



# Building the business case for biodiversity conservation

## SIGNIFICANT IMPLICATIONS FOR BUSINESS

- Economic cost of biodiversity risk is high
- Biodiversity protection offers an emerging opportunity

## SIGNIFICANT CHALLENGES FOR BUSINESS

- Lack of awareness & understanding of biodiversity
- Unclear biodiversity regulation
- Tools & process to manage biodiversity emerging



# Canadian Business and Biodiversity Council 2011 National Workshop

BARB STEELE

Network for  
Business Sustainability

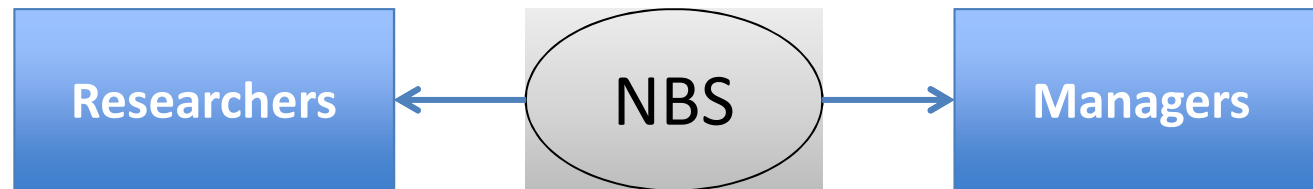
Business. Thinking. Ahead.

09/08/09

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# NBS mission: Bridge the gap



- Academic and industry thought leaders
- Produce and translate research on sustainability
- 2200 strong network—international in scope
- Non-profit, credible, publicly funded organization





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# measuring and valuing environmental impacts

A Systematic Review  
of Existing Methodologies



Network for  
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Business. Thinking. Ahead.

Prepared by  
Dr. Pamela Kaval



# Why should companies consider biodiversity impacts?

1. Reduce Costs
2. Respond to Investor Demands
3. Facilitate Regulatory Approval and Mitigate Operational Risk
4. Hire the Best Employees
5. Meet Emerging Consumer Demand



## Reduce Costs

*Interface*

\$100m savings over last 5 years (from waste diversion)



Save money. Live better.

Projected \$140m savings over next 5 years (from energy reduction, waste diversion and supply chain efficiency)





# Respond to Investor Demands





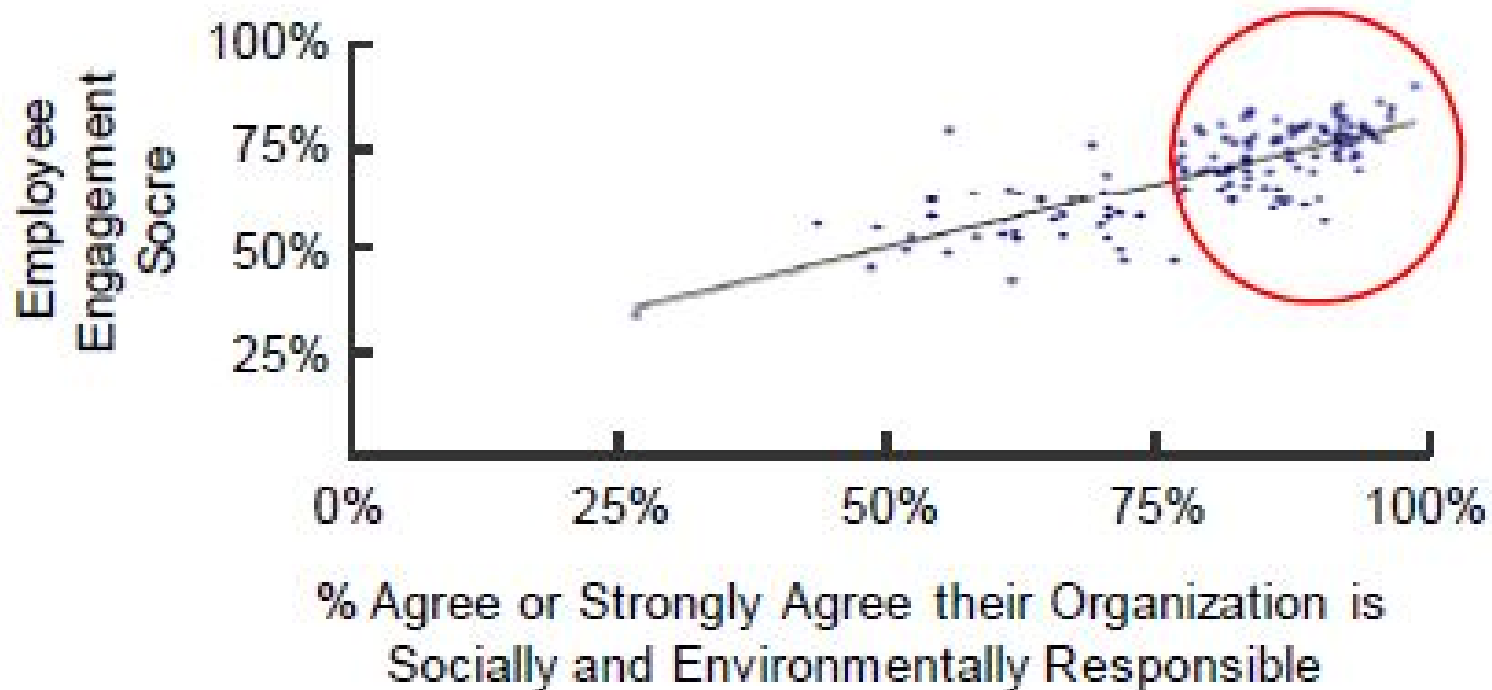
# Facilitate Regulatory Approval and Mitigate Operational Risk







# Hire and Retain Best Employees





# Meet Emerging Consumer Demand





# How to measure and value your organization's biodiversity impacts

Define Success



Decide What to Measure



Determine How to Measure and Value Impacts















# Tools to support measuring and valuing impacts

## DECIDE WHICH TOOLS TO USE

This table can help you decide which of the four most common tools for measuring and valuing environmental impacts is most appropriate for your needs. See our full [report on this topic](#) for other emerging, industry-specific and less common tools you may want to explore.

	Tool	Best for...	Pros	Cons	How to do it
Measuring (#)	<b>Life Cycle Analysis</b> 	Measuring any and all impacts stemming from production, use and disposal of a particular product.	<ul style="list-style-type: none"> <li>Can be used to directly compare alternatives (e.g. Input A vs Input B) and identify opportunities or risks in product categories.</li> <li>Incorporates external factors (e.g. social, political, technological).</li> <li>Many cheap/free software packages are available.</li> <li>EIO-LCA (Environmental Input-output Life Cycle Analysis) can add a valuation layer to your LCA, turning numbers into dollars.</li> </ul>	<ul style="list-style-type: none"> <li>Only as good as its data, and getting reliable data can be challenging and costly.</li> <li>LCAs may be difficult to compare due to differences in calculation methods.</li> <li>May be difficult to choose the right level of detail for analysis.</li> </ul>	Learn the steps for conducting an LCA: <a href="http://www.epa.gov/nmrl/ncaccess/pdfs/600r06060.pdf">http://www.epa.gov/nmrl/ncaccess/pdfs/600r06060.pdf</a>
	<b>Environmental Footprint</b>  	Measuring the overall impact of your organization's activities on the natural environment in a single number.	<ul style="list-style-type: none"> <li>Yields one number (hectares or acres) which can be compared easily to other footprints, facilitating benchmarking.</li> <li>Good educational tool to illustrate aggregated impacts.</li> </ul>	<ul style="list-style-type: none"> <li>Aggregating impacts into one number can be an oversimplification.</li> <li>Less relevant to certain industries (e.g. services).</li> <li>Doesn't help identify "hot spots" within product categories</li> </ul>	The Global Footprint Network identifies the data and formulas you'll need: <a href="http://www.footprintnetwork.org/images/uploads/National_Footprint_Accounts_Method_Paper_2010.pdf">http://www.footprintnetwork.org/images/uploads/National_Footprint_Accounts_Method_Paper_2010.pdf</a>
Valuing (\$)	<b>Ecosystem Services Valuation</b>  	Valuing "services" provided by the natural environment, and/or determining how their values will change.	<ul style="list-style-type: none"> <li>Provides a thorough valuation that considers many/all facets.</li> <li>Can be used to value a service (e.g. biodiversity, protection from UV rays) or how that value will change given a decision (e.g. to construct a new building, or clear a plot of land).</li> <li>Includes both market (i.e. out-of-pocket) and non-market values.</li> </ul>	<ul style="list-style-type: none"> <li>Complete valuations are extensive—and can be expensive.</li> <li>Studies are difficult to compare due to differences in calculation methods. e.g. non-market values can be estimated using travel cost, hedonic pricing, contingent valuation, etc.</li> </ul>	Decide what kind of study to undertake: <a href="http://ideas.repec.org/p/wai/econwp/10-02.html">http://ideas.repec.org/p/wai/econwp/10-02.html</a>  Search a database of valuation studies: <a href="http://www.euri.ca/">http://www.euri.ca/</a>
	<b>Environmental Input-Output Modeling</b> 	Measuring (in dollars) flows of a business' goods and services. Based on the formula: "Production – Consumption = Demand."	<ul style="list-style-type: none"> <li>Attempts to incorporate all business activities and effects on outputs, profits and pollution.</li> <li>Highlights the relationships across units in a company and between companies.</li> <li>Calculations are easily computed, understood and presented.</li> <li>High comparability across countries using the UN's System of National Accounts.</li> <li>Helps quantify externalities.</li> </ul>	<ul style="list-style-type: none"> <li>Requires many assumptions that may be difficult to validate</li> <li>Requires extensive data.</li> <li>Input-Output tables must be constantly updated to reflect the latest information.</li> </ul>	Learn the steps for conducting an analysis: <a href="http://www.ce.cmu.edu/GreanDesign/gd/education/Eio.pdf">http://www.ce.cmu.edu/GreanDesign/gd/education/Eio.pdf</a>

Note: symbols denote product level (  ), organizational level (  ), and national or global level (  ).

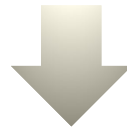


# How to measure and value your organization's biodiversity impacts

Define Success



Decide What to Measure



Determine How to Measure and Value Impacts



Incorporate Measurement into Decision-Making



# Incorporate Measurement into Decision Making







# Building the business case for biodiversity conservation

SIGNIFICANT IMPLICATIONS FOR BUSINESS

Motivate action by “Building the Business Case”

SIGNIFICANT CHALLENGES FOR BUSINESS

Use evidence based methods to make progress

GOOD LUCK WITH YOUR IMPORTANT WORK ON  
BIODIVERSITY CONSERVATION!!

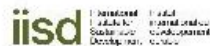


# Report available at [nbs.net/knowledge](http://nbs.net/knowledge)



Social Sciences and Humanities  
Research Council of Canada

Conseil de recherches en  
sciences humaines du Canada



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## Definition

- For this presentation biodiversity is defined as:
- ...the variety of species and ecosystems on earth and the ecological processes of which they are a part – the Canadian Biodiversity Strategy
- Can be used as a catch all term for nature—lifeforms and ecosystems
- The original field of study was ecology and evolution, biodiversity conservation relatively new and refers to the protection