



## Towards Biodiversity Assessments for Business: Developing a coordinated approach in Québec

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### Introduction

Human society is dependent upon biological resources and biodiversity in general. Until recently, biodiversity received little attention, due in part to the difficulty of understanding its contribution to society in terms of human and economic well-being. Yet, as shown by the TEEB report (2010), the costs associated with inaction on biodiversity are significant<sup>1,2</sup>.

Public fears are now crystallizing around the consequences of biodiversity loss. With the International Year of Biodiversity, increasing attention is being given to the measures needed to stop this loss.

As a result, leaders from the private sector are beginning to evaluate their exposure to new types of risks associated with their impacts on biodiversity and the changing expectations of governments, partners, and clients. The prosperity of the majority of businesses depends upon a sustainable source of biodiversity as well as ecosystem services. The activity of companies can lead to the modification of ecosystem services on which other businesses depend for their activities. Moreover, the ecosystem services affected by different types of disturbances, such as the activities of businesses, are generally inseparable from the quality of life to which many human communities aspire.

Following the Millennium Ecosystem Assessment<sup>3</sup> and the emergence of the concept of ecosystem services, the most innovative businesses have realized that the current regulatory system may change<sup>4</sup>: the economic evaluation of biodiversity and ecosystem services is becoming a prominent concern and is creating new business opportunities<sup>5</sup>.

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<sup>1</sup> TEEB (2010) – [The economics of ecosystems and biodiversity](#). Report for business. Executive summary.

<sup>2</sup> Braat, L., & Ten Brink, P. 2008. The cost of policy inaction (COPI). The case of not meeting the 2010 biodiversity target. Report to the European Commission, May, 29.

<sup>3</sup> Évaluation des Écosystèmes pour le Millénaire, 2004. Les écosystèmes et le bien être humain : synthèse. Island Press, Washington D.C. <http://www.millenniumassessment.org>

<sup>4</sup> Houdet, J., Trommetter, M., Weber, J., 2009b. Changing business perceptions regarding biodiversity: from impact mitigation towards new strategies and practices. Cahier no 2009-

Current approaches favor the monetary evaluation of the *services* supplied by biodiversity<sup>6</sup>, which have been treated as free resources until the present, in order to avoid having to assign a value to ecosystems and biodiversity themselves.

On a methodological level, the approaches and the data needed to quantify ecosystem services are still under development. For the moment, this limits the use of economic approaches in this field, as well as the emergence of best practices for mitigating businesses' impacts on biodiversity and their participation in the maintenance of biodiversity and ecosystem services.

This project, led by the Québec Centre for Biodiversity Science (QCBS), brings together partners from the private sector and from public and governmental institutions seeking to get involved in improving the integration of biodiversity into the strategies of business and other organizations in Québec. This objective can be achieved, in part, through the development of a coordinated, collaborative approach for biodiversity assessment for Québec's businesses and organizations.

The biodiversity assessment for business essentially aims to delineate the connection of the organization with biodiversity and ecosystem services, with a particular emphasis on its dependence upon and impacts on biodiversity and ecosystem services. A variety of methods have been put forward to achieve this goal. For example, the method proposed by the [World Resources Institute](#), [The Meridian Institute](#), and the [World Business Council for Sustainable Development](#) is based on a review of ecosystem services by the business itself. This is a method that allows business managers to develop strategies to address the risks and business opportunities resulting from their companies' dependence and impact on ecosystems<sup>7</sup>. Another method of biodiversity assessment<sup>8</sup>, developed by the non-profit organization Orée, uses an interdisciplinary tool whose boundaries and limits refer to the organizations' ecosystemic responsibility. The assessment is structured around two

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29. École Polytechnique, Department of Economics. 28p. – <http://halshs.archives-ouvertes.fr/hal-00412875/en/>

<sup>5</sup> Claesson, G., Proche, J. & Ross, J. Le Marché des écosystèmes. Le Carbone n'est qu'un début : êtes-vous prêts ? Groupe responsabilité d'entreprise et développement durable. Deloitte

<sup>6</sup> Centre d'analyse stratégique, 2009. Approche économique de la biodiversité. Contribution à la décision publique. Rapport du groupe de travail présidé par Bernard Chevassus-au-Louis. Rapport et document.

<sup>7</sup> Hanson, C., Ranganathan, J., Iceland, C. & Finisdore, J. 2008. [The Corporate ecosystem services review](#): Guidelines for Identifying Business Risks and Opportunities Arising from Ecosystem Change. World Resources Institute (WRI), Meridian Institute and the World Business Council for Sustainable Development – WBCSD

<sup>8</sup> Houdet, J. Pavageau, Trommetter, C.M. Weber, J. 2009. Accounting for Changes in Biodiversity and Ecosystem Services from a business perspective – Preliminary Guidelines towards a Biodiversity Accountability Framework. Novembre 2009, Ecole Polytechnique, CNRS, Cahier N°2009-44 – <http://hal.archives-ouvertes.fr/docs/00/43/44/50/PDF/2009-44.pdf>

inseparable elements: ecosystem accounting of the business and ecosystem accounting of the connections between businesses.

The biodiversity assessment brings a coherence to the multitude of existing initiatives in order to better account for the socio-ecological challenges that we face.

The [Quebec Centre for Biodiversity Science \(QCBS\)](#) was created in 2009 through a strategic research network grant from the *Fonds québécois de la recherche sur la nature et les technologies* (FQRNT). The QCBS is a network of more than 75 researchers from McGill University, Bishop's University, Université Laval, Université de Sherbrooke, Université du Québec à Rimouski, Université de Montréal, Université du Québec à Montréal, Agriculture and Agri-Food Canada, and the Montréal Botanical Garden. The QCBS facilitates the training of highly qualified professionals and enhances biodiversity science research at the international level. The mission of the Centre is to facilitate scientific cooperation by developing cross-disciplinary collaborations and partnerships that meet the research needs of Québec organizations, including private businesses. The QCBS plays a key role in biodiversity related issues and contributes to the academic and public debate on biodiversity loss.

This pilot project will support businesses in their reflection on these matters, which will ultimately give them a comparative advantage. They will be better equipped to integrate biodiversity conservation and maintenance of the ecosystem services on which they depend, into their corporate strategies.

Project partners benefit from collaborating with the QCBS because, in addition to bringing together unique scientific and technical expertise in Québec, part of the Centre's mission is to commit itself to formative projects. In addition to producing an initial biodiversity assessment, the prospects for the diverse partners are significant. These include advancing knowledge, training highly qualified personnel, improving a company's ability to meet certification requirements, etc.

In the context of this project, Québec wants to establish effective tools and mechanisms for companies, adapted for biodiversity and ecosystem services or even the fundamentals for implementing an effective support structure for businesses. Companies would then be prepared and supported in their progress based upon recognized provincial standards. Since the majority of firms are of small and medium size, it is important that this framework be adaptable to their circumstances, just as it can be for large companies.

## **Project Phases**

The project will have two phases. The first, preliminary phase, will consist of developing evaluation criteria for a biodiversity assessment adapted to Québec businesses and organizations, as well as a simultaneous, coordinated approach for conducting these self-assessments.

The evaluation criteria will include principles, standards, and indicators that enable businesses to assess their impacts and exposure to biodiversity risk, and more generally, to

integrate both the ecological and social dimensions of biodiversity into their business strategies.

## Preparatory Phase

Lasting up to one year long, this first phase will be guided by a working group made up of representatives of the project partners. The model and approach of the biodiversity assessment will be presented to potential businesses and organizations which will then decide whether or not to participate in the second phase: carrying out their own biodiversity assessment.

Within a year, the partners seek to achieve the following objectives:

- Establish a working group of the principal stakeholders, representing public institutions and private businesses;
- Conduct a review and analysis of the different models of biodiversity assessment for businesses and organizations;
- Complete a critical analysis of the contributory economic approaches developed in the field of biodiversity;
- Identify and characterize the technical resources and the information needed to prepare such business assessments in Québec;
- Develop a biodiversity assessment approach adapted to the Québec context.

One expected result of the preparatory phase is submission of a project proposal (for the second phase) for financing. One of the strengths of this proposal will undoubtedly be the formal partnerships among businesses, business associations, government, and university institutions.

## Second Phase: Application of the Biodiversity Assessment Approach

The second year of the project, the implementation phase, is dependent upon the concerted action of the working group members. This phase will allow for the implementation of the biodiversity assessment approach among Québec businesses and organisations, followed by an evaluation of the experience. To accomplish this, project partners will work to achieve the following objectives during this second phase :

- The biodiversity assessments themselves will be performed voluntarily by companies and organisations during the second phase. This exercise will be conducted jointly, with the support of the main institutions involved in the first phase of the project.
- QCBS experts as well as other project partners will support companies in performing their assessments. Lessons learned from the experience will result in a series of recommendations that will ultimately provide Québec with effective biodiversity and ecosystem service tools for business.

## Partners

The [Québec Centre for Biodiversity Science \(QCBS\)](#) is responsible for coordination of the project. The Centre has mobilized the relevant scientific and technical expertise and will establish a dedicated scientific advisory committee for the project. There will be synergies

between this project and an existing QCBS working group on ecosystem services and biodiversity. The QCBS will liaise with Québec research centres working in the same sectors as the participating businesses, and will coordinate communication among partners as well as overall development of the project.

The Hydro-Québec Institute of Environment, Development, and Society ([L'Institut Hydro-Québec Environnement Développement et Société, Institut EDS](#)) at l'Université Laval is closely associated with the third research axis of the QCBS, titled "Management and Adaptation to Biodiversity Change", and as such, will have a key role in the project.

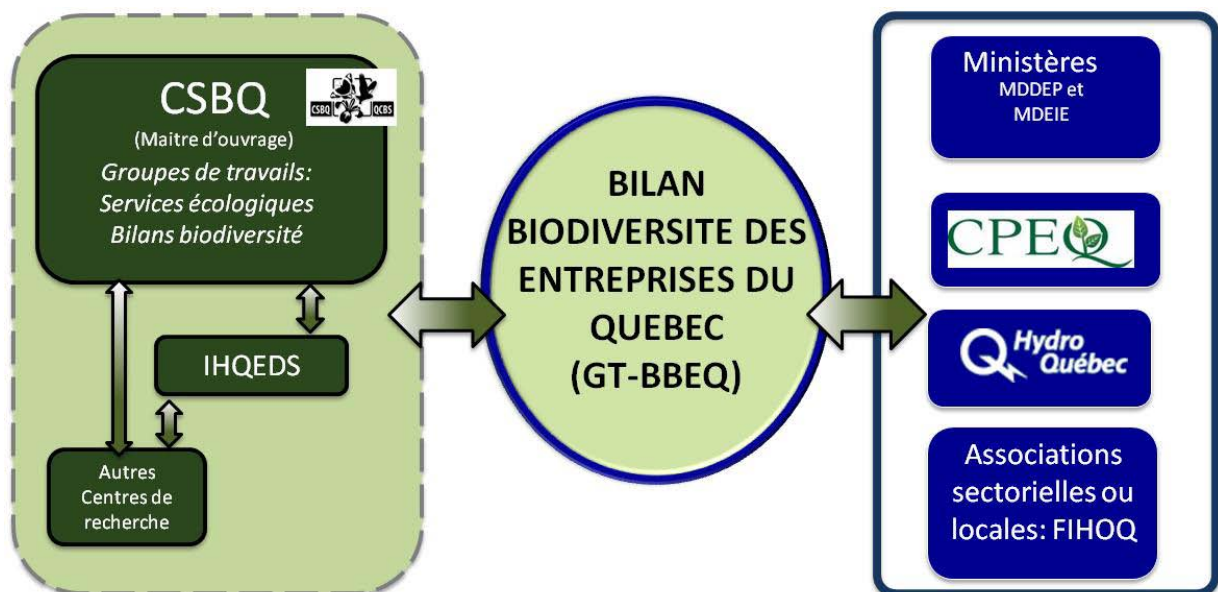
Québec's Ministry of Sustainable Development, the Environment, and Parks ([Ministère du Développement Durable, de l'Environnement et des Parcs, MDDEP](#)) will serve as the liaison with other Québec ministries (MAPAQ, MDEIE, MTQ et MRNF).

The Québec Business Council for the Environment ([Conseil Patronal pour l'Environnement du Québec, CPEQ](#)) has established a Biodiversity Committee to facilitate the connection between the working group and companies. Participating businesses will be involved in the first phase of the project through this Biodiversity Committee.

The Québec Interdisciplinary Federation of Ornamental Horticulture ([Fédération interdisciplinaire de l'horticulture ornementale du Québec, FIHOQ](#)) brings together 12 professional industry associations involved in ornamental horticulture.

[Hydro-Québec \(HQ\)](#) is a government-owned public utility that has been involved in the project from the outset.

## Project Flowchart



## Contacts

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