

Northern Saskatchewan Environmental Industry Study

EXECUTIVE SUMMARY

SUBMITTED BY:

FINAL REPORT 2002

Introduction

In the last twenty-five years environmental awareness has increased on both the national and international level. Environment, an area originally of interest for environmentalists, has become a regulated field that concerns the general public, government, and industry. Due to the industry's young age there is a need to examine its composition, resource needs, and potential for job creation. As an industry with great prospects it is very important for Saskatchewan to investigate employment and investment opportunities. The main challenge facing the environmental sector is providing post secondary programs to meet the skill sets required by industry.

As a result of these changes and challenges, there is a need to generate a common understanding of the human resource and training needs of the industry. AMEC Earth & Environmental Limited (AMEC), on behalf of SEIMA and the environmental industry, received funding from Saskatchewan Post Secondary Education and Skills Training through the Sector Partnership Program to assist in the Northern Saskatchewan Environmental Industry Sector Partnership. A Steering Committee was formed to work with and provide direction to AMEC in carrying out the research component, analysis, and needs assessment for planning human resource requirements for the environmental industry in northern Saskatchewan.

Objectives

AMEC, on behalf of the environmental industry, conducted a needs analysis to research and address human resource requirements for environmental work in northern Saskatchewan and undergraduate (or equivalent) environmental training programs available. The results of this study will provide a document for use by Saskatchewan industry and post secondary education to assess the future requirements of the industry and the training programs available to meet industry's needs. The initiatives resulting from this project will affect companies outside northern Saskatchewan. Some of the conclusions of this report can be considered encompassing of the whole province and transferable to the south.

Methodology

The Northern Saskatchewan Environmental Industry Sector Partnership Steering Committee was established and mandated with the responsibility for overseeing and directing all project activities to ensure project objectives were achieved, and providing direction for various research components, survey development and the final report.

Background information needed for this study was obtained through a literature review.

For the purposes of this study, northern Saskatchewan was defined as the area north of and encompassing La Ronge, although certain businesses in Regina and Saskatoon were included in the survey because they were thought to do environmental work in the North. For this study, Environmental Industry Businesses were defined as businesses that:

1. Hire people with environmental knowledge and/or skills,
2. Are involved in environmental protection or conservation; and
3. May impact the environment and/or participate in abatement practices.

A survey was drafted by AMEC, reviewed by the Steering Committee and subsequently modified by AMEC. The survey was mailed out to businesses and/or industries that complete environmental work, or whose activities impact the environment, according to the definition developed for this study. A representative sample was taken of approximately half of the businesses. Follow up phoning occurred from April 16 until April 20.

A list of Canadian educational institutions was compiled through Internet and telephone research. Calendars from each institution were obtained and a list of relevant undergraduate or equivalent programs assembled. A summary of environmental programs offered at institutions in Western Canada, including British Columbia, Alberta, Saskatchewan, and Manitoba was compiled. Details of training programs offered in Saskatchewan were gathered, including: length, achievement, a brief summary, possible specializations or options, and accreditation, if applicable.

A Focus Group, consisting of northern Saskatchewan businesses environmental personnel from the forestry, mining and environmental services, was surveyed in December 2001 to obtain industry validation for the study.

Key Findings

Key findings from the literature review, educational databases, and survey are condensed for review in this Executive Summary.

The environmental industry is a multidisciplinary one employing: chemists, engineers, biologists, geographers, geologists, agrologists, planners, technologists, and people with backgrounds in environmental studies, business administration, health and safety, computer programming, and humanities. There is a need for employees with a wide range of skills due to the prevalence of small businesses in the industry and the broad spectrum of activities performed by these companies.

In general, the environmental industry is characterized as an emerging sector, dominated by small to medium enterprises. The sector is constantly changing, with new legislation and regulations being introduced as awareness increases. The development of technology is a rapidly evolving area. As a result of this constant change, small, under-capitalized companies may find it increasingly difficult to develop and enhance their business. As the industry expands, it is important for small businesses to network. By sharing ideas and funding for training, businesses can make their needs heard by educational facilities. The majority of businesses reported that their environmental employees received training from universities or technical colleges, with 36% and 30%, respectively, and 89% of respondents reported on the job training. Meeting these training requirements warrants cooperation between industry and educational facilities.

The environmental industry in Saskatchewan is expanding. For northern Saskatchewan, this may lead to a shortage of qualified employees. This is especially true as the majority of employees are in the 45 – 54 age range and

may be nearing retirement, and therefore other employees will needed to take their place.

According to the Focus Group responses:

- "there is a major need for (environmental) training and education."
- "most environmental work is becoming quite complex."
- "adequately trained/certified human resources from northern Saskatchewan are limited."

In northern Saskatchewan, 60% of businesses that require environmental personnel have some level of aboriginal participation in their organization, 15% of businesses are 100% aboriginally owned, and 40% of businesses employing aboriginals have a majority of aboriginal employees. It is necessary that training be applicable to First Nations, and Northern issues.

The greatest number of environmental employees in Saskatchewan was noted in the areas of environmental assessment (28%) and biological resources (31%). The largest expansion is indicated in the area of biological resources with 22% of companies suggesting the hiring of more full time and part time employees; this area is expected to see a 6% increase in positions.

The handling of wastes and dangerous goods was highlighted as an area where more training is required. In regards to ecotourism, business startup and hospitality training is needed. Knowledge of regulations in the industry is also essential. A few respondents indicated the need for short courses to be available in the North. Several others pointed out that their employees are continually trained in order to "keep abreast of current trends, findings and systems".

There are 46 educational institutions in Western Canada offering environmental training. 42 environmental undergraduate or equivalent programs are offered at six facilities in Saskatchewan. In order to meet human resource needs in the north, these programs need to deal specifically to northern and aboriginal issues. To improve qualifications of northern employees, training programs need to be offered directly in the north and in cooperation with business. This may increase the number of educated people working and staying in the north. It will also improve the economic base of the area, as the quality of business will improve with the employees.

Recommendations

The following recommendations are based on the results of the research and developed in consultation with the Steering Committee.

1. Communication: The results of the human resource and training needs assessment and the recommendations of the Steering Committee should be publicized. The executive summary should be forwarded to stakeholders, both business and educational, with the complete report being made available to those requesting it.

2. **Demographics:** The data compiled in the human resource and training needs assessment requires further analysis on a provincial level.
3. **Sustainability:** A course of action must be developed in order to ensure that the process started by the Northern Saskatchewan Environment Industry Sector Partnership Steering Committee continues.
4. **Aboriginal Strategies:** The industry needs to develop and enhance a partnership with aboriginal educational facilities, and organizations.
5. **Partnerships:** Partnerships within the industry need to be improved. Small companies must network amongst themselves to share ideas and funding. Co-operation between business and training providers can improve educational programs and employability. The Steering Committee should expand to include additional stakeholders. Northern and aboriginal groups should be involved in order to address the specific needs of the North, and to collaborate on a provincial level.
6. **Awareness:** The educational system needs to recognize career opportunities within the environment industry. Businesses need to become more educated on the types of training programs offered.
7. **Skill Shortages:** Potential shortages of employees are identified in the following three management areas: waste, water, and biological resource management. Industry needs to identify the necessary skills in these areas and communicate these needs to educational institutions, which should address these priority training needs.

Next Steps

In order to ensure that the work begun under the Sector Partnership initiative is continued, the committee has identified the following first steps to be undertaken:

1. Develop a communication strategy by circulating this document to key stakeholders and encouraging a dialogue among them in regards to the issues raised.
2. Explore partnerships with organizations, such as Post Secondary Education and Skills Training, Human Resources Development Canada, and the Aboriginal Relations Office, and request assistance implementing the proposed strategy and recommendations.
3. Explore partnerships with SEIMA and CCHREI in order to develop new strategies and recommendations specific to the environment industry, as well as identifying options for industry-driven funding for training.
4. Expand and strengthen the Environmental Industry Sector Partnership for the continuation and sustainability of long term human resource planning.
5. Skills inventory by industry to identify gaps and strategies on behalf of education providers to address the gaps.

6. Industry and stakeholders need to work together to develop and implement recruitment strategies to promote educational and career opportunities to encourage youth and aboriginal persons to enter this industry.