

Protected areas in Québec:

A Lifelong Heritage

INFORMATION DOCUMENT GRANTING OF PERMANENT PROTECTION STATUS TO EIGHT TERRITORIES

Réserves de biodiversité projetées :

- des marais du lac Parent
- du lac Wetetnagami
- du lac Saint-Cyr
- des Dunes-de-la-Rivière-Attic
- Wanaki
- des Basses-Collines du Ruisseau-Serpent
- de la Vallée-de-la-Rivière-Maganasipi

Réserve aquatique projetée :

- de la Rivière-Dumoine



ABITIBI-TÉMISCAMINGUE ADMINISTRATIVE REGION



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ABITIBI-TÉMISCAMINGUE ADMINISTRATIVE REGION

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Linguistic revision

Traductions Terrance Hughes inc.

Bibliographic reference

Gouvernement du Québec, ministère du Développement durable, de l'Environnement et des Parcs, Direction du patrimoine écologique et des parcs, Document d'information – Consultation publique portant sur l'attribution d'un statut permanent de réserve de biodiversité pour huit aires protégées projetées de l'Abitibi-Témiscamingue: *la réserve de biodiversité projetée des marais du lac Parent, la réserve de biodiversité projetée du lac Wetetnagami, la réserve de biodiversité projetée du lac Saint-Cyr, la réserve de biodiversité projetée des Dunes-de-la-Rivière-Attic, la réserve de biodiversité projetée Wanaki, la réserve de biodiversité projetée des Basses-Collines-du-Ruisseau-Serpent, la réserve de biodiversité projetée de la Vallée-de-la-Rivière-Maganasipi et la réserve aquatique projetée de la Rivière-Dumoine*, 2012, 234 p.

Legal deposit

Bibliothèque et Archives nationales du Québec, 2012

978-2-550-65989-1 (print version)

978-2-550-65990-7 (PDF)

Acronyms and initialisms

- BAPE: Bureau d'audiences publiques sur l'environnement
- JBNQA: *James Bay and Northern Quebec Agreement*
- CCEQ: Centre de contrôle environnemental du Québec du ministère du Développement durable, de l'Environnement et des Parcs
- CDB: *Convention on Biological Diversity*
- CDPNQ: Centre de données sur le patrimoine naturel du Québec
- ERF: Ecological reference framework
- RCEO: Regional conference of elected representatives
- DPÉP: Direction du patrimoine écologique et des parcs du ministère du Développement durable, de l'Environnement et des Parcs
- DRAE: Direction régionale de l'analyse et de l'expertise de l'Abitibi-Témiscamingue du ministère du Développement durable, de l'Environnement et des Parcs
- Faune Québec: Secteur Faune du ministère des Ressources naturelles et de la Faune
- NHCA: *Natural Heritage Conservation Act*
- ATVS: *Act respecting threatened or vulnerable species*
- MDDEP: Ministère du Développement durable, de l'Environnement et des Parcs
- RCM: Regional county municipality
- MRNF: Ministère des Ressources naturelles et de la Faune
- PASAP: *Plan d'action stratégique sur les aires protégées*
- SIEF: Ecoforestry information system (SIEF)
- IRM panel: Integrated resource management panel
- SB: Spruce budworm
- FMU: Forest management unit
- FAMU: Fur-bearing animal management unit

Definitions

Protected area

The *Natural Heritage Conservation Act* defines a **protected area** as "a geographically defined area that is designated or regulated and managed in order to attain specific conservation objectives."¹

Québec has 23 territories with the status of protected areas, of which the MDDEP manages 14 pursuant to the *Natural Heritage Conservation Act* (NHCA) that came into force on December 19, 2002 (aquatic reserves, biodiversity reserves, ecological reserves, nature reserves, man-made landscapes),² the *Act respecting threatened or vulnerable species* (R.S.Q., c. E-12.01) adopted in 1989 (plant habitats) and the *Parks Act* (R.S.Q., c. P-9) adopted in 1977 (provincial parks). Several other territories with the status of protected areas are the responsibility of the Ministère des Ressources naturelles et de la Faune (MRNF), such as an outstanding geological sites (OGS) under the *Mining Act*, an exceptional forest ecosystem and the biological refuge pursuant to the *Forest Act*, and wildlife habitats pursuant to the *Act respecting the conservation and development of wildlife*.

Ecological reference framework³

The ecological reference framework is a classification, cartography and interpretation system pertaining to hydrosystems and terrestrial ecosystems. The MDDEP elaborated the tool, which seeks to integrate and use ecological knowledge for planning and sustainable management that respects the territory and its resources. It reveals land-use planning problems in light of different scales adapted to the territory concerned.

Conservation

Conservation refers here to nature conservancy. It consists in the protection of populations of animal and plant species and the preservation of the ecological integrity of their natural or replacement habitats. Its objective is to maintain ecosystems in a good state of preservation and to prevent or remedy degradation that might occur there.

Biological diversity or biodiversity

The NHCA defines biological diversity or biodiversity as "the variability among living organisms from all sources including terrestrial, marine, estuarial and freshwater ecosystems and the ecological complexes of which they are a part; those terms include diversity within species, between species and of ecosystems."

¹ Simplified version of the official definition in the *Natural Heritage Conservation Act* (R.S.Q., c. C-61.01).

² In addition to these types of status, mention must also be made of the equivalents as regards provisional conservation status, proposed aquatic reserves, proposed biodiversity reserves, proposed ecological reserves, and proposed man-made landscapes.

³ To obtain additional information, please consult: <http://www.mddep.gouv.qc.ca/biodiversite/cadre-ecologique/index.htm>.

Natural province

The natural province is the first cartographic level of Québec's ecological reference framework (Li and Ducruc, 1999). There are 15 natural provinces in Québec. They are usually mapped at a scale of 1:1 000 000. The natural provinces have names but are also indicated by a letter. Accordingly, the Southern Laurentian Mountains, Mistassini Highlands and Abitibi Lowlands natural provinces are designated by the letters C, G and F, respectively.

Natural region and other levels of generalization of the ecological reference framework

The subdivision of the natural provinces is the second level of generalization of Québec's ecological reference framework. There are 92 natural regions in Québec, of which 10 are either mainly located outside Québec or are narrow coastal zones in James Bay, Hudson Bay or Ungava Bay. The natural regions are subdivided into physiographic units, which in turn are subdivided into ecological districts then into topographic units. It should be noted that in the Abitibi-Témiscamingue region, the physiographic units cover the entire region and the ecological districts are in the process of elaboration.

Representativeness

Representativeness refers to the faithful illustration of an environment's full biological variety or at least a good glimpse of it. The networks of protected areas must contain samples that reflect all existing ecosystems (IUCN, 2002). While representativeness can be defined under a coarse filter approach, through an understanding of the territory's physical features, the objective and the outcome consist in grasping the biological traits associated with physical environments.

Biodiversity reserve

A biodiversity reserve is an area established with a view to fostering the maintenance of biodiversity, in particular areas constituted in order to preserve a natural monument, a physical formation or a group of such formations, and areas established in order to ensure the representativeness of the biological diversity of Québec's natural regions.

This permanent protection status is granted, following the public consultation stipulated in the NHCA, to a territory previously protected by the status of a proposed biodiversity reserve.

Industrial activities such as logging, energy production or mining operations are then prohibited there. This protection status allows, in particular in light of the territory's ecological issues, recreational activities such as holiday resorts, hunting, fishing, hiking and canoeing-kayaking.

Proposed biodiversity reserve

Such protection status is granted to a territory established pursuant to the NHCA that legally protects a territory for four years. The status of a proposed reserve may be renewed, if necessary. During the period that the territory benefits from the status of a proposed reserve, the MDDEP carries out all of the studies and steps necessary to subsequently grant the territory permanent protection status, which includes the organization of a public consultation.

Note to readers concerning the expansions

The sections entitled “Theoretical expansions under study” pertaining to each reserve, i.e. sections 4.1.7, 4.2.7, 4.3.7, 4.4.7, 4.5.7, 4.6.7, 4.7.7 and 4.8.7, present the most up-to-date information possible by taking into account the outcomes of the pre-consultation workshops carried out with the ILRM panels concerned. They also take into account meetings with the Aboriginal communities. The MDDEP presented various scenarios at the meetings and workshops for modifying the boundaries of the proposed reserves. For each of the protected areas, the scenarios are intended to both enhance their ecological quality and effectiveness in maintaining ecological integrity. The scenarios usually include potential expansions of varying degrees of ecological interest, i.e. some expansions are more worthwhile than others from the standpoint of protection.

The presentation of the expansion scenarios sought, first of all, to encourage reflection by workshop participants on the desirable boundaries for each of the protected areas and to ascertain their concerns in this respect. In addition, the MDDEP offered participants an opportunity to make other proposals concerning the boundaries. By and large, few interveners expressed a stance on the potential expansions. Accordingly, the sections entitled “Theoretical expansions under study” cannot reflect a consensus on whether or not to adopt the MDDEP’s proposals. However, when a position was expressed or submitted to the MDDEP, it is presented there.

Since the workshops were held in the fall of 2010 and the spring of 2011, the scenarios have changed. Moreover, the MDDEP has received several expansion proposals, which explains the changes that readers, especially those who participated in the workshops, can observe in the cartography in relation to the scenarios presented at the workshops. The other cartographic changes related to the expansions are usually minor and are attributable to a concern for more accurate mapping of the territories targeted according to their specific criteria described in the sections entitled “Theoretical expansions under study.”

It should also be noted that an analysis is under way of the constraints and potential that the territories display. The analysis has already revealed that several of the expansion sectors presented appear to be subject to significant social and economic impacts. The final analysis for the purpose of making recommendations to Cabinet must, therefore, be pursued bearing in mind the recommendations that the BAPE might make, existing rights in the territory, resource development potential, and the impact on the region’s economic development. The objective of the final analyses is to limit the impact of the expansions on forestry operations, take into account mining and energy resource development potential, ensure the pursuit of the development of solidly anchored structured wildlife territories in the region, and better take into account the concerns of the territory’s users, while ensuring that the territory to be established as a protected area is of the greatest ecological interest possible.

It should be noted that the data in Section 4 are drawn from different sources and were not necessarily up-to-date at the time of the public consultation. For example, the characteristics of forest stands, e.g. age class groups, disturbances, cutover areas, and so on, drawn from ecoforestry mapping may differ at present from when the data were compiled.

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1 Introduction

1.1 The network of protected areas in Québec

In June 2000, the Québec government committed itself to establishing a network of protected areas that would cover at least 8% of its territory and be representative of Québec's biological diversity. To this end, the Minister of the Environment was mandated to coordinate the *Plan d'action stratégique sur les aires protégées (PASAP)*, in collaboration with the Minister of Natural Resources.

To ensure that it responded to the three key directions in the PASAP, the Ministère de l'Environnement set objectives at that time that allowed for the development of protected areas in the territory. The key objectives were to:

- attain a geographic area on the order of 8% in each of the natural provinces;
- protect a representative sample of all of Québec's ecosystems;
- obtain a balanced spatial distribution;
- ensure that there is at least one big protected area in each natural region and one big river in each natural province;
- target the ecological integrity of the protected area chosen;
- increase, if possible, the geographic size of small protected areas;
- invite the public and stakeholders concerned to participate in the process of implementing and creating a network of protected areas;
- take into account the social and economic concerns of the stakeholders and populations concerned.

The action plan achieved the geographic size objective in the spring of 2009, when 8.14% of Québec's territory was reserved for the purpose of protection and recorded in the Register of Protected Areas. The percentage corresponds to a total geographic area of 135 636.7 km². In 2002, the geographic size of protected areas stood at 48 060.9 km², equivalent to 2.88% of Québec's territory. A net gain of 87 575.8 km², equivalent to 5.25%, was achieved during the seven years, despite Québec's having to withdraw in 2007 1.90% of the protected areas when the Register of Protected Areas was published because the territories did not meet international criteria.

On April 20, 2011, the Québec government adopted strategic directions that will structure until 2015 the development of the network of protected areas aimed at the protection of 12% of Québec's territory, for a total of approximately 200 000 km² in the form of protected areas. The key directions reflect the agreements reached in Nagoya in October 2010, i.e. to increase by 2020 to

10% and 17% the area of offshore zones and terrestrial zones, respectively, protected worldwide.

As of March 2012, the Québec network of protected areas covered 8.35% of Québec's territory, equivalent to an additional 61 000 km² that must be protected to achieve the 12% objective. The additions to the network of protected areas will enhance the scope and quality of the network by creating new protected areas and expanding certain existing protected areas.

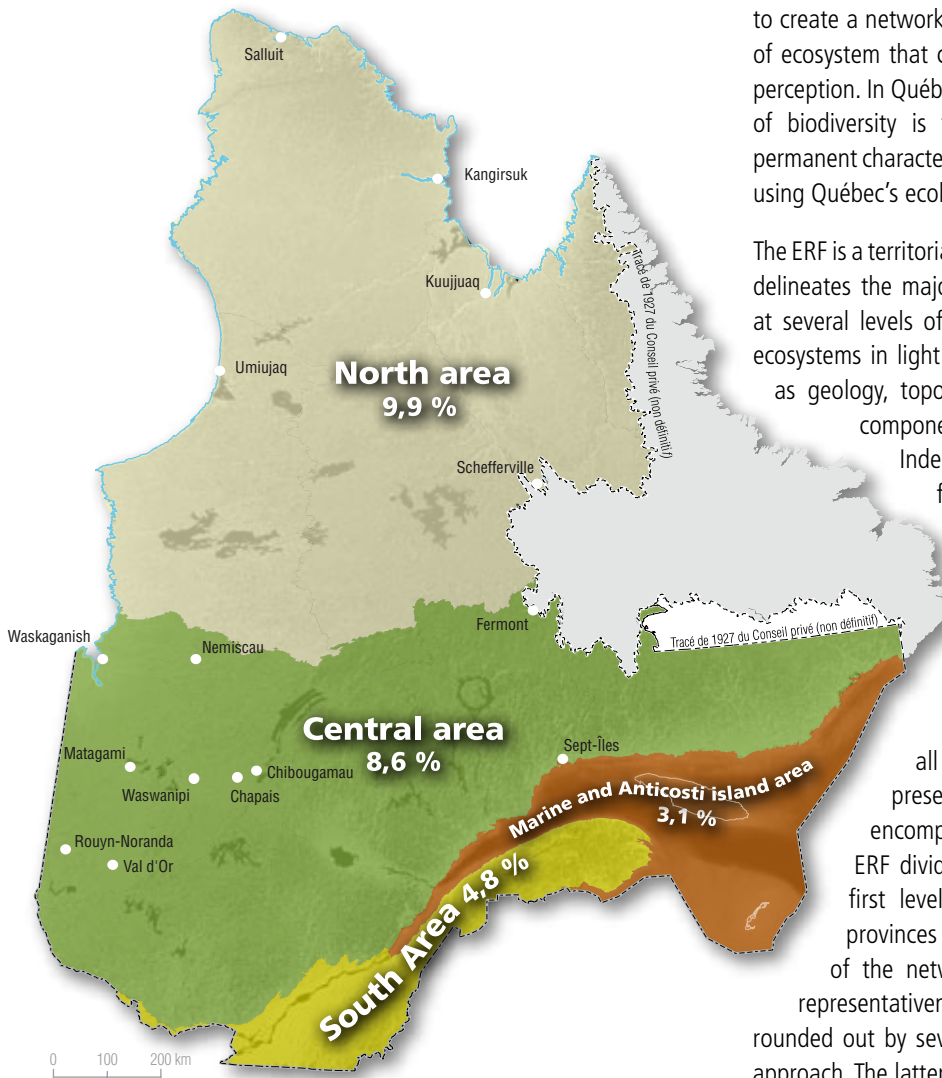
Accordingly, the theoretical expansions assessed in this information document and the impending granting of permanent status for the eight protected areas covered by this consultation reflect the strategic directions. Certain strategic directions apply to the territory covered by the eight protected areas and the adjustments of the boundaries studied were determined, in particular, in light of the objectives respecting the enhancement of the network of protected areas.

For example, one strategic direction is to round out the representativeness of the current network of protected areas through the addition of rare and common components of biodiversity that are less well represented in the existing network, which could affect proposals concerning boundaries. The strategic directions propose the division of Québec into four zones (Figure 1) and the protected areas in the information document are located in the central zone. In this zone, the objective is to protect 12% of the territory by first rounding out the representativeness of the network through the addition of strictly protected areas (Categories I to III of the IUCN) in order to overcome the shortcomings noted in the document entitled "Portrait du réseau d'aires protégées au Québec – Analyse de carence écorégionale – Région administrative de l'Abitibi-Témiscamingue" (physiographic types, old-growth forests, threatened and vulnerable species, and so on) and then enhance the network's efficacy through the addition of areas in Categories IV to VI.

Another key direction that applies within the framework of this consultation concerns the consolidation of the network of protected areas through the protection of conservation cores to ensure the safeguarding of species that are sensitive to human activity. The preferred means is the maintenance or enhancement of the connectivity between the protected areas and the protection of species and ecosystems whose survival is threatened because of human activities.

The quest for the ecosystemic coherence of the boundaries of the protected areas is, in this respect, an important means of action to ensure the most effective maintenance possible of ecological

Figure 1. Geographical zones in the network of protected areas



integrity. The sections in this information document entitled “Potential expansions” focus on an analysis of the boundaries of each of the eight protected areas covered by this consultation and present enhancement scenarios respecting the boundaries bearing in mind ecological factors. The sections are the core of the analysis from the standpoint of the maximization of the effective conservation of the territories.

1.2 The process of establishing aquatic reserves and biodiversity reserves

The status of biodiversity reserve and aquatic reserve is intended to protect components that are representative of the biodiversity of Québec’s natural regions. In order for a network of protected areas to effectively conserve biodiversity, it must not only protect rare, unique and outstanding components but also protect

representative, common components that define the territory’s biodiversity (Noss, 1995). The principle of representativeness seeks to create a network that protects at least one sample of each type of ecosystem that characterizes the territory at a defined scale of perception. In Québec, an immense territory, the representativeness of biodiversity is first measured through the identification of permanent characteristics that define the foundations of ecosystems, using Québec’s ecological reference framework (ERF).

The ERF is a territorial mapping and ecological classification tool that delineates the major ecosystems by mapping the natural entities at several levels of perception. Ecological mapping differentiates ecosystems in light of the territory’s permanent components such as geology, topography and soil (Gerardin *et al.*, 2002). The components determine the nature of major ecosystems. Indeed, in a given climatic context, the physical foundation of a territory makes it possible to ascertain the plant and animal life forms potentially associated with it.

Accordingly, depending on the level of perception adopted, an attempt is made to grasp the full potential diversity of the ecological units. It is then hypothesized that all life forms associated with the units are also present there. This coarse filter approach theoretically encompasses most of Québec’s biodiversity. The ERF divides the territory into 15 natural provinces (the first level of perception of the territory). The natural provinces underpin the analysis of the representativeness of the network of protected areas. The analysis of the representativeness of the territory’s permanent variables was rounded out by several other analyses, including the coarse filter approach. The latter approach seeks to determine rare components such as the presence of threatened or vulnerable plant or animal species, or specific physical components. The complementarity of the fine filter and coarse filter approaches optimizes the level of ecological representativeness of the territories selected. The variable respecting the conservation of old-growth forest tracts has also been incorporated into the process of selecting protected areas in the natural provinces subject to forest harvesting.

The profile of the representativeness of the network of protected areas hinges on the best ecological knowledge now available on the territory overall. The contribution that the protected areas make to the protection of ecosystems and species is measured by means of the crossing of different ecological characterization approaches. Accordingly, analyses of representativeness are conducted, in particular, according to the description of types of environments (physical, aquatic and marine), types of forest cover, potential vegetation, vegetation area, bioclimatic domains, old-growth

forests, forest productivity, and threatened or vulnerable species. The analyses have revealed both the gains achieved in respect of the representativeness of the biodiversity of the network during the period 2002-2009 and made it possible to ascertain the existing shortcomings (Brassard *et al.*, 2009) to guide future choices of territories to be protected.

1.3 The participatory approach and the regional public hearing process

The rapid gain in protected areas during the period 2002-2009 was made possible, among other things, by the establishment of numerous proposed biodiversity reserves and proposed aquatic reserves. The two forms of provisional status make it possible to concretely protect the territory in order to carry out the steps that lead to permanent status as a biodiversity reserve or an aquatic reserve. This period of study and analysis allows, in particular, for the acquisition of broader ecological knowledge of the territory and the consultation of the public in order to propose protected areas whose permanent configuration and method of management satisfy conservation objectives and the needs and interests of the communities concerned.

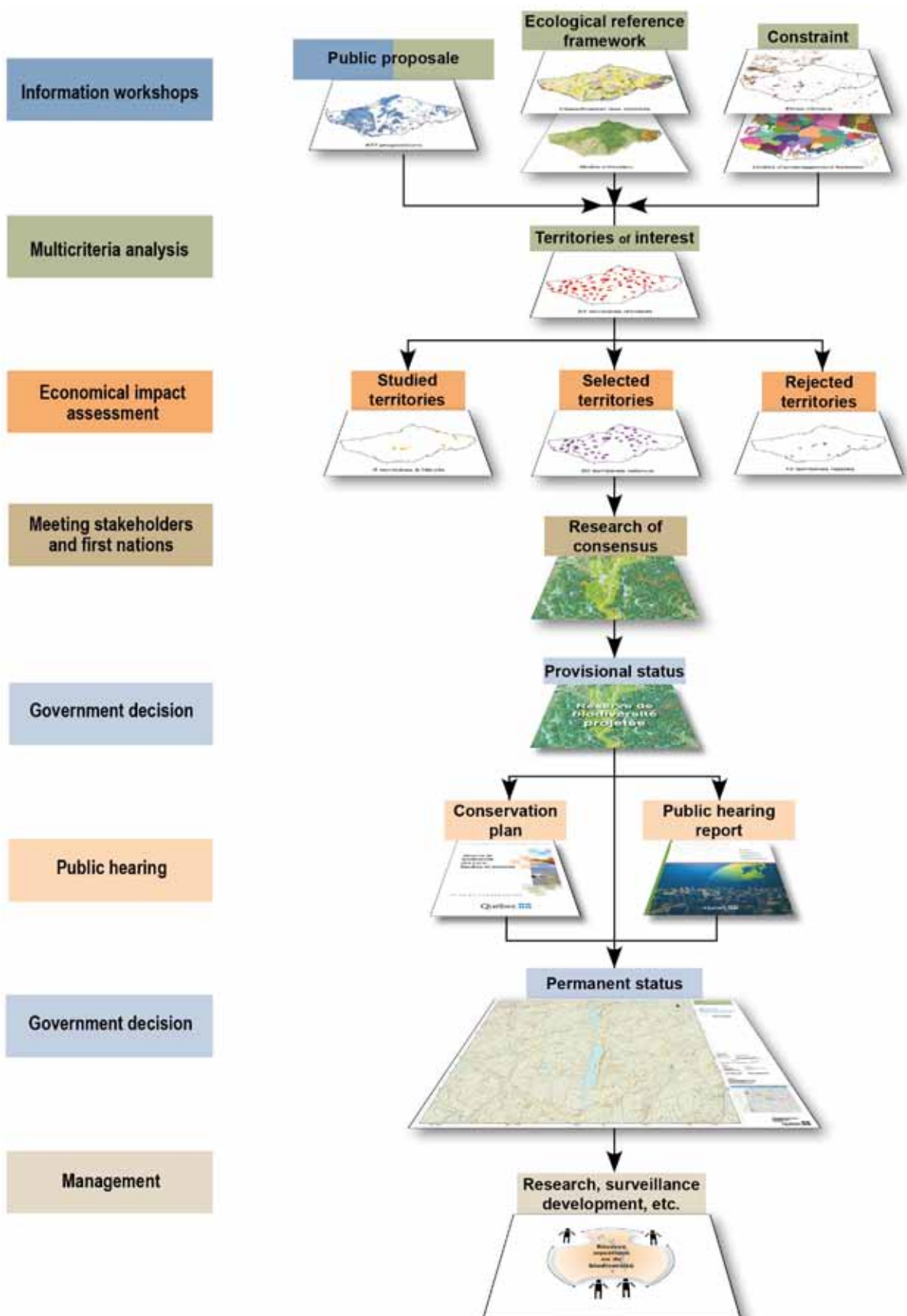
The *Natural Heritage Conservation Act* stipulates that a public consultation must be held prior to the granting of permanent status to a proposed biodiversity reserve or a proposed aquatic reserve (R.S.Q., c. C-61.01, s. 39). Accordingly, since 2003, the Bureau d'audiences publiques sur l'environnement (BAPE) has held nine public hearings focusing on 37 proposed biodiversity reserves and aquatic reserves in the Côte-Nord, Abitibi-Témiscamingue, Saguenay-Lac-Saint-Jean and Gaspésie administrative regions.

In several of their reports, the BAPE commissions of inquiry observed that local residents and the Aboriginal communities did not feel that they were stakeholders throughout the process of determining and establishing the territories that became protected areas. To remedy this shortcoming, the department improved in 2010 its participatory approach upstream from the BAPE public hearing. This enhanced approach comprised preparatory workshops to the public hearings to which the key regional interveners concerned were invited and which members of the Aboriginal communities concerned also attended. The approach was adopted in the Côte-Nord, Saguenay-Lac-Saint-Jean and Abitibi-Témiscamingue regions.

Moreover, contrary to what was achieved in the past, when only a few projects were targeted, the public hearings will from now on be held in such a way as to evaluate all of the proposed reserves in a given administrative region. This approach will provide regional interveners, the Aboriginal communities, the government departments and bodies concerned and the commission of inquiry with a regional profile of the network of protected areas.

In 2012, nearly 50% (65 122 km²) of the geographic size of the network of protected areas comprises proposed biodiversity reserves (76 territories) and proposed aquatic reserves (eight territories). The public consultations that precede the granting of the status of a permanent biodiversity reserve or a permanent aquatic reserve have not yet taken place in the majority of the reserves (53 out of 84). One of the objectives of the *Plan d'action stratégique sur les aires protégées 2011-2015* (PASAP2) is thus to consolidate the existing network by granting permanent status to the proposed protected areas. To this end, public hearings will be held in each administrative region of Québec to consult Quebecers with respect to the entire network of protected areas in a region. On the one hand, this method of consultation will allow for an analysis in the regional context of each proposed biodiversity reserve or aquatic reserve and, on the other hand, will make it possible to carry out the consultation for all of the proposed aquatic reserves and biodiversity reserves in a given region. Figure 2 indicates the steps in the establishment of a biodiversity reserve or an aquatic reserve.

Figure 2. Steps in the establishment of biodiversity reserve or an aquatic reserve



1.4 The consultation in the Abitibi-Témiscamingue region

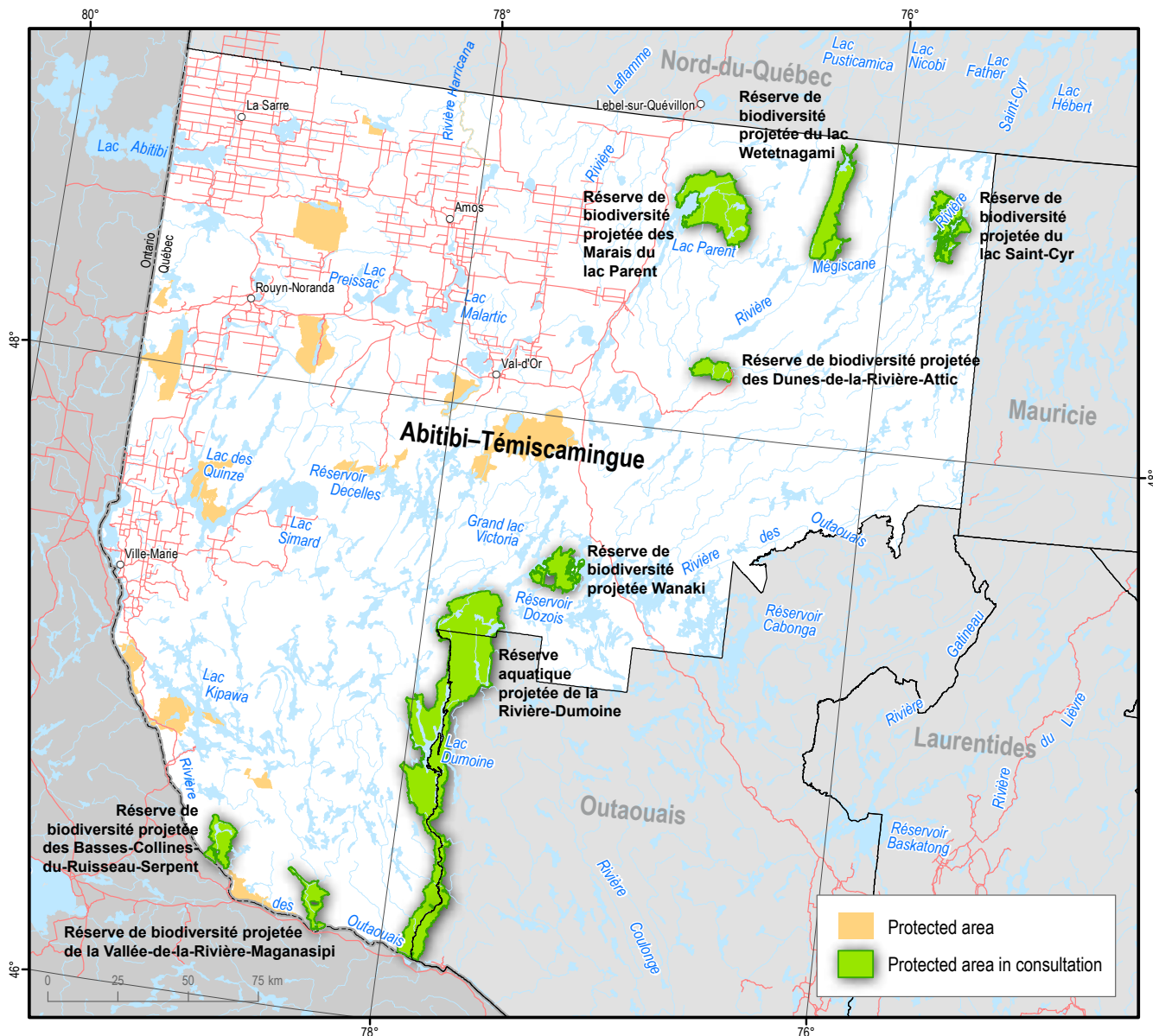
The Abitibi-Témiscamingue region is one of the first regions in which biodiversity reserves and aquatic reserves were established pursuant to the PASAP. Accordingly, the public hearing in respect of which this information document has been written focuses on the eight proposed protected areas in the Abitibi-Témiscamingue region that have not yet been subject to a public consultation. More specifically, this information document deals with the granting of permanent biodiversity reserve status to the proposed des marais du lac Parent, du lac Wetetnagami, du lac Saint-Cyr, des Dunes-de-la-Rivière-Attic, Wanaki, des Basses-Collines-du-Ruisseau-Serpent et de la Vallée-de-la-Rivière-Maganasipi biodiversity reserves and

the granting of permanent aquatic reserve status to the Réserve aquatique projetée de la Rivière-Dumoine (Figure 3).

The eight proposed protected areas are a fine example of the region's diversity and natural heritage that it is important to preserve for current and future generations.

The government departments concerned have already been consulted and preparatory workshops to the public hearing have been conducted with the participation of the key regional stakeholders concerned, i.e. the RCEO, the RCM, the Aboriginal communities, the integrated resource management (IRM) panels, mining and forestry industrialists, outfitters, resort vacationers, hunters, fishermen, environmental organizations, associations and

Figure 3. The eight proposed reserves covered by this public hearing



clubs of recreational users of the territory, and so on. Through the workshops it was possible to define challenges stemming from the establishment of the network of protected areas in the Abitibi-Témiscamingue region and for interveners to express their concerns and suggestions and comments. The companion document entitled “Ateliers préparatoires à la consultation publique portant sur l’attribution d’un statut permanent de réserve aquatique ou de biodiversité pour huit aires protégées projetées de l’Abitibi-Témiscamingue” presents the outcomes of the workshops and summarizes the concerns of regional interveners as regards the regional network of protected areas and proposals pertaining to the eight aquatic reserve for the granting of permanent status. The public hearing will round out the consultation process by allowing individuals who wish to do so to express themselves on the network of protected areas in the Abitibi-Témiscamingue region and the granting to the eight proposed protected areas of the permanent status of a biodiversity reserve or an aquatic reserve.

1.5 The information document

In this information document, the MDDEP presents an ecological and social profile of the Abitibi-Témiscamingue region and the eight territories in the region in respect of which it is proposing protection and management strategies. The ecological and social profiles stem from a summary of the literature, preliminary ecological inventories and meetings with local and regional stakeholders. The knowledge acquired made it possible to propose, when relevant, modifications to the proposed configuration of the protected areas, to define challenges arising from the conservation of biological diversity, and to propose management methods in order to attain the objectives. For each protected area, the information document provides information on its geographical location and ecological characteristics (physical environment, vegetation, wildlife, and so on), briefly describes the social, economic, cultural and historic contexts pertaining to each area, and proposes the conservation and

management issues to be included in each territory’s conservation plan.

The main objective of the consultation paper is to provide participants in the public hearing with the relevant information to enable them to express an opinion on the projects. The MDDEP is of the opinion that the document supports this final step in the consultation process preliminary to the granting of permanent protection status for the eight proposed protected areas.

The *Natural Heritage Conservation Act* (R.S.Q., c. C-61.01) stipulates that the territories now have legal protection status that prohibits industrial activity such as logging, hydroelectric, mining, gas or oil development, mineral, gas or oil exploration, the search for brine, and so on. Recreational activities such as hunting, fishing, trapping and hiking are allowed there if they do not contravene the biodiversity conservation objectives of the territories. The establishment or development of infrastructure is subject to authorization from the MDDEP. This information document examines procedures respecting such activities.