



An evaluation of the integration of biodiversity into business in Ontario

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State of Ontario's Biodiversity Technical Report Series

Report #SOBTR-02

Ontario Biodiversity Council



AN ASSESSMENT OF THE INTEGRATION OF BIODIVERSITY INTO THE PRACTICES OF ONTARIO BUSINESSES

Introduction:

In recent years, a critical link has been identified between society, the economy, and the natural environment (TEEB 2010). Many business leaders are recognizing that to remain competitive, especially in challenging economic times, biodiversity issues must be factored into their operations. In addition, individuals are becoming increasingly aware of the impact their daily lifestyle choices are having on the natural environment both directly and indirectly through issues such as increasing loss of habitat and green space and climate change. Because biodiversity is not an infinite resource, many business leaders are making biodiversity a top priority by factoring biodiversity management into their corporate planning and mainstreaming biodiversity into their decision-making process.

Ontario's Biodiversity Strategy, 2011 (OBC 2011) includes a target for all sectors to develop and implement plans that support the Strategy by 2020. This report provides details of an assessment of biodiversity integration into Ontario's business sector to support the development of an indicator addressing the target. The indicator examines the extent to which Ontario companies have addressed biodiversity in their corporate planning and reporting. As this is the first time this indicator has been assessed, the results will serve as a baseline for future assessments.

While this is the first time this target has been evaluated, relevant studies have been completed which examine the integration of biodiversity in different sectors of the global economy. A study completed by PricewaterhouseCoopers (PWC) for The Economics of Ecosystems and Biodiversity (TEEB) studied the integration of biodiversity of the 100 largest companies internationally. Their results concluded that of the 100 companies' annual reports, 2% reported biodiversity as a "strategic issue", 6% identified programs to reduce their negative impacts on biodiversity, and 18% mentioned biodiversity (TEEB, 2010). In contrast, when examining the 89 sustainability reports published, 10% reported biodiversity as a "sustainability issue", and 30% identified programs to reduce their negative impacts (Figure 1; TEEB 2010).

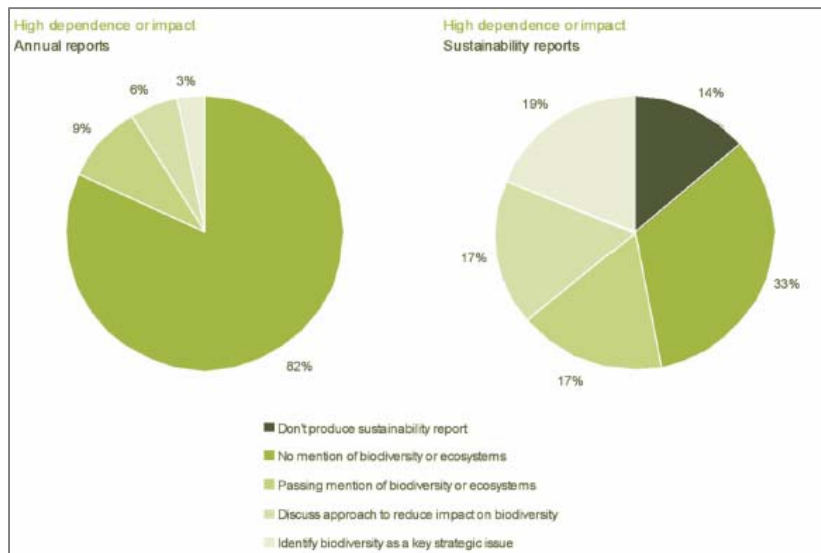


Figure 1. Reporting on biodiversity by the largest companies in 2008 (Source: TEEB 2010).

Another PWC (2010) study, conducted as part of their 13th Annual Global CEO Survey, explored the degree to which international businesses are concerned about biodiversity. PWC surveyed 1,200 chief executive officers (CEOs) to understand if they were concerned about biodiversity loss as a threat to business. Overall, 27% of participating CEOs were at least “somewhat” concerned about biodiversity loss as a potential risk to their business (TEEB 2010). However, only 14% of North American CEOs were at least “somewhat” concerned about biodiversity loss, ranking below the international average (Figure 2; TEEB 2010).

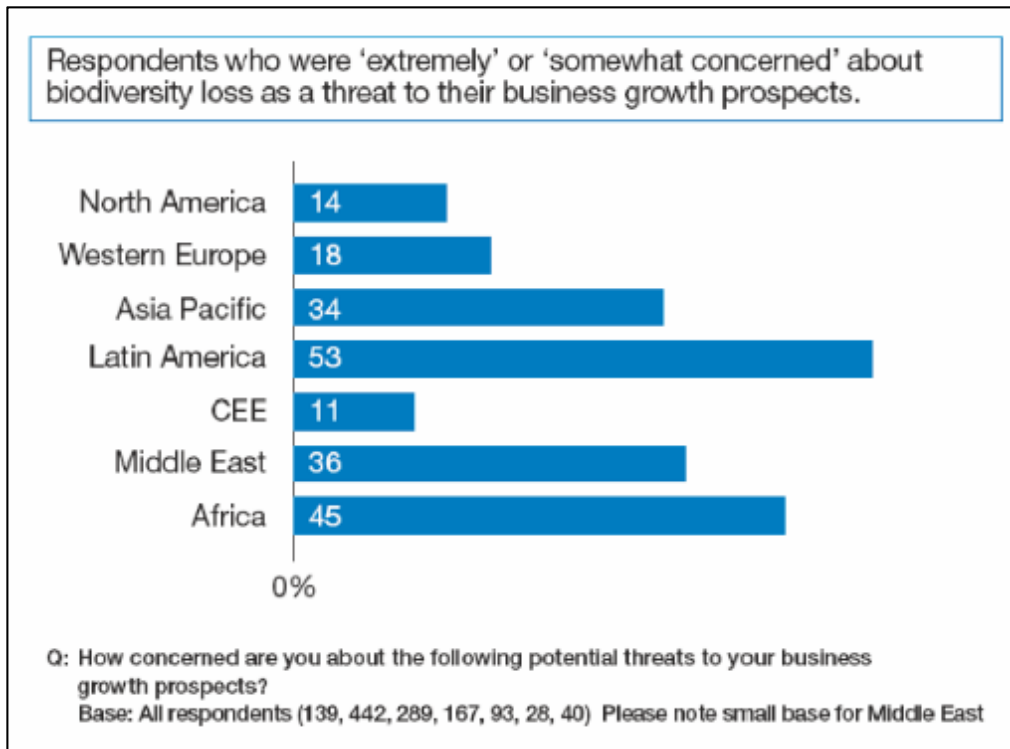


Figure 2. Views of global CEOs on the threat to business growth from biodiversity loss (Source: TEEB 2010).

The Natural Value Initiative (NVI) has developed the Ecosystem Services Benchmark (ESB) as an evaluative tool to study ecosystem thinking within companies (Grigg et al., 2009a). The NVI is a collaborative group between Fauna & Flora International, the United Nations Environmental Programme Finance Initiative, Nyenrode Business University and the Dutch Association of Investors for Sustainable Development. There are five main components assessed in this classification including “competitive advantage”, “governance”, “policy and strategy”, and “management and implementation” (Grigg et al. 2009a). The NVI assesses these five areas to determine performance levels of biodiversity considerations to understand both a company’s impact and dependence on biodiversity (Grigg et al. 2009a).

Using this framework, the NVI surveyed the agricultural industry in Brazil by examining producers, processors, and retailers in the food, beverage, and tobacco industries (Grigg et al. 2009b). Based on public information (websites, reports, and online media searches), the NVI found that businesses with an easily identifiable connection between their business practices and ecosystems tended to rate higher because of consumer, non-governmental organization, and investor pressures (Grigg et al. 2009b). Another study completed by the NVI used the ESB tool to evaluate the mining, oil, and gas industries. The NVI found that of the extractive companies examined, 90% publically identified biodiversity in their “corporate risk management practices” (Grigg et al. 2011).

These studies used different approaches to explore how businesses are integrating biodiversity considerations into their operations. Companies have been evaluated on biodiversity reporting by

examining annual reports and websites to identify if biodiversity considerations are merely mentioned or are a strategic issue. As well, these studies evaluate if the company has developed and implemented plans, policies, and programs aimed at reducing negative impacts on biodiversity.

Methods

This index surveyed the integration of biodiversity within business operations in Ontario by examining 70 companies. Businesses were categorized into four main sectors: primary (extraction of natural resources), secondary (processing goods), tertiary (service activities), and quaternary (research and information activities). This categorization system is used in the literature; for example, see Kenessey (1987) and Thakur (2011). Categorizing sectors in this way allows for a better identification of the connection between businesses operations and impact on biodiversity. For example, companies in the agriculture and forestry industry have “direct” impacts on ecosystems through the extraction of natural resources (TEEB 2010). In contrast, businesses in the manufacturing industry have “indirect” impacts on biodiversity through the use of raw materials in their supply chain, and “direct” influence on ecosystem services through the footprint of their manufacturing operations (TEEB 2010). The four sectors were further categorized using industries identified in Statistics Canada’s *North American Industry Classification System* (NAICS, 2012) to produce a sector categorization (Table 1).^{i ii}

Table 1. Industries used to study biodiversity integration into all sectors of business in Ontario.

Primary Sector (n = 15)	Secondary Sector (n = 15)	Tertiary Sector (n = 25)	Quaternary Sector (n = 15)
<ul style="list-style-type: none"> • Agriculture and forestry • Mining and quarrying • Oil and gas 	<ul style="list-style-type: none"> • Construction • Manufacturing • Utilities 	<ul style="list-style-type: none"> • Accommodation and food services • Finance and insurance • Real estate • Retail and distribution • Transportation 	<ul style="list-style-type: none"> • Communication • Government funded researchⁱⁱⁱ • Technology

Within each industry, the five largest publicly traded and private companies^{iv} in Canada were studied. These were identified based on the *Globe and Mail’s Report on Business* (Appendix, Table 2).^v Due to the globalized nature of the business sector in Ontario, companies that were chosen either had headquarters, operated, and/or sold products in Ontario. This decision was based on the interconnectedness and complexity of business supply chains. Companies’ publically available annual corporate social responsibility and sustainability reports, as well as webpages, were examined for each business based on key word search terms (Table 3). These documents were obtained from the businesses’ websites.

Table 3. List of keywords.

Keywords
• Biodiversity
• Biological Diversity
• Ecosystem
• Environment
• Nature
• Sustainability

The framework used to examine these companies was based on criteria developed to study the integration of biodiversity into the business sector. This evaluative model was developed after consulting several studies including *The Economics of Ecosystems and Biodiversity in Business and Enterprise* (TEEB 2010), *The Ecosystems Services Benchmark* (Grigg et al. 2009a), *Tread lightly: Biodiversity and ecosystem services risk and opportunity management within the extractive industry* (Grigg et al. 2011), and *Linking shareholder and natural value: Managing biodiversity and ecosystem services risk in companies with an agricultural supply chain* (Grigg et al. 2009b). These documents provided guidance on how to examine the integration of biodiversity into different sectors.

The degree to which the company is concerned with biodiversity conservation was categorized into one of five successive stages. These ranged from companies with no consideration of biodiversity or sustainable development and environmental issues to companies with developed and implemented biodiversity-monitoring programs (Table 4).

Table 4. Stages of biodiversity concern for companies. See Appendix, Table 5 for criteria.

Stage	Companies that:
1	Have no consideration of biodiversity or sustainable development/environmental issues
2	Report on sustainable development/environmental issues
3	Report on biodiversity, including acknowledgement of impacts
4	Consider biodiversity conservation as a key strategic issue and have plans/policies to address it
5	Have developed and implemented a biodiversity monitoring system and/or report on results of the monitoring

The first stage included companies that did not mention any of the biodiversity keywords in their annual reports or on their website, and did not produce any sustainability or sustainable development reports.

The second stage identified companies that did not report on biodiversity, but reported on sustainable development, sustainability, and environmental issues. For example, a company in this stage may have reported on landfill waste and water use reduction goals on their sustainability webpage, but did not mention biodiversity or ecosystems.

The third stage included companies that report on biodiversity and acknowledge their negative impacts on ecosystems. These companies were determined initially based on a keyword search using the terms ecosystem, biodiversity, and biological diversity. Companies were then identified based on whether they connected biodiversity to the nature of their business practices. For example, a company may have identified their direct impacts on biodiversity through construction operations in their corporate social responsibility report.

The fourth stage includes companies that consider biodiversity conservation as a key strategic issue and have plans and policies in place to address it. These companies identified biodiversity as something that needs to be addressed because of their business practices. This category also included companies that had policies and strategies contributing to healthy biodiversity systems. For example, a company in this stage may have policies in place that regulated the use of natural resources in ecologically sensitive areas in order to reduce their negative impacts on biodiversity in the area.

The fifth stage included companies that had developed and implemented a biodiversity monitoring system. This included companies that had programs in place that monitor their progress to mitigate their impacts on biodiversity. It included both companies that monitor the results of their biodiversity programs and policies and had monitoring systems to evaluate impacts of their operations on ecosystems. For example, a company that scored in this stage produced a biodiversity report, which identified biodiversity as a strategic issue and outlined the progress of their plans and policies through monitoring.

Results

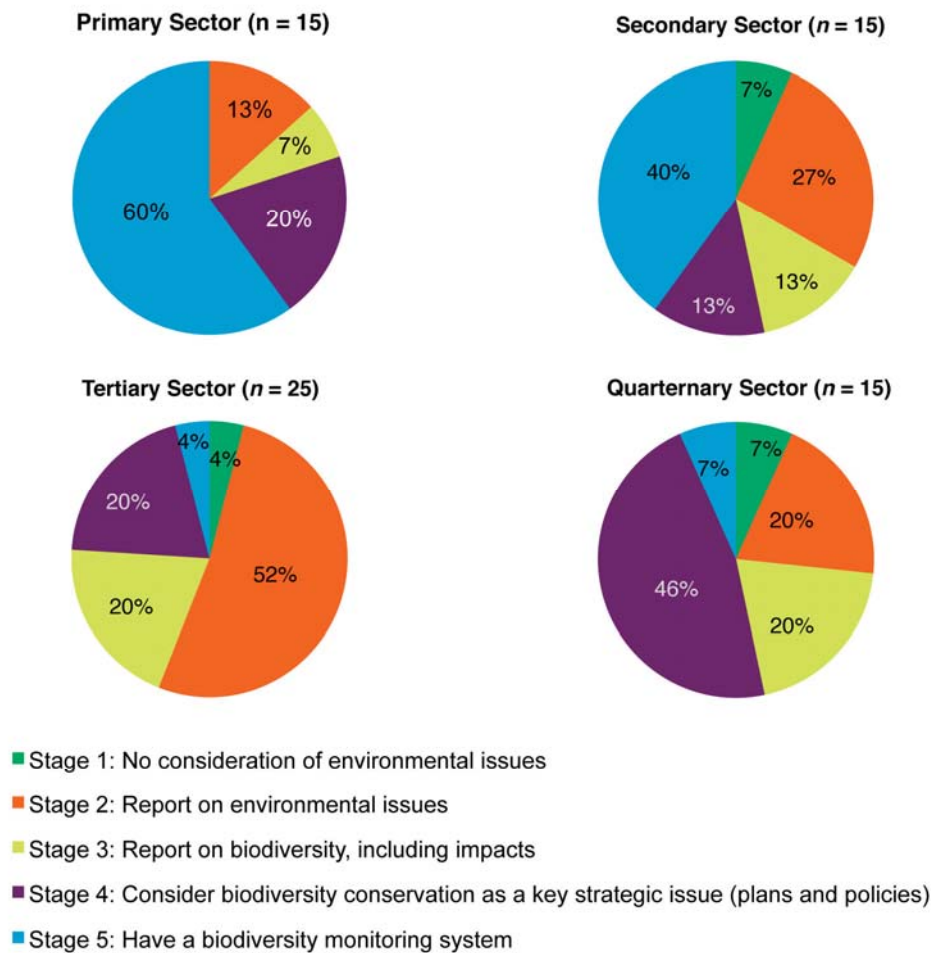


Figure 3. Summary of biodiversity consideration of different sectors operating in Ontario (n = 70). See Appendix, Table 6 for a list of companies and score.

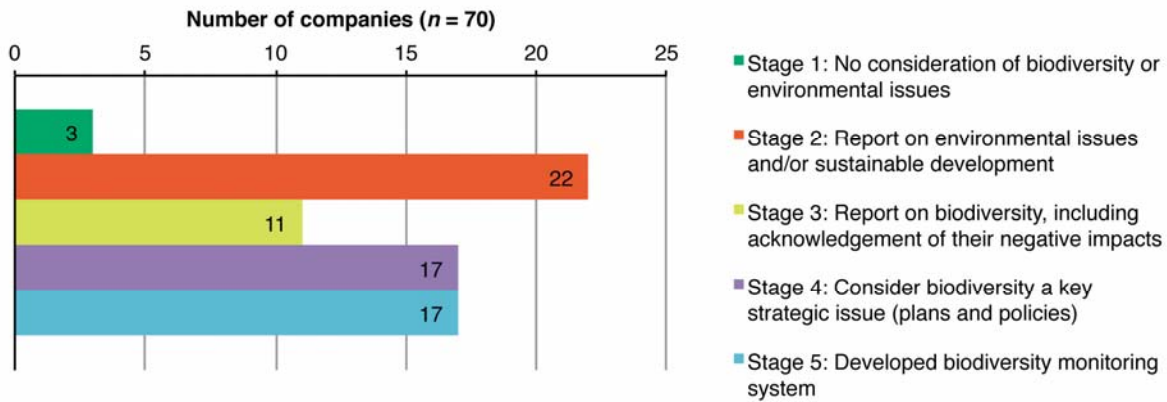


Figure 4. Summary of biodiversity consideration by all sectors operating in Ontario (n=70). See Appendix, Table 6 for a list of companies and scores.

Results from this index found that companies ranged from no consideration of biodiversity or environmental issues to having developed biodiversity-monitoring systems. Only four percent ($n = 3$) of companies in this index did not consider biodiversity or environmental issues in their corporate programs or policies. Thirty-one percent ($n = 22$) of companies in this study reported on environmental issues and/or sustainable development, but did not explicitly consider biodiversity. Sixteen percent ($n = 11$) of companies in this study reported on biodiversity, including acknowledgement of their negative impacts. Twenty-four percent ($n = 17$) of companies in this study considered biodiversity as a key strategic issue and had developed plans and policies to address these issues. An additional twenty-four percent ($n = 17$) of companies in this study had developed biodiversity monitoring systems to monitor their effects on biodiversity and/or their plans and policies to address biodiversity concerns.

Discussion:

This study demonstrates that businesses across Ontario are at different stages of integrating biodiversity into their business plans. Overall, the primary sector (60%, $n = 9$) had the greatest level of biodiversity integration, with the largest number of companies that have developed biodiversity monitoring systems. This was followed by the secondary sector (40%, $n = 6$), the quaternary sector (7%, $n = 1$), and the tertiary sector (4%, $n = 1$). As the primary sector had the greatest level of biodiversity integration, companies in this category recorded the largest number of developed biodiversity monitoring programs. This sector included agricultural, gas, forestry, mining, oil and quarrying industries, which tend to have more direct impacts on biodiversity through the nature of business operations. In sectors that had more indirect impacts (tertiary and quaternary sectors), biodiversity considerations within companies scored lower. While some companies have more identifiable connections through direct and/or indirect impacts, biodiversity issues need to be factored into corporate decision-making in order to maintain healthy ecosystems.

With the increasingly globalized nature of business, companies evaluated in this index tended to be multinational corporations with global operations. The complexities of supply chains present in business operations, ranging from extraction to distribution, make deciphering company impacts on biodiversity difficult to geographically define. For this reason, the scope of this index evaluated biodiversity considerations at the international level as policies and programs were primarily aimed at reducing biodiversity loss outside of Ontario, where extraction and manufacturing processes occurred. Further studies could evaluate biodiversity considerations by geographically examining business impacts on

biodiversity in comparison to plans and policies carried out by the company. This would allow for a connection to be made between biodiversity impacts and policies in a specific area.

This index was based on data collection from publically accessible reports and websites, which were scattered throughout their companies' websites. It was found that biodiversity reporting was not present in a universal reporting form, but found throughout annual, sustainability, and corporate social responsibility reports, as well as on environmental, social responsibility, and biodiversity webpages. Due to the diversity of data collection, further studies should be confirmed with companies themselves to ensure that biodiversity projects, policies, or monitoring have not been missed. Furthermore, consultation with companies, through interviews or surveys, would allow for a comparison between biodiversity plans and policies that are reported on and biodiversity conservation practices being completed at sites, which is not being reported.

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Appendix

Appendix 1. Companies studied in this index, sorted by sector and industry.

Sector	Industry	Company
<i>Primary (n = 15)</i>	Agriculture and forestry	Agropur Cooperative
		Alliance Grain Traders
		Gay Lea Foods Co-operative
		Ridley Inc.
		Viterra Inc.
	Mining and quarrying	Cameco
		First Quantum Minerals
		Rio Tinto Alcan
		Teck Resources
		Vale Canada
	Oil and gas	Canadian Natural Resources
		Cenovus Energy
		Husky Energy
		Imperial Oil
		Suncor Energy Products Inc.
<i>Secondary (n = 15)</i>	Construction	Aecon Group Inc.
		Bird Construction
		EllisDon Inc.
		Golder Associates Corp.
		Hatch Ltd.
	Manufacturing	ArcelorMittal Dofasco
		Essar Steel Algoma Inc.
		Russel Metals Inc.
		Siemens Canada Limited
		Toromont Industries
	Utilities	Direct Energy Marketing Ltd. (Centrica)
		Hydro One Inc.
		Just Energy Group Inc.
		Ontario Power Generation Inc.
		Toronto Hydro Corporation
<i>Tertiary (n = 25)</i>	Accommodation and food services	Cott Corporation
		Maple Leaf Foods

		McCain Foods Limited	
		Nestle Canada Inc.	
		PepsiCo Canada	
	Finance and insurance		Bank of Nova Scotia
			Manulife Financial Corporation
			RBC
			Sun Life Financial
			Toronto-Dominion Bank
	Real estate and rental leasing		Brookfield
			Calloway Real Estate Investment Trust
			First Capital Realty Inc.
			FirstService Corporation
			RioCan Real Estate Investment Trust
	Retail and distribution		Canadian Tire
			Costco Wholesale
			George Weston
			Loblaws Companies Limited
			Walmart
	Transportation		Canada Post Corporation
			Great Toronto Airports Authority (Pearson)
		NAV Canada	
		Purolator Courier	
		Toronto Transit Commission	
<i>Quaternary (n = 15)</i>	Communications	Bell Media	
		Canadian Broadcasting Corporation	
		Cogeco Inc.	
		Rogers Communications Inc./Wireless	
		Shaw Communications	
	Government funding research	Cascades	
		Kruger Mill	
		Pratt & Whitney Canada	
		Toyota Motor Manufacturing	
		Ubisoft	
	Technology	Blackberry Ltd.	
		Bombardier Inc.	
		Catamaran Corp.	
		CGI Group	
		IBM Canada	

Appendix 2. Stages and criteria used to determine biodiversity stage for this index.

Stage	Companies that:	Criteria
1	Have no consideration of biodiversity or sustainable development/environmental issues	<ul style="list-style-type: none"> No results in key word search of biodiversity, sustainability, ecosystems, and environment No annual sustainability or sustainable development report
2	Report on sustainable development/environmental issues	<ul style="list-style-type: none"> Some results in key word search of biodiversity, sustainability, and ecosystems Sustainability or sustainable development report present
3	Report on biodiversity, including acknowledging impacts	<ul style="list-style-type: none"> Identifiable connection between biodiversity and nature of their business practices Supporting of other organization's biodiversity projects, programs, and policies
4	Consider biodiversity conservation as a key strategic issue, and have plans/policies to address it	<ul style="list-style-type: none"> Biodiversity identified as something that needs to be addressed because of their impacts through business Have developed policies and strategies Projects and programs in place or in progress to address the impacts of their business operations on biodiversity
5	Have developed and implemented a biodiversity monitoring system or any results and implementation	<ul style="list-style-type: none"> Programs in place that monitor their progress to mitigate their impacts on biodiversity

Appendix 3. Companies studied in this index and biodiversity consideration score.

Sector	Industry	Company	Score
Primary (n = 15)	Agriculture and forestry	Agropur Cooperative	2
		Alliance Grain Traders	2
		Gay Lea Foods Co-operative	4
		Ridley Inc.	4
		Viterra Inc.	4
	Mining and quarrying	Cameco	3
		First Quantum Minerals	5
		Rio Tinto Alcan	5
		Teck Resources	5
		Vale Canada	5
	Oil and gas	Canadian Natural Resources	5
		Cenovus Energy	5
		Husky Energy	5
		Imperial Oil	5
		Suncor Energy Products Inc.	5
Secondary (n = 15)	Construction	Aecon Group Inc.	3
		Bird Construction	1

		EllisDon Inc.	2
		Golder Associates Corp.	5
		Hatch Ltd.	4
	Manufacturing	ArcelorMittal Dofasco	5
		Essar Steel Algoma Inc.	5
		Russel Metals Inc.	2
		Siemens Canada Limited	3
		Toromont Industries	2
	Utilities	Direct Energy Marketing Ltd. (Centrica)	5
		Hydro One Inc.	5
		Just Energy Group Inc.	2
		Ontario Power Generation Inc.	5
		Toronto Hydro Corporation	4
	<i>Tertiary (n = 25)</i>	Accommodation and food services	Cott Corporation
Maple Leaf Foods			2
McCain Foods Limited			4
Nestle Canada Inc.			5
PepsiCo Canada			3
Finance and insurance		Bank of Nova Scotia	4
		Manulife Financial Corporation	4
		RBC	3
		Sun Life Financial	2
		Toronto-Dominion Bank	4
Real estate and rental leasing		Brookfield	1
		Calloway Real Estate Investment Trust	2
		First Capital Realty Inc.	3
		FirstService Corporation	2
		RioCan Real Estate Investment Trust	2
Retail and distribution		Canadian Tire	2
		Costco Wholesale	2
		George Weston	2
		Loblaws Companies Limited	3
		Walmart	3
Transportation		Canada Post Corporation	2
		Great Toronto Airports Authority (Pearson)	2
		NAV Canada	2
		Purolator Courier	4
		Toronto Transit Commission	2
<i>Quaternary (n =</i>	Communications	Bell Media	4

15)		Canadian Broadcasting Corporation	2
		Cogeco Inc.	3
		Rogers Communications Inc./Wireless	4
		Shaw Communications	2
	Government funded research	Cascades	3
		Kruger Mill	4
		Pratt & Whitney Canada	4
		Toyota Motor Manufacturing	4
		Ubisoft	4
	Technology	Blackberry Ltd.	3
		Bombardier Inc.	2
		Catamaran Corp.	1
		CGI Group	4
		IBM Canada	5

Footnotes

ⁱ Based on the scope of this study, industries not included are as follows: administration, educational services, health care and social assistance, information and culture, public administration, and waste management. While the additional category, government funded research, was not listed under *Statistics Canada's* North American Industry Classification System (2012), it was added to the index in order to provide a larger sample size.

ⁱⁱ While some industries could be divided into more than one sector, the industries were sorted as accurately as possible.

ⁱⁱⁱ The “government funded recipients” industry was substituted with the “government funded research” for clarity. These companies were funded for research activities (Globe and Mail, 03 July 2014).

^{iv} Largest companies based on revenue.

^v The identification of industries was based primarily on *The Globe and Mail's* Report on Business database. The majority of data was taken from “Canada’s top companies by industry” article, which outlined top 10 companies for the industries selected for this index. Industries not included in this list were then searched for in the Globe and Mail’s “Top 1000 rankings”.