ECOSYSTEM-BASED MANAGEMENT in the Eastern Black-Spruce Forest of Quebec, Canada: A Feasibility Study

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INTRODUCTION

In 2004, the Commission for the study of public forest management in Québec stated that ecosystem-based management should be central to Quebec public forest management. However, a science-based setting of ecosystem-based management still needs to be defined for Quebec's forest. This project concerns the three spheres of a sustainable forest management : the ecological, economic and social aspects.

A DEFINITION OF ECOSYSTEM-BASED MANAGEMENT

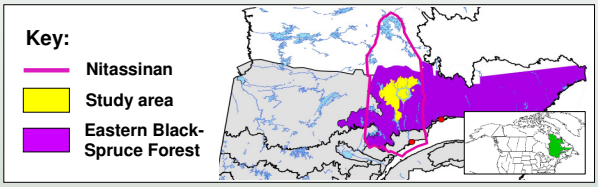
<<An ecological management approach that aims to maintain the ecosystems viability, biodiversity and productivity in the territory while meeting the social and economic needs and expectations in the respect of the society forest values.>>

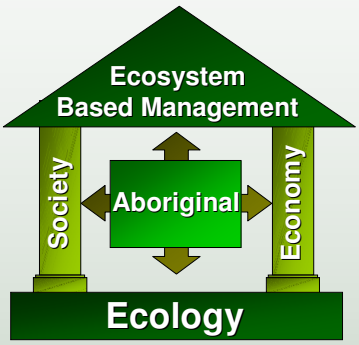
GOALS OF THE STUDY

Develop management strategies that will ensure the resilience of ecosystems and evaluate their economical feasibility and social acceptability.

STUDY AREA

The area is under provincial harvesting license since 1997, while being part of the Pessamit Innus' ancestral territory, called the *Nitassinan.*





Main objective
Objectives
Methods
Results
Ecosystem-based management strategies

Ecology

Define the ecological basis for ecosystem-based management strategies

1. Characterize natural disturbances
2. Define natural variability
3. Document traditional aboriginal use of the land
4. Evaluate harvest-induced alterations
5. Define biodiversity issues

- Spatial analysis of fires and post-fire stands dynamic
- 200 yrs structure, ages and composition analysis of large ecosystems
- Interviews with elders and archives analysis
- Modelling actual strategy for a 150 yrs horizon
- Discussions with scientific committee

Aboriginal usage of the land
Natural variability
Alteration level of actual strategy
→ Ecological Issues

Society

Studying the social acceptability of ecosystem-based management strategies

1. Identify forest values
2. Characterize social acceptability
3. Elaborate socially acceptable ecosystem-based management strategies

- Surveys and interviews on forest values
- Interviews about perceptions, concerns and needs concerning the actual forest management and ecosystem-based management

Portrait of the different publics and their values
Social acceptability framework
→ Social Issues

Stakeholders:
General public, members of Kruger participation process, members of the Pessamit Community, players of the controversy, scientists and decision makers.

Economy

Determine if ecosystem-based management strategies allows for a sustainable wood supply within a set of logistic and economic constraints

1. Propose a tactical and operational plan
2. Evaluate the flow of woody material per period
3. Evaluate operational and financial impacts according to certain constraints linked to mills supply

- Step 1 : Ecosystem-based management strategies by spatial and structural components
- Step 2 : Forest analysis relating to strategic, tactical and operational plans
- Step 3 : Mills analysis relating to strategic, tactical and operational plans

Mills supply needs
Procurement cost
→ Economical Issues

Aboriginal priorities

Determine Innu visions of Nitassinan, forestlands and management strategies

- Survey and interviews on Innu values
- Interviews about Innu perceptions, concerns and needs concerning forestlands and management

Innu vision of Nitassinan
Innu knowledge and institutions
→ Aboriginal issues

Ecosystem-based management strategies that maintain the ecosystem viability, biodiversity and productivity, are economically feasible and respect social values