

HC120
.E5
E53

c. 1 aa

Industry, Science and
Technology Canada

Industrie, Sciences et
Technologie Canada



IC

The Environmental Industries Sector Initiative:

An Overview and Progress Report for 1989-1990

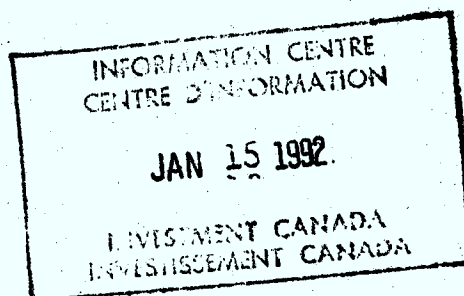
p 45

Canada

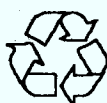
— 1000 —

ACCESS CODE CODE D'ACCÈS	CEEP
COPY / ISSUE EXEMPLAIRE / NUMÉRO	1

**The Environmental Industries
Sector Initiative:
An Overview and Progress Report for 1989-1990**



Environmental Industries and Projects Division
Surface Transportation and Machinery Branch
Industry and Technology Sector
June 1990



Printed on recycled paper

© Minister of Supply and Services Canada 1990
Cat. No. C2-141/1990
ISBN 0-662-57894-5

PU 0123-90-03

The Environmental Industries Sector Initiative: An Overview and Progress Report for 1989-90

Overviews and progress reports on programs or initiatives such as the Environmental Industries Sector Initiative (EISI) usually focus solely on objectives and what has been accomplished in relation to them within a given period. What we have done in 1989-90 to meet our objectives is important, however, **how** we have met our objectives is also important. Therefore, much of this report emphasizes our approach to meeting EISI's primary objective, which is to improve the competitiveness, at home and abroad, of Canadian industries that produce environmentally related goods and services. This emphasis is appropriate because the **manner** in which we meet this objective is critical to the Initiative's success.

What we have been able to do in our first year represents the collaborative efforts of those who have opted to buy into the Initiative.

In this report, we present an overview of the Initiative, looking at what it is and why it was launched. As noted, we will examine the collaborative approach the Initiative has taken so far and explain why we think this approach is appropriate. Finally, we will review some key accomplishments for 1989-90. These accomplishments represent the collaborative efforts of various stakeholders who have opted to buy into EISI, and participate in it.

A Brief Overview of EISI

Industry, Science and Technology Canada (ISTC) launched this two-phased project on April 1, 1989. 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.

Why EISI?

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, 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.

A great deal of preliminary work was needed to overcome some very real impediments to the sector's ability to reach its potential.

In Canada, as in other countries, the concept of sustainable development has taken hold, and the search is on for the tools — products, services and expertise — needed to translate the concept into action. However, despite a growing number of customers for these tools and Canada's international reputation as a leader in environmental management and technology development, the environmental industries sector has not been well placed to market what it has to offer. Several factors account for this situation:

- The sector is fragmented — consisting primarily of many small firms with limited finances and international marketing experience.
- The sector is unfocused — research and expertise scattered among private manufacturing and consulting companies, government agencies, universities and other institutions.
- The sector does not have a well defined identity. Its new national association, The Canadian Environment Industry Association, which was formed in May 1989, is only beginning to give the sector visibility.
- When EISI began, little or no information was available on the sector itself — its size and the players, with their respective financial, technical and research strengths and capabilities were relatively unknown.
- Little information on existing and potential domestic and international markets was available on the sector.
- No one had determined which technologies the sector should concentrate on in order to put it in the best position to take advantage of current and emerging market opportunities.

The Department's Approach

The Basic Principles

When ISTC was deciding how the Initiative was to accomplish its mission, it became clear that a traditional, department-centred approach for managing the project would not be appropriate. What was needed was an approach that would enable EISI to draw on a range of resources from outside the Department.

The reasons were clear. First, no one had tried to consolidate the available information on the sector, and as a result, the Department would have to collect and synthesize even the most basic sectoral data before it could proceed. Second, the list of potential stakeholders and others who might be affected by the Initiative was very broad. Finally, ISTC recognized that no government organization would have the expertise and resources needed to assume responsibility for developing and carrying out a project such as EISI on its own.

A different management approach was essential to mobilize the necessary human and financial resources to get the job done. The 3 Cs evolved as the best way to get the right mix of people and organizations working together to meet our objectives.

Networking is a key part of our approach. It reinforces EISI's philosophy of opening up the Initiative to as wide a group of stakeholders as possible and enlisting their support and participation.

For these reasons (and others) a non-traditional management approach emerged. This approach has the following unique characteristics:

- It relies on team building in a non-hierarchical environment.
- It is geared toward providing leadership in getting others to solve problems — it has not tried to provide the solutions by itself.
- It 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. EISI's approach is to tie their efforts together and to get them to use their respective strengths in developing collective, coordinated strategies for helping EISI to meet its objectives.

Building a Consultative Network

The key elements of the Initiative's organizational structure are its Federal-Provincial Committee, Sector Development Team, and three Working Groups. All are closely interconnected and geared toward developing a network to facilitate consultation. For example, federal government departments involved with the Initiative often have people on the Sector Development Team and in one or more of the Working Groups. These departments include, among others, ISTC, Environment Canada, Statistics Canada, External Affairs and International Trade Canada (EAITC), the Export Development Corporation, Investment Canada, the Canadian International Development Agency (CIDA), the National Research Council, Employment and Immigration Canada, Energy Mines and Resources Canada, Fisheries and Oceans and Supply and Services Canada. The governments of Manitoba, Alberta and Ontario are also represented. This departmental cross-representation encourages networking and consultation between the groups and within the groups themselves.

EISI's Federal-Provincial Committee provides another example of how the 3 Cs approach has succeeded in establishing networks between the Department, the provinces and industry. The Committee is building a network of provincial teams so that EISI can forge even closer links with public and private sector stakeholders in the provinces.

Finally, Reference Groups complete the consultative network with EISI forming the first group (Science and Technology) in March 1990. The purpose of these Reference Groups is to enable EISI to benefit from the perspectives of non-government constituencies or groups of stakeholders. EISI will be assembling other Reference Groups as they are deemed appropriate.

We have attracted a broad community of stakeholders who are committed to nurturing ideas and carrying them forward.

EISI's Long-term Perspective

EISI's approach, based on consultation, collaboration and consensus, was possible only because ISTC made a relatively long-term commitment to the project. Recognizing that such an approach would take time to gain momentum and produce results, the Department committed itself to supporting the project for a number of years and this commitment has paid off. We have had the time to develop links with a broad community of stakeholders who are working with great enthusiasm to make EISI a success.

These stakeholders include organizations such as the Conference Board of Canada, municipal governments, business and trade associations and anyone else who might have an interest in a stronger environmental industries sector. One of our goals is to give life to an idea and then, at the appropriate point, pass responsibility for nurturing and carrying it forward for the longer term to our stakeholders .

On the following pages are brief descriptions of some of EISI's key accomplishments for 1989-90. It is important to note that we were able to do *what we did* because of **how** we did it. Our approach has made it possible for us to open the project up; it has allowed us to create a pool of expertise and other resources that would have been impossible to duplicate using a traditional, department-centred approach.

Some Key Accomplishments for 1989-90

This partial list of EISI's endeavours for the 1989-1990 fiscal year shows clearly the results of a process based on consultation, collaboration and consensus. It also shows what can happen when organizations are presented with a problem and asked what they might be able to do to help solve it. Our experience has been that they usually develop a stake in finding a solution; given this stake or sense of ownership, they often agree to commit some of their own resources to working with others on the problem.

The Industrial Wastewater Project

Investment Canada, ISTC, EAITC and the private sector are involved in what is an excellent example of government and industry working together.

In 1989-90, ISTC co-funded and collaborated with Investment Canada on the Industrial Wastewater Project, where the objective was to enhance the international competitiveness of small and medium-sized Canadian companies so they might exploit the growing global demand for technology and expertise in managing industrial wastewater.

A well-known expert on industrial wastewater was hired to gather information on companies and other organizations in the industrial wastewater business and identify the most promising firms out of approximately 150 in the field. The study yielded a document that profiles 30 Canadian companies and research and scientific institutes. Still in draft form at the time this publication was being completed, the document is intended as a basic marketing tool that will describe the interests and capabilities of the 30 organizations it profiles while providing them with an identity and heightened international visibility.

Two parallel pilot studies of industrial wastewater entities in France and Japan were also launched in 1989-90. When the results appear later this year, they will provide comparative information on business opportunities in these two international markets. EAITC and the International Affairs Branch of ISTC co-funded the study in France, and EISI funded the one in Japan. In essence, these studies will establish bridges linking Canada's industrial wastewater business with its counterparts in those two countries.

Taken together, the Canadian, French and Japanese studies will allow us to look at what we are doing and what the French and Japanese are doing, while identifying what we can do together. These areas of mutual interest include raising capital, arranging partnerships to enter new markets, sharing knowledge, pooling research and expertise and arranging licensing agreements.

As part of the project, EAITC agreed to assist Canadian companies who wanted to attend "IFAT '90", an environmental technology fair to be held in Munich this year, and as a result of groundwork completed in 1989-90, a number of companies will attend the fair. EAITC, with its extensive trade contacts abroad, set up a program to help these firms promote and market their technological capabilities by introducing them to the right people. In addition, EAITC helped to defray some of the costs of making the trip which, for some firms, would have been prohibitive.

The Industrial Wastewater Project is continuing in 1990-91 with EISI continuing to consult with the provinces in order to refine and add to the profiles of companies and research facilities in the industrial wastewater field. Investment Canada and ISTC will each fund 50 percent of the project's cost for the 1990-91 fiscal year and Investment Canada has also contributed one full-time person to help manage it. This work will help us all to better understand Canada's strengths and capabilities relating to this area, without this commitment, the project would not have been able to continue.

Sectoral Studies

When we started in April 1989, little if any comprehensive, consolidated information was available on the environmental industries sector. To fill this gap, we funded and co-funded several research studies aimed at gathering data on which we could build a foundation for subsequent work. To this end, the studies examined three aspects of the sector: economic characteristics; prospective domestic and international markets; and critical scientific and technical areas the sector should focus on to meet current and future market demands.

EISI's consultative approach extended to defining the terms of reference for these studies. We felt that we needed quality (i.e. useful and relevant) information, and that developing sound terms of reference through consultation was critical to ensuring that we would get it. So we asked the Sector Development Team members (including representatives from ISTC, seven other federal government departments and the provinces of Manitoba and Ontario) to review the terms in detail and provide their input. This consultative exercise helped us to ensure that we would produce quality research work by providing a wide variety of perspectives on what information we needed and who should develop that information. It also helped to prevent us from re-inventing the wheel.

Consultation was a key part of the process of defining the terms of reference for our research projects and has paid dividends in terms of quality of information.

The following are some highlights of sectoral research for 1989-90:

- ISTC and Environment Canada collaborated on the development of a preliminary structure for classifying environmental products and services. This was a first step in coming to grips with the difficult problem of identifying environmental activities and the products and services associated with them. We consulted with industry from the earliest stages of our research, with the subsequent work performed in 1989-90 providing a basis for further consultation with industry and its associations, government and others interested in refining the classification structure.
- Early in 1989-90, EISI asked Statistics Canada to refine and augment certain existing information on the environmental industries sector and provided funds for this task. Late in 1989-90, Statistics Canada made a significant commitment to survey a number of important topics, including waste handling, and offered to fund about 50 percent of this work as part of its own workplan and to contribute the people to ensure the project's success. When the work is completed, we will have a more accurate and comprehensive economic picture of the sector.
- In the spring of 1989, EISI began consulting with representatives from the Atlantic Provinces to establish the terms of reference for a study to develop an economic profile of Atlantic Canada's environmental industries sector. The study is an excellent example of how the Initiative has been able to bring other organizations together to participate in a project and share in its costs and benefits. Early in 1990, a consulting firm was hired to carry out the work, scheduled to be completed in the summer of 1990. The study will assess the demand for environmental products, services and expertise in the four Atlantic provinces. It will also assess the region's ability to meet those demands and list all firms in Atlantic Canada that sell environmentally related goods and services to domestic and foreign customers. EISI is funding about 65 percent of the project costs with the four Atlantic Provinces, the Atlantic Canada Opportunities Agency (ACOA) and Environment Canada agreeing to fund the rest according to the resources each could commit. Information generated by the study will be used to set priorities for developing the environmental industry sector in Atlantic Canada, with obvious economic benefits for the region.
- In March 1989, a Reference Group of experts from industry and research institutes met to help guide the efforts of the Working Group on Critical Science and Technology. In addition, two complementary studies were launched and are scheduled for completion in the summer of 1990. These studies will profile the capabilities of Canadian producers of technology and the technological needs of user industries.

The four Western provinces are considering a similar study for Western Canada and ISTC has been working with them to develop appropriate terms of reference toward that end.

Sectoral research represents mutual interest and collaboration.

The Moncton Symposium

In February 1990, a symposium entitled "The Environment: Make It Your Business" took place in Moncton, New Brunswick. Its purpose was to stimulate ideas for generating environmentally related business and research in the Province. The Moncton Symposium illustrates how EISI has used its collaborative approach to attract broad financial and people support from government, the private sector, trade associations and the academic world.

Recognizing that developing businesses and promoting research oriented toward cleaning-up pollution or reducing and eliminating sources of pollution could mean tangible economic and environmental benefits for the province, ISTC's Moncton Office used seed money from the Initiative to pave the way for developing a network of New Brunswick organizations to support the symposium. As a result, the following New Brunswick organizations agreed to co-sponsor the symposium along with ISTC and Environment Canada:

- The New Brunswick Department of Commerce and Technology
- The New Brunswick Department of the Environment
- The Environmental Sciences Research Centre, Université de Moncton
- The Premier's Round Table on the Environment and Economy

EISI's emphasis on networking and getting others to collaborate and participate in projects such as the Moncton Symposium will produce real benefits for the sector. Experience has shown that the 3 Cs approach has enlarged the community of stakeholders in the Initiative. These stakeholders have contributed a catalogue of financial and other resources that would have been difficult (if not impossible) to attract had EISI used a department-centred approach.

Looking Ahead

EISI made good progress in its first year. Its consultative mechanisms were firmly established in 1989-90, and it is continuing to build new ones with the provinces and industry through EISI's Federal-Provincial Committee and Reference Groups. The progress that has been made (and will continue to be made) through these mechanisms has been possible only because of the three hallmarks of EISI's approach: Consultation, Collaboration and Consensus.

With much help from others, EISI has completed key research that will yield a more accurate picture of the sector and its markets. Other research has focused on identifying which scientific and technical areas should be given priority if the sector is to develop to its full potential. More research into its economic, market and scientific and technical dimensions is continuing and will be completed by the end of this fiscal year.

Preliminary work was done last year to help the industry heighten its profile. Work is continuing this year. For instance, as a result of a feasibility study completed in 1989-90, consultations between EISI and the private sector to organize an annual trade show and conference to showcase Canadian environmental products and services have been made possible.

By the end of the 1990-91 fiscal year, we will have made a good start in communicating the results of our work to our stakeholders. We will have begun to integrate and package data from our research, as well as other information, so that others can use it.

We look forward to reporting our progress in these areas in the coming months.

For more information on the Initiative, please contact:

Project Manager
Environmental Industries and Projects Division
Surface Transportation and Machinery Branch
Industry, Science and Technology Canada
235 Queen Street
OTTAWA, Ont.
K1A 0H5

Tel.: (613) 954-2989

Fax: (613) 954-3430

