



Case Study **September 2005**

The Environmental Skills Internship Project Cleaning Up on Skills Training in Cape Breton's Budding Environment Sector

This case study looks at the impact that ECO Canada's Environmental Skills Internship (ESI) project is having on local businesses within the environment sector in Cape Breton, Nova Scotia. It explores how the ESI project affects the capacity of organizations to maximize their human resources potential, recruit and develop skilled personnel, and contribute to the building of the local economy. It also considers the keys to success of the ECO Canada ESI project and offers insights into how this model might be replicated or adapted by other Sector Council initiatives.

Canada's environment sector employs more than 250,000 people in approximately 10,100 organizations. Small and medium-sized firms dominate the Canadian environment industry: in 2002, small businesses made up 93 per cent of all establishments in the environment industry and earned 54 per cent (\$8.5 billion) of total environment industry revenues.¹ Four industry groups make up most of Canada's

environment industry: wholesale trade (29 per cent); waste management and remediation services (24 per cent); construction (11 per cent); and engineering services (7 per cent).²

Environmental practitioners make up the majority of workers in the sector, accounting for 66 per cent of the workforce (166,000 workers) in 2003.³ Most environmental practitioners (74 per cent) work in organizations with 50 or fewer employees: 37 per cent are employed in organizations with 2 to 10 employees; 28 per cent work in firms with 11 to 50 employees; and 9 per cent are sole proprietors.⁴ The primary activities undertaken by environmental practitioners and their organizations include water quality testing, monitoring and management; water pollution abatement; waste management, collection, treatment and disposal; environmental

training and education; communications and public awareness; and site remediation, restoration and reclamation. This case study focuses on environmental practitioners in the area of site remediation, restoration and reclamation.

A GROWING SECTOR SEEKING SKILLED WORKERS

Growing at a rate 60 per cent faster than that of the Canadian economy, the environment sector has abundant job opportunities for skilled and knowledgeable individuals. In 2004, approximately one in four organizations was actively recruiting environmental practitioners for a total of nearly 12,000 job vacancies. In order for the environment sector to maintain its current growth rate, it is critical to identify and address any real or potential human resources issues. The primary challenges currently facing the environment sector include:

- the recruitment and retention of skilled and experienced workers;
- continuing professional development; and
- the development of leadership and communications skills to address middle-management skills gaps in many organizations.

The environment sector is growing at a rate 60 per cent faster than that of the Canadian economy. Identifying and solving human resources challenges is critical to this sector's continued growth.

Established in 1992 as part of the Government of Canada's Sector Council Program, the Environmental Careers Organization of Canada (ECO Canada) addresses the human resources challenges facing the Canadian environment sector by developing strategies and programs that promote and enhance human resources standards. ECO Canada caters to the needs of four primary environmental client groups: employers, environmental practitioners, educators and students. Its mission is to ensure that the environmental human resources needs of the public and private sectors across Canada are met by assisting in the development of skilled and knowledgeable people.

This case study examines one of ECO Canada's environmental human resources development programs, the Environmental Skills Internship (ESI) project. The ESI is a work experience and subsidized employment program that provides wage subsidies to Cape Breton-based environmental businesses as a means of building their long-term human resources capacities and overall capacity in the region's budding environment sector.

The ESI project is currently focusing its attention on establishing 30 new environmental employment opportunities for recent graduates and displaced workers, and on providing assistance for customized professional development and training.

The objectives of this case study are to identify:

1. The economic impacts that the ESI project has on local businesses within the environment sector in Cape Breton;
2. The economic and social impacts that the ESI project has on the local economy;
3. The benefits that displaced workers and post-secondary graduates gain by participating in the ESI project; and
4. The keys to success of the ESI project and insights as to how this internship model might be replicated or adapted by other Sector Council initiatives.

Qualitative and quantitative data used in this study were gathered using a number of research techniques, including a review of Sector Council, government and environmental literature, and a series of in-depth interviews and conversations with 19 employers, consultants, interns, educators, displaced workers and ECO Canada employees.

ECO CANADA'S ENVIRONMENTAL SKILLS INTERNSHIP PROJECT

Launched in November 2002, the ESI project has the overarching objective of developing a critical mass of environment remediation expertise in Cape Breton. This expertise will allow local firms to prepare for and successfully bid on current and future major remediation projects in Cape Breton, including:

- the cleanup of the Sydney tar ponds/Muggah Creek watershed;

- the decommissioning and cleanup of Sydney Steel Company, an abandoned steel plant;
- the decommissioning and cleanup of mine operations—181 old mine sites located throughout the region; and
- the decommissioning of the Seabord Power Plant (Nova Scotia Power Inc.).

The unique environment issues facing the Cape Breton area, such as the Sydney tar ponds, are of great concern to local citizens and to all levels of government.

The long-term objective is to create capacity to deal with similar toxic waste clean-up projects anywhere in Canada or other countries on a “flying squad” model similar to that of Alberta wild-well fighters, where practitioners return home between contracts. On a more functional level, the ESI project reduces the risk for companies involved in hiring young professionals or displaced workers, and it offers post-secondary graduates and displaced workers the opportunity to get a head start in an environmental career.⁵

Specifically, the goals of the ESI project are to:

- improve the retention rates of qualified Cape Breton youth and displaced workers;
- spur job creation in the environment industry;
- increase regional prosperity and employment rates; and
- build local expertise and develop export capacity within the environment industry in Cape Breton.⁶

A UNIQUE INTERNSHIP PROJECT

The ESI project is unique among ECO Canada’s internship projects for a number of reasons. First, it targets a major, politically charged environment remediation challenge facing the Cape Breton region. Second, the project was developed in collaboration with the Cape Breton Growth Fund (CBGF)—a federal–provincial economic adjustment fund—and private industry. Third, it is funded entirely through the CBGF. Fourth, ECO Canada established an Atlantic Canada regional office in the Sydney area in order to oversee the administration

of the project. Finally, the project offers a wage subsidy that is unmatched by any of ECO Canada’s other internship programs in terms of internship duration and the value of the remuneration to companies.

THE NEED FOR ENVIRONMENT REMEDIATION IN THE CAPE BRETON REGION

Cape Breton has been a rich mining source since the 1700s. For over a century—1900 to 2003—the Sydney Steel Corporation in the Muggah Creek watershed provided jobs for residents of Sydney. It also produced large volumes of water and air pollution from the plant’s furnaces and coke ovens, contaminating the groundwater and surface water with arsenic, lead and other toxins. As a result of the plant’s activities, about 700,000 tonnes of chemical waste and raw sewage, including 40,000 tonnes of polychlorinated biphenyls, accumulated in an estuary the size of three city blocks known as the tar ponds.⁷

Environment Employers

Environment employers are organizations that employ one or more individuals who work toward the protection of the environment, the conservation of natural resources or environment sustainability—whether or not an organization’s activities take place directly within the environmental profession.¹

¹ See: ECO Canada, www.eco.ca/portal/employer.aspx?display=main.

The unique environment, health and safety issues facing the Cape Breton region are of great concern to local citizens and to all levels of government. With these challenges and concerns also come some real opportunities to build local remediation expertise and employ local people in the clean-up work.⁸ The ESI project is working collaboratively with the environment sector to create upward of 30 new employment opportunities in this burgeoning remediation industry.⁹ It also has the potential to form the basis of a new industry that exports the expertise, knowledge and services developed during the impending remediation process in Cape Breton.

Over the next 10 years or so, about \$942 million in environmental services will be required to complete the remediation projects, including an estimated \$102 million in professional services and \$760 million in technical services.¹⁰ The remediation services will include site

assessments; environmental inspection; risk assessment; engineering design, procurement, construction, installation, operation and management of remediation systems; environmental sampling, materials testing and analytical laboratory services; hazardous materials transportation and disposal; regulatory liaison and legal services; and research and development.

If Cape Breton businesses are to maximize their participation in these upcoming remediation projects, they will need to carefully determine their business plans, their education and human resources training plans, and their human capital plans. The ESI project

helps mitigate some of the risks associated with making strategic capital investments in human resources in advance of funding commitments from different levels of government for these projects.

A testament to the current and potential economic opportunities in this sector of employment is the fact that there are now more than 20 companies (including nine environmental consulting firms) with long-term offices in the Cape Breton region—all working on remediation projects or preparing for the onslaught of anticipated work once a finalized project plan is agreed upon by the Government of Canada and the Province of Nova Scotia.¹¹ An additional six environmental consulting companies involved in the cleanup of the tar ponds and coke ovens sites have developed a local presence, to varying degrees, over the past few years. There are also numerous groups and organizations attempting to promote use of their technologies in the clean-up process, and contractors from around the globe are vying for the opportunity to be part of this large-scale remediation project.

ECO Canada

Activities undertaken by ECO Canada in support of building careers and professions in the environment sector include the following:¹

Career Information: meeting the needs of students, mid-career practitioners and others exploring career options through customized career-planning tools.

Job Board and Recruitment Services: meeting the needs of job seekers and job posters through an online job board that includes an online résumé bank and a professional development centre.

Work Experience: helping graduates make the transition from post-secondary institutions to the workforce through subsidized internship work experiences.

Professional Development Services: providing practitioners with an online database of environment competencies and essential skills courses.

Employee Retention Strategies: assisting in the development of human resources retention and recruitment practices, and career change and career development initiatives.

Certification: providing practitioners with formal documentation of their skills and experience through the Canadian Certified Environmental Practitioner and Canadian Environmental Practitioner in Training designations.

Career Change and Career Development: providing mid-career workers and newcomers to Canada with tools to complete self-assessments, interest tests and career-matching analyses.

Human Resources Trends for Workforce Planning: providing statistics and trends on the environment labour market.

Documentation of Environmental Skills and Knowledge: providing national occupational standards for environment employment as the foundation of the certification process.

Building Environmental Aboriginal Human Resources: increasing Aboriginal employment in the sector by promoting career awareness, providing training and employment resources, and recognizing environmental excellence.

¹ For more information about ECO Canada and the activities it is involved in, go to www.eco.ca/portal/about_cchrei.aspx?display=activities.

ECO CANADA'S ENVIRONMENTAL SKILLS INTERNSHIP MODEL

THE CBGF-ECO CANADA PARTNERSHIP

The Cape Breton Growth Fund is a \$98-million economic adjustment fund, comprising an \$86-million contribution from the Government of Canada and a \$12-million contribution from the Province of Nova Scotia. Since its inception in 1999, the CBGF has worked in collaboration with existing government programs to promote the financing and development of industry on Cape Breton Island, provide employment opportunities outside the coal industry and broaden the base of the region's economy.¹²

The CBGF is the responsibility of the Minister of the Atlantic Canada Opportunities Agency (ACOA), who is responsible for policies and programs designed to encourage economic development in Atlantic Canada and, in particular, to enhance the growth of earned incomes and employment opportunities. The Minister, the Honourable Joseph McGuire, is also responsible for the Enterprise Cape Breton Corporation (ECBC).¹³

In 2003 the CBGF partnered with ECO Canada to administer the ESI project. CBGF funding for the internship project is approximately \$1.6 million and is being used to create 30 new employment opportunities within Cape Breton’s emerging environment industry.

THE ESI FUNDING MODEL

ECO Canada’s internship programs typically run for a year, and cover the costs of 33 to 40 per cent of an intern’s salary to a maximum of \$12,000. They offer graduates or displaced workers a short-term opportunity to get their feet in the door of an environment organization.

Companies that agree to be part of the ESI project necessarily develop a vested interest in the success of the interns they hire.

On the other hand, the ESI project, in partnership with the CBGF, provides Cape Breton–based environment organizations—and national environment consulting offices with a local presence—with a three-year wage subsidy of up to \$33,200 for the entire duration of the internship. In addition, the ESI project covers some of the professional development and training costs of interns, up to \$5,000. Table 1 below illustrates the typical funding schedule of the ESI program.

Three-year subsidy	Amount of wage subsidy/year
Year 1	50 per cent of gross annual salary up to \$15,000
Year 2	35 per cent of gross annual salary up to \$11,200
Year 3	20 per cent of gross annual salary up to \$7,000
Training subsidy	50 per cent of matching training resource up to \$5,000
Total	Up to \$33,200 + \$5,000 training subsidy Total of up to \$38,200

Sources: The Conference Board of Canada; ECO Canada.

While the ESI funding model offers a substantial wage subsidy to employers over the three years of the program, it intentionally covers only a percentage of an intern’s salary, based on a sliding scale over the three years.¹⁴ Companies that agree to be part of the ESI project therefore have a vested interest in and commitment to the success of the interns they hire. To illustrate this point, let’s assume that an intern’s gross salary is \$30,000 per year. Over the course of the three years, his or her gross salary would equal \$90,000. In the first year of the ESI project, the employer is required to pay 50 per cent of the intern’s salary—or \$15,000. In the second year, the employer is responsible for 65 per cent of the salary—or \$19,500; and in the final year the employer is committed to 80 per cent of the salary—or \$24,000. Although the employer has saved \$31,500 in salary by being part of the ESI project, it has also invested \$58,500 of its own resources. There is little doubt, therefore, that an employer will be committed to developing the intern’s knowledge and skills.

The ESI project funding model creates the foundation upon which long-term human resources capacity in Cape Breton’s environment sector can be built. While only time will tell how successful this initiative will be in achieving its longer-term targets, the short-term results have been very positive and are the focus of the remainder of this report.

THE INTERN SELECTION PROCESS

Potential candidates are screened, short-listed and selected through ECO Canada’s Sydney office in consultation with the local environmental companies interested in the ESI program. Interns are typically found through a number of ECO Canada’s resources and services, including its online job board, its recruitment and career information services, and its career change and career development services.¹⁵ As well, ECO Canada has a list of pre-screened graduates seeking internship positions who have their résumés posted on ECO Canada’s website, to which ESI-participating companies have access using the online résumé search tool. Companies may also post their internship positions on ECO Canada’s job board, or post the work placement opportunity on their own network and find a candidate who fits the eligibility criteria.¹⁶

Once a candidate is selected for employment, his or her name is passed on to ECO Canada, where the application is evaluated for eligibility and a funding recommendation; if successful, the company will receive the necessary documentation to begin the internship. Ultimately, the intern's coordinates and accompanying documentation are forwarded to the CBGF, as it is this office that manages the program's \$1.61-million budget and issues salary reimbursements on a quarterly basis to employers.¹⁷

The ESI project helps post-secondary graduates and displaced workers make the transition to the environment workforce. It can also improve an organization's ability to compete for environment remediation contracts.

Typically, interns are selected based on their educational background, knowledge, ability to perform relevant tasks and job functions, career interests, and overall attitudes and personal work ethic. Employers look for a good match between a potential intern's skills and knowledge and the needs of the company in terms of its area of environmental specialization. As well, they look for a good fit between an intern's character and the culture of their company. MGI Limited, for example, was able to hire an intern with a specialty in environment site assessment and a familiarity with the Cape Breton Development Corporation site.

A DEMAND-DRIVEN INTERNSHIP PROJECT

The ESI project is a demand-driven internship model. Research conducted on behalf of the Environmental Remediation Task Force, part of the CBGF initiative, looked into the human resources of local environment companies and noted that there will be a shortfall of approximately 60 environmental practitioners. Interestingly, this shortfall is not predicated on a lack of local talent, as there are plenty of professionals with technical, technological and science backgrounds who are either graduates of local post-secondary institutions¹⁸ or displaced workers.¹⁹ However, there is concern that without sustainable long-term environment work on the island, talent might leave before the remediation projects come into full swing. The ESI project acts, in part, as a good bridging and skills development initiative.

MATCHING HUMAN RESOURCES DEMAND WITH SUPPLY

Taking this into consideration, if the CBGF and other organizations had decided to do nothing, it is estimated that anywhere from 50 to 85 per cent of the future environmental practitioner and remediation jobs might be filled by people from outside the region. However, the CBGF did act on recommendations coming from various studies and committees, and—in partnership with other delivery organizations, such as ECO Canada—implemented two programs to address and overcome the potential local environmental skills gaps. The first offers wage subsidies and training resources for 30 post-secondary graduates through the ESI project, and the second offers training assistance to 20 current environmental practitioners in order to upgrade their skills and build management capacity within their organizations. These two CBGF-funded initiatives offer a real opportunity for local companies and local environmental practitioners to build up their human resources capacity and successfully bid and work on a substantial portion of the estimated \$700 million of remediation projects yet to get underway.

Clearly, the objective of ECO Canada's ESI project to offer local employers and 30 skilled and knowledgeable interns the opportunity to come together in a win-win skills development and human resources capacity-building project is not based on some arbitrary number. It is based on carefully considered labour market information—including environmental employment data for Cape Breton, extrapolated from Statistics Canada's *2002 Environment Industry Survey: Business Sector*—and on the results of conversations with the major environment companies and consultants in the region about their anticipated human resources needs.²⁰

IMPACTS OF THE ESI PROJECT

The ESI project helps post-secondary graduates and displaced workers make the transition into the environment workforce, and it offers environment organizations an opportunity to enhance their human resources capacities and compete for environment remediation contracts that they would not have been able to bid on otherwise. Finally, and perhaps most significantly, the ESI project improves the retention of qualified Cape Bretoners in the region, and ultimately increases regional prosperity and employment rates.

IMPACT ON BUSINESS

Building Corporate Capacity

One of the biggest issues in the environment field is building capacity within firms. When a big contract comes along, it is often difficult to successfully compete for it because it is hard to find the right people to complete the job. The ESI project gives firms such as AMEC Earth & Environmental Limited, MGI Limited and Dillon Consulting Limited a bit of a competitive edge by building capacity in their companies.

Companies use the ESI project to hire recent graduates or displaced workers full time and, through a blended approach of on-the-job learning and formal training, develop the skills and knowledge of interns so that they can play a bigger role within the company. One business manager noted that as the interns' skills grow, the company's capacity to bid on contracts and successfully complete them grows too.

Depending upon the size of the company, hiring one or two ESI interns can have a significant impact on the capacity of the organization. Companies interviewed for this study indicated that they were able to increase their human resources capacity by 9 to 33 per cent on account of the ESI project. Without it, many would not have brought on the number of employees that they did (ranging from one to four new hires).

Because interns come to companies with a degree or diploma in environment studies or a related discipline, or with years of relevant experience and knowledge gained from previous employment, they are able to add to the productivity quotient of a firm very quickly—which is a good thing in this competitive industry.

One company interviewed for this study, Dillon Consulting Limited—a Canadian-owned firm with 20 offices in Canada and other countries, and with a Sydney office of 15 people—has benefited greatly from the ESI project. It has taken on, or is in the process of taking on, a total of three ESI interns, who will add greatly to the Sydney office's capacity and knowledge base. According to the managing partner at Dillon, if the ESI project were not in place, the company would have hired only one or two individuals over a much longer period of time, because of the availability of work and the capital resources needed to hire new staff.

The ESI project, through its wage subsidy and training budget, gives Dillon's Sydney office the opportunity to hire the practitioners it needs two or three years earlier than it would otherwise have been able to do. With this human resources advantage, Dillon has put itself in a competitive position to bid on current environment science and engineering work and utilize local staff. Dillon has positioned itself favourably by having skilled, capable and knowledgeable practitioners ready to work on remediation projects as soon as they become available.

The bottom-line impact of the ESI project on the 20 environment consulting companies and contractors in Cape Breton is that it increases their work capacity (which usually translates into increased revenues) by matching their skills and knowledge needs with a pool of affordable, skilled and knowledgeable entry-level field technicians, technologists, geologists and environment scientists. The ESI project has assisted five companies in the region so far by boosting their human resources capacities in anticipation of forthcoming remediation work.

One business manager noted that as the interns' skills grow, the company's capacity to bid on contracts and successfully complete them grows too.

MGI Limited is another firm that has chosen to be part of the ESI project. This has given the company the means to hire two employees instead of one. Not only did the ESI project increase the company's human resources capacity by a factor of two, but it also allowed it to successfully bid on more work, get into new lines of business (by matching the skills of the interns with the needs of the business) and, ultimately, bring in more revenue. As well, by hiring interns through the three-year project, the company no longer has to let go its new hires in the off-season.²¹ With access to subsidized wages and the training resource, MGI Limited can keep its interns employed over the winter months and train them in new job functions, skill sets, and activities in such areas as writing and reading reports, understanding the business side of a consulting company, cleaning and repairing field equipment, writing proposals, responding to requests for proposal, and helping with costing activities. By building valued skills and knowledge during the off-season, and by maintaining a year-round dedicated

and committed workforce,²² the company benefits by increasing the competencies and capacities of new employees.

Building a Skilled and Productive Workforce

Because ESI interns are hired for three years, local employers are much more inclined to commit to and invest in their formal and informal skills development. Training is also facilitated by the fact that the ESI project has a \$5,000 matching training budget that employers can access. For example, one multinational company with a local office in Sydney hired an intern who did a lot of quality control checks in her first year—typical entry-level work. In the second year of her internship, managers wanted her to become proficient in a number of areas that they felt the regional office would eventually require. They were able to send her on a number of training courses in areas such as risk assessment and portable gas chromatography (a point detection tool used to identify toxic chemical materials). Today, 80 per cent of the intern's billable hours are dedicated to risk assessment work. This adds directly to the bottom line of the local office, which would have otherwise outsourced the work to a third party located outside Cape Breton.

The ESI project offers students and displaced workers an enticing opportunity: a three-year paid internship with a heightened possibility of full-time employment afterwards.

Another geotechnical engineering firm in Cape Breton noted that the ESI project gives its local office a bit of breathing room when hiring new staff in anticipation of future megaprojects in the area. The wage subsidy and training resource that the ESI project offers also allow companies such as Jacques Whitford Limited and MGI Limited to provide specialized training to interns in preparation for future environment work. One intern at MGI Limited, for example, received specialized HAZMAT training (a \$2,000 hazardous materials training course) through the support of the ESI project.

Typically, in the environment sector, companies will bid on work, and if they are successful they will then go about finding the right people to complete the

contract. The ESI program allows a company to see who is coming through the door in advance of securing remediation work—and if there is a fit between the employer and a potential intern, it can train him or her according to its business needs, and ultimately keep that person on as a full-time, productive employee. Certainly, it is not in the interests of any company to invest time and money in the development of a junior employee who will have to be let go. The ESI project mitigates much of this risk for companies. For example, a company such as Jacques Whitford Limited, with 26 offices across Canada, is more willing to take on a new employee because of the ESI project. If the business climate in a particular region is sluggish, the company can consider resource-sharing its staff among its other offices, and not have to let valued, skilled and company-knowledgeable employees go.

IMPACT ON POST-SECONDARY GRADUATES AND DISPLACED WORKERS

Students, recent graduates and displaced workers hear about the ESI project through a number of different sources, including the ECO Canada website, word of mouth, newspaper classifieds, friends and family, businesses, and classroom presentations by ECO Canada staff at local educational institutions. It is an enticing and attractive opportunity, and one that many students and displaced workers jump at—a three-year paid internship with learning and training opportunities and a heightened possibility of full-time employment after completing the ESI project.²³

Some of the major benefits that graduates and displaced workers have realized through their involvement in the ESI project include:

- paid, local employment;
- hands-on learning and lots of experience in the field;
- the opportunity to get their foot in the door of the environment sector before the large remediation projects come into play over the next 8 to 12 years;
- the opportunity to work with experienced professionals on a variety of specialized tasks;
- the opportunity to access formal training in specialized areas such as HAZMAT;
- the opportunity to take full advantage of the training and skills development materials developed by ECO Canada, and to achieve certification through ECO Canada's Canadian Certified Environmental

- Practitioner (CCEP) and Canadian Environmental Practitioner in Training (CEPIT) programs;²⁴ and
- the opportunity (for Cape Bretoners living in other parts of Canada) to move back to the region and work full time in the environment sector.

The economic and social health of Cape Breton has been positively influenced by the ESI program, which is helping to reverse the outflow of young people looking for work.

IMPACT ON THE CAPE BRETON REGION

Growing and Maintaining a New Economic and Social Base in Cape Breton

In December 2004, the Enterprise Cape Breton Corporation and the CBGF announced the results of a study that looked at the impact of federal development funding on Cape Breton's economy from 1999 to 2004. The study clearly demonstrated that the programs are having a positive impact. Unemployment rates dropped to 16 per cent from 25.3 per cent; a total of \$667.1 million of labour income was provided to Cape Breton households; an additional \$1,201.4 million in GDP, or \$240.3 million a year, was brought in; there was an increase in federal revenues of \$91.2 million and estimated employment insurance savings of \$30.6 million a year; there was an increase of \$84 million in provincial revenues and \$10.8 million in municipal revenues; and it is estimated that Cape Breton's population would have further declined by more than 12,000 people without Government of Canada economic development assistance.²⁵

Keeping Cape Breton's Skilled Practitioners in the Region

Although the ESI program is a small part of the economic adjustment and development efforts in the Cape Breton region, it has had a positive impact on the economic and social health of the island. Over the years there has been a significant out-migration of Cape Breton's youth aged 20 to 30, mostly on account of a lack of work. The ESI project is a step in the right direction in reversing this outflow. Of the seven interns interviewed for this case study, four said they would have left the region had it not been for the opportunity afforded them through the ESI project. Two other interns said they would have been doing different work were it

not for the internship. Another intern was able to return to Cape Breton because of the opportunity offered through the ESI project. One intern who had left Cape Breton immediately after graduating came back to a temporary job for a year and a half, and would have left the island again if the ESI project had not offered a local alternative.

Although seven is a small number of people, they are all productive, fully employed members of the community who contribute to its economic and social fabric. Not only do they pay taxes, but they also frequent stores and restaurants, purchase household goods and services, and participate in community events.

The ESI project helps build the capacity of businesses with established offices in Cape Breton, benefiting companies with a stake in the success of the island's economy and community. As noted earlier, there is also a longer-term potential for the Cape Breton region to develop an export capacity in the environment remediation industry, whereby Cape Bretoners could work in other regions in need of environmental practitioners without moving permanently from the island.

Gently Influencing Post-secondary Institutions

ECO Canada's work in developing the environment sector in the region, in partnership with the CBGF and others, could have a significant impact on curriculum reviews, customized training and learning modules offered through universities and other learning institutions.

As the environment industry grows in Cape Breton—with the real potential for the region to become a centre of environment remediation expertise—local educational institutions will need to become more involved in environment studies, research and remediation activities. Cape Breton University, for example, has a case study on the tar ponds in one of its courses. However, more could be done to better align the post-secondary educational system with the sector.

Nova Scotia Community College has 13 campuses and 123 programs that offer customized training to promote economic development in the province. Now that the environment remediation projects are about to begin, the college is in a position to develop new curricula to better address the training needs of the sector and better align the curricula's learning outcomes with those of the environmental practitioner occupations.

Association of Canadian Community Colleges Connection

ECO Canada works closely with the Association of Canadian Community Colleges (ACCC)'s Canadian College Environmental Network (CCEN). The CCEN brings together individual colleges with an interest in environment studies to discuss common interests, ideas, challenges, best practices, effective programs, advocacy concerns and recent developments. The CCEN consists of more than 70 deans and directors involved in environmental sciences and technologies. Representation from the Atlantic region includes New Brunswick Community College, Fisheries and Marine Institute, Nova Scotia Agricultural College, Nova Scotia Community College, Cape Breton University, and Holland College.

CHALLENGES

STUDIES, STUDIES AND MORE STUDIES

The remediation projects have been studied for years: site assessments, commissions, environment studies, soil-testing programs and failed clean-up plans have soiled the clean-up work in Cape Breton since 1986. Almost 20 years and millions of dollars later, the plan to clean up the tar ponds and the other major sites is still controversial, although most people now believe that it is on the cusp of implementation.

Nevertheless, the timing of the ESI project continues to be a bit tricky for companies, in terms of engaging interns for three years of work placements and training. The uncertainties around the start of the remediation work and their ability to earn money on contracts has caused some employers to hold back from hiring as many interns as they would otherwise. For example, some companies interviewed for this study were originally going to take on three or four interns, but have agreed to take on only one or two due to the uncertain timing of the clean-up work.

The CBGF—the organization that provides the funding for the ECO Canada internship program—will be required to close its offices in March 2006. There is worry within the region and among employers about what might happen if the clean-up money is not distributed by then.

FULL-PANEL REVIEW

In May 2005 the Government of Canada announced that the tar ponds and coke oven sites would undergo a full-panel environmental review. The review is being undertaken by the Canadian Environmental Assessment Agency (CEAA) on behalf of the federal government.²⁶

The CEAA has just published the *Draft Environmental Impact Statement Guidelines* and awarded funding assistance to community organizations so that they can comment on the draft guidelines.²⁷ The federal government has committed to a June 30, 2006, completion date for the full-panel review, but many community groups feel that the full-panel review will drag on indefinitely and ultimately jeopardize the clean-up project.

A SHORTAGE OF WORKPLACE-BASED ENVIRONMENTAL SKILLS TRAINING IN CAPE BRETON

The Cape Breton region does not have the resources or infrastructure to provide all of the specific training that many of the environment companies need. As such, firms are required to send their interns (and their employees) out of the region, and often out of the province, for an extended period of time, at an added expense. One individual interviewed for this study felt there was no reason why some of the training could not be offered locally or online—something that ECO Canada might look into as a way to enhance the skills and learning platform offered to employers in the region.

The timing of the ESI project continues to be tricky for companies engaging interns for three-year placements, since there is still uncertainty around the start date of the remediation work.

KEYS TO SUCCESS

The ESI project works because it is not a typical six-month or one-year internship program that requires little or no commitment on the part of employers or learners. The fact that the project requires individuals to invest three years of their time and effort, after they have already invested in a post-secondary degree or diploma in environment studies or a related project, ensures a dedication and interest in the industry second to none. As well, employers choose the interns they would like to have on staff, making sure that their skills and attitudes match those of the company. By being partially responsible for the interns' salaries (based on a sliding scale), companies are also motivated to make sure that the interns learn what is needed to be effective, efficient, productive employees.

ECO Canada's administration of the internship project gives it instant credibility among the region's environment companies and consulting firms. The organization is well known and highly regarded in the industry, and is able to use its years of experience in the sector and in the running of internship programs similar to the ESI project to the region's full advantage. As well, ECO Canada is able to integrate many of its human resources products and tools into the ESI project, including, for example, its labour market information and human resources research, its career awareness and career development initiatives, its national occupational standards, its online job board and its certification programs.

By remaining focused, straightforward and relevant, the ESI project continues to help new graduates and displaced workers enter the environment industry in the Cape Breton region.

Finally, the ESI project provides real-world learning and working opportunities for young practitioners and displaced workers that these workers might not otherwise have. The ESI project is, in the words of one employer, a "hand-up" and not a "handout."

CONCLUSION

ECO Canada's Environmental Skills Internship project is a successful collaboration between many levels of government, industry and educational institutions working toward the common goal of developing a supply of skilled and knowledgeable environmental practitioners in support of the local economy in Cape Breton.

The project continues to achieve success by keeping in close contact with industry and ensuring that the program addresses the human resources needs of employers. By remaining as focused, straightforward and relevant as possible, the ESI project continues to assist recent graduates and displaced workers to make their way into the exciting and quickly growing environment industry in the Cape Breton region. It also helps local businesses build their human resources capacity and ability to bid on pending remediation and clean-up projects. By supporting the local industry and providing a client-friendly application process, the program continues to receive much praise and credit from local environmental practitioners.

1 Statistics Canada, *2002 Environment Industry Survey: Business Sector*, (Ottawa: Statistics Canada, Cat. No. F0008XIE, Sept., 21, 2004), p. 1. Available from Statistics Canada: www.statcan.ca:8096/bsolc/english/bsolc?catno=16F0008X.

2 Ibid, p. 1.

3 The number of environmental practitioners in Canada increased by 63 per cent between 1999 and 2003, up from 102,000 in 1999 to 166,000 in 2003. Environmental practitioners work for three main employment sectors: environment protection (e.g., air, water and land quality, waste management); conservation and preservation of natural resources (e.g., fishery, wildlife, forestry, mining and parks); and environment sustainability (e.g., education, communications and public awareness, research and development).

4 ECO Canada, *2004 Environmental Labour Market (ELM) Report* (Calgary: ECO Canada, 2004), p. 16.

5 In addition to the ESI project, ECO Canada offers three other internship programs across Canada: the National Environmental Youth Corp. (NEYC) project, offering interns the opportunity to work on a project that focuses on a particular region of Canada; the International Environmental Youth Corp. (IEYC) project, offering interns some international exposure; and the Building Environmental Aboriginal Human Resources (BEAHR) internship project, where the interns are Aboriginal and the placement may be with

a private, not-for-profit, municipal or educational organization, owned by either Aboriginal or non-Aboriginal people. Each of these internship programs provides businesses with up to \$12,000 (\$8,000 for NEYC/BEAHR, \$12,000 for IEYC) in wage subsidies to support a post-secondary environmental internship position. Last year, 26 per cent of the NEYC placements were earmarked for Aboriginal interns.

6 The intent is not to export the skills on a permanent basis, but to permit people to work outside the region for specific projects while maintaining a home base in Cape Breton.

7 CBC News Online, "Tracking the tar ponds," May 6, 2004. See www.cbc.ca/news/background/tarponds/.

8 Environmental Design and Management, *Models for Industrial Benefits From Environmental Remediation* (2001), p. 2. See www.cbgf.ca/pdfs/Industrial_Benefits_Environmental_Remediation.pdf.

9 It is anticipated that as many as 20 to 25 of the 30 ESI interns will be retained full time by local organizations upon completion of the program. This level of retention of interns has consistently been achieved on other ECO internship projects. See www.cbgf.ca/e/CBGF%20Investments/env_skills.asp.

10 Environmental Design and Management, *Models for Industrial Benefits from Environmental Remediation*.

- 11 The first announcement of federal–provincial funding for cleanup of the tar ponds took place in 1986. However, after a number of failed clean-up attempts and public protests (e.g., the failure of the sludge pipeline and fluidized bed incinerators, and the protests over the encapsulation model) there has been little substantial work on the cleanup as of yet—nearly 20 years later. Privately and publicly commissioned tests, numerous reviews, the development and abolition of a joint action group to determine cleanup approaches, and a call for a full-panel review as recently as May 2004 continue to add to the challenges.
- 12 *Investing Today for a Brighter Tomorrow—Cape Breton Growth Fund, Report Card 2002/03* (Sydney: CBGF, 2003), p. 3. Between 1999 and 2002–03 the CBGF was instrumental in fostering economic growth and job creation on Cape Breton Island, helping with three new companies, three new export-oriented businesses and approximately 2,814 new jobs.
- 13 While ECBC and ACOA have a close working relationship, ECBC is a separate entity. It is a Crown corporation that reports separately to Parliament. ECBC is the sole shareholder of the CBGF, and the vice-president of the ECBC is the CEO of the CBGF.
- 14 To be part of the ESI project, a company must complete an online application confirming that it is Canadian-owned or a Canadian subsidiary of a multinational organization with a local office in Cape Breton. It must also offer an intern a full-time position—one that has a significant environmental component—for the duration of the program. In addition, companies may not access any other federally funded wage subsidies for the position. Before the internship begins, a company must confirm the internship period, remuneration and job description with the intern, and it must sign a detailed contract with the CBGF.
- 15 ECO Canada currently has more than 200 résumés of individuals who qualify as eligible ESI project candidates in its online database. This list includes individuals living in the Cape Breton region and those “from away.” Although the project focuses on people from the region, it will hire others if their skills are in demand by local employers.
- 16 An eligible candidate must be a Canadian citizen or landed immigrant; be a graduate of a post-secondary institution; be eligible for full-time employment; be unemployed or underemployed (e.g., working part time, on a contract of less than six months, or outside his or her field of study); not be currently employed by the employer; not be a family member of the organization’s directors or senior officers; and have the intention to obtain a permanent position in the environment industry.
- 17 Of the 20 environment consulting companies and related companies with offices in the region, 7 (or 35 per cent) are actively involved in the ESI project. This number is expected to increase as negotiations on the remediation plans come closer to fruition.
- 18 Cape Breton University, for example, graduates approximately 30 students a year with environmental technology diplomas; 20 to 30 with bachelor of science degrees with a major in biology; and 50 to 75 in other related disciplines, such as control systems and business.
- 19 The 2001 Environmental Design and Management report, *Models for Industrial Benefits from Environmental Remediation*, does note, however, that there is a shortage of professionals with environment engineering and risk assessment experience, and there are shortages of intermediate to senior-level environment professionals in the region.
- 20 Statistics Canada, *2002 Environment Industry Survey: Business Sector*.
- 21 Environmental work tends to be seasonal, with little activity taking place in the winter months, when sites are covered in snow or frozen over. Typically, junior employees are hired in the spring, summer and fall months, on a part-time and seasonal basis. Clearly this is of little or no benefit to the employee. It is also challenging and of little long-term benefit to companies, as they must release hard-working, often highly skilled and knowledgeable talent simply because there is not enough work to keep them employed in the off-season.
- 22 The skills might include writing and reading reports, understanding the business side of a consulting company, cleaning and repairing field equipment, writing proposals, responding to requests for proposal, and helping with costing activities.
- 23 It is anticipated—based on ECO Canada reviews of the five companies that have ESI interns—that 80 per cent of employers will offer full-time employment to their interns upon completion of the program.
- 24 The requirements and expectations of environmental practitioners are often highly specific and complex. Increasingly, key stakeholders—including the public, governments and insurance industries—are demanding that practitioners formally demonstrate that they have the knowledge, experience and skill sets to conduct work related to environment protection, conservation and sustainability. Environmental practitioners can fulfill this requirement by becoming certified through CCEP or CEPIT. The CCEP designation provides credibility for those with five or more years of experience, while practitioners with less than five years’ experience are eligible for the CEPIT. These designations boost the reputation and marketability of practitioners, and raise the profile of the company or organization that they work for.
- 25 Enterprise Cape Breton Corporation, *Study reviews impact of federal economic development funding*, news release (Sydney: ECBC, December 13, 2004). See www.ecbc.ca/e/newsreleases?20041213.asp.
- 26 The *Canadian Environmental Assessment Act* is the legal basis for the federal environmental assessment (EA) process. The Government of Canada uses an EA as a planning tool to identify, understand, assess and mitigate, where possible, the environmental effects of a project.
- 27 The Canadian Environmental Assessment Agency and Nova Scotia Environment and Labour have invited the public to comment on the draft guidelines for the preparation of the environmental impact statement (EIS) for the Sydney tar ponds and coke ovens sites remediation project. Once finalized, the guidelines will identify the issues that the Sydney Tar Ponds Agency will be required to address in its EIS for the proposed project. See “Sydney Tar Ponds: public invited to comment on the draft guidelines for EIS,” *HazMat Management*, July 5, 2005. See www.hazmatmag.com/article.asp?id=45102&issue=07052005.

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The Environmental Skills Internship Project: Cleaning Up on Skills Training in Cape Breton's Budding Environment Sector

by *Douglas Watt*

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