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# Business and the Environment:

## Strengthening Canadian Environmental Companies

by Brian Hull  
Business and the Environment  
Research Program  
The Conference Board of Canada

in conjunction with

Environmental Industries Sector Initiative  
Industry, Science and Technology Canada



Industry, Science and  
Technology Canada

Industrie, Sciences et  
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## About the Business and the Environment Research Program

In late 1989, the Board of Directors of The Conference Board approved the establishment of a separately funded research program on business and the environment. The program is to focus on economic, managerial, and public policy aspects of environmental issues. A better understanding of market-based instruments for achieving environmental goals was identified as one of its first priorities. The other two major priorities for the first year are the management of environmental issues within organizations and issues concerning the relationship between the global environmental agenda and international competitiveness.

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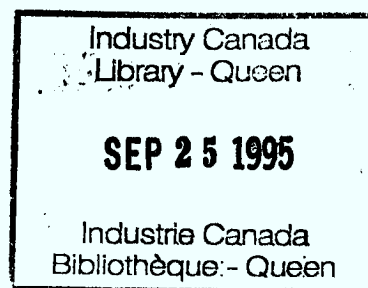
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# About the Environmental Industries Sector Initiative

Industry, Science and Technology Canada (ISTC) launched this two-phased project on April 1, 1989. When the Initiative was launched, Canada's environmental industry was facing a situation that could, if left unattended, hinder its ability to garner its share of a burgeoning world market for environmental products, services and expertise. In essence, the Environmental Industries Sector Initiative (EISI) was formed to redress that situation by consolidating the collective knowledge, perspectives and resources of a wide range of public and private sector groups.

Phase I, expected to last for up to three years, is concentrating on two tasks. The first is to build a network—a framework for close consultation between the federal government, the provinces and industry. Through this network, we will collect, synthesize and disseminate information on environmental industries. This information will provide a profile of the sector—its size, products, services, capabilities and existing and potential customers. Such information is an essential step toward completing our second task in Phase I, which is to identify business opportunities and find a way of taking advantage of them. Phase II of EISI, an ongoing phase, will focus on what has to be done to capitalize on those opportunities, thereby developing the sector and its industries.

EISI's primary objective is to improve the competitiveness, at home and abroad, of Canadian industries that produce environmentally related goods and services. Its approach in meeting its objective is based on the 3 Cs—Consultation, Collaboration and Consensus. It has consulted with provincial and federal government departments, businesses and business associations, research organizations and others who might have an interest in a stronger environmental industries sector. Consultation has allowed EISI to foster collaboration among potential stakeholders and

to work toward achieving consensus. *Business and the Environment: Strengthening Canadian Environmental Companies*, funded by ISTC's EISI, is an important step in meeting the objectives outlined above.

To obtain copies of this publication and for further information on the Initiative, please contact your nearest ISTC Regional Office, or

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# Preface

GLOBE '90, the international trade fair and conference held in Vancouver during March 1990, was designed to integrate environmental concerns into business practice. It brought together stakeholders from business, government, universities and environmental groups to identify practical solutions to the environmental challenge.

A key goal of GLOBE '90 was to foster the growth of the environmental industry in Canada. Firms providing technology, products and services to meet environmental needs were well represented during the event, both at the trade fair and the conference. Through presentations and displays, these firms provided insights into how they are capturing global business opportunities while tackling pressing environmental concerns.

The purpose of the report is to assist the growth of environmental companies in Canada, to enhance their international competitiveness and to help them take advantage of the expansion of business opportunities throughout the world.

This is one of two reports that builds from the experience of GLOBE '90 in support of environmental business in Canada. The companion report, *Business and the Environment: Economic Benefits from Environmental Improvements* by Al Howatson, is designed to assist business leaders in Canadian manufacturing and resource-processing industries to enhance their international competitiveness while accelerating the capacity of their industries to anticipate and resolve environmental challenges.

These reports have been prepared by the staff of the Business and the Environment Research Program of The Conference Board of Canada with the financial support of the Environmental Industries Sector Initiative of Industry, Science and Technology Canada.

**James R. Nininger**

President and Chief Executive Officer  
The Conference Board of Canada

March 1991



# Executive Summary

## Major Findings

Throughout the world, concern for the environment accelerated during the 1980s. People began to demand a sound economy within a viable environment. Governments responded by initiating a rapid increase in environmental programs, standards and regulations.

The demand for environmental technologies, products and services is global in scope. The international market is large and growing rapidly. It presents Canadian environmental companies with significant business opportunities. Growth, however, also presents challenges. Companies will need to design solid business strategies to take full advantage of the available business opportunities.

## Action Plan

- Think globally; its your market and your competition.
- Track the public mood, regulations and intentions of governments; they drive the market.
- Build a solid business plan.
- Focus on a market niche.
- Define your market and track prospective opportunities.
- Develop or acquire scientific and technical competence to sell leading-edge technology.
- Sell solutions that contribute to your client's bottom line.
- Know your client and ensure your client knows your company.
- Commit yourself to a well-developed marketing strategy.
- Build strategic alliances and partnerships.



# Introduction

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*... commitment to the resolution of environmental problems continues to be a high priority within the global community.*

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## Purpose

The purpose of this report is to assist the growth of environmental companies in Canada, to enhance their international competitiveness and to help them take advantage of the expansion of business opportunities throughout the world.

## Background

Concern for the environment gathered speed during the 1980s and took off by the end of the decade. Since the publication of the Brundtland report in 1987, environmental issues have gained unprecedented attention throughout the world. By early 1989, a national Angus Reid poll showed that the environment was ahead of all other priorities on the public agenda in Canada. While recent domestic and international crises and growing economic pessimism have displaced the environment as the major focus of public attention, commitment to the resolution of environmental problems continues to be a high priority within the global community.

Reports on environmental issues are receiving prominent and thoughtful treatment in the media. News items relate to issues far away and close to home: oil spills in the Persian Gulf and oil wells burning out of control in Kuwait alongside accounts of efforts to minimize effluents from pulp and paper mills and to restore the quality of the Great Lakes.

The response by governments to the public concern for the environment is bringing a rapid increase in environmental programs, standards and regulations. Preparations for the United Nations Conference on Environment and Development to be held in Brazil in 1992 have focused the thinking of governments around the world on environmental needs. The Green Plan, launched by the federal government in December 1990, has set numerous goals to be achieved within this decade.

Provincial governments are in action with initiatives that parallel and complement those of the

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*... environmental companies  
constitute a horizontal weave  
throughout the economy.*

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federal government. Municipalities are also responding to their local environmental problems and concerns.

#### **Four Types of Business Opportunities**

Higher environmental standards have generated an enormous increase in business opportunities for companies dedicated to supplying environmental technologies, products and services. Many other types of business opportunities are also increasing as the environmental agenda advances. For example, as manufacturers seek to minimize the harmful side-effects of their activities, they adopt cleaner manufacturing processes. Installations of new apparatuses to meet environmental goals increase the demand both for multi-purpose technology, products and services as well as for equipment that is custom designed and manufactured. Products are also being redesigned to be more environmentally friendly. In recent years, the variety of environmentally friendly consumer products and services increased enormously.

The following brief description of each of these areas of opportunity will help set the stage for a more detailed discussion of dedicated environmental companies.

##### *Dedicated Environmental Technologies, Products and Services*

Companies dedicated to supplying environmental technologies, products and services are often called *environmental companies* or *environmental industries*. They tend to be primarily small and medium-sized companies dedicated to solving environmental problems related to water, air quality, municipal and toxic waste systems and associated issues. This sector is quite different from traditional industrial sectors, such as the automotive or lumber industries, in that environmental companies constitute a *horizontal weave* throughout the economy. There is a great diversity in their activities. Firms may be engaged in waste handling, whether municipal solid waste or hazardous waste. They may be involved in the treatment of water, preparing it for domestic or industrial use or cleaning it for discharge

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*Firms in many industries are redesigning both their products and their processes to meet rising environmental standards.*

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back into lakes and rivers. They may be involved in reducing air emissions and in incineration. They may also be involved in the associated scientific and engineering activities: monitoring; remote sensing; environmental engineering; and the many dimensions of environmental consulting, from environmental impact and risk assessment, to site analysis and environmental audits.

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*Consumer products and services in every area of household need are being redesigned to satisfy more rigorous environmental standards.*

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#### *Clean Industrial Processes*

Firms in many industries are redesigning both their products and their processes to meet rising environmental standards. Familiar examples include closed-loop pulp mills, solar-powered cars and new processes for printing and dry cleaning. Some of this activity is done within the firm and some of it is undertaken on behalf of manufacturers by their traditional suppliers. Both the users and the suppliers of industrial processes have the opportunity to develop clean industrial processes in response to regulations and public demand.

#### *Multi-Purpose Technology, Products and Services*

There is a wide variety of technologies, products and services such as pipes, pumps and other apparatus that have many applications, of which the environment is only one. In general, these are standard products and the supplier may have little or no interest in the use made of them. However, as the demand for new investment to meet environmental goals expands, so will expenditure on such multi-purpose ancillary products and services.

#### *Environmentally Friendly Consumer Products and Services*

Consumer products and services in every area of household need are being redesigned to satisfy more rigorous environmental standards. The number of products and services being marketed as environmentally friendly has increased in recent years. Canada's Environmental Choice Program aims to provide coherent standards to define what makes a product environmentally friendly. Through the

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*This report focuses, particularly,  
on companies that provide dedicated  
environmental technologies,  
products and services.*

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ECO-LOGO, consumers are assisted in identifying relative environmental merits, and firms planning to launch new products or redesign old ones are using this program as a guide.

**Focus of the Report: Dedicated Environmental Companies**

This report focuses, particularly, on companies that provide dedicated environmental technologies, products and services. While some firms in this market have been offering services and products to meet environmental needs for many years, only recently has the sector attracted attention as a whole.

This report examines the marketplace for the products and services of dedicated environmental companies and it identifies what aspiring companies in the sector need to give them a competitive edge.



# The Environmental Market

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*Tracking the public mood and the intentions of governments in Canada can provide important indicators of new economic opportunities.*

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## **Rapidly Evolving at Home and Abroad**

The market for environmental technologies, products and services is large and growing rapidly around the world. Various estimates analysed by Industry, Science and Technology Canada indicate that the North American market is currently about \$120 billion per year and the European market is not far behind, at about \$100 billion. Real growth in the market is averaging about 6 per cent per year for all environmental industries. Some segments are growing by up to about 20 per cent per year.

The growth of the environmental sector is driven by the advance of the public environmental agenda. Stricter laws and regulations by governments at all levels are expanding the demand for environmental technologies, products and services. In addition, regulations have opened up an enormous variety of opportunities for new cost-effective solutions, providing stimuli to transform innovative ideas into commercially viable products.

## **Tracking the Business Opportunity**

Although there are sectoral and geographic variations in regulations throughout the world, there is a clear trend toward stricter regulations and environmental cleanups. Tracking the public mood and the intentions of governments in Canada can provide important indicators of new economic opportunities. Early indications of new market opportunities provide valuable intelligence to both traditional domestic suppliers and prospective market entrants from other countries.

It is also important to track the evolution of the regulatory framework in other countries, especially those where new market opportunities may emerge. Tracking those countries with the most exacting standards in a field is particularly important. Environmental companies that can meet these needs are well placed to meet similar or lesser needs in other jurisdictions.

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*Keeping informed can be a burdensome task, especially for the small company.*

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Keeping informed can be a burdensome task, especially for the small company. Many new and useful sources of information have become available in recent years. There is tremendous variety among them: specialized publications and reporting services; seminars and workshops; reports by polling firms; memberships in associations; government services; and consultants who specialize in staying current with particular issues.

*How are you keeping informed about market opportunities?*

# Building a Business Strategy for Growth

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*Organized around market opportunities, the most powerful business plan will reflect all of the basic business functions, such as marketing, technology development and acquisition, human resource development and sources and uses of funds.*

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The GLOBE '90 trade show and conference was an occasion for individuals and firms in the environmental industry to share their experience, their products and their insights into what it takes to tackle market opportunities successfully. Companies with bases both inside and outside Canada participated in the event. Many already have significant experience in international markets and are well placed to further develop their capacity to respond to new demands in other countries. Other participating companies were interested in strengthening their capacity to respond within a global market. What follows is a summary of some of the most important messages from their experiences.

## Make a Business Plan

A sound business plan is key to a successful effort to take advantage of the rapid growth in demand for environmental technologies, products and services. Organized around market opportunities, the most powerful business plan will reflect all of the basic business functions, such as marketing, technology development and acquisition, human resource development and sources and uses of funds.

Business plans are a prerequisite for any substantive business venture. They are even more important within the environmental market that is evolving rapidly; presenting a great diversity of opportunity; very sensitive to shifts in demand occasioned by altered government regulations; populated by many small companies; and, requires a high order of technical and entrepreneurial skills.

*Do you have a comprehensive business plan?*

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*Identifying and clarifying what is to be the focus of the firm's activities is the first and most essential step in shaping the business plan.*

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The absence of a thoughtful business plan and a commitment to keep it under review can become a major, self-imposed handicap. There can be an inclination, especially within smaller companies, to postpone or neglect the work that a careful business plan requires. There can always be something that seems more urgent.

### **Choose a Market Niche**

As the environmental agenda advances, many firms will be confronted with more business opportunities than they can handle. There will be a temptation to pursue these opportunities even if they do not reflect the strengths and expertise of the firm. The risks of becoming unfocused and over extended are great.

Invest in understanding your market niche. The better firms are at doing what they do best, the stronger they will be in the international marketplace.

Successful firms have chosen the problems and the market they are addressing very deliberately. Identifying and clarifying what is to be the focus of the firm's activities is the first and most essential step in shaping the business plan.

### **Search for New Business Opportunities**

Because the market is driven by new government regulations, it is important for companies to stay informed about existing and emerging regulations throughout the world. Opportunities to address environmental concerns may emerge anywhere in the world.

Successful firms, even those with an identified focus, keep the global market under review and yet confront and resist the temptation to be all things to all people. What this means is a constant search for new opportunities to apply their existing specialties

*Are you seeking to define a niche and to focus on it?*

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*... a company that places itself at the scientific and technological leading edge is poised to seize business opportunities throughout the world.*

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at home and abroad. Some firms have the capacity within the firm to pursue this search. For others, particularly smaller companies and those looking to enter the environmental market for the first time, specialist services are available to accelerate the search and match-making process. Such services include those offered by consulting companies, associations and government.

### **Science and Technology: Develop It—Acquire It**

Environmental companies are usually built around a specific scientific or technical specialty. In many areas, scientific understanding and technical ability are evolving very quickly. Sometimes, this occurs through quantum breakthroughs, sometimes through the rapid accumulation of several small improvements. Either way, a company that places itself at the scientific and technological leading edge is poised to seize business opportunities throughout the world. It may gain a strategic advantage through its own research and development. Or, it may license, for its own use, the products or technologies of others and apply them in new ways or in new markets.

Providing new, commercially viable technologies can be a costly and risky business. This is true for environmental companies of any size, but it is particularly true for new and smaller companies. The challenge is to keep risks and costs to a minimum while still getting the job done.

One way to reduce the risk is to gain a licence to use the work of others, especially technologies developed in other countries. Another way is to form joint ventures and other working alliances. Governments can also help with their provision of publications and directories, trade-promotion initiatives and general knowledge of emerging market needs and opportunities.

*Are you taking the time to define your market and track prospective opportunities?*



# Establishing a Marketing Edge

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*Longer term solutions—particularly those incorporated into the design of new capital acquisitions from the outset—offer better prospects of providing a positive rate of return on investment for the client.*

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## Sell Cost-Effective Solutions

Environmental companies market technologies, products and services that solve environmental problems. This can be exciting from an environmentalist perspective. There is a risk, however, if a firm loses sight of its fundamental goal of making a profit. To be a profitable supplier, it is important to sell cost-effective solutions that contribute to the client's corporate performance.

These days, the pace of regulatory change often compels client corporations to adopt short-term, end-of-pipe solutions, which have little or no payback. Longer term solutions—particularly those incorporated into the design of new capital acquisitions from the outset—offer better prospects of providing a positive rate of return on investment for the client.

In the long run, the market will likely diminish for both stop-gap solutions and those that do not contribute to the client's bottom line. Within a longer term planning framework, a positive rate of return on investments in environmental technology, products and services becomes an essential marketing feature for environmental companies.

*Do you have the scientific and technical competence to sell leading-edge technology?*

*How do your solutions contribute to your client's bottom line?*

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*... a high commitment to marketing is a characteristic of the most successful dedicated environmental firm.*

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*For many environmental companies, building partnerships can be one of the most powerful ways to develop new opportunities.*

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### **Bridge the Client-Supplier Gap**

The challenge of matching supplier and client is not easy in the environmental industry. Many firms in the industry are new, small, and just beginning to find their way. Prospective clients may have been confronted only recently by the need to solve an environmental problem. The search process for a solution on the part of a prospective client may also be an urgent one, such as the need to respond to an incident, breakdown or new regulation.

Because of these special features of the environmental marketplace, a high commitment to marketing is a characteristic of the most successful dedicated environmental firm. It includes market research, presentations to prospective customers and participation in trade fairs and conferences like GLOBE '90. It means deliberately building networking relationships through trade associations, government marketing programs and publications.

Of particular importance are the opportunities that may emerge by becoming known by the large engineering management companies. These firms, which manage large, complex projects both domestically and abroad, bring together many different skills and trades in the projects they undertake. Winning the respect of these suppliers can open many doors to contracts in the international marketplace.

### **Build Strategic Partnerships and Associations**

For many environmental companies, building partnerships can be one of the most powerful ways to develop new opportunities. These include:

- alliances with firms already established in foreign markets;
- joint ventures;
- technology-licensing agreements; and

*Do you have a well-developed marketing strategy?*



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*Trade and industry associations also provide valuable opportunities to build a stronger company . . . .*

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- working associations with large engineering firms that act as general contractors for large projects, whether at home or abroad.

Trade and industry associations also provide valuable opportunities to build a stronger company, networks for marketing and mechanisms to participate in building and shaping the priorities of the public policy agenda.

Environmental companies in Canada are fortunate in that there now exists throughout the country provincial associations that represent environmental industries. In addition, these companies have the benefit of the federally incorporated Canadian Environment Industry Association.

*Are you profiting from strategic alliances and partnerships?*



# Specialist Support for the Growing Company

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*New ways are emerging that allow innovators to commercialize their work and launch it in the private sector.*

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*Governments at the federal and provincial levels offer many types of assistance to dedicated environmental companies and their clients.*

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There are many services now available to assist the growing environmental company. There are established firms to assist with technical transfer, to help secure patent protection for innovations and to supply legal services for guiding environmental decision making.

The transfer of new technology from government laboratories, research institutes and universities to environmental firms is becoming increasingly important. New ways are emerging that allow innovators to commercialize their work and launch it in the private sector.

- New environmental technologies can be patented to generate royalties and fund future expansion.
- Legal guidance can help dedicated environmental firms and their clients focus their efforts and secure compliance with laws and regulations.
- Innovative arrangements can assist the transfer of technologies from the public sector to the private sector where they may become commercially viable.

Governments at the federal and provincial levels offer many types of assistance to dedicated environmental companies and their clients. Trade fairs, such as GLOBE '90 and sponsored trade delegations to other countries, are among the many services offered to help match client needs with supplier services.



## Conclusion

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*Shaped by the opportunity to solve environmental problems, guided by a focused business plan and driven by a commitment to marketing and technical excellence, the environmental company is positioned for success in a rapidly growing market.*

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Successful environmental companies operate from a strategic business plan that is kept current in response to rapidly changing opportunities. Service to the client—providing technologies, products and services that solve client problems in a cost-effective way—is the foundation of their success.

As the business plan is fulfilled and reshaped, operations are guided by three fundamental operating commitments:

- up-to-date knowledge of market opportunities and the laws and regulations that shape them, both in Canadian and international markets;
- care in defining the market niche and in the choice of products, services and technologies to serve it; and
- attention to market building throughout the global marketplace.

Shaped by the opportunity to solve environmental problems, guided by a focused business plan and driven by a commitment to marketing and technical excellence, the environmental company is positioned for success in a rapidly growing market.

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