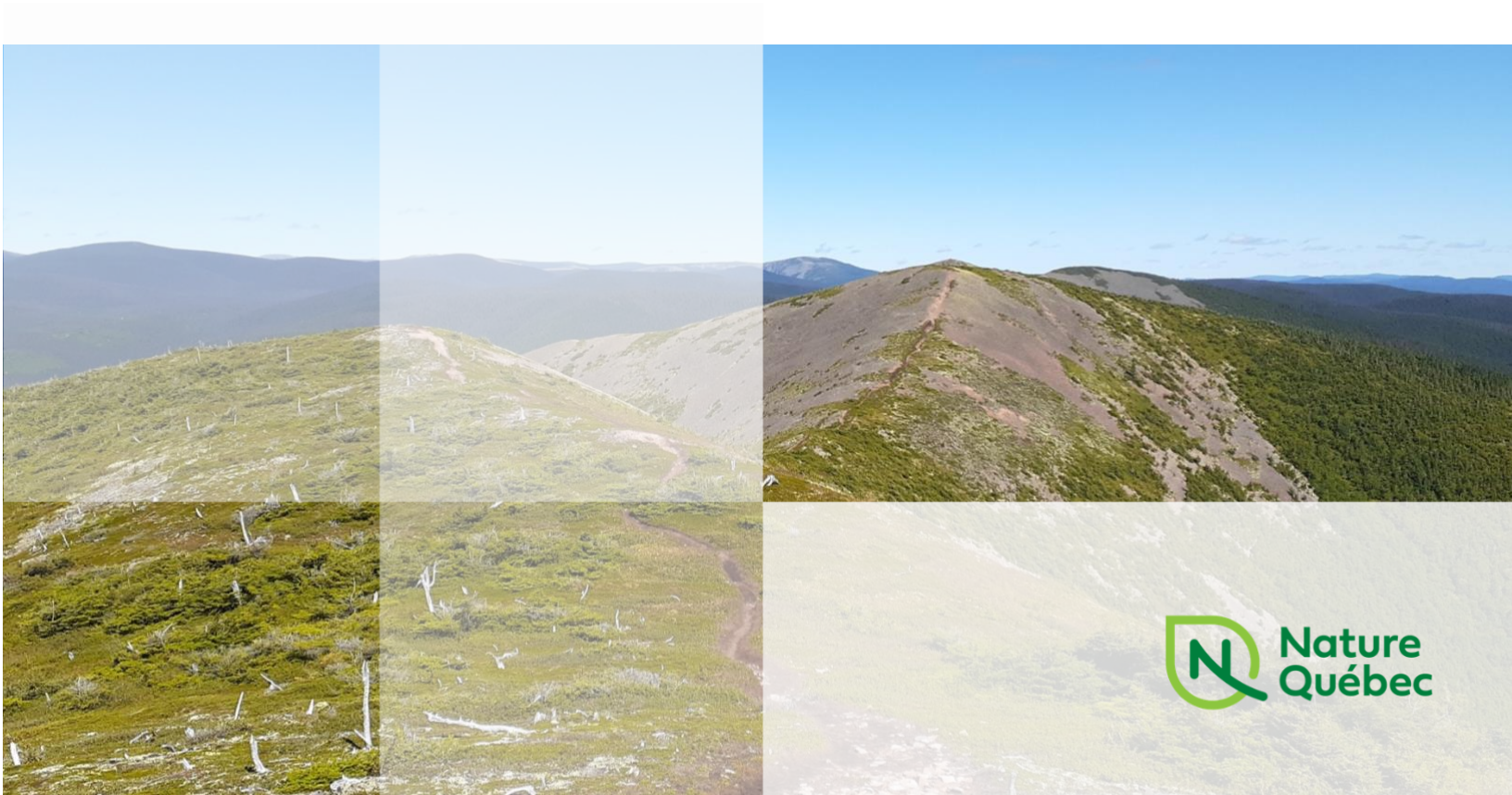




Nature Québec report

PROPOSAL FOR A PLAN TO STRENGTHEN PROTECTION FOR THE GASPÉSIE CARIBOU

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Issue: Biodiversity and protected areas

Written by

Marianne Caouette, Project manager, Biodiversity and Forests

Revised by

Marie-Audrey Nadeau-Fortin, Project manager, Biodiversity and Forests



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Cover photo

Mount Vallières-de-Saint-Réal © Marianne Caouette



About Nature Québec

Nature Québec is a non-profit organization dedicated to the conservation of natural environments and the sustainable use of resources. With the support of a network of scientists, our team carries out projects and campaigns around four main issues: biodiversity, forests, energy and climate, and the urban environment. The organization has over 90,000 members and supporters, as well as 40 affiliated groups, and is a member of the International Union for Conservation of Nature (IUCN). Nature Québec operates throughout Québec, building environmental awareness and engagement, and working to create a more just society with a smaller ecological and climate footprint, in solidarity with the rest of the planet.

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+ OUR VISION

Nature Québec strives to help create a more just society with a smaller ecological and climate footprint, in solidarity with the rest of the planet. The organization's efforts are geared towards cultivating appreciation and respect for Québec's natural environments in cities and rural areas alike, and ensuring that these environments are protected and recognized as essential to Québec's development.

+ OUR MISSION

Nature Québec promotes civic engagement, takes part in public debates, provides insight and information, raises awareness and undertakes projects that encourage our society to:

- ▶ **Value biodiversity**
- ▶ **Protect natural environments and species**
- ▶ **Foster contact with nature**
- ▶ **Use resources sustainably.**

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Executive summary

This document presents a plan developed by Nature Québec together with several local stakeholders. The main objective is to strengthen protection for the Gaspésie caribou. Based on the best available knowledge and data, this plan takes account of the main local socio-economic issues. **The adoption of a plan based firmly on the one set out here would provide effective protection for critical caribou habitat by shielding it from industrial activity, thus making a significant contribution to achieving the recovery objectives for the population.**

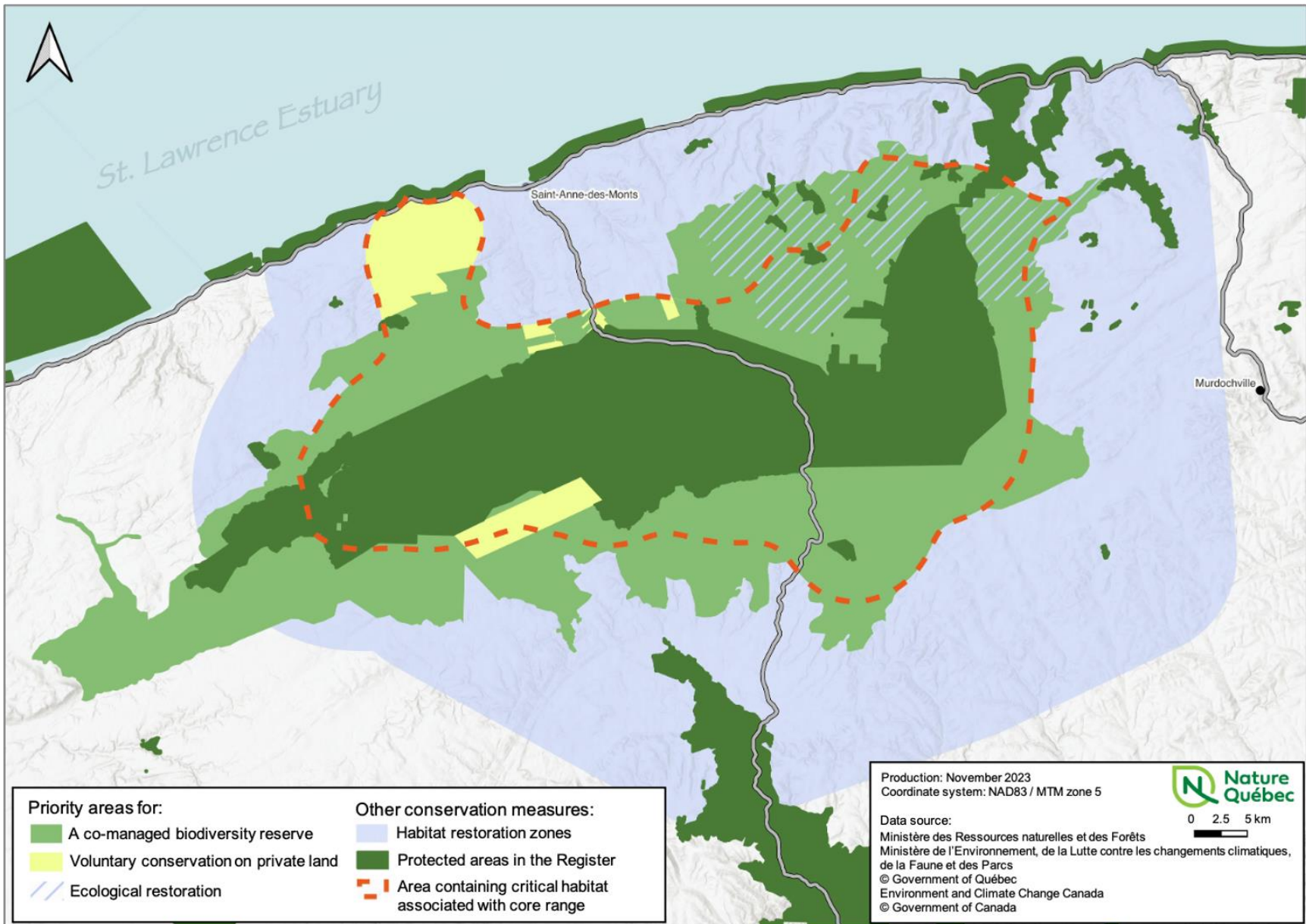
To develop the plan, **a review of the scientific literature was conducted as well as an analysis of recent news events and developments. This, in addition to qualitative surveys and participatory mapping workshops conducted by Nature Québec with a variety of local stakeholders and experts,** served to delineate the main conservation issues. Recent data was also used to map suitable caribou habitat, based principally on the biophysical attributes of the Gaspésie caribou's preferred habitat, as well as recent high-use areas.

The main socio-economic issues identified as central to the protection of the Gaspésie caribou are **forest management, mining rights, land access (logging roads), and recreational tourism.**

The proposed plan covers three types of zones, i.e. priority areas for 1) protection on public land, 2) voluntary conservation on private land, and 3) ecological restoration.

The cornerstone of this plan is the **creation of a biodiversity reserve under co-management**, which would secure long-term protection for critical caribou habitat, located mainly on public land on the outskirts of the Parc national de la Gaspésie, for the benefit of present and future generations. Establishing this protected area would also generate many co-benefits, such as protecting several other species in a precarious situation, preserving landscapes and maintaining ecological services, in addition to advancing the government's objectives for biodiversity protection. Adopting a **co-management** governance structure would make it possible to involve local stakeholders in managing the area, thus promoting social acceptance of protection measures and cohabitation. The plan foresees **authorizing the following activities (at a minimum) in the protected area: hunting, trapping, fishing, backcountry skiing and hiking.** However, these activities should be managed in a way that is compatible with the long-term conservation of the caribou. **Dynamic management of** certain activities (particularly backcountry skiing), based on the presence or absence of caribou, would foster social acceptance of protection measures while reducing any adverse impact on the caribou.

The Gaspésie caribou population has been in continuous decline since the 1950s. Moreover, the 2019-2029 Québec government's recovery plan for the population singles out the creation of protected areas that meet the caribou's ecological requirements and help consolidate the core conservation area as a vital step towards achieving the objectives of the government plan.



Proposed plan to strengthen protection for the Gaspésie caribou

Background

The Atlantic-Gaspésie woodland caribou (*Rangifer tarandus caribou*), hereinafter referred to as the “Gaspésie caribou,” is a treasure trove of biodiversity for both Québec and Canada. Geographically and genetically isolated from other caribou populations in Québec and Canada, this population constitutes one of the 12 Designatable Units for Caribou in Canada (COSEWIC, 2011). The caribou has a threatened status in Québec since 2009 under the *Loi sur les espèces menacées ou vulnérables (Act respecting threatened or vulnerable species)*, and is listed as endangered in Canada since 2003 under the *Species at Risk Act*. Despite this, and notwithstanding two completed recovery plans and a third in progress, the situation of the Gaspésie caribou has not ceased to deteriorate; reaching a new low in 2020 of a mere 34 individual animals (Morin et al., 2021). The disappearance of this population would create an extensive gap in the range of the caribou in Canada (COSEWIC, 2011). To reverse this trend, more ambitious habitat protection and restoration measures are imperative in the short term.

Over the past few decades, there have been many studies documenting the decline of the Gaspésie caribou (e.g., Crête and Desrosiers, 1995; Boisjoly et al., 2010; Frenette et al., 2020), and **forest management practices are regarded as the main cause of this population's decline** (MFFP, 2021). By modifying the habitat, mainly through forest rejuvenation and the creation of roads, logging is propitious to alternate prey species such as moose (*Alces alces*), white-tailed deer (*Odocoileus virginianus*) and snowshoe hare (*Lepus americanus*) that benefit from the abundance of young stands, thereby amplifying the effects of caribou predation (apparent competition phenomenon; MFFP, 2021). In addition, logging and roads reduce the surface area of mature and old-growth forests, which are essential to the mountain caribou, particularly for winter feeding (ECCC, 2022).

According to the Gaspésie Woodland Caribou Recovery Team (2018): “*the survival rate is ultimately related to habitat quality in the range. It is therefore vital to reduce the rate of disturbance in the Gaspésie caribou's range quickly and substantially, otherwise the possibility of ensuring its recovery, or even its survival, will be greatly compromised.*” Hence, promoting the creation of protected areas that meet the caribou's ecological requirements is a priority measure in the 2019-2029 recovery plan of the Québec government and considered essential to achieving this plan's objectives.

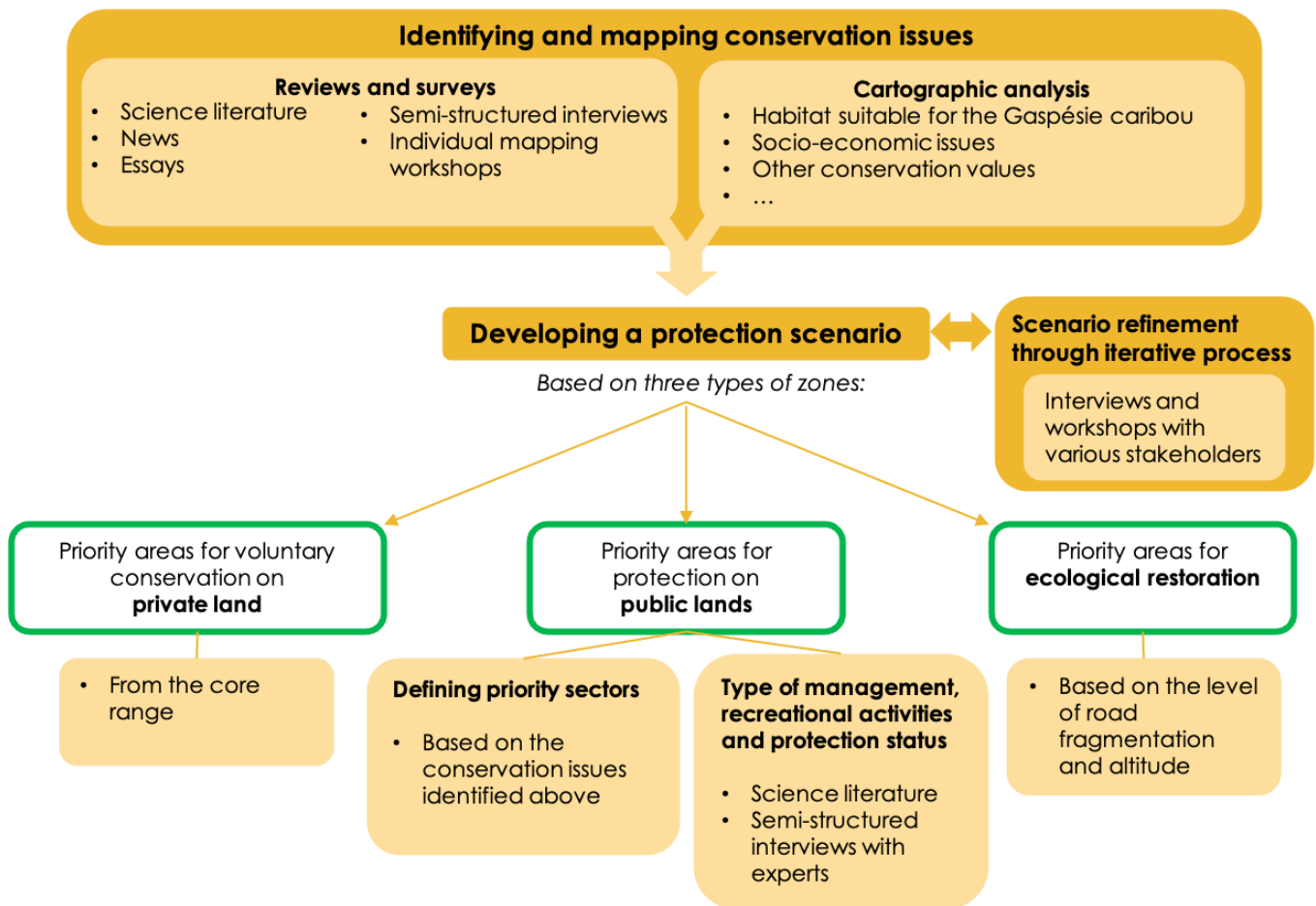
While other measures to complement habitat protection – such as active and passive habitat restoration, the breeding and reintroduction of individuals, and predation management – are needed in the short term to promote population recovery, legal habitat protection is proving to be a priority to ensure long-term recovery. The creation of protected areas is recognized by the scientific community as an effective tool for safeguarding the caribou by protecting its territory from industrial activity. By itself, however, the protection currently offered by the Parc national de la Gaspésie is insufficient to maintain the population (St-Laurent et al., 2009).

It was against this background that **Nature Québec launched a collaborative effort in 2020 to develop a protection plan with the primary objective of protecting key areas from industrial activity, and particularly logging.**

Methodological approach

The first step in the process consisted of documenting and mapping the conservation issues central to the Gaspésie caribou, and then delineating priority areas for conservation (protection, restoration and voluntary conservation) based on scientific and local knowledge. In developing the plan, the principal socio-economic issues were taken into consideration with a focus on limiting the impact on local communities while ensuring the long-term protection of caribou habitat.

The following diagram summarizes the methodological approach set out in the following pages:



Identifying and mapping conservation issues

Reviews and surveys

To hone in on conservation concerns and issues surrounding the protection of the caribou in the Gaspésie region, recent developments were analyzed and a review was conducted of both the scientific literature and the essays of the Independent Commission on Woodland and Mountain Caribou. In addition, from 2021 to 2023, semi-structured interviews were conducted and individual mapping workshops were held with various stakeholders.

More than 25 organizations and stakeholders were interviewed from the following sectors:

- ▶ Academia ;
- ▶ Environmental groups;
- ▶ Indigenous communities;
- ▶ Backcountry skiing;
- ▶ Municipal sector;
- ▶ Hunting;
- ▶ Trapping;
- ▶ Forestry;
- ▶ The Société des établissements de plein air du Québec – Sépaq (the government agency that manages parks and wildlife reserves);
- ▶ The ministère des Ressources naturelles et des Forêts – MRNF (the Québec government ministry of Natural Resources and Forests);
- ▶ The ministère de l'Environnement, de la Lutte contre les changements climatiques, de la Faune et des Parcs – MELCCFP (the Québec government ministry of the Environment, the Fight Against Climate Change, Wildlife and Parks).

Mapping analysis

Mapping analyses were conducted to identify the main conservation issues, which represent both opportunities and threats for caribou protection.

Mapping of **suitable habitat for the Gaspésie caribou** was based on the following data (and sources):

- ▶ Caribou high use areas (MELCCFP; based on telemetry surveys from 2013 to 2016);
- ▶ Known calving sites (approximate location; ECCC, 2022);
- ▶ Preferred habitat* (ECCC, 2022): mature and old-growth (≥ 61 years) fir and spruce stands;
- ▶ Preferred high-elevation habitat: dry tundra and mature and old-growth fir and spruce stands at elevations of 700 m and above;
- ▶ Historical telemetry, 1975 – 2002 (MRNF map; on the outskirts of the national park);
- ▶ Candidate protected areas often selected in the study by Bauduin et al., 2020;

* With data from the ecoforest map (fifth inventory) as of July 13, 2023.

The mapping of **socio-economic issues** covers the following data (and sources):

- ▶ Wood Production Intensification Areas (aires d'intensification de la production ligneuse - AIPL) (MRNF);
- ▶ Resort leases (MRNF);
- ▶ Forest management constraints (MRNF);
- ▶ Mining rights (MRNF);
- ▶ Sugar bush management permits and maple syrup production potential (MRNF);
- ▶ Roads and multi-use paths (Adresses Québec);
- ▶ Land tenure (private or public) (MRNF);
- ▶ Recreational territories (MRNF).

The mapping of **other conservation values** covers the following data (and sources):

- ▶ Hautes valeurs pour la conservation (high conservation values) (Corporations de gestion de la certification forestière des territoires publics, Gaspésie [2016] et Bas-Saint-Laurent [2023]);
- ▶ Wetlands of conservation interest (in-house analyses by the Conseil de l'Eau du Nord de la Gaspésie and the Conseil de l'Eau Gaspésie Sud);
- ▶ Potential wetlands (MELCCFP);
- ▶ Occurrences of threatened or vulnerable plant and wildlife species (Centre de données sur le patrimoine naturel du Québec);
- ▶ Proposed biological refuges (MRNF);
- ▶ Salmon rivers (Saumon Québec).

Other cartographic information incorporated into the analysis includes: the protection plan examined by the Independent Commission on Woodland and Mountain Caribou; plans for protected areas in the region previously submitted to the MELCCFP; current land protection measures (for example, wildlife habitats and interim caribou protection measures); sectors flagged by other stakeholders as of interest for protection; and 500 m buffer zones (ECCC, 2022) around preferred habitats and anthropogenic disturbances (roads and paths, 0-20 years old cuts) to factor in the impact of disturbances on caribou behaviour and demography.

Developing a protection plan

A protection plan was then drawn up based on the conservation issues that had been identified and mapped.

The proposed plan covers **three types of zones**:

Priority areas for protection on public land: Areas on public land with one or more components of suitable caribou habitat, such as preferred habitat range and high-use areas. Industrial activity should be permanently prohibited in these areas.

Priority areas for voluntary private conservation: Private land in the caribou's core range. The owners or managers of these areas should be approached to encourage the conservation of caribou habitat attributes.

Priority areas for ecological restoration: Sectors with a high density of logging roads resulting in the fragmentation of preferred habitats at high elevation. We recommend developing and implementing ecological restoration programs for these areas, working closely with local stakeholders and users.

A Habitat Restoration Zone (HRZ) was also identified. It corresponds to the area studied by the Independent Commission on Woodland and Mountain Caribou. Forest management in this zone should aim to promote the restoration of quality caribou habitat.

Delineation of priority areas for protection on public land

The delineation of priority areas is based on constraints such as the 500 m buffer zone around preferred habitats, proposed protected areas, core range and the road network in order to encompass most of the suitable caribou habitat near the core range while maximizing protection of other conservation values and limiting socio-economic impacts. Provision should be made for a more detailed delineation of boundaries.

Type of management, recreational activities and protection status

Individual semi-directed interviews were conducted with four caribou experts with the goal of making recommendations about the types of activity compatible with the conservation and protected status of the Gaspésie caribou. The analysis was also informed by a careful reading of the Gaspésie Woodland Caribou Recovery Team's 2014 report "*Impact des activités récréatives et de leurs infrastructures sur le caribou : Recommandations pour l'habitat légal du caribou de la Gaspésie.*"

An iterative process to refine and improve the plan

Once a first draft of the plan was completed in 2022, it was presented to various stakeholders for their comments and suggestions for improvement. The plan was validated and refined one last time at a workshop held in Matane in December 2023 that brought together seven organizations and associations from the environmental and recreational sectors (e.g., backcountry skiing and hunting) for a discussion on the location, governance and management of recreational activities.

Protection plan

The proposed plan (Figure 1) is designed to consolidate protection of the Gaspésie caribou conservation core. It is informed by the current state of scientific knowledge and the main local socio-economic issues. Although the delineation of priority areas requires further refinement, the **adoption of a plan firmly based on this one would provide effective protection from industrial activity of a major part of the caribou's critical habitat** (Figure 2).

It should be noted, however, that **maintaining suitable connected habitat across (and possibly beyond) the range is essential to achieving recovery goals** (ECCC, 2022).

The following sections describe the proposed biodiversity reserve, which is the cornerstone of this plan.

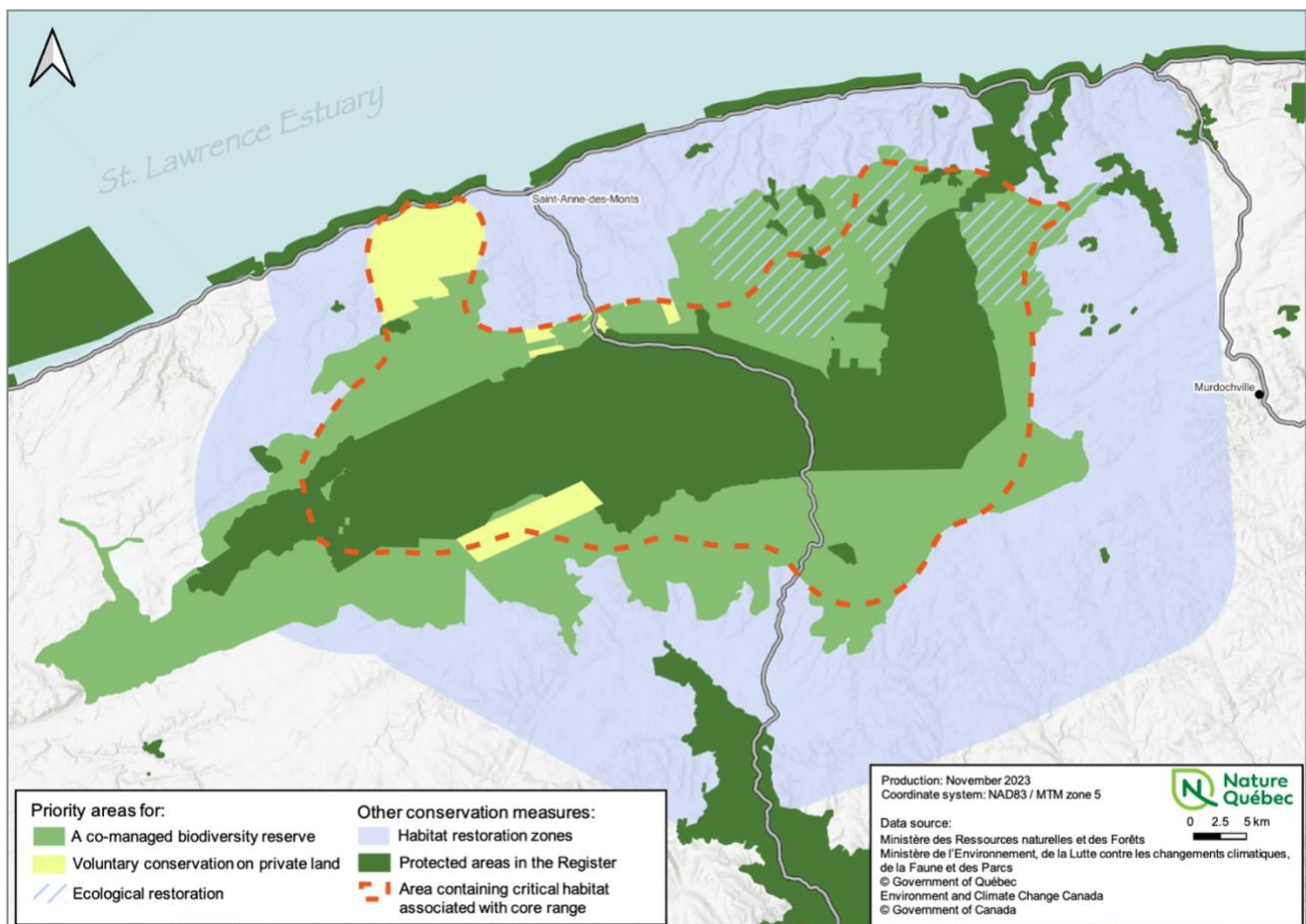


Figure 1. Proposed plan to strengthen protection of the Gaspésie caribou.

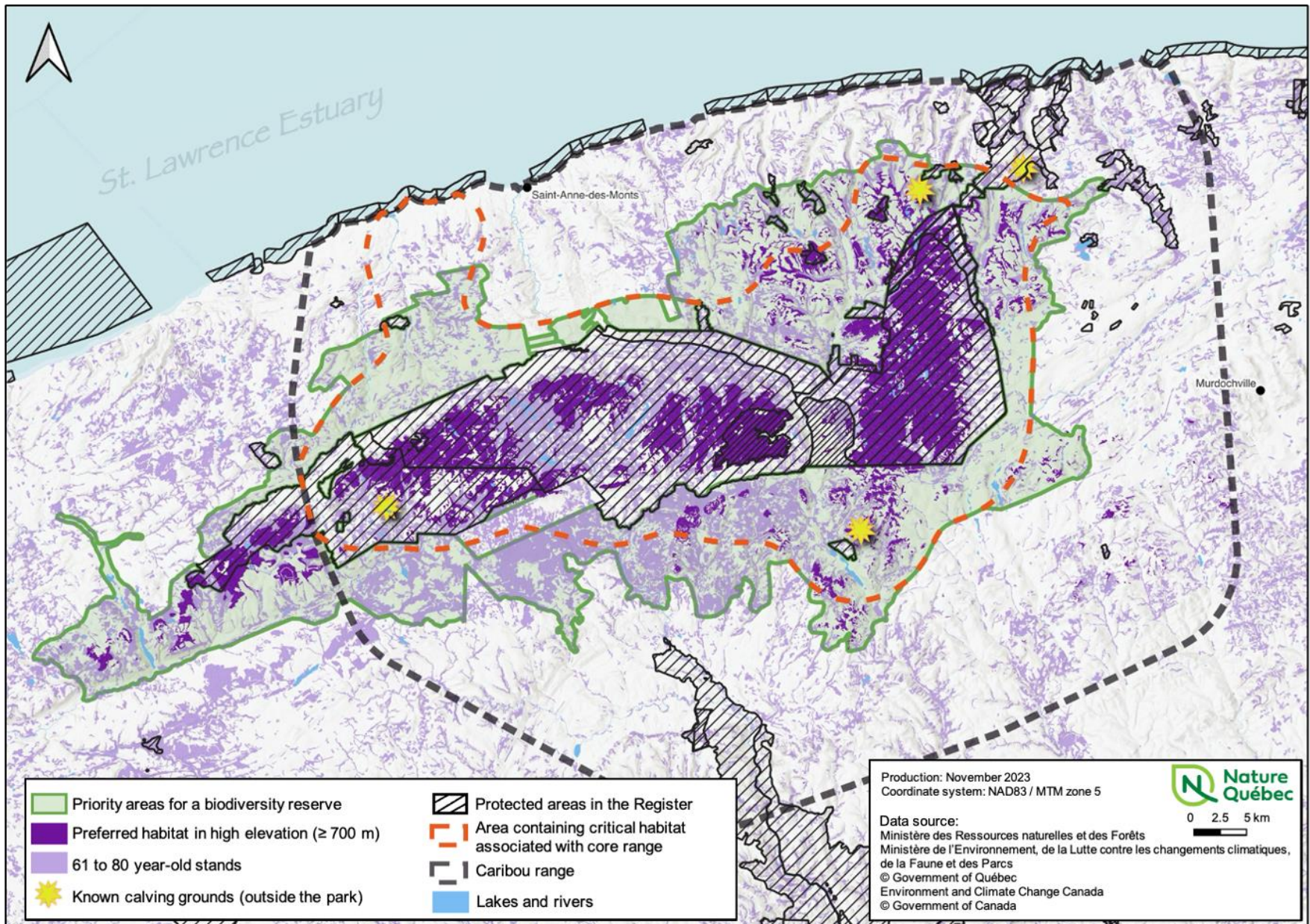


Figure 2. Map of the preferred habitat of the Gaspésie caribou and priority areas for a biodiversity reserve. Preferred habitat corresponds to the biophysical attributes described in the federal recovery strategy for the Woodland Caribou (*Rangifer tarandus caribou*), Atlantic-Gaspésie population (ECCC, 2022). Note that all preferred habitat located in the core of the range is designated as critical habitat (ECCC, 2022).

Biodiversity reserve under co-management

Description of the proposal

The area identified as a priority for the creation of a biodiversity reserve on public land comprises approximately 1,625 km². Most of the surface area (1,116 km² or ~ 69%) is located in Gaspésie, within the Haute-Gaspésie regional county municipality (RCM), with the remainder in Bas-Saint-Laurent, the Matanie RCM (503 km² or ~ 31%) and the La Matapédia RCM (6 km² or > 1%) (Figure 3).

The proposal calls for **biodiversity reserve status** to be assigned to all priority areas for protection on public land. There are several reasons for this. First, it is important to protect these areas not only for the purposes of caribou recovery, but also in order to preserve the richness of biodiversity they contain. The Chic-Choc Mountains are considered a biodiversity hotspot in North America (Tardif et al., 2005). A biodiversity reserve that makes biodiversity conservation a priority in the management of the territory and any activities within it would maximize the positive impact on all the existing species and ecosystems. Second, the status of biodiversity reserve allows for a degree of flexibility with respect to the framework governing authorized activities compared to other protected area status designations. More particularly, it allows for the possibility of drawing up regulations to define the nature and conditions of authorized activities. Lastly, this designation allows for long-term protection, for the sake of the living world as a whole, including future generations. By contrast, biological refuges or administrative measures are liable to be revoked at a future time and are therefore not suitable tools.

It is also advisable to set up a **co-management structure** for the biodiversity reserve to promote sustainable and inclusive management of the area. It is important to involve local stakeholders in the management process in order to foster social acceptance of caribou protection measures. It will be particularly important in this case to encourage close dialogue between recreational tourism and conservation stakeholders to ensure a coherent management approach.

In order to foster adherence to and social acceptance of the plan, we recommend minimizing **the following activities** and managing them in a way that is not detrimental to caribou conservation:

- ▶ Hunting;
- ▶ Trapping;
- ▶ Fishing;
- ▶ Backcountry skiing;
- ▶ Trail hiking.

Other recreational activities may be permitted if they are compatible with the main objective of long-term maintenance of the caribou in the ecosystem and if such activities are managed in a way that is consistent with the aim of achieving **sustainable cohabitation**.

Description of the issues

The following **key socio-economic issues** have been identified as central to the protection of the target sectors:

- ▶ Mining rights (Figure 4);
- ▶ Forest management (Figures 5, 6 and 7);
- ▶ Land access (forest roads; Figure 8);
- ▶ Recreational tourism and its development; (Figure 9).

Mining rights: The area proposed for the creation of a biodiversity reserve is subject to many mining claims. Mining exploration and operations pose a risk of disturbance and degradation of caribou habitat (ECCC, 2022) and constitute an obstacle to the creation of protected areas because these activities are incompatible with protected area status. *Nature Québec therefore recommends that measures be taken to prohibit new mining claims, as well as the renewal of claims upon expiry, on the land targeted for the biodiversity reserve.*

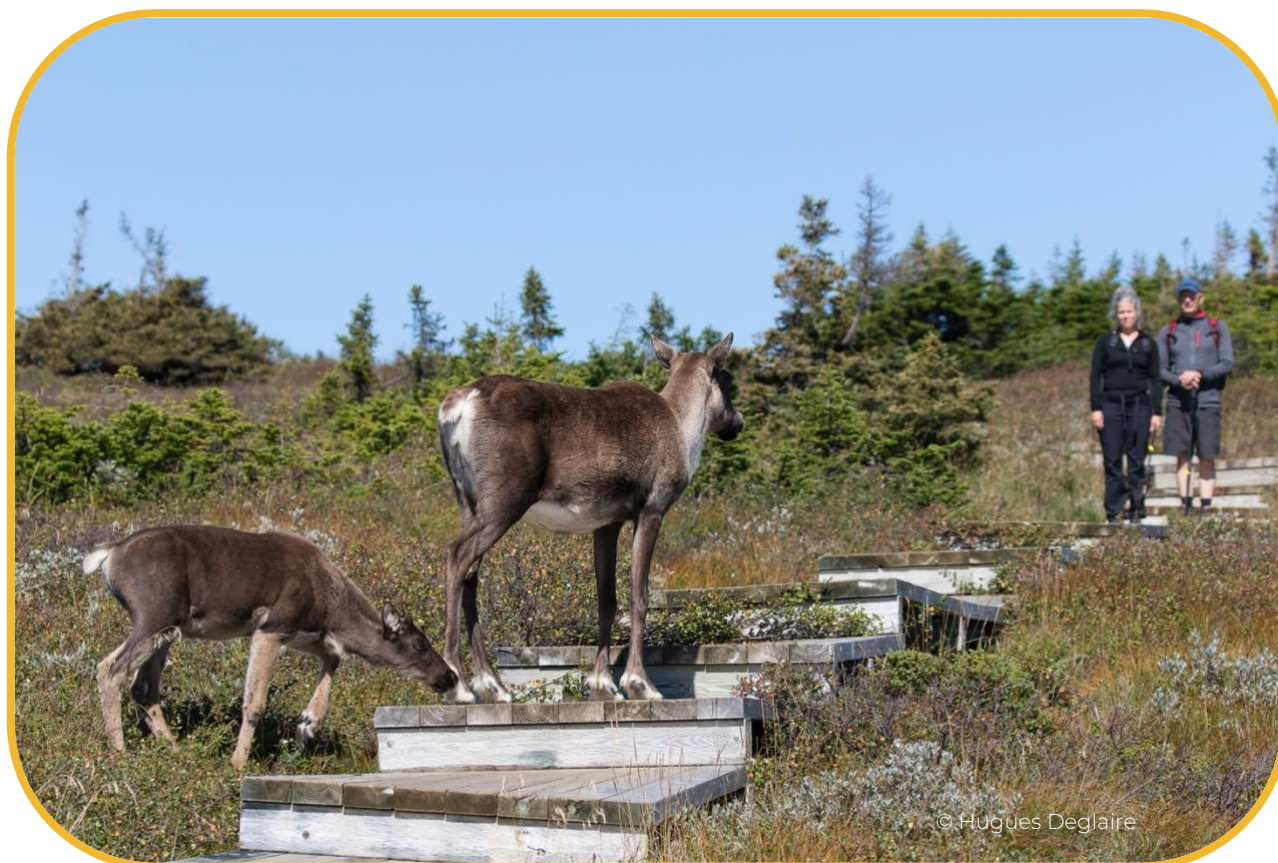
Forest management: Since forest management has contributed significantly to the decline in the caribou population over the last few decades, it is a central issue for caribou protection (St-Laurent et al. 2009; Boudreau, 2017). Most of the logging done in the area is inimical to maintaining the attributes of suitable habitat for caribou, thus creating a forest matrix that is inhospitable to the species (St-Laurent et al. 2009; Boudreau, 2017; Mackey et al., 2023). Recent logging (20 years or less; Figure 6) and forest roads (Figure 8) created by the industry tend to benefit predators instead (Boisjoly et al. 2010; Gaudry, 2013; Boudreau, 2017). There are also several AIPLs in the region, that is, areas of intensive silviculture operations designed to maximize wood production. Although the majority of AIPLs are not located on the land proposed for the creation of the biodiversity reserve (Figure 5), some do exist in the core range. It should be noted that the Gaspésie Woodland Caribou Recovery Team recommends excluding AIPLs from caribou range (Gaspésie Woodland Caribou Recovery Team, 2018).

Nature Québec recognizes that measures have already been taken in the Gaspésie region to limit the impact of forest management practices on caribou, including, most notably, the cessation of logging in the critical habitat zone corresponding to the caribou's core range. The permanent cessation of forest harvesting in this area would be a major step in the right direction, however, **to increase the likelihood of population recovery it is essential to protect key high-elevation habitat in addition to large mature and old-growth coniferous forest ranges with a low level of fragmentation that lie beyond the core range.** There are already constraints on forestry practices in several of these areas of interest due to the risk of soil erosion (Figure 7), for example, or the presence of biological refuges which are excluded from forest management activities (Figure 10). To compensate for the impact of protecting this forest massifs, *Nature Québec recommends that the government take steps to mitigate the impact on the region's forestry workers. Accordingly, Nature Québec and the Fédération de l'industrie manufacturière (FIM-CSN) recommend that Québec adopt [a plan for a just economic transition of the forestry sector](#) comprising a whole variety of measures, including a silvicultural investment plan involving the intensification of silviculture within a sustainable development framework.*

Land access: The proposed biodiversity reserve encompasses most of the less fragmented sectors bordering the national park. Although the area has fewer forest roads, there are still several roads that provide access to the many resort leases and hunting grounds. However, because roads facilitate the movement of predators, caribou avoid them (Gaudry, 2013). It will thus be necessary to restore certain roads in suitable habitat areas to reduce the rate of habitat disturbance. *Nature Québec recommends that ecological habitat restoration programs be implemented quickly in cooperation with land users.*

Recreational tourism and its development: The area surrounding the national park is used extensively for a great variety of recreational activities. Creating a biodiversity reserve would allow for the continuation of activities compatible with preserving the caribou while enhancing the tranquility and beauty of the area. Permitted activities should, however, be managed in a way that minimizes their impact on biodiversity, including the caribou. Since local stakeholders have already reported a lack of monitoring of the area, increased monitoring – by wildlife officers and/or [land guardians](#), for example – will be crucial to minimize the impact of these activities on the species present. Moreover, Indigenous communities [want to play a collaborative role in managing activities, including monitoring the territory](#). Nature Québec recommends that managing recreational activities be considered an integral part of the conservation plan for the biodiversity reserve and that financial and human resources be allocated accordingly.

According to caribou experts and stakeholders, taking a dynamic management approach based on the presence or absence of caribou would be suitable for reducing pressures on both the cervid and users, which would make users more likely to support protective measures. Nature Québec therefore recommends the short-term hiring of a recreation officer at the MELCCFP to work in concert with local stakeholders to set up a dynamic management system for recreational activities, and particularly backcountry skiing (based on the presence/absence of caribou) in areas used by caribou.



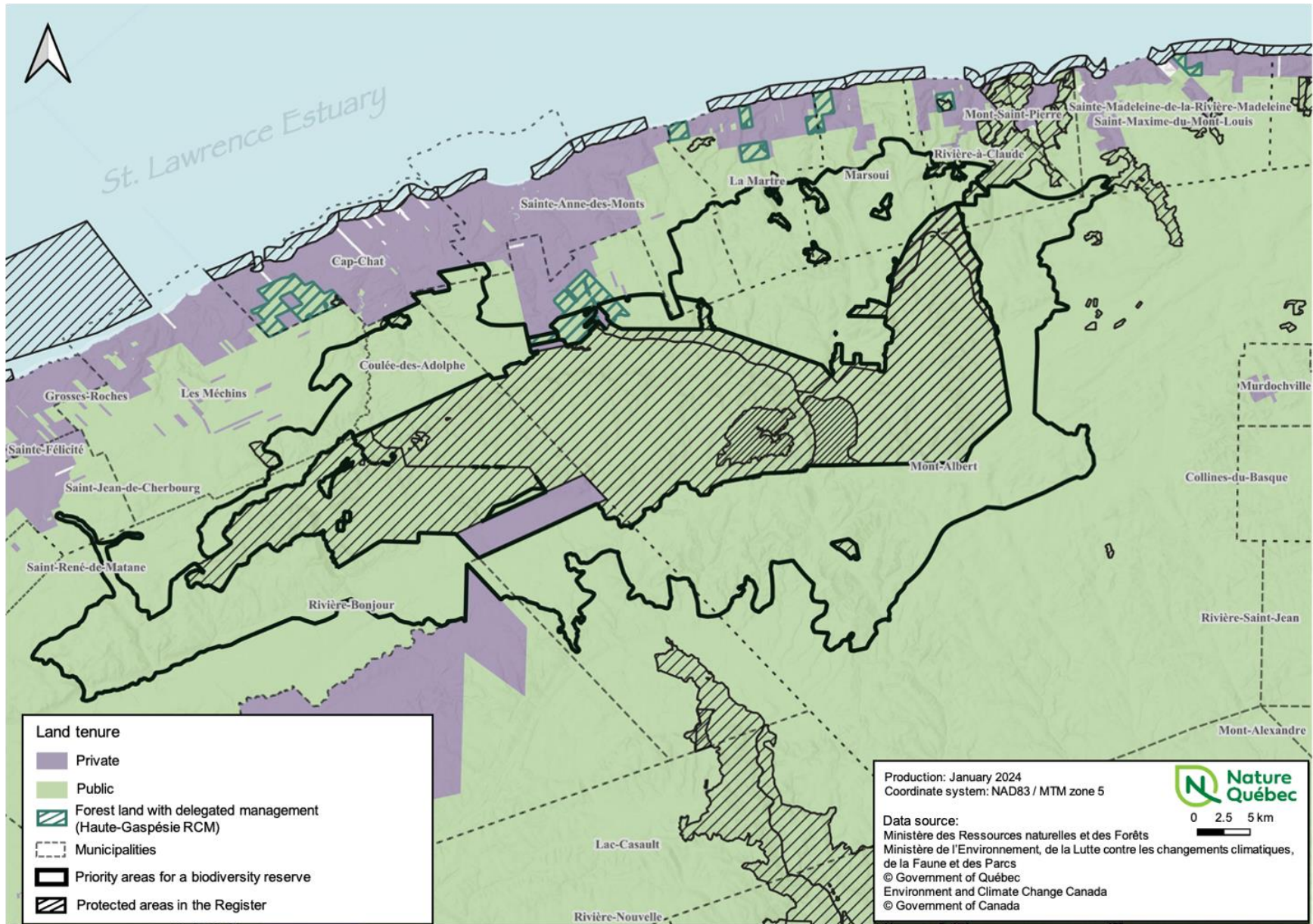


Figure 3. Map of land tenure, municipalities and priority areas for a biodiversity reserve.

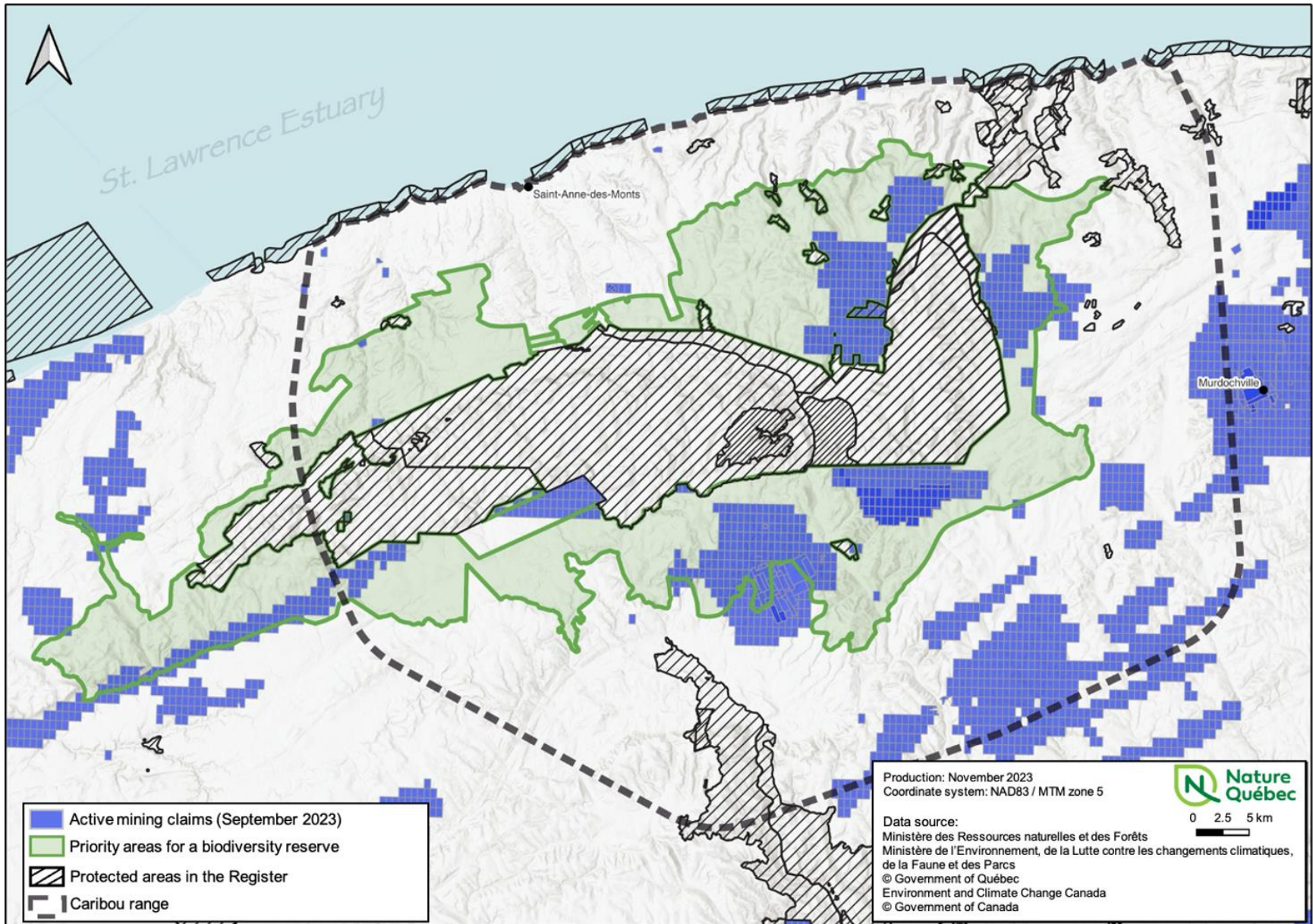


Figure 4. Maps of active mining claims and priority areas for a biodiversity reserve.

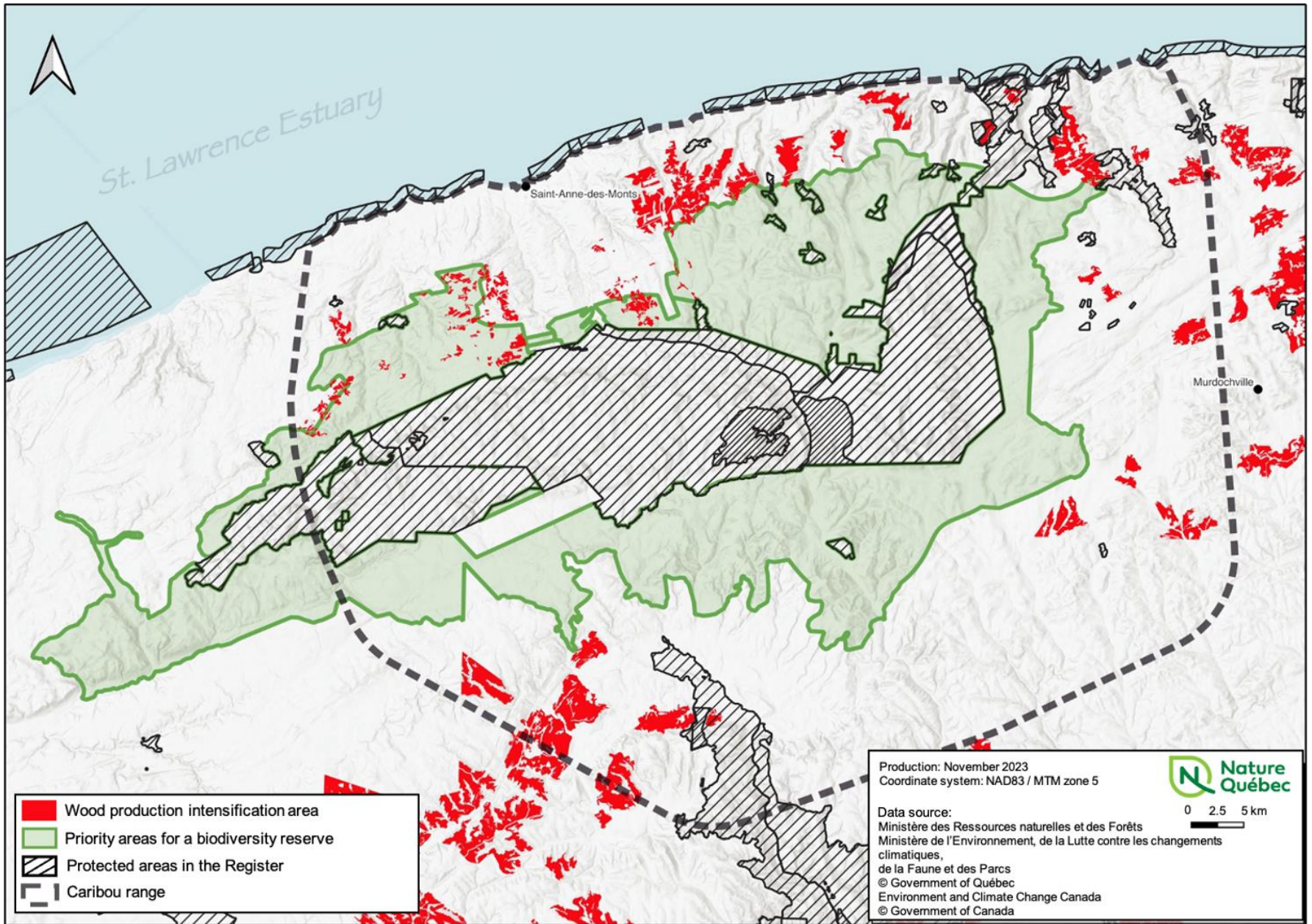


Figure 5. Map of wood production intensification areas (AIPLs) and priority areas for a biodiversity reserve.

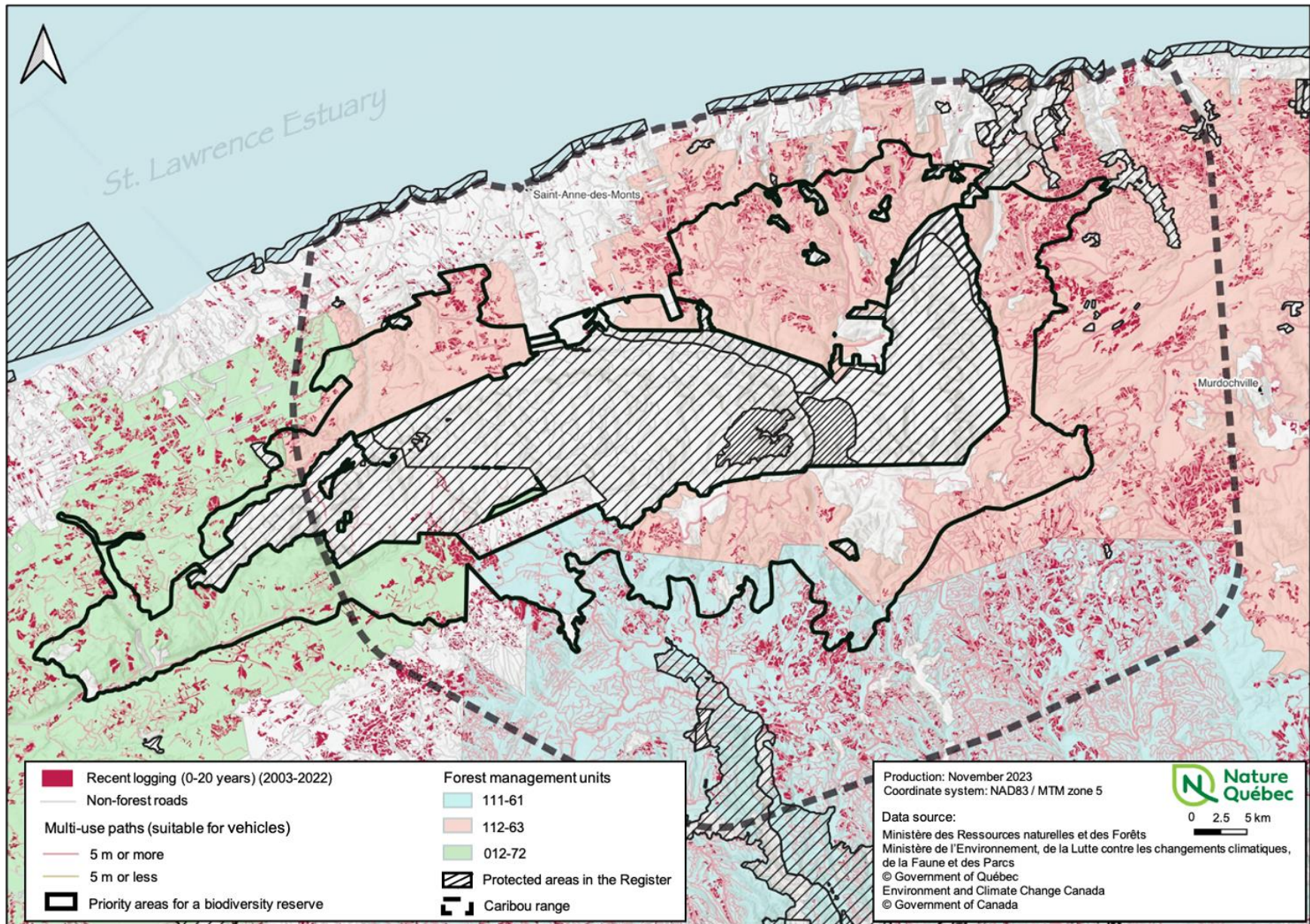


Figure 6. Map of recent logging (0–20 years; 2003–2022) and priority areas for a biodiversity reserve.

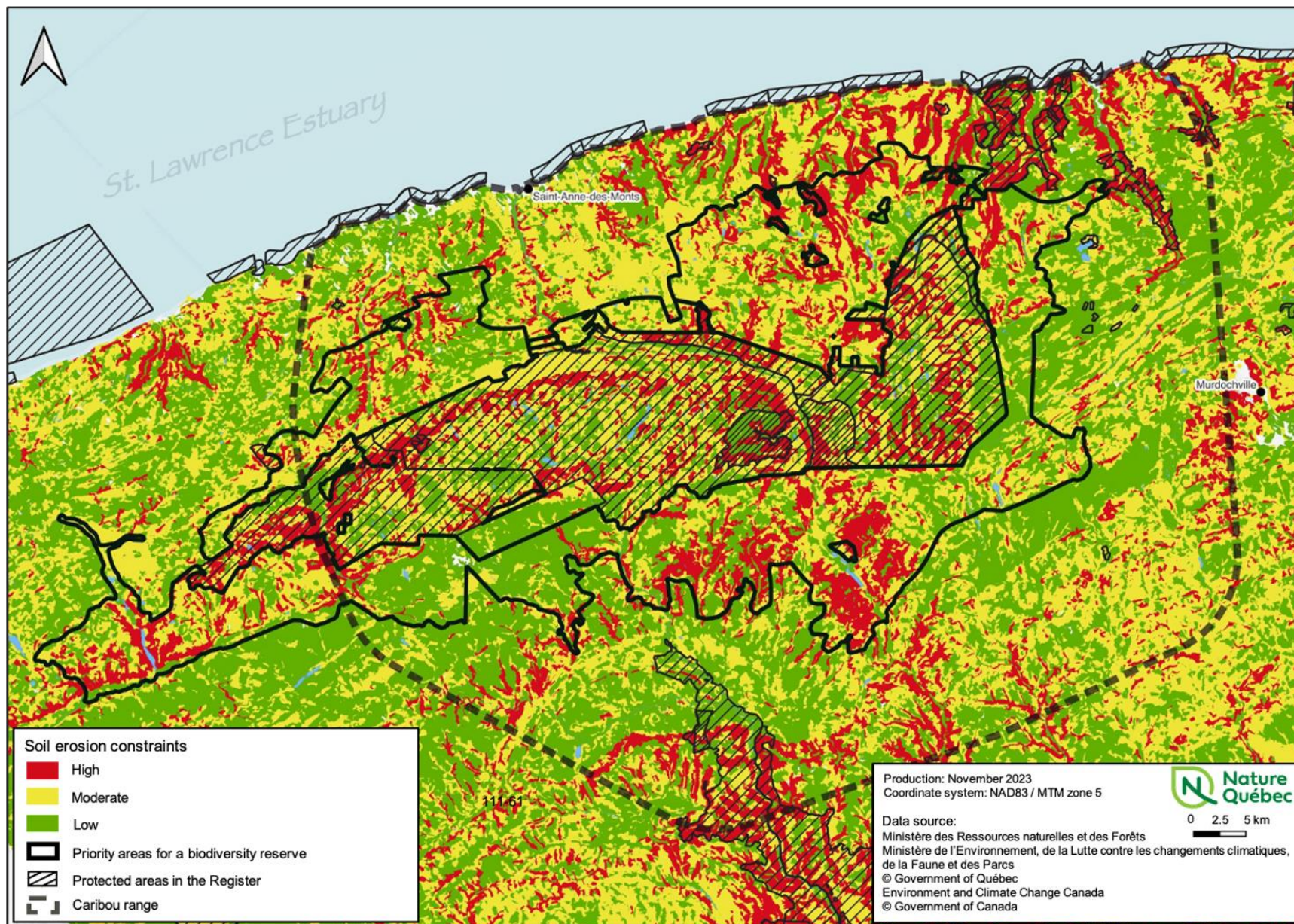


Figure 7. Map of soil erosion constraint on forest management and priority areas for a biodiversity reserve.

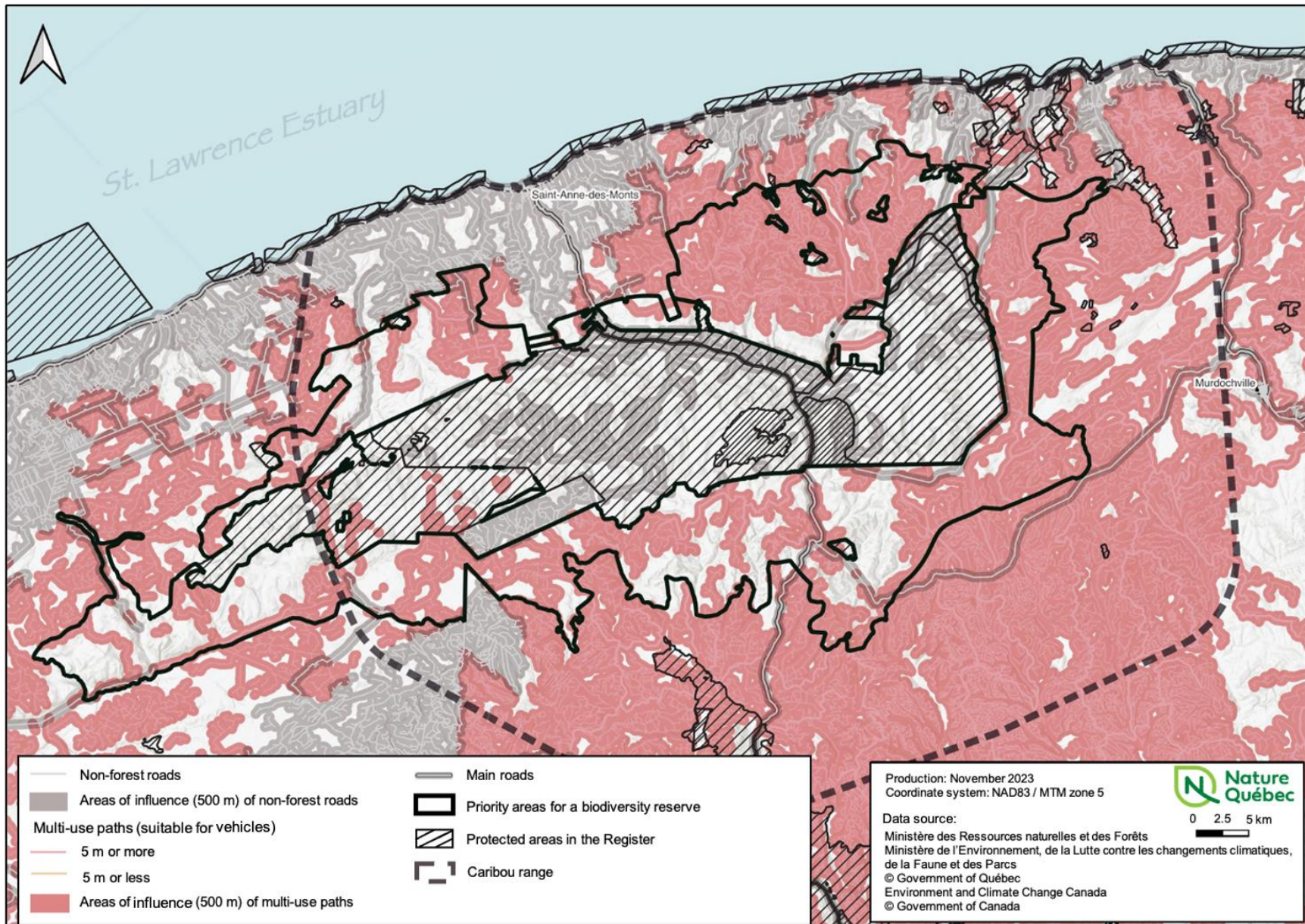


Figure 8. Map of roads, multi-use paths and their areas of influence (500 m), and priority areas for a biodiversity reserve.

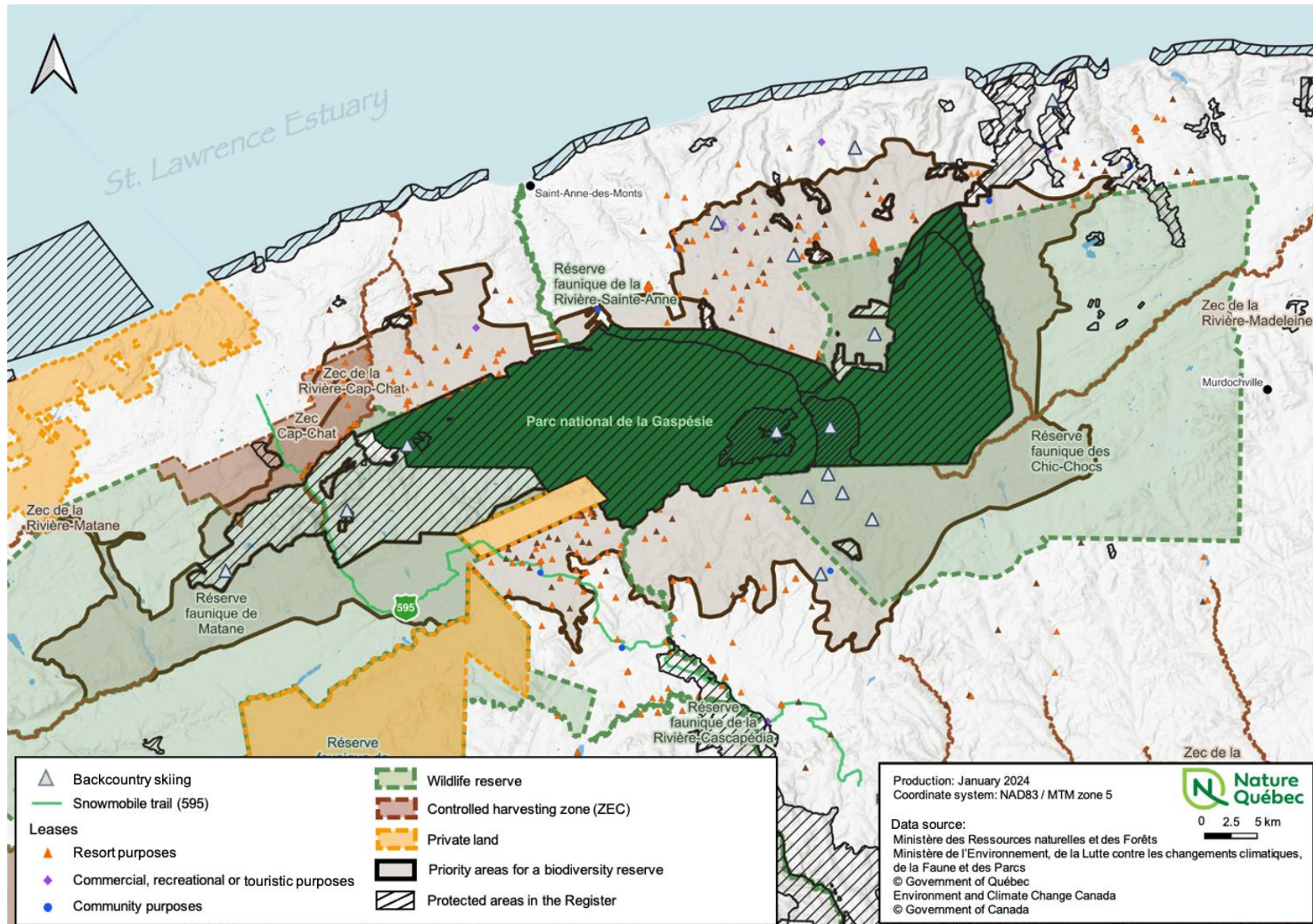


Figure 9. Map of recreational territories, resort leases and priority areas for a biodiversity reserve.

Rationale for the plan

Contribution to caribou recovery efforts

The area identified as a priority for the creation of a biodiversity reserve encompasses the vast majority of the caribou's preferred high-elevation habitat (≥ 700 m), large areas of preferred lower elevation habitat, as well as most recent high use areas (2013–2016).

The creation of this protected area would contribute to Action 1d) of the first objective of the 2019-2029 provincial recovery plan, deemed essential to achieving the provincial plan's objectives, namely to "*promote the creation of protected areas that meet the caribou's ecological requirements in the range outside the Parc national de la Gaspésie.*"

In the federal recovery strategy, critical habitat – the habitat that is required for the population to become stable and self-sustaining in its current range – is identified based on two overlapping geographic zones (ECCC, 2022):

- within the core range: all areas with the biophysical characteristics of the Gaspésie caribou's preferred habitat;

and:

- within the range: a minimum of 65% undisturbed habitat is achieved and maintained in order to provide overall ecological conditions that will allow for an ongoing cycle of recruitment, retirement and recolonization of usable habitat, and also reduce the risk of predation.

First, the creation of the proposed biodiversity reserve would protect the entire critical habitat area corresponding to the core range from industrial exploitation, as well as critical habitat located outside the core, including habitat areas at elevations of 700 m or above. As stated in the federal recovery strategy (ECCC, 2022), "*Maintaining undisturbed habitats at higher elevations (≥ 700 m) is [...] of vital importance, because these habitats are the primary refuges used by Gaspésie caribou throughout their life cycle to avoid predators [...]). Habitat disturbance in these high elevation areas should be limited to the maximum extent possible because any increase in the predation rate in these refuges could compromise the achievement of the recovery objectives.*" These high elevation areas could be the object of short-term ecological restoration programs to re-establish suitable habitat for caribou.

Environment Canada established a minimum threshold of 65% of undisturbed habitat in the range based on recommendations for woodland caribou, which corresponds to a measurable probability of 60% for a local population to be self-sustaining (ECCC, 2020). It is therefore highly advisable to go beyond 65% in order to increase the probability of recovery. **The proportion of disturbed habitat is currently estimated at 81%, when it should be below 35%** (ECCC, 2022). Measures to preserve and restore habitat are therefore urgently needed to increase the amount of suitable habitat for caribou. Taking into account the areas already protected, **the creation of the proposed biodiversity reserve would achieve a range protection rate of roughly 49%**. In actual fact, despite the recommended introduction of ecological restoration programs, it is unlikely that the area targeted for protection will ever be totally free of disturbance (due to the maintenance of certain access points, for example). In order to attain the threshold of at least 65% of undisturbed range habitat, **conservation measures are needed beyond the boundaries of the proposed protected area**. Short-term options include giving legal protection status to those portions of the Chic-Choc and Matane wildlife reserves outside the area covered by the biodiversity reserve, as well as to the proposed biological refuges within the range. This would bring the range protection rate up to roughly 62%. It should be noted that the same caveat applies here to the interpretation of this rate, which does not necessarily equate to a proportion of undisturbed habitat. Conservation efforts should also seek to optimize connectivity between habitat clusters within the range, and promote voluntary conservation on private land to consolidate core protection.

Co-benefits

In addition to the expected benefits of this plan for caribou recovery, adopting the proposed plan would generate many co-benefits by maintaining biological and socio-cultural values (Figure 10).

The proposed biodiversity reserve would strengthen protection for the Chic-Choc Mountains, which are considered a biodiversity hotspot in North America (Tardif et al., 2005) and also a candidate for designation as a Global Key Biodiversity Area (KBA). In fact, the area is home to several species that are rare and/or in a precarious situation.

Furthermore, the Haute-Gaspésie hinterland is a jewel not only for local residents, but also for tourists looking for a place to relax. Every year, the Parc national de la Gaspésie attracts thousands of tourists, generating economic spin-offs for neighbouring communities. Implementing the proposed plan would help preserve the national park's iconic species, in addition to protecting and enhancing landscapes and biodiversity, and providing greater access to nature.

There are also sites in the area covered by the plan that are culturally important to the Mi'kmaq communities. The creation of protected areas that are compatible with any related uses would help ensure their long-term survival.

Additional co-benefits of protecting the land include the reduction of environmental pressures from logging road construction and the protection of carbon stocks..



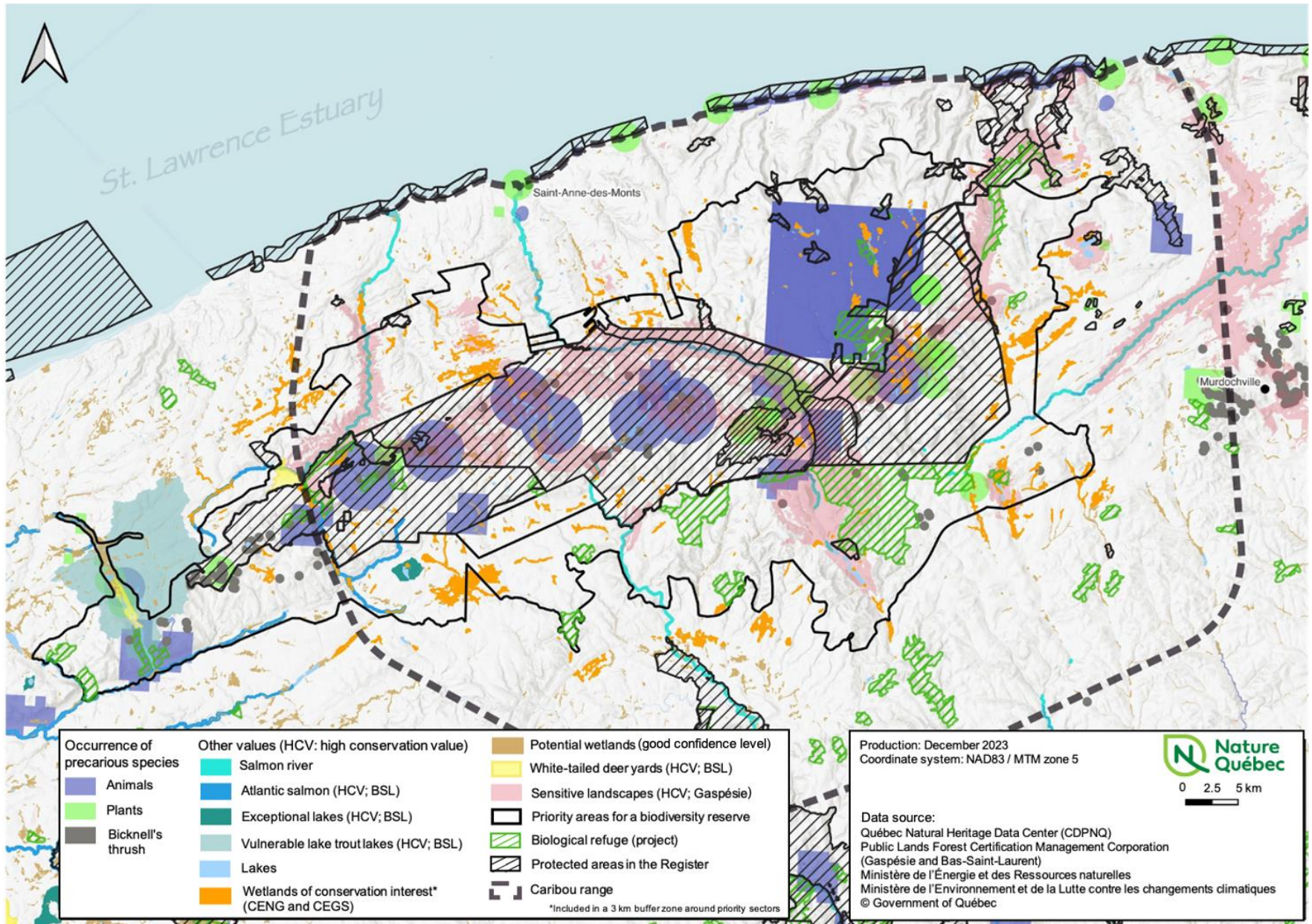


Figure 10. Map of other conservation values and priority areas for a biodiversity reserve.

Description of priority areas for protection

The following section provides a brief description (geographic location, ecological value and main issues identified) of each sector covered by this plan, while the figure below indicates the location of the various sectors.

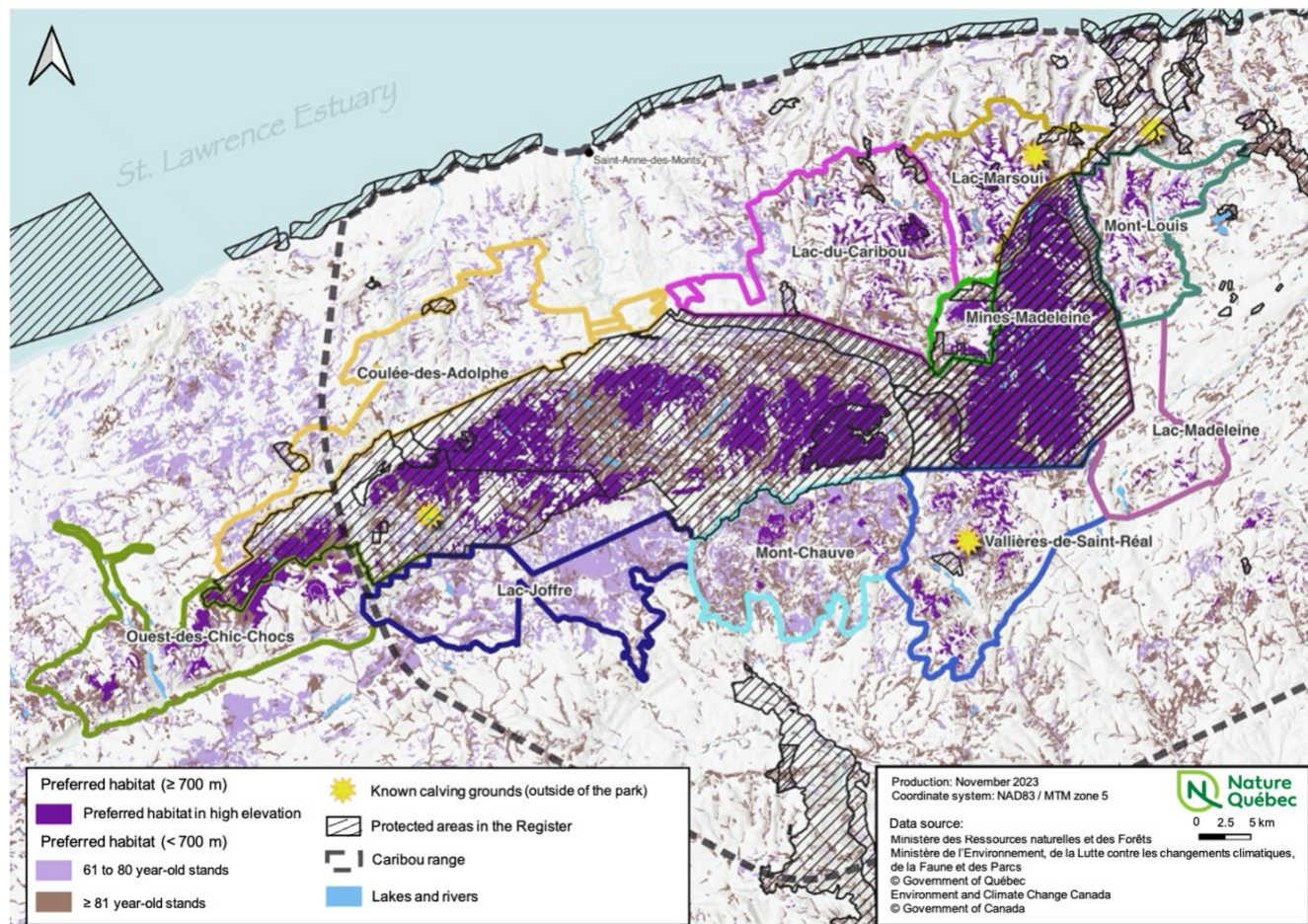


Figure 11. Map of priority areas for a biodiversity reserve.

Mines-Madeleine

The Mines-Madeleine sector is located in the Réserve faunique des Chic-Chocs, a wildlife reserve in the unorganized territory of Mont-Albert.

It includes an unfragmented portion of the large McGerrigle mountain range habitat. Nearly the entire area is extensively used by caribou. The Rivière Sainte-Anne Nord-Est runs along the outskirts of the area. This is a breeding ground for the harlequin duck (*Histrionicus histrionicus*, eastern pop.), a species that is vulnerable in Québec and of special concern in Canada. There are also several breeding grounds of Bicknell's thrush (*Catharus bicknelli*; vulnerable in Québec and threatened in Canada) and occurrences of plant species at risk. This area falls within the caribou's legally designated wildlife habitat, and a large part of it is slated for a biological refuge.

The main issues identified with respect to the protection of this area are the presence of mining claims and the use of the area for backcountry skiing. This protected area would have virtually no impact on the annual allowable cut.

Lac-du-Caribou

The southern part of the Lac-du-Caribou sector is located in the Mont-Albert unorganized territory, partly within the Réserve faunique des Chic-Chocs. The northern part of the sector includes the municipalities of Sainte-Anne-des-Monts, La Martre and Marsoui, as well as an area of land managed by the Haute-Gaspésie RCM.

It harbours several old-growth forests with high peaks (> 700 m), including the Forêt ancienne du Lac-Marsoui, a forest of old-growth fir stands, covering roughly 9 km², that is partially protected by its status as an “exceptional forest ecosystem.” There are also several extensively used areas, as well as occurrences of wildlife species in precarious situations (likely to be designated threatened or vulnerable), in addition to a large wetland complex of interest, and three designated biological refuges.

Among the issues identified as central to this sector are forest management, recreational tourism and accessibility. The area’s proximity to local communities makes it a popular destination for fishing (many lakes), hunting, backcountry skiing, and cycling. There are more than 30 resort leases and a high concentration of forest roads. There are also several mining claims to the east of the area.

An ecological restoration program should be implemented in this area, as it is highly fragmented by logging roads. In addition, the presence of a paved road (Route 14) that runs along the Mines-Madeleine sector and the McGerrigle Mountains likely limits the movement of caribou towards this sector (Bauduin, 2016), although it has been used by caribou for several decades (recent and historical occurrences).

Lac-Marsoui

The southern part of the Lac-Marsoui sector is located in the Mont-Albert unorganized territory, in the Réserve faunique des Chic-Chocs. The northern part of the sector is mainly located in the municipality of Marsoui, with a small section in the municipality of Rivière-à-Claude.

This sector encompasses preferred habitats (\geq 700 m elevation) in the McGerrigle Mountains, along with several extensively used areas, including a calving site. This sector harbours part of the Lac Marsoui old-growth forest, as well as biological refuges (planned and designated), several lakes, and wetlands of interest for conservation.

Among the issues identified as central to the sector are forest management, recreational tourism and accessibility. There is a high concentration of driveable forest roads in the area, as well as several mining claims. Resort leases are located mainly on the shoreline of Lac Marsoui.

An ecological restoration program should be implemented in this area, as it is highly fragmented by logging roads. In addition, the presence of a paved road (Route 14) that runs along the Mines-Madeleine sector and the McGerrigle Mountains likely limits the movement of caribou towards this sector (Bauduin, 2016), although it has been used by caribou for several decades (recent and historical occurrences).

Mont-Louis

The Mont-Louis sector is located mainly in the Mont-Albert unorganized territory, within the Réserve faunique des Chic-Chocs, and in the municipality of Rivière-à-Claude.

This sector encompasses preferred habitats at elevations \geq 700 m and several recent (2013-16) high use areas, despite a high concentration of roads and recent logging (0-20 years, mostly from 2004 to 2006). There is a Bicknell's thrush breeding ground in the sector. There are also allopatric lakes, two planned biological refuges, a portion of a wetland complex of interest, and a sensitive landscape. Protecting this

area would enhance connectivity with the large designated biological refuge to the east, as well as with the protected area reserve in the Mont-Saint-Pierre corridor

The main issues surrounding the protection of this sector are forest management, mining rights and recreational tourism. A large part of the sector has been identified as an area of high recreational value and biodiversity (Réserve faunique des Chic-Chocs).

An ecological restoration program should be implemented in this area, as it is highly fragmented by forest roads.

Lac-Madeleine

The Lac-Madeleine sector is located in the Mont-Albert unorganized area, in the Réserve faunique des Chic-Chocs. Part of the Rivière-Madeleine ZEC (Zone d'exploitation contrôlée – a controlled harvesting zone) is also located there.

There have been some recent and historic occurrences of caribou in the area, which encompasses preferred high-elevation habitats. There have also been occurrences of Bicknell's thrush. In addition, the area harbours a harlequin duck breeding ground, a planned biological refuge and several wetlands of interest.

The main issues identified as central to this sector are accessibility, recreational tourism and forest management. Lac Madeleine and its surrounding area have been identified as an area of high recreational value (Réserve faunique des Chic-Chocs) with a sensitive landscape.

Vallières-de-Saint-Réal

The Vallières-de-Saint-Réal sector is located in the Mont-Albert unorganized area, mainly in the Réserve faunique des Chic-Chocs. A part of the Rivière-Madeleine ZEC lies to the northeast.

This area is extensively used by caribou, particularly in the vicinity of the Blanche-Lamontagne and Vallières-de-Saint-Réal mountains, the latter which harbours a calving site. There is a large area of preferred high-elevation habitat. The sector is also home to several Bicknell's thrush breeding grounds and an occurrence of American milkvetch (*Astragalus americanus*; likely to be designated as threatened). A large part of this sector is free from forest roads.

There is already a proposal for a protected area for part of this sector – a plan that was sidelined after the 17% terrestrial protected-area target for 2020 was reached. According to a 2014 document by the regional conference of elected officials in Gaspésie-Îles-de-la-Madeleine, the planned protected area proposed at the time, which included the Vallières-de-Saint-Réal project, met with a “*broad, though not unanimous, consensus*” on the part of the committee. One of the points raised by the committee was the very low impact on the allowable cut (a legal wildlife habitat and planned biological refuge extends across nearly the entire sector). However, the proposal adopted by the committee does not include the preferred high-elevation habitats south of the sector, where relatively recent use by caribou has been recorded (1998 – 2002 telemetry data).

The main issues flagged are mining rights, recreational tourism (notably backcountry skiing and hiking) and forest management (to the south of the sector). These include Mount Lyall, which is a popular spot for backcountry skiing. A large part of the sector has been identified as an area of high biodiversity value containing areas of high recreational value (Réserve faunique des Chic-Chocs). Landscape conservation is thus essential.

Lac Sainte-Anne is a major vacation spot, but it is also the site of traditional activities practised by Mi'kmaq communities, such as trapping, moose and small game hunting, medicinal plant harvesting in wetlands, and plant harvesting for handicrafts.

Mont-Chauve

Most of the Mont-Chauve sector is in the Mont-Albert unorganized area, with a small zone located in the Réserve faunique des Chic-Chocs. The headwaters of the Rivière Cascapédia in the Réserve faunique de la Rivière-Cascapédia (a wildlife reserve) cross the sector to the west.

This sector encompasses preferred high-elevation range areas (≥ 700 m), a few recent high-use areas, and large preferred range areas at lower elevations. There is also a Bicknell's thrush breeding ground and occurrences of another wildlife species in a precarious situation. The area comprises three planned biological refuges and has a low rate of disturbance by logging roads.

Forest management is the main issue identified as central to this sector. Several possible areas of intervention were singled out in the most recent Operational integrated forest management plan (Plan d'aménagement forestier intégré opérationnel - PAFIO; 2023). There are also a number of resort leases.

Lac-Joffre

The Lac-Joffre sector is mainly located in the Rivière-Bonjour unorganized area, with the western part in the Réserve faunique de Matane (Matane Wildlife Reserve).

This sector encompasses areas extensively used by caribou and large areas of preferred range. The study by Bauduin et al. (2020) identifies the western part of the sector as an area of particular interest for caribou protection in face of climate change insofar as it maximizes both ecological representativeness and functional connectivity for caribou under current and future conditions. The area also features two planned biological refuges, an exceptional lake (Lac Joffre, an allopatric lake) and a large forested peatland of interest for conservation.

The main issues identified as central to the protection of this sector are forest management and accessibility (numerous resort leases). The sector is characterized by an average forest road density, and there have been quite a few recent logging operations. One major road runs through the area, Chemin 1 Nord, used by motor vehicles to access salmon fishing and the wildlife reserve during the summer, and for snowmobiling in winter (Trail 595). There is a high concentration of resort leases south of the Bloc Faribault, due to the former presence of hunting clubs. There are several mining claims to the west of the area.

The sector also harbours sites of significance to Mi'kmaq communities, particularly a dozen or so burial grounds.

Ouest-des-Chic-Chocs

The Ouest-des-Chic-Chocs sector is located mainly in the Rivière-Bonjour unorganized area, in the Réserve faunique de Matane. **The sector coincides with the expansion of the Chic-Choc protected area reserve proposed by the Comité de protection des monts Chic-Chocs (Chic-Choc mountain protection committee). A consultation process is currently underway, spearheaded by a regional environmental council, the Conseil régional de l'environnement du Bas-Saint-Laurent (CREBSL), in conjunction with the MELCCFP.**

Although this sector is outside the range, it encompasses several tracts of preferred high-elevation habitat, and caribou have been observed in the vicinity in recent decades (J. Côté, pers.comm.). There are also many Bicknell's thrush breeding grounds, as well as occurrences of several other species in a precarious situation. The proposal includes a portion of the Matane River (north of the sector) owing to its importance for the freshwater Eastern Pearlshell (*Margaritifera margaritifera*), a species likely to be designated threatened or vulnerable. For a more detailed discussion of the project and its ecological value, see [the website of the Comité de protection des monts Chic-Chocs](#).

The main issues identified as central to the protection of this sector are forest management and recreational tourism. There are also several mining claims.

Coulée-des-Adolphe

The Coulée-des-Adolphe sector covers three unorganized areas – Coulée-des-Adolphe, Mont-Albert and Rivière-Bonjour – with a small portion located in the municipality of Les Méchins. This sector includes the Rivière-Cap-Chat ZEC as well as intramunicipal public lands that are managed by the Haute-Gaspésie RCM.

This sector encompasses several areas extensively used by caribou, despite a lower concentration of preferred habitat and a lower elevation compared with other sectors. In the study by Bauduin et al. (2020), it is identified as an area of interest for caribou protection in view of climate change. There are few forest roads, and any recent logging operations and roads are concentrated in the eastern part of the sector.

The main issues concerning the protection of this sector are forest management and accessibility. There are several AIPLs as well as possible areas of intervention flagged in the most recent PAFIO (2023). The intramunicipal public lands are also subject to short-term logging operations. The sector includes several resort leases, as well as two maple groves between Rivière Cap-Chat and Rivière Petite Cap-Chat with potential for maple syrup production. The sector has also been targeted for the site of a regional park in the Cap-Chat river basin and a gravel bike trail to the east of the sector (see the [Plan de développement touristique des Chic-Chocs et de la Haute-Gaspésie 2023-2033](#)).

Conclusion

We are at a turning point for the protection of the caribou, an animal that has roamed this territory for millennia. With only a handful of individuals remaining in Gaspésie, waiting is no longer an option. And while there is no dearth of studies on the decline of the caribou and the solutions needed to save them, there have been several successive government decisions in recent years that have delayed the implementation of protection measures because of the attempts to accommodate competing interests. Over time, the room for manoeuvre has shrunk, and more far-reaching measures are now required. Of course, various issues and concerns must be considered in order to minimize the impact of protection measures, but this should not get in the way of the population's recovery. It is important to remember that the provincial and federal governments have a moral and legal obligation to protect endangered species within their jurisdictions, and that these species are inextricably linked to the quality of life of future generations.

It is clear from our meetings with local stakeholders in Gaspésie that the local community would welcome **coherent and effective measures** to ensure the long-term survival of the caribou population. Those meetings also confirmed the community's desire to be involved in preserving the species. Implementing the plan presented in this document would be a major step in the right direction. Not only would it contribute to achieving the recovery objectives for the caribou, but it would also help meet the broader provincial and national goals for biodiversity protection. In a constantly changing world, it is critical to preserve the biodiversity that surrounds us.

To secure our future we must preserve what came before us

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