

A Collaborative Approach between WWF and Tembec on Forest Certification in the Gordon Cosens Forest

A model for Forest Certification in Canada

Introduction

In January 2001, World Wildlife Fund Canada (WWF-Canada) and Tembec Inc. (Tembec) signed a Joint Statement on Forest Stewardship. The parties committed to advancing forest conservation in Canada by working together to implement a two-pronged strategy, which involves both sustainable forestry and the establishment of ecologically-representative protected areas.

Tembec's pro-active approach to complete the protected area network includes preserving options (i.e. deferring logging) and improving their management methods in forest types currently under-represented by protected areas. Tembec is seeking certification from the Forest Stewardship Council to meet a new market demand for products coming from forests that are managed according to agreed upon economic, social and environmental standards. The Forest Stewardship Council provides an independent, international and credible framework for standard setting and auditing of forestry practices, and labelling of forest products.

In April 2003, Tembec was awarded a Forest Stewardship Council (FSC) certificate for the Gordon Cosens Forest (GCF) in Ontario (Figure 1). Tembec has set the standard in North America with two unprecedented accomplishments: the largest FSC certified forest in Canada and the first certification in the Boreal forest. As illustrated by Figures 2a and 2b, after certification Tembec succeeded in adequately representing 60% of the area of the Gordon Cosens Forest, with over 140,000 hectares deferred from logging (290,000 hectares with existing protected areas).

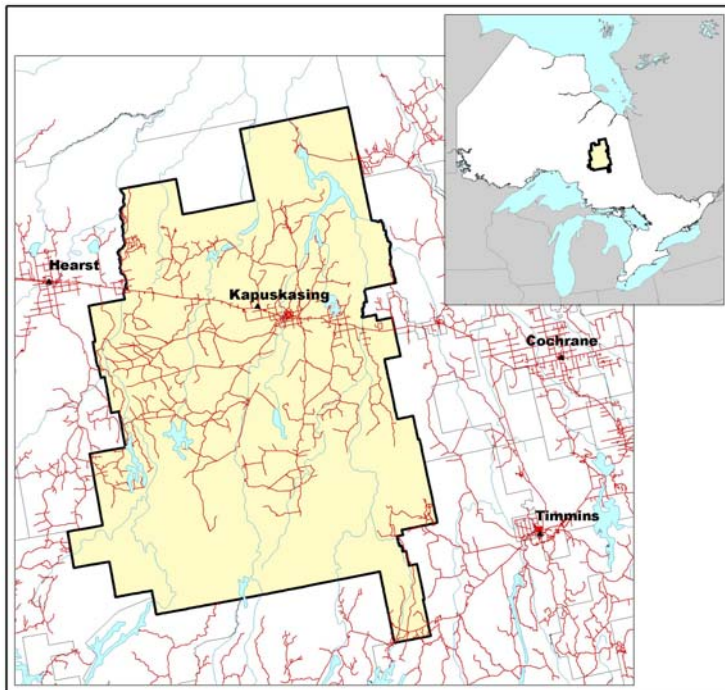
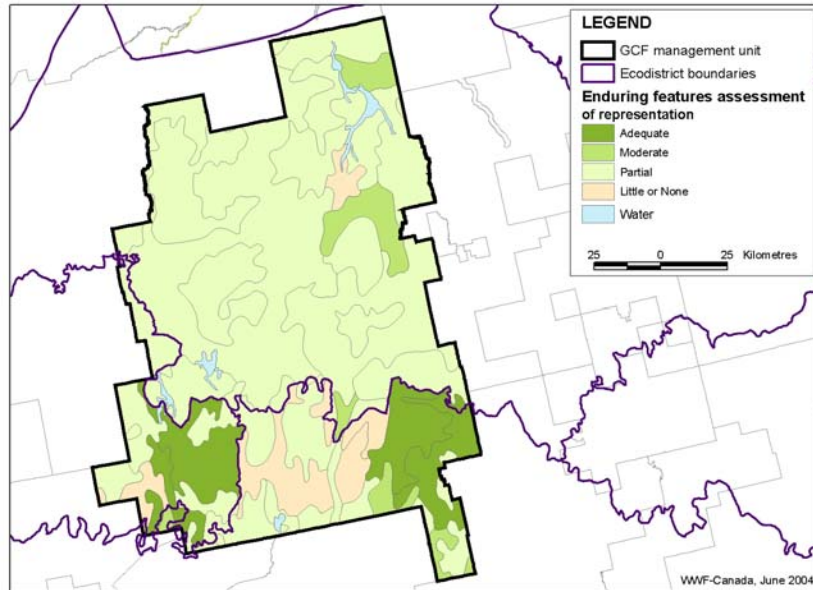


Figure 1: Gordon Cosens Forest in northeastern Ontario

2a) Ecological Representation by Existing Protected Areas



2b) Ecological Representation by Existing Protected Areas and Deferred Areas After Forest Certification

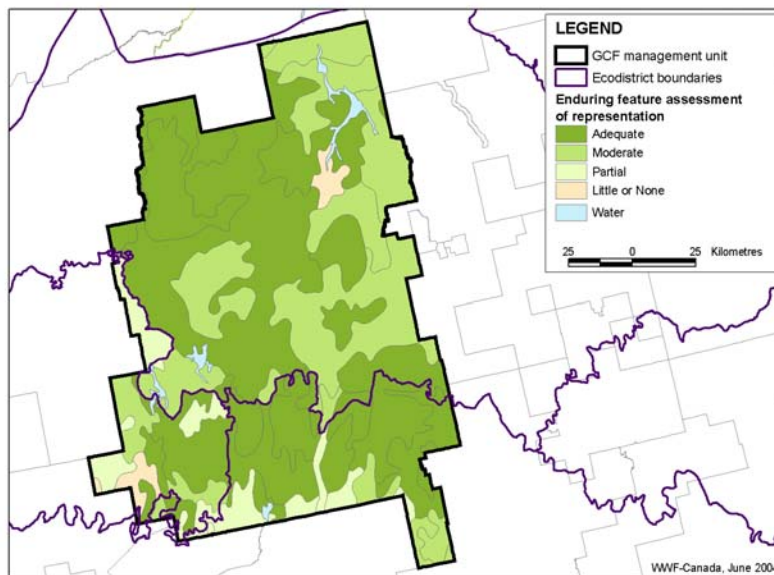
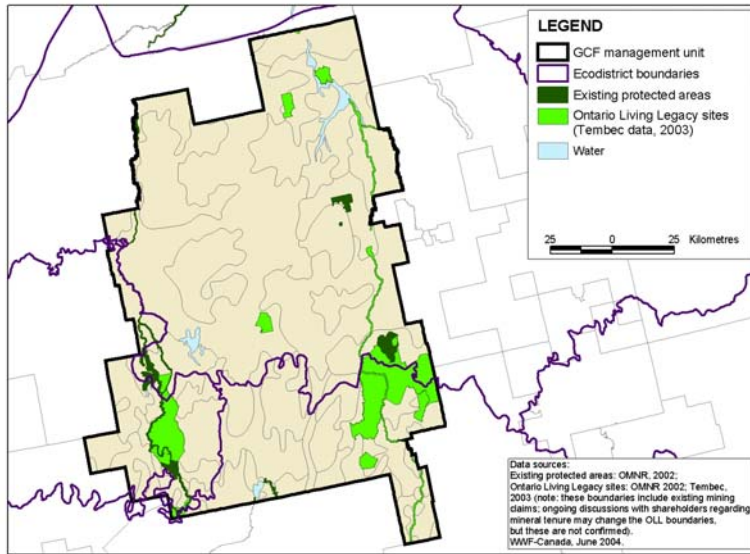


Figure 2 a and b: Status of ecological representation (as interpreted by WWF-Canada) based on existing protected areas and with the addition of the deferral areas in the Gordon Cosens Forest.

2c) Existing protected areas in the Gordon Cosens Forest.



2d) Existing protected areas and areas deferred from logging in the Gordon Cosens Forest.

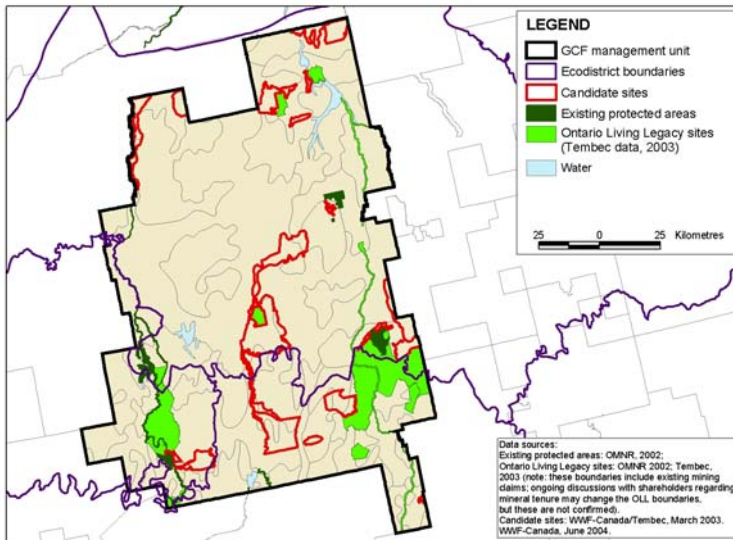


Figure 2 c and d: Existing protected areas, including Ontario Living Legacy sites, shown in c) and the same protected areas with the addition of the deferral areas in the Gordon Cosens Forest shown in d).

WWF's Approach to Forest Conservation

WWF Forest for Life targets: Protect - Manage - Restore

What is WWF's overall approach to forest conservation?

WWF's global forest conservation program "Forests for Life" adopts three complementary approaches to forest conservation: protect-manage-restore.

- **Protection.** WWF believes in the need for a greater number of effectively managed protected areas linked by corridors, protected by buffer zones and designed to maximize resilience to threats.
- **Manage.** People the world over are consumers of wood – for building material, furniture, office paper, firewood, books, newspapers, toilet tissue and so on. All the timber and paper products used in every day life, amounting to some 1.6 billion cubic meters of wood every year, come from forests. The demand for paper – the single largest use of wood fibre – has increased 5 fold since the 1950s and is expected to double again over the next 50 years. With this huge demand it is therefore important to ensure the sustainable management of the forests that provide these products.
- **Restore.** WWF believes that there is a vital need to reverse the loss and degradation of forests by restoring forest landscapes. Forest Landscape Restoration (FLR) is much more than just planting trees - it is about restoring the goods and services that forests provide for both people and nature, at a landscape scale.

How do the Forest Stewardship Council principles relate to WWF's forest conservation program?

FSC certification provides independent, third party verification of sustainable forest management and is an important mechanism to meet WWF's "manage" forest target. Of the ten FSC Principles and Criteria, two are directly related to the identification and effective management of a conservation area network.

FSC PRINCIPLE #6.4:

Representative samples of existing ecosystems within the landscape shall be protected in their natural state and recorded on maps, appropriate to the scale and intensity of operations and the uniqueness of the affected resources.

- Principle 6.4 requires the establishment of permanent protected areas. The identification of a viable, representative core reserve network and making progress to permanently protect these areas are important components of obtaining and maintaining an FSC certificate.

FSC PRINCIPLE #9:

Management activities in high conservation value forests shall maintain or enhance the attributes which define such forests. Decisions regarding high conservation value forests shall always be considered in the context of a precautionary approach.

- Meeting the requirements of Principle 9 has two important benefits to forest conservation. First, the identification of high conservation value forests (HCVFs) can be used in the site selection process to identify protected areas to meet the requirements of Principle 6.4. Second, HCVFs that are not already protected or candidates for permanent protection, but which are managed to maintain the high conservation values for which they have been identified, effectively become corridors and buffers in the larger conservation area network.

FSC Certification for the Gordon Cosens Forest

WWF and Tembec, together with CPAWS-Wildlands League, worked collaboratively on the Gordon Cosens Forest certification to work towards:

- Protecting an additional 7% of the forest (140,000 hectares),
- A higher level of standing tree retention (10-50%) after logging than is required by any provincial guidelines in place across the country,
- Maintaining 20% of the forest in large core patches of mature and old forest,
- Undertaking access planning to maintain the remote nature of forest areas (Canadian governments have no policies or laws on this issue.)

Collaborative Approach to identifying HCVs and Candidate Sites

FSC certification requires proactive efforts by forest companies to understand the conservation attributes of forests under their stewardship and take steps to protect and maintain those features. In fall 2002, Tembec and WWF-Canada resource managers and conservation scientists initiated a collaborative technical project in the boreal forests of northeastern Ontario. Beginning with joint ground and aerial field tours, the team worked to evaluate the adequacy of existing conservation measures at a landscape and forest site level. From the habitats of pine marten and woodland caribou to boreal white pine and intact landscapes, features of High Conservation Value (HCV) were identified and mapped.

The assessment of the GCF was conducted using both the generic High Conservation Value Forests (HCVF) checklist and a draft of a guidance document on meeting the requirements of FSC Principle 9 in Canada's forest ecoregions, which was jointly developed by Tembec and WWF-Canada (Iacobelli and Johnson 2002). The guidance document has influenced the development of a national HCVF toolkit, which was recently released by FSC Canada (National Boreal Standard V 3.0, 2004). This approach is also consistent with the global HCVF framework developed by ProForest (Jennings et. al. 2003). Tembec and WWF used a multi-criteria overlay approach, a Conservation Suitability Analysis (CSA), in advance of a completed HCVF report for the collaborative technical project in the Fall of 2002. The CSA includes all the elements of a HCVF assessment, but also takes additional steps to consider the spatial overlap of conservation values to identify potential candidate sites for protection.

Purpose:

Since 2002, WWF-Canada and Tembec have been working together to meet the requirements of Principles 6.4 and 9 in Tembec's Northeastern Ontario licences.

Overall goals of the partnership:

1. Maximize ecological representation in priority protected areas gaps; and
2. Minimize short and medium term wood supply impacts.

Step 1: Identify Gaps in Representation

What is the framework for conservation site planning?

WWF-Canada developed a framework for conservation site planning for Canada, based on a hierarchical arrangement of enduring features¹ within natural regions. Each enduring feature is unique to each natural region, which is characterized, in part, by its climatic characteristics. The gap analysis measures the degree of ecological representation within each enduring feature by protected areas. A GIS-based automated routine has been developed to conduct the gap analysis.

What are the criteria for assessing the level of representation by protected areas?

- Protected area size guidelines;
- Connectivity and adjacency of candidate and/or existing protected areas;
- Representation of environmental gradients using a Digital Elevation Model;
- Inclusion of important physical habitat types, such as shorelines and riparian corridors;
- Level of habitat quality (ie. unfragmented blocks based on roads and/or communication corridors).

How does the automated routine analyze representation?

The automated routine uses a set of equations relating recommended protected area sizes to enduring feature sizes. Disturbance regimes and area requirements of focal species were used to determine recommended protected area sizes. The routine assesses each enduring feature based on the representation criteria and ranks each feature as having “adequate”, “moderate”, “partial” or “little or no” representation.

Step 2: High Conservation Value Forests

What is the process for identifying High Conservation Value Forests (HCVFs)?

High Conservation Value Forests (HCVFs) are defined by the Forest Stewardship Council as forests of outstanding and critical importance due to their high environmental, socio-economic, biodiversity or landscape values. HCVFs comprise the crucial forest areas and values that need to be maintained or enhanced in a landscape. Although originally designed as a tool to help certification, the HCVF concept is being extended to more general conservation planning including the design of representative networks of protected areas and buffer zones.

Examples of potential high conservation value forests include:

- Concentration areas of biodiversity at risk identified by government agencies (e.g. Natural Heritage Information Centres);
- Focal species’ critical habitat (e.g. Marten core habitat);
- Wildlife concentration areas (e.g. Important Bird Areas);
- Large unfragmented blocks of forest.

The assessment of HCVFs is consistent with conservation area design methods: determine thresholds for each attribute, gather relevant data sets, make a HCVF determination, and delineate the HCVF.

Some of the above values may be considered potential HCVFs on their own while others may be not unless found in a cluster of several conservation values. A simple multi-attribute layering approach can be used to identify their spatial coincidence.

What is a Conservation Suitability Analysis?

In the case of the Gordon Cosens Forest, a Conservation Suitability Analysis (CSA) was conducted in the absence of a completed HCVF report. The CSA is a multi-attribute layering approach developed to identify areas of relatively high conservation values using a set of attributes and criteria. The approach was adopted from the proposed Room-to-Grow methodology (Blasutti et al. 2001). Using the methodology described in the Room-to-Grow report, the pertinent ecological values are converted to grids and ranked based on their relative conservation value. The individual grids are then added together to derive an overall conservation score. The resulting grid depicts areas of potential high conservation value (Figures 3 and 4).

¹ A spatial unit for representation based on landform and climate.

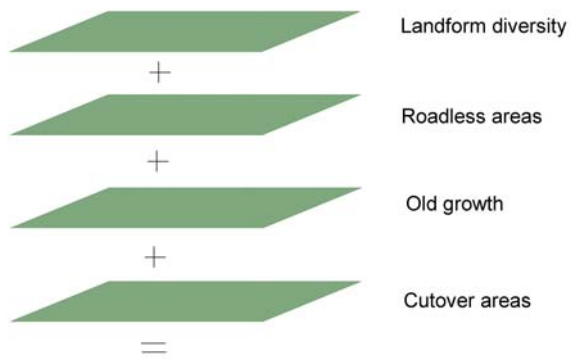


Figure 3: HCV multi-criteria layering approach

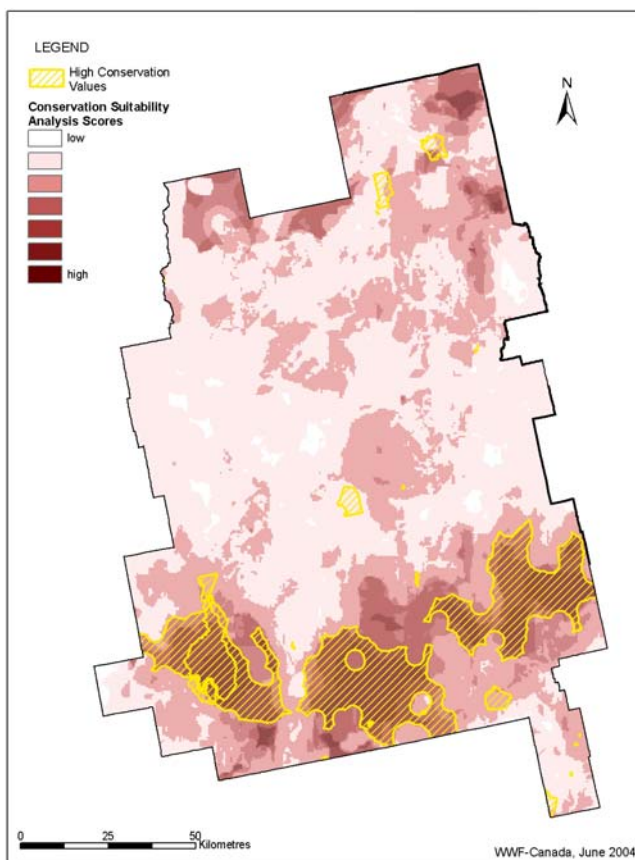


Figure 4: Resulting Conservation Suitability Analysis scores and Potential High Conservation Value Areas

Step 3: Proposing Candidate Sites for Protection

How are candidate protected areas selected?

Candidates are selected based on the consideration of the following factors:

- Interpreting outputs of the gap analysis and HCVF assessment regarding site selection;
- Additional conservation design principles such as connectivity to existing protected areas and using natural features to delineate boundaries;
- Minimizing impact on current forest management plan and depletion areas (i.e. cutovers).

The following candidate site (Figure 5) was selected based on the following criteria:

- Encompasses an area of high conservation suitability according to the CSA. It also coincides with an identified potential HCV according to the HCVF assessment.
- Adjacent to an existing protected area thereby increasing the connectivity of the overall protected area network.
- Low conflict with short term harvesting plans.

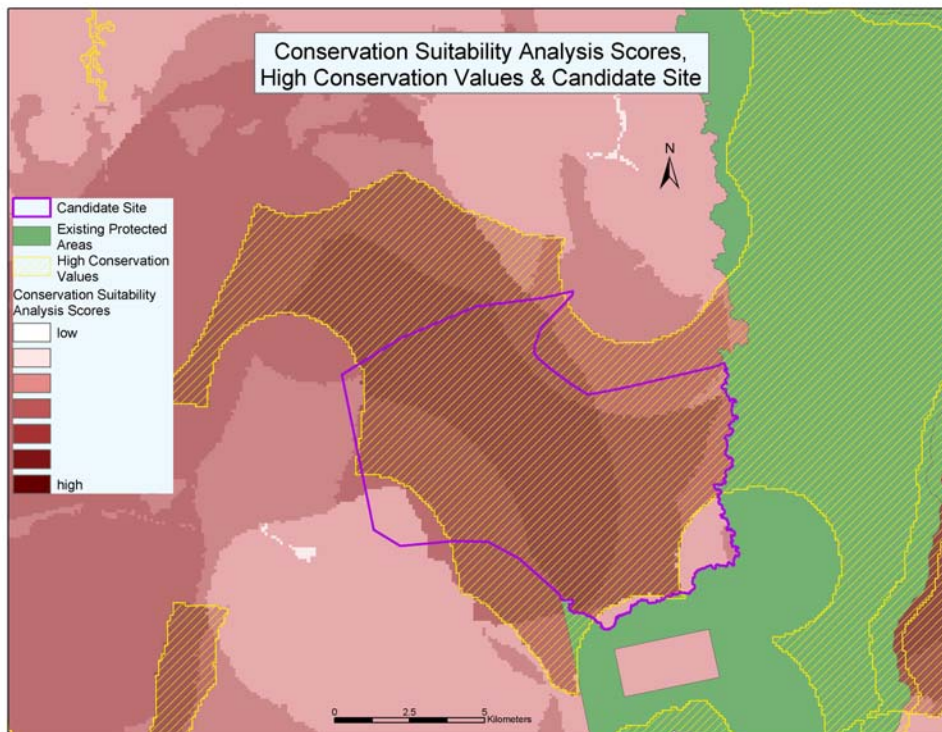


Figure 5: Proposed deferral option with Conservation Suitability Analysis scores and areas of High Conservation Value

The gap analysis and HCVF assessment are applied in an iterative manner, being repeated until the partners agreed on potential deferral options that would adequately complete representation (Figure 6). To ensure that the proposed deferral options have minimum impact on short and medium term wood supply, Tembec also ran the Ontario Ministry of Natural Resources' Strategic Forest Management Model (SFMM).

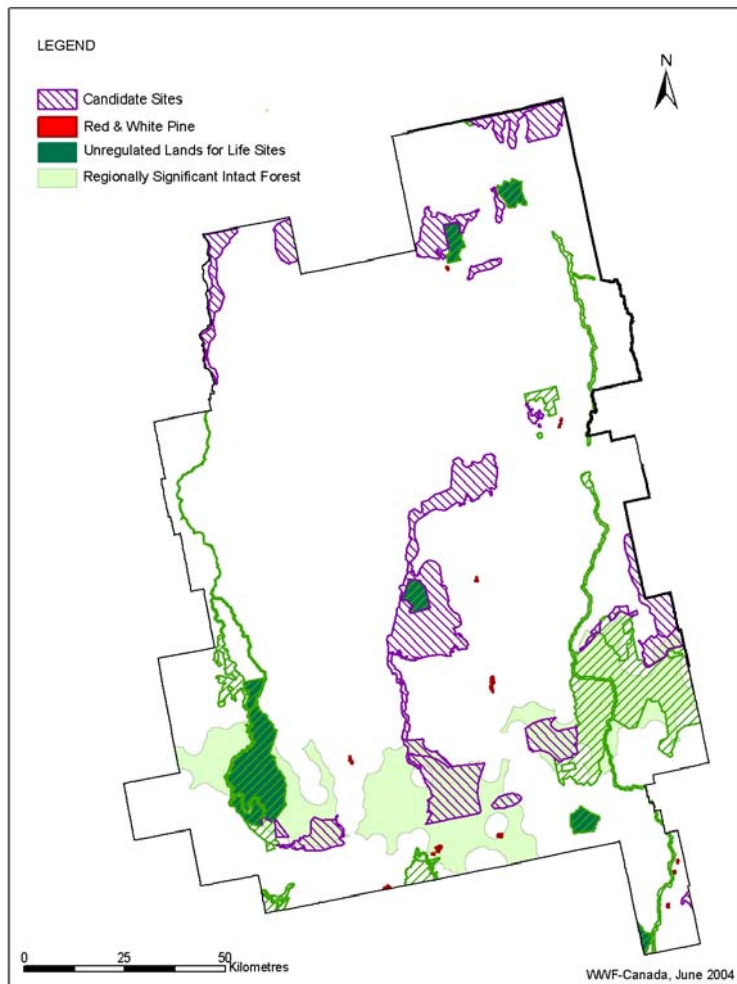


Figure 6: Selection of deferral options(candidate sites in the legend) in the Gordon Cosens Forest

Future steps

As important as this process is to conservation, significant work remains. This document is just one way in which the partners will engage key organizations such as the Ontario Ministry of Natural Resources, First Nations, and other interests in the review of the outcomes of this project, and develop joint implementation plans.

Conclusions

The forest certification process can successfully generate and safeguard protected areas options in the allocated forest land base. In particular, application of landscape-based tools such as the gap analysis and HCVF framework are consistent with conservation planning goals and methods. Tembec's accomplishment in the Gordon Cosens Forest, certifying five million acres to FSC standards, makes a significant contribution to forest conservation including ecological representation of the Boreal forest, and provides an example for future land use planning by the forestry industry in Canada.

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