4 Land occupation

4.1 Background[14]

Human occupation of the Abitibi-Témiscamingue region dates back to the period following the melting of the glaciers. The first known occupations date back over 6,000 years. The Algonquins, who called themselves *Anishinabeg*, meaning *the people*, mostly occupied the territory of the valley of the Ottawa river, which was an area abundant in game, fur-bearing animals and fish. The Algonquin were nomadic, ensuring their livelihood by hunting, fishing and gathering on their territory (*nitakinan*).

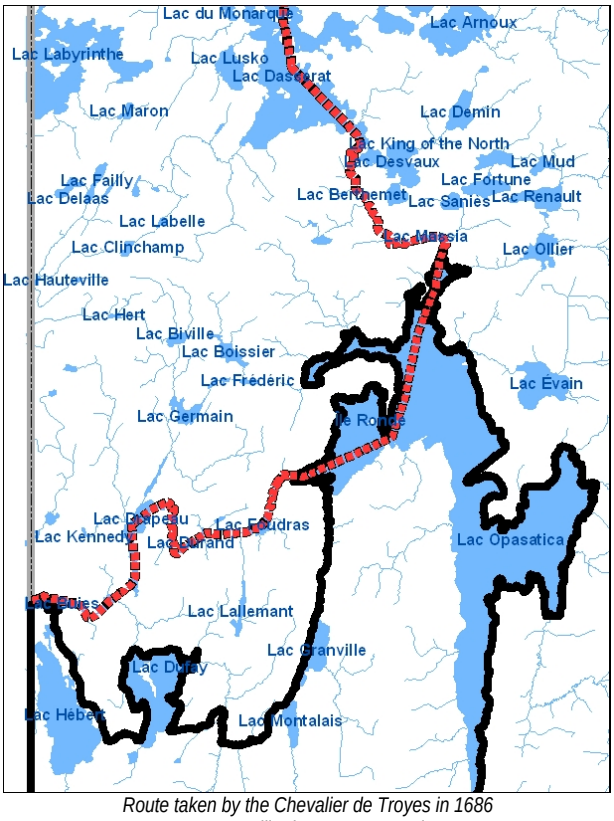
Later, many First Nation communities, including the Algonquins, took part in a vast trade network with the settlers. This network would be the beginning of the fur trade system. In the 17th century, the Témiscamingue area was criss-crossed with explorers, coureurs de bois and prospectors. The construction of trading posts on the banks of the Témiscamingue (1678) and Abitibi (1686) lakes considerably reduced the distances the Algonquins had to travel to sell or trade their furs, but they nonetheless had to travel a great deal to trap game. The Ottawa river at this period was one of the most heavily travelled commercial arteries.

In the middle of the 19th century, the Témiscamingue area began to be settled. At the beginning of the 20th century, settlement extended to Abitibi. Settlement followed forest development with settlers moving into large areas that had been intensively cut, particularly large white pine. Along with the settlers, mines were opened along the Cadillac fault which ensured long-term occupation. The opening of new mining districts in the 1920s consolidated this sector of activity.

Opasatica lake

Opasatica lake played an important role in the history of the region as it occupied a strategic position on the great waterway between the St. Lawrence River and Hudson Bay. This waterway was used in 1686 by Pierre Chevalier sent to fight the English at James Bay. The route used by Chevalier de Troyes is recorded in the "*Journal de l'expédition de Chevalier de Troyes à la Baie d'Hudson*," in 1686 (edited and commented on by Abby Ivanhoé Caron, Beauceville, Compagnie de l'Éclaireur, 1918, 136 p.).

Pierre Chevalier de Troyes arrived in Québec City in 1685 as a captain of a company in the marines already serving in the colony. In February 1686, the "*sieur de Troyes*" was mandated to take over the posts on the banks of the North bay. He was part of a group of 30 soldiers selected for their travelling, caneoing and fighting skills.



Route taken by the Chevalier de Troyes in 1686
Source: Ville de Rouyn-Noranda

From Montréal, they travelled up the Des Prairies river to Lake of Two Mountains, then up the Ottawa river to Fort Coulonge where they camped in May 1686. It was during their portage between Témiscamingue lake and Abitibi lake that the group of soldiers used Opasatica lake. From Larder lake, they crossed the Buies, Kennedy, Drapeau, Durand and Foudras lakes to Opasatica lake, then up to Dasserat lake and up Kanasuta river to Duparquet lake. They finally crossed Abitibi lake, then up Abitibi river to James Bay[15].

Of Algonquin origin, *Opasatica*, regularly documented since the beginning of the 20th century, is made up of *obié* or *opa*, which means *narrow* and *satika*, which is translated to mean *there are aspens*. According to sources, it forms *lake surrounded by aspens*, *strait of aspens* or *lake enclosed by aspens*. Several graphic

[14] Different sources were used for the historical data and information. The MDDEP does not claim that this information is the official and acknowledged version of events of the history of Québec's colonization or First Nations occupation of the land. For more detailed information on the subject, please consult specialized historical documentation.

[15] Musée virtuelle de la Nouvelle-France: http://www.civilization.ca/vmnf/explor/troy_f2.html#top

variations exist for this toponym: Opasatikaw, Opasataca and Obasatica (*Commission de toponymie du Québec*).

Des Quinze lake[16]

Towards the middle of the 19th century, the forest companies began operations around Des Quinze lake. The settlers followed between 1884 and 1910, gradually settling along the south bank of the lake. In 1883, a former employee of the Hudson Bay Company, John Morrison, built a trading post on Gillies bay on Des Quinze lake to attract the region's First Nation communities. Around 1912, a dam was built on the Ottawa river at the mouth of the Des Quinze lake to develop its hydroelectric potential. The Des Quinze dam was raised in 1947 and three other dams with generating stations were built downstream.

Already in use in a land survey report by Lindsay Russell in March 1868, the name of the lake and Des Quinze river was used in another land survey report dated May 1873. Walter McOuat mentioned that he "travelled up the Ottawa to Des Quinze lake, a distance of about 15 miles (24 km)... This part of the Ottawa is designated in the area as Les Quinze, based on the fact that 15 portages are required to navigate it by canoe (corresponding to the number of rapids or waterfalls) (*Commission de toponymie du Québec*).

Piché and Lemoine lakes

Lemoine lake was first known under the Algonquin name of *Kakinokamak*, long lake, a name that appeared on John Bignell's map in 1894. The surveyor Bignell also gave it the name Lemoine lake, a toponym mentioned in 1916 as a new name in the first report of the Commission de géographie du Québec, in honour of the apostolic and linguistic work of Oblate Father Georges Lemoine (1860-1912). Born in Longueuil, Father Lemoine studied in Ottawa where he became a priest in 1888. As soon as he was ordained, he was sent to the Montagnais in Betsiamites[17] (1888-1899), then to Pointe-Bleue (1899-1902), whose name became Mashteuiatsh. Father Lemoine lived successively with the Algonquins, the Têtes-de-Boule and the Cree in the Maniwaki, Haut-Saint-Maurice and Waswanipi regions. He returned briefly to Pointe-Bleue (1907-1910), but ended his days at Mattawa, in Ontario. Father Lemoine authored several manuscripts and published works, written in Montagnais and Algonquin, notably the French-Montagnais dictionary written in 1901, the *Histoire sainte*, in montagnais, and a French-Algonquin dictionary, in 1909 (*Commission de toponymie du Québec*).

The Piché river is named in honour of Gustave-Clodomir Piché, head of the forest service of Québec's Ministère des Terres et Forêts du Québec from 1909 to 1937. He is considered to be the pioneer of Québec forestry.

Decelles reservoir

At the beginning of the 1940s, Noranda Power Co. built a dam on the Ottawa, south of Malartic, which with the rising water progressively transformed Decelles lake into an imposing reservoir of over 200 km², 58 kilometres long and 27 kilometres wide. The Rapide-Sept dam is located at the northwest end of the reservoir. The reservoir contains numerous islands and peninsulas, some of which divide the body of water into two or more sections.

Approved in 1948 by the Commission de géographie, the Decelles reservoir toponym, like the township of the same name, honours the memory of learned journalist Alfred Duclos De Celles (1843-1925). The Decelles lake toponym, appearing in the first report of the Commission de géographie in 1916 at the same time as the township name, qualifies as a recent designation. The Decelles reservoir also bears the Algonquin name *Namawash*, which means *sturgeon*. A variation on this term is *Nimewaja Lake*. (*Commission de toponymie du Québec*).

4.1.1 Historical Algonquin occupation[18]

The Algonquins occupied and lived in western Québec and northeastern Ontario (see map below). The eastern region is generally defined by the land within the Ottawa river watershed.

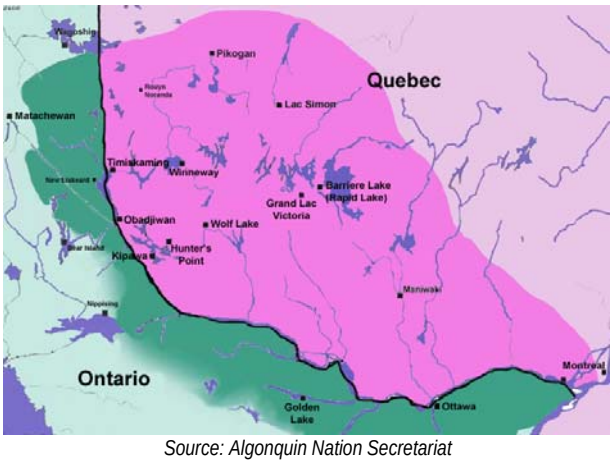
Before the arrival of the Europeans, a network of commercial routes was well established throughout North America via the rivers, lakes, portage and trails. Huron farmers traded corn for meat and furs from the Algonquin hunters. The woodland tribes traded with the plains dwellers. Precious shells collected by the coastal tribes, like the Mi'kmaqs, travelled far into the interior. Among others, the Gatineau and Dumoine rivers enabled the Algonquins to reach the Saint-Maurice river

[16] Témiscamingue portal: http://www.temiscamingue.net/decouvrir/historique/index.html

[17] Today called the Innu of Pessamit.

[18] Taken from the Algonquin Anishinabeg Nation Tribal Council Web site: http://www.anishinabenation.ca/fr/hist_na_fr.htm, the Algonquin Nation Secretariat Web site: http://www.algonquinnation.ca/fr/index.html and Wapikoni mobile Web site: http://www.onf.ca/aventures/wapikonimobile/excursionWeb/nation.php?id=2 and personal communications from the Ministère de la Culture et des Communications.

basin, which facilitated their access to Saint-Jean lake and Mistassini lake.



Source: Algonquin Nation Secretariat

The Algonquins were among the first groups encountered by Samuel de Champlain. Thanks to their strategic position and commercial partnerships, they played a considerable role in the 17th century. By controlling the Ottawa and having political and commercial alliances with the First Nations groups located further north and west, they became important allies of the French.

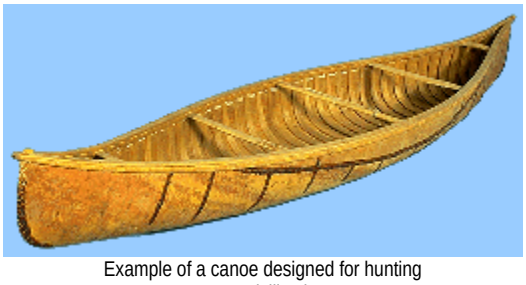
The Algonquin nation is patriarcal. Hunting grounds, for example, were passed down from father to son, and when a girl wed, she went to live with her husband's family.

Several families assembled during the summer in bands of 150 to 300 individuals, for exchanges, marriages and other social activities. They consisted of extended families or families that had no ties. During the summer, people stayed in the same area or surrounding area. They took the opportunity to collect provisions for the winter. They dried meat, collected wild berries, cultivated certain plants, prepared medicinal plants and so on. The food that was collected enabled the families to travel to their hunting grounds and stay there until the end of November, until winter began. Winter was a period of subsistence and survival.

Once fall arrived, the group divided up into small units of no more than 30 people. The reason was simple: each family had a hunting ground of about 1,000 square kilometres, meaning that a bigger group could not have survived on the resources available. These small groups were made up of extended families, that is, the grandfather, grandmother, their children, their children's spouses and their grandchildren. When the warm weather returned, and the snow melted and ice melted on the lakes and rivers, the cycle started over again and the families returned to their summer camping grounds.

The main characteristic of the traditional home of the Anishinabeg was that it was constructed of material that was easy to find in the immediate surroundings and easy to dismantle. A *pikogan* was a dwelling made of posts covered with bark. It had an opening at the top to allow the air to circulate. The ground was covered in balsam boughs which were then covered with furs or straw. People only stayed in when it was very cold or to sleep. Otherwise, they were always outdoors. Permanent dwellings were also built on the hunting grounds where families returned from one year to the next.

The Anishinabeg were hunters, which meant that mobility was essential. The materials they used had to be light and easy to carry. Canoes were made of birch bark sewn together with spruce roots and waterproofed with heated spruce gum and grease. They were easy to move and the material easy to find.



Example of a canoe designed for hunting
Source: Civilization.ca

In winter, toboggans were used to transport material and people used snowshoes to get around; *takinagans* were used to carry babies. They were made of wood and covered in an envelope made of leather or fabric. The baby was upright with its feet resting on a board. The mother could place the *takinagan* on her back, thus enabling the child to observe its surroundings and begin to learn how the daily chores were accomplished.

The American anthropologist Frank Speck made a note of the months as they were explained to him by the Algonquins of Timiskaming. The following calendar shows how the seasons were established according to the production of food.

January – month of the long moon **February** – month of the groundhog **March** – month of the goose **April** – month that the snow shines on the lake **May** – month of flowers **June** – month of strawberries	**July** – month of raspberries **August** – month of blueberries **September** – month for harvesting corn **October** – month of the trout **November** – month of the white fish **December** – beginning of winter

4.2 Current occupation

4.2.1 Algonquin communities

There are currently 10 recognized Algonquin communities, including 9 in Québec. The number of Algonquins censused is 8,293 (Algonquin Nation Secretariat).

The Timiskaming community, which means *deep water*, is located about 30 km south of the Opasatica lake proposed biodiversity reserve, a little over 20 km west of Des Quinze lake. It has 548 inhabitants.

The Algonquin community of Winneway, which means *whitewater or rapids, bay of troubled waters*, is located over 30 km east of the Des Quinze proposed biodiversity reserve and about 16 km southwest of the Decelles reservoir. It has 300 members.

The Algonquin community of Lac-Simon (whose name is derived from either Simon Papatie, son of the grand chief in the 19th century or the word *siamo*, which designates wood duck) is situated about 40 km east of the Piché-Lemoine forest proposed biodiversity reserve. It has 1,482 members.

The community of Kitcisakik, which means *big lake*, is situated over 60 km southeast of the Piché-Lemoine forest proposed biodiversity reserve. It has 377 members.

The Algonquin communities practice ritualistic, social and traditional activities, particularly hunting, fishing, trapping and food gathering on the Des Quinze and Decelles reservoir proposed biodiversity reserves. The Opasatic lake reserve is used less frequently and the Piché-Lemoine forest reserve, due to its proximity to Ville de Val-d'Or, is no longer used by the Algonquins today.

The Piché-Lemoine proposed biodiversity reserve is entirely located on land classified as Category III under the *James Bay and Northern Québec Agreement* (JBNQA), signed in 1975, and the *Act respecting the land regime in the James Bay and New Québec territories* (R.S.Q. c. R-13.1) enacted in 1978. The territory of the proposed biodiversity reserve lies within the territory covered by the hunting, fishing and trapping regime applicable pursuant to section 24 of the JBNQA (see the *Act respecting hunting and fishing rights in the James Bay and New Québec territories*, R.S.Q., c. D-13.1). The lower quarter of the proposed biodiversity reserve lies within the Grand-Lac-Victoria beaver reserve where Native communities have special rights for the hunting and trapping of fur-bearing animals.

The Decelles reservoir proposed biodiversity reserve is largely situated within the Grand-Lac-Victoria beaver reserve.

4.2.2 The other communities[19]

The Opasatica proposed biodiversity reserve lies almost entirely within the territory of the Ville de Rouyn-Noranda, which is a city of 41,401 inhabitants (2002 data) built on the banks of Osisko lake where Edmund Horne in 1917 discovered large copper and gold deposits. The two separate cities of Rouyn and Noranda merged in 1986 and in 2002 the city became an RCM and extended throughout the territory of 13 municipalities making up the RCM. Most jobs are in the tertiary sector and only 11.9% are in the primary sector, of which 10% are in mining[20].

The municipality of the Township of Nédélec, which borders part of the Opasatica lake proposed biodiversity reserve, has 430 inhabitants. It was settled in 1909 with the arrival of farmers from Grand-Mère. The name is in honour of Father Oblate Jean-Marie Nédélec, who worked with the Témiscamingue lake and Abitibi lake Algonquins.

The Des Quinze proposed biodiversity reserve is situated in part on the territory of the municipality of Rémigny (364 inhabitants) and partly on the territory of the municipality of the village of Angliers (306 inhabitants). Rémigny obtained the status of municipality in 1978 but it was first settled in 1935. All originally from Joliette, these families were seeking a better life after an economic crisis. Angliers was constituted in 1945, but the parish of Angliers was created in 1924 during a period of spontaneous settlement.

With 80% of its area lying within Ville de Val-d'Or and bordering on the unorganized territories of Lac-Fouillac (70 inhabitants) and Lac-Granet (96 inhabitants), the Piché-Lemoine forest proposed biodiversity reserve is situated near downtown Val-d'Or. This city has a population of 32,125 inhabitants. It is the result of gold discoveries by prospectors in 1935, after which the city was created and expanded quickly. Afterwards, the forest became a source of a second flourishing industry[21].

[19] Date taken from the *Répertoire des municipalités*: http://www.mamr.gouv.qc.ca/accueil.asp
[20] Taken from the Ville de Rouyn-Noranda Web site:
[21] Société d'histoire de Val-d'Or: http://www.telebecinternet.com/histoirevd/

Three quarters of the Decelles reservoir proposed biodiversity reserve is located on the territory of Ville de Rouyn-Noranda and the remainder is part of Ville de Val-d'Or.

5 Land use[22]

5.1 Within the four proposed biodiversity reserves

5.1.1 Land rights granted

Commercial land rights

No commercial land rights have been granted for the territory of the Opasatica lake proposed biodiversity reserve. However, this does not exclude the practice of commercial activities including hunting and fishing offered by outfitters or the rental of nautical equipment.

An outfitter (formerly Sport G.R.P. ltée.; it's new name is not known) owns an establishment on Morpin point on the banks of Des Quinze lake within the Des Quinze lake proposed biodiversity reserve. It holds a land right for the establishment of a commercial outfitter.

Although no land right has been granted on the territory of the Piché-Lemoine forest proposed biodiversity reserve, certain outfitters offer fishing activities on Lemoine lake.

No commercial right has been granted on the territory of the Decelles reservoir proposed biodiversity reserve.

Rights for personal purposes

Within the periphery of Opasatica lake proposed biodiversity reserve there are 4 resort leases (cottage), 4 on Hébert lake and 4 in the sector of the Paulson passage to Opasatica lake. There is a total of 71 temporary shelter leases (hunting camps) on the terrestrial portion of the proposed biodiversity reserve.

There are 5 resort leases on the Des Quinze lake proposed biodiversity reserve. There is a total of 50 leases for temporary shelters over the territory.

There are 8 resort leases and 16 temporary shelter leases on the territory of the Piché-Lemoine forest proposed biodiversity reserve. Resort leases are for lots located on the banks of Lemoine lake.

On Decelles reservoir proposed biodiversity reserve there are 4 resort leases, all for lots on Strong lake, and 12 temporary shelter leases.

Other land rights

There are 2 community land rights for shelters located along a network of multifunctional trails (cross-country skiing, snowshoeing, hiking) in the Paulson sector of Opasatica lake.

There are 2 Native camps[23] on the territory of the Des Quinze lake proposed biodiversity reserve. One is located in the northeast end of the proposed biodiversity reserve and the other on the banks of the Baie des Quatre Milles bay.

There is a lease for community purposes granted to a holiday colony located on the southwest bank of Lemoine lake. A lease was granted for an astronomy observatory (not shown on map).

Trails

A snowmobile trail crosses the Opasatica lake proposed biodiversity reserve from north to south in the western end near Hébert lake. A multifunctional network of trails (cross-country skiing, snowshoeing, hiking) is located near the Paulson sector of Opasatica lake.

No trail has been authorized by the MRNF on the territory of the Des Quinze lake and Decelles reservoir proposed biodiversity reserves. However, many existing forest roads are used as recreational trails. Also, roads or trails are made to access the resort cottages or hunting camps. Hydro-Québec uses some of the trails and roads to access its equipment which crosses these two proposed biodiversity reserves.

There is a large number of trails crisscrossing the Piché-Lemoine forest proposed biodiversity reserve. They belong to networks that extend beyond the boundaries of the protected area. Three sections of cross country ski trails cross the northeastern part of the proposed biodiversity reserve but southeast of Lemoine lake (right not renewed as of March 2007). A canoe-kayak route, coming from the Montigny lake and Thompson river, pass through Lemoine lake. An important bike path network crosses the northeastern part of the proposed biodiversity reserve, near the Chemin des Voltigeurs. A snowmobile trail runs through the northeastern part of the proposed biodiversity reserve. A regional ATV trail runs along the northern boundary of the proposed biodiversity reserve. Another ATV trail, located south of Lemoine lake, provides access to Auberge Harricana (right not renewed as of March 2007).

[22] See maps in appendices 2, 3, 4 and 5.

[23] Term used in the MRNF's land rights management system.

5.1.2 Wildlife harvesting

Trapping

The terrestrial part of the Opasatica lake proposed biodiversity reserve lies within fur-bearing animal management unit (FAMU) 04. Eight registered traplines cross the proposed biodiversity reserve. The trappers in question have not built any trapping camps inside the proposed biodiversity reserve.

The Des Quinze proposed biodiversity reserve is located in FAMU 04. There are 8 registered traplines within the proposed biodiversity reserve. Two of the lots however are small. A trapper has built a trapline inside the proposed biodiversity reserve in the south end near Pointe aux Indiens.

The Piché-Lemoine forest proposed biodiversity reserve lies within FAMU 03-B (north part), 04 (central part) and 07 (south part), which corresponds to the Grand-Lac-Victoria[24] beaver reserve. The north part is free of trapping. There are two traplines in the central part of the proposed biodiversity reserve. A trapper has built a trapping camp on the proposed biodiversity reserve on Boisvert point on Lemoine lake.

The Decelles reservoir proposed biodiversity reserve lies almost entirely within the Grand-Lac-Victoria beaver reserve (FAMU 07). Its western part lies within FAMU 04 and there is only one trapline inside the proposed biodiversity reserve. There is no trapping camp inside the proposed biodiversity reserve.

Trapping pressure on the four proposed biodiversity reserves is deemed to be average by Faune Québec. The inventory of captured fur-bearing animals conducted on the traplines in the four protected areas during the period from 2002 to 2005 is given in the table below:

Species	Opasatica (8)*	Des Quinze (6)*	Piché-Lemoine (2)*	Decelles (1)*
Weasel	88	54	11	1
Beaver	205	88	60	-
Coyote	-	-	1	-
Squirrel	27	16	-	-
Otter	13	4	1	-
Canada lynx	50	18	16	2
Marten	67	70	51	-
Fisher marten	7	9	8	-
Muskrat	104	9	29	123
Racoon	1	1	-	-
Cross fox	-	2	-	-
Red fox	14	18	9	6
Mink	26	17	8	4

* number of traplines used for the inventory

This table does not include the territory covered by the Grand-Lac-Victoria beaver reserve where the Native communities have exclusive hunting and trapping rights for fur-bearing animals. Since there is no data available on the animals caught on the beaver reserve, it is difficult to make comparisons between the four proposed biodiversity reserves and draw conclusions on the quality of the habitats and health of the populations of the species that are harvested.

Sport hunting

The four proposed biodiversity reserves are located in hunting zone 13. Harvesting is allowed for several species[25]. Sport hunting for woodland caribou in this zone has been prohibited since 1979. The Algonquins hunt them for subsistence purposes.

Outfitters located in or around the proposed biodiversity reserves are likely to offer hunting activities on the four territories. Generally, however, becase of the large bodies of water on these territories, the outfitters tend to specialize in fishing.

Hunting is therefore practiced everywhere by people living in the areas surrounding the territories and those who have a hunting camp inside the proposed biodiversity reserves. The most hunted species are moose and black bear.

According to the Faune Québec evaluation, the pressure of moose hunting on the four proposed biodiversity reserves is high. Hunting results are different, however, on each territory.

In the Opasatica lake and Des Quinze lake proposed biodiversity reserves, moose hunting is two times higher that the regional average (0.52 individuals/10 km^2), whereas the harvesting rate on the Piché-Lemoine forest and Decelles reservoir proposed biodiversity reserves is slightly above the regional average.

The harvesting rate for black bear on the Des Quinze lake proposed biodiversity reserve is slightly below the regional average (0.15 individual/10 km^2) and that for the Opasatica lake biodiversity reserve is almost two times higher than the regional average. The hunting rate for the territory of the Decelles reservoir proposed

[24] For more information on trapping legislation, go to: http://www.mrnf.gouv.qc.ca/publications/enligne/faune/reglementation-piegeage/index.asp

[25] For more information on sport hunting regulations for zone 13, go to: http://www.mrnf.gouv.qc.ca/publications/enligne/faune/reglementation-chasse/index.asp

biodiversity reserve is three times higher than the regional average.

Sport fishing

Opasatica lake is considered to be an important sport fishing lake and offers good quality fishing. Sport fishing pressure for this popular lake is deemed to be high. Sport fishing pressure for Lemoine lake is average.

Concerning the other proposed biodiversity reserves, the main bodies of water are located outside the boundaries.

The four proposed biodiversity reserves are part of fishing zone 13 west[26], in which the harvesting of bass, pike, walleye, sturgeon, brook trout, trout, lake trout and yellow perch is specifically controlled. In Abitibi-Témiscamingue, sauger is found in most of the turbid lakes in the clayey plain of which the territories of the four proposed biodiversity reserves are a part.

The most harvested species are yellow walleye, northern pike, small-mouthed bass, brook trout and sauger.

5.1.3 Traditional Native activities

Although occupation and lifestyle have changed, traditional native activities, particularly those related to natural resources, are governed by the same precepts. The calendar in section 4.1.1 largely corresponds to today's reality.

Algonquins mostly hunt moose. They also hunt white-tailed deer in some sectors, black bear to a lesser degree and small game. Trapped species include beaver, Canada lynx, fisher marten, fox and hare.

The most hunted birds are geese, duck and partridge. Canada geese are one of the key species harvested.

The most fished species of fish on these territories are walleye, pike, brook trout, lake trout and sturgeon.

Algonquin communities continue to gather strawberries, blueberries, raspberries and a variety of other types of plants used for medicinal purposes. White birch bark is of particular importance. It is used to make moose call cones.

5.1.4 Other occupations and uses

In addition to the official data on land rights (leases, trails, etc.) described previously and the related activities (hunting, fishing, etc.), the four proposed biodiversity reserves are used for various activities, including recreation.

The banks of the Opasatica and Lemoine lakes are developed a great deal, particularly for private resort purposes. Since these lakes are near regional urban centres, their visitor rate rises considerably during the summer months. Water sport activities, particularly motor boating, is widespread on these lakes.

Many so-called light activities such as hiking, snowshoeing, cross-country skiing, kayaking and canoeing are commonplace on these four territories.

Motorized activities such as snowmobiling and ATVs, are also widespread, for recreational purposes or for hunting.

Archeological potential

There are numerous sites of archeological interest at Opasatica lake and in the surrounding area. Within the boundaries of the protected area or on the periphery there are 17 archeological sites, including 14 at Opasatica lake and 3 on Buies lake. Digs are currently underway at different sites on either side of the mouth of Baie de l'Orignal bay and have tremendous heritage value, evaluated at the provincial scale.

Although there is no site at Des Quinze lake that is on the *Inventaire des sites archéologiques*, the territory of the proposed biodiversity reserve has significant potential for archeological research according to the Ministère de la Culture et des Communications (personal communications). The hydrographic network of the protected area could contain vestiges of native occupation, as suggested by the recent discovery of artifacts dating back at least a thousand years, west of Des Quinze lake. However, due to the rising lake level after the construction of several dams, several sites with archeological potential have either been flooded or destroyed. A native burial ground is located in the northeastern part of the proposed biodiversity reserve.

Due to its geographical location, Lemoine lake may have been used at one time as a means of communication between the two major axes, the Ottawa river and Harricana river. The potential for archeological

[26] For more information on sport fishing legislation for zone 13, go to: http://www.mrnf.gouv.qc.ca/publications/enligne/faune/reglementation-peche/index.asp

research is considered moderate by the Ministère de la Culture et des Communications.

5.1.5 Private land

There is privately-owned land on the four proposed biodiversity reserves, particularly on Opasatica lake proposed biodiversity reserve and Piché-Lemoine forest proposed biodiversity reserve. They are largely resort properties, which are generally enclosed within the boundaries of the proposed biodiversity reserves. Although located within the current boundaries, this land would be excluded from the final boundaries. The biodiversity reserves and aquatic reserves concern only the land in the domain of the state.

Regarding the Opasatica lake proposed biodiversity reserve, there is a vacation resort sector near Paulson's passage on Opasatica lake. This sector was excluded because it is in the same area as a sand and gravel pit (see section 5.2.3).

Auberge Harricana is located on private property on Lemoine lake, therefore involving commercial wildlife and recreational activities that could take place on the territory of the Piché-Lemoine forest proposed biodiversity reserve.

There are three outfitters established on the Decelles reservoir. They own the property on which they have built their infrastructures. Focused on fishing, they may offer hunting activities on the Decelles reservoir proposed biodiversity reserve.

5.2 On the outskirts of the proposed biodiversity reserves

5.2.1 Hydroelectric facilities

Des Quinze dam

The Des Quinze reservoir is formed by the Des Quinze and Simard lakes. The Angliers dam holds the water in this reservoir, the watershed of which covers 9,000 km^2. The Des Quinze reservoir is the water reservoir for the Rapides-des-Quinze, Rapide-des-Îles and Première-Chute hydroelectric generating stations, owned by Hydro-Québec. These three dams generate 372 MW of power. The Rapide-des-Quinze dam created a reservoir of 373 km^2.

The Rapide-Sept generating station

The Rapide-Sept dam created a reservoir of 237 km^2 and its falls are over 20 metres high, generating 48 MW in installed capacity.

Transmission line

The Des Quinze proposed biodiversity reserve is divided in two by the right-of-way (36.6 metres wide) of the 1339 power line (Rapide des Quinze/Rapide-7 substation), which crosses the protected area over a distance of 11 kilometres.

A power line crosses the western end of the Decelles reservoir proposed biodiversity reserve. The right-of-way for this power line is 36.6 metres wide and is excluded from the protected area it crosses, a distance of about 8 kilometres.

5.2.2 Forestry activities

Generally, Timber Supply and Forest Management Agreements (TSFM) apply to almost the entire public forest territory surrounding the four proposed biodiversity reserves area.

The most recent peripheral forest operations were carried out in the southwest part of the Opasatica lake proposed biodiversity reserve, in the east part of the Des Quinze proposed biodiversity reserve, and cuts followed by plantations in the northeast part of the Decelles reservoir proposed biodiversity reserve.

Some of the forest operation infrastructures might be excluded from the boundaries of the proposed biodiversity reserves. In the case of the Opasatica lake proposed biodiversity reserve, a few sections of forest road could be excluded from the boundaries following a total right-of-way of 40 metres. The same applies to the Decelles reservoir proposed biodiversity reserve.

5.2.3 Mining activities

There are active mining rights for sites located near the boundaries of the Opasatica lake proposed biodiversity reserve, specifically north of the McCormick and Ollier bays, near the Beaupré and Orignal bays, south of Petit lac Bull Rock lake and north of Hébert and Dufay lakes. The Cadillac fault runs north of the proposed biodiversity reserve, which explains why this sector of Rouyn-Noranda is almost entirely staked out. There are no active gravel or sand pits on the proposed reserve; however, a zone near Paulson's passage on Opasatica lake has been excluded from the protected area because of an active gravel and sand excavation site located there.

There are no active mining titles granted for the area surrounding the Des Quinze lake proposed

biodiversity reserve. There are no active gravel and sand excavation sites.

The Piché-Lemoine forest proposed biodiversity reserve near the Cadillac fault is almost entirely limited in the north by the presence of sites for which active mining titles have been granted, which explains its configuration. A mining waste site is located near the northwestern boundary of the proposed biodiversity reserve. This site would only be used in emergencies given that the main site is located several kilometers to the east of the proposed biodiversity reserve, known as the Manitou Barvue site. There is no other gravel or sand excavation site on the territory.

There are a few active mining titles for sites located near the Decelles reservoir proposed biodiversity reserve. It does not appear, however, to be a sector with strong mining potential. There is no gravel or sand excavation site on this territory.

5.2.4 Other peripheral elements

There is a marina located in the Baie Ollier bay sector bordering the Opasatica lake proposed biodiversity reserve. There are also many private vacation resort properties bordering the proposed biodiversity reserve along its east, north and northwest banks. Also to take into consideration is farmland located east of the proposed biodiversity reserve. An exceptional forest ecosystem (Baie-à-Beaupré old-growth forest: black spruce-white pine-cedar woodland) is located on the parcel of land between the Verte and Beaupré bays. North of this exceptional forest ecosystem is a white-tailed deer confinement area. It is the biggest white-tailed deer wintering ground in the region. There is a sector designated as a biological refuge in the area between Hébert and Dufay lakes.

The Sagittaire campground is located on the northeastern boundary of the Piché-Lemoine forest proposed biodiversity reserve, where the Thompson river and Lemoine lake converge. The Piché-Lemoine forest, as defined by the RCM of the Vallée-de-l'Or, extends north of the boundaries of the proposed biodiversity reserve. Recreational activities are practiced there, with numerous sites of wildlife interest on the Piché river.

6 Boundaries and configuration

The proposed biodiversity reserves aim to protect ecosystems that are representative of biodiversity and maintain natural processes throughout these ecosystems. Their boundaries must therefore be defined by so-called "natural" boundaries that help to achieve the targeted conservation objectives. However, as mentioned in section 1.5 of this document, actual occupations or uses of the territory and natural resources may make it harder to follow the natural contours of the area. Moreover, the presence of identifiable elements on the territory can serve as boundaries to facilitate the management of these protected areas.

In other respects, the scale of the ecological perception of the territory is very important in properly defining the ecosystems to be protected. For example, in some cases, the watershed is not an ideal scale, particularly when the protected area is intended to protect terrestrial ecosystems. Ecological mapping of terrestrial ecosystems carried out by the MDDEP may be more representative of the actual territory.

According to the theoretical principles that are used, in terms of form and size to calculate its coefficient of integrity[27], the bigger a protected area and the more consistent its configuration, (tending toward a circle), with a high surface area/perimeter ratio, the more its ecological integrity will be maintained.

Analysis of boundaries

In the case of the four proposed biodiversity reserves, the boundaries were a compromise between the ecological reality, factors of occupation and use of the land and natural resources and the objective of facilitating its management. The extent to which the proposed biodiversity reserve boundaries and those of the ecosystems match varies from one territory to another.

Opasatica lake proposed biodiversity reserve

This territory is bound in the east by the high-water line of Opasatica lake's east bank. This side of the lake is mostly private property. However, the lake lies on a longitudinal fault oriented north-south so that it acts as a natural division between the territories located on either side. Aside from the Québec-Ontario border, the boundaries generally follow the watercourses or existing forest roads, making it easier to see the boundaries in the field.

Bull Rock stream, in the south, corresponds to the MDDEP's[28] delineation of the terrestrial systems. To the north, in the sector of Opasatica lake where there are numerous bays, the proposed biodiversity reserve ends at the high-water line. In the western portion, the irregularity of the boundaries is more pronounced. They are roughly based on a forest road.

The surface area to perimeter ratio (245 km^2/199 km) of this protected area is 1.23.

The Des Quinze lake proposed biodiversity reserve

Generally, the configuration and boundaries of this proposed biodiversity reserve correspond to the natural environment. The Des Quinze lake, which is not included in the protected area, constitutes a natural boundary. Only the central-east section was determined without taking the topographic and ecosystemic factors into consideration. The fault, oriented northeast/southwest, which follows the northeast boundary of the projected biodiversity reserve that passes through Villars lake constitutes the ecological boundary. However, woodcutting recently took place in the zone located between this fault and the proposed biodiversity reserve.

The surface area to perimeter ratio (159 km^2/170 km) of this protected area is 0.94.

The Piché-Lemoine forest proposed biodiversity reserve

The boundaries of this territory correspond very little to the territory's ecological delineation. The northern boundary is based on a territory for which mining rights have been granted. Thus, the Piché-Lemoine recreational forest which has many features of ecological interest is not fully included within the protected area. To the west, Fournière lake and the bog to the south of the lake constitute the boundaries that correspond to natural boundaries.

All the boundaries of the section surrounding Lemoine lake to the southeast and southwest were established on the basis of a 500-metre buffer zone in from the lake banks and 100 metres in from the Desmarais stream. These boundaries have the advantage of better protecting the lake and stream due to a boundary that was traced along the high-water line.

[27] This does not take into account the presence of concrete features of the territory (occupation, use, physical elements) that may have a greater influence on the choice of boundaries to increase the integrity of the protected area.

[28] Ecological map

The Harricana moraine is in the southeast, near the proposed biodiversity reserve. In fact, Ville de Val-d'Or inventoried three significant eskers of 1.8 km^2, 3.6 km^2 and 14.3 km^2 respectively. They are rich in aquifer resources and are of interest both quantitatively and qualitatively for supplying drinking water to the community. The first is partly included in the protected area and the second is totally included. The biggest of the three eskers is entirely excluded from the protected area.

The RCM of the Vallée-de-l'Or has designated four vacation resort areas in its land management and development plan that are expected to be consolidated. Since these areas already have vacation resort lots (some private and others public and likely to be privatized – some of which are vacant and will be developed), the MDDEP intends to exclude these sectors from the final boundaries of the projected biodiversity reserve.

The surface area to perimeter ratio (94 km^2/66 km) of this protected area is 1.43.

Decelles reservoir proposed biodiversity reserve

The banks of the Decelles reservoir constitute natural and coherent boundaries. They correspond, however, to the 311 metre tidal range, which is a virtual boundary that is difficult to site in the field. The southwest boundary is based on an important forest road. The boundary east of Godard lake is based on a power line. Although easy to see in the field, it does not correspond to the ecological delineation.

To the northeast, the reserve is bound by a sector of forest cuts and plantations. Geomorphologically, this sector has two elements of considerable interest, namely the Harricana Moraine with its kettle lakes and wind dunes associated with the moraine. On a biological level, however, the plantation sector is not of significant interest as a protected area.

Generally, the boundaries are based on elements of the territory that are identifiable, which makes it easier to manage the protected area. On the other hand, its configuration only corresponds in part to the area's ecological boundaries. The surface area to perimeter ratio (81 km^2/129 km) of the protected area is 0.63.

7 Conservation issues

7.1 Ecological issues

Issue 1 ~ Maintain the biodiversity of the protected ecosystems

The creation of these four biodiversity reserves will enable representative samples of the ecosystems described above to be protected. Their protection must allow these ecosystems to evolve naturally while minimizing human related disturbances.

This is why the protection status of biodiversity reserve prohibits industrial activities that significantly affect the ecosystems of the targeted territories.

This status, however, allows the pursuit and, in some cases and under certain conditions, the development of non-industrial activities that are compatible with the objectives of maintaining biodiversity such as recreational, traditional and cultural activities. These compatible activities must therefore be adequately framed to be able to maintain the integrity of the ecosystems.

Also, since these territories have only recently been protected from industrial activities, they have ecosystems that have been disturbed to varying degrees by prior activities and are therefore in a state of regeneration. This is the case particularly in certain sectors of the Opasatica lake proposed biodiversity reserve and most of the territory of the Decelles reservoir proposed biodiversity reserve.

At the moment, the Opasatica lake and Piché-Lemoine proposed biodiversity reserves are used to a considerable extent since they are close to urban centres. The Decelles reservoir and Des Quinze lake reserves are used very little. The challenge is to guarantee the integrity of the protected ecosystems in the future, by stabilizing existing activities and rigorously analyzing the impact any new requests for activities or infrastructures may have on the support capacity of the ecosystems. The analysis will also consider the cumulative impacts of several activities or infrastructures on one site.

Directions

- Frame the activities allowed in the biodiversity reserves so that they may be carried out in respect of the support capacity of the environments and ensure that they are compatible with the conservation objectives.
- Encourage the setting up of an evaluation procedure for projects that would essentially take into account the biodiversity, the support capacity of ecosystems and the harmonization of uses.
- Ensure the conservation of the habitats of threatened or vulnerable species or those likely to be so designated and pay particular attention to their protection.
- Maintain the quality of the lacustrine and riparian ecosystems of Opasatica and Lemoine lakes, notably with regard to motorized recreational boating and the impact of vacationing, with the participation of users.
- Minimize the impacts of activities, particularly in the zones located on the outskirts of the two EFEs and on the white pine-red pine forest addressed by the EFE project (Opasatica lake proposed biodiversity reserve), on the old sugar maple and eastern white cedar stands (Des Quinze lake proposed biodiversity reserve) and on the black spruce and 120 year-old yellow birch stands (Piché-Lemoine forest proposed biodiversity reserve).

Proposals

- Protect these territories in such manner as to encourage the restoration of a natural dynamic to the disturbed ecosystems.
- Propose an analysis framework for assessing requests concerning the development of activities and implementation of infrastructures subject to authorization by the MDDEP.
- Establish an approach for determining the support capacity of the various natural environments.
- Encourage the implementation of a system to monitor activities and their impacts on the aquatic and riparian ecosystems of the Opasatica and Lemoine lakes.
- Participate in work and considerations of the *Table de gestion intégrée des ressources* in view of harmonizing the land management methods, including the biodiversity reserves.

Issue 2 ~ Encourage knowledge acquisition and the raising of awareness of users

Knowledge of the natural environment is necessary to adequately protect it. In particular, it will ensure that activities allowed in the biodiversity reserves are conducted without compromising efforts to maintain their biodiversity.

Projects to develop activities that are compatible with the protection status must include a knowledge acquisition program for the site in question in order to determine the natural and cultural variables that will be used to measure the eventual impacts.

To reach the conservation objectives, it is necessary to know the territories well and also to adequately inform and communicate with the users and population as well as raise their awareness. This communication may take several forms, but the objective must be to properly explain the ecological aspect of these territories, the reasons behind their respective protection as well as the different projects and objectives.

Awareness raising may be done through recreational activities that are compatible with the conservation objectives on the territories to increase appreciation of these protected natural environments.

In the case of the Opasatica and Des Quinze lakes proposed biodiversity reserves, the archeological potential and research activities underway or to come will enable a cultural and historical component important to the understanding of these environments to be developed.

Directions

- Encourage the implementation of a knowledge acquisition program and follow-up on activities and biodiversity.
- Focus on educational actions within the four biodiversity reserves, including the archelogical and historical component for the Opasatica and Des Quinze biodiversity reserves.
- Develop awareness raising and information tools enabling users to reduce their impacts on the natural environment, by planning an aquatic and riparian component for the Opasatica and Lemoine lakes.
- Encourage the transmission of various knowledge on these natural and cultural environments;
- Encourage archeological research.

Proposals

- Encourage scientific research and the compilation of ecological, historical, human, social and traditional data.
- Document the impact of activities allowed within the biodiversity reserves and those from activities taking place on the outskirts, in view of conducting a follow-up on the biodiversity.
- Make the particularities and remarkable aspects of these territories known in order to raise interest and encourage users to subscribe to conservation and development objectives.
- Integrate educational, communication, awareness raising and interpretation components into the action plan to come[29].
- Support initiatives to develop tools for transmitting natural and cultural knowledge and those concerning the awareness of users.

7.2 Socioeconomic issues

Issue 3 ~ Involve local representatives

The participation of local users is a key element in guaranteeing the implementation of conservation and development objectives for these four biodiversity reserves.

In addition to the regional representatives of the other departments of the Québec government, are the following partners:

- Algonquin communities of Timiskaming, Winneway, Lac-Simon and Kitcisakik;
- Ville de Rouyn-Noranda and Ville de Val-d'Or;
- RCM of the La Vallé-de-l'Or and RCM of Témiscamingue;
- Local municipalities (Nédélec, Angliers, Rémigny);
- Conseil régional de l'environnement de l'Abitibi-Témiscamingue (CREAT);
- Conférence régionale des élus de l'Abitibi-Témiscamingue;
- Association touristique régionale (ATR) de l'Abitibi-Témiscamingue;
- outfitters who have establishments in or near the proposed biodiversity reserves;
- conservation and environment groups;

[29] See section 8 "Management terms and conditions."

- user associations (vacationers, trappers, fishers, ATV and snowmobile clubs, etc.);

- research groups (CÉGEP, university).

Local representatives are spokespersons for the MDDEP in the management of these territories because they frequent and use them on a regular basis. Their contribution will be useful in finding solutions and alternatives for reaching the conservation objectives sought.

This participation will encourage collective and social commitment of the population to the conservation objectives sought.

Directions

- Involve the stakeholders who use these territories and their natural resources in the management of the biodiversity reserves.
- Support the management of the four territories by getting the key users to participate in a concerted fashion.
- Encourage the stakeholders to participate and contribute to the development of knowledge and awareness raising (issue 2) and protection efforts (issue 1).

Proposal

- Have stakeholders participate in drafting the action plan and determining the specific conservation and development directions, and protection and management measures.
- Participate in the conservation, acquisition and transmission of knowledge and sustainable, compatible development initiated by local representatives and have stakeholders participate in these same actions, when undertaken by the MDDEP.

Issue 4 ~ Promote sustainable development

The MDDEP's key objective is not to develop services or activities for the biodiversity reserves. However, new uses may be proposed by local representatives and authorized by the MDDEP. Due to the territory's conservation status, the management terms and conditions of certain activities might be adapted to the conservation context.

These territories have a potential for the practice and development of ecotourism and outdoor activities, either due to their natural components, quality of their landscapes, current uses or proximity to the population.

Directions

- Encourage the sustainable development of the four biodiversity reserves while taking into account the fragility of certain environments and the support capacity of ecosystems.
- Prioritize the development of ecotourism activities, namely, "a form of tourism that aims to reveal a natural environment while preserving its integrity, which includes interpretation of the environment's natural and cultural components (educational component), which encourages respect for the environment, which is based on elements of sustainable development and which leads to socioeconomic benefits for local and regional communities.[30] "

Proposal

- For each biodiversity reserve, that is, for each zone of a biodiversity reserve, establish sustainable development criteria for activities and development in order to guide the analysis of requests for uses and to evaluate the impacts on the natural environment.

[30] Source: Bureau de normalisation du Québec (BNQ). *Projet de norme-P-9700-060, Tourisme - Produit d'écotourisme*, mars 2003. This definition of sustainable tourism is based on directions proposed by the World Tourism and Travel Council (WTTC), the World Tourism Organization (UNWTO) and the Earth Council (1999)

8 Management terms and conditions

8.1 Legal status

The four proposed biodiversity reserves were created under the *Natural Heritage Conservation Act*. The status of permanent protection that is sought is that of biodiversity reserve. This law is applied only to land in the public domain located inside the biodiversity reserves. The MDDEP is responsible for the management of the biodiversity reserves. The other departments that have responsibilities on public land continue to exercise them.

At the moment, these four proposed biodiversity reserves are classified as category III by the World Conservation Union (IUCN)[31], according to the *Registre des aires protégées du Québec*[32]. This category, which consists of "a protected area managed mainly for conservation of specific natural features," is defined as follows: "protected area containing specific natural or natural/cultural feature(s) of outstanding or unique value because of their inherent rarity, representativeness or aesthetic qualities or cultural significance."

The intended category for the attribution of permanent biodiversity reserve status is category III of the IUCN.

8.2 Management principles

The MDDEP defined a number of guiding principles for the management of biodiversity reserves. They are as follows:

The 7 principles for the management of biodiversity reserves:

- ecosystemic management
- regionalized management
- participatory management
- coherent management
- responsible management
- flexible management
- minimal management

Ecosystemic management

In the four biodiversity reserves, the MDDEP's ecosystemic management approach will aim to respect the following conservation principles:

- maintain the natural dynamic of the ecosystems;
- restore disturbed ecosystems, as needed and over the long term;
- allow activities and land management in keeping with the support capacity of the ecosystem and without hindering biodiversity protection objectives;
- authorize harvesting activities for non-commercial purposes but without supporting them;
- encourage the acquisition and dissemination of natural and cultural heritage for the purpose of encouraging the upholding of protection measures;
- participate in harmonizing the management of the biodiversity reserves and land located around the protected area as part of a land management approach that takes the ecosystems into account.

Regionalized management

Operational management of the four biodiversity reserves will be the responsibility of the Direction de l'analyse et de l'expertise régionales de l'Abitibi-Témiscamingue et du Nord-du-Québec of the MDDEP. Regionalized management will make it easier to adapt to local and regional realities, reflecting the specificities of the Abitibi-Témiscamingue communities, and will contribute to the population's appropriation of the protected areas.

The Direction de l'analyse et de l'expertise régionales de l'Abitibi-Témiscamingue et du Nord-du-Québec of the MDDEP will determine the most adequate management approach for each territory.

Participatory management

The Direction de l'analyse et de l'expertise régionales de l'Abitibi-Témiscamingue et du Nord-du-Québec of the MDDEP will establish the terms and conditions for the participation of local parties concerned with the management and future of the four biodiversity reserves.

Local organizations will be invited to participate in developing an action plan, in decisions pertaining to development of these territories, and in concrete management actions aimed at reaching the conservation objectives.

[31] http://www.iucn.org/

[32] http://www.mddep.gouv.qc.ca/biodiversite/aires_protegees/registre/reg-design/reg-design.htm

Coherent management

The Direction de l'analyse et de l'expertise régionales de l'Abitibi-Témiscamingue et du Nord-du-Québec of the MDDEP is responsible for reaching the conservation objectives of the four biodiversity reserves. The Direction du patrimoine écologique et des parcs of the MDDEP will provide the necessary scientific and technical support.

The MDDEP is responsible for application of the *Natural Heritage Conservation Act*, which governs the four biodiversity reserves. Certain activities will also continue to be regulated by other government representatives under their respective legislation in cooperation with the MDDEP. They will also be responsible for respecting and meeting the conservation objectives.

Management of the biodiversity reserves, while upholding the main objective of biodiversity, must ensure coherence with respect to the occupation and use of the territory and natural resources.

Responsible management

Throughout the decision-making process, the MDDEP will rely on rigourous scientific data. The principle of precaution will also be applied to ensure responsible management.

What is the principle of precaution?

When there are threats of serious or irreversible damage, lack of full scientific certainty must not be used as a reason for postponing the adoption of effective measures to prevent environmental degradation.

Source: *Sustainable Development Act*, 2006.

Flexible management

Since each territory has very different natural features, uses and occupation, the management approach may be adapted to the realities and dynamic of each biodiversity reserve.

The actions, tools and mechanisms put in place to manage the territories and to conduct a follow-up on the conservation objectives will also be adapted to the territorial realities.

Follow-up on the action plan and conservation objectives will serve to rectify the implementation strategies if necessary and adapt the management mechanisms on an ongoing basis.

Minimal management

Management of the four biodiversity reserves will guarantee that, at the very least, the conservation plan objectives are met and will consist in taking action in the following areas:

- information and communication;
- drafting of an action plan;
- signposting;
- monitoring and control;
- regulatory application;
- monitoring of the natural environment.

The MDDEP must implement all necessary action to ensure the protection of the biodiversity and counter all degradation of natural settings.

8.3 Implementation of the action plan

Under the responsibility of the Direction de l'analyse et de l'expertise régionales de l'Abitibi-Témiscamingue et du Nord-du-Québec of the MDDEP, the action plan could be drafted as soon as the status of permanent biodiversity reserve is obtained, in cooperation with local stakeholders.

An action plan is prepared for each biodiversity reserve. The action plan specifies the conservation and development objectives and issues contained in the conservation plans. Moreover, it determines the concrete actions to be carried out, the players involved and those responsible for coordinating each action and a schedule for each action.

The duration of each action plan and the frequency at which they will be reviewed will be decided by the Direction de l'analyse et de l'expertise régionales de l'Abitibi-Témiscamingue et du Nord-du-Québec of the MDDEP and the players it will have designated to participate in the management.

The conservation plan must be revised during the seventh year following its initial approval, and afterwards at least every ten years as prescribed by section 50 of the *Natural Heritage Conservation Act*. These reviews are carried out following the deposit of the summary. The action plans must take into account the dates set by the law for such summaries, since they constitute the main element on which the evaluations are based.

8.4 Responsibilities of the other departments

The MRNF will work with the MDDEP to reach the biodiversity conservation objectives and ensure the

application of the laws and regulations for which it is responsible on the protected territories.

The MRNF's areas of activity and responsibilities are, for example:

- Management of public land (particularly all land rights pertaining to recreational activities);
- Wildlife management (hunting, fishing and trapping regulations, structured wildlife territories, attribution of wildlife rights, monitoring wildlife populations);
- Issuing of foresty permits.

8.5 Activity schedule[33]

As mentioned in section 1.5 of this document, the biodiversity reserve aims to protect natural environments, mainly with regard to commercial activities. Therefore, even though the activity schedule, due to its regulatory nature, makes many allusions to authorization requirements for new infrastructures or facilities, the occupants, users and visitors of these territories will be able to pursue most of their activities without constraint, as is the case on free public land. The activity schedule for the biodiversity reserves has additional requirements for specific or exceptional situations and all new buildings that may increase the pressure or negative impacts on the ecosystems. The MDDEP's objective is to ensure that the degree of impact remains acceptable in terms of the capacity of the ecosystem or features of the natural environment to undergo pressure, particularly from anthropogenic activities.

Activities conducted within the four proposed biodiversity reserves are currently governed by the provisions of the *Natural Heritage Conservation Act* and the activity schedule of conservation plans in force for the four proposed biodiversity reserves. It should be noted that the current activity schedule for the proposed biodiversity reserves will not necessarily be the same when they are given permanent status. The definitive activity schedule will be specific to each biodiversity reserve with a permanent status and take into account the topics raised during the public hearings and the specific realities of each territory.

[33] The following section presents the important features of the activity schedule applying to the territory of the four biodiversity reserves. These features are simplified versions of the legislative and regulatory provisions and should in no way be considered a substitute for the legal versions. Refer to the legal documents for additional details on the interpretation of the activity schedule.

This section is intended to explain the MDDEP's role with respect to the various activities or interventions in a context where these territories will have permanent status as a biodiversity reserve. It is therefore a proposal for an activity schedule for a permanent status.

To better express the MDDEP's conservation and development directions with regard to the concept of biodiversity reserve, the provisions of the Act and activity schedule were summarized in the following paragraphs according to the following four categories of activity and intervention:

- Prohibited activities;
- Compatible activities subject to authorization;
- Incompatible activities which may be exceptionally authorized;
- Prohibited activities.

8.5.1 Permitted activities[34]

The draft regulation recognizes existing rights already authorized on the territory when the status of proposed biodiversity reserve is granted, as well as associated infrastructures and equipment. These occupations are:

- Trapping camps and rough shelters;
- Cottages (and accessory buildings allowed under lease provisions);
- Telephone or power lines, trails, roads, boat ramps, etc.;
- Any other infrastructure present resulting from an occuption right whose vocation is deemed compatible (e.g.: camping, vacation colony, interpretation centre, outfitter).

Moreover, the draft regulation does not require authorization for the following activities and interventions:

- Wood harvesting for outdoor campfires;
- Firewood for domestic purposes for rough shelters and trapping camps on the territory of the proposed biodiversity reserve (quantity limited to a measured 7 m^3 per year);
- Maintaining or rebuilding existing rough shelters, trapping camps or cottages (on a single site);
- Maintaining or upgrading existing trails or roads;

[34] Where mentioned that an activity or intervention may be carried out without authorization, it is in reference to the *Natural Heritage Conservation Act*. Any other form of authorization under another law or regulation remains obligatory.

- Installation or implementation of minor structures (dock or platform, boat shelter) whose installation is allowed at no cost under section 2 of the *Regulation respecting the water property in the domain of the State*;
- Clearing allowed deforested areas, maintaining them or making visual openings allowed under the *Act respecting the lands in the domain of the State*, maintaining access roads, equipment or infrastructures;
- Emergency activities or interventions required to protect the health or safety of individuals;
- Food gathering, rituals and social activities carried out by members of a Native community;
- Hydro-Québec operations already covered by the *Environment Quality Act*, particularly as part of preliminary work or studies required to obtain an authorization under the *Environment Quality Act* and for the purpose of electricity transportation and distribution or to carry out routine maintenance work on existing equipment, in or in proximity to the proposed biodiversity reserves;
- Construction of a trapping camp, hunting camp or vacation resort cottage, when allowed under an occupation right already issued but not yet carried out.

Rules of conduct for users that apply to all protected areas and other types of public site have been applied to the biodiversity reserves, including the following:

- Safe conduct when making campfires;
- Respectful conduct toward other users (noise, etc.) and wildlife;
- Respect for property (signs, panels, notices, etc.);
- Respect for signposting in place to restrict access to a sector to protect the public, flora or fauna from danger.

Finally, any other activity not mentioned in schedule 3 are allowed, specifically:

- Hunting, fishing and trapping and the use of machinery or materials required for these activities;
- Gathering small berries or flora species for domestic purposes;
- Occupation for a period of 90 days or less (ecotourism, hunting, fishing, camping, etc.);
- Marine activities (kayaking, canoeing, rafting, etc.);
- Hiking, skiing, snowshoing or biking;
- Activities requiring domestic animals (dog sledding, horseback riding);
- Nature observation activities;
- Educational activities;
- Use of motorized vehicles such as ATVs, snowmobiles and motorcraft.

It should be noted that any activity generally allowed in the biodiversity reserves may be prohibited or framed if the MDDEP deems that it generates too great an impact on the natural environment or on certain biodiversity components. For example, the habitat of a species of interest or area's vulnerability to erosion could require restrictions, whereas the cumulative impact of several activities could cause the support capacity to be reached.

8.5.2 Compatible activities subject to authorization

The MDDEP will have to authorize certain activities or interventions considered compatible with the biodiversity reserves and, if necessary, set certain conditions for their realization for the purpose of minimizing or avoiding the impacts on the natural environment. The activities are as follows:

- Erecting, installing or upgrading new constructions intended for ecological, educational or recreational purposes (e.g. belvedere, interpretation panels, trails, shelters);
- Construction of new recreational and educational trails;
- Educational or research activities likely to damage or disrupt the natural environment;
- Seeding a watercourse or body of water for ecological purposes (re-establishing a population);
- Woodcutting to maintain biodiversity (e.g. creating or maintaining a wildlife habitat).

8.5.3 Incompatible activities that may be authorized on an exceptional basis

In order to avoid damage to the natural environment, certain activities likely to have negative repercussions will be deemed incompatible and therefore prohibited in the biodiversity reserves.

However, given the diverse range of occupations and uses, certain activities could in exceptional cases be authorized by the MDDEP. Only specific circumstances

will justify such authorizations, which would be a derogation of the conservation objectives.

Rigorous justification and all data necessary for analysis of the application must be supplied by the applicant. Moreover, specific conditions will be included with any authorization granted for this type of intervention.

- introduction of non-native fauna specimens or individuals;
- Introduction of non-native flora species;
- intervention in a wetland or watercourse (marsh, swamp, bog), watercourse or body of water or in a riparian environment (e.g. digging, filling, obstruction);
- soil development work;
- erection or installation of new structures for personal or commercial purposes;
- creation of new trails, roads or routes;
- use of pesticides;
- competitions and sporting events;
- access to a site with signposting forbidding access;
- woodcutting for domestic purposes (heating[35], wildlife or recreational structure);
- maple syrup harvesting[36];
- stays of more than 90 days on the same site on the territory.

8.5.4 Prohibited activities

Under the *Natural Heritage Conservation Act*, the following activities, incompatible with the conservation objectives, are prohibited on the biodiversity reserves with a permanent status:

- mining, gas or petroleum development;
- mining, gas or petroleum exploration, including brine and underground reservoir exploration, prospecting, and digging or boring;
- forest management within the meaning of section 3 of the *Forest Act* (R.S.Q. c. F-4.1);
- The development of hydraulic resources and any production of energy on a commercial or industrial basis.

The activity schedule for the conservation plans also prohibits:

- Stocking of a watercourse or body of water for aquaculture, commercial fishing or commercial purposes;
- The disposal of waste and other residual material in areas other than those provided for or authorized by the Minister;
- Destruction, removal or damage to signs, notices or advisories or any other type of signposting put up by the Minister;
- Use of fertilizers;
- Harvesting of small berries and flora for commercial purposes in terrestrial environments and any harvesting or sampling or these berries or species using mechanical means.

8.5.5 Other legislative and regulatory provisions

Certain activities likely to be carried out within a biodiversity reserve are also governed by other applicable legislative and regulatory provisions, including those requiring a permit or authorization or the payment of certain fees. The practice of certain activities may also be prohibited or limited under other laws or regulations applicable to the territory of the proposed biodiversity reserve.

Other related laws and regulations concerning public and municipal territories continue to apply on the territory of the biodiversity reserves and the aquatic reserves. Prohibitions provided for by these laws and regulations regarding any activity or intervention must be considered to be an integral part of the activity schedule. They are, without being limited to, the following (including associated regulations):

- Protection of the environment: measures provided for in particular by the *Environment Quality Act* (R.S.Q., c. Q-2);
- Archeological research: environment: measures provided for in particular by the *Cultural Property Act* (R.S.Q., c. B-4);
- Use and conservation of wildlife resources: measures provided for by the *Act respecting the conservation and development of wildlife* and its

[35] The cutting of firewood is permitted during the status of proposed biodiversity reserve when conditions provided for by the activity schedule are respected.
[36] The cutting of wood for the purposes of maple syrup production is permitted during the status of proposed biodiversity reserve when conditions provided for by the activity schedule are respected.

attendant regulations (R.S.Q., c. C-61.1), whose provisions pertain to outfitters and beaver reserves, as well as measures contained in the applicable federal laws, including the fisheries regulations; in northern regions: specific measures provided for under the *Act respecting hunting and fishing rights in the James Bay and New Québec territories* (R.S.Q., c. D-13.1);

- Harvesting of wildlife or flora species that are or likely to be designated threatened or vulnerable: measures prohibiting the harvesting of these species under the *Act respecting threatened or vulnerable species* (R.S.Q., c. E-12.01);

- Access and land rights: measures provided for under the *Act respecting the lands in the domain of the State* (R.S.Q., c. T-8.1) and, in northern regions, the *Act respecting the land regime in the James Bay and New Québec territories* (R.S.Q., c.R-13.1);

- Circulation: measures provided for in particular by the *Act respecting the lands in the domain of the State* (R.S.Q., c. T-8.1) and regulations on the circulation of motor vehicles in certain fragile areas set forth under the *Environment Quality Act* (R.S.Q. c. Q-2);

- Municipal regulations: measures provided for by the municipal regulations, particularly by-laws, the regulation on permits and certificates and the intermediary regulation to protect banks, coast and floodplain.

9 Conclusion

This public consultation document, which is a conservation plan proposal for the Opasatica lake, Des Quinze lake, Piché-Lemoine forest and Decelles reservoir proposed biodiversity reserves, demonstrates the ecological interest of these four territories and the importance of protecting them. It sheds lights on the various ecological and social issues related to their protection and development, and proposes a preliminary framework for adaptable management based on the context of the Abitibi-Témiscamingue region.

The first goal of these four protected areas is to protect diverse, representative and remarkable territories that are part of a common natural and cultural heritage, while harmonizing the population's use of the territory with conservation objectives. With sustainable development at our doorstep, this is a challenge that needs to be met.

The status of biodiversity reserve allows for the practice of non-industrial activities (hunting, fishing, trapping, hiking, traditional Native activities) if they do not have a significant impact on biodiversity. Excluding all industrial activities serves to preserve landscapes and ecosystems that have not been degraded or degraded very little and whose ecological value and potential for light development (recreational tourism, ecotourism, hunting, fishing and trapping) are important to the diversification of tourist attractions in the region and, as a result, its economy.

These four territories present diverse ecological and social features that raise specific concerns with regard to conservation and management. What they have in common is maintaining biodiversity while enabling the sustainable development of the resources of the entire Abitibi-Témiscamingue region. By protecting habitats suitable for wildlife, it is possible to sustain the many harvesting activities of Abitibi-Témiscamingue, and thus guarantee the long-term practice of these activities while increasing the protection of the biodiversity.

The MDDEP has voluntarily proposed a management framework that is not final nor unchangeable. It contains a number of suggestions for management, raised by the preliminary issues, the objective being that the various aspects be raised at the public hearings.

The management framework, however, enables local representatives to participate directly in the conservation and development of these remarkable territories. These representatives can participate in the management and planning activities. They can also participate in the actions, efforts and measures taken to preserve and develop these territories and through their knowledge of the region make social concerns more compatible with the objectives of biodiversity protection.

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