

Gouvernement du Québec

**O.C. 437-2020, 8 April 2020**

Natural Heritage Conservation Act  
(chapter C-61.01)

Permanent status of the Réserve de biodiversité Akumunan, the Regulation respecting that reserve and its conservation plan

WHEREAS, under the first paragraph of section 43 of the Natural Heritage Conservation Act (chapter C-61.01), the Minister of the Environment and the Fight Against Climate Change may recommend to the Government that all or part of land set aside under section 27 of the Act be assigned a permanent protection status as biodiversity reserve;

WHEREAS, under the second paragraph of section 43 of the Act, the Minister is to submit at the same time to the Government for its approval the conservation plan for the land;

WHEREAS, by Order in Council 636-2005 dated 23 June 2005, the Government authorized the Minister of Sustainable Development, Environment and Parks to assign the status of proposed biodiversity reserve to the territory of the Réserve de biodiversité projetée Akumunan and approved the plan of that area and the conservation plan proposed for the area;

WHEREAS, by Minister's Order dated 27 July 2005 (2005, *G.O.* 2, 4072), the Minister of Sustainable Development, Environment and Parks assigned in particular temporary protection status to the territory of the Réserve de biodiversité projetée Akumunan, for a term of four years commencing on 7 September 2005;

WHEREAS, by Order in Council 136-2008 dated 20 February 2008, the Government approved the amendments to the conservation plan of the reserve;

WHEREAS the setting aside of the territory was extended for four years under the Order of the Minister of Sustainable Development, Environment and Parks dated 17 July 2009 (2009, *G.O.* 2, 2233), and eight years under the Order of the Minister of Sustainable Development, Environment, Wildlife and Parks dated 13 March 2013 (2013, *G.O.* 2, 769);

WHEREAS, in accordance with the first paragraph of section 39 of the Natural Heritage Conservation Act, the Minister of Sustainable Development, Environment and Parks entrusted the mandate to hold a public consultation on the Réserve de biodiversité Akumunan to the Bureau d'audiences publiques sur l'environnement and its inquiry and public hearing report was made public on 20 November 2012;

WHEREAS the report deals in particular with the feasibility of expanding the territory of the Réserve de biodiversité projetée Akumunan and concludes, among other things, that permanent protection status may be assigned to the territory;

WHEREAS the limits of the Réserve de biodiversité projetée Akumunan were reassessed by the Minister and changed after the public consultation to add 80 km<sup>2</sup> situated north-west and east of the biodiversity reserve and to remove small sectors overlapping the Domaine du lac des Coeur Inc. outfitting operation, and to rely, where possible, on natural or man-made elements easily visible on the site to facilitate management;

WHEREAS the plan of the Réserve de biodiversité projetée Akumunan and its conservation plan were adjusted based on the changed limits and the technical description corresponding to the new limits has been prepared;

WHEREAS the land included in the territory forms part of the domain of the State and is not part of a reserved area or an agricultural zone established under the Act respecting the preservation of agricultural land and agricultural activities (chapter P-41.1);

WHEREAS, in accordance with the first paragraph of section 151 of the Act respecting land use planning and development (chapter A-19.1), the Minister of Sustainable Development, the Environment and the Fight Against Climate Change notified an opinion describing the planned intervention to the council of Municipalité régionale de comté du Fjord-du-Saguenay and the council of Municipalité de La Haute-Côte-Nord;

WHEREAS, in accordance with the first paragraph of section 152 of that Act, the council of Municipalité régionale de comté du Fjord-du-Saguenay, by resolution No. C-16-364 dated 23 November 2016 and the council of Municipalité régionale de comté de La Haute-Côte-Nord, by resolution No. 2016-10-214 dated 18 October 2016, confirmed that the project for the establishment of the Réserve de biodiversité Akumunan complies with the objectives of the revised land use planning and development plan and to the layout of the complementary document;

WHEREAS the Commission de toponymie sent to the Minister its approval of the name “Réserve de biodiversité Akumunan” to designate that permanent biodiversity reserve;

WHEREAS, under subparagraph *f* of paragraph 1 of section 46 of the Natural Heritage Conservation Act, in an aquatic reserve and a biodiversity reserve, any activity which the Government may prohibit by regulation is prohibited;

WHEREAS, under subparagraph *g* of paragraph 1 of section 46 of the Act, in an aquatic reserve and a biodiversity reserve, subject to measures in the conservation plan authorizing the activities and specifying the conditions on which they may be carried on, any allocation of a right to occupy land for vacation resort purposes, earthwork, backfilling or construction work and commercial activities are prohibited;

WHEREAS, under paragraph 2 of section 46 of the Act, all other activities are permitted, in addition to those prohibited by paragraph 1 of that section, subject to the applicable conditions;

WHEREAS, in accordance with sections 10 and 11 of the Regulations Act (chapter R-18.1), the draft Regulation respecting the Réserve de biodiversité Akumunan was published in Part 2 of the *Gazette officielle du Québec* of 15 May 2019 with a notice that it could be made by the Government on the expiry of 45 days following that publication;

WHEREAS it is expedient to make the Regulation respecting the Réserve de biodiversité Akumunan with amendments, in particular to include the technical description of the territory and to make technical adjustments;

WHEREAS, under paragraph 3 of section 44 of the Natural Heritage Conservation Act, the establishment of a biodiversity reserve and a change in its limits, or its abolishment, is effected by order of the Government, on a proposal by the Minister, subject to the publication of a notice of the decision of the Government to establish a biodiversity reserve in the *Gazette officielle du Québec* with the plan of the area and the conservation plan;

WHEREAS the publication in the *Gazette officielle du Québec* of this Order in Council, of the Regulation respecting the Réserve de biodiversité Akumunan and of its conservation plan constitutes the notice required by that paragraph, including the documents that must accompany it;

WHEREAS, under section 45 of the Natural Heritage Conservation Act, permanent protection status for land, conservation plans and applicable agreements, and amendments or revocations take effect on the date of publication of the order in the *Gazette officielle du Québec* or on any later date specified in the order;

IT IS ORDERED, therefore, on the recommendation of the Minister of the Environment and the Fight Against Climate Change:

THAT permanent biodiversity reserve status be assigned to the territory described in the Regulation attached to Schedule I to this Order in Council, under the name “Réserve de biodiversité Akumunan”;

THAT the Regulation respecting the Réserve de biodiversité Akumunan, attached to Schedule I to this Order in Council, be made;

THAT the conservation plan applicable to the Réserve de biodiversité Akumunan, attached to Schedule II to this Order in Council, be approved;

THAT permanent status of the Réserve de biodiversité Akumunan and its conservation plan take effect on the fifteenth day following the date of their publication in the *Gazette officielle du Québec*.

YVES OUELLET,  
*Clerk of the Conseil exécutif*

---

## SCHEDULE I

### Regulation respecting the Réserve de biodiversité Akumunan

Natural Heritage Conservation Act  
(chapter C-61.01, s. 43 and . 46, par. 1, subpars. *e, f* and *g*, and par. 2)

1. The Réserve de biodiversité Akumunan is established in the territory described in the Schedule.

2. For the purposes of this Regulation,

(1) the words or terms “high-water mark”, “littoral zone”, “floodplain”, “lakeshore” and “riverbank” have the meaning given to them in the Protection Policy for Lakeshores, Riverbanks, Littoral Zones and Floodplains (chapter Q-2, r. 35);

(2) the term “wetlands and bodies of water” has the meaning given to it in section 46.0.2 of the Environment Quality Act (chapter Q-2);

(3) the term “forest development activity” has the meaning given to it in the Sustainable Forest Development Act (chapter A-18.1).

## **DIVISION I**

### **PROTECTION OF RESOURCES AND THE NATURAL ENVIRONMENT**

**3.** Subject to the prohibition in the second paragraph, no person may introduce any individuals of a native or non-native species of fauna into the biodiversity reserve, including by stocking, unless the person has been authorized by the Minister.

No person may stock a lake or watercourse for aquaculture, commercial fishing or any other commercial purpose.

Except with the authorization of the Minister, no person may introduce non-native species of flora into the biodiversity reserve.

**4.** No person may use fertilizers in the biodiversity reserve. Compost for domestic purposes is however permitted if it is used at least 20 metres from a lake or watercourse, measured from the high-water mark.

**5.** No person may remove from the biodiversity reserve species of flora, small fruits or any other non-timber forest product by mechanical means.

**6.** No person may in the biodiversity reserve, unless the person has been authorized by the Minister,

(1) intervene in a wetland area, in particular a marsh, swamp or peat bog;

(2) modify the natural drainage or water regime, including by creating or developing lakes and watercourses;

(3) dig, fill, obstruct or divert a lake or watercourse;

(4) install or construct a structure, infrastructure or new works in the littoral zone, on the banks or shores or the floodplains of a lake or watercourse; no authorization is however required for minor works — quay or platform, boat shelter — installed for private purposes and may be free of charge under section 2 of the Regulation respecting the water property in the domain of the State (chapter R-13, r. 1);

(5) carry on an activity other than those referred to in paragraphs 1 to 4 likely to directly and substantially affect the biochemical characteristics or quality of wetlands and bodies of water in the biodiversity reserve, including by discharging or dumping residual materials or contaminants into the wetlands or bodies of water;

(6) carry out soil development work or an activity likely to degrade the soil or a geological formation, or to damage the vegetation cover, in particular by stripping, the digging of trenches or excavation work, including any burial, earthwork, removal or displacement of surface materials or vegetation cover, for any purpose;

(7) install or construct a structure, infrastructure or new works;

(8) reconstruct or demolish a structure, infrastructure or works;

(9) use a pesticide; no authorization is required for the use of personal insect repellent;

(10) carry on educational or research-related activities if the activities are likely to directly or significantly damage or disturb the natural environment, in particular because of the nature or size of the samples taken or the invasive character of the method or process used; or

(11) hold a sports event, tournament, rally or any other similar event where

(a) fauna or flora species are taken or are likely to be taken; or

(b) motor vehicles or craft are used.

**7.** Despite paragraphs 6, 7 and 8 of section 6, if the requirements provided for in the second paragraph are met, no authorization is required to carry out the following work:

(1) the maintenance, repair or improvement of any structure, infrastructure or works, including a camp, a cabin, a road or a trail, including an ancillary facility such as a lookout or stairs;

(2) the construction or installation

(a) of a dependency or a facility ancillary to a trapping camp, a rough shelter, a shelter or a cabin, including a shed, a water withdrawal facility or a system for the discharge and disposal of waste water, grey water and toilet effluents; or

(b) of a trapping camp, a rough shelter, a shelter or a cabin if, on the date of coming into force of this Regulation, such a building was permitted under the right of use or occupancy granted, but had not yet been carried out; or

(3) the demolition or reconstruction of a trapping camp, a rough shelter, a shelter or a cabin, including a dependency or a facility ancillary to such a structure, including a shed, a water withdrawal facility or a system for the discharge and disposal of waste water, grey water and toilet effluents.

The carrying out of the work referred to in the first paragraph must comply with the following:

(1) the work involves a structure, infrastructure or works whose presence is permitted within the biodiversity reserve;

(2) the work is carried out within the area of the land or right of way subject to the right to use or occupy the land in the biodiversity reserve, whether the right results from a lease, a servitude or other form of title, permit or authorization;

(3) the nature of the work or elements installed by the work will not operate to increase the area of land that may remain deforested beyond the limits permitted under the provisions applicable to the sale, lease and granting of immovable rights under the Act respecting the lands in the domain of the State (chapter T-8.1) and, if applicable, the limits set under an authorization issued in connection with that structure, works or infrastructure;

(4) the work is carried out in accordance with the prescriptions of any permit or authorization issued for the work or in connection with the structure, infrastructure or works to which they are related, as well as in compliance with the applicable legislative and regulatory measures;

(5) in the case of forest roads, the work must not operate to alter or exceed the existing right of way, widen the roadway or convert the road to a higher class.

For the purposes of this section, repair and upgrading work includes work to replace or install works or facilities to comply with the requirements of an environmental regulation.

**8.** No person may bury, incinerate, abandon or dispose of residual materials or snow, except if they are disposed of in waste disposal containers, facilities or sites determined by the Minister or, in other cases, with the authorization of the Minister.

Despite the first paragraph, a controlled zone or an outfitter having a lease for lodging purposes in the reserve does not need an authorization to use a disposal facility or site, in compliance with the Environment Quality Act (chapter Q-2) and its regulations, if they were already using the facility or site on the date of coming into force of this Regulation.

## **DIVISION II**

### **RULES OF CONDUCT FOR USERS**

**9.** No person may enter, carry on an activity or operate a vehicle in a given sector of the biodiversity reserve if the signage installed by the Minister restricts access, traffic or certain activities in the sector in order to protect the public from a danger or to avoid placing the fauna, flora or other components of the natural environment at risk, unless the person has been authorized by the Minister.

**10.** No person may destroy, remove, move or damage any poster, sign, notice or other type of signage posted by the Minister within the biodiversity reserve.

## **DIVISION III**

### **ACTIVITIES REQUIRING AN AUTHORIZATION**

**11.** No person may, for a period of more than 90 days in the same year, occupy or use the same site of the biodiversity reserve, unless the person has been authorized by the Minister.

For the purposes of the first paragraph,

(1) the occupation or use of a site includes

(a) staying or settling in the biodiversity reserve, for instance for vacation purposes;

(b) setting up a camp or a shelter; and

(c) installing, burying or abandoning any property in the reserve, including equipment, a device or a vehicle; and

(2) the expression “same site” includes any other site within a radius of 1 kilometre from the site.

Despite the first paragraph, an authorization is not required if a person,

(1) on the date of coming into force of this Regulation, was a party to a lease or had already obtained another form of right or another authorization allowing the person to legally occupy the land under the Act respecting the lands in the domain of the State (chapter T-8.1) or, if applicable, the Act respecting the conservation and development of wildlife (chapter C-61.1), and whose right to occupy the land is renewed or extended on the same conditions, subject to possible changes in fees; or

(2) in accordance with the law, has entitlement under a sublease, an assignment of a lease or a transfer of a right or authorization referred to in subparagraph 1, and whose right to occupy the land is renewed or extended on the same conditions, subject to possible changes in fees.

**12.** No person may carry on forest management activities to meet domestic needs or for the purpose of maintaining biodiversity, unless the person has been authorized by the Minister.

Despite the first paragraph, persons staying or residing within the biodiversity reserve and who collect wood required to make a campfire are not required to obtain the authorization of the Minister.

No such authorization is required if a person collects firewood to meet domestic needs to supply a trapping camp or a rough shelter permitted within the biodiversity reserve in the following cases and on the following conditions:

(1) the wood is collected by a person in compliance with the conditions set out in the permit for the harvest of firewood for domestic purposes issued under the Sustainable Forest Development Act (chapter A-18.1);

(2) the quantity of wood collected does not exceed 7 apparent cubic metres per year.

In addition, no authorization to carry on a forest management activity is required if a person authorized by lease to occupy land within the biodiversity reserve in accordance with this Regulation carries on the activity for the purpose of

(1) clearing, maintaining or creating visual openings, and any other similar removal work permitted under the provisions governing the sale, lease and granting of immovable rights under the Act respecting the lands in the domain of the State (chapter T-8.1), including for access roads, stairs or other trails permitted under those provisions; or

(2) clearing the necessary area for the installation, connection, maintenance, repair, reconstruction or upgrading of facilities, lines or mains for water, sewer, electric power or telecommunications services.

If the work referred to in subparagraph 2 of the fourth paragraph is carried on for or under the responsibility of an enterprise providing any of those services, the work requires the prior authorization of the Minister, other than in the case of the exemptions provided for in sections 14 and 16.

**13.** No person may carry on commercial activities in the biodiversity reserve, except with the authorization of the Minister.

Despite the first paragraph, no authorization is required

(1) if the activity does not involve the taking of fauna or flora resources, or the use of a motor vehicle; or

(2) to carry on commercial activities which, on the date of coming into force of this Regulation, were the subject of a right to use the land for such a purpose, whether the right results from a lease or other form of title, permit or authorization, within the limits of the right.

#### **DIVISION IV** **AUTHORIZATION EXEMPTIONS**

**14.** Despite the preceding provisions, an authorization is not required for an activity or other form of intervention within the biodiversity reserve if urgent action is necessary to prevent harm to the health or safety of persons, or to repair or prevent damage caused by a real or apprehended catastrophe. The person concerned must, however, immediately inform the Minister of the activity or intervention that has taken place.

**15.** Despite the preceding provisions, an authorization is not required for a member of a Native community for an intervention within the biodiversity reserve where that intervention is part of the exercise of rights covered by section 35 of the Constitution Act, 1982 (Schedule B of the Canada Act, chapter 11 in the 1982 volume of the Acts of the Parliament of the United Kingdom) and those rights are credibly asserted or established.

**16.** Despite the preceding provisions, the following activities and interventions carried out by Hydro-Québec (hereinafter the “Société”) or by any other person for Hydro-Québec do not require the prior authorization of the Minister under this Regulation:

(1) any activity or intervention required within the biodiversity reserve to complete a project for which express authorization had previously been given by the Government and the Minister, or only by the latter, in accordance with the requirements of the Environment Quality Act (chapter Q-2), if the activity or intervention is carried out in compliance with the authorizations issued;

(2) any activity or intervention necessary for the preparation and presentation of a pre-project report for a project requiring an authorization under the Environment Quality Act;

(3) any activity or intervention relating to a project requiring the prior authorization of the Minister under the Environment Quality Act if the activity or intervention is in response to a request for a clarification or for additional information made by the Minister to the Société and it is carried out in accordance with the request.

The Société informs the Minister of the various activities or interventions referred to in this section it proposes to carry out before the work is begun within the reserve.

For the purposes of this section, the activities and interventions of the Société include but are not restricted to pre-project studies, analysis work or field research, work required to study and monitor the impact of electric power transmission and distribution line corridors and rights of way, geological or geophysical surveys and survey lines, and the opening and maintenance of roads required for the purposes of access, construction or traffic incidental to the work.

## DIVISION V FINAL

17. This Regulation comes into force on the fifteenth day following the date of its publication in the *Gazette officielle du Québec*.

## SCHEDULE

### TECHNICAL DESCRIPTION

#### RÉSERVE DE BIODIVERSITÉ AKUMUNAN (s. 1)

[Translation of the technical description filed in French only at the office of the Surveyor-General of Québec of the Ministère de l'Énergie et des Ressources naturelles.]

### FOREWORD

In this technical description, it is understood that:

When the perimeter described follows a watercourse or lakeshore, it does so, unless otherwise indicated, along the outer edge of the bank or shore, in other words along the high-water mark of the hydrographic entity concerned.

In general, the beds of all watercourses, rivers and lakes are included in the territory. Only those that are excluded are mentioned in this technical description.

When a coordinate is accompanied by the sign “±”, it is approximate and given as a general location only. The hydrographic or topographic feature, or any other limit described, takes priority.

When the perimeter described follows the right-of-way of the Micoua-Saguenay section of the Duvernay-Micoua power transmission line, it corresponds to the land placed at the disposal of Hydro-Québec under reference no. 85-T (Right #699908).

When the perimeter described follows the limit of the right-of-way of a road, it corresponds to the land occupied by the road and its improvements (shoulder, bank, ditches, channels and bridges).

A territory of irregular shape situated in the regional county municipalities of Fjord-du-Saguenay and Haute-Côte-Nord, in the registration divisions of Chicoutimi and Saguenay, in the unorganized territories of Mont-Valin and Lac-au-Brochet, and in the townships of Pijart, Liégeois, Bassin-de-la-Rivière-Portneuf, Bassin-de-la-Rivière-des-Escoumins, Bassin-de-la-Rivière-Betsiamites and Bassin-de-la-Rivière-Sainte-Marguerite (Sacré Cœur). The perimeter of the territory may be described as follows, namely:

Starting from a point situated at the intersection of the southern shore of Lac de la Croix with the western bank of an unnamed stream, being point 1;

Point 1      5 405 186 m North, 329 254 m East ±

Thence, in an easterly direction, along the southern shore of Lac de la Croix, excluded from the biodiversity reserve, to its intersection with the northeastern bank of an unnamed stream, being point 2;

Point 2      5 404 787 m North, 330 962 m East ±

Thence, in a generally southeasterly direction, along the northeastern bank of several streams and the northeastern shore of an unnamed lake and Lac des Boîtes, to point 3;

Point 3      5 404 253 m North, 331 685 m East ±

Thence, in an easterly direction, along a straight line until it meets the north bank of an intermittent stream, being point 4;

Point 4      5 404 289 m North, 332 059 m East ±

Thence, in an easterly direction, along the north bank of the said intermittent stream and of several unnamed streams and the north shore of several unnamed lakes, to point 5;

Point 5      5 404 462 m North, 335 298 m East ±

Thence, in a northeasterly direction, along a straight line until it meets the southern shore of Lac de la Tête, being point 6;

Point 6 5 404 679 m North, 335 594 m East ±

Thence, in an easterly direction, along the southern shore of the said lake and an unnamed lake and the south shore of several unnamed streams, all excluded from the biodiversity reserve, to the intersection with the north shore of Lac du Piège, being point 7;

Point 7 5 404 337 m North, 337 366 m East ±

Thence, in a generally southeasterly direction, along the northern and eastern shore of the said lake, to its intersection with the eastern bank of an intermittent stream, being point 8;

Point 8 5 403 881 m North, 337 650 m East ±

Thence, in a southeasterly direction, along a straight line until it meets the north bank of an intermittent stream, being point 9;

Point 9 5 403 659 m North, 338 369 m East ±

Thence, in a generally southeasterly direction, along the northeastern bank of the said intermittent stream, the northeastern shore of Lac Étroit and the northeastern bank of an unnamed stream, to the intersection with a line parallel to and 60 metres from the southwestern shore of Lac Marche Serrée, being point 10;

Point 10 5 402 955 m North, 340 326 m East ±

Thence, in a generally southeasterly direction, along the said parallel line, to its intersection with the dividing line between the regional county municipalities Le Fjord-du-Saguenay and La Haute-Côte-Nord, being point 11;

Point 11 5 402 195 m North, 340 889 m East ±

Thence, in a southerly direction, along the said regional county municipality dividing line, to point 12;

Point 12 5 399 192 m North, 340 907 m East ±

Thence, in a westerly direction, along a straight line to point 13;

Point 13 5 399 184 m North, 339 229 m East

Thence, in a southerly direction, along a straight line to point 14;

Point 14 5 396 883 m North, 339 274 m East

Thence, in a southeasterly direction, along a straight line to point 15;

Point 15 5 395 377 m North, 340 229 m East

Thence, in a southerly direction, along a straight line, to its intersection with the northern boundary of the township of Pijart, being point 16;

Point 16 5 394 335 m North, 340 250 m East ±

Thence, in an easterly direction, along the northern boundary of the said township, to its intersection with the dividing line between the regional county municipalities Le Fjord-du-Saguenay and La Haute-Côte-Nord, being point 17;

Point 17 5 394 146 m North, 340 935 m East ±

Thence, in a southerly direction, along the said regional county municipality dividing line, to its intersection with the southwestern limit of the right of way of an unnamed road, being point 18;

Point 18 5 393 708 m North, 340 937 m East ±

Thence, in an easterly direction, along the southwestern and then southeastern limit of the said right of way, excluded from the biodiversity reserve, to its intersection with the northwestern limit of the right of way of the Duvernay-Micoua power transmission line, being point 19;

Point 19 5 393 584 m North, 341 339 m East ±

Thence, in a generally southwesterly direction, along the northwestern limit of the right of way of the said power transmission line, to its intersection with the northern limit of the right of way of an unnamed road, being point 20;

Point 20 5 385 049 m North, 338 771 m East ±

Thence, in a generally southwesterly direction, along the northern and then western limit of the said right of way, excluded from the biodiversity reserve, to its intersection with the eastern bank of an unnamed stream, being point 21;

Point 21 5 383 160 m North, 337 422 m East ±

Thence, in a generally southeasterly direction, along the northeastern bank of the said stream and its extension, to the intersection with the eastern bank of another unnamed stream, being point 22;

Point 22 5 383 069 m North, 337 473 m East ±

Thence, in a generally southerly direction, along the eastern bank of the said stream and the eastern shore of an unnamed lake, to the intersection with the northwestern limit of the right of way of the Duvernay-Micoua power transmission line, being point 23;

Point 23 5 381 574 m North, 337 335 m East ±

Thence, in a southwesterly direction, along the northwestern limit of the right of way of the said power transmission line, to its intersection with the northern limit of the right of way of an unnamed road, being point 24;

Point 24 5 381 375 m North, 337 230 m East ±

Thence, in a generally westerly direction, along the northern limit of the said right of way, excluded from the biodiversity reserve, to its intersection with the northeastern bank of an intermittent stream, being point 25;

Point 25 5 381 333 m North, 337 047 m East ±

Thence, in a generally northwesterly direction, along the northeastern bank of the said intermittent stream, to point 26;

Point 26 5 381 411 m North, 336 881 m East ±

Thence, in a northwesterly direction, along a straight line until it meets the northwest bank of an unnamed stream, being point 27;

Point 27 5 381 619 m North, 336 465 m East ±

Thence, in a generally southwesterly direction, along the northwest bank of the said stream, excluded from the biodiversity reserve, to its intersection with the northeastern bank of Rivière Sainte-Marguerite Nord-Est, being point 28;

Point 28 5 381 364 m North, 336 206 m East ±

Thence, in a generally northwesterly direction, along the northeastern bank of Rivière Sainte-Marguerite Nord-Est and Eaux mortes à Lavoie, both excluded from the biodiversity reserve, to the intersection with the western bank of Ruisseau Liégeois, being point 29;

Point 29 5 393 024 m North, 322 515 m East ±

Thence, in a generally northerly direction, along the western bank of the said stream Liégeois, to its intersection with the southern shore of Lac Liégeois, being point 30;

Point 30 5 396 659 m North, 323 130 m East ±

Thence, in an easterly direction, along the southern and eastern shore of the said lake and then the south bank of several unnamed streams and the south shore of an unnamed lake, Lac Roger and Lac Magella, all excluded from the biodiversity reserve, to point 31;

Point 31 5 397 659 m North, 326 694 m East ±

Thence, in a northeasterly direction, along a straight line until it meets the southern limit of the right of way of an unnamed road, being point 32;

Point 32 5 397 752 m North, 326 803 m East ±

Thence, in an easterly direction, along the southern limit of the said right of way, excluded from the biodiversity reserve, to point 33;

Point 33 5 397 785 m North, 327 590 m East ±

Thence, in a northwesterly direction, along a straight line until it meets the northern limit of the right of way of another unnamed road, excluded from the biodiversity reserve, being point 34;

Point 34 5 398 337 m North, 327 346 m East ±

Thence, in a northeasterly direction, along a straight line until it meets the intersection of the western bank of an unnamed stream with the northern limit of the right of way of an unnamed road, being point 35;

Point 35 5 398 494 m North, 327 565 m East ±

Thence, in a generally northwesterly direction, along the western bank of the said stream, and then the southwestern shore of Lac de l'Avion, to the intersection with the northeastern bank of another unnamed stream, being point 36;

Point 36 5 399 025 m North, 327 180 m East ±

Thence, in a generally northerly direction, along the eastern bank of several unnamed streams and the eastern shore of Lac des Pies and Lac Mercier, all excluded from the biodiversity reserve, to the intersection with the southern limit of the right of way of an unnamed road, being point 37;

Point 37 5 401 270 m North, 326 857 m East ±

Thence, in an easterly direction, along the southern limit of the said right of way, excluded from the biodiversity reserve, to its intersection with the extension of the eastern right of way of another unnamed road, being point 38;



Point 38 5 401 500 m North, 328 037 m East ±

Thence, in a generally northerly direction, along the said extension and then the eastern limit of the right of way of an unnamed road, excluded from the biodiversity reserve, to its intersection with the southern bank of an unnamed stream, being point 39;

Point 39 5 401 851 m North, 327 959 m East ±

Thence, in an easterly direction, along the southern bank of the said stream, excluded from the biodiversity reserve, to its intersection with the southeastern limit of the right of way of an unnamed road, being point 40;

Point 40 5 402 000 m North, 328 646 m East ±

Thence, in a generally northeasterly direction, along the southeastern limit of the said right of way, excluded from the biodiversity reserve, to its intersection with the eastern bank of an intermittent stream, being point 41;

Point 41 5 402 351 m North, 328 825 m East ±

Thence, in a generally northeasterly direction, along the eastern and southern bank of the said intermittent stream, and then the southern shore of Lac Daniel and the southern bank of an unnamed stream, all excluded from the biodiversity reserve, to the intersection with the extension of the eastern bank of another intermittent stream, being point 42;

Point 42 5 402 814 m North, 329 460 m East ±

Thence, in a generally northerly direction, along the said extension, and then the eastern bank of the intermittent stream, excluded from the biodiversity reserve, to point 43;

Point 43 5 403 118 m North, 329 434 m East ±

Thence, in a northerly direction, along a straight line until it meets the western bank of another intermittent stream, being point 44;

Point 44 5 403 273 m North, 329 421 m East ±

Thence, in a generally northerly direction, along the western bank of an intermittent stream, the western bank of several streams and the western shore of an unnamed lake, to starting point 1.

Having an area of 284.7 square kilometres.

Notes:

—The boundary of the territory shown on the plan accompanying the technical description was determined using the digital files in the Adresses Québec geobase kept by the Ministère de l'Énergie et des Ressources naturelles du Québec as of 25 January 2018, the geobase of Québec's hydrographic network (géobase du réseau hydrographique du Québec, or GRHQ) kept by the Ministère de l'Énergie et des Ressources naturelles du Québec as of 25 January 2018, the Québec administrative boundary system (système de découpage administratif du Québec, or SDA) at a scale of 1:20 000, the digital compilation of surveys produced by the Ministère de l'Énergie et des Ressources naturelles du Québec at a scale of 1:20 000, and an excerpt of land with special legal status from the register of land in the domain of the State as of 24 January 2018.

—The coordinates and areas mentioned in this technical description were determined graphically using the same data as the data used to determine the boundary of the territory. They are expressed in metres with reference to the Québec plane coordinate system (QPCS), Modified Transverse Mercator projection (MTM), Time Zone 7 (central meridian 70°30'), North American Datum 1983 (NAD83).

—Measurements are expressed in International System units.

—The boundary of the territory is based on the actual layout of the elements described in this document and must be legally interpreted on that basis. It was defined by the Direction des aires protégées of the Ministère du Développement durable, de l'Environnement et de la Lutte contre les changements climatiques.

—The territory of the biodiversity reserve, as described in this technical description, contains only lands in the domain of the State. Any land that that proves to be not part of the domain of the State is excluded from the biodiversity reserve.

—The territory is shown on a plan drawn at a scale of 1:30 000.

—In accordance with the instructions of the Direction des aires protégées of the Ministère de l'Environnement and the Lutte contre les changements climatiques, the information contained in the source documents provided by the mandator, from which this technical description was prepared, has been accepted as fact.

The whole as shown on the plan prepared by the undersigned on 29 January 2019 and filed with the office of the Surveyor-General of Québec at the Ministère de l'Énergie et des Ressources naturelles under document number 538321.

Prepared at Québec on 29 January 2019, under number 1 of my minutes.

Digitally signed by:

GUILLAUME BERNARD,  
*Land surveyor*

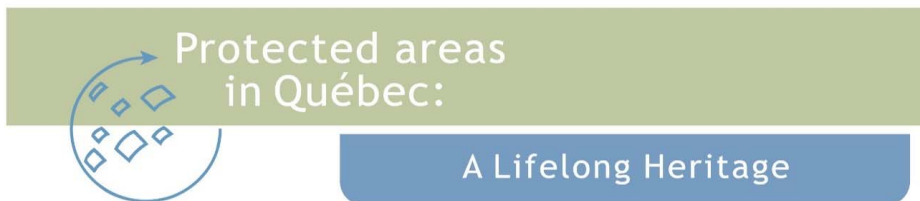
BAGQ file: 538321

MELCC file: 5148-06-02 [04]

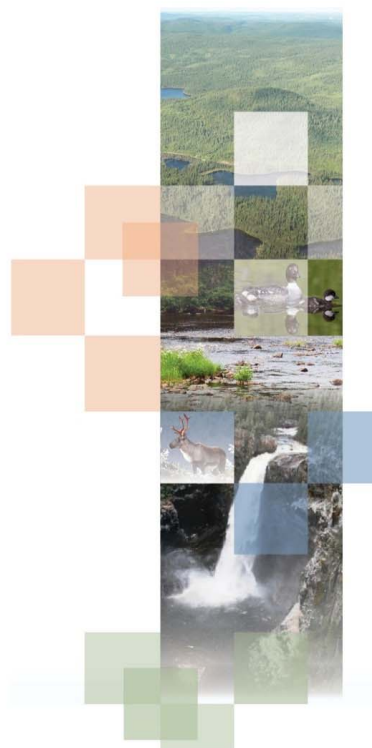
Original filed at the office of the Surveyor-General of Québec.
SPACE RESERVED FOR THE DIGITAL SIGNATURE OF THE CERTIFICATE OF FILING ISSUED BY THE SURVEYOR-GENERAL OF QUÉBEC
Only the Surveyor-General of Québec is authorized to issue certified copies of this document.
Certified copy issued on .....
..... For the Surveyor-General of Québec



**SCHEDULE II**  
CONSERVATION PLAN FOR THE RÉSERVE DE BIODIVERSITÉ AKUMUNAN



Réserve de  
biodiversité  
Akumunan



CONSERVATION PLAN

Québec 

Cover page photos: Barrow's goldeneye: L. Master; woodland caribou: Société des établissements de Plein air du Québec; waterfall on Rivière Pilote: Première Nation des Innus d'Essipit; other: M.-A. Bouchard, Ministère de l'Environnement et de la Lutte contre les changements climatiques.

Reference to cite:

Gouvernement du Québec. 2019. Conservation Plan, Réserve de biodiversité Akumunan. Québec, Ministère de l'Environnement et de la Lutte contre les changements climatiques, Direction des aires protégées. 20 pages.

## Contents

### Introduction

- 1 The territory of Réserve de biodiversité Akumunan
  - 1.1 Official toponym
  - 1.2 Boundaries and location
  - 1.3 Ecological portrait
    - 1.3.1 Physical environment
    - 1.3.2 Biological environment
    - 1.3.3 Ecological representativeness
  - 1.4 Land occupation and uses
- 2 Conservation and management issues
  - 2.1 Introduction
  - 2.2 Protection of biodiversity
  - 2.3 Development activities
  - 2.4 Knowledge acquisition and environmental monitoring
  - 2.5 Conservation and management objectives
- 3 Zoning
- 4 Activity framework applicable to Réserve de biodiversité Akumunan
  - 4.1 Activity framework established by the Natural Heritage Conservation Act
  - 4.2 Activity framework established by the Regulation respecting the Réserve de biodiversité Akumunan
- 5 Activities governed by other laws
- 6 Management
  - 6.1 Responsibilities of the Minister of the Environment and the Fight against Climate Change
  - 6.2 Monitoring
  - 6.3 Participation of stakeholders

### Bibliographical references

Appendix 1 — Boundaries and location

Appendix 2 — Land occupation and uses

Appendix 3 — Location of sectors of interest

Appendix 4 — Zoning

## Introduction

By Order in Council No. 636-2005 of June 23, 2005, pursuant to section 27 of the *Natural Heritage Conservation Act* (chapter C-61.01), the government authorized the Minister of Sustainable Development, Environment and Parks to create Réserve de biodiversité projetée Akumunan, and approved the boundaries and the conservation plan proposed for it. The creation of this provisional protected area by the ministerial order of July 27, 2005 (2005, G.O. 2, 4072) came into force on September 7, 2005 for a duration of four years. This provisional protection status was extended twice, first until September 7, 2013 by order of the Minister of Sustainable Development, Environment and Parks on July 17, 2009 (2009, G.O. 2, 2233), and then until September 7, 2021 by order of the Minister of Sustainable Development, Environment, Wildlife and Parks on March 13, 2013 (2013, G.O. 2, 769).

On January 26, 2012 the Minister of Sustainable Development, Environment and Parks (MDDEP) mandated the Bureau d'audiences publiques sur l'environnement (BAPE) to hold public consultations on ten proposed protected areas in the Saguenay–Lac-Saint-Jean region, one of them being Réserve de biodiversité projetée Akumunan. This mandate was given to the BAPE in accordance with section 39 of the *Natural Heritage Conservation Act*, which provides for a public consultation process before permanent protection status is recommended to the Gouvernement du Québec for a territory reserved for the creation of a new protected area. The BAPE's mandate began on February 13, 2012 and concluded on July 20 of the same year. The consultation was held in March and April 2012 in Saguenay and Saint-Félicien. The BAPE's

inquiry and public hearing report (No. 287) was submitted to the Minister on July 20, 2012 (BAPE, 2012). In its report, the commission recommended giving permanent protection status to Réserve de biodiversité projetée Akumunan, with the proposed enlargements.

During the public hearings, enlargements were proposed to the northwestern part of the proposed reserve. The BAPE concluded that they should be considered in the light of efforts by the government to increase the total protected area of Québec to 12% by 2015 in the developed forest. Accordingly, the enlargement proposal was studied by the Table régionale de l'analyse de carence en aires protégées (TRACA – regional table on gaps in protected areas), set up by the Conférence régionale des élus du Saguenay–Lac-Saint-Jean (CRÉ02), which worked from June 2011 to February 2014. Composed of multiple stakeholders, including forestry companies, the TRACA unanimously approved the enlargement proposal (about 40 km<sup>2</sup>), and the CRÉ02 held a public consultation to obtain comments on the matter. All comments received were favourable to the addition of this sector. At the same time, a few small areas were withdrawn from the project, notably sections overlying the outfitter Domaine du lac des Cœurs Inc.

The present conservation plan is a short version of the detailed conservation and development plan, entitled *Plan détaillé de conservation et de mise en valeur de la Réserve de biodiversité Akumunan* (Conseil de la Première Nation des Innus Essipit and Gouvernement du Québec, 2015). Both documents will help to guide the management of Réserve de biodiversité Akumunan. The detailed plan is available (in French only) on the website of the MELCC.

## **1 The territory of Réserve de biodiversité Akumunan**

### **1.1 Official toponym**

Akumunan means “haven” in Innu-aimun, the language of the Innu. This choice of toponym choice expresses the wish that Akumunan participate in protecting the woodland caribou (Atik, in Innu-aimun) by offering it the best habitat conditions. At one time, Innu society was based on the caribou, which offered everything the Innu needed to live, from food to clothing, from materials to hunting tools. It is the archetypal element of subsistence, providing nomads with essential supplies for life in the bush. The territory covered by the biodiversity reserve is also a haven, relatively intact or at least less disturbed than surrounding areas that are heavily marked by human activities.

### **1.2 Boundaries and location**

The boundaries and location of the reserve are shown on the map comprising Appendix 1. Covering an area of 284.7 km<sup>2</sup>, the reserve lies between 48° 34' and 48° 46' north latitude and between 70° 00' and 70° 15' west longitude. It is located about 53 km north/northwest of Tadoussac and 70 km northeast of Saguenay. The reserve is part of the unorganized territory of Mont-Valin, in the Fjord-du-Saguenay MRC (Saguenay–Lac-Saint-Jean), with a tiny portion to the east that is in the unorganized territory of Lac-au-Brochet, in Haute-Côte-Nord MRC (Côte-Nord).

Wherever possible, the boundaries of the reserve were defined on the basis of natural or anthropic

elements that are easily identified on the ground, such as watercourses, lakes, forest roads and the edges of bogs. For sections along the banks of a water body (e.g. Rivière Sainte-Marguerite Nord-Est), the real boundary is the natural high-water mark. Where the boundary corresponds to a forest road or a hydroelectric line, the right of way of the road or line is excluded from the protected area (e.g. line 7004 in the east). The legal boundaries of the reserve are defined in the technical description and the survey map prepared by land surveyor Guillaume Bernard with the following minutes 1 (January 29, 2019) and filed in the surveying archives of the Surveyor General of Québec (Greffé de l'arpenteur général du Québec), Ministère de l'Énergie et des Ressources naturelles under document number 538321.

### **1.3 Ecological portrait**

#### **1.3.1 Physical environment**

The biodiversity reserve is in the southern portion of Central Laurentian natural province (Li, T. and J.-P. Ducruc, 1999<sup>1</sup>), in Grenville geological province. The latter corresponds to the roots of a chain of mountains formed nearly a billion years ago, during the Grenville orogeny.

Réserve de biodiversité Akumunan is in the heart of the Monts-Valin natural region, at the eastern edge of the mountain massif from it takes its name. The Monts-Valin massif, with summits of nearly 1000 metres, constitutes the southwestern portion of this natural region.

<sup>1</sup> [http://www.mddelcc.gouv.qc.ca/biodiversite/cadre-ecologique/rapports/Provinces\\_Internet\\_16-12-2014.pdf](http://www.mddelcc.gouv.qc.ca/biodiversite/cadre-ecologique/rapports/Provinces_Internet_16-12-2014.pdf)



Elevations in Akumunan range from 380 m, in the lower parts of the Sainte-Marguerite Nord-Est valley, to 850 m on a few summits to the north. The dominant relief is a plateau, the top of which is a bit hummocky, while the sides are steep in places. The plateau is generally covered with a thin layer of till<sup>2</sup> (25 to 100 cm), with bare rock in places, especially on steep slopes. The largest depressions run along fault lines (e.g. the Rivière Pilote valley), and contain sand and gravel deposits of fluvio-glacial or even proglacial origin. Here and there a few scattered organic formations (bogs) occupy hollows (less than 1% of the territory).

The western part of the reserve rests on a foundation of orthopyroxene granitoids, while the eastern part is underlain by charnockitic gneisses (Avramtchev, 1985). However, this difference should not be reflected in the soils to any meaningful degree, since their source rock was mixed together before being deposited by the glaciers, and all the rocks are acidic.

The reserve protects parts of three watersheds: in the west, that of Rivière Sainte-Marguerite (8.7%); in the east, that of Rivière des Escoumins (10.4%); and in the north, a small slice of the watershed of Rivière Portneuf (0.6%). Note however that the reserve protects 87.3% of the Pilote sub-watershed (Rivière Bras-Pilote), which covers 124.7 km<sup>2</sup>.

Modest bodies of water occupy nearly 7% of the territory. Many of them are headwater lakes. The principal lakes are Lac Brûlé (16 129 ha), Lac des Sapins (12 075 ha), Lac La Loutre (8386 ha), Lac de l'Avion (6356 ha), Lac Pilote (6190 ha), and

Lac à Lessard (3703 ha). Many are elongated and lie in a northwest/southeast direction, following the orientation of faults (e.g. lakes Pilote, de l'Avion, Brûlé).

According to Gerardin and McKenney (2001), the territory of the reserve is subject to a cold subarctic continental climate, subhumid with a medium growing season in the northern part, while the south is characterized by a humid subarctic climate with a medium growing season.

Though the differences are slight between the south and north of Akumunan, it is interesting to note that the north receives more precipitation (both snow and rain), but the growing season in the south is two weeks longer. These differences are not due to latitude, but to elevation. The elevation at the southeast sampling point is about 600 m, compared to 750 m at the northern sampling point. However, the maximum elevation range is 470 m (380 m at the lowest point, 850 m at the highest).

### 1.3.2 Biological environment

Productive forest environments dominate the landscape, with forests covering 92.2% of the area of the reserve (Table 1).

The forest cover is dominated by closed forests of balsam fir accompanied by black spruce, with a significant proportion (nearly 33% of the reserve) consisting of old-growth forest (> 90 years). More open coniferous forests<sup>3</sup> cover nearly 11% of Akumunan. Mixed forests of shade-intolerant hardwoods (such as paper birch and aspen) accompanied by conifers, or the

<sup>2</sup> Moraine material left by glaciers.

<sup>3</sup> Forests of density class D (25 to 40% coverage at ground level).

opposite, coniferous forests with shade-intolerant hardwoods, together cover 37% of Akumunan. An area burned in 1995, covering 4% of the reserve, is slowly regenerating, while sections that were recently logged (from the early 2000s to 2013), covering nearly 5% of the reserve, are also regenerating. Spruce budworm outbreaks are the most serious disturbance that Akumunan has undergone, particularly the great outbreak of the early 1980s. Nearly 12 000 hectares were affected by this insect. Severely affected stands are mostly in the south and in the Rivière du Bras-Pilote valley.

*Table 1: Forest summary of the territory of Réserve de biodiversité Akumunan (MFFP, SIEF, 4<sup>th</sup> 10-year survey)*

Type of cover		Area (ha)	Proportion (%)
Forest	Deciduous	911.8	3.2
	Mixed	9840.1	34.6
	Coniferous	12 327.9	43.3
	Regeneration	3180.3	11.1
Other	Alder stands	116.6	0.4
	Wet barrens	174.2	0.6
	Dry barrens	51.9	0.2
	Water	1857.7	6.5
	Island	5.4	0.0
	Flooded	7.0	0.0
	Other	3.0	0.0
<b>Total</b>		<b>28 477.6</b>	<b>100.0%</b>

Forestry operations represent the second most serious disturbance undergone by the territory over the last 50 years. Since 1968, 25% of the total area of the reserve has been transformed by logging or silvicultural work (stand regeneration and improvement).

Reflecting the region's cold, humid climatic conditions, the poor soils and the history of natural disturbances (fires, spruce budworm outbreaks, windthrows), along with human disturbances (logging), the present-day forests of the reserve are a mosaic of the evolutionary stages of balsam fir/white birch forest, with elements of black spruce.

Since logging has only affected a quarter of the territory, large areas are intact and there are numerous old coniferous stands of which three *biological refuges* (09751R141, 09751R137 et 09751R142) have been protected under the Sustainable Forest Development Act (chapter A-18.1). These three biological refuges contribute, since 2008, to preserve old forests. However, half of the intact areas previously mentioned were affected by the great spruce budworm outbreak of the 1980s, which drastically reduced coniferous numbers to the benefit of white birch and trembling aspen. The result is that there are now a great many mixed and young stands in the territory. Based on topographic zones, forest density and age classes, one can distinguish five distinct forest vegetation units (Conseil de la Première Nation des Innus Essipit and Gouvernement du Québec, 2015).

In 2008 the MELCC conducted a summary plant survey in the territory of Réserve de biodiversité Akumunan. The following species were observed: lowbush blueberry (*Vaccinium angustifolium*), velvet-leaf blueberry (*Vaccinium myrtilloides*), wild salsaparilla (*Aralia nudicaulis*), creeping snowberry (*Chiogenes hispidula*), bluebead lily (*Clintonia borealis*), threelobed goldthread (*Coptis groenlandica*), black spruce (*Picea mariana*), skunk currant (*Ribes*

*glandulosum*), prickly currant (*Ribes lacustre*), sheep laurel (*Kalmia angustifolia*), twinflower (*Linnaea borealis*), Canada mayflower (*Maianthemum canadense*), mountain woodsorrel (*Oxalis montana*), creeping buttercup (*Ranunculus reptans*), Labrador tea (*Rhododendron groenlandicum*), balsam fir (*Abies balsamea*) and northern starflower (*Trientalis borealis*).

No systematic wildlife survey has been done for the territory of the reserve. However, one can draw an approximate portrait based on a report by the Commission régionale sur les ressources naturelles et le territoire du Saguenay–Lac-Saint-Jean, entitled “Portrait de la ressource faune du Saguenay–Lac-Saint-Jean” (CRRNT-02, 2011).

That portrait is incomplete however, since it mostly concerns species of interest for hunting and fishing. From that point of view, the biodiversity reserve is home to large mammals like moose (*Alces americanus*), black bear (*Ursus americanus*) and the forest ecotype of woodland caribou (*Rangifer tarandus caribou*). The mid-sized mammals include snowshoe hare (*Lepus americanus*), porcupine (*Erethizon dorsatum*), American marten (*Martes americana*), American beaver (*Castor canadensis*), red fox (*Vulpes vulpes*), Canada lynx (*Lynx canadensis*), muskrat (*Ondatra zibethicus*), American mink (*Neovison vison*), striped skunk (*Mephitis mephitis*) and raccoon (*Procyon lotor*). The small mammals include: red squirrel (*Tamiasciurus hudsonicus*), chipmunk (*Tamias striatus*), deer mouse (*Peromyscus maniculatus*) and a few species of bat (order Chiroptera).

Turning to avian wildlife, the territory is frequented by a number of common species, including ruffed grouse (*Bonasa umbellus*), spruce grouse (*Falci pennis canadensis*), American woodcock (*Scolopax minor*), common snipe (*Gallinago gallinago*), American crow (*Corvus brachyrhynchos*), gray jay (*Perisoreus canadensis*), redwing blackbird (*Agelaius phoeniceus*) and Barrow's goldeneye (*Bucephala islandica*). Warblers should also be present (family Parulidae), along with raptors such as red-tailed hawk (*Buteo jamaicensis*). Some of the cliffs and escarpments could well provide a habitat for peregrine falcon (*Falco peregrinus*). Great horned owl (*Bubo virginianus*) and barred owl (*Strix varia*) could also be present. Observed nearby, Bicknell's thrush (a vulnerable species) may frequent balsam fir stands at higher elevations (over 600 metres) in the reserve.

Several species of amphibian are also found in Akumunan, including American toad (*Anaxyrus americanus*) and common garter snake (*Thamnophis sirtalis*).

The lakes and rivers are exclusively home to allopatric (geographically isolated) brook trout (*Salvelinus fontinalis*).

### 1.3.3 Ecological representativeness

Réserve de biodiversité Akumunan will enrich the representation of the characteristic ecosystems of the Monts-Valin natural region in Québec's protected areas network. Together with Réserve de biodiversité du Plateau-du-Lac-des-Huit-Chutes, Réserve aquatique de la Vallée-de-la-Rivière-Sainte-Marguerite and Parc national des Monts-Valin, Réserve de biodiversité Akumunan completes the representation of the characteristic

ecosystems of the highlands (elevations > 600 m) in the southwest part of the natural region, which basically correspond to the Lac-Tremblay low hills physiographic complex (level 3 in the ecological reference framework of Québec). While some of the protected areas mentioned above also protect low-altitude ecosystems (< 500 m), the biodiversity reserves of Plateau-du-Lac-des-Huit-Chutes and Akumunan are on the uplands of the massif (basically between 500 and 800 m). These two protected areas are highly representative of the types of physical environments and surface deposits characteristic of the Lac-Tremblay low hills physiographic complex.

With regard to biology, the present-day forests of the biodiversity reserve and the areas around it differ considerably, in structure and composition, from the natural forest landscapes (Grondin *et al.* 2010). The latter authors recommend that the stands of balsam fir/white birch and fir/black spruce (mixed Eastern forest) be the focus of forest restoration efforts, to gradually bring their structure and composition closer to those of natural landscapes. The cessation of logging will contribute to that end by letting the young forests (fir and spruce stands) to age.

Réserve de biodiversité Akumunan is in the Eastern bioclimatic subdomain, whose climate, wetter than its counterpart to the west, results in a longer forest fire cycle. For this reason it normally contains more old-growth forests. The current presence of a high proportion of such forests (which will increase over time) heightens the reserve's ecological value, since the surrounding forests are considerably younger due to the impact of logging.

In this respect, the biodiversity reserve forms a conservation nucleus of over 100 km<sup>2</sup>, in which the biodiversity components expressed across the landscape (types of physical environments and assemblages of associated species) will continue evolving with greater ecological integrity (see sidebar).

#### **ECOLOGICAL INTEGRITY**

*The condition of a protected area that is considered characteristic of its natural region and likely to persist, including abiotic [non-living] components and the composition and abundance of native species and biological communities, rates of change and supporting processes.*

Adapted from the definition in the Canada National Parks Act (S.C. 2000, c. 32).

#### **CONSERVATION NUCLEUS**

*An area where the protection of biodiversity, ecological integrity, the natural environment and other similar values take precedence over usage values.*

Brassard *et al.*, 2010.

Having a conservation nucleus of good size will ensure the long-term effectiveness of the reserve in protecting ecosystem functionality, while reducing its vulnerability to natural disturbances and changes in the surrounding landscape.

### **1.4 Land occupation and uses**

Réserve de biodiversité Akumunan lies entirely within the Nitassinan of the Innu Essipit First Nation, as demarcated in Schedule 4.1 of the Agreement-in-Principle of General Nature between the First Nations of Mamuitun and Nutashkuan and the Government of Québec and the Government of Canada (signed in March 2004).

In 1927, anthropologist Frank G. Speck mapped the hunting grounds of the Montagnais of Lac Saint-Jean and the St. Lawrence River (Speck, 1927). Historical information about the presence of Essipiunnuat ancestors in the territory of the

reserve was found in the Grande Recherche du Conseil Attikamekw-Montagnais (Laforest, 1983) and in studies of that research for the Innu Essipit First Nation (Parcoret, 2009). For the Nitassinan of Essipiunnuat (Innus from Essipit), six traditional hunting grounds were identified and mapped to indicate the Innu families occupying them. These territories had Innu toponyms and corresponded to the principal watersheds of the rivers of Essipit Nitassinan. Réserve de biodiversité Akumunan straddles two of these hunting grounds. One is the hunting ground of Rivière Sainte-Marguerite, *pépolsemiskâ*, which also includes Rivière Sainte-Marguerite Nord-Est. The other is the hunting ground of Rivière des Escoumins, *ecibiucibu*, meaning “shell river”, which represents about 80% of Akumunan.

The reserve is at the head of two main watersheds that, according to oral sources, were used and occupied by the Essipiunnuat in the 19<sup>th</sup> and 20<sup>th</sup> centuries: the watersheds of Rivière Sainte-Marguerite and Rivière des Escoumins. The Denis, Nicolas, Duberger, Jacques and Moreau families occupied the Sainte-Marguerite territory, i.e. the southwest part of the reserve. Another branch of the Moreau family and the Dominique and Ross families occupied the Escoumins territory, i.e. the north and east parts of the reserve.

Due to its geographic and hydrographic location, the Akumunan territory was shared by these Innu families in a manner that reflected the natural barriers constituted by watersheds. To reach their trapping ground in the Sainte-Marguerite Nord-Est watershed, Essipiunnuat families had to pass through the Rivière des Escoumins watershed. At the same time, families that trapped in the Rivière Portneuf area had to portage from Lac des

Cœurs to Lac de la Croix, going through Lac Girard and Lac aux Renards, in the northern part of the reserve.

Today, various points of entry offer access to Réserve de biodiversité Akumunan. However, the network of roads that enter or are within the reserve is of very uneven quality. The area is still used and occupied by members of the Innu Essipit First Nation (IEFN). There are four main camps belonging to Essipiunnuat, where they practise traditional activities (Innu Aitun) including hunting, fishing, trapping, gathering, and any other activity with a connection to the Innu culture of the IEFN. These traditional activities, like those practised throughout the Nitassinan, are monitored in terms of occupation and use (Innu Aitun monitoring).

The reserve is mostly in hunting zone 28 (87%), with the rest being in hunting zone 18, which is basically the part of Nordique ZEC that is within the boundaries of the protected area (13%).

Réserve de biodiversité Akumunan overlaps two controlled harvesting zones (ZECs):

- Hunting and fishing: Nordique ZEC (38 km<sup>2</sup> = 13.7%)
- Salmon fishing: Rivière Sainte-Marguerite ZEC (1.4 km<sup>2</sup> = 10.3%)

The reserve also overlaps a sector used by an outfitter without exclusive rights that has a right of occupation for its accommodations under the *Act respecting the lands in the domain of the State*:

- Outfitter without exclusive rights: Pourvoirie du Lac Pierre

A total of 29 land rights have been granted within the perimeter of the reserve. They consist of

resort leases (cottage lots) and leases for temporary forest shelters (hunting camps):

- Eighteen resort leases
- Eleven leases for temporary forest shelters, six of which belong to IEFN members<sup>4</sup>

Besides the above-mentioned land rights, there are six sites for trapping camps, one of which belongs to an IEFN member. The territory of the reserve overlaps six leased trapping grounds, four of them being leased to IEFN members under an agreement signed in 1989 with the Ministère du Loisir, de la Chasse et de la Pêche. The main present-day uses and rightful occupations on the territory of the reserve are shown on the map comprising Appendix 2.

In summary, the territory of Réserve de biodiversité Akumunan is chiefly used for vacationing, hunting, fishing and trapping. The level of use can be considered light, since the cottages are concentrated around lakes that are accessible by road, and there are none at all in most of the reserve.

## **2 Conservation and management issues**

### **2.1 Introduction**

Generally, a biodiversity reserve is dedicated to protection of the natural environment, nature discovery and recreation. For this reason, activities that could have a significant impact on ecosystems and biodiversity, particularly of an industrial nature, are prohibited. Less harmful activities, such as those involving recreation,

wildlife, ecotourism or education, are permitted in this type of protected area. However, the management framework to which they are subject is conditioned by conservation issues specific to each biodiversity reserve. The conservation and other issues to be taken into account for Réserve de biodiversité Akumunan, and the orientations and objectives to which they give rise, are set out in the sections that follow.

### **2.2 Protection of biodiversity**

#### **Restoration of forest ecosystems**

For this conservation issue, the corresponding objective is: *Promote the gradual restoration of the characteristic ecosystems of the Monts-Valin natural region.* The absence of industrial activities will allow the average age of forest stands to gradually increase. Ultimately, old stands of balsam fir (with black spruce and white birch) should cover most of the land. Old-growth forests are rare ecosystems. Their considerable presence in the reserve will serve to protect birds, insects, mushrooms, mosses and lichens that prefer such forests, which are rich in dead trees, woody debris and other important elements (Desponts and coll., 2002, 2004). The second objective is therefore: *Avoid any development that could reduce the age of the forest cover.*

#### **Protection of threatened or vulnerable species**

Pursuing the previous objective will help preserve and improve the conditions needed for the survival of woodland caribou. Despite its small size, Réserve de biodiversité Akumunan is one of the solutions set out in the *Plan d'aménagement*

---

<sup>4</sup> As part of a process for managing Aboriginal occupations currently being deployed by the Innu Essipit First Nation, these six leases from the MERN will eventually be transferred to become Innu Aitun leases from the IEFN.

*de l'habitat du caribou forestier* (management plan for woodland caribou habitat), specifically for the Lac des Cœurs herd, as the initial central core. The potential contribution of the protected area to maintaining the species in the surrounding (developed) forest will have to be evaluated over the coming years.

Another species to protect is the Barrow's goldeneye, considered an arboreal duck because it usually nests in natural cavities in trees (Savard and Robert, 1997). Large trees that could offer nesting cavities are generally rare in the north, and current practices in forestry favor the production of healthy trees (without cavities). Special attention should therefore be given to the reserve's intact forests and small headwater lakes, which these ducks seem to prefer. Accordingly, the next objective is: *Adapt the management of the reserve to protect threatened or vulnerable species for which it provides a habitat.*

### **Protection of lacustrine ecosystems and near-shore environments**

With its high proportion of headwater lakes, the hydrographic network of the reserve has excellent ecological integrity and water quality. Accordingly, maintaining the integrity of aquatic, wetland and near-shore environments is another conservation issue for the reserve. The corresponding objective is: *Avoid any new development that could degrade the quality of aquatic, wetland or near-shore environments.*

### **2.3 Development activities**

Réserve de biodiversité Akumunan is relatively remote, yet is readily accessible by forest roads that also serve in winter for snowmobilers. The

territory offers numerous attractions for recreation (hunting, fishing, vacationing) and for the traditional activities of the Essipit Innu. Further development of the reserve's potential to meet the needs of its users is justified, particularly in terms of maintaining the traditional activities of the Essipit Innu, continuing operations by the ZECs and the outfitter, maintaining a quality environment for the cottagers, and providing opportunities for the public to be in contact with nature and Innu culture.

Practised in accordance with the applicable laws and regulations, these activities by users of the territory are compatible with the status of biodiversity reserve, and can continue to be practised normally.

The MELCC and the IEFN want all concerned stakeholders to be involved in preparing an action plan to carry out these conservation objectives, in particular the protection of certain sensitive or fragile natural environments, the recovery of old forests and the protection of threatened or vulnerable species. To encourage participation by all stakeholders who use the territory, the following objectives have been set: (1) *Establish participative and collaborative management.* (2) *Inform all users as to the conservation and management objectives being pursued in the protected area.*

### **2.4 Knowledge acquisition and environmental monitoring**

Existing information about the ecosystems of Réserve de biodiversité Akumunan (section 1.3) is fragmentary. Knowledge acquisition, besides being crucial to the achievement of objectives specific to natural heritage protection, will make it possible to monitor the natural environment. The

knowledge acquired could also be used in developing activities for nature discovery, education and public awareness. It will facilitate the analysis of development projects, and ensure that management partners have a common understanding of the issues.

Ecological knowledge, especially about the support capacity of natural environments, and about the impact of recreational and tourist activities on ecosystems, must also be developed. The corresponding objective is: *Promote knowledge building, in particular by conducting targeted surveys and monitoring biodiversity.*

The IEFN and the MELCC will target certain needs related to knowledge building on biodiversity. With the help of regional partners, the MELCC aims to establish an inventory of the plant and animal species found in the reserve. The subjects of surveys and research to prioritize will be determined later, and will concern both existing and expected ecological problems.

## **2.5 Conservation and management objectives**

Réserve de biodiversité Akumunan is a “protected area” as defined in the *Natural Heritage Conservation Act*, and appears in the *Registre des aires protégées du Québec* constituted under the Act. Thus, it was primarily created to ensure the protection and maintenance of the area’s biological diversity, with the associated natural and cultural resources. In addition, protecting this territory enhances the representativeness of the national and regional protected areas network, since it holds numerous ecological components of interest that are representative of the

characteristic ecosystems of the Monts-Valin natural region. For the government, the protection of these components and ecosystems, described in section 1.3, is a major objective. Note that this protection will allow the pursuit of traditional activities by members of the IEFN who frequent the land, as well as the recreotourism activities currently practised there.

Taking into account the issues set out in section 2 and the geographical sectors of interest corresponding to the elements described in section 1 (see Appendix 3), the conservation and management objectives specific to Réserve de biodiversité Akumunan are as follows:

- *Avoid any development that could reduce the age of the forest cover.*
- *Adapt the management of the reserve to protect threatened or vulnerable species for which it provides a habitat.*
- *Avoid any new development that could degrade the quality of aquatic, wetland or near-shore environments.*
- *Protect the Innu heritage and promote the practice of Innu Aitun.*
- *Establish participative and collaborative management.*
- *Inform all users as to the conservation and management objectives being pursued in the protected area.*
- *Promote knowledge building, in particular by conducting targeted surveys and monitoring biodiversity.*

Additional objectives, complementary to those listed above, may be found in the *Plan détaillé de conservation et de mise en valeur de la Réserve de biodiversité Akumunan* (Conseil de la



Première Nation des Innus Essipit et Gouvernement du Québec, 2015).

To achieve those objectives, the conservation and management of Réserve de biodiversité Akumunan will be guided by an activity framework whose several dimensions are set out in sections 4, 5 and 6 of this plan.

### 3 Zoning

Taking into account the ecosystems, occupation and use of the territory, as well as the present condition of the natural environment and the protection and management objectives, the biodiversity reserve has been subdivided into three zones. While all enjoy the same degree of legal protection and have the same activity framework, their protection measures and development possibilities reflect their respective features.

The three zones are presented in the map comprising Appendix 4. The MELCC will consider this zoning in managing the reserve and when evaluating applications for authorization concerning activities or developments.

The three zones are:

- I. (West) Plateau of small lakes
- II. (Centre) Lac Pilote and Rivière Pilote
- III. (East) Large lakes and Rivière de la Sainte-Marguerite Nord-Est

#### **Zone I: Plateau of small lakes**

This zone is distinguished by an abundance of small and mid-sized lakes, large areas of old-growth forest, medium usage by woodland caribou, and just three resort leases. With its varied forest cover, Zone I can be subdivided into two subzones (Conseil de la Première Nation des

Innus Essipit and Gouvernement du Québec, 2015). It is a conservation zone, allowing minimal intervention, except for habitat restoration, scientific research, monitoring and control, and outfitter activities.

#### **Zone II: Lac Pilote and Rivière Pilote**

This zone is characterized by the presence of medium-sized lakes and Rivière du Bras-Pilote, but it has fewer lakes than Zone I. It has a high level of naturalness, despite the presence of a network of secondary roads, a well-used central artery for ATV travel, and a few resort leases. Zone II should only be used with care, limiting interventions to a strip along either side of the central artery, the width of which will be decided later.

#### **Zone III: Large lakes and Rivière de la Sainte-Marguerite Nord-Est**

Despite containing some old-growth forests, this zone has been heavily modified, both by forestry and the spruce budworm outbreak, resulting in the dominance of second-growth forests. The level of use and occupation is quite high, notably by the holders of land rights (60%), especially to the north of Lac Brûlé. Added to this are the northwest part of Nordique ZEC and the left bank of Saumon ZEC along Rivière Sainte-Marguerite Nord-Est. Zone III is where infrastructures and/or facilities for ecotourism activities could be deployed. Particular attention should be paid to backcountry camping activities around Bras-Pilote falls.

### 4 Activity framework applicable to Réserve de biodiversité Akumunan

The activity framework applicable to Réserve de biodiversité Akumunan follows from the provisions of the *Natural Heritage Conservation*

Act and the Regulation respecting the Réserve de biodiversité Akumunan.

#### **4.1 Activity framework established by the *Natural Heritage Conservation Act***

Activities carried out within the biodiversity reserve are primarily governed by the provisions of the *Natural Heritage Conservation Act*.

Under the Act, the principal activities prohibited in a territory with the status of biodiversity reserve are the following:

- mining and gas or oil extraction or exploration;
- forest management within the meaning of section 4 of the *Sustainable Forest Development Act* (chapter A-18.1);
- the development of hydraulic resources and any production of energy on a commercial or industrial basis.

Though fundamental to protecting the territory and its ecosystems, the above prohibitions do not cover all of the standards considered desirable to ensure the proper management of the reserve and the conservation of its natural environment. The *Natural Heritage Conservation Act* allows the Regulation to detail the legal framework applicable on the territory of a biodiversity reserve.

#### **4.2 Activity framework established by the Regulation respecting the Réserve de biodiversité Akumunan**

Accordingly, the provisions set out in Regulation respecting the Réserve de biodiversité Akumunan present additional prohibitions beyond those already stipulated in the Act. Their

purpose is to set conditions for the performance of certain permitted activities, thus ensuring better protection of the natural environment in accordance with the principles of conservation and other management objectives for the biodiversity reserve. Certain activities are therefore subject to prior authorization by the Minister.

The measures contained in Regulation specifically concern new interventions. They do not affect activities that are already being practised or facilities that are already present, so many existing uses are therefore preserved.

However, for activities subject to authorization, the provisions set out in Regulation do not identify which activities could be refused authorization, being considered incompatible with the vocation of the biodiversity reserve. Basic information about the compatibility or incompatibility of each type of activity is provided in the document *Activity Framework for Biodiversity Reserves and Aquatic Reserves*, which is available on the website of the MELCC at:

[http://www.mddelcc.gouv.qc.ca/biodiversite/aires\\_protegees/regime-activites/regime-activite-reserve-bio-aqua-en.pdf](http://www.mddelcc.gouv.qc.ca/biodiversite/aires_protegees/regime-activites/regime-activite-reserve-bio-aqua-en.pdf).

For certain activities, Regulation also includes exemptions to the requirement for prior authorization.

### **5 Activities governed by other laws**

Certain activities that could potentially be practised in the biodiversity reserve are also governed by other applicable legislative and regulatory provisions, and some require a permit or authorization or the payment of certain fees. Certain activities could be prohibited or limited

under other laws or regulations applicable on the territory of the reserve.

Within the biodiversity reserve, a particular legal framework may govern permitted activities under the following categories:

- **Protection of the environment:** measures set out in particular by the *Environment Quality Act* (chapter Q-2) and its regulations.
- **Archeological research and discoveries:** measures set out in particular by the *Cultural Heritage Act* (chapter P-9.002).
- **Exploitation and conservation of wildlife resources:** measures stipulated by the *Act respecting the conservation and development of wildlife* (chapter C-61.1) and its regulations, including provisions relating to threatened or vulnerable wildlife species, outfitters and beaver reserves; and measures in the applicable federal laws and regulations, including the legislation and regulations on fisheries.
- **Plant species designated as threatened or vulnerable:** measures prohibiting the harvesting of such species under the *Act respecting threatened or vulnerable species* (chapter E-12.01).
- **Access and property rights related to the domain of the State:** measures set out in particular by the *Act respecting the lands in the domain of the State* (chapter T-8.1) and the *Watercourses Act* (chapter R-13).
- **Issuance and oversight of forest development permits** (harvesting of firewood for domestic purposes, wildlife development, recreational development), **delivery of authorizations** (forest roads),

and **protection of biological refuges:** measures stipulated by the *Sustainable Forest Development Act* (chapter A-18.1).

- **Travel:** measures stipulated by the *Act respecting the lands in the domain of the State* and by the regulations on motor vehicle travel in fragile environments, under the *Environment Quality Act*, by the *Act respecting the conservation and development of wildlife* (chapter C-61.1) when in a ZEC, and by its regulations, including regulations adopted by delegated management bodies.
- **Construction and development standards:** regulatory measures adopted by local and regional municipal authorities in accordance with the applicable laws.

## 6 Management

### 6.1 Responsibilities of the Minister of the Environment and the Fight against Climate Change

The Minister of the Environment and the Fight against Climate Change is responsible for the management of Réserve de biodiversité Akumunan. Among other things, the Minister sees to the application of the *Natural Heritage Conservation Act* (chapter C-61.01) and the Regulation respecting the Réserve de biodiversité Akumunan. In its management, the MELCC enjoys the collaboration and participation of other government representatives that have specific responsibilities in or adjacent to the territory.

The process leading to the creation of Réserve de biodiversité Akumunan is the fruit of ongoing collaboration between the MELCC and the Innu Essipit First Nation. Accordingly, the Minister

plans to establish a partnership with the Band Council of the Innu Essipit for the management of Réserve de biodiversité Akumunan, under terms and conditions to be defined in an agreement.

The principal local and regional stakeholders concerned by the biodiversity reserve will be invited to participate in management activities.

## **6.2 Monitoring**

As mentioned in section 2, measures will be taken toward monitoring the status of the natural environment, in collaboration with the various stakeholders. Botanical and wildlife surveys may also be conducted.

## **6.3 Participation of stakeholders**

To fulfill its management responsibilities pertaining to the biodiversity reserve, the MELCC intends to focus on partnership with IEFN, and will seek collaboration and participation of the principal actors concerned by the territory, including the MRC of Fjord-du-Saguenay, Nordique ZEC, De la rivière Sainte-Marguerite ZEC, the Lac Pierre outfitter, the holders of land rights and the regional units of other government departments that have responsibilities in the biodiversity reserve.

## Bibliographical references

Avramtchev, L., 1985. La carte géologique du Québec. Ministère de l'Énergie et des Ressources, Direction de l'exploration géologique et minérale. Carte n° 2000 du DV-84-02 ; échelle 1 : 1 500 000.

Brassard, F. A.R. Bouchard, D. Boisjoly, F. Poisson, A. Bazoge, M.- A. Bouchard, G. Lavoie, B.Tardif, M. Bergeron, J. Perron, R. Balej et D. Blais. Portrait du réseau d'aires protégées au Québec. Période 2002-2009. Ministère du Développement durable, de l'Environnement et des Parcs, 2010, 229 p

Commission régionale sur les ressources naturelles et le territoire du Saguenay–Lac-Saint-Jean, 2011. Portrait de la ressource Faune du Saguenay–Lac-Saint-Jean, 242 pages.

Conseil de la Première Nation des Innus Essipit et Gouvernement du Québec, 2015. Plan détaillé de conservation et de mise en valeur de la réserve de biodiversité Akumunan (2015-2020). Ministère du Développement durable, de l'Environnement et de la Lutte aux Changements climatiques, Direction du patrimoine écologique et des parcs. 162 pages.

Despots, Mireille, André Desrochers, Louis Bélanger et Jean Huot, 2002. Structure de sapinières aménagées et anciennes du massif des Laurentides (Québec) et diversité des plantes vasculaires. Can. J. For. Res. 32 : 2077–2093.

DESPONTS, Mireille, Geneviève BRUNET, Louis BÉLANGER et Mathieu BOUCHARD, 2004. The eastern boreal old-growth balsam fir

forest: a distinct ecosystem. Can. J. Bot. 82 : 830–849.

Gerardin, V. et D. McKenney, 2001. *Une classification du Québec à partir de modèles de distribution spatiale de données climatiques mensuelles : vers une définition des bioclimats du Québec*, ministère de l'Environnement du Québec, Service de la cartographie écologique no 60, 2001, 40 p. IUCN. [En ligne] <http://www.mddelcc.gouv.qc.ca/changements/classification/model-clima.pdf>

Grondin, Pierre, Denis Hotte, Yan Boucher, Patrice Tardif et Jean Noël, 2010. Comparaison des paysages forestiers actuels et des paysages forestiers naturels du sud de la forêt boréale du Québec à des fins d'aménagement écosystémique. Mémoire de recherche forestière n° 158. Ministère des Ressources naturelles et de la Faune, Direction de la recherche forestière. 96 p.

LAFORÉST R., 1983. Occupation et utilisation du territoire par les Montagnais des Escoumins, Rapport de recherche soumis au Conseil Attikamekw-Montagnais, 136 pages et annexes.

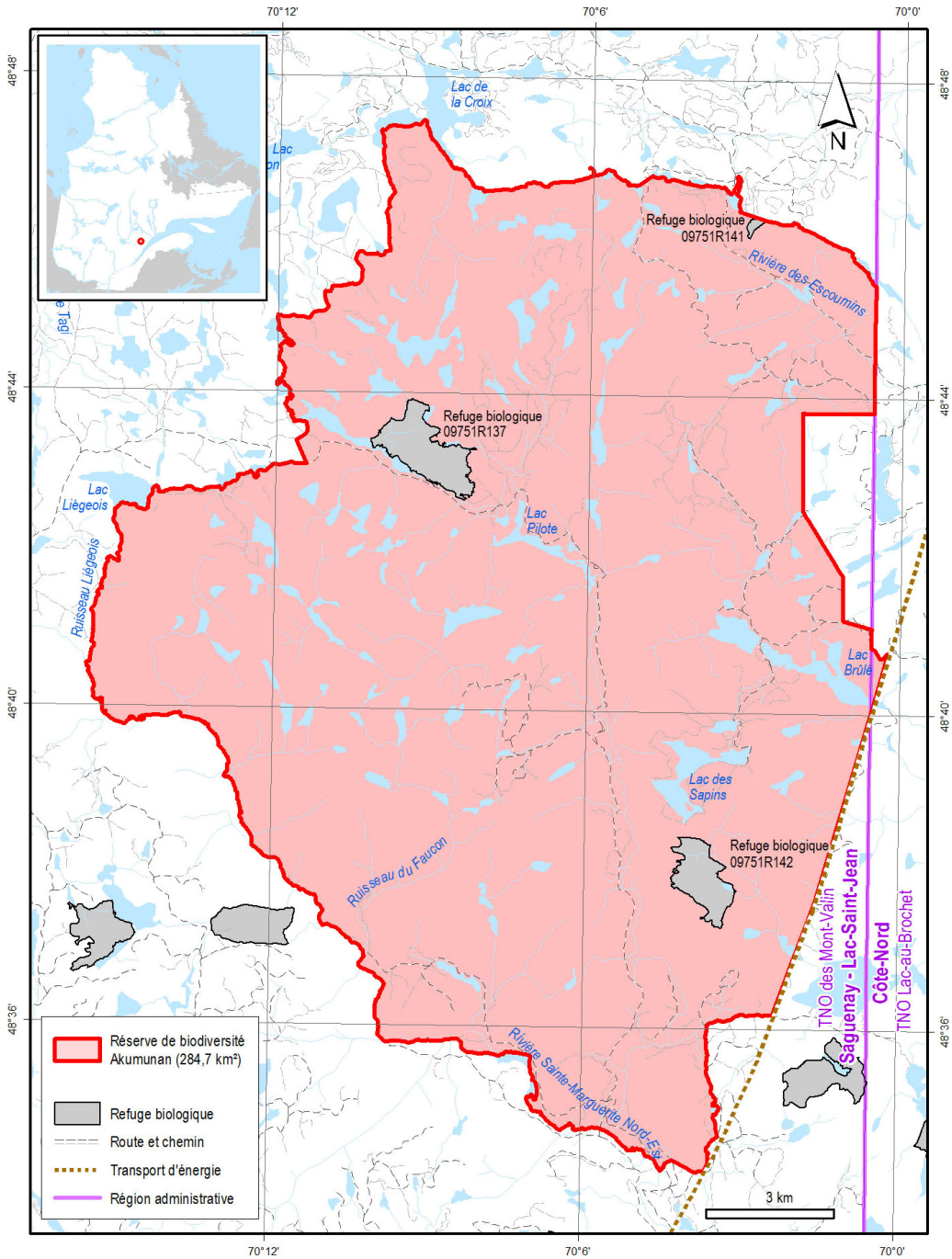
Li, T. et J.-P. Ducruc, 1999. *Les provinces naturelles. Niveau I du cadre écologique de référence du Québec*, ministère de l'Environnement, 20 p.

PARCORET, F., 2009. Occupation et utilisation du territoire par les Innus Essipit au cours de la période contemporaine. Rapport de recherche à partir des sources ethnographiques de la grande recherche du Conseil Attikamekw-Montagnais (1983). Pour le conseil de la Première Nation des Innus Essipit.

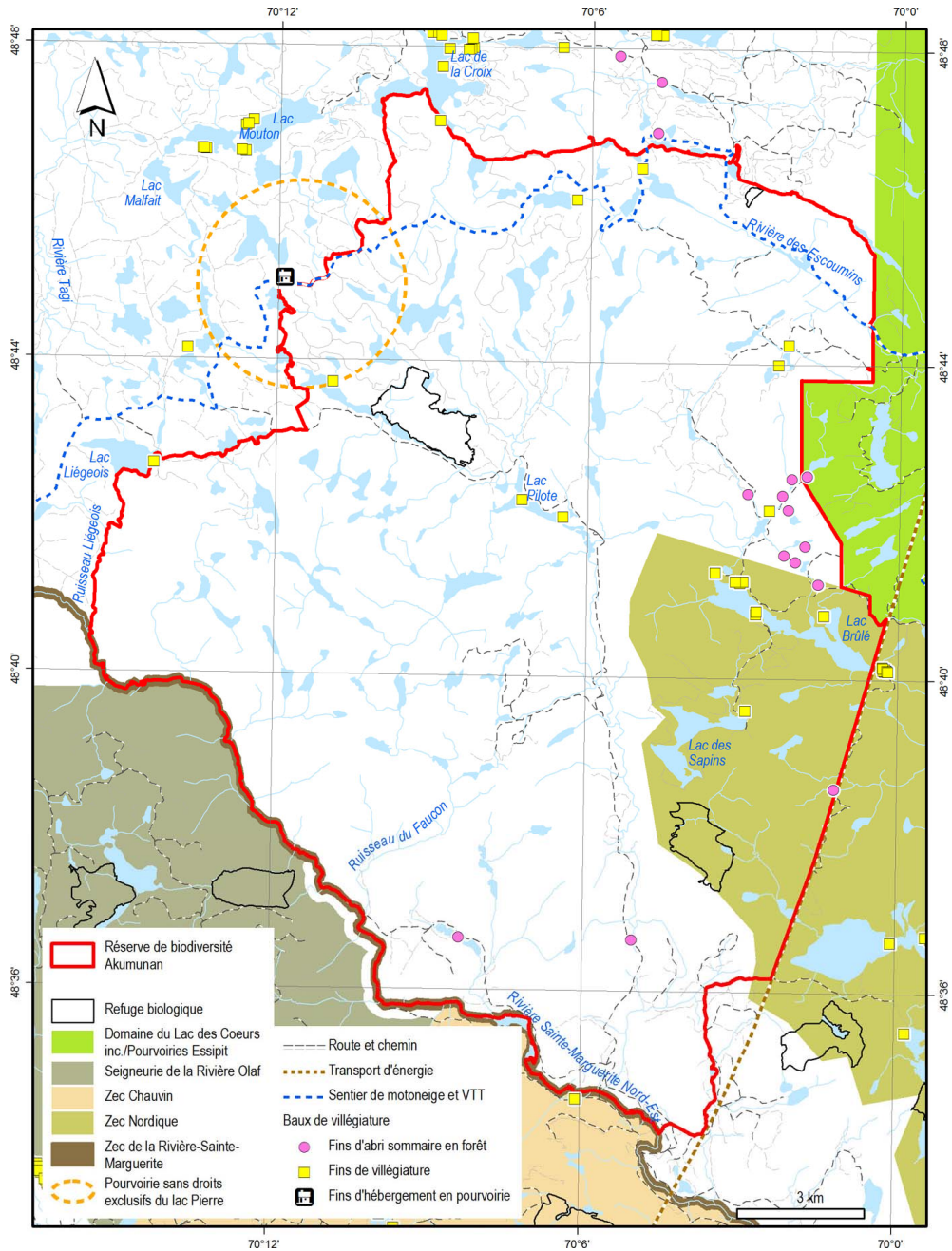
Savard, J-P., L. et M. Robert, 1997. Le Garrot d'Islande : un oiseau vulnérable. Québec-Oiseaux, volume 9, numéro 2, pages 18-19.

Speck, F. G., 1927. Family Hunting Territories of the Saint John Montagnais and Neighboring Bands, in *Anthropos*, Vol. 22; p. 387-403.

## Appendix 1 — Boundaries and location

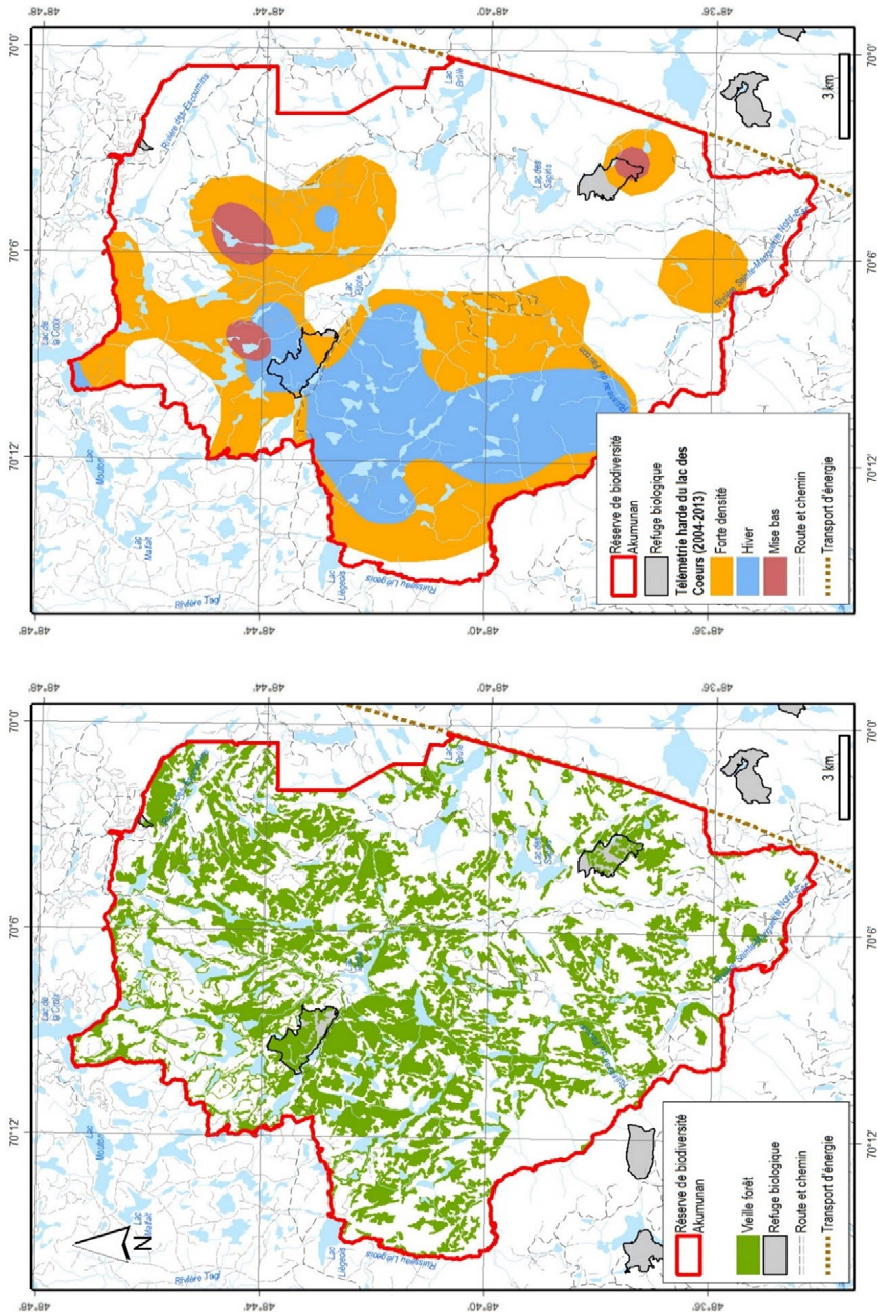


Appendix 2 — Land occupation and uses





## Appendix 3 — Location of sectors of interest



Appendix 4 – Zoning

