



## ADAPTATION OF THE DESIGN AND MANAGEMENT OF QUEBEC'S NETWORK OF PROTECTED AREAS FOR CLIMATE CHANGE

Projet de réserves de biodiversité et de réserve aquatique dans la région de l'Abitibi-Témiscamingue

6213-01-003



photo : Marie-Ève Deshaies (Université Laval)

Program  
ECOBIOCC

PROJECT STARTING DATE  
AND LENGTH  
October 2010 • 2 ½ years

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### CONTEXT

The government of Quebec is working to implement a network of protected areas that will provide for the conservation of natural landscapes representative of the biodiversity of all regions in the province. It will be attached to a world network of national systems of protected areas of mammoth scope. However, it still remains to incorporate into it the issue of climate change, because this will most certainly affect biodiversity and ecosystems in Quebec, as much as in the rest of Canada.

### OBJECTIVES

This project will contribute to refining the process for planning and managing Quebec's network of protected areas, so that it explicitly includes consideration of biogeographic dynamics resulting from climate change and the associated impacts, risks, and vulnerabilities. A participative research approach involving all stakeholders will make it possible to establish a process of strategic thinking on overall policy for managing a network of protected areas, a process that will involve the MDDEP in collaboration with the MRNF, along with the scientific community and civil society.

### APPROACH

This project will include the production of climate scenarios for two selected regions, the Gaspésie and the Mauricie. These will create a picture of the current climate and of the projected changes for the 2050 and 2080 time horizons. This information will make it possible to assess the vulnerability of ecosystems to climate change in the pilot regions. Subsequent analyses will then enable us to measure the capacity of the current network of protected areas to lessen this vulnerability. A research-action approach will allow us to validate the strategic thinking in the field, for the purpose of the planning of protected areas and their conservation. The goal of these pilot projects is to implement the concept of multi-category protected areas, particularly by adapting the IUCN category VI of protected areas to Quebec conditions, allowing for the sustainable use of natural resources. Recommendations for the adaptation of conservation plans will be made available to the responsible bodies in the target regions. The results could also be applied later to other Quebec regions.

### EXPECTED RESULTS

A number of results are expected from this project, including the following:

- The production of severity and climate change sensitivity indices for the protected areas in the target regions;
- The development of a tool for measuring the capacity of the current network of protected areas to respond to ecosystem vulnerabilities;
- A proposal for regional adaptation strategies for *in situ* management of protected areas;
- Developing, using pilot projects, the concept of multi-category protected areas, so as to strengthen the protection of conservation zones and improve connectivity between protected areas;
- Recommendations to the MDDEP.

### LEAD SCIENTISTS

- Louis Bélanger  
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- François Brassard  
Ministère du Développement durable, de l'Environnement et des Parcs (MDDEP)

### OTHER PARTICIPANTS

- Ministère des Ressources naturelles et de la Faune (MRNF)
- Parcs Canada
- Parcs Québec
- Société des établissements de plein air du Québec
- Université du Québec à Rimouski

### IMPACT

This project will make it possible to implement an adaptation strategy for the network of protected areas, a key component of Quebec's Action Plan on biodiversity. The results of this study will provide the MDDEP with the scientific basis it needs to help modify its tools and management procedures for protected areas so that they can be adapted for climate change.

FUNDING

