eco canada

Canadian Environmental Employment

Summary Analysis

September 2017

Canada

Funded by the Government of Canada's Sectoral Initiatives Program

ECO Canada

ECO Canada develops programs that help individuals build meaningful environmental careers, provides employers with resources to find and keep the best environmental practitioners and informs educators and governments of employment trends to ensure the ongoing prosperity of Canada's growing environmental sector.

Labour Market Research

ECO Canada Labour Market Research investigates current environmental skill and labour trends within the environmental profession and provides up-to-date, timely and relevant insights that can be applied in policy, business, and educational contexts. The complete collection of reports is available at eco.ca.

Acknowledgements

ECO Canada wishes to express its appreciation to all the organizations and individuals that contributed their time and effort to the development of this report.

This study was funded by the Government of Canada's Sectoral Initiatives Program, whose continuous support is much appreciated.

We acknowledge the substantial contribution of Field Guide Consulting and express gratitude to the numerous individuals who contributed their time and insights to this project.

Table of Contents

Foreword

ECO Canada is moving away from large multifaceted surveys as its primary source of labour market information and is examining new ways of measuring environmental employment.

The following report is one of a suite of four preliminary reports:

- ***Canadian Environmental Employment: Summary Analysis***
  - This report introduces some new concepts and ways of exploring trends in environmental employment. It summarizes the major findings of the following three, more detailed reports.
- ***Canadian Environmental Employment: Job Posting Trends***
  - This report looks at how job posting analysis can be useful in looking at hiring trends and presents some findings for environmental employment.
- ***Canadian Environmental Employment: Supply and Demand***
  - ECO Canada has begun work on a supply-demand model, and this report presents some early findings.
- ***Canadian Environmental Employment: Environmental Goods and Services***
  - This report analyses data from UK-company kMatrix and presents major findings on market size and employment. It also looks at the contribution of each ECO Canada sub-sector to Canada's GDP.

1 Introduction

The environmental sector is an important component of the Canadian economy, and there are many indications that the demand for Environmental workers is sizable. Ongoing changes in green technology – both in terms of the types of new products and services and the demand for them – is one of the factors contributing to a highly dynamic demand for Environmental workers that can shift up and down to meet the needs of employers. Understanding this dynamic demand for environmental workers requires specific sources of information that reflect the unique characteristics of the Environmental Sector's labour force.

1.1 ECO Canada's Environmental Sub-Sector Model

ECO Canada has long defined environmental work as falling into three sectors: Environmental Protection, Resource Management and Resource Sustainability. Within each sector are sub-sectors, such as Air Quality, Fisheries and Wildlife Management, and Education and Training, which define sub-categories of environmental work. This framework, referred to as the ECO Canada Sector Model, provides a unifying framework for classifying the economic inputs and outputs (including labour inputs, goods, services and technologies) that contribute to environmental protection, resource management and sustainability in Canada. The model serves as a basis for bridging different concepts of the environmental sector, including environmental employment (workers who use environmental competencies) and environmental goods and services, which are produced or provided in a manner that offers an environmental benefit. Each environmental job, product, service or technology can be understood in relation to one or multiple environmental sectors and/or sub-sectors.

Figure 1: ECO Canada's Sector/Sub-Sector Model

1.2 Definitions of Environmental Employment

ECO Canada has previously defined environmental workers as those who require environmental competencies. Environmental competencies are a combination of environmental knowledge, skills and experience that workers must possess to function at an elevated level, especially in job duties that relate to environmental protection, resource management or sustainability.

In recent years, interest has grown significantly in green technology as well as in those jobs that are linked to the provision of goods and services that benefit the environment. Employment in this Environmental Goods and Services Sector (EGSS) is defined as the workers who are employed at companies providing environmental goods, services, and technologies. A portion of (but not all) workers employed in this sector also require environmental competencies (e.g. wind turbines provide an environmental benefit in energy resource management and sustainability, but the technicians who manufacture the parts for a wind turbine may not require any environmental knowledge, skills or experience).

1.3 Measuring Environmental Employment

Statistics Canada defines occupations using the National Occupational Classification (NOC) system. The NOCs classify similar jobs according to the scope of work performed by workers who typically share similar job duties, competencies, skills, knowledge, training and education.

Environmental employment is cross-sectoral (spread across industries), and previously, environmental occupations could not be organized into individual NOCs. Therefore, ECO Canada used primary research methodologies, such as surveys of employers, to get labour market information at this level. However, there are challenges with this type of research in that surveys are expensive, one-time only data and are generally done at a low level of granularity.

ECO Canada has therefore adopted new strategies for looking at environmental employment trends. Although there is no one specific NOC for environmental jobs, ECO is now able to identify the proportion of jobs in each NOC that are considered to be environmental or to require environmental competencies. Using a database of job advertisements, an analysis was performed on all jobs posted online in Canada between January 2013 and December 2016 to determine if any ECO Canada defined National Occupational Standards Competency Statements appears in the job ad (or if a similar statement existed). Algorithms that use a combination of keywords, key phrases and more advanced artificial intelligence techniques were used to identify environmental competencies within each job advertisement.

This analysis of job ads revealed that there is a portion of workers within most NOC categories who have job duties that require environmental competencies. The portion of workers in each NOC occupation who require environmental competencies differs from occupation to occupation. For example, a large portion of workers who are employed as regulatory officials require environmental competencies, while a small portion of physicians require environmental competencies.

Compared to point-in-time snapshots provided by survey-based labour market data, the real-time nature of job ads data allows for the early detection of labour demand trends, which gives industry a forward-looking analytical tool.

This job ad analysis serves a dual purpose: it can help us understand trends in hiring for each sub-sector, such as seasonality, and it also feeds into ECO Canada's environmental labour market forecast by producing baseline employment numbers and providing a way to tie employment projections to ECO Canada sub-sectors. Although the forecast model is in its infancy, it does enable ECO Canada to provide employment projections for the sub-sectors from 2015 to 2024. In addition, ECO Canada has also some data on the supply of workers who possess environmental competencies, which is derived from the Employment and Social Development Canada's Canadian Occupational Projection System (COPS) dataset.

As mentioned, another way of looking at environmental employment is to group workers according to the environmental goods and services they produce. ECO Canada has purchased data from kMatrix, a UK-based research firm that has studied low-carbon environmental goods and services (LCEGS) since 2006, and they updated the numbers in 2015. This data not only enables us to look at employment numbers, but it also allows us to examine market size (revenue) and (with further analysis and calculations) the contribution of each ECO Canada's sub-sector to Canada's GDP.

1.4 What the Report Will Cover

The following report presents selected findings from three accompanying ECO Canada reports:

- ***Canadian Environmental Employment: Job Posting Trends*** (Chapter 2 of this report)

Source of data:

  - Job Vacancy Database (Burning Glass Technologies)
  - Job Ad Scraping Algorithm (Field Guide Consulting & VC Global Consulting)
  - Secondary sources reviewed as part of the trends analysis

- ***Canadian Environmental Employment: Supply and Demand*** (Chapter 3 of this report)

Source of data:

  - Statistics Canada 2011 National Household Survey (demand)
  - Statistics Canada Labour Force Survey (demand)
  - Job posting sources and analysis (demand)
  - Consensus GDP forecast by Field Guide Consulting & VC Global Consulting (demand)
  - COPS dataset (supply)

- ***Canadian Environmental Employment: Environmental Goods and Services*** (Chapter 4 of this report)

Source of data:

  - Dataset published by kMatrix

The report will then present small sections on interim conclusions and intended future developments for ECO Canada's labour market information.

1.5 Definitions

- **NOC (National Occupational Classification):** the means by which Statistic Canada groups occupations of a similar nature.
- **Proportion of environmental job ads:** is the percentage of total job ads that require environmental competencies.
- **Environmental sector:** refers to the total number of job ads that contained an environmental competency or otherwise put, the total number of core environmental workers.
- **Environmental competency:** is a combination of environmental knowledge, skills and experience that workers must possess to function at an elevated level.
- **COPS:** refers to Employment and Social Development Canada's Canadian Occupational Projection System.
- **EGSS:** Environmental Goods and Services Sector
- **Value added:** The value added of an industry, also referred to as gross domestic product (GDP) by industry, is the contribution of a private industry or government sector to overall GDP. Value added is the difference between an industry's gross output (consisting of sales or receipts and other operating income, commodity taxes, and inventory change) and the cost of its intermediate inputs (including energy, raw materials, semi-finished goods, and services that are purchased from all sources).

2 Job Posting Analysis

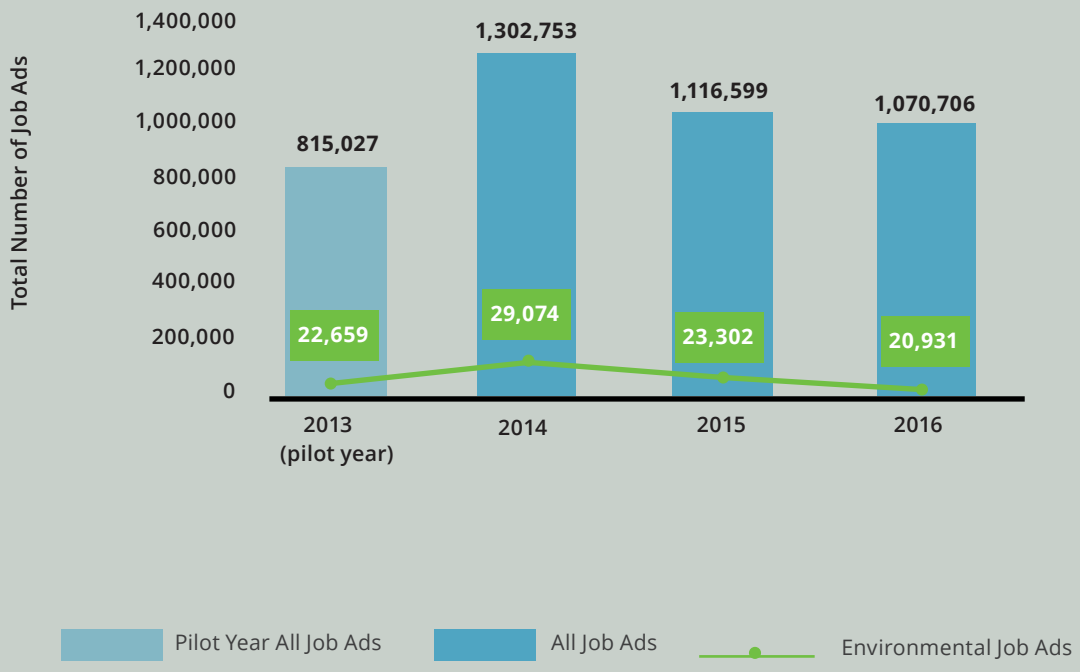
Between Q1 2013 and Q4 2016, a large subset of online job postings was scraped and analysed to see if they required environmental skills (competencies as defined by ECO Canada).

Selected Findings

From 2014 to 2016, job advertisements decreased significantly, and environmental job ads in particular, experienced a steeper decline at 28% compared to total job ads that fell by 18%.

- All job ads peaked in 2014 at 1.3 million and dropped to 1 million in 2016 as the economic downturn set in.
- Environmental job ads also peaked in 2014 at 29,000 and dropped to 21,000 by 2016.

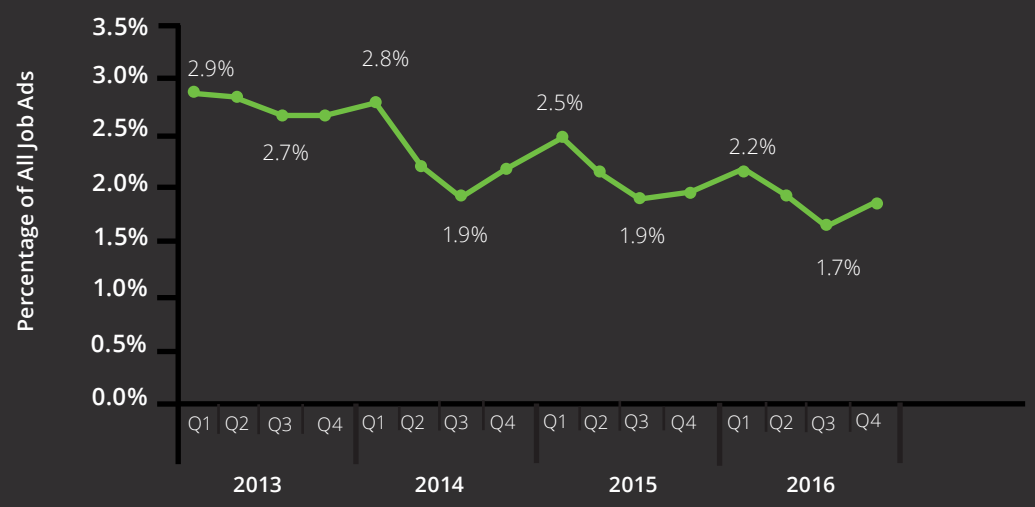
Figure 2: Total vs Environmental Job Ads, Annual



Q1 (January–March) experienced the highest proportion of environmental job ads in each of the years presented, and Q3 (July–September) experienced the lowest proportion in each of the years presented. Figure 3 shows a general downward trend for all quarters.

- The largest environmental proportion (2.9%) was experienced in 2013, which was the pilot year and before commodity prices collapsed.

Figure 3: Environmental Sector - Proportion of Job Postings, Quarterly



In 2016, approximately 21,000 environmental jobs were advertised, and the top three NOCs with the highest number of job ads were:

- Agriculture and horticulture workers (3,200),
- Other technical inspectors and regulatory officers (2,600)
- Civil, mechanical, electrical and chemical engineers (1,800)

The sub-sector with the highest number of job ads was Natural Resource Management at just over 7,000.

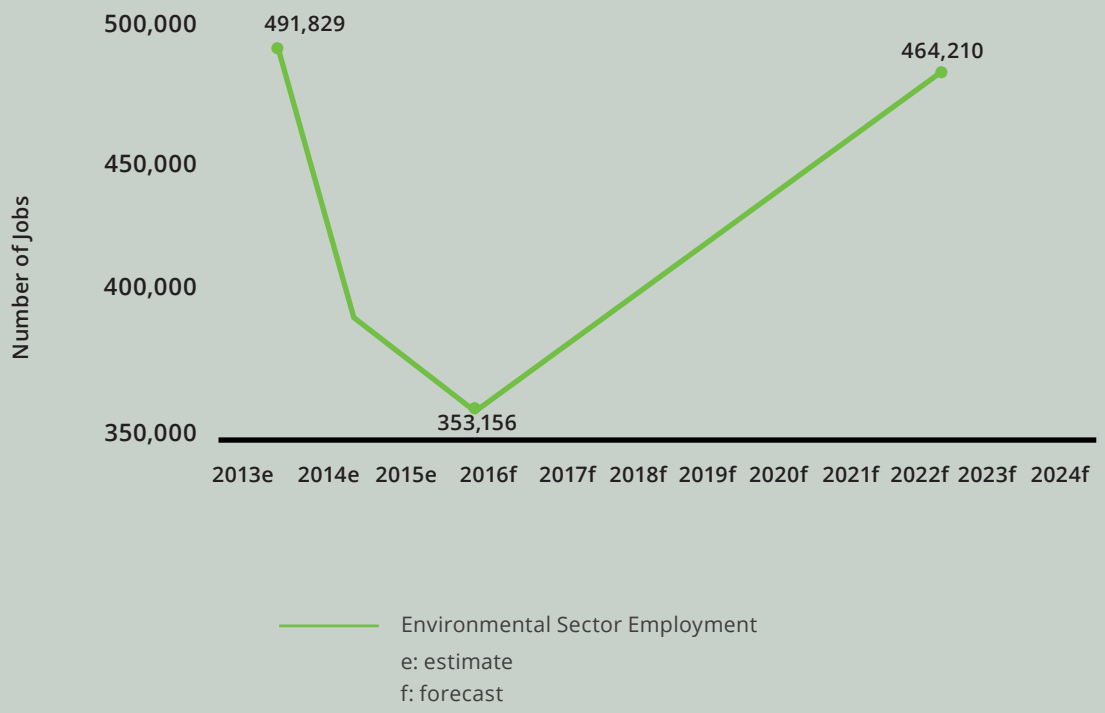
3 Supply and Demand Analysis

3.1 Current and Projected Employment

Selected Findings

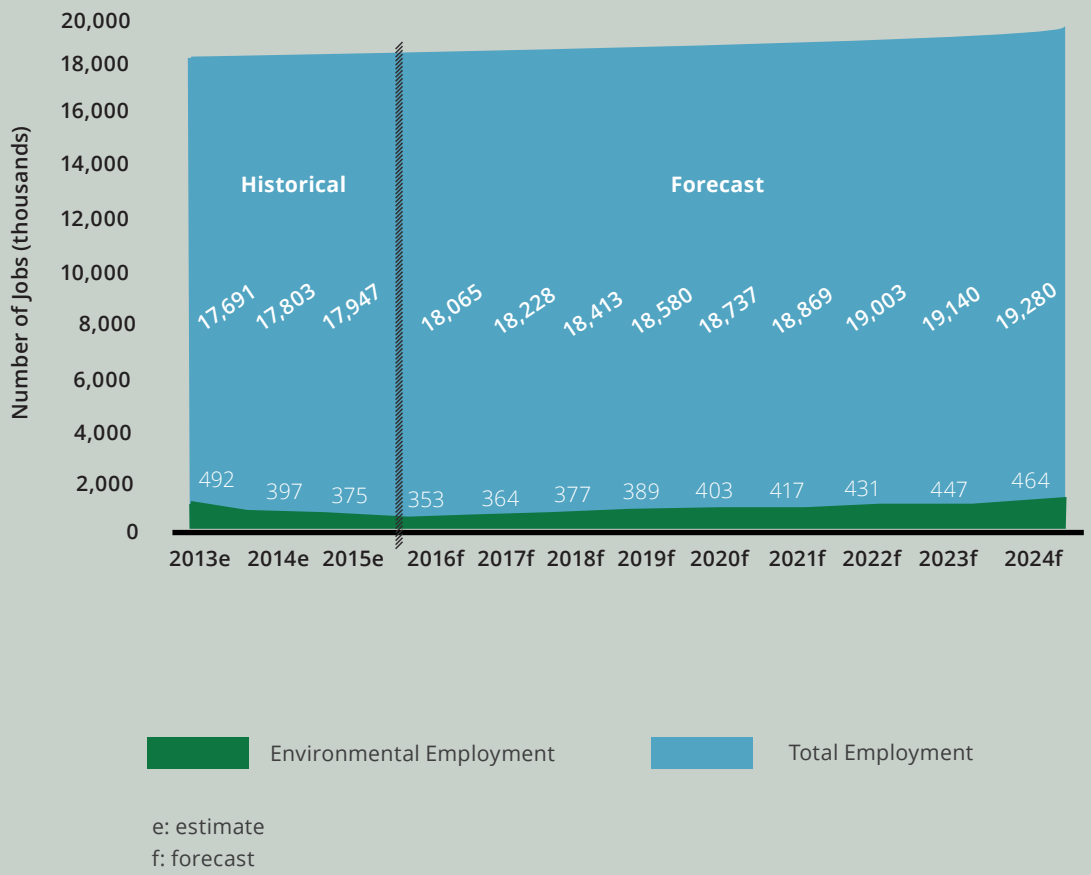
2013 was the pilot year for the job posting analysis and should be treated with caution; however, from 2014 to 2016, a decline in environmental employment is very evident as the oil price fell, together with investment and, consequently, jobs. After 2016, a steady increase in environmental employment is projected, as government policy, technology and social interest focuses on reducing carbon emissions.

Figure 4: Environmental Sector Employment



The environmental workforce is a small fraction of total employment; however, it is projected to grow steadily and at a quicker pace than the total labour force (see Figure 5). In the period 2015 to 2024 the core environmental workforce is projected to add 90,000 workers (24%), whereas total employment is projected to add 1,334,000 workers (7%).

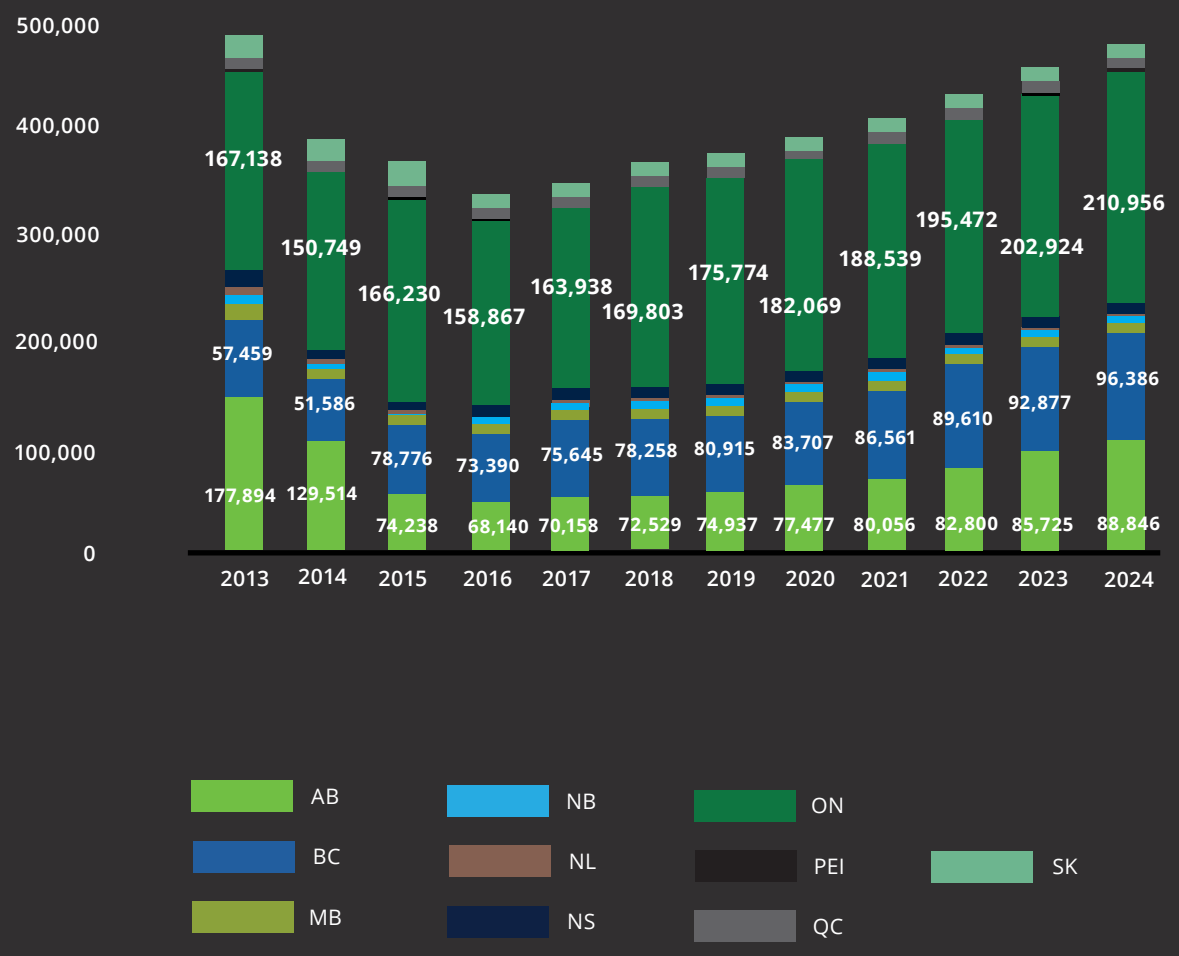
Figure 5: Environmental Employment vs Total Employment Projections, Annual



e: estimate
f: forecast

From 2015 onwards, Ontario has consistently been home to the most environmental jobs, with British Columbia having the second highest number of environmental jobs. Both these trends are set to continue to 2024.

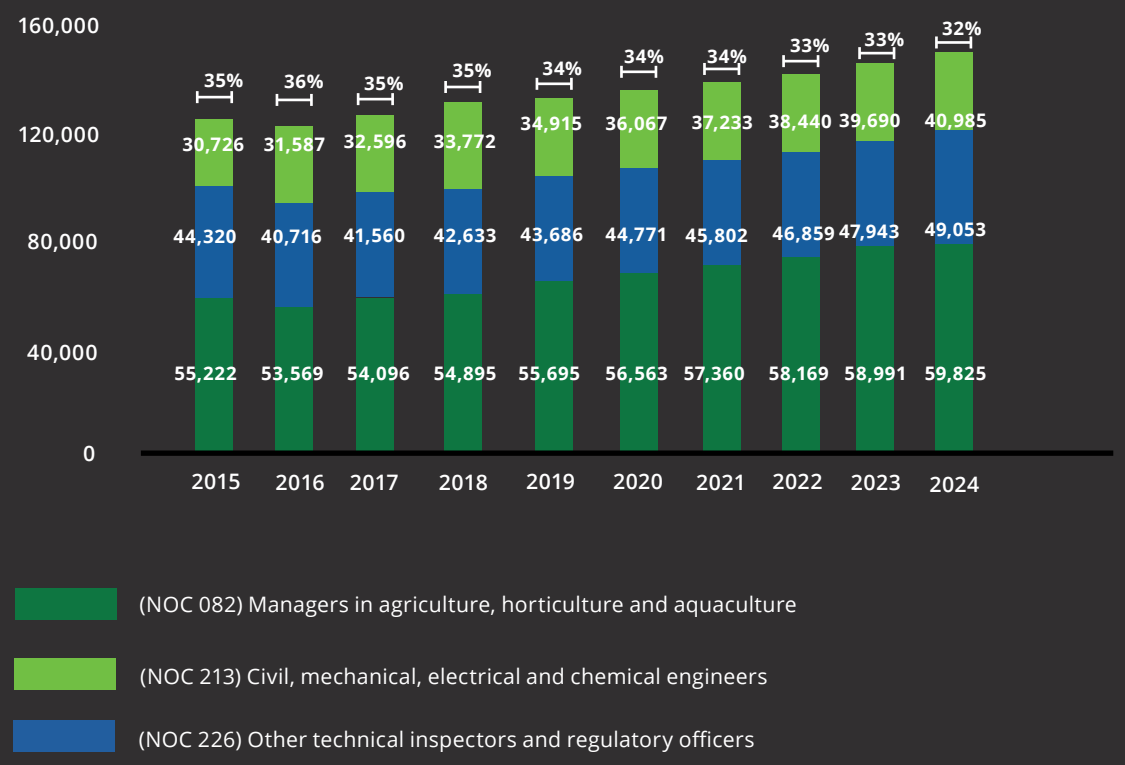
Figure 6: Environmental Employment by Province, Annual



As shown in Figure 7, the top 3 NOCs are consistent and make up between 30% and 36% of the environmental sector over the analysis period. These NOCs are also somewhat consistent with the top three NOCs in job postings:

- Managers in agriculture, horticulture and aquaculture
- Other technical inspectors and regulatory officers
- Civil, mechanical, electrical and chemical engineers

Figure 7: Top 3 Environmental NOCs, Employment



Natural Resource Management is the largest ECO Canada sub-sector, and is projected to add over 38,000 jobs 2016-2024, whereas Policy and Legislation is projected to grow the most at 65%.

Table 1: Environmental Employment Projections by Sub-Sector

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Environmental Protection	**213,589**	**212,188**	**219,188**	**227,285**	**235,492**	**244,115**	**252,963**	**262,434**	**272,599**	**283,535**
Air Quality	12,103	14,156	14,551	15,004	15,452	15,907	16,361	16,834	17,327	17,841
Water Quality	51,368	47,108	48,737	50,618	52,509	54,481	56,496	58,637	60,917	63,346
Site Assessment and Reclamation	17,503	16,316	16,751	17,260	17,760	18,269	18,779	19,312	19,869	20,450
Waste Management	55,290	58,395	60,931	63,779	66,715	69,849	73,159	76,763	80,698	85,009
Environmental Health and Safety	77,325	76,213	78,218	80,624	83,056	85,609	88,168	90,888	93,788	96,889
Resource Management	**189,304**	**187,132**	**193,161**	**200,099**	**207,134**	**214,480**	**221,901**	**229,703**	**237,917**	**246,574**
Energy Efficiency	39,796	40,679	41,792	43,086	44,371	45,710	47,064	48,504	50,040	51,684
Energy Renewables	14,996	14,932	15,420	15,990	16,564	17,167	17,785	18,444	19,149	19,904
Natural Resource Management	121,943	118,917	123,116	127,908	132,804	137,916	143,084	148,497	154,171	160,122
Fisheries and Wildlife Management	12,569	12,604	12,833	13,115	13,395	13,687	13,968	14,258	14,557	14,864
Sustainability	**112,701**	**106,380**	**110,416**	**114,964**	**119,627**	**124,496**	**129,526**	**134,904**	**140,658**	**146,825**
Sustainability	27,452	25,258	26,230	27,322	28,434	29,590	30,774	32,029	33,360	34,774
Policy and Legislation	19,319	21,310	22,344	23,502	24,700	25,963	27,278	28,685	30,194	31,813
Communications and Public Awareness	20,943	21,360	22,372	23,512	24,696	25,947	27,253	28,656	30,164	31,785
Research and Development	23,852	22,153	22,847	23,634	24,417	25,214	26,020	26,864	27,745	28,666
Education and Training	21,136	16,299	16,623	16,994	17,380	17,782	18,201	18,670	19,195	19,787
Environmental Sector Total	**374,525**	**353,156**	**364,005**	**376,615**	**389,426**	**402,916**	**416,711**	**431,452**	**447,244**	**464,210**

3.2 Factors Affecting Supply

From 2016 to 2024, retirements, emigration and other exits* from the labour force will have a significant impact on the Canadian labour force, and the number of workers exiting the labour force will disproportionately affect occupations that have a high proportion of environmental workers.

With the loss of these workers in the labour force, Canada will lose the skills, experience, and competencies that these workers possess.

From the job posting analysis, it has emerged that some NOCs have a higher proportion of environmental workers than others. A total of 20 3-digit NOC categories are considered to have a high proportion of workers who perform environmental work in their job duties.

Between 2016 and 2024 COPS projects:

- Approximately 305,000 will retire from NOCs with a high proportion of environmental workers.
- Almost 56,000 immigrants will exit the labour force for occupations with a high proportion of environmental workers.
- Around 96,000 other workers will exit occupations with a high proportion of environmental workers.

* In addition to retirements and emigrants, the last major factor impacting loss to labour supply is captured in the COPS model through a measure of other movements. Other movements describe people who leave and re-enter the labour force for family reasons or to return to school. It also captures inter-occupational movements (people who transition from one occupation to another). For many management occupations, other movements are the largest contributor to changes in the supply of workers.

Of the 5.3 million workers projected to leave the labour force between 2016 and 2024, proportionally more are expected to leave occupations that have high levels of environmental workers compared to those that have lower levels of these workers.

Table 2: Projected Exits 2016-2024 from Environmental NOCs

Proportion of environmental workers	2015 employment	Retirements	Emigrants	Exits of other workers	Total exits from the labour force 2016-2024	Percentage of workers exiting the labour force
NOCs with high proportion of environmental workers	1,390,010	305,165	55,672	96,391	457,228	33%
NOCs with moderate proportion of environmental workers	3,220,112	731,476	136,219	62,498	930,193	29%
NOCs with low proportion of environmental workers	10,522,378	1,870,649	395,865	828,251	3,094,765	29%
NOCs with no evidence of environmental workers	2,814,201	476,894	105,640	266,868	849,402	30%
Total	**17,946,700**	**3,384,185**	**693,397**	**1,254,009**	**5,331,588**	**30%**

3.3 Entrants to Supply

COPS estimates that the loss of workers from the labour force will be offset by approximately 4.5 million new school leavers and 1.1 million immigrants entering the labour force. These new entrants will fill vacant positions as well as the new jobs created due to economic growth. New school leavers are expected to enter non-management jobs left vacant by retirements as most management occupations are filled by workers with prior experience.

Between 2016 and 2024 COPS projects:

- Nearly 295,000 new school leavers will enter occupations that have a high proportion of environmental workers.
- Almost 74,000 immigrants will join the labour force for occupations with a high proportion of environmental workers.
- Almost 142,000 other workers will join the labour force for occupations with a high proportion of environmental workers.

Of the 6.5 million workers projected to enter the labour force between 2016 and 2024, the proportion expected to enter occupations that have high levels of environmental workers is similar to most of the NOCs. NOCs with moderate levels of environmental workers will have slightly fewer (proportionally) entrants to the labour force.

Table 3: Projected Entrants 2016-2024, by Environmental NOCs

Proportion of environmental workers	2015 employment	New school leavers	Immigrants	Entrants of other workers	Total entrants to the labour force (2016-2024)	Percentage of new entrants
NOCs with high proportion of environmental workers	1,390,010	294,914	73,800	142,560	511,274	37%
NOCs with moderate proportion of environmental workers	3,220,112	623,080	174,100	330,777	1,127,957	35%
NOCs with low proportion of environmental workers	10,522,378	2,824,800	733,300	288,000	3,846,100	37%
NOCs with no evidence of environmental workers	2,814,201	792,541	146,200	99,342	1,038,083	37%
Total	**17,946,700**	**4,535,335**	**1,127,400**	**860,679**	**6,523,414**	**36%**

3.4 Balancing Demand and Supply

ECO Canada's supply and demand work is still in its early stages of development. Demand due to economic activity is derived from job posting analysis combined with Statistics Canada data, and growth rates from economic and other assumptions are applied. Data on supply and factors affecting supply is derived from the Government of Canada's COPS model.

As the two types of data originated from different sources at different times and have been segmented in different ways, it is challenging to integrate the findings at this point in the development of the model.

However, we are able to discern some insights regarding those leaving the labour force by retiring or other means and those entering the labour force from the supply pool.

Overall, net in-movement for environmental supply will increase over the forecast period. Many workers will transition out of work, and a large contingent of school leavers, immigrants and labour force re-entrants will compensate for worker losses. The level of turnover in workers will drive ongoing demand for education, training and skills upgrading.

Overall, NOCs with a high proportion of environmental workers will experience an inflow of just over 54,000 workers or 4% of 2015 employment for those NOCs. Comparatively, the NOCs with a lower proportion of environmental NOCs will experience a larger percentage of new entrants.

Table 4: Summary Table

Proportion of Environmental Workers	Est. 2015 employment	Total losses	Total entrants	NET IN-MOVEMENT
NOCs with high proportion of environmental workers	1,390,010	457,228	511,274	54,045 (4% of employment)
NOCs with moderate proportion of environmental workers	3,220,112	930,193	1,127,957	197,764 (6% of employment)
NOCs with low proportion of environmental workers	10,522,378	3,094,765	3,846,100	751,335 (7% of employment)
NOCs with no evidence of environmental workers	2,814,201	849,402	1,038,083	188,681 (7% of employment)
Total	**17,946,700**	**5,331,588**	**6,523,414**	**1,191,826 (7% of employment)**

As noted, ECO Canada has not presented projected supply-demand gaps by occupation. While the levels of supply of workers vary over time, with some occupations increasing while others have projected decreases, the increase or decrease is not necessarily an indication of shortage or surplus. Some NOCs may experience a loss of supply, but they may also experience a loss in demand. Or, perhaps, some occupations experience a net addition to supply, but demand due to economic activity increases to the extent that there is a shortage.

Among all levels of environmental demand by occupation (including those with a high, medium, and low incidence of environmental workers) there will be a need for training related to the experience level of the workers being recruited.

4 Canada's Environmental Goods and Services Sector, 2015

Selected Findings

In 2015, an estimated 44,800 companies were in the Canadian environmental goods and services sector (EGSS) with sales of over US$132 billion. These firms employ approximately 807,350 workers or 4.5% of Canada's 17.9 million employees in 2015.

Note: Some products and services fall under multiple sectors; therefore, the sum of revenues across ECO sub-sectors will not add up to the total. Sub-sectors such as Education and Training, and Research and Development will span across all sectors.

The LCEGS the framework includes Nuclear and Noise Pollution, which have no real match to ECO's competencies and its sub-sector model. These areas are recognized as important in Europe and because we now have estimates for them, they are recorded separately to ECO Canada's sub-sectors.

For the purposes of this report, ECO Canada's energy sub-sector has been split into Energy – Renewable and Energy – Efficiency.

Energy is the Largest Sub-Sector

Much of Canada's EGSS comprises companies operating in the energy sector. In 2015, the renewable energy sector was the largest EGSS category, with sales of $59.8 billion, followed by the energy efficiency sector with $42.4 billion and the waste management sector with $12.3 billion. The energy sector is also the highest employer in the EGS sector with 640,000 employees in both energy sub-sectors.

Table 5: Summary of EGS Sales, Companies, Employees and Value Added to GDP, Segmented by ECO Canada Environmental Sub-Sectors, 2015

Primary ECO Sub-Sector (2015)	Sales ($MM)	Companies	Employees	Value added ($MM)	% Products Mapped to Multiple Sub-Sectors
Energy-Renewable	$59,832	22,157	388,696	$30,076	1%
Energy-Efficiency	$42,350	13,197	251,281	$22,218	0%
Waste Management	$12,342	4,988	92,137	$7,473	32%
Water Quality	$10,036	2,556	46,803	$5,473	1%
Sustainability	$5,206	1,980	27,695	$2,678	1%
Nuclear	$3,435	933	18,840	$2,100	0%
Research and Development	$3,247	2,999	54,138	$2,343	100%
Site Assessment and Reclamation	$1,649	334	6,338	$1,009	10%
Air Quality	$1,391	353	6,531	$852	0%
Natural Resource Management	$1,250	68	1,007	$654	71%
Education and Training	$1,093	642	10,562	$623	100%
Environmental Health and Safety	$882	413	7,230	$524	99%
Policy and Legislation	$446	606	11,263	$293	98%
Communications and Public Awareness	$404	223	3,846	$202	92%
Noise Pollution	$249	71	1,304	$123	0%
Fisheries and Wildlife Management	$235	21	205	$146	47%
General	$155	79	1,602	$93	14%
ALL SECTORS	**$131,728**	**44,799**	**807,348**	**$69,254**	

Source: Base data provided by kMatrix. ECO sector crosswalk and analysis by Field Guide Consulting.

Activity Type

In terms of activity type, manufacturing and development (M&D) generates the most revenue (US$54.3 billion) across the EGS sector. M&D also has the most companies (18,150) and the most people (327,400). However, Supply and Distribution generates the most value-added GDP at $25.5 billion.

Table 6: Summary of EGS Sales, Companies, Employees and Value added to GDP, Segmented by Activity Type

Activity Type	Sales ($MM)	Companies	Employees	Value Added ($MM)
Manufacture/ Development	54,338	18,145	327,393	23,378
Supply/Distribution	40,552	12,794	227,288	25,548
Services	23,989	9,120	161,317	13,991
Installation	6,800	2,692	54,452	2,855
Maintenance	6,048	2,048	36,898	3,481
Total	**131,728**	**44,799**	**807,348**	**69,254**

5 Conclusion

Owing to its multifarious nature, there are many ways to measure environmental employment, and many insights we can discern:

Job posting analysis gives insight into short-term trends for 2016:

- Approximately 21,000 environmental job ads were posted out of almost 1.1 million (about 2%)
- The NOC for Agriculture and horticulture workers recorded the most job postings overall at approximately 3,200
- The ECO Canada sub-sector for Natural Resource Management posted the most jobs at approximately 7,000

Supply and demand analysis gives insight into current and projected employment and the supply pool to 2024:

- Core environmental employment fell significantly over 2013-2016 period, but is expected to steadily rise going forward, reaching more than 460,000 workers by 2024
- Ontario consistently has the most core environmental workers throughout the forecast period, with British Columbia having the next highest number of core environmental workers
- The top three NOCs over the forecast period were:
  - Managers in agriculture, horticulture and aquaculture
  - Other technical inspectors and regulatory officers
  - Civil, mechanical, electrical and chemical engineers
- The sub-sector that consistently had the most environmental employees over the forecast period was Natural Resource Management, whereas Policy and Legislation was the fastest growing in terms of environmental employment.
- Overall more workers will enter the environmental sector (as defined in this report) than will leave, but at the occupational level, there may be some challenges as retirements outpace new entrants.

The Environmental Goods and Services data provides insights into market size via employment, revenue and contribution to Canada's GDP:

- In the context of products and services, the Energy sub-sector (Renewable and Efficiency combined) is the largest both in terms of revenue and employment. Together, the Energy sub-sector employed 640,000 workers in 2015, generated US$102 billion in sales and contributed US$52 billion to Canadian GDP.

6 LMI in Transition and Future Developments

For two decades, ECO Canada has relied heavily on large surveys of the Canadian business community as the foundation of its environmental LMI base of knowledge. ECO Canada has now begun to tap into new and different methods of research exploration as described for the first time in these reports. The national surveys, though unwieldy and costly, are necessary to develop baseline numbers for the new methods. In future, ECO Canada will still carry out periodic surveys to inform the multi-method model.

Other items that ECO Canada intends to explore further are to:

- Conduct a review of ECO Canada's subsectors and National Occupational Standards to keep them as up to date and relevant as possible
- Explore improvements in the geographic granularity and general specificity in the data produced by the model
- Better integrate the supply data with the demand data
- Regularize the release of data
- Examine the timing of minor and major model updates

eco canada

This project was funded by the Government of Canada's Sectoral Initiatives Program.
The opinions and interpretations in this publication are the author's and do not necessarily reflect those held by the Government of Canada.

ECO Canada (2017).
Canadian Environmental Employment: Summary Analysis - October 2017

Labour Market Research.
Environmental Careers Organization of Canada.

CONTACT US

ECO Canada
#200, 308 - 11th Avenue S.E.
Calgary, Alberta, Canada
T2G 0Y2

P : (403) 233-0748
F : (403) 269-9544
E : info@eco.ca
W : eco.ca

@ecocanada