrial sectors of the Canadian economy.

Source:

Industry Canada, 2000, <<http://strategis.ic.gc.ca/>>, (accessed August 29, 2000), Ottawa.

2 Concepts and Definitions

There are several sets of criteria that define an environmental good or service. This report defines the environment industry as “. . .all companies operating in Canada that are involved in whole or in part in the production of environmental goods, the provision of environmental services and the undertaking of environment-related construction activities.”¹ The statistical unit used in this report is the establishment.²

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.

This definition focuses on the *end-use* instead of the physical attributes of goods and services. It also addresses the core question: “Does a particular good or service exist in the market either **solely or partly** because of its environmental component?” The detailed lists of environmental goods and services are shown in text boxes 2.1, 2.2 and 2.3. These lists were developed using Canadian and international sources.³ The major categories presented in the statistical tables are based on the condensed versions of the detailed lists.

Industry classification

The environment industry is composed of establishments operating in a variety of industries that produce environmental goods and services. Thus, this industry is not classified as one specific industry under Statistics Canada’s official classification of industries.⁴ Beginning with reference year 1998, statistical tables on the different industry groups that comprise the environment industry are based on the North American Industry Classification

System (NAICS) instead of the 1980 Standard Industrial Classification System (SIC) used in the reports for previous years.

Developed in coordination with the statistical agencies of Mexico and the United States, NAICS is based on the premise that “*economic units that have similar production processes are classified in the same industry, and the lines drawn between industries demarcate, to the extent practicable, difference in the production processes.*”⁵ This production-oriented classification system was also designed to reflect technological changes and diversification of services that industries have undergone in recent years. Through NAICS, there is an improved representation of the wide range of industries that undertake environment-related activities. Various examples are described below.

First, the Waste Management and Remediation Services industry, formerly classified in Other Utility Industries, n.e.c. under the 1980 SIC, is a separate industry under NAICS (NAICS 562). Having its own industry code allows for a clearer description of waste management activities as well as a detailed breakdown of activities such as waste treatment and disposal, remediation and other waste management services. Another new environment-related industry under NAICS is the Environmental Consulting Services industry (NAICS 54162) which includes environmental and sanitation consulting services. Third, Recyclable Material Wholesalers have a separate NAICS code (NAICS 4181), in contrast with a much broader classification under the 1980 SIC (SIC 5919, Other Waste Materials, Wholesale).

The above groups are some of the most prominent industries that engage in environment-related activities. Improvements in the classification brought about by NAICS have resulted in better estimates for Canada’s environment industry. Text Box 2.4 presents the profile of the NAICS industry groups used in the statistical tables.

1. Definition based on the *Environment Industry Survey, 2000*.

2. An establishment is defined as “the most homogeneous unit of production for which the business maintains accounting records from which it is possible to assemble all the data elements required to compile the full structure of the gross value of production (total sales or shipments, and inventories), the cost of materials and services and labour and capital used in production.” Refer to Statistics Canada, *North American Industry Classification System 1997*, Catalogue 12-501-XPE, Ottawa.

3. For a more detailed discussion on environmental goods and services, refer to OECD and Eurostat, 1999, *The Environmental Goods and Services Industry: Manual for Data Collection and Analysis*, Paris.

4. Industry classification systems arrange producing units into industries; i.e., groups of establishments whose production represents a homogeneous set of goods or services or groups of establishments engaged in the same or similar kind of economic activity. Until recently, the Standard Industrial Classification System (SIC) was the standard classification used by Statistics Canada. This has been replaced by the North American Industry Classification System (NAICS).

5. Statistics Canada, 1997, *North American Industry Classification System*, Catalogue No. 12-501-XPE, Ottawa.

Text Box 2.1

Environmental Goods

Water

Water Supply and Conservation - equipment or technology used for fresh water supply and delivery, water purification equipment, water handling equipment parts (pumps, pipes and valves).

Wastewater Management and Sewage Treatment - chemical recovery systems, aeration systems, biological recovery systems, gravity sediment systems, oil/water separation systems, wastewater reuse equipment, wastewater treatment chemicals, water pollution control equipment, screens, strainers, clarifiers, filters and filter media.

Air

Air Pollution Control (Indoor or Outdoor) - catalytic converters, chemical recovery systems, dust collectors, separators, precipitators, scrubbers, odour control equipment.

Waste

Hazardous and Non-hazardous Waste Management - hazardous waste storage/treatment equipment, waste collection equipment, waste disposal machinery and equipment, waste handling equipment, waste separation equipment, recycling equipment, and incineration equipment.

Remediation/Treatment of Soil, Surface Water, Seawater and Groundwater - absorbents, bioremediation equipment, soil vapour extraction equipment, spill equipment, containment systems, chemicals and bioremediators.

Renewable Energy

Energy Efficient Equipment - energy management equipment, energy recovery equipment.

Solar Energy Systems and Equipment - active and passive solar systems, photovoltaics, solar-thermal generators, solar water and space heating systems.

Biomass Energy Systems and Equipment - landfill gas collection systems, other systems and equipment that use organic matter (forest and agricultural residues) to produce electricity, chemicals or transportation fuels.

Wind Energy Systems and Equipment - horizontal axis turbines, vertical axis turbines, other types of windmills used to generate energy and electricity.

Other Renewable Energy Systems and Equipment - wave, tidal and ocean thermal energy conversion systems, geothermal energy.

Alternative Fuel Systems

Alternative Fuel Systems - clean fuel systems (reformulated fuels and oxygenated fuels), fuel cell technologies, hydrogen systems and advanced batteries.

Clean Technologies and Related Components - integrated process technology; and materials recovery technology.

Analytical

Environmental Monitoring, Analysis and Assessment -measuring and monitoring equipment, sampling systems, data acquisition equipment, environment information systems and analytical software such as laboratory, remote sensing and GIS management software.

Other

Noise and Vibration Abatement - mufflers/silencers, noise deadening equipment, noise and vibration control systems, highway barriers.

Recyclable materials - metals (ferrous and non-ferrous scrap metal, including automobiles for scrap), paper and paperboard and other recyclable materials (plastic, glass, textiles, liquids and sludges).

Others, specify - specified by respondents.

Text Box 2.2

Environmental ServicesWater

Water Supply and Conservation - services related to water purification, water delivery and water handling systems, including maintenance, repair, related consulting engineering and analytical services.

Wastewater Management and Sewage treatment - operation of water treatment facilities, storm water management, water and wastewater system assessment, planning and design management, related consulting engineering and analytical services.

Air

Air Pollution Control (Indoor or Outdoor) - emission monitoring, assessment/ evaluation and planning, related consulting engineering and analytical services.

Waste

Hazardous and Non-Hazardous Waste Management - waste handling, collection, transport and disposal, operation of sites, ownership or management of sites, recycling (sorting, baling, cleaning), operation of materials recovery facilities, hazardous waste management services, including related consulting engineering and analytical services.

Remediation and Treatment of Soil, Surface Water, Seawater and Groundwater - cleaning for facilities and tanks, emergency response and spills clean-up systems, site reclamation and remedial action services, maintenance and repair of remediation or treatment systems, including related consulting engineering and analytical services.

Research and Development

Environmental Research and Development - development, evaluation and implementation of clean process technologies and/or end-of-pipe pollution abatement and control technologies, including related consulting engineering and analytical services, and related research to improve knowledge on ecosystems and the impact of human activities on the environment.

Renewable Energy

Energy Efficiency and Renewable Energy - installation, maintenance, repair and related consulting and analytical services for alternative energy systems or renewable energy production (solar, biomass, wind, other), energy audit, energy resource management, related consulting engineering and analytical services.

Engineering

Other Environmental Consulting Engineering Services - other environmental advisory and/or design, services not listed in the preceding categories.

Analytical

Other Analytical Services, Data Collection and Analysis - other analysis services not listed in the preceding categories.

Management Consulting and Legal Services - general environmental impact assessment, resource management planning, environmental risk management, environmental law and legal services, other environment-related general consulting and legal services not listed in any other categories.

Environmental Education, Training and Information - environmental education, training and information management for the general public and specific environmental workplace education, environmental information searching services, environmental emergency response planning, conservation and resource management, ISO 9000/14000 support services, including related consulting engineering and analytical services.

Other

Noise and Vibration Abatement - assessment and monitoring; design and management services for acoustic and soundproof screens and street covering; and related consulting engineering and analytical services.

Others, specify - specified by respondents.

Text Box 2.3

Environment-related Construction**Air Pollution Control (Indoor or Outdoor)****Water Supply and Conservation**

Wastewater Management and Sewage Treatment - sewer systems; water treatment plants.

Hazardous and Non-hazardous Waste Management - hazardous waste management; solid waste treatment, storage and disposal; recycling.

Remediation and Treatment of Soil, Surface Water, Seawater and Groundwater**Noise/Vibration Abatement**

Others, specify - specified by respondents.

**Text Box 2.4
Profile of Industry Groups
based on the North American Industry Classification System (NAICS)**

Industry	NAICS code
Agriculture, forestry, fishing and hunting	11
Mining and oil and gas extraction	21
Utilities	22
Construction	23
Chemical manufacturing	325
Plastics and rubber products manufacturing	326
Non-metallic mineral product manufacturing	327
Primary metal manufacturing	331
Fabricated metal product manufacturing	332
Machinery manufacturing	333
Computer and electronic product manufacturing	334
Electrical equipment, appliance and component manufacturing	335
Rest of manufacturing sector	312, 314, 321, 322, 324, 336, 339
Wholesale trade	41
Retail trade	44, 45
Finance and insurance services	52
Legal services	5411
Architectural services and landscape architectural services	54131, 54132
Engineering services	54133
Surveying and mapping (including geophysical) services	54136, 54137
Testing laboratories	54138
Computer systems design and related services	5415
Management, scientific and technical consulting services	5416
Scientific research and development services	5417
All other professional, scientific and technical services	541212, 541215, 541340, 541350, 541420, 541810, 541820, 541910, 541940, 541990
Management of companies and enterprises	55
Administrative and support services	561
Waste management and remediation services	562
Other services	482, 484, 488, 493, 511, 513, 514, 531, 532, 621, 624, 711, 712, 722, 811

3 Survey Results

3.1 Environmental revenues

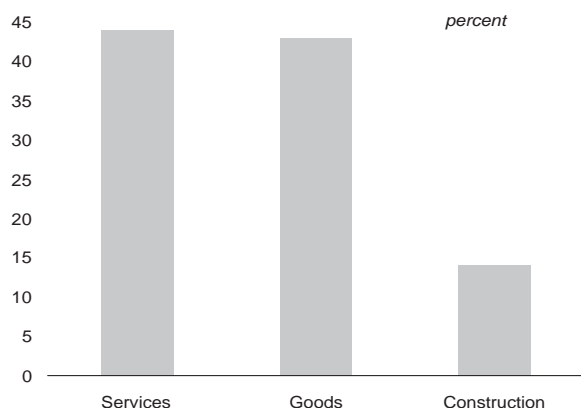
Revenues derived from the sale of environmental goods and services reached \$14.4 billion in 2000 (Table A.1), an increase of 0.6% from 1998. Overall, the 2000 environmental revenues represented 55% of the total revenues reported by establishments that made up Canada's environment industry.

Among the major categories of goods and services, environmental services accounted for 44% of total environmental revenues, slightly surpassing the goods category, which represented 43% of these revenues. Environment-related construction services made up the remaining 13% of total environmental revenues (Figure 3.1)

Activity Profile

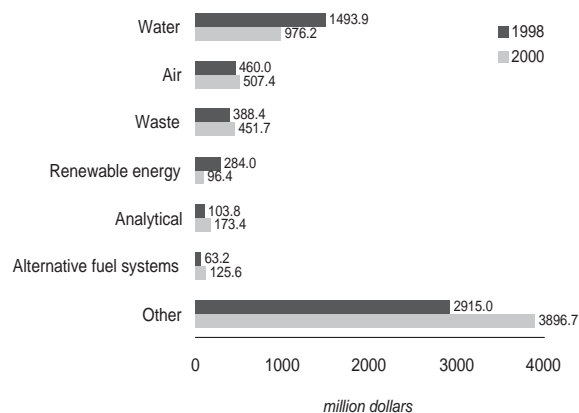
The analysis in this section focuses on the different types of environmental activities undertaken by Canadian establishments: the types of environmental goods produced and sold (machinery, systems and equipment), the nature of environmental services provided and the environment-related construction activities undertaken. The term "market" or "market segment" is also widely used in analysing various environmental activities performed by a wide range of firms belonging to different industries. For example, air pollution control services could be performed by firms in various industries including Engineering Services, Testing Laboratories, Scientific and Technical Consulting Services, and Surveying and Mapping Services.

Figure 3.1
Environmental Revenues by Major Categories, 2000



Source:
Statistics Canada, Environment Accounts and Statistics Division.

Figure 3.2
Distribution of Environmental Goods Revenues, 1998 and 2000



Source:
Statistics Canada, Environment Accounts and Statistics Division.

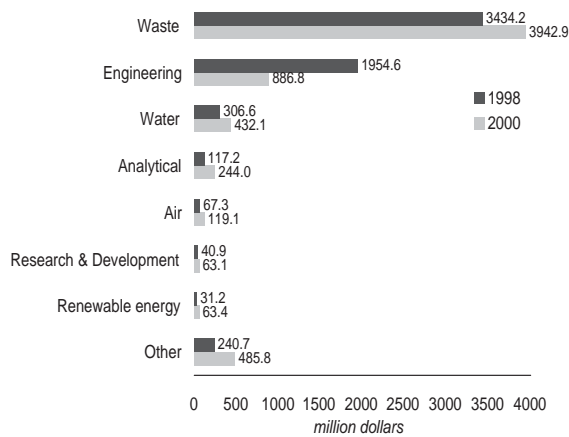
Environmental goods

Total environmental goods revenues rose 9% to \$6.2 billion in 2000 (Table A.2). As in the previous years, the "Other" goods category, composed mainly of the sales of recyclable materials, posted the top environmental goods revenues in 2000, \$3.9 billion or 63% of total (Figure 3.2). The water category was the second largest category, generating 2000 revenues of \$976.2 million. However, this category experienced a decline of 35% between 1998 and 2000 due to lower revenues from the sales of parts (pumps, pipes, valves, etc.) used in water handling equipment, water supply systems and sewage treatment plants.

During the same period, revenues from air pollution control systems and equipment increased by 10%, accounting for \$507.4 million of total environmental goods revenues in 2000. The growth was mostly from increased sales of systems and equipment for improving indoor air quality. Ventilation systems, filtration systems, scrubbers, electrostatic precipitators, NOx control systems were some of the most widely sold goods during the latest period. Revenues earned from systems and equipment for hazardous and non-hazardous waste management and remediation rose from \$388.4 million to \$451.7 million between 1998 and 2000, respectively. Increased sales of waste collection and recycling equipment (including parts and sub-assemblies), waste containment equipment and landfill liners contributed in generating the 16% growth of this category in 2000.

The environment industry also obtained a boost in revenues from two other categories of environmental goods: analytical goods and alternative fuel systems. The analytical goods category which includes measuring and monitoring equipment, environmental data acquisition equipment, sampling systems and other equipment used for environmental monitoring, analysis and assessment reached \$173.4 million in 2000 (+67%). On the other hand,

Figure 3.3
Distribution of Environmental Services Revenues, By Type of Service, 1998 and 2000



Source:
 Statistics Canada, Environment Accounts and Statistics Division.

the alternative fuel systems category, made up of fuel cell technologies, clean fuel systems, hydrogen systems and advanced batteries posted the highest revenue increase (+99%) between 1998 and 2000, from \$63.2 million in 1998 to \$125.6 million in 2000.

Energy efficient equipment and renewable energy systems and equipment are the two components of the renewable energy category. Energy efficient equipment generally constitutes the bulk of revenues from this category while the remaining revenues are accounted for by revenues from renewable energy systems and equipment (solar, biomass, wind energy and other renewable energy). In 2000, Canada's environment industry experienced a sharp decline in revenues from this environmental goods category, from \$284 million in 1998 to \$96.4 million in 2000 (-66%), brought about by lower revenues from energy efficient systems and equipment. Certain establishments that contributed significantly to the total revenues from energy efficient systems and equipment in 1998 diversified the type of products that they offered in 2000. An example would be a shift from producing and selling specialised environmental equipment to offering a wider range of products having both environmental and non-environmental applications.

Environmental services

Total environmental services revenues were \$6.3 billion in 2000 (Table A.3), which was \$0.06 billion lower than that reported in 1998. In terms of the type of environmental services, most of the revenues originated from the waste services activities (\$3.9 billion), including services such as hazardous and non-hazardous waste management as well as remediation/treatment of soil, surface water, seawater and groundwater (Figure 3.3). Revenues from this category

amounted to 63% of total environmental services revenues in 2000, a 15% increase from the \$3.4 billion reported in 1998. Engineering services, mostly general consulting engineering services,¹ was the second most significant category of environmental services, generating \$886.8 million (or 14% of total) in 2000, albeit showing a 55% decline from 1998 revenues. Between 1998 and 2000, consulting engineering firms changed the mix of their revenue sources by undertaking more environment-related construction projects.

Revenues from services related to water supply and conservation and wastewater management and sewage treatment reached \$432.1 million in 2000 or 7% of total environmental services revenues. With reported revenues of \$244 million, the analytical services category posted the largest growth among all the categories of environmental services between 1998 and 2000. This category consists mainly of general analytical services and environmental data collection activities.²

Despite its relatively small share of total environmental services revenues, revenues from energy efficiency and renewable energy services increased from \$31.2 million in 1998 to \$63.4 million in 2000. This could be attributed to increased revenues from the installation, maintenance and repair of alternative energy systems, services related to renewable energy production and consulting services related to energy resource management and energy audit. Similarly, environmental research and development services also experienced continued growth with revenues of \$63.1 million in 2000. Development of clean process technologies, end-of-pipe pollution abatement and control technologies and research to improve the knowledge on ecosystems are some of the activities that comprise this category.

Revenue estimates for two environmental services categories, namely, management consulting and legal services (\$220.5 million) and environmental education, training and information (\$41.9 million), are now published separately for 2000 (Table A.3).³ General environmental impact assessments, resource management planning, environmental risk management and environmental law are some examples of activities that fall under management consulting and legal services while environmental education, training and information usually consists of environmental information searching services, providing training on environmental emergency response planning and ISO 9000/14000 support services.

1. Includes all other environmental advisory and/or design services that cannot be classified under more specific categories such as water, air, waste, R&D, etc.
2. Includes all analytical services, data collection and analysis that cannot be classified under more specific categories such as water, air, waste, R&D, etc.
3. Both categories were included under the "Other" services category in 1998. The 2000 questionnaire was revised in order to reflect the significant number of responses in terms of revenues earned for these two environmental services activities.

Revenues from Environment-related construction services

Environment-related construction revenues fell by 17%, from \$2.3 billion in 1998 to \$1.9 billion in 2000 (Table A.3). Overall, 2000 saw a decrease in revenues from infrastructure projects related to water supply and wastewater management, two of the biggest environment-related construction activities.

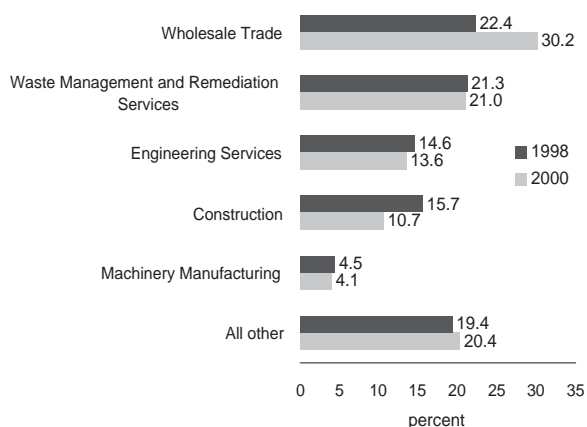
Industry profile¹

The analysis in this section complements the activity profile section. The focus, however, is on the types of industries that produce the different environmental goods and services rather than the environmental activities themselves.

In 2000, four industry groups continued to lead Canada's environment industry: Wholesale Trade²; Waste Management and Remediation Services; Engineering Services; and Construction Services. The combined share of these industries was about 76% of total environmental revenues (Figure 3.4).

Figure 3.4

Distribution of Environmental Revenues, Top Industry Groups, 1998 and 2000



Source:
Statistics Canada, Environment Accounts and Statistics Division.

1. The discussion on industry profiles makes reference to an *industry* or *industry group*. This report defines an *industry* or *industry group* as a combination of various industries classified under the North American Industry Classification System (NAICS). The NAICS codes that constitute each industry group are listed in Section 2, Text Box 2.4.
2. The following wholesale industries are included in the Wholesale Trade industry group: Farm Product (NAICS 411), Petroleum Product (NAICS 412), Food, Beverage and Tobacco (NAICS 413), Personal and Household Goods (NAICS 414), Motor Vehicle and Parts (415), Building Material and Supplies (NAICS 416), Machinery, Equipment and Supplies (NAICS 417), Miscellaneous (NAICS 418), and Wholesale Agents and Brokers (NAICS 419).

The Wholesale Trade industry reported \$4.3 billion in environmental revenues in 2000 (Table A.1), a 36% increase from its 1998 environmental revenues (\$3.2 billion). A substantial portion of the increase was generated by growth in the Recyclable Materials Wholesalers industry.³

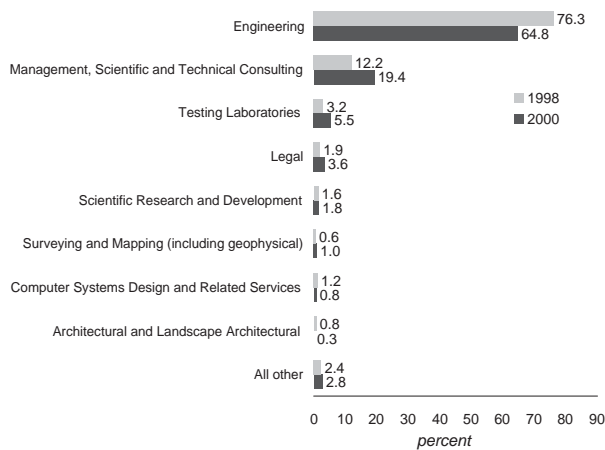
The Waste Management and Remediation Services industry posted 2000 environmental revenues of \$3.0 billion, essentially unchanged from the 1998 revenues. Being a relatively homogeneous industry, Waste Management and Remediation Services undoubtedly derives a significantly larger proportion of its total revenues from environment-related activities relative to all other industries. Most establishments in this industry specialise in one category of environmental service rather than providing multiple types of goods and services (Tables A.2 and A.3).

Environmental revenues of the Engineering Services industry were approximately \$2.0 billion, a 6% decrease from its 1998 revenues. In contrast, the Construction industry experienced a more significant drop in revenues, from \$2.2 billion in 1998 to just over \$1.5 billion in 2000 (Table A.1). The relatively smaller market for water supply as well as sewage and wastewater management infrastructure in 2000 had an impact on the Construction industry's environmental revenues, particularly on the Engineering Construction industry.⁴

In the Professional, Scientific and Technical Services sector,⁵ Engineering Services continued to lead the way in 2000, despite losing some of its share to the Management, Scientific and Technical Consulting Services. In 2000, Engineering Services accounted for 65% of the sector's environmental revenues, down from the 76% share earned in 1998. Revenue growth in the Management, Scientific and Technical Consulting Services industry translated to an increase in share, from 12% to 19%, between 1998 and 2000, respectively. As in 1998, each of the sector's remaining industry groups had a share of 5% or less of total environmental revenues (Figure 3.5).

3. The Recyclable Materials Wholesalers covered in this report pertain to those establishments that fall under NAICS 418.
4. Includes all establishments that fall under the 4-digit NAICS code 2313 comprise the Engineering Construction industry.
5. Industries classified under the 2-digit NAICS code 54 comprise the professional, scientific and technical services sector.

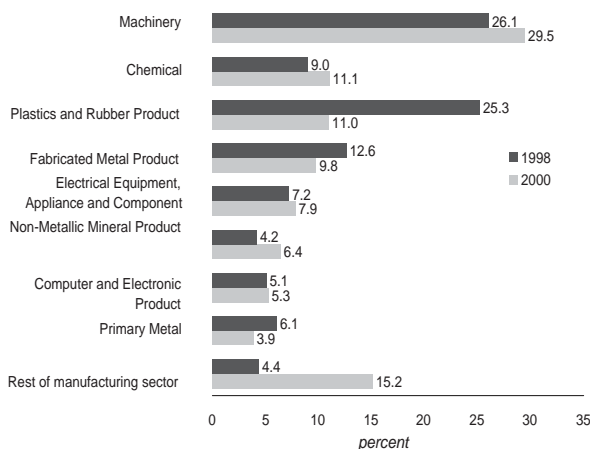
Figure 3.5
Distribution of Environmental Revenues, Professional, Scientific and Technical Services Sector, 1998 and 2000



Source:
 Statistics Canada, Environment Accounts and Statistics Division.

The Manufacturing sector's overall contribution was \$2.0 billion or 14% of the total environmental revenue in 2000. Firms in the Machinery; Chemical; and Plastic and Rubber Products industries reported this sector's most significant environmental revenues (Figure 3.6). Lower revenues from sales of pumps, pipes, and other parts used in water supply systems and water handling systems had a significant negative impact on the revenues of Plastic and Rubber Products industry, resulting in the industry's loss of environmental revenue share in 2000. In contrast, environmental

Figure 3.6
Distribution of Environmental Revenues, Manufacturing Sector, 1998 and 2000



Source:
 Statistics Canada, Environment Accounts and Statistics Division.

revenue gains in the Transportation Equipment Manufacturing industry explained the increase in environmental revenue share for the rest of the manufacturing sector (15% in 2000).

Environmental goods and services by province and territory

The analysis of provincial and territorial changes in environmental revenues provides an illustration of the volatile nature of the environment industry. Inasmuch as environment-related activities could be one-time projects, continuing contracts or often, a combination of both, huge swings in environment-related activities are experienced by the industry as a whole.

Unlike the revenue growth reported by majority of the provinces in 1998, the 2000 total environmental revenues declined in most of the provinces, with the exception of the growth in Nova Scotia (+14%), Ontario (+3%) and more notably, Manitoba (+74%). Increased sales of recyclable materials fuelled the growth of Manitoba's environment industry in 2000. The province saw its environmental revenues rise from \$298.1 million in 1998 to \$518 million in 2000 (Table A.5).

The environmental business in Ontario and Quebec continued to lead Canada's environment industry. With a modest 3% growth between 1998 and 2000, Ontario generated \$6.2 billion in environmental revenues or 43% of total environmental revenues in Canada. Sales of both environmental goods and services both grew at approximately the same rate (7% and 6%, respectively) between 1998 and 2000 while posting lower 2000 revenues from environment-related construction activities (\$465 million, compared with \$605 million in 1998). On the other hand, environmental revenues in Quebec dropped by 5% in 2000 to \$3.2 billion or 22% of total environmental revenues in Canada. This was mainly attributed to the activity level in the environmental consulting engineering services (Table A.7). In 2000, Quebec's \$152.1 million environmental consulting engineering services revenues were closer to the levels reported in 1996 (\$129 million) and 1997 (\$151.6 million). Significant one-time projects carried out in 1998 caused the environmental consulting engineering services revenues to reach \$635.1 million during that period.

Alberta (\$1.9 billion) and in British Columbia (\$1.7 billion) also had substantial environmental revenues although the numbers were down slightly, 3% and 4%, from the 1998 levels.

During 2000, Newfoundland, Nova Scotia, New Brunswick, Alberta and British Columbia acquired more of their environmental revenues from the provision of environmental services than from the provision of environmental goods. In 2000, as in 1998, Ontario and Quebec obtained a relatively larger proportion of their environmental revenues from goods sales, particularly, recyclable materials reported under the "other" goods category (Table A.5). In each

province, revenues from environmental goods amounted to 51% of total environmental revenues. The “other” category which includes recyclable materials made up 60% and 62% of Ontario and Quebec’s total environmental goods revenues, respectively.

Environmental goods and services by establishment size

In 2000, there were 7,474 business establishments engaged, in whole or in part, in environment-related activities (Table A.9). Small and medium establishments continued to dominate the Canadian environment industry.¹ Small establishments, in particular, comprised 96% of the establishments in the Canadian environment industry and accounted for 45% of total employment. Small establishments also generated the majority (45%) of total revenues (Table A.9).

Environmental revenues as a proportion of total revenues was highest among small establishments (69%) followed by medium (48%) and large establishments (35%) (Table A.9).

Small establishments had the biggest share of environmental goods revenues (70%) and environment service revenues (51%) compared to the other two establishment size groups (Table A.9). Medium establishments had the highest share of environment related-construction service revenues (55%).

Both small and medium establishments obtained the majority of their environmental goods revenue from the “other” category (72% and 43% respectively). Water was the second biggest source of environmental goods revenue for both the small and medium sized establishments (13% and 22% respectively). Air and water categories together made up 50% of total environmental goods revenues for large establishments (Table A.10).

Each of the three establishment size groups obtained a majority of their environmental services revenues from the waste category. This category made up 65%, 62% and 58% of small, medium large establishment’s environmental services revenues respectively (Table A.11).

Client base

Environmental goods and services exist because they cater to the needs and requirements of markets that are, by and large, driven by regulatory compliance or voluntary actions.

Clients varied widely across the different industry groups. Nevertheless, aggregate level estimates show that governments continued to be one of the environment industry’s top clients in 2000 (Table A.13). Twenty percent of environmental revenues were associated with local government

1. Small establishments are often described as businesses having fewer than 100 employees. Medium-sized establishments have 100 to 499 employees. Large establishments have 500 or more employees.

projects and another 7% were linked with federal/provincial environment-related undertakings.

Other key buyers of environmental goods and services were firms in the manufacturing and business services industries, the two accounting for 32% of total environmental revenues. For instance, various types of wholesalers (recyclable metals, chemicals, industrial machinery and equipment) sold a large portion of their environmental goods to manufacturing industries. Business services, on the other hand, were cited as prominent clients for suppliers of environment-related management services, legal services, and fabricated metal products.

3.2 Trade

Domestic markets

Domestic market earnings represented 91% of Canadian environmental revenues in 2000 (Table A.14). Other than Ontario and British Columbia, all provinces and territories generated more than 90% of their environmental revenues from domestic markets.

As in the previous years, environmental business establishments in all the provinces catered mostly to clients located within their own province. In general, this may be attributed to factors such as the predominance of small establishments as well as the characteristics of leading industry groups. The highest ratios of *within-province clients* were found in Prince Edward Island (82%), Nova Scotia (73%) and Newfoundland and Labrador (71%). New Brunswick on the other hand, posted the highest ratio of *out-of-province clients* (47%) compared with all the other provinces (Table A.14).

International markets

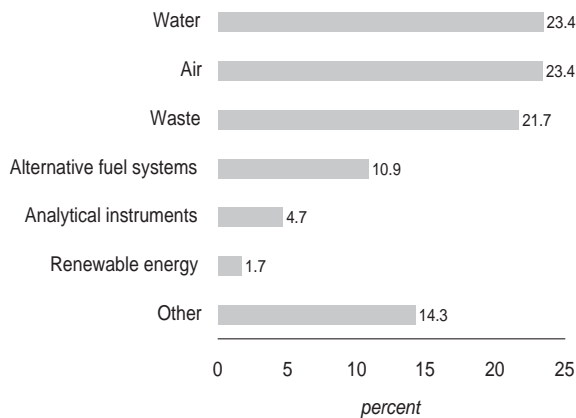
With an estimated 772 exporting establishments,² Canada’s environmental exports reached \$1.3 billion in 2000 an increase of 13% over 1998 (Table A.15). Of this amount, \$879.1 million was in the form of environmental goods (66% of total environmental export revenues) (Table A.18 and A.19). Environmental services export revenues³ amounted to \$459.3 million or 34% of total environmental export revenues (Table A.18 and A.20).

The top industry exporters were Engineering Services, Machinery Manufacturing and the rest of the manufacturing

2. The estimated number of exporters refers specifically to those establishments that **earned** environmental export revenues in 2000. Environmental exports for Engineering Construction (NAICS 2313), Recyclable Materials Wholesalers (NAICS 4181), and Waste Management Services (NAICS 5621 and 5622) are not available due to the methodology used to derive the estimates.

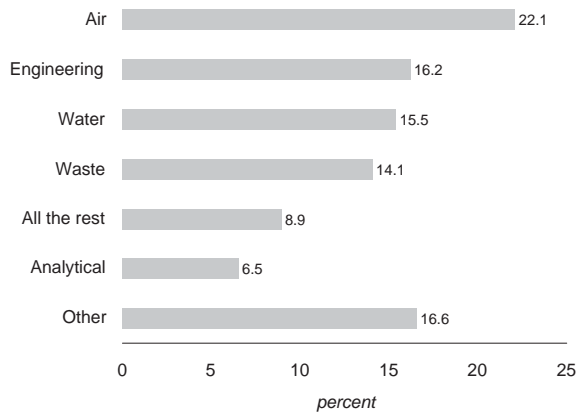
3. In 2000 survey, revenues from export of environmental services includes revenues from exports of environmental-related construction.

Figure 3.7
Distribution of revenues from export of Environmental Goods, 2000



Source:
Statistics Canada, Environment Accounts and Statistics Division.

Figure 3.8
Distribution of revenues from export of Environmental Services, 2000

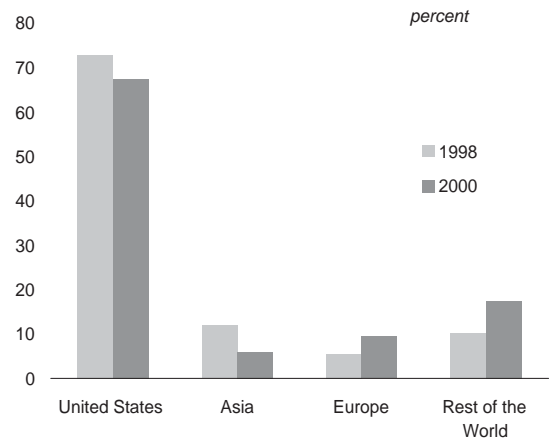


Source:
Statistics Canada, Environment Accounts and Statistics Division.

sector. These industry groups represented more than half of total environmental export revenues in Canada in 2000 (Table A.15).

Revenues from the export of environmental goods amounted to 879.1 million in 2000, a decline of 94.3 million from 1998 (Table A.19). The majority of environmental goods revenues came from the water, air and waste categories. Approximately 68% of revenues from the export of environmental goods originated from these three categories (Figure 3.7).

Figure 3.9
Distribution of Environmental Exports, by Export Destination, 2000



Source:
Statistics Canada, Environment Accounts and Statistics Division.

Revenues from export of environmental services and environment-related construction were \$459.3 million in 2000, a sharp increase from the \$211 million earned in 1998 (Table A.20). Export revenues of the following service industry groups contributed to the significant increase in 2000: Engineering, Surveying and Mapping, Testing Laboratories, and Management, Scientific and Technical Consulting. In terms of the types of exported services, the majority of revenues came from air, "other" and engineering categories. These three categories amounted to 55% of revenues from exports of environmental services (Figure 3.8).

As in the previous years, the United States was the biggest international market for Canada's environment industry in 2000 (Table A.15 and Figure 3.9). With a 5% increase between 1998 and 2000, total environmental exports to the United States were valued at \$900.3 million, or 67% of total environmental export revenues, primarily from the Machinery Manufacturing industry (Table A.15). The remaining shares of exports were distributed among Asia (6%)¹, Europe (9%) and the rest of the world (17%).

In terms of export market growth, environment-related projects of the Engineering Services industry in 2000 stimulated the environmental export growth to Africa, South America and Other Central America. In contrast, environmental export revenues from Asia declined by about 44%

1. Asia includes China, Japan and Other Asia categories from Table A.16.

which could mainly be attributed to the recession faced by Asian countries such as Japan during this period.

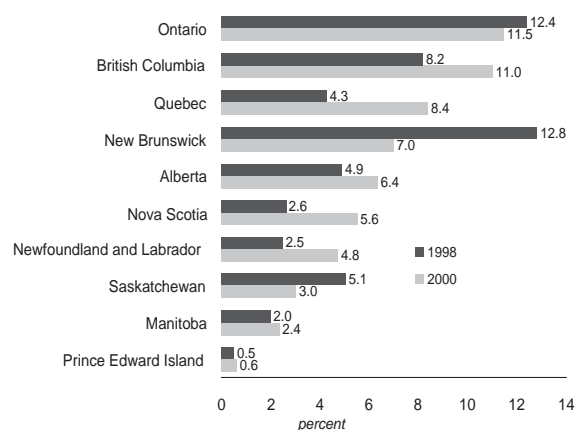
Examining exports by province/territory, over 86% of total environmental exports originated from environmental firms in Ontario, Quebec and British Columbia (Table A.16). Ontario's environmental exports totalled \$707.9 million, a 4% decline from 1998 environmental export revenues of \$739.3 million. As well as having the largest export revenues, Ontario also had the highest revenues from exports to the United States. In addition, 78% of Ontario's export revenues came from the United States, a higher proportion than for any other province. Quebec's environmental exports surged to \$266.3 million, an 86% increase over the 1998 environmental export revenues of \$143.1 million. This growth was spurred, in part, by increase in exports to the United States and Europe. British Columbia's environmental exports rose to \$187.1 million in 2000, a 28% increase from 1998, owing to higher exports to the United States, South America, China and Australia.

The noticeable decline in New Brunswick's environmental exports and the resulting decline in their share of total environmental revenues (from 13% in 1998 to 7% in 2000) was caused by changes in business operations for some of the province's key environmental businesses (i.e., product changes, revisions in targetted export markets, etc.) (Figure 3.10). Similarly, 2000 also saw a slowdown in export activity for Saskatchewan's environment industry. A number of key exporters in 1998 did not earn any revenues from environment-related activities in 2000, although they continued to offer the environmental products in the market.

The distribution of environmental export revenues according to firm size was 47% for medium establishments followed by small (40%) and large establishments (13%). Most of the environmental export revenues for small and medium

Figure 3.10

Share of Total Environmental Exports to Total Environmental Revenues, by Province, 1998 and 2000



Source:
Statistics Canada, Environment Accounts and Statistics Division

size establishments came from the United States, amounting to 72% and 77% of their total environmental export revenues respectively. Africa and South America were the biggest source of environmental export revenues for large establishments amounting to 51% of their total environmental export revenues (Table A.17).

3.3 Total employment

In terms of employment data, only **total employment** of those businesses producing environmental goods and services are presented in this report. The question on environment-related employment was removed from the 2000 questionnaire because response rates in earlier surveys had been very low. Respondents, particularly those establishments that had both environmental and non-environmental activities, had difficulty estimating the number of workers directly involved in environment-related activities. Labour productivity analysis specifically for the environment industry is, therefore, not possible.

In 2000, reporting business establishments employed a total of 159,269 workers.¹ Surpassing all other industry groups, Engineering Services was the top industry employer with 34,205 workers or 21% of total employment. It was followed by Wholesale Trade; Waste Management and Remediation Services; and Construction industries (Table A.1). These top four industry groups amounted to 59% of total employment.

Ontario and Quebec businesses had the largest number of workers, accounting for about 40% and 19% of total employment, respectively (Table A.5). Environmental establishments in Alberta and British Columbia also made significant employment contributions (16% and 13%, respectively).

Small establishments employed 45% of those employed in the Canadian environment industry. Total employment in small establishments rose from 67,220 workers in 1998 to 71,676 workers in 2000. The medium-sized establishments share was 33% and large establishments share was 22% of total employment (Table A.9). Medium establishments experienced an increase of 3,885 workers from 1998 to 2000. Total employment in large establishments saw a decline of 13,413 workers from 1998 to 2000.

3.4 Work-in-progress

The following survey updates and refinements were carried out for the 2000 survey:

- presenting more detailed estimates of environmental goods and services, particularly on revenues from

1. Total employment includes full-time, part-time and contract workers, including working proprietors and/or principals of unincorporated businesses.

wind energy systems and equipment, environmental education, training and information, and management consulting and legal services;

- producing a product breakdown for environmental export revenues, by type of environmental goods and services (including construction), by province;
- improving the coverage of Environmental Consulting Services industry (NAICS 541620); and
- establishing the relationship between the Environment Industry Survey and other Statistics Canada surveys that collect environment-related information.

In preparation for the next survey cycle, reference year 2002, efforts are targeted towards the collection of information specific to climate change technologies and services. As part of the *Statistical Monitoring of Climate Change Technologies* initiative, a supplementary questionnaire will be designed in order to analyse the following areas related to climate change technologies and services:

- availability of climate change technology solutions;
- exports and export markets;
- research and development;
- innovation; and
- problems and obstacles in developing climate change technologies and services.

4 Methodology and Data Quality

The following information should be used to ensure a clear understanding of the underlying methodology of the survey and of key aspects of the data quality. This information will provide a better understanding of the strengths and limitations of the data and of how they can be effectively used and analysed. The information may be of particular importance when making comparisons with data from other surveys or sources of information and in drawing conclusions regarding change over time.

4.1 Overall approach: data sources and methodology

4.1.1 General methodology

This report presents, on a biennial basis, the revenues earned from the production of environmental goods, the provision of environmental services and the undertaking of environment-related construction activities. The overall estimates are based on the integrated data from the *Environment Industry Survey* and other existing Statistics Canada surveys that ask for information on environmental revenues and activities.

To minimise response burden and at the same time to produce a more complete set of estimates for the environment industry, the results of the *Environment Industry Survey 2000* were integrated with other existing Statistics Canada surveys that asked for information on environmental revenues and activities. These surveys included:

- Waste Management Industry Survey: Business Sector;
- Annual Survey of Engineering Services;
- Annual Survey of Service Industries: Management, Scientific and Technical Consulting;
- Annual Survey of Service Industries: Geomatics Services; and
- Annual Survey of Service Industries: Testing Laboratories.

There were 1,726 establishments from the Waste Management Industry Survey: Business Sector and 65 establishments from all the other services industries surveys listed above.

Estimates of environment-related construction activities were derived from two demand-side estimates: government expenditures on environmental protection and business sector expenditures on environmental protection (*Survey of Environmental Protection Expenditures*). Estimates for recyclable materials wholesalers were obtained from Statistics Canada Business Register (2,523 establishments).

Financial, employment and other relevant data from all of the above-mentioned sources were consolidated to produce a combined data set for firms that produced environmental goods and/or provided environmental services. The combined data set was used to produce the final statistical tables for the industry. Thus, the estimates in this report present, to our best knowledge, a comprehensive coverage of Canada's environment industry.

The discussion on methodology and data quality that follows refers to the *Environment Industry Survey 2000* only. Documentation on methodology and data quality of the other Statistics Canada surveys cited in this report is available through the Statistical Methods website <http://dissemination.statcan.ca/english/concepts>.

4.2 Environment Industry Survey

4.2.1 Reference period

Beginning with the 1998 reference year, the *Environment Industry Survey* has been changed from an annual to a biennial survey. The information contained in this report reflects the total revenues, total environmental revenues and total employment covering the financial year ending between April 1, 2000 and March 31, 2001.

4.2.2 Coverage

Starting with the pilot survey conducted for reference period 1995, the *Environment Industry Survey* has been a census of all establishments operating in Canada that were involved either in whole or in part in the production of environmental goods, the provision of environmental services and the undertaking of environment-related construction activities. These establishments may fall within a variety of industries, as defined by the North American Industry Classification System (NAICS), that produce environmental goods and services.¹

The survey frame has been developed in consultation with key public and private sector groups that have an in-depth knowledge of the environment industry. Industry directories and thorough research conducted on specific companies also helped in updating and improving the survey frame.

1. Section 2 describes the composition of the environment industry based on industry classifications.

A hybrid approach was used in the *Environment Industry Survey 2000*. The survey continued to cover all establishments (classified to various NAICS industries) operating in Canada and identified to have environment-related activities. The only exception was in the coverage of the Environmental Consulting Services industry (NAICS 541620). In 2000, data for this industry were collected through a sample of establishments. The change in methodology used for this industry was based on the homogeneous nature of the industry, the availability of more reliable administrative information in 2000 and the fact that the Environmental Consulting Services industry was one of the industries introduced through NAICS whose main activity can be clearly identified as environment-related.

4.2.3 Variables measured

For the reference year 2000, respondents were asked to report the following information:

- total revenues and revenues realised from the sale of environmental goods or services (environmental revenues);
- specific types of environmental activities conducted by the establishment;
- breakdown of environmental revenues by client base and by customer location;
- environmental export revenues by region;
- year when the establishment started selling the environmental goods, offering the environmental service or undertaking the environment-related construction; and
- total employment.

4.2.4 Data collection and processing

Frame completion as well as must-firm identification¹ was carried out during the first quarter of 2001. The mail-out took place in May, 2001. Survey questionnaires were mailed to 2,982 establishments identified in the frame and the responses were returned by mail. The surveys were addressed to a contact person who was either responsible for, or had knowledge of, the environment-related operations of the firm. In the case of some multi-establishment firms, the survey was mailed to the head office which either forwarded the questionnaire to the appropriate establishment or provided a combined report for all targeted establishments.

1. *Must firms* refer to top contributor establishments in terms of total revenues and total environmental revenues, by industry group and by province. Identification of must firms is essential in order to prioritize data collection and follow-up efforts for the survey.

Data collection and processing took place from June to October 2001. Follow-ups by fax and/or telephone were carried out after the due date to remind respondents to return their surveys. During this time, queries to respondents and review of edit rejects were also done on an ongoing basis.

Questionnaires were edited in two steps. First, validity edits were applied to ensure that responses to particular questions fell within a limited range of possible values. Second, consistency edits were then applied. Cases where responses in one section of the questionnaire were inconsistent with those given in other sections were identified and edited. These edits were done throughout the data collection phase. Additional follow-ups were carried out to collect missing data and to resolve inconsistencies. The survey closed in October, 2001.

4.2.5 Evaluation of frame coverage

In-scope establishments

For this survey cycle, a total of 1,860 fully-completed and partially-completed questionnaires were returned. Approximately 9% of these questionnaires came from establishments that did not earn any revenues from the environmental good or service they offered/marketed in 2000. On the other hand, the number of non-response questionnaires that were considered to be within the scope of the survey frame were 651. Thus, a total of 2,511 were considered to be *in scope* for the purposes of the survey.

Closures, mergers and acquisitions, out-of-scope establishments

A brief note on closures, mergers and acquisitions and out-of-scope establishments also provides an indication of changes occurring within Canada's environment industry. There were 11 mergers and acquisitions among the surveyed establishments in 2000. Another 242 surveyed establishments were previously engaged in some form of environment-related activity but went out-of-business in 2000. Finally, 220 establishments were confirmed to be out-of-scope for the purposes of the survey. These were mostly attributed to changes in business activities, wherein the establishments no longer provide the environmental good or service they used to offer.

4.3 Data accuracy

Many factors affect the reliability of the data produced in a survey. For example, respondents may have made errors in interpreting questions, answers may have been incorrectly entered on the questionnaires, and errors may have been introduced during the data capture or tabulation process. The methodology of this survey has been designed to

control errors and to reduce their potential effects on the data quality.

The mailing list for the 2000 survey was developed from the *Environment Industry Survey 1998*, various industry directories and supplementary information from the Statistics Canada's Central Frame Data Base (CFDB). The CFDB is kept up-to-date using administrative information on businesses received monthly from Canada Customs and Revenue Agency, as well as information from other Statistics Canada surveys and business profiling activities.¹ Extensive research was conducted for each establishment in the frame in order to identify the firm's environment-related activities and markets served. As a result, improved coverage of the universe as well as better identification of environment-related activities and export markets continued during the fourth cycle of the survey. In addition, the industry classifications based on the North American Industry Classification System improved the accuracy of industry groups within the environment industry.

Every effort was also made to reduce the occurrence of non-sampling errors in the survey.² These efforts included a complete verification of keyed data, validity and consistency edits and extensive follow-up with the key businesses that are heavily involved in providing environmental goods and services.

4.3.1 Response rates

The overall response rate for the *Environment Industry Survey 2000*, based on the ratio of the number of fully and partially completed questionnaires to the total number of in-scope questionnaires, was 74%.³ Tables 4.1 and 4.2 illustrate alternative calculations of response rates based on the following variables:

- number of reporting establishments;
- total employment; and
- total revenues.

1. For additional information on the Statistics Canada's Business Register, refer to <http://dissemination.statcan.ca/english/sdds/1105.htm>.
 2. Non-sampling errors can arise during the course of virtually all survey activities such as a result of errors in the frame, or difficulties in establishing precise operational definitions. For more details, refer to Statistics Canada, 1993, *Survey Sampling: A Non-Mathematical Guide-Second Edition*, Catalogue No. 12-602E, Ottawa.
 3. Includes the unweighted response rates for the sampled NAICS 541620 (Environmental Consulting Services).

Table 4.1
Weighted Response Rates: Environment Industry Survey 2000, Environmental Consulting Services (NAICS 541620)¹

	Weighted response as a percentage of total
According to number of reporting establishments	72.5
According to total employment	79.8
According to total revenues	72.2

Notes:

1. Responses are based on fully-completed and partially-completed questionnaires. The total includes all in-scope respondents only. Out-of-scope establishments, mergers, closed and/or sold establishments, etc. are excluded. The weighted response rates takes into account both the sampling weight and the value for the following variables: number of establishments, total employment and total revenues. Data for NAICS 541620 were collected through a sample of establishments.

Source:

Statistics Canada, Environment Accounts and Statistics Division.

Table 4.2
Unweighted Response Rates: Environment Industry Survey 2000, All Other Industries¹

	Unweighted response as a percentage of total
According to number of reporting establishments	74.2
According to total employment	79.9
According to total revenues	83.1

Notes:

1. Responses are based on fully-completed and partially-completed questionnaires. The total includes all in-scope respondents only. Out-of-scope establishments, mergers, closed and/or sold establishments, etc. are excluded. Data for all other industries were collected through a census of all establishments operating in Canada and identified to have environment-related activities.

Source:

Statistics Canada, Environment Accounts and Statistics Division.

4.3.2 Imputation rates

Given the complexity in reporting financial information on environment-related activities, extensive follow-ups were made to respondents in order to obtain the necessary information. However, there remained instances when a respondent could not provide the details requested in the questionnaire because the information was not reported separately in the firm's financial records.

In cases where values were missing from survey cells after follow-up, the information was imputed based on the mean values by industry and by revenue-size group. Imputed values were then carefully evaluated and compared with values from the Business Register, other Statistics Canada survey results and other sources (annual reports, for example). Imputation for non-response was not carried out on the records coming from the other Statistics Canada surveys discussed in Section 4.2.2. The final micro-data on environment-related revenues and activities from these surveys were obtained and incorporated into the combined file. Hence, the imputation rates for selected categories shown in Table 4.3 were calculated based on the *Environment Industry Survey 2000* only.

Table 4.3
Imputation Rates, Selected Categories, 2000

Category	Imputation rate ¹
	percent
Total revenues	-
Total employment	-
Total environmental revenues	18.1
Environmental goods revenues	20.0
Environmental services revenues	25.8
Environment-related construction services revenues	5.8
Total environmental export revenues	8.6

Note:

1. The proportion of the total value of the category that is imputed.

Source:

Statistics Canada, Environment Accounts and Statistics Division.

4.3.3 Data limitations

In general, respondents were able to classify their environmental activities according to the detailed lists illustrated in text boxes 2.1, 2.2 and 2.3. Understanding certain data limitations will help the reader make informed decisions before conducting further research and analysis using the estimates in this report. These data limitations are explained below.

Exports

Export revenues and key export markets were identified. At the industry level, export estimates were not available for the following industries: Engineering Construction; Recyclable Materials Wholesalers; and Waste Management and Remediation Services.

In 2000, the data on environmental export revenues by type of environmental good or service were estimated based on the type of environmental good or services produced by the establishment overall. There were no specific questions on the types of products exported in the 2000 questionnaire.

Employment

In terms of employment data, only **total employment** of those businesses producing environmental goods and services are presented in this report. The question on environment-related employment was removed from the 2000 questionnaire because response rates in earlier surveys had been very low. Respondents, particularly those establishments that had both environmental and non-environmental activities, had difficulty estimating the number of workers directly involved in environment-related activities. Labour productivity analysis specifically for the environment industry is, therefore, not possible.

Environment-related construction services

The total environmental revenues from environment-related construction services were demand-side estimates based

on information provided by government and business purchasers of environmental goods and services. Consequently, there is no estimate for the total number of firms.

Client base and client location

The data on client base and client location were based only on reported data from the *Environment Industry Survey 2000*. No further imputation was conducted to measure the proportion missing due to nonresponse.

Revenues

Revenues presented in this report pertain to **gross revenues**. As a rule, revenues will be double counted to the extent that goods and services produced by an establishment in the environment industry are purchased by another one in the same industry. For this reason, it would be incorrect to compare the aggregate environmental revenues to gross domestic product (GDP) which is the sum of the unduplicated production of all industries. Thus, readers should not express the revenues presented in this report as percentage of GDP. At this stage of the project, it would be difficult to estimate the unduplicated value of production (value added) without placing excessive response burden on environmental businesses.

4.4 Comparability of data and related sources

4.4.1 Comparisons over time

The 2000 estimates for several variables are not comparable to estimates for past reference periods because revisions were made to the survey methodology:

- *Estimates for the Management, Scientific and Technical Consulting Services industry group* - the Environmental Consulting Services industry (NAICS 541620) makes up the bulk of the estimates for this industry group.¹ In 2000, there was a change in sampling methodology for this industry, as explained in Section 4.3.1.
- *Revisions to the categories of environmental goods and services (text boxes 2.1, 2.2 and 2.3)* - in 2000, the point estimates are reported specifically for wind energy systems and equipment; management, consulting and legal services; and environmental education, training and information. Previously, estimates for these environment-related activities were grouped together with other categories. Wind energy systems

1. Refer to Text Box 2.4 in Section 2 for details on the industry groups used in this report.

and equipment used to be part of other renewable energy systems and equipment. On the other hand, estimates for management, consulting and legal services as well as environmental training and information were combined with activities in the other environmental services category.

- *Tables by establishment size* - The definitions used were the same as in the previous years (small establishments have fewer than 100 employees; medium-sized establishments have 100 to 499 employees; large establishments have 500 or more employees). However, a more aggregate grouping by establishment size was used in reporting the 2000 data to allow for more estimates to be published.

ELECTRONIC PUBLICATIONS AVAILABLE AT
www.statcan.ca



Annex A: Statistical Tables

ELECTRONIC PUBLICATIONS AVAILABLE AT
www.statcan.ca



Table A.1
Total and Environmental Revenues by Industry, 2000

Industry ¹	Establishments ²	Total Employment	Total revenues ³	Environmental goods	Environmental services	Environment- related construction ⁴	Total environmental revenues
Agriculture, forestry, fishing and hunting	18	240	14.6	x	x	-	8.4
Mining and oil and gas extraction	23	544	76.6	x	16.3	x	27.9
Utilities	16	4 323	32.9	9.7	x	x	30.0
Construction	123	14 160	2 179.2	69.6	190.3	1 276.5	1 536.4
Chemical manufacturing	55	3 629	1 676.9	154.3	68.4	--	222.9
Plastic and rubber products manufacturing	38	2 902	800.8	218.5	-	--	221.4
Non-metallic mineral product manufacturing	17	1 056	232.7	126.0	x	x	129.7
Primary metal manufacturing	10	749	144.6	70.8	x	x	77.9
Fabricated metal product manufacturing	47	4 011	663.9	197.4	--	--	197.9
Machinery manufacturing	145	7 231	1 339.9	565.4	19.2	9.0	593.6
Computer and electronic product manufacturing	52	2 123	354.5	104.6	--	--	106.6
Electrical equipment, appliance and component manufacturing	11	2 944	986.1	158.0	--	--	158.3
Rest of manufacturing sector	33	2 571	391.9	292.6	13.0	-	305.6
Wholesale trade	2 842	23 087	5 983.9	3 915.4	407.9	9.0	4 332.3
Retail trade	18	521	94.9	39.6	x	x	42.8
Finance and insurance services	16	100	31.4	x	x	x	27.2
Legal services	52	7 759	1 085.2	x	x	-	109.0
Architectural and landscape architectural services	27	399	25.8	-	8.8	-	8.8
Engineering services	664	34 205	4 415.8	40.5	1 446.8	469.9	1 957.1
Surveying and mapping (including geophysical) services	20	511	68.8	x	x	-	29.9
Testing laboratories	114	4 412	340.4	--	166.8	--	167.6
Computer systems design and related services	31	2 071	160.8	4.7	18.7	-	23.4
Management, scientific and technical consulting services	1 117	9 004	771.4	52.6	523.5	9.1	585.2
Scientific research and development services	31	1 068	76.8	x	13.6	x	54.6
All other professional, scientific and technical services	27	716	95.9	x	26.0	x	84.4
Management of companies and enterprises	22	1 957	332.1	x	41.1	x	65.4
Administrative and support services	47	2 386	261.5	x	80.0	x	98.5
Waste management and remediation services	1 796	22 474	3 195.7	x	2 945.2	x	3 020.5
Other services	62	2 116	305.5	x	83.4	x	136.5
Canada	7 474	159 269	26 140.3	6 227.4	6 254.6	1 877.7	14 359.7

Notes:

Figures may not add up to totals due to rounding.

1. Industry groups are based on the North American Industry Classification System (NAICS). Refer to Text Box 2.4 in Section 2 for a profile of these industry groups.

2. The total number of establishments does not include engineering construction establishments (NAICS 2313) due to the methodology used to derive the estimates.

3. Total revenues of establishments that were considered to be in scope for the purposes of the survey.

4. Revenues from environment-related construction services were derived from demand-side estimates of environmental protection expenditures.

Source:

Statistics Canada, Environment Accounts and Statistics Division.

Table A.2
Revenues of Environmental Goods by Industry, 2000

Industry ²	Environmental goods ¹								Total environmental goods revenues	Environmental goods' share of total environmental revenues percent
	Total environmental revenues	Water	Air	Waste	Renewable energy	Alternative fuel systems	Analytical	Other		
	million dollars									
Agriculture, forestry, fishing and hunting	8.4	x	x	x	x	-	x	-	x	x
Mining and oil and gas extraction	27.9	x	-	x	-	x	x	-	x	x
Utilities	30.0	5.2	-	x	x	-	x	-	9.7	32.2
Construction	1 536.4	24.0	14.3	3.8	27.2	-	--	--	69.6	4.5
Chemical manufacturing	222.9	89.9	-	4.5	x	x	-	55.5	154.3	69.2
Plastic and rubber products manufacturing	221.4	98.4	9.0	85.5	-	--	-	24.7	218.5	98.7
Non-metallic mineral product manufacturing	129.7	62.4	x	x	-	-	-	55.9	126.0	97.1
Primary metal manufacturing	77.9	66.0	x	-	-	-	-	x	70.8	90.9
Fabricated metal product manufacturing	197.9	80.5	7.4	71.8	11.6	--	-	25.6	197.4	99.7
Machinery manufacturing	593.6	219.2	205.5	65.9	x	16.0	x	40.8	565.4	95.2
Computer and electronic product manufacturing	106.6	5.9	2.4	1.5	--	-	77.9	16.6	104.6	98.2
Electrical equipment, appliance and component manufacturing	158.3	-	98.1	x	x	x	-	x	158.0	99.8
Rest of manufacturing sector	305.6	x	72.9	130.6	x	x	x	24.5	292.6	95.8
Wholesale trade	4 332.3	231.9	x	x	x	x	x	3 538.1	3 915.4	90.4
Retail trade	42.8	x	-	x	x	-	x	x	39.6	92.6
Finance and insurance services	27.2	-	x	x	x	-	x	x	x	x
Legal services	109.0	x	-	-	-	-	-	-	x	x
Architectural and landscape architecture services	8.8	-	-	-	-	-	-	-	-	-
Engineering services	1 957.1	9.6	5.4	2.6	9.3	-	12.8	0.9	40.5	2.1
Surveying and mapping (including geophysical) services	29.9	-	-	-	-	-	x	-	x	x
Testing laboratories	167.6	-	-	--	--	-	--	--	--	--
Computer systems design and related services	23.4	x	-	x	-	-	3.8	x	4.7	20.3
Management, scientific and technical consulting services	585.2	12.4	x	5.8	x	-	8.4	x	52.6	9.0
Scientific research and development services	54.6	x	x	-	x	x	x	x	x	x
All other professional, scientific and technical services	84.4	x	x	x	-	-	x	-	x	x
Management of companies and enterprises	65.4	-	x	-	x	-	x	x	x	x
Administrative and support services	98.5	x	x	x	x	x	x	x	x	x
Waste management and remediation services	3 020.5	x	x	x	-	-	x	x	x	x
Other services	136.5	x	x	x	x	x	x	x	x	x
Canada	14 359.7	976.2	507.4	451.7	96.4	125.6	173.4	3 896.7	6 227.4	43.4

Notes:

Figures may not add up to totals due to rounding.

1. Refer to Text Box 2.1 in Section 2 for classification details.

2. Industry groups are based on the North American Industry Classification System (NAICS). Refer to Text Box 2.4 in Section 2 for a profile of these industry groups.

Source:

Statistics Canada, Environment Accounts and Statistics Division.

Table A.3
Revenues of Environmental Services by Industry, 2000

Industry ²	Environmental services ¹											Total environmental services revenues	Environmental services' share of total environmental revenues percent	
	Total environmental revenues	Water	Air	Waste	Research and development	Renewable energy	Engineering	Analytical	Management consulting and legal services	Environmental education, training and information	Other			
	million dollars													
Agriculture, forestry, fishing and hunting	8.4	x	x	x	x	x	x	x	x	x	x	x	x	x
Mining and oil and gas extraction	27.9	x	x	8.2	x	-	0.5	-	-	-	x	5.0	16.3	58.2
Utilities	30.0	x	-	x	x	x	-	x	-	-	x	x	x	x
Construction	1 536.4	25.6	2.9	139.5	x	2.4	1.9	x	x	x	0.1	0.7	190.3	12.4
Chemical manufacturing	222.9	0.7	-	56.6	x	-	x	x	x	x	x	x	68.4	30.7
Plastic and rubber products manufacturing	221.4	-	-	-	-	-	-	-	-	-	-	-	-	-
Non-metallic mineral product manufacturing	129.7	x	-	-	-	-	-	-	-	-	-	-	x	x
Primary metal manufacturing	77.9	-	-	x	-	-	-	-	-	-	-	-	x	x
Fabricated metal product manufacturing	197.9	-	--	-	-	-	-	-	-	-	--	--	--	--
Machinery manufacturing	593.6	12.1	x	x	x	x	x	x	-	-	x	-	19.2	3.2
Computer and electronic product manufacturing	106.6	--	--	--	-	-	-	--	--	-	--	--	--	--
Electrical equipment, appliance and component manufacturing	158.3	-	--	-	-	-	-	--	-	-	-	-	--	--
Rest of manufacturing sector	305.6	x	x	9.8	x	-	-	x	-	-	x	-	13.0	4.2
Wholesale trade	4 332.3	17.1	5.0	366.2	x	2.0	x	--	-	-	x	x	407.9	9.4
Retail trade	42.8	-	-	x	-	-	-	-	-	-	x	x	x	x
Finance and insurance services	27.2	x	x	x	-	x	-	-	x	x	x	x	x	x
Legal services	109.0	x	-	x	x	-	x	-	x	-	x	-	x	x
Architectural and landscape architectural services	8.8	x	-	x	x	x	0.4	x	1.2	x	0.4	-	8.8	100.0
Engineering services	1 957.1	299.2	x	147.4	x	40.5	733.1	30.8	30.2	x	70.5	-	1 446.8	73.9
Surveying and mapping (including geophysical) services	29.9	x	x	x	x	-	x	x	x	x	x	x	x	x
Testing laboratories	167.6	5.4	x	27.8	x	x	6.0	120.6	x	x	x	x	166.8	99.5
Computer systems design and related services	23.4	x	-	x	x	-	1.4	x	x	x	1.3	x	18.7	79.7
Management, scientific and technical consulting services	585.2	31.6	20.3	132.1	16.9	6.6	119.3	33.3	110.0	17.9	35.5	-	523.5	89.5
Scientific research and development services	54.6	1.1	x	1.8	1.1	x	1.3	1.2	x	x	x	-	13.6	24.9
All other professional, scientific and technical services	84.4	0.4	x	x	x	x	3.3	10.4	x	x	x	-	26.0	30.8
Management of companies and enterprises	65.4	x	x	7.4	x	x	x	x	x	x	x	-	41.1	62.9
Administrative and support services	98.5	5.4	3.6	62.0	-	0.6	x	x	0.2	x	x	-	80.0	81.2
Waste management and remediation services	3 020.5	7.4	1.7	2 910.6	0.2	--	5.9	11.5	0.7	0.2	7.1	-	2 945.2	97.5
Other services	136.5	11.5	x	54.3	x	-	3.1	x	2.3	7.0	x	-	83.4	61.1
Canada	14 359.7	432.1	119.1	3 942.9	63.1	63.4	886.8	244.0	220.5	41.9	240.7	6 254.6	43.6	

Notes:

Figures may not add up to totals due to rounding.

1. Refer to Text Box 2.2 in Section 2 for classification details.

2. Industry groups are based on the North American Industry Classification System (NAICS). Refer to Text Box 2.4 in Section 2 for a profile of these industry groups.

Source:

Statistics Canada, Environment Accounts and Statistics Division.

Table A.4
Revenues of Environment-related Construction Services by Industry, 2000

Industry ²	Environment-related construction services ¹		
	Total environmental revenues	Total environment-related construction services revenues	Environment-related construction services' share of total environmental revenues
	million dollars		percent
Agriculture, forestry, fishing and hunting	8.4	-	-
Mining and oil and gas extraction	27.9	x	x
Utilities	30.0	x	x
Construction	1 536.4	1 276.5	83.1
Chemical manufacturing	222.9	--	--
Plastic and rubber products manufacturing	221.4	--	--
Non-metallic mineral product manufacturing	129.7	x	x
Primary metal manufacturing	77.9	x	x
Fabricated metal product manufacturing	197.9	--	--
Machinery manufacturing	593.6	9.0	1.5
Computer and electronic product manufacturing	106.6	--	--
Electrical equipment, appliance and component manufacturing	158.3	--	--
Rest of manufacturing sector	305.6	-	-
Wholesale trade	4 332.3	9.0	0.2
Retail trade	42.8	x	x
Finance and insurance services	27.2	x	x
Legal services	109.0	-	-
Architectural and landscape architectural services	8.8	-	-
Engineering services	1 957.1	469.9	24.0
Surveying and mapping (including geophysical) services	29.9	-	-
Testing laboratories	167.6	--	--
Computer systems design and related services	23.4	-	-
Management, scientific and technical consulting services	585.2	9.1	1.6
Scientific research and development services	54.6	x	x
All other professional, scientific and technical services	84.4	x	x
Management of companies and enterprises	65.4	x	x
Administrative and support services	98.5	x	x
Waste management and remediation services	3 020.5	x	x
Other services	136.5	x	x
Canada	14 359.7	1 877.7	13.1

Notes:

Figures may not add up to totals due to rounding.

1. Refer to Text Box 2.3 in Section 2 for classification details.

2. Industry groups are based on the North American Industry Classification System (NAICS). Refer to Text Box 2.4 in Section 2 for a profile of these industry groups.

Source:

Statistics Canada, Environment Accounts and Statistics Division.

Table A.5
Total and Environmental Revenues by Province and Territory, 2000

Province/Territory	Establishments ¹ number	Total employment	Total revenues ²	Environmental goods	Environmental services	Environment- related construction	Total environmental revenues
Newfoundland and Labrador	150	1 938	170.6	18.5	62.7	20.3	101.6
Prince Edward Island	43	1 172	125.7	x	12.0	x	51.1
Nova Scotia	365	5 679	576.2	102.8	168.2	39.4	310.4
New Brunswick	292	3 729	408.6	86.7	107.6	49.1	243.4
Quebec	1 735	30 041	5 199.2	1 625.6	1 098.2	439.8	3 163.7
Ontario	2 379	64 483	12 783.8	3 173.3	2 526.6	465.1	6 165.1
Manitoba	228	3 352	690.3	373.4	117.4	27.3	518.0
Saskatchewan	286	3 668	350.2	93.4	76.6	33.1	203.1
Alberta	905	24 797	3 100.9	333.8	1 062.7	479.7	1 876.2
British Columbia	1 050	20 088	2 704.8	409.0	1 010.1	281.8	1 700.9
Yukon Territory, Northwest Territories and Nunavut	41	322	30.0	x	12.6	x	26.2
Canada	7 474	159 269	26 140.3	6 227.4	6 254.6	1 877.7	14 359.7

Notes:

Figures may not add up to totals due to rounding.

1. The total number of establishments does not include engineering construction establishments (NAICS 2313) due to the methodology used to derive the estimates.

2. Total revenues of establishments that were considered to be in scope for the purposes of the survey.

Source:

Statistics Canada, Environment Accounts and Statistics Division.

Table A.6
Revenues of Environmental Goods by Province and Territory, 2000

Province/Territory	Environmental goods ¹								Total environmental goods revenues	Environmental goods' share of total environmental revenues percent
	Total environmental revenues	Water	Air	Waste	Renewable			Other		
					energy	fuel	Analytical			
	million dollars									
Newfoundland and Labrador	101.6	x	-	x	x	-	x	11.7	18.5	18.2
Prince Edward Island	51.1	x	x	x	-	-	x	x	x	x
Nova Scotia	310.4	11.3	x	7.4	x	x	5.6	66.5	102.8	33.1
New Brunswick	243.4	31.4	x	x	x	x	2.1	48.0	86.7	35.6
Quebec	3 163.7	237.3	168.0	x	x	x	x	1 011.0	1 625.6	51.4
Ontario	6 165.1	588.9	301.1	159.0	62.0	66.8	102.7	1 892.8	3 173.3	51.5
Manitoba	518.0	13.7	3.8	-	x	x	x	342.8	373.4	72.1
Saskatchewan	203.1	4.4	x	20.0	x	x	3.5	60.9	93.4	46.0
Alberta	1 876.2	x	x	74.8	10.5	x	x	184.4	333.8	17.8
British Columbia	1 700.9	37.4	15.0	12.4	8.1	x	17.7	x	409.0	24.0
Yukon Territory, Northwest Territories and Nunavut	26.2	x	-	-	-	-	-	x	x	x
Canada	14 359.7	976.2	507.4	451.7	96.4	125.6	173.4	3 896.7	6 227.4	43.4

Note:

Figures may not add up to totals due to rounding.

1. Refer to Text Box 2.1 in Section 2 for classification details.

Source:

Statistics Canada, Environment Accounts and Statistics Division.

Table A.7
Revenues of Environmental Services by Province and Territory, 2000

Province/Territory	Environmental services ¹											Total environmental services revenues	Environmental services' share of total environmental revenues percent		
	Total environmental revenues	Research and Renewable			Management consulting and legal services	Environmental education, training and information	Other		Total environmental services revenues						
	Water	Air	Waste	development	energy	Engineering	Analytical	services	information	Other	revenues			revenues	
	million dollars														percent
Newfoundland and Labrador	101.6	1.3	0.4	25.8	x	x	x	x	x	0.2	x	62.7	61.7		
Prince Edward Island	51.1	x	x	7.8	x	x	x	x	x	-	x	12.0	23.4		
Nova Scotia	310.4	7.8	3.1	97.9	1.0	2.7	14.9	11.1	10.0	1.2	18.4	168.2	54.2		
New Brunswick	243.4	x	3.9	61.4	1.5	3.9	x	2.0	11.4	x	2.2	107.6	44.2		
Quebec	3 163.7	115.3	x	662.2	9.8	x	152.1	28.5	19.8	13.0	43.6	1 098.2	34.7		
Ontario	6 165.1	157.6	49.1	1 778.6	37.7	23.3	228.4	77.5	73.7	11.6	89.0	2 526.6	41.0		
Manitoba	518.0	x	5.4	92.3	x	x	x	x	x	0.6	1.2	117.4	22.7		
Saskatchewan	203.1	x	x	55.0	x	x	x	x	2.0	0.2	0.9	76.6	37.7		
Alberta	1 876.2	71.9	16.4	520.5	2.0	5.5	324.9	59.8	33.5	5.8	22.4	1 062.7	56.6		
British Columbia	1 700.9	56.2	4.5	631.3	9.0	8.7	136.5	55.8	61.1	6.1	40.9	1 010.1	59.4		
Yukon Territory, Northwest Territories and Nunavut	26.2	x	x	10.0	x	x	1.2	x	x	0.4	x	12.6	48.2		
Canada	14 359.7	432.1	119.1	3 942.9	63.1	63.4	886.8	244.0	220.5	41.9	240.7	6 254.6	43.6		

Note:
 Figures may not add up to totals due to rounding.
 1. Refer to Text Box 2.2 in Section 2 for classification details.
Source:
 Statistics Canada, Environment Accounts and Statistics Division.

Table A.8
Revenues of Environment-related Construction Services by Province and Territory, 2000

Province/Territory	Environment-related construction services ¹		
	Total environmental revenues	Total environment-related construction services revenues	Environment-related construction services' share of total environmental revenues
	million dollars		percent
Newfoundland and Labrador	101.6	20.3	20.0
Prince Edward Island	51.1	x	x
Nova Scotia	310.4	39.4	12.7
New Brunswick	243.4	49.1	20.2
Quebec	3 163.7	439.8	13.9
Ontario	6 165.1	465.1	7.5
Manitoba	518.0	27.3	5.3
Saskatchewan	203.1	33.1	16.3
Alberta	1 876.2	479.7	25.6
British Columbia	1 700.9	281.8	16.6
Yukon Territory, Northwest Territories and Nunavut	26.2	x	x
Canada	14 359.7	1 877.7	13.1

Note:
 Figures may not add up to totals due to rounding.
 1. Refer to Text Box 2.3 in Section 2 for classification details.
Source:
 Statistics Canada, Environment Accounts and Statistics Division.

Table A.9
Total and Environmental Revenues by Establishment Size,¹ 2000

Establishment size	Establishments ² number	Total employment	Total revenues ³	Environmental goods	Environmental services	Environment-related construction	Total environmental revenues
Small establishments	7 173	71 676	11 689.2	4 362.3	3 199.5	540.5	8 102.2
Medium establishments	267	52 929	9 214.8	1 730.6	1 670.6	1 040.0	4 441.2
Large establishments	34	34 664	5 236.3	134.5	1 384.5	297.3	1 816.3
Canada	7 474	159 269	26 140.3	6 227.4	6 254.6	1 877.7	14 359.7

Notes:

Figures may not add up to totals due to rounding.

1. Small establishments have fewer than 100 employees. Medium-sized establishments have 100 to 499 employees. Large establishments have 500 or more employees.

2. The total number of establishments does not include engineering construction establishments (NAICS) due to the methodology used to derive the estimates.

3. Total revenues of establishments that were considered to be in scope for the purposes of the survey.

Source:

Statistics Canada, Environment Accounts and Statistics Division.

Table A.10
Revenues of Environmental Goods by Establishment Size,¹ 2000

Establishment size	Environmental goods ²									Environmental goods' share of total environmental revenues percent
	Total environmental revenues	Alternative fuel systems							Total environmental goods revenues	
		Water	Air	Waste	Renewable energy	Analytical	Other			
million dollars										
Small establishments	8 102.2	568.6	199.8	236.3	64.4	x	x	3 128.0	4 362.3	53.8
Medium establishments	4 441.2	376.7	270.8	215.4	23.9	x	x	748.7	1 730.6	39.0
Large establishments	1 816.3	30.9	36.8	--	8.1	x	x	20.0	134.5	7.4
Canada	14 359.7	976.2	507.4	451.7	96.4	125.6	173.4	3 896.7	6 227.4	43.4

Notes:

Figures may not add up to totals due to rounding.

1. Small establishments have fewer than 100 employees. Medium-sized establishments have 100 to 499 employees. Large establishments have 500 or more employees.

2. Refer to Text Box 2.1 in Section 2 for classification details.

Source:

Statistics Canada, Environment Accounts and Statistics Division.

Table A.11
Revenues of Environmental Services by Establishment Size,¹ 2000

Establishment size	Environmental services ²											Total environmental services revenues	Environmental services' share of total environmental revenues percent
	Total environmental revenues	Water	Air	Waste development	Research and Renewable energy	Engineering	Analytical	Management consulting and legal services	Environmental education, training and information	Other	Total environmental services revenues		
	million dollars												
Small establishments	8 102.2	234.3	x	2 093.1	30.0	33.1	345.8	141.4	149.0	28.9	x	3 199.5	39.5
Medium establishments	4 441.2	122.3	x	1 041.1	33.1	7.2	210.3	75.1	51.1	12.6	x	1 670.6	37.6
Large establishments	1 816.3	75.6	48.6	808.7	--	23.1	330.8	27.5	20.4	0.5	49.3	1 384.5	76.2
Canada	14 359.7	432.1	119.1	3 942.9	63.1	63.4	886.8	244.0	220.5	41.9	240.7	6 254.6	43.6

Notes:

Figures may not add up to totals due to rounding.

1. Small establishments have fewer than 100 employees. Medium-sized establishments have 100 to 499 employees. Large establishments have 500 or more employees.

2. Refer to Text Box 2.2 in Section 2 for classification details.

Source:

Statistics Canada, Environment Accounts and Statistics Division.

Table A.12
Revenues of Environment-related Construction Services by Establishment Size,¹ 2000

Establishment size	Environment-related construction services ²			Environment-related construction services' share of total environmental revenues percent
	Total environmental revenues	Total environment-related construction services revenues	Environment-related construction services' share of total environmental revenues	
	million dollars			
Small establishments	8 102.2	540.5	6.7	
Medium establishments	4 441.2	1 040.0	23.4	
Large establishments	1 816.3	297.3	16.4	
Canada	14 359.7	1 877.7	13.1	

Notes:

Figures may not add up to totals due to rounding.

1. Small establishments have fewer than 100 employees. Medium-sized establishments have 100 to 499 employees. Large establishments have 500 or more employees.

2. Refer to Text Box 2.3 in Section 2 for classification details.

Source:

Statistics Canada, Environment Accounts and Statistics Division.

Table A.13
Client Base Distribution of Environmental Revenues, 2000

Client Base	percent
Local government	20.0
Federal/provincial governments	6.7
Agriculture and agri-food products	1.3
Forestry and pulp and paper	7.3
Fish and fish products	0.8
Mining and related products, metal and mineral products	5.2
Crude petroleum and natural gas, refined petroleum and related products	11.2
Manufacturing	16.6
Business services	15.2
Gas distribution and electric power systems	4.2
Individuals and households	4.2
All other industries	7.3
Total	100.0

Notes:

Figures may not add up to totals due to rounding.

These estimates were based on reported data from the *Environment Industry Survey, 2000*.

Source:

Statistics Canada, Environment Accounts and Statistics Division.

Table A.14
Client Location by Province and Territory, 2000

Province/Territory	Client location				Total (a+b+c)
	Within the province (a)	Other provinces (b)	Total domestic market (a+b)	Outside Canada (c)	
	percent				
Newfoundland and Labrador	71.0	24.2	95.2	4.8	100.0
Prince Edward Island	81.5	17.9	99.4	0.6	100.0
Nova Scotia	72.9	21.5	94.4	5.6	100.0
New Brunswick	46.7	46.3	93.0	7.0	100.0
Quebec	71.9	19.7	91.6	8.4	100.0
Ontario	60.9	27.6	88.5	11.5	100.0
Manitoba	72.9	24.7	97.6	2.4	100.0
Saskatchewan	64.5	32.5	97.0	3.0	100.0
Alberta	62.9	30.8	93.6	6.4	100.0
British Columbia	71.4	17.6	89.0	11.0	100.0
Yukon Territory, Northwest Territories and Nunavut	98.7	1.3	100.0	-	100.0
Canada	90.7	9.3	100.0

Notes:

Figures may not add up to totals due to rounding.

These estimates were based on reported data from the *Environment Industry Survey, 2000*.

Source:

Statistics Canada, Environment Accounts and Statistics Division.

Table A.15
Environmental Exports by Industry and by Destination, 2000

Industry ¹	Environmental exports													Total environmental export revenues
	Establishments ² number	United	South	Other			Middle			Other		All		
		States	America	Mexico	Central America	Europe	East	Africa	China	Japan	Asia	Australia	Other	
million dollars														
Agriculture, forestry, fishing and hunting	x	x	-	-	-	-	-	-	-	-	x	-	-	x
Mining and oil and gas extraction	7	1.0	x	x	x	x	x	-	x	x	x	x	x	1.4
Utilities	x	x	x	x	-	x	-	-	-	x	x	x	-	1.5
Construction ³	18	22.5	x	x	x	1.3	x	x	-	-	x	-	x	26.8
Chemical manufacturing	18	31.1	x	x	x	3.8	x	x	x	x	x	x	x	38.1
Plastic and rubber products manufacturing	24	59.2	1.7	1.5	x	2.1	0.1	x	x	0.3	x	-	x	70.6
Non-metallic mineral product manufacturing	8	28.3	-	x	x	x	-	-	x	x	-	-	x	29.3
Primary metal manufacturing	x	12.1	-	-	-	-	-	-	-	-	-	-	-	12.1
Fabricated metal product manufacturing	14	46.6	x	-	-	x	-	x	-	-	x	-	x	48.9
Machinery manufacturing	77	187.5	x	1.2	x	18.7	2.0	x	4.1	1.4	2.7	0.8	8.6	234.6
Computer and electronic product manufacturing	33	22.1	0.5	0.2	0.1	5.7	0.4	0.1	0.3	1.0	1.1	0.4	0.4	32.2
Electrical equipment, appliance and component manufacturing	x	x	x	x	x	x	-	x	-	-	x	x	-	x
Rest of manufacturing sector	17	164.4	4.4	x	x	20.4	x	x	x	x	0.8	0.2	x	199.3
Wholesale trade ⁴	69	28.6	0.2	x	x	1.2	0.8	0.3	x	0.3	1.0	0.1	1.2	43.3
Retail trade	x	x	-	-	-	-	-	-	-	-	-	-	-	x
Finance and insurance services	x	x	-	-	-	x	-	-	x	x	x	-	x	x
Legal services	x	x	-	-	-	x	x	-	-	-	-	-	x	1.4
Architectural and landscape architectural services	x	x	-	-	-	x	x	-	x	-	-	-	-	0.6
Engineering services	135	71.3	71.7	1.0	4.1	36.8	0.3	70.9	8.9	3.9	x	x	x	281.1
Surveying and mapping (including geophysical) services	x	4.2	x	x	x	x	-	x	x	x	x	-	-	14.6
Testing laboratories	28	14.7	x	0.1	0.2	x	x	-	x	x	0.2	x	0.8	18.1
Computer systems design and related services	15	4.2	x	0.1	x	0.3	x	x	x	x	x	x	-	5.2
Management, scientific and technical consulting services	214	41.1	2.8	0.1	0.8	3.5	x	1.9	2.1	0.3	3.5	2.9	x	61.8
Scientific research and development services	14	9.5	x	x	x	x	-	x	x	x	x	x	-	x
All other professional, scientific and technical services	8	x	x	x	-	x	x	-	-	x	x	x	-	x
Management of companies and enterprises	x	x	x	x	x	x	x	x	x	-	x	x	x	x
Administrative and support services	13	x	x	x	-	x	x	x	x	x	x	x	x	13.0
Waste management and remediation services ⁵	9	x	-	-	-	x	-	-	-	-	-	-	-	3.2
Other services	12	21.5	x	x	x	x	x	x	x	x	x	0.3	x	30.9
Canada	772	900.3	95.0	15.6	8.3	127.1	5.6	78.6	32.8	15.7	29.4	10.2	20.0	1 338.4

Notes:

Figures may not add up to totals due to rounding.

1. Industry groups are based on the North American Industry Classification System (NAICS). Refer to Text Box 2.4 in Section 2 for a profile of these industry groups.

2. Total number of establishments that reported environmental export revenues in 2000.

3. Environmental exports for engineering construction establishments (NAICS 2313) are not available due to the methodology used to derive the estimates.

4. Environmental exports for recyclable material wholesalers (NAICS 4181) are not available due to the methodology used to derive the estimates.

5. Environmental exports for waste management services (NAICS 5621 and 5622) are not available due to the methodology used to derive the estimates.

Source:

Statistics Canada, Environment Accounts and Statistics Division.

Table A.16
Environmental Exports by Province and territory, and by Destination, 2000

Province/Territory	Environmental exports													Total environmental export revenues	
	Establishments ¹ number	United	South	Other		Middle			Other			All			
		States	America	Mexico	Central America	Europe	East	Africa	China	Japan	Asia	Australia	Other		
		million dollars													
Newfoundland and Labrador	x	3.2	x	x	--	x	x	x	x	x	x	x	x	4.8	
Prince Edward Island	x	--	x	x	x	x	x	x	x	x	-	-	-	0.3	
Nova Scotia	42	10.4	0.7	--	0.2	x	x	1.0	0.1	0.7	x	x	0.7	17.2	
New Brunswick	26	9.8	0.5	x	0.1	0.4	x	0.1	0.0	0.1	x	x	x	17.0	
Quebec	110	160.0	x	1.3	1.9	26.4	0.9	x	1.9	x	3.2	-	1.6	266.3	
Ontario	341	548.9	27.7	8.2	4.9	49.9	3.9	18.4	7.2	9.7	16.7	1.5	11.1	707.9	
Manitoba	14	6.3	x	x	x	x	x	-	x	-	x	-	-	12.2	
Saskatchewan	16	4.6	--	x	x	x	x	x	x	x	0.1	--	-	6.2	
Alberta	78	86.2	7.3	5.1	x	5.0	x	x	3.5	1.5	1.6	0.3	0.5	119.2	
British Columbia	129	70.8	25.7	0.4	0.5	40.2	0.6	x	16.7	0.7	5.4	3.1	x	187.1	
Yukon Territory, Northwest Territories and Nunavut	x	--	-	-	-	-	-	-	-	-	-	-	--	--	
Canada	772	900.3	95.0	15.6	8.3	127.1	5.6	78.6	32.8	15.7	29.4	10.2	20.0	1 338.4	

Note:

Figures may not add up to totals due to rounding.

1. Total number of establishments that reported environmental export revenues in 2000.

Source:

Statistics Canada, Environment Accounts and Statistics Division.

Table A.17
Environmental Exports by Establishment Size¹ and by Destination, 2000

Establishment size	Environmental exports													Total environmental export revenues	
	Establishments ² number	United	South	Other		Middle			Other			All			
		States	America	Mexico	Central America	Europe	East	Africa	China	Japan	Asia	Australia	Other		
		million dollars													
Small establishments	658	385.5	19.2	x	x	43.2	x	16.1	10.7	7.8	x	5.1	x	533.3	
Medium establishments	103	490.4	34.5	x	x	44.6	x	17.8	9.3	5.5	x	5.1	x	635.3	
Large establishments	11	24.4	41.3	x	x	39.3	x	44.7	12.8	2.3	x	--	x	169.8	
Canada	772	900.3	95.0	15.6	8.3	127.1	5.6	78.6	32.8	15.7	29.4	10.2	20.0	1 338.4	

Notes:

Figures may not add up to totals due to rounding.

1. Small establishments have fewer than 100 employees. Medium-sized establishments have 100 to 499 employees. Large establishments have 500 or more employees.

2. Total number of establishments that reported environmental export revenues in 2000.

Source:

Statistics Canada, Environment Accounts and Statistics Division.

Table A.18
Exports of Environmental Goods and Services, 2000

Goods:	<u>million dollars</u>
Water	206.0
Air	205.5
Waste	190.5
Renewable energy	15.2
Alternative fuel systems	95.5
Analytical	41.0
Other	125.5
Total: Goods	879.1
Services¹:	
Water	71.0
Air	101.7
Waste	64.7
Research and development	12.3
Renewable energy	10.7
Engineering	74.6
Analytical services, data collection and analysis	30.0
Management consulting and legal services	8.5
Environmental education, training and information	9.5
Other	76.3
Total: Services	459.3

Notes:

Figures may not add up to totals due to rounding.

1. Includes environment-related construction. Refer to Text Box 2.5 in Section 2.

Source:

Statistics Canada, Environment Accounts and Statistics Division.

Table A.19
Exports of Environmental Goods by Province and Territory, 2000

Province/Territory	Total environmental export revenues	Water	Air	Waste	Renewable energy	Alternative fuel systems	Analytical instruments	Other	Total exports of environmental goods
	million dollars								
Newfoundland and Labrador	4.8	-	-	x	-	-	x	-	2.6
Prince Edward Island	0.3	-	-	-	-	-	-	-	-
Nova Scotia	17.2	x	x	x	x	x	x	x	12.6
New Brunswick	17.0	x	-	-	x	x	x	0.4	1.7
Quebec	266.3	x	42.8	62.6	0.6	x	1.6	19.0	162.6
Ontario	707.9	149.3	156.9	77.2	11.4	x	25.4	94.3	562.9
Manitoba	12.2	x	x	-	-	x	x	x	11.4
Saskatchewan	6.2	0.8	-	0.6	x	-	x	-	4.0
Alberta	119.2	5.9	x	x	x	x	0.2	x	51.7
British Columbia	187.1	9.9	x	6.3	0.7	x	5.6	6.7	69.7
Yukon Territory, Northwest Territories and Nunavut	--	-	-	-	-	-	-	-	-
Canada:	1 338.4	206.0	205.5	190.5	15.2	95.5	41.0	125.5	879.1

Notes:

Figures may not add up to totals due to rounding.

Source:

Statistics Canada, Environment Accounts and Statistics Division.

Table A.20
Exports of Environmental Services¹ by Province and Territory, 2000

Province/Territory	Total environmental export revenues	Water	Air	Waste	Research and development	Renewable energy	Engineering	Analytical	Management consulting and legal services	Environmental education, training and information	Other	Total exports of environmental services
	million dollars											
Newfoundland and Labrador	4.8	x	--	x	x	x	0.1	--	x	x	x	2.3
Prince Edward Island	0.3	x	-	-	-	x	x	-	x	-	-	0.3
Nova Scotia	17.2	x	x	1.0	x	0.4	1.3	x	x	--	0.3	4.6
New Brunswick	17.0	1.3	0.1	2.9	x	x	0.4	x	1.1	-	x	15.4
Quebec	266.3	x	x	4.0	x	x	x	x	0.2	x	x	103.7
Ontario	707.9	20.3	10.3	34.8	9.1	4.6	27.2	21.0	2.9	1.5	13.4	145.0
Manitoba	12.2	x	x	x	x	x	--	-	x	x	x	0.8
Saskatchewan	6.2	x	x	x	-	-	--	x	-	x	-	2.2
Alberta	119.2	13.5	4.0	13.4	x	x	10.0	x	0.8	0.2	x	67.5
British Columbia	187.1	6.5	x	x	2.1	0.9	15.6	5.2	2.7	2.2	9.3	117.5
Yukon Territory, Northwest Territories and Nunavut	0.0	x	-	-	-	-	x	-	-	x	-	--
Canada:	1 338.4	71.0	101.7	64.7	12.3	10.7	74.6	30.0	8.5	9.5	76.3	459.3

Notes:

Figures may not add up to totals due to rounding.

1. Includes environment-related construction.

Source:

Statistics Canada, Environment Accounts and Statistics Division.

ELECTRONIC PUBLICATIONS AVAILABLE AT
www.statcan.ca



Annex B: Questionnaires

ELECTRONIC PUBLICATIONS AVAILABLE AT
www.statcan.ca





Environment Accounts and Statistics Division

Environment Industry Survey, 2000

Confidential when completed
Collected under authority of Statistics Act, Revised Statutes of Canada, 1985, Chapter S19.

Français au verso

Correct as required

Company Name

Establishment Name

C/O

Street Address

City

Province/Territory

Postal Code



Please read before completing

SURVEY OBJECTIVE

This survey collects data on the revenues of environmental goods and services. These data will be aggregated with information from other sources to produce official estimates of national and provincial economic activity of the environment industry. Information from the survey can be used by businesses for market analysis, by trade associations to study the performance of the Environment Industry, by governments to develop national and regional policies, and by other users involved in research and policymaking.

The results of this survey will be published in the Statistics Canada publication, *Environment Industry 2000*, Catalogue No. 16F0008XIE.

CONFIDENTIALITY

Statistics Canada is prohibited by law from publishing any statistics which would divulge information obtained from this survey that relates to any identifiable respondent, without previously written consent. The data reported will be treated in strict confidence, used for statistical purposes only and published in aggregate form. The confidentiality provisions of the Statistics Act are not affected by either the Access to Information Act or any other legislation.

AUTHORITY

This survey is conducted under the authority of the Statistics Act, Revised Statutes of Canada, 1985, Chapter S19. **COMPLETION OF THIS QUESTIONNAIRE IS A LEGAL REQUIREMENT UNDER THE STATISTICS ACT.**

INFORMATION

If you require assistance in completing this questionnaire or if you have any questions or comments regarding this survey, please contact:

Operations and Integration Division

Statistics Canada

Ottawa, Ontario K1A 0T6

Telephone (toll-free): **1-800-387-0479 (within Canada)**

Fax: **1-800-755-5514 (within Canada)**

Email: **enviro.oid.ind@statcan.ca**

In all correspondence concerning this questionnaire, please quote the identification number that appears on the address label.

Please return this questionnaire within 30 days of receipt.

If you are unable to do so, kindly inform Operations and Integration Division of the expected completion date.

Important: Please read the General Instructions before answering.

Statistics Canada use only

Rec.	D	M	Y
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Ed.	D	M	Y
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Kyd.	D	M	Y
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Bat.			
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Coll.

FSC



General Instructions

1. Please complete and return this form in the envelope provided.
2. Please refer to the accompanying **Guide on Definitions and Classification Details** for more information.
3. If this establishment is involved in a combination of environmental activities (*producing environmental goods, providing environmental services or undertaking environment-related construction*), please ensure that the relevant portion(s) of Section B are completed.
4. When precise figures are not available, please provide your best estimates.
5. Please report all dollar amounts in **CANADIAN DOLLARS**.

SECTION A - Information on this establishment

- A1.** This questionnaire should be completed for your company's establishment in one province or territory that produces environmental goods or offers environmental services or environment-related construction. If you operate more than one establishment that produces environmental goods or offers environmental services or environment-related construction you should fill out separate questionnaires for each of these establishments in each province or territory. You may wish to photocopy this questionnaire or you may call us toll-free at 1-800-387-0479 to request additional questionnaires.

Province/territory for which this questionnaire applies:

400

- A2. Did your company operate environmental establishments in more than one province or territory in 2000?**

Environmental establishments refer to those establishments that produced environmental goods or offered environmental services or environment-related construction.

401 Yes 402 No ➤ Go to question A4.

- A3. Please indicate where you operated other environmental establishments in this province or territory or elsewhere in Canada in 2000.**

Establishment Name	Address	Phone Number	Contact
40101	40102	40103	40104
40105	40106	40107	40108
40109	40110	40111	40112
40113	40114	40115	40116

A4. Reporting year:

1. The report must cover your most recent financial year ending between April 1, 2000 and March 31, 2001.

From:		
Day	Month	Year
403	404	405

To:		
Day	Month	Year
406	407	408

2. Did your company operate this establishment for the full year?

409 Yes ➤ Please go to Question B1, Section B - Revenues and Classifications

410 No ➤ Please check the appropriate box(es) below

411 Seasonal operation ➤

From:		
Day	Month	Year
412		

To:		
Day	Month	Year
413		
415		
417		
419		
421		
423		

414 New business (please provide date of start) _____

416 Change of fiscal year end (please provide the new end date) _____

418 Change of ownership (please provide the date) _____

420 Ceased operations (please provide the date) _____

422 Temporarily closed (please specify the closing date and reason for closing) _____

424

425 Other (please specify) ➤

426

SECTION B - Revenues and Classification

Revenues

B1. What were this establishment's total revenues in 2000?

Canadian Dollars
(omit cents)

101

B2. Of this establishment's total revenues reported in Question B1, please report the revenues from the sale of environmental goods or services, or revenues from environment-related construction.

102

Classification

The purpose of this section is to measure the environmental revenues received by this establishment by types of environmental goods, services and environment-related construction provided. Please classify the environmental revenues reported in Question B2 according to the applicable categories of environmental goods, environmental services and environment-related construction. Examples for each category are provided on the insert entitled **Guide on Definitions and Classification Details** enclosed with this form.

Environmental Goods

B3. Did this establishment receive revenues from the sale of environmental goods in 2000?

¹⁰³ Yes ➤ Go to question B4.

¹⁰⁴ No ➤ Go to question B5.

B4. Please report this establishment's 2000 revenues received from the sale of environmental goods. If this establishment's environmental goods do not fall in any stated category, please use the "Other, specify" category. Please refer to the **Guide on Definitions and Classification Details** for examples of each category.

Canadian Dollars
(omit cents)

1. Air Pollution Control Systems and Equipment (Indoor or Outdoor)

105

2. Water Supply and Conservation Systems and Equipment

106

3. Wastewater Management and Sewage Treatment Systems and Equipment

107

4. Hazardous and Non-Hazardous Waste Management Equipment

108

5. Systems and Equipment for Remediation/Treatment of Soil, Surface Water, Seawater and Groundwater

109

6. Noise/Vibration Abatement Equipment

110

7. Environmental Monitoring, Analysis and Assessment

111

8. Energy Efficient Equipment

112

9. Solar Energy Systems and Equipment

113

10. Biomass Energy Systems and Equipment

114

11. Wind Energy Systems and Equipment

115

12. Other Renewable Energy Systems and Equipment

116

13. Alternative Fuel Systems

117

14. Clean Technologies and Related Components

118

15. Other, specify ¹²¹

119

Total Environmental Goods

120

Environmental Services

B5. Did this establishment receive revenues from the provision of environmental services in 2000?

¹²² Yes ➤ Go to question B6.

¹²³ No ➤ Go to question B7.

B6. Please report this establishment's 2000 revenues received from the provision of environmental services. If this establishment's environmental services do not fall in any stated category, please use the "Other, specify" category. Please refer to the *Guide on Definitions and Classification Details* for examples of each category.

	Canadian Dollars (omit cents)
16. Air Pollution Control Services (Indoor or Outdoor)	124
17. Water Supply and Conservation Services	125
18. Wastewater Management and Sewage Treatment Services	126
19. Hazardous and Non-Hazardous Waste Management Services	127
20. Services for Remediation/Treatment of Soil, Surface Water, Seawater and Groundwater	128
21. Noise/Vibration Abatement Services	129
22. Environmental Research and Development Services	130
23. Energy Efficiency and Renewable Energy Services	131
24. Environmental Education, Training and Information	132
25. Management Consulting and Legal Services	133
26. Other Environmental Consulting Engineering Services	134
27. Other Analytical Services, Data Collection and Analysis	135
28. Other, <i>specify</i> ¹³⁸	136
Total Environmental Services	137

Environment-related construction

B7. Did this establishment receive revenues from environment-related construction projects in 2000?

¹³⁹ Yes ➤ Go to question B8.

¹⁴⁰ No ➤ Go to question C1, Section C - Client Base.

B8. Please report this establishment's 2000 revenues received from environment-related construction projects. If this establishment's environment-related construction projects do not fall in any stated category, please use the "Other, specify" category. Please refer to the *Guide on Definitions and Classification Details* for examples of each category.

	Canadian Dollars (omit cents)
29. Air Pollution Control (Indoor or Outdoor)	141
30. Water Supply and Conservation	142
31. Wastewater Management and Sewage Treatment	143
32. Hazardous and Non-Hazardous Waste Management	144
33. Remediation/Treatment of Soil, Surface Water, Seawater and Groundwater	145
34. Noise/Vibration Abatement	146
35. Other, <i>specify</i> ¹⁴⁹	147
Total Environment-related Construction	148

SECTION C - Client Base		SECTION D - Client Location	
<p>C1. Please report this establishment's environmental revenues reported in Question B2 according to the type of client to whom the environmental goods or services were delivered or for whom the environment-related construction projects were completed.</p>		<p>D1. Please report this establishment's environmental revenues reported in Question B2 according to the location of the client to whom the environmental goods or services were delivered or for whom the environment-related construction projects were completed.</p>	
	Canadian Dollars (omit cents)		Canadian Dollars (omit cents)
	150		164
Municipal Government		Newfoundland	
	151		165
Federal/Provincial Governments		Prince Edward Island	
	152		166
Agriculture and Agri-Food Products		Nova Scotia	
	153		167
Forestry and Pulp and Paper		New Brunswick	
	154		168
Fish and Fish Products (Including Aquaculture)		Quebec	
	155		169
Mining and Related Products, Metal and Mineral Products		Ontario	
	156		170
Crude Petroleum and Natural Gas, Refined Petroleum and Related Products		Manitoba	
	157		171
All other Manufacturing		Saskatchewan	
	158		172
Business Services		Alberta	
	159		173
Gas Distribution and Electric Power Systems		British Columbia	
	160		174
Individuals and Households		Yukon Territory, Northwest Territories, and Nunavut	
	161		175
Other, specify ¹⁶³		Outside Canada (Exports)	
	162		176
Total Environmental Revenues (must equal the value reported in Question B2)		Total Environmental Revenues (must equal the value reported in Question B2)	

SECTION E - Environmental Export Revenues

E1. Please report a breakdown, by region, of this establishment's environmental revenues from OUTSIDE CANADA (exports) reported in Question D1.

	Canadian Dollars (omit cents)
United States	177
Mexico	178
Other Central America	179
South America	180
Europe	181
Middle East	182
Africa	183
China	184
Japan	185
Other Asia	186
Australia	187
Other foreign (specify) ¹⁹⁰	188
Total Environmental Exports	189

SECTION F - Environment-related Activities

F1. Please report the year when this establishment started selling the environmental goods, offering the environmental service or undertaking the environment-related construction reported in Question B2.

191

SECTION G - Total Employment

G1. Please report the total number of persons usually employed by this establishment during the reporting period.

Working proprietors and/or principals of unincorporated businesses	192
Full-time employees - regular employees who worked the standard work week hours observed by the establishment	193
Part-time employees - those who worked regularly but for fewer than the standard work week hours observed by the establishment	194
Contract employees - those who were engaged only for the duration of a specific project or term	195
Total Employment	196



Environment Accounts and Statistics Division

Environment Industry Survey, 2000

Guide on Definitions and Classification Details

Definitions

Establishment

An establishment is defined as the most homogeneous unit of production for which a business maintains accounting records. From these accounting records, it is possible to assemble all the data elements required to compile the total sales or shipments, inventories, cost of materials and services, labour and capital used in production.

Environmental Goods and Services

Environmental goods and services are produced by businesses operating in a variety of industries. These 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 or ecosystems.

For the purposes of this survey, all businesses operating in Canada that are involved in whole or in part in the production of environmental goods, the provision of environmental services and the undertaking of environment-related construction activities make up what is called the "environment industry."

Section B. Revenues and Classification

Examples are listed for each category of environmental goods, environmental services and environment-related construction found in Section B.

a) Environmental Goods

1. **Air Pollution Control Systems and Equipment (Indoor or Outdoor)**
– catalytic converters, chemical recovery systems, dust collectors, separators, precipitators, scrubbers, odour control equipment.

2. **Water Supply and Conservation Systems and Equipment** –
equipment or technology used for fresh water supply and delivery, water purification equipment, water handling equipment parts (pumps, pipes and valves).

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3. **Wastewater Management and Sewage Treatment Systems and Equipment** – chemical recovery systems, aeration systems, biological recovery systems, gravity sediment systems, oil/water separation systems, wastewater reuse equipment, wastewater treatment chemicals, water pollution control equipment, screens, strainers, clarifiers, filters and filter media.
4. **Hazardous and Non-hazardous Waste Management Equipment** – hazardous waste storage/treatment equipment, waste collection equipment, waste disposal machinery and equipment, waste handling equipment, waste separation equipment, recycling equipment, incineration equipment.
5. **Systems and Equipment for Remediation/Treatment of Soil, Surface Water, Seawater and Groundwater** – absorbents, bioremediation equipment, soil vapour extraction equipment, spill equipment, containment systems, chemicals and bioremediators.
6. **Noise/Vibration Abatement Equipment** – mufflers/silencers, noise deadening equipment, noise and vibration control systems, highway barriers.
7. **Environmental Monitoring, Analysis and Assessment** – measuring and monitoring equipment, sampling systems, data acquisition equipment, environment information systems and analytical software such laboratory, remote sensing and GIS management software.
8. **Energy Efficient Equipment** – energy management equipment, energy recovery equipment.
9. **Solar Energy Systems and Equipment** – active and passive solar systems, photovoltaics, solar-thermal generators, solar water and space heating systems.
10. **Biomass Energy Systems and Equipment** – landfill gas collection systems, other systems and equipment that use organic matter (forest and agricultural residues) to produce electricity, chemicals or transportation fuels.
11. **Wind Energy Systems and Equipment** – horizontal axis turbines, vertical axis turbines, other types of windmills used to generate energy and electricity.
12. **Other Renewable Energy Systems and Equipment** – wave, tidal, and ocean thermal energy conversion systems, geothermal energy.
13. **Alternative Fuel Systems** – clean fuel systems (reformulated fuels and oxygenated fuels), fuel cell technologies, hydrogen systems, advanced batteries.
14. **Clean Technologies and Related Components** – integrated process technology, materials recovery technology.
15. **Other, *specify*** – please specify your goods if they are not listed in the preceding categories.

b) Environmental Services

16. **Air Pollution Control Services (Indoor or Outdoor)** – emissions monitoring, assessment/evaluation and planning, related consulting engineering and analytical services.
17. **Water Supply and Conservation Services** – services related to water purification, water delivery and water handling systems, including maintenance, repair, related consulting engineering and analytical services.
18. **Wastewater Management and Sewage Treatment Services** – operation of water treatment facilities, storm water management, water and wastewater system assessment, planning and design management, related consulting engineering and analytical services.
19. **Hazardous and Non-Hazardous Waste Management Services** – waste handling, collection, transport, and disposal, operation of sites, ownership or management of sites, recycling (sorting, baling, cleaning), operation of materials recovery facilities, hazardous waste management services, including related consulting engineering and analytical services.
20. **Services for Remediation/Treatment of Soil, Surface Water, Seawater and Groundwater** – cleaning for facilities and tanks, emergency response and spills clean-up systems, site reclamation and remedial action services, maintenance and repair of remediation or treatment systems, including related consulting engineering and analytical services.
21. **Noise/Vibration Abatement Services** – design and management services for acoustic and soundproof screens and street covering, related consulting engineering and analytical services.
22. **Environmental Research and Development Services** – development, evaluation and implementation of clean process technologies and/or end-of-pipe pollution abatement control technologies, including related consulting engineering and analytical services, and related research to improve knowledge on ecosystems and the impact of human activities on the environment.
23. **Energy Efficiency and Renewable Energy Services** – installation, maintenance, repair and related consulting and analytical services for alternative energy systems or renewable energy production (solar, biomass, wind, other), energy audit, energy resource management related consulting engineering and analytical services.
24. **Environmental Education, Training and Information** – environmental education, training, and information management for the general public and specific environmental workplace education, environmental information searching services, environmental emergency response planning, conservation and resource management, ISO 9000/14000 support services, including related consulting engineering and analytical services.

25. **Management Consulting and Legal Services** – general environmental impact assessment, resource management planning, environmental risk management, environmental law and legal services, other environment-related general consulting and legal services not listed in any other categories.
26. **Other Environmental Consulting Engineering Services** – other environmental advisory and/or design services not listed in the preceding categories.
27. **Other Analytical Services, Data Collection and Analysis** – other environmental advisory and/or design services not listed in the preceding categories.
28. **Other, specify** – Please specify your environmental services if they are not listed in the preceding categories.

c) Environment-related Construction

Activities for the construction and installation of facilities for:

29. **Air Pollution Control**
30. **Water Supply and Conservation**
31. **Wastewater Management and Sewage Treatment** – sewer systems, water treatment plants
32. **Hazardous and Non-hazardous Waste Management**
33. **Remediation/Treatment of Soil, Surface Water, Seawater and Groundwater**
34. **Noise/Vibration Abatement**
35. **Other, specify** – please specify your environment-related construction services if they are not listed in the preceding categories.