



Conseil Cris-Québec sur la foresterie
Cree-Québec Forestry Board

Sainte-Foy, March 29, 2005

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Object : Draft directives on the protection and development of wildlife habitats on the territory of the *Agreement concerning a new relationship between le gouvernement du Québec and the Crees of Québec*

Dr Moses,

I am writing to inform you that the Board has submitted the draft directives on the protection and development of wildlife habitats developed by the Cree-Québec Forestry Board in accordance with article 59 of Schedule C-4 of the Agreement. The recommendations submitted to the Minister are related to introduce the forest management planning process strategies t the position of the Board concerning the Project on draft directives for protection and management of wildlife habitats. You will find attached copy of this document for your information.

In closing, Dr Moses, I want to take the opportunity to tell you how good the climate of cooperation is among Board members. These recommendations were developed in accordance with the provisions and the spirit of the Agreement. We hope to keep this mood in order to cope with the challenging issues we have before us.

I am available to provide you with any further information on all recommendations.

Sincerely,

Jean-Pierre Gauthier
Chairman of the Board

Attachment: Draft directives on the protection and management of wildlife habitats on the territory of the *Agreement concerning a new relationship between le gouvernement du Québec and the Crees of Québec*, March 2005

Draft directives on the protection and management of wildlife habitats on the territory of the *Agreement concerning a new relationship between le gouvernement du Québec and the Crees of Québec*

by

The Cree-Québec Forestry Board

March 2005

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Summary

In the context of the *Agreement concerning a new relationship between le Gouvernement of Québec and the Crees of Québec* signed February 7th 2002, the mandate to elaborate «a draft directives aimed at introducing into the forest management planning process strategies that can take into account the protection and development of wildlife habitats» (Schedule C-4, article 59) was entrusted to the Cree-Québec Forestry Board. «Directives guiding the elaboration of such management strategies will thereafter be introduced into the Cree section of the protection and development of wildlife habitats. These directives will be the subject of recommendations by the Cree-Québec Forestry Board» (Schedule C-4, article 60).

On April 22nd 2004, as stipulated in its mandate, the Board informed the Minister of Ressources naturelles de la Faune et des Parcs, about the steps and directions that were intended for the draft directives to be submitted in the spring of 2005.

Since then, principles reflecting the spirit of the Agreement were defined and have guided the development of the draft directives. These principles are described in this document.

The results of our, which involved consultations with several stakeholders, indicate that in order to protect and develop wildlife habitats, the directives should have to reach three main goals, which are:

1. To ensure that biodiversity and sustainable ecosystems are maintained on the territory (large-scale approach);
2. To integrate Crees' concerns and traditional knowledge in the protection and development of wildlife habitats of special interest for the Crees (species-specific approach); and
3. To ensure a real and meaningful participation of the Crees in the forest planning process (participation and consultation process).

For the first goal, adaptations of the forestry regime retained in the Agreement as well as forest protection and development objectives (FPDO) and the mixed stands strategy, which are about to be completed, offer concrete actions fostering the conservation of biodiversity on the territory, thus providing an adequate environment for wildlife species. To achieve this goal, it is essential to determine the state of the forest and wildlife habitats, in terms of plant species, age class of stands as well as spatial distribution, in order to ensure a balanced representation of all forest ecosystems in all the forest management units (FMU). This study should be used as the foundation for planning forest management activities. A clear directive on the matter should be sent to the beneficiaries.

Considering that the Woodland caribou will soon be added to the Québec vulnerable species list, please note that a precautionary approach specific to this species is presented in the appendix.

On the scale of the territory's users, more particularly tallymen, special interest wildlife species (bear, moose, hare, beaver, marten, waterfowl) and sensitive habitat (spawning areas and riparian environment) have been identified. Specific protective measures have been defined to harmonise forest management activities and traditional activities such as hunting, fishing and trapping. These measures, which combine scientific knowledge and traditional knowledge, were retained to address the issues of wildlife and impact on habitat observed by the Crees. In accordance with the second identified goal, such measures, which will provide directions for balancing traditional and forestry activities, should also be included in the directives sent to the beneficiaries.

Besides the need for protection and management measures at different levels of intervention, habitat protection and development must be improved through reinforcing participation of the Crees in the forest planning process. This is why in a third component, the draft directives address the participation and harmonisation processes to ensure an a priori participation of the Crees in planning processes.

Considering the postponement to the spring of 2008 of the coming into effect of the new general forest management plans, we are proposing to conduct, during the year 2005-2006, a concrete exercise (pilot project) aimed at testing the proposed directives.

This project's intent will be to analyse the state of the forest in the territory's forest management units (diagnostic), to test the proposed protection and development strategies and modalities and to define a process of real and meaningful participation of the Crees in forest management planning. Furthermore, this initiative will identify approaches required to ensure follow-up and evaluation of the directives and to determine training needs for the stakeholders.

Considering the importance of this step, this pilot project should be co-ordinated by a steering committee composed of representatives of the stakeholders involved at different levels in the implementation of the Agreement. The participants' shared objectives will be to ensure a real and meaningful participation of the Crees in forest management planning, according to the principles of the Agreement, and also to ensure that forest planning takes habitat protection into account.

At the end of this pilot project, the Board will report to the Minister on the results of the exercise in order to help with the development of the forest management plans in the spirit of the Agreement. Recommendations regarding follow-up and evaluation of the directives and training needs will also be sent to you.

The enclosed document presents the guiding principles of the directives' development, as well as proposed strategies and harmonisation process to ensure habitat protection and management, in a context of sustainable development. Considering the Caribou's precariousness, appendix 1 proposes a precautionary approach for this species. Appendix 2 lists harmonisation measures for protecting and developing species of special interest for the Crees. Appendix 3 presents a participation and consultation process based on a diagnostic approach. Finally, appendix 4 outlines goals, activities and deadlines that will guide the implementation of the pilot project in the upcoming year.

The Cree-Québec Forestry Board trusts that the proposed directives will contribute to an increased integration of sustainable development issues and that they will constitute a meaningful step in the new relationship between the Government of Québec and the Crees of Québec.



Introduction

On the territory of the Agreement, the Forest act, the Regulation respecting standards of forest management for forests in the domain of the State (RNI), Chapter 3 of the *Agreement concerning a new relationship between le Gouvernement du Québec and the Crees of Québec and the future forest protection and development objectives (FPDO)* present many measures aiming at an increased integration of sustainable development preoccupations, a forest management which takes into account the protection and management of wildlife habitats and the adaptations for a better integration of Cree traditional way of life.

The Agreement creates joint working groups and sets modalities to ensure participation of the Crees in the forest planning process. It also includes delimitation rules for the forest management units (FMU) and protective measures for sites of special interest to the Cree (1%) and sectors presenting wildlife interest for the Cree (25%).

The hereby draft directives, which involved consultations with several stakeholders, indicate that the directives on habitat protection and management in forest planning will have to meet three main goals:

1. To ensure that biodiversity and viable ecosystems are maintained on the territory (large-scale approach);
2. To integrate the Crees' concerns and traditional knowledge in the protection and management strategies of habitats for species presenting wildlife interest for the Crees (species-specific approach);
3. and to ensure a real and meaningful participation of the Crees in the forest planning process (participation and consultation process).

The draft Directives on wildlife protection and management rests on the application of strategies and methods of intervention as well as the implementations of a cree participation and consultation process which take into account the existing legal framework, the scientific and traditional knowledge and the participation of the Crees, in the form of consultations, at the time of forest management planning. They are a guide towards harmonization of forest and traditional activities.

The proposed measures are based on the application, on a broader scale of management strategies aiming at the maintenance of the biodiversity and the

availability of large ecosystems types. On a finer scale, strategies and particular methods of intervention aiming at the protection and the development of wildlife habitats of particular interest are also presented. Some of the proposed measures will have to be applied at the General Forest Management Plan (GFMP) level whereas other, more operational, are applicable at the annual planning level.

The judicious use of the measures suggested, resulting from the dialogue between trappers and forest planners will make it possible to insure that forest management takes into account the protection and wildlife habitats management on the Territory.

Development principles

The draft directives have been developed in respect of the following principles:

- Maintain biodiversity and following a sustainable forest management approach;
- Take into account and optimise the use of the existing measures under the Agreement, the future forest protection and development objectives (FPDOs), other legislation and future projects (protected area) ;
- Wildlife management and protection require that strategies at different planning scales in terms of the targeted species and/or the state of forests be considered;
- Forest management on the territory must allow for the management and protection of wildlife habitats of interest to the Crees, and it must be a priority in sectors of wildlife interest as identified by tallymen (25 %) without however being restricted there;
- The tallyman must play a leading role in identifying the sectors to be protected or managed, and in identifying wildlife habitat management objectives to be pursued. His active involvement must be ensured upstream from the forest planning process and, following validation, the agreed elements must be integrated in forest plans;
- Forest planning must be based on an ongoing consultation process involving Tallymen and beneficiaries, in order to take into account, for instance, the Cree calendar of seasonal activities;
- Particular attention will be given to the Woodland caribou, which should require a provincial recovery plan;
- The proposed strategies must be flexible and based on an adaptive approach in order to ensure the integration of scientific and traditional knowledge and the adoption of new forest protection and development objectives. This flexibility must also allow to take into account the spatial dimension of the implementation of these measures.

A large-scale approach

The maintenance of viable ecosystems is essential to preserve biodiversity to maintain sustainable development on the Territory. Thus, it is of a primary importance to draw a portrait of forest management units (FMU) of the Territory so that a global solution of management at the FMU scale can allow the maintenance of an equitable and viable representation of all existing forest ecosystems, as well in term of plant species, age classes as of spatial distribution and various wildlife habitats. A detailed attention will have to be paid to mature and over-mature forests as well as mixed stands for which a management strategy is under development. This profile must be used as the foundation in planning forest management activities. A clear directive on this question will be sent to the beneficiaries.

Many FPDOs proposed by the ministère des Ressources naturelles, de la Faune et des Parcs (MRNFP) will have a favourable impact on wildlife. Indeed, the objectives aimed at protecting the aquatic habitat by avoiding sediment input (FPDO 3), the permanent maintenance of mature and over-mature forests (FPDO 4), the development and application of spatial distribution patterns for logging (FPDO 5), the protection of threatened or vulnerable species habitat (FPDO 6), the supervision of pre-commercial thinning (FPDO 7), the conservation of dead wood in managed forests (FPDO 8), the maintenance of visual quality (FPDO 9), as well as the FPDO 11 which aims at the maintenance and improvement of the habitat of important wildlife species for the Crees are objectives that will contribute significantly to habitat protection and management.

The current existing measures and the ones being developed must be analysed in order to avoid duplication and enhance the impact of their implementation.

In a context of biodiversity preservation, considering that the Woodland Caribou is about to become a vulnerable species in Québec, a precautionary approach to protect this species' habitat is proposed in appendix 1.

An approach at the scale of the Tallyman: A species-specific approach

Certain species with a special cultural value have been identified by the Crees and require that their habitats be protected and managed. The identified species are black bear, the moose and the hare, which are mainly associated with young forests; the marten, found mainly in older forests; the beaver, associated with riparian habitats and fish and waterfowl associated to aquatic environment. It is to be noted that some of these species at the widespread concept of indicator species of a given environment. Thus, the protection and management which will be carried for those species will benefit a much broader range of wildlife species.

The habitat protection and management strategies for sites presenting wildlife interest, presented in appendix 2, take into account both scientific and traditional knowledge. These strategies are attempting to address the needs of the Tallymen while relying for the most part on the use of existing measures in the Agreement as well as other available measures, such as FPDO.

These measures must be used as guidelines for the harmonisation of traditional activities and forest planning.

In order to assess the efficiency of reaching the objectives, a pilot project on the territory will test the measures and their use will be subjected to follow-up and evaluation.

Implementation of a participation and consultation process in order to take into account habitat protection and development

Beyond creating strategies and modalities for protection and development, habitat protection and management must rely on knowledge of forests and habitats (diagnosis) and on Cree participation in the earlier stages of forest planning.

This participation must be real and meaningful. Therefore, the participation and consultation process, presented in appendix 3, is based on a diagnostic process where the state of forests and habitats is analysed and where wildlife objectives are identified and defined. This must be done prior to the process of participation and harmonisation of forest and wildlife activities planning.

The proposed diagnosis process is recognised in medicine as well as in management. It is used to objectively examine problems and potential solutions before deciding on the appropriate course of actions.

Implementation of a pilot project

In order to test the evaluation of the state of forests and habitats (diagnosis), the guidelines on protection and management of wildlife habitats of special interest for the Crees (appendix 2) and the proposed approach for Cree participation and consultation in the forest planning process (appendix 3), the Cree-Québec Forestry Board will conduct a pilot project in the year 2005-2006. The main activities of this project are described in appendix 4.

Following this one year experimentation, the Board will report to the Minister on the results of the exercise.

Appendix 1 : Particular approach for the Woodland caribou

In the past, woodland caribou populations occupied all Canadian and Northern United States forests. These populations declined significantly during the 19th and 20th centuries, mainly due to changes in their habitat and harvesting by predators and hunters. In Québec, three ecotypes of woodland caribou are found: the mountain caribou in Gaspésie; the barren-ground caribou (the two large migrating herds of George River and Rivière aux Feuilles in northern Québec, and the woodland caribou, distributed at low density in the boreal forest. Today, the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) says that all woodland caribou populations in Canada's boreal forests (forest ecotype) are considered as threatened and the Québec Government is about to designate it as a vulnerable species. The woodland caribou is a species associated with mature and over-mature forests. Specialists suggest that we emulate natural processes to create landscapes that will include large tracts of mature forest. The objective is to plan the woodland caribou habitat so as to maintain, if not increase, the population density.

Habitat

The woodland caribou is sensitive to disturbances in its environment. There seems to be a strong correlation between human activities on the territory and the new northern boundary of the woodland caribou range. Several hypotheses try to explain this phenomenon. On one hand, the caribou avoids disturbed environments and, on the other hand, forest management tends to increase the availability of hardwood which promotes the growth of alternative prey populations at the same time as predatory populations, resulting in increased predation risk for the woodland caribou. Increased access following forest cutting could increase harvesting and therefore result in an additional negative pressure on woodland caribou. Finally, the main effect of forest cutting is to permanently or temporarily modify forest stands structures and, consequently, that of the forest matrix. These changes that take place over large territories on a continuous basis reduce the availability of the caribou's food resources, particularly as these negative effects combine with the effects of forest fires in the short and medium term.

The woodland caribou feeds mainly on arboreal and ground lichens, horsetail, carex, bogbean, willow, white birch, poplar, pin cherry and blueberries; herbaceous plant stems and roots, and mushrooms. It is found in dense and mature coniferous forests (spruce and pine forests with or without lichens), open coniferous (with lichens – bare and dry), peatland and nearby water bodies. Females give birth to one calf in May or June. Its main predators are the wolf, the black bear and man.

Management Strategies for the woodland caribou

Based on the principle of biodiversity preservation, the issue of the woodland caribou, whose range covers part of the Agreement's territory, must be considered within the framework of the management strategies applied to the territory.

It seems important at this point in time to mention that, according to the latest scientific knowledge, mosaic cutting with protection of regeneration and soils, as described in the Agreement, may not be consistent with the woodland caribou habitat conservation strategy being currently developed.

As the woodland caribou is in the process of being designated as a vulnerable species, and a provincial committee for the recovery of the caribou is mandated to submit its recommendations, the approach presented is one of precaution. It shall be reviewed in light of the caribou habitat conservation strategy to be recommended by the recovery committee, and of the impact of this strategy on the Agreement provisions.

In such a context, the proposed strategies have been developed according to the ministerial policy direction 2003-16B of the Minister of Ressources naturelles, de la Faune et des Parcs relative to the protection of the woodland caribou habitat and of the provincial committee on woodland caribou recovery.

For habitat protection:

- Identify on forest planning maps the sectors of interest (protected and replacement areas of 100 km² to 250 km²) for the woodland caribou as designated by Faune Québec.
- When forest management as planned in the current five-year plans affect the sectors of interest, discussions must be initiated between MRNFP (Forest branch, Forêt Québec and Faune Québec), industry representatives and the Crees in order to minimise the negative impacts of the operations on woodland caribou habitat (for example, pay special attention to ground lichens, use the CPHRS and CPMS methods if the stands allow, minimise the construction of permanent roads, proceed to cutting as quickly as possible, etc.
- Proceed the same way for the sectors of interest affected by the operations planned in the next GFMP when infrastructures are already in place.
- When no forest management has been planned in the sectors of interest in the next GFMP or when there are no existing infrastructures, initiate

discussions between MRNFP (Forest branch, Forêt Québec and Faune Québec), industry representatives and the Crees to avoid as much as possible carrying out timber harvesting activities in the proposed protected areas.

The forest management plans for caribou habitat, to be completed by October 14, 2005, submitted and approved by Québec and Cree authorities, could be integrated in the mapping of the next five-year program.

Appendix 2 – Measures for the protection and development of areas presenting wildlife interest

The following section presents, for each specific interest species and wildlife habitats identified, the objectives, a short description of the habitat and the needs of the species, as well as strategies or modalities to privilege to ensure the harmonisation of traditional activities related to those species and forest planning.

These measures, which are intended as guidelines for harmonisation of activities, integrate scientific and traditional knowledge. They are intended, at a smaller scale, to address the Crees' concerns and issues. Note that some of the proposed protection measures are based on Cree observations that differ from scientific knowledge. Further research will be needed in order to reach a common understanding.

Note that some of the retained species are part of the widely spread notion of indicator species of a given environment. Therefore, protection and management of these species will profit to a larger group of wildlife species.

The species and habitats presenting wildlife interest, presented below, are:

- the bear
- the moose
- the marten
- small game
- the beaver
- waterfowl
- riparian zone
- and fish

The Bear and the Crees

Bears are sacred animals to the Crees. They pay it special attention and respect. When practising their traditional activities, the Crees entertain a special “relation” with the bear. In that sense, a strict protection of the bear’s habitat must be ensured.

Objectives

The selected management strategies and measures under the Agreement should allow for the development of a variety of environments including a mix of several types of forest stands of different sizes providing various types of food and a forested shelter suitable for the bear. A special attention must be given to the maintenance of the production of small fruits, a critical source of food

At the local level, bear den sites and feeding grounds are sensitive areas for Cree trappers.

Habitat

Being an omnivorous, the black bear eats a variety of food such as the stems, buds and roots from herbaceous plants, fruits, leaves, honey, hazelnuts, acorns, beechnuts, insects, small mammals, young cervidae, fish, carrion, etc. Food in sufficient quantity will allow the bear to stock fat in its body to survive through the winter.

The black bear needs good shelter. The presences of large trees, debris on the ground as well as a sizeable lateral obstruction cover are essential. The species is found in regenerating or old hardwood sectors, mixed stands, softwood forests and blueberry fields.

Mating takes place in June or July but embryos develop about 18 weeks later. Cubs are born naked, blind and little developed in January or February, in the den. The black bear enters into its den in October or November and comes out around April. The cubs stay with their mother for 16 to 18 months. Besides man, the wolf is the predator of the black bear on the Agreement's territory.

Dens are essential for hibernation. Trappers have observed that if their environment is not perturbed, dens are sometimes re-used more than one year. This observation differs from scientific knowledge and requires further research in order to reach a common understanding.

Considering the importance of the bear for the Crees, the following protection and management measures attend to address the Crees' concerns, taking into account specific traditional knowledge.

Management Strategies for the bear

For habitat protection:

- When the tallyman identifies an occupied bear den, it should be protected by localising a residual block at the place he designates.
- When a den could not be protected by a residual cutting block and is located in a wood cutting area, a 100-meter wooded strip radius must be kept intact around the den. No forestry activities should be authorised in the said strip for the whole term of the general forest management plan. A travel corridor with sufficient lateral visual obstruction between the protected area and the forest environment should be provided and maintained.
- When a bear den is identified by the tallyman, forest activities in the immediate area of the den should be avoided during the winter season.
- When new dens are brought to the attention of the timber permit holder, necessary measures should be taken in order to ensure the protection and the connection with the habitat matrix of the site localised by the tallyman.
- Following identification by the tallyman, the sectors located around large areas regenerated with blueberry (old cuts or burnt areas) and occupying sectors within the first 100 to 200 meters from the closest forest cover shall be exempt from scarification.
- The maintenance of residual blocks near blueberry fields can also be assessed locally.

For habitat development:

- Cuts with retention of clusters in the bear habitat sectors identified by the tallyman should be given priority.
- The planning of cuts over small surface areas and/or irregular strips is to be preferred.
- In a bear's feeding grounds, the specific needs shall be assessed, in consultation with the tallyman, in the following manner:
 - The pre-commercial block thinning method (4 to 5 years apart) should be preferred.
 - Special attention will be given to the conservation of different habitats. Preserve a certain number of small fruit trees such as sorb and cherry trees; Preserve hardwood trees in open spaces where there are no coniferous trees;

The Moose and the Crees

The moose is a species of prime importance for the Crees. It is an important source of food for Cree families. Furthermore, the related hunting activity and the utilisation of the different parts of the animal are closely related to the Nation's traditional activities.

Objectives

Globally, the selected management strategies and measures under the Agreement will allow to create a variety of environments that can provide moose with food and shelter. Block cutting, protection of forests near watercourses and lakes, and maintenance of a forest cover of various forms and surface areas will produce a landscape made up of openings and tree stands that should be beneficial to the moose.

At a more local level, the protection of winter yards and riparian and travel corridors used during the other seasons must be protected. It is to be noted that in a little disturbed northern territory, these places can be used year after year by the moose.

Habitat

A quality moose habitat should include abundant and varied food. The moose feeds on leaves and twigs from tree species such as willow, poplar, white birch, mountain maple, American mountain ash, arrowwood, Saskatoon berry, red-osier dogwood, pin cherry, balsam fir, water plants such as water-lily and pondweed, and many other herbaceous plants.

Its habitat must also offer an escape and protection cover. Thus, mixed stands with a good mixture of hardwood and softwood are interesting for the moose. In winter, when snow limits their travel, moose find themselves in yards. Softwood cover is particularly important towards the end of winter. The cow moose isolates itself to give birth around mid-May or mid-June. Besides man, the main predators are the wolf and the black bear (more for the calves).

Management Strategies

For habitat protection of particular sensibility:

- In close collaboration with the tallyman, localise the residual forest blocks in order to protect yards, calving sites as well as corridors identified by the tallyman.

- In the moose's riparian travel corridors, where residual blocks cannot be localised, the riparian strip width must be extended to 40 meters and no timber harvesting can be done within the first 20 meters from the watercourse or lake.
- As mentioned in the Agreement, residual stands to be preserved must be located in priority in mixed forests
- A forested strip should be maintained around moose yards. Also, yards must not be isolated from the forest environment by wide cutting areas
- In sectors identified as moose habitats, silvicultural treatments such as pre-commercial thinning and stand release must be planned with the tallyman.
- Ensure connection between recognised seasonal habitats

For habitat development:

- Priority shall be given to cluster retention cutting in identified moose habitat sectors.
- In sectors developed for moose (planning sectors with maximum surface areas of 25 km²), spread the variable-size cuts over the landscape, in order to ensure that at the most half of the surface of management units is covered with young forests. Residual blocks will be harvested once regeneration in the cutting areas have reached 2,5 to 3 meters, while leaving two to three islets (3-10 ha) of mature forest (softwood basal area >13 m²/ha) every 10 km² as cover in late winter.
- When possible, maintain a travel corridor of a minimum width of 100 meters between the yard sector and the stands bordering watercourses or lakes. The residual blocks could be used for this purpose.

Other measures:

- The moose's life cycle makes it prefer habitats with distinct characteristics, according to the seasons. The schedule of forest operations must be coordinated with the tallyman's knowledge regarding the habitats occupied by moose through the seasons, so that forest or silvicultural activities will not disturb the animal when it is in a yard or on a calving site.
- The tallyman will participate in identifying sensitive sectors and harmonising the forest activity schedule. From mid-May to mid-June, no forest activity should be carried out within a distance of 400 meters from a calving site identified by the tallyman. Also, when moose are gathered in a yard, forest activity should be minimized in the neighbour area.
- Roadside protection strips:

In order to decrease vulnerability of moose to hunting from the roadside, the localisation of residual blocks or the maintenance of a 40-meters wide residual strip along certain roads could be planned along with the tallyman.

The Marten and the Crees

Objectives

The selected management strategies and measures under the Agreement must allow to ensure the maintenance of marten populations in order to maintain the Crees' trapping activities. The marten is also an indicator of forest massifs on a local scale, since it avoids sectors that are over 30% disturbed.

Habitat

The marten is a species associated with mature or overmature coniferous or mixed forests. It prefers predominantly coniferous forests or mixed and hardwood forests with dense undercover, including wood debris, hollow trees or snags. In its vital habitat, the marten can tolerate a 30 to 35 % level of recent disturbance. It avoids cutting areas with sparse regeneration. Formerly disturbed sites are only considered as habitat when they reach a 6 meters height. The marten feeds mainly on rabbits and small mammals. Its main predators are man, lynx, fisher and birds of prey. An average of 3 to 4 young are born in March or April and they leave their mother at the age of three months.

Management Strategies for the marten

Marten is a species for which a landscape-level management approach seems the most appropriate. Several authors suggest that, in order to maintain marten populations, large blocks of mature forest must be preserved.

There are measures in the Agreement for mature forest conservation in sectors of wildlife interest. Therefore, a minimum of 50% of the productive surface in forests over seven (7) meters high will be preserved, including at least 10% in forests over ninety (90) years of age. Also, one of the future forest protection and development objectives (FPDO) prescribes the ongoing preservation of a number of mature and overmature forests. The implementation of these measures will foster the preservation of habitat for the marten.

For habitat protection and development at the local level:

- Wherever the stands structure in a given sector allows it, follow François Potvin¹'s propositions to divide residual blocks based on an age-class range. To maintain marten populations locally in sectors to be developed for this species (planning sectors: area of 10 km²), keep 50% or more of the stands that are over 7 m. (>30 years old). Cutting method should be CPMS (cutting with protection of small merchantable stems) or CPHRS (cutting with protection of high regeneration and soils) if the stands allow,

¹ See Potvin 1998.

in order to maximize the inner forest surface area and decrease the contact perimeter with lowly regenerated cuts.

Game and the Crees

Small game hunting and fishing (hare, grouse, etc.) are part of the Cree way of life. The management and protection of areas allowing to support these activities throughout the seasons must be ensured.

Hare is recognised as a species indicative of young and regenerating forest sectors. In sectors of saplings, wildlife is abundant when the forest cover is closed in and the diameter of the stems found in them is non commercial.

Objectives

The hare is an ecotone animal occupying densely regenerated sectors that offer cover for protection, food and travel. The characteristics of the habitats preferred by the hare are also those of sectors eligible for pre-commercial thinning and plantation release. This type of silvicultural operations will destroy, for a relative period of time, habitats that sustain hare populations. It is therefore essential to pursue conciliation between silvicultural operations and the needs of Cree people who practise hunting and trapping activities by maintaining small game in young, well-generated stands.

Habitat

Snowshoe Hare

Protection and food covers are important characteristics of the hare's habitat (optimal protection cover would be over 85% of lateral visual obstruction, with a minimum of 40 %). In winter, the hare looks for coniferous covers. It feeds on herbaceous plants (aster, touch-me-not, strawberry plant, dandelion, clover, daisy, horsetail, fern), young tree stems and leaves from white birch, mountain maple, willow, ash, chokecherry, bark and twigs of blueberry plant, pine, tamarack, hawthorn, common hazel, strawberry plant, balsam, birch, maple, poplar, willow, cedar, speckled alder, sweet gale, broad-leaved meadowsweet. Between May and September, females can have up to 3 or 4 litters with an average of 2 to 4 young. Many predators feed on hare such as lynx, fox, weasel, mink, marten, otter and birds of prey.

Management Strategies for Small Game

At a more global level, the selected management strategies and measures under the Agreement will create a variety of environments made up of mixed regenerating or mature forest stands providing a variety of food and a shelter cover that are essential to small game animals, and particularly to the snowshoe hare.

For habitat protection:

- In bond with the application of the development objective aiming at framing the practice of precommercial thinning (FDOP7), in sectors of wildlife interest, residual non-treated sectors should be localised in agreement with the tallyman. A particular attention should be given to densely spruce-regenerated sectors with some hardwood. An habitat should have a minimum height of 4 meters and be of density over 6,500 stems per hectare. The treatment for these untreated blocks at the time of the first intervention should not be applied before favourable conditions have been restored in the treated sectors (minimum 4 meters high with a density over 6,500 stems per hectare).

For habitat development:

- In cutting sectors near trapping camps, within a one (1) kilometer radius, cutting areas less than twenty-five (25) hectares should be favoured.
- During pre-commercial thinning treatments, apply a checkerboard pattern treatment. The maintenance of berry-producing plant species should be promoted during treatment.
- Cutting with protection of high regeneration and soils and cluster retention should be promoted.

The Beaver and the Crees

Few animal species have so much impact on their environment as the beaver. By building dams, this rodent plays a determinant role in the structure and dynamics of its habitat. The beaver is found in large number on the territory.

For the Crees, the beaver trapping activity is very important, both in terms of the economic value it represents and the many uses they make of it. When a beaver is trapped, the whole animal is used and processed to provide food, clothing and medicine to the people, among other things.

Objectives

The main habitat-related factor limiting the beaver's presence in the boreal forest is the density of leafy species it uses for food and that are located along aquatic environments. Also, where active colonies are found, sufficient water depth to avoid freezing will constitute a highly critical factor for the beaver's survival. Forest management should therefore maintain, if not improve, the condition of the essential components of the beaver's habitat.

Habitat

For the beaver, the riparian zone is very important. The beaver uses the aquatic environment as a refuge against predators, and the land environment for food and the necessary material to build its different structures. The beaver will preferably look for a slow and meandering stream, as well as lakes with shallow and muddy bays bordered with poplar or other leafy species that he prefers for food. When these species are not available, the beaver will eat coniferous trees and tubers from aquatic plants.

Usually, the beaver will get its food and material within a distance of 50 to 60 meters from the watercourse, but when the source of food is located further away, it can go as far as 200 meters to satisfy its needs. Building dams allows the beaver to access trees that would otherwise be too far away from the shore, and provides it with sufficiently deep water for winter.

For shelter, the beaver uses the burrow that it digs on the shore of the stream, and a semi-immersed hut built more or less close to the shore.

Beaver mating takes place in January/February and gestation lasts from 105 to 107 days. The female has one litter of 3 to 4 young per year in April/June. Beavers usually live in a colony of 2 to 12 individuals (average of 4 individuals), including the parents, the new-born and the young from the previous year. Juveniles leave their parents at the age of two and migrate to new places to start new colonies.

Besides man, the wolf, the bear and the lynx are the beaver's main predators.

Management Strategies for the beaver

For habitat protection:

In sectors where there is an active beaver colony identified by the tallyman:

Over a distance of 800 meters upstream from a dam and 300 meters downstream from the dam:

- Favore the maintenance of deciduous and mixed stands located at less than 60 meters from water.
- In bond with the application of the development objective concerning conservation of dead wood in managed forests (FPDO8), leave a 20-meters strip undisturbed along both sides of the stream occupied by the colony
- Along lakes of less than 5 ha. and watercourse of less than 5 meters wide, leave a 40-meters riparian strip on both sides of the stream, and allow the harvesting of 75 % of the stems within the 20 meters located along the cutting area while preserving the leafy species.

For habitat development:

In sectors where there is or not an active beaver colony and which site is localised by the tallyman:

- Encourage the establishment of shade intolerant leafy species within a radius of 60 meters or less from the stream. The modulation of the riparian residual mosaic and/or partial cutting could be considered in agreement with the tallyman.
- In low-slope sectors, partial cutting of small strips right up to the edge of the stream may be a management approach to promote the establishment of hardwood regeneration. However, no mechanised equipment shall be authorised in these strips, unless special authorisation is obtained from concerned authorities.

In these sectors of interest, the development of the access road network shall be done in close cooperation with the tallyman.

Waterfowl and the Crees

Waterfowl hunting, and more particularly Canada goose hunting, is an important community activity. For the Crees, “goose break” is a traditional hunting activity during which families gather to celebrate the coming spring. The Crees put up their blinds on certain bays where ice breaks up early, thus providing a favourable habitat for the geese’s migratory stopover. Permanent camps, used by many families, are generally built nearby.

Objective

Due to the cultural significance of the “goose break”, the quality of the environment around the migratory stopover is particularly important for the Crees. This environment includes the bay, the access trails and the camps. Forest activities can damage these hunting areas either due to narrow riparian strips sliding into the bay, destruction of access trails or degradation of the visual quality.

Management Strategies for Waterfowl Feeding and Migratory Areas

For habitat protection:

In sectors identified by the tallyman as being territories or water bodies used as waterfowl feeding grounds or staging areas,

- Give preference to localising residual blocks so as to optimise the wooded strip of the identified sector’s section-and this, by considering the source of the dominant winds
- In bond with the application of the development objective concerning conservation of dead wood in managed forests (FPDO8), leave all localised 20-meters strips undisturbed, on both sides of the sector or along the identified section of the lake.
- In sensitive sectors identified for wildlife, and only after consultation with the tallyman, the beneficiary and MRNFP (Wildlife and Forest branches), the riparian mosaic of over 200 meters could be modulated on one side or both sides of the stream, based on the objective for maintaining the Visual Quality of Forest Landscapes (FPDO 9).

The Riparian Zone and the Crees

Objectives

Riparian habitat is known to play a crucial role for regional wildlife and biodiversity. Since times immemorial, Crees have used rivers and lakes to move around and fish, and riparian habitat as favoured hunting and trapping grounds. A certain number of navigable rivers are of great importance for traditional hunting, fishing and trapping activities and because they are used by Crees to reach their camp. These ways are well-known to the tallyman and other users of the land. Some of these lakes and rivers also have a heritage value. These waterways (large navigable rivers) have always been a way for different families to gather at cultural and community sites.

Habitat

Riparian environment is defined by its location, composition and function. It is made up of wet land and dry land. The wet zone is an area bordering a permanent watercourse or a lake and characterised by the presence of many plant species requiring water for part of the year or their life cycle or that can stand above-normal wet conditions. The dry zone is an habitat located above the annual high-water line without spilling along any watercourse or water body. It corresponds to the outwash plain or to a strip of land vegetation when there is no or little floodplain.

Riparian environments have ecological functions in relation to: soils and water (physical chemistry, nutrient system, temperature, sediments); stands characteristics (snags, wood debris); invertebrates (aquatic and terrestrial) and vertebrates (fish, reptiles and amphibians, birds, mammals). These habitats include more plants and wildlife than any other. Indeed, “animals must drink”, 53% of the 486 vertebrates in Québec (excluding fish) use them and 62 species depend on them.

Management Strategies

- In sensitive sectors identified for terrestrial and aquatic wildlife, and only after consultation between the tallymen, the beneficiary and MRNFP (Wildlife and Forest branches), the riparian mosaic of 200 meters could be modulated on one side or both sides of the stream based on the objective for maintaining the Visual Quality of Forest Landscapes (FPDO 9).
- In sectors located on slopes exceeding 30 %, the riparian strip along lakes or permanent watercourses shall be extended to 40 meters wide, and partial cutting shall be allowed only within the first 10 meters of the strip.
- A particular attention aiming at minimizing the risk of windfall should be given to the sectors most vulnerable to the winds of West.

The Fish and the Creees

Objectives

The selected management strategies and measures under the Agreement must allow to maintain the integrity of fish breeding sites.

Habitat

In their habitat, fish need adequate water quality and the necessary elements for their life cycle. Available oxygen, water temperature and its physical chemistry and transparency, flow velocity, available substratum, plants, aquatic invertebrates and vertebrates are all equally essential components for the developmental, growth, protection, feeding and breeding needs of each species.

Management Strategies for Spawning Areas

- In sectors where a spawning ground is identified, no forest operation can be carried out in the riparian strips. A 40-meters wide protection strip must be maintained along the spawning area on both sides of the shore as well as on a distance of 40 meters, upstream and downstream from the spawning ground.
- When the slope of the riparian strip bordering a spawning site exceeds 30 %, the riparian strip shall be extended to a width of 50 meters.
- During the construction of a temporary or permanent access road, it is forbidden to cross a watercourse within a distance of 100 meters upstream and 40 meters downstream from a spawning area.

Other Strategies and Recommendations

Intervention in mixed stands:

- When cutting in mixed stands, give priority to the maintenance and distribution of retention clusters made up of hardwood and softwood.

Silvicultural works:

- Localisation of sectors for silvicultural work such as scarification, tree planting, plantation release and pre-commercial thinning must be done in close cooperation with the trapper, and it should be done systematically in sectors of wildlife interest (25%).

Aquatic habitat and road network development:

- In sectors of wildlife interest, access road construction (temporary and permanent) must be located outside the residual blocks as a priority.
- To optimise water quality and aquatic habitat conservation, apply and adapt to the Agreement's territory the guide on sound forest road practices developed by the Gaspésie-Iles de la Madeleine regional directorate of MRN, by emphasising the placement (according to trade practice) of structures such as culverts. Sound practices during winter road construction must also be adapted and applied. Using techniques that minimise disturbance of the stream bed (half-pipe culverts, temporary bridge) is to be preferred.

Harmonisation of activity schedule:

- In sectors of wildlife interest (25 %), the beneficiary's work schedule must be harmonised with the annual land use cycle of the tallyman and his knowledge of the habitats to be protected.

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Appendix 3 – Participation and consultation process for wildlife habitat protection and management

In order to really take into account the habitat protection objectives in the context of forest activities planning we must acquire knowledge about wildlife habitats (diagnosis) and implement a participation and consultation process to harmonise the identified wildlife and forest objectives.

In order to insure the identification of wildlife objectives and the participation of the Crees in the forest planning process, a diagnosis process based on problem-resolution is proposed. This approach allows us to carefully examine problems and potential solutions before deciding the appropriate treatment. Its main advantage is to take into account the various objectives and knowledge prior to building around harmonisation.

A diagnosis process :

The proposed diagnosis process includes the following 6 steps:

1. Findings and analysis of the situation (diagnosis);
This step aims the analysis of knowledge on wildlife habitats and the determination of wildlife protection and management objectives on a given territory (analysis of the state of the forest, consulting Tallymen, validation of information)
2. Choice of one or several solutions;
Beginning of the participation and harmonisation process with the Tallyman, the JWG and the beneficiary
3. Identification of problem(s) if necessary ;
Consultation and conciliation, if necessary, following the measures of the Agreement
4. Choice of treatment;
Identifying harmonisation measures (reference to the protection and management guide for sites presenting wildlife species interest)
5. Formulation and analysis of potential solutions
Integration in forest planning
6. And follow-up on agreed harmonisation measures and planning.

Implementing such a process will guide stakeholders towards the development of forest planning based on consultation, which takes into account wildlife habitat-related objectives and concerns.

Appendix 4 – A pilot project to improve directives on habitat protection and management:

In the context of the postponement of the coming into effect of the general forest management plans to April 2008, the implementation of a one year pilot project gives the opportunity to test the draft directives on habitat protection and management.

Objectives to reach:

This pilot project intends to reach four specific goals:

1. To analyse the state of forest and its preoccupying habitats, on each FMU, and this more specifically in regards to wildlife habitats;
2. To test an approach of habitat objectives identification and participation of the Crees in planning forest activities, following a diagnosis process;
3. To test the use of protection and development measures for wildlife species of interest for the Crees, in a context of harmonisation of wildlife-forest objectives;
4. Following the completion of the pilot project, report to the Minister on the results of the exercise.

More specifically, the project will allow us to:

- Recommend a participation and harmonisation process based on a tested approach in order to improve participation of the Tallyman in forest planning, in regards, particularly, to habitat protection;
- Test the use of habitat protection and management measures developed as guidelines for harmonisation of wildlife and forest objectives in the context of forest planning development;
- Develop a follow-up and evaluation process for the directives, to be implemented in the next GFMP;
- Identify training and skills enhancement required to implement the directives on habitat;
- For the stakeholders, develop a know-how and a mutual understanding on the implementation of the directives;

Main activities:

The following three main activities will be carried out during the test year:

1. Definition and follow-up on wildlife objectives on the territory of the Agreement
 - Analysis of the state of forests and habitat, by FMU;
 - Identification of wildlife protection and management objectives on the territory;

- Identification of a follow-up and evaluation process for the forest, in order to integrate habitat protection and management
2. Implementation of a project testing a participation and consultation approach based on the use of a diagnosis approach
- Analysis of the state of forests and habitats (for a given TRU and/or FMU)
 - Identification of wildlife objectives for one or more given territories (for a given TRU and/or FMU) (diagnosis)
 - Implementation of a participation and consultation process (diagnosis approach)
 - Integration of harmonisation measures in forest planning

Identification of the project participants should be done following criteria to be developed (ex. Interest of trappers-beneficiaries participants, access, territory's forestry background, etc.).

3. Follow-up and evaluation of the pilot project
- Including the identification of training and skills enhancement needs.

Following this test, the Board will report to the Minister, in 2006, on the results of the exercise. Specific recommendations will then be presented.

Structure of the implementation of the pilot project:

Considering the importance of the objectives of this directives-testing step, the project must be coordinated by a steering committee composed of stakeholders involved at different levels of the implementation of the Agreement. Furthermore, considering the mandate of the JWG to ensure participation of the Tallymen in forest planning, the co-ordinators of the working groups should act as co-chair on the project's steering committee.

A project manager should be responsible for implementation and follow-up of the various proposed activities.

The project's structure and implementation steps are:

