



PROJECTS AND PUBLICATIONS GUIDE

RESEARCH PROGRAM

SELECTED COMPLETED PROJECTS

SELECTED PUBLICATIONS

2007

THE SUSTAINABLE FOREST MANAGEMENT NETWORK

The Sustainable Forest Management Network (SFM Network) is one of Canada's Networks of Centres of Excellence (NCE). Established in 1995, the Network starts from a foundation of researchers from a range of disciplines working with partners from industry, universities, government, Aboriginal peoples and non-governmental organizations to explore the very foundations of sustainable forest management. Through rigorous scientific peer-reviewed research, Network partners and researchers are discovering new solutions to some of the most perplexing challenges facing Canada's forests today.

Five criteria common to all Networks of Centres of Excellence drive the SFM Network:

- Research Excellence
- Networking and Partnerships
- Highly Qualified Personnel
- Knowledge Exchange and Technology Extension
- Network Management

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PROJECTS AND PUBLICATIONS GUIDE

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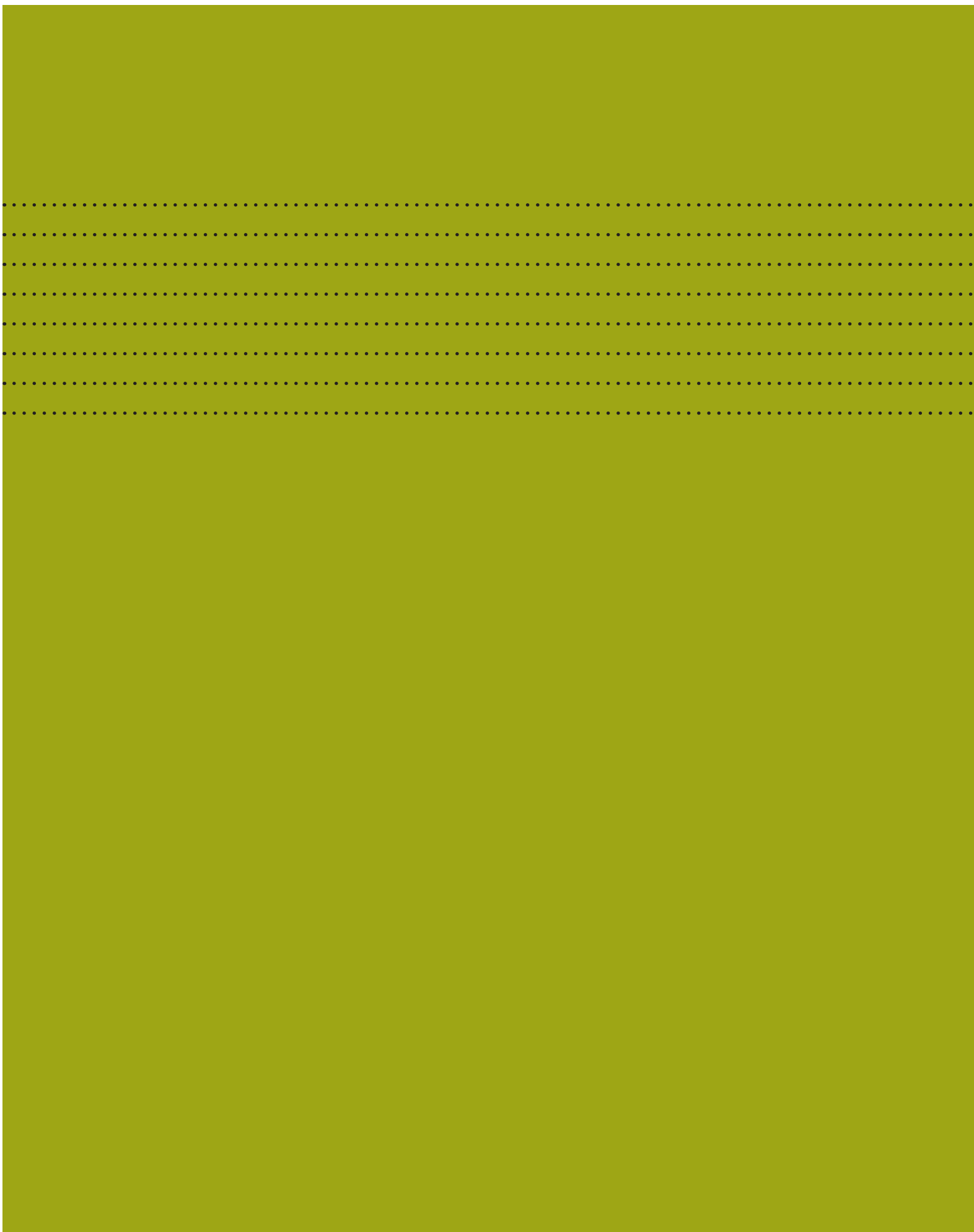
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NEW RESEARCH PROJECTS 2006 | 2007

PROJECTS

All 18 new projects arranged
alphabetically by principal investigator

Ecological and economic trade-off analysis of conservation strategies for woodland caribou

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Initiated April 2007

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Government of Alberta

Tembec Inc.

Government of Yukon

Weyerhaeuser Company

Tolko Industries Ltd.

Treaty 8 First Nations of Alberta

Research Locations

Canada-wide

RESEARCH PROJECT

Researchers and Collaborators

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Description

At least four landscape level management actions have been proposed in response to declining caribou numbers:

1. Limiting industrial footprint in areas occupied by caribou;
2. Altering the industrial footprint to discourage predator and alternate prey use;
3. Culling of predators; and
4. Increasing hunter harvest of alternate prey.

The efficacy of these actions depends on caribou population growth rate, current and projected industrial footprint, and prey and predator densities on and surrounding caribou range.

The objective of this project is to identify tradeoffs and evaluate the cost effectiveness of these alternative caribou management actions. The work will be based on a spatially explicit optimization model with forestry and energy sectors as economic components and will provide assessments and recommendations.

Researchers and Collaborators

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Influence of relative density and composition on growth and understory in boreal mixedwoods

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Description

This study will use data from permanent and temporary sample plots established by SFM partners in boreal aspen, spruce and mixed wood stands in Alberta, B.C. and Ontario to examine the use of stand density index and other crowding indexes for linking early stand conditions to future conditions. It will examine and demonstrate the application of crowding indexes as stand level indicators for linking early stand characteristics to future stand conditions. This study will also assess and monitor stand structure and its relationships to understory vegetation and site productivity.

Participating Partners and Affiliates

Alberta Pacific Forest Industries Inc.
Daishowa-Marubeni International Ltd.
Government of British Columbia
Environment Canada
Weyerhaeuser Company
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Research Locations

Canada-wide

Applying regional dynamic models to Québec

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Research Locations

Canada-wide

RESEARCH PROJECT

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Description

The SFMN's Boreal Ecology and Economics Synthesis Team (BEEST) has developed a unique suite of modeling tools for the regional spatial analysis of forest management and ecosystem processes (TARDIS - Cumming and Armstrong 2005). This project will apply this framework to other regions of Canada, beginning with the Province of Québec. The research will facilitate spatially explicit analysis of tradeoffs/interactions between economic activity, disturbances and biodiversity at provincial and larger extents.

Researchers and Collaborators

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John Turner

Moose Cree First Nation

Description

This project will develop a multi-scale adaptive ecosystem management (AEM) framework that is rooted in Aboriginal concepts of the land. Both Ojibway and Cree variations of the term for land (ahkee/aski) are multi-scale terms covering different scales from family territories to large regions.

The starting point for dialogue is what Pikangikum First Nation (PFN) calls Cheekahnahwaydahmungk Keetahkeemeenaan, or keeping the land. The approach is innovative because adaptive management has not been approached from a First Nations perspective. It is significant for SFM because there is an urgent need to develop innovative AEM that incorporates Aboriginal knowledge and learning. Our analysis will be based on the experience of PFN and Moose Cree First Nation (MCFN).

The research will:

1. Analyze the customary stewardship systems of PFN and MCFN; and
2. Investigate how PFN and MCFN have negotiated with previous state management regimes (e.g. trapline system) while maintaining continuity with customary stewardship approaches.

The resultant framework will serve PFN and MCFN, the boreal region, and Canada.

Toward adaptive ecosystem management: dialogue with Pikangikum and Moose Cree for keeping the land

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Research Locations

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Shared land-use: management of cumulative resource development in the Treaty 8 region of Canada

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Research Locations

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British Columbia
Northwest Territories
Saskatchewan

RESEARCH PROJECT

Researchers and Collaborators

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Description

The goal of this project is to determine how the cumulative impacts of development on Treaty 8 First Nations' communities can best be managed given the diverse nature of resource developments and policy environments that exist in the different provincial/territorial jurisdictions throughout the Treaty 8 settlement area. It will develop modules for the implementation of a cumulative effects tool, including both social and ecological impacts, and will examine the policy environments that are leading to differing interpretations of the Treaty.

The focus of the project is on shared land-use issues in the context of resource development in the Treaty 8 region. Specifically, the investigators will seek to identify ways in which Treaty 8 peoples can sustain their culture and livelihood, as defined constitutionally and by the Treaty, within the context of increasing levels of forestry activity, oil and gas exploration and development and other resource development.

Researchers and Collaborators

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Description

Aboriginal culture and land-use practices are synonymous with sustainability. An understanding of the economics of Aboriginal land-use is a prerequisite to understanding the economics of SFM. The project will provide a different perspective on the value of Aboriginal land-use and new valuation tools which can be used across the country.

The main purpose of the project is to develop a Decision Support Tool to assess the value and impacts of forestry and natural resource development projects on Aboriginal economies.

The specific objectives are:

1. To develop a method to value traditional Aboriginal land-use and use the method in an Aboriginal bush economy;
2. To modify this method to assess the value and impacts of natural resource development projects on Aboriginal economies, and use it in an Aboriginal economy; and
3. To develop scenarios to demonstrate the use of these valuation methods to government and industry decision-makers.

The economics of Aboriginal
land-use

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Canada-wide

Evaluating the potential effect of insect outbreaks on sustainable forest management

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Innu Nation

Research Locations

Canada-wide

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Description

This project will investigate how insect outbreaks of major forest pests across the country interact with processes at different spatiotemporal scales (i.e., stand composition, landscape pattern, and regional climate change) to affect successional trajectories across the nation.

Annually insect outbreaks affect more forest in Canada on average than fires, and in the US they are more costly to society than any other disturbance type. Ensuring even flow to mills and making future wood projections can be a problem following episodic insect outbreaks that affect stands across an insect's range.

Researchers and Collaborators

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Description

The project aims to analyze the amount of management change induced by forest certification. A second research objective is to investigate the perceptions of various stakeholders over forest certification effectiveness.

The study will:

1. Review trends in forest certification and its effects on forest operations, economic situation and social issues (Aboriginal and non-Aboriginal);
2. Investigate the extent of behavioural change prompted by forest certification in forest managing entities, individual consumers and large retailers (wholesalers, brokers, etc.); and
3. Compare the degree of behavioural change that occurred in certified and non-certified forest managing entities.

Although forest certification has gained momentum in Canada, little has been done to assess its effectiveness across the nation. This study attempts to close this gap.

Assessing the effectiveness of
forest certification as a means to
achieve SFM in Canada

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Research Locations

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Impacts of technological innovations in the forest products value chain on SFM

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Research Locations

Canada-wide

RESEARCH PROJECT

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Description

Consumption of forest products is a major source of pressure on forest ecosystems. However, relatively little research has been undertaken to link societal demand for forest products to the challenges confronting sustainable forest management (SFM). Over the last 40 years, the forest sector has made substantial progress in substituting knowledge and capital for material input and such developments have had significant impacts on SFM.

For example, technological developments in the Canadian forest products sector have resulted in:

1. Increased wood, panel and fibre recovery rates;
2. Improved productivity;
3. Increased automation and mechanization;
4. Consolidation leading to fewer, larger mills;
5. Significant shifts in the wood and fibre characteristics sought from the forest;
6. Fewer jobs per unit round wood harvested; and
7. Fewer forest dependent communities.

The Canadian forest products sector is largely focused on two value chains:

1. The solid wood panels value chain leading to the construction of wood framed buildings;
2. The pulp and paper value chain manufacturing market pulp, papers, packaging and hygiene products.

This study will investigate both value chains and will determine the impact of technological developments along each value chain on SFM in Canada over the last 30 years.

Researchers and Collaborators

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Implementing and testing decision support tools to evaluate forest management scenarios for SFM: a multiple scale and perspective

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Description

The project will use the model toolkit developed during the three years of the project to investigate how management activities and disturbance across the boreal forest biome in Canada and Europe interact with processes at multiple spatiotemporal scales (i.e., stand composition, landscape pattern, and regional climate change) to affect successional trajectories.

This initiative has four objectives:

1. Identify key drivers of change and their associated scale;
2. Develop a model toolkit to model the drivers and their interactions;
3. Rapidly parameterize and calibrate the tools to a new location; and
4. Design and evaluate a range of sustainable management scenarios.

Participating Partners and Affiliates

Natural Resources Canada - Canadian Forest Service
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Research Locations

Canada-wide

New modeling approaches for predicting hydrologic effects of intense forest disturbance

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Research Locations

Alberta
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RESEARCH PROJECT

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Description

This research will address hydrological impacts of intense disturbance of terrestrial systems, and focuses on the mountain pine beetle (MPB) outbreak in western Canada. MPB could ultimately spread across boreal Canada through the extensive Jack pine stands. In addition, outbreaks of other forest pests are likely to occur throughout Canada (e.g., spruce bark beetle) in association with the current tendency to warmer climatic conditions.

Hydrologic changes associated with large-scale forest disturbance and subsequent salvage logging could increase peak flows and thus increase risks of channel instability and damage to fish habitat and human infrastructure. Earlier melt could exacerbate summer low flows, causing stress to the aquatic environment and shortages of water supply. Models are required that can be applied operationally to predict post-disturbance hydrologic changes. This will inform managers about the tradeoffs between the economic and possible silvicultural benefits from salvage harvesting and prompt reforestation and the increased risks associated with stream flow changes. Such models would promote the objectives of sustainable forest management by allowing concerned parties to explore the potential outcomes of different management strategies.

Researchers and Collaborators

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Description

Environmental conditions and natural disturbances such as forest fires, insect epidemics and diseases all contribute to shape the forest. Since the vegetation of the boreal forest is adapted to these disturbances, ecosystem-based management (EBM), by attempting to emulate this dynamic, may prove a promising avenue (Booth et al. 1993, Harvey et al. 2002). While logging can never fully duplicate the effects of fire, efforts can nonetheless be made in order to approximate certain characteristics affected by the passage of fire such as size, shape and pattern as well as retention of woody debris and rate of cut.

This project will develop an experimental implementation of EBM on a area of the boreal forest with its own defined disturbance regime. It will address the meaningful changes to forest policy advocated by the task force on the management of Québec's public forests (Commission Coulombe, 2004), and the Ministry of Natural Resources and Wildlife of Québec (MRNW). The difficulty of this initiative resides in integrating EBM in present forestry practices in order to maintain biodiversity and ecosystem functions, while meeting the expectations of the public, in particular those of the Aboriginal communities, and while maintaining the wood supply to the different mills, at reasonable costs.

Development and experimentation of sustainable forest management strategies: biological and Aboriginal feasibility

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Tembec Inc.

Communauté Kitchisakik

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Research Locations

Québec

Natural capital and ecosystem valuation as a tool for sustainable forest management

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Initiated April 2007

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Research Locations

Canada-wide

Researchers and Collaborators

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Description

This project will include a comprehensive literature review that will focus on a wide array of domestic and international sources, and include examples of innovative, market-based approaches to managing forest natural capital. Interviews will be held with leading experts both in Canada and abroad. A combination of written and telephone interviews will be used to elicit relevant information, within the study's research framework.

The study will identify and discuss legal issues for implementation of fiscal instruments, such as compliance with multilateral trade rules, jurisdiction under Canada's constitution, the range of administrative and political issues that will need to be assessed if new approaches are to be adopted. The report also will identify key areas of uncertainty where further research is needed. It will identify practical steps, such as pilot projects, to assist in developing and testing valuation and policy approaches in this emerging area.

The final report will focus on issues concerning natural capital valuation, and policy approaches to incorporate valuation into SFM. The report will include both theoretical approaches, and experience from practice regarding these issues. Key barriers including challenges in valuation methodology, and in policy approaches to implementation will also be identified.

Researchers and Collaborators

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Donnelly Ecological
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Dan Moore

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British Columbia

Description

This project will assess potential effects of forest management and disturbance on surface water and groundwater resources, based on a synthesis of scientific/government literature and expert opinion.

This will lead to:

1. Data synthesis;
2. Meta analyses to support a systems-based understanding of scientific, social, economic and political factors influencing water resources in forested landscapes; and
3. Thought experiments to explore interactions of climate change and disturbance, both natural and anthropogenic, on water resources in forested landscapes (e.g., extreme disturbances).

This work will lead to recommendations for Sustainable Forest Management (SFM) strategies and operational practices to minimize potential adverse effects to water resources.

Implications for water resources of activities on the forested land base

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Research Locations

Canada-wide

Climate change vulnerability and adaptation for forest management in Canada

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Initiated April 2007

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Research Locations

Canada-wide

STATE-OF-KNOWLEDGE PROJECT

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Description

Understanding the wide range of effects of climate change is critical to planning in the forest sector, especially given the long-term nature of forest management decision-making. While a great deal of research has been carried out on the biophysical impacts of climate change on forests (e.g. fires, insects, tree growth), there are gaps in the literature on how these effects can be integrated into forest management and planning. Specifically, little is known about the vulnerability of Canadian forest management to climate change, and how adaptation options can be implemented within Canada's forest management policy and regulatory systems. This state of knowledge review focusing on climate change impacts and adaptation will help to identify key research gaps, prioritize these gaps, and direct and channel future Canadian research in this area.

Researchers and Collaborators

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Description

This initiative addresses the ecological, economic and social implications of altering the composition of mixedwood forests. Specifically, it will address the significance of a change in composition of mixedwood forests at various scales in terms of effects on ecological characteristics and processes of the forest. We will include consideration of biodiversity and functional aspects of carbon and nutrient budgets.

Ecological implications of altering
the composition of mixedwood
forests

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Research Locations

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Protected areas in sustainable forest management: finding innovation across knowledge systems

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Initiated April 2007

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Government of Yukon
Government of Newfoundland and Labrador
Government of Alberta

Research Locations

Canada-wide

Researchers and Collaborators

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Description

Sustainable forest management (SFM) is a goal expressed by government agencies, Aboriginal peoples, resource based communities, NGOs, and industry in Canada. However, each has differing viewpoints with respect to the relative contribution of protected areas (PAs) to SFM. A key component of this may be different views along a continuum of what “protected” means; from strictly protected and spatially exclusive areas, through to variable management prescriptions or regulations in the landscape. The term protected area may also create discomfort, although common goals for conservation and SFM exist. Issues of scale and overlapping jurisdictions/land tenure have the potential to create controversy.

Researchers and Collaborators

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Description

In recent years, researchers have examined case studies and reviewed a diversity of issues, noting particularly both the benefits of and barriers to collaboration and the role of governance in establishing the context for relations. It is now appropriate to go beyond case studies, to review combined experience and research of various forms of collaboration.

Various case studies and synthesis documents will be reviewed that describe incentives, practices, activities and policies that encourage (or hinder) relations between Aboriginal, industry and Crown interests. The experiential knowledge of key personnel involved in these efforts will be accessed to consider both barriers to Aboriginal involvement and facilitating factors. The project will consider the advantages, disadvantages and effectiveness of consultation processes, governance arrangements, traditional land-use mapping, negotiated harmonization measures, current tenure systems, rights, policy constraints and institutional/economic arrangements.

Reviewing Canadian experience of harmonization between First Nations and forest industries

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Treaty 8 First Nations of Alberta

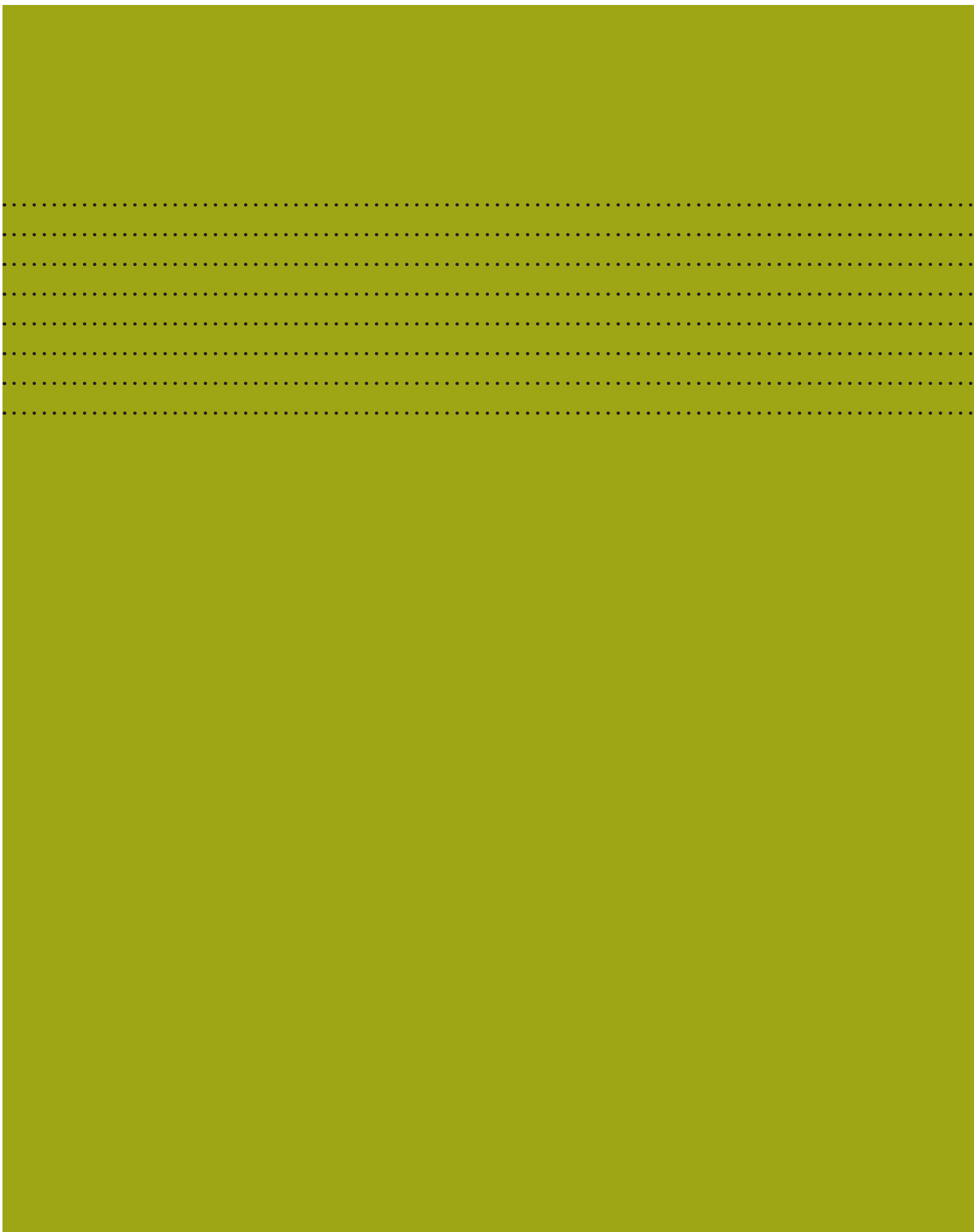
Confederacy of Mainland Micmac

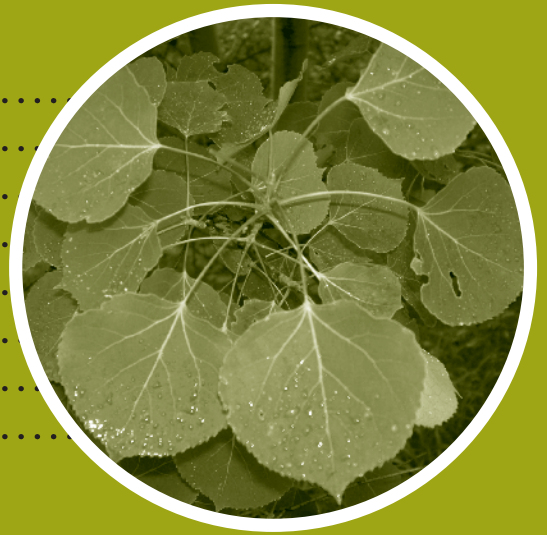
Métis National Council

Institute du développement durable des Premières Nation
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Research Locations

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SFM NETWORK PUBLICATIONS

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Research Notes

The BC Tree Farm Licence #49 project

The TFL #49 project was a multi-disciplinary research project in southeast British Columbia led by the University of British Columbia. The project objective was the development a decision-support framework for implementing sustainable forest management. Notes 18, 19 and 20 stem from this project.

No. 18 **Criteria and indicators and a decision support system for an alternative zoning approach to sustainable forest management**

Implementing sustainable forest management requires managers to consider and balance multiple values. This note outlines the process undertaken to identify and implement local ecological, social, and economic indicators tailored to a sustainable forest management framework for TFL 49. Using these indicators, a decision support system is being developed to assist forest managers in assessing tradeoffs using different management strategies and associated stand-level forestry practices.

No. 19 **Considering climate change in sustainable forest management**

Climate change is predicted to have a large influence on our forests. This note outlines how forest managers can reduce the risks posed by climate change by considering the potential responses of natural disturbances (such as forest fire) to climate change and integrating these into their management planning.

No. 20 **Modeling stand-level indicators of sustainable forest management**

Computer-based modeling is a useful tool for predicting trends in stand-level indicators of sustainable forest management. The note describes some of the features of computer models of stand-level processes, including the hybrid model FORECAST used in the TFL 49 project.

Sense of place in forest communities

No. 21 **Assessing SFM values: a tool for describing attachment to place**

A central challenge confronting forest managers is the task of incorporating public values into land management planning. Values can often be difficult for the public to communicate and for forest managers to understand in such a way that the value can be managed. This note presents a photography-based method for people to describe the forest features and places they value.

Wood-ethanol

No. 22 **Wood-ethanol in Canada: production technologies, wood sources and policy incentives**

Wood-ethanol, or bio-fuel, is well-positioned as a growth industry in Canada. This note provides an overview of wood-ethanol production technologies, wood and fibre sources and the many policy incentives for wood-ethanol production in Canada.

No. 23 **Wood-ethanol plantations: implications for sustainable forest management**

Ethanol is gaining market share in North America as an alternative fuel. Consequently, some forest and land managers are becoming more interested in establishing tree plantations to produce wood-ethanol. This note reviews the economic, ecological and social implications of wood-ethanol plantations for sustainable forest management and the local economy.

Synthesis Documents

Fire Cycles and Forest Management: An Alternative Approach for Management of the Boreal Forest

Forest managers in Canada urgently require solutions for achieving the goals of sustainable development and the conservation of biodiversity. To attain these goals, many have suggested the use of landscape pattern resulting from naturally occurring disturbances as a template for forest management. Forest fires constitute one of the main disturbances affecting forest dynamics in the boreal. Fire cycle studies have revealed the high variability of this parameter from one region to the next. Fire cycle is often used as a forest management tool, but since it is highly variable in time and space, using the mean time since fire seems to be a simpler and more realistic approach.

Published literature was used to determine both fire cycle and mean time since fire of forests across the Canadian boreal forest. Based on the mean time since fire of the stands, the percentage of forest which could be managed to reproduce the fire controlled age structure conditions found for each Canadian region studied was determined. This report provides forest managers with a tabular tool that can be used to help achieve sustainable forest management and the conservation of biodiversity.

Public Participation in Sustainable Forest Management: A Reference Guide

Over the last few decades, public participation has emerged as a key component of forest management and policy decision-making. Forest managers are now faced with enacting a transition from an expert-driven, regulatory, and science-based system to a more inclusive and socially responsive model of decision-making. However, most forest managers are not trained in such techniques and have many questions about why and how they should meet these new objectives. This document describes principles for public involvement and provides a description of potential tools for effectively involving the public in forest management and policy.

This report also provides a table in poster format that summarizes much of the information contained in the description of public participation tools. It is intended as a menu or quick reference guide for strategic and operational forest managers and planners, to help them consider the strengths and weaknesses of various tools as they develop a public participation program.

Good public participation initiatives create a place where criticism and respectful dissent are welcome. Using these tools and processes to their full potential will allow resource managers to move from managing public interest and controlling dissent to meaningfully incorporating public interests and conflicting values into the planning process.

SELECTED REFEREED AND NON-REFEREED JOURNAL ARTICLES from SFM Network-funded research

Refereed Contributions

Aakala, T.; Kuuluvainen, T.; De Grandpré, L.; and Gauthier, S. **Trees dying standing in the northeastern boreal old-growth forests of Québec: spatial patterns, rates, and temporal variation.** *Canadian Journal of Forest Research* 2007. Vol: 37, Pg.50-61.

Belleau, A.; Bergeron, Y.; Leduc, A.; Gauthier, S.; and Fall, A. **Using temporal variation to assess the range of forest conditions expected under natural conditions to guide management strategies in Canadian boreal regions.** *Forest Chronicle* 2007. Vol: 83, Pg.72-83.

Bergeron, Y.; Cyr, D.; Drever, C.R.; Flannigan, M.; Gauthier, S.; Kneeshaw, D.; Lauzon, E.; Leduc, A.; Le Goff, H.; Lesieur, D.; and Logan, K. **Past, current and future fire frequency in Québec's commercial forests: implications.** *Canadian Journal of Forest Research* 2006. Vol: 36, Pg. 2737-2744.

Berninger, K. **Neljän intressiryhmän näkemyksiä Kaakkois-Suomen metsien hoidosta.** (In Finnish) (Translated title: Views of four interest groups on forest management in Southeastern Finland); *Alue ja ympäristö* 2007.

Berninger, K. **Millaisia teemoja ja painotuksia sisältyy kaakkoissuomalaisten mielestä kestävään metsätalouteen? Neljän intressiryhmän ajatuksia.** (In Finnish) (Translated title: Which themes and rankings do forest users in Southeastern Finland include in SFM?) *Metsätieteen aikakauskirja* 2006.

Biggs, J.; Laaksonen-Craig, S.; Niqidet, K.; and van Kooten, G. C. **Resolving Canada-U.S. Trade Disputes in Agriculture and Forestry: Lessons from Lumber.** *Canadian Public Policy* 2006. Vol: XXXII, Issue: June, Pg.143-155.

Bladon, K.D.; Silins, U.; Landhäusser, U.; and Lieffers, V.J. **Differential transpiration by three boreal tree species in response to increased evaporative demand after variable retention harvesting.** *Agricultural and Forest Meteorology* 2006: Vol: 138, Pg.104-119.

Boucher, D.; Gauthier, S.; and De Grandpré, L. **Structural changes in coniferous stands along a chronosequence and a productivity gradient in the northeastern boreal forest of Québec.** *Écoscience* 2006. Vol: 13, Pg.172-180.

Bourgeois, L.; Kneeshaw, D.; and Boisseau, G. **Les routes forestières : le Québec doit considérer les impacts.** *Vertigo* 2006.

Bourque, C.P.A.; Neilson, E.T.; Gruenwald, C.; Perrin, S.F.; Hiltz, J.C.; Blin, Y.A.; Horsman, G.V.; Parker, M.S.; Thorburn, C.B.; Corey, M.M.; Meng, F.-R.; and Swift, D.E. **Generating forest management plans with the explicit purpose to maximize carbon sequestration at the landscape level.** *Mitigation and Adaptation Strategies for Global Change* 2007. Vol: DOI 10.1007/s11027-006-9072-3.

Buddle, C.M.; Langor, D.W.; Pohl, G.R.; and Spence, J.R. **Arthropod responses to harvesting and wildfire: Implications for emulation of natural disturbance in forest management.** *Biological Conservation* 2006. Vol: 128, Pg. 346-357.

Buttle, J.M. **Mapping first-order controls on streamflow from drainage basins: the T3 template.** *Hydrological Processes* 2006. Vol: 20, Pg. 3415-3422.

Cooke, B.J.; and Lorenzetti, F. **The dynamics of forest tent caterpillar outbreaks in Québec, Canada.** *Forest Ecology and Management* 2006. Vol: 226, Pg.110-121.

Didion, M.; Fortin, M.J.; and Fall, A. **Forest age structure as indicator of boreal forest sustainability under alternative management and fire regimes: A landscape level sensitivity analysis.** *Ecological Modelling* 2007.

Elson, L.T.; Schwab, F.E.; and Simon, N.P.P. **Winter food habits of Lagopus lagopus (Willow Ptarmigan) as a mechanism to explain winter sexual segregation.** *Northeastern Naturalist* 2007.

Fenton, N.; and Bergeron, Y. **Sphagnum community change after partial harvest in black spruce boreal forests.** *Forest Ecology and Management* 2007. Vol: 242, Pg. 24-33.

Fish, H.; Lieffers, V.J.; Silins, U.; and Hall, R.J. **Crown shyness in lodgepole pine stands of varying stand height, density and site index in the upper foothills of Alberta.** *Canadian Journal of Forest Research* 2006. Vol: 36, Pg. 2104-2111.

Fricker, J.M.; Chen, H.Y. H.; and Wang, J.R. **Stand age structural dynamics of North American boreal forests and implications for forest management practices.** *International Forestry Reviews* 2006. Vol: 8, Issue: 4, Pg.495-405.

Girardin, M.P.; Tardif, J.; Flannigan, M.D.; and Y. Bergeron. **Forest fire-conductive drought variability in the southern Canadian boreal forest and the associated climatology inferred from tree-rings.** *Canadian Water Resources Journal* 2006. Vol: 31, Pg.275-296.

Girardin, M.P.; Bergeron, Y.; Tardif, J.C.; Flannigan, M.D.; Gauthier, S.; and Mudelsee, M. **A 229-year dendroclimatic-inferred record of annual forest fire activity for the Boreal Shield of Canada.** *International Journal of Wildland Fire* 2006. Vol: 15, Pg.375-388.

Greene, D.F.; Gauthier, S.; Noël, J.; Rousseau, M.; and Bergeron, Y. **A field experiment to determine the effect of post-fire salvage on seedbeds and tree regeneration.** *Frontiers in Ecology and the Environment* 2006. Vol: 4, Pg. 69-74.

Hannam, K.D.; Quideau, S.A.; and Kishchuk, B.E. **Forest floor microbial communities in relation to stand composition and timber harvesting in northern Alberta.** *Soil Biology & Biochemistry* 2006. Vol: 38, Pg.2565-2575.

SELECTED REFEREED AND NON-REFEREED JOURNAL ARTICLES from SFM Network-funded research

Harshaw, H.W.; Kozak, R.A.; and Sheppard, S.R.J. **How well are outdoor recreationists represented in forest land-use planning? Perceptions of recreationists in the Sea-to-Sky Corridor of BC.** *Landscape & Urban Planning* 2006. Vol: 78, Issue: 1-2, Pg.33-49.

Harshaw, H. W.; Sheppard, S.R.J.; and Kozak, R.A. **Outdoor recreation and forest management: A plea for empirical data.** *Forestry Chronicle* 2007.

Hart, S.A.; and Chen H.Y.H. **Understory vegetation dynamics of North American boreal forests.** *Critical Reviews in Plant Sciences* 2006. Vol: 25, Issue: 3, Pg.381-397.

Hassan, Q.K.; Bourque, C.P-A.; and Meng, F.R. **Estimation of daytime net ecosystem CO₂ exchange over balsam fir forests in eastern Canada: combining averaged tower-based flux measurements with remotely sensed MODIS data.** *Canadian Journal of Remote Sensing* 2006. Vol: 32, Pg. 405-416.

Hassan, Q.K.; Bourque, C.P.A.; Meng, F.R.; Arp, P.; MacLean, D.; and Zhang, Y. **Net daytime carbon dioxide fluxes over eastern Canadian forests: an application of MODIS imagery.** IGARSS '06, Proceedings 2006, IEEE International Geoscience and Remote Sensing Symposium; August 2006, Denver, CO. The Institute of Electrical and Electronics Engineers, Inc. (IEEE), New York. Pg.1717-1720.

Jacobs, J.M.; Spence, J.R.; and Langor, D.W. **Influence of boreal forest succession and dead wood qualities on saproxylic beetles.** *Agricultural & Forest Entomology* 2007. Vol: 9, Pg. 2-15.

Kneeshaw, D.; Kobe, R.; Coates, D.; and Messier, C. **Sapling size influences shade tolerance ranking among southern boreal tree species.** *Journal of Ecology* 2006.

Koivula, M.; Cobb, T.P.; Dechene, A.D.; Jacobs, J.M.; and Spence, J.R. **Responses of two *Sericoda* Kirby 1937 (Coleoptera: Carabidae) species to forest harvesting, wildfire and burn severity.** *Entomologia Fennica* 2006. Vol: 17, Pg. 315-324.

Langor, D.W.; and Spence, J.R. **Arthropods as ecological indicators of sustainability in Canadian forests.** *Forestry Chronicle* 2006. Vol: 82, Pg. 344-350.

Langor, D.W.; Spence, J.R.; Hammond, H.E.J.; Jacobs, J.M.; and Cobb, T.P. **Maintaining saproxylic insects in extensively managed boreal forests: the Canadian experience.** *USDA Forest Service, General Technical Reports* 2006. Vol: SRS-93, Pg. 83-97.

Lauzon, E.; Kneeshaw, D.; and Bergeron, Y. **Forest fire history reconstruction (1680-2003) in the Gaspésie region of eastern Canada.** *Forest Ecology and Management* 2007. Vol: 244, Pg.41-49.

Luckert, M.K.; **Property rights, forest rents and trade: The case of US countervailing duties on Canadian softwood lumber.** *Forest Policy and Economics* 2007. Vol: 9, Issue: 6, Pg. 581-590.

Meitner, M.J.; Harshaw, H.W.; Sheppard, S.R.J.; and Picard P. **Extension Note 8 - Criterion 9: Quality-of-life indicators.** *Journal of Ecosystems and Management* 2006. Vol: 7, Issue: 1, Pg.739-742.

Meng, S.X.; Lieffers, V.J.; Reid, D.E.B.; Rudnicki, M.; Silins, U.; and Jin, M. **Reduced stem bending increases the height growth of tall pines.** *The Journal of Experimental Botany* 2006. Vol: 57, Pg. 3175-3182.

Mogus, A.; Stennes, B.; and van Kooten, G.C. **Canada-US softwood lumber trade revisited: substitution bias in the context of a spatial price equilibrium framework.** *Forest Science* 2006. Vol: 52, Issue: 4, Pg. 411-21.

Niquidet, K.; and van Kooten, G.C. **Transaction evidence appraisal: competition in British Columbia's stumpage markets.** *Forest Science* 2006. Vol: 52, Issue: 4, Pg. 451-9.

Nitschke, C.R.; and Innes, J.L. **Interactions between fire, climate change and forest biodiversity. Perspectives in agriculture.** *Veterinary Science, Nutrition and Natural Resources* 2006. Vol: 1, Issue: 60, Pg.1-9.

Paoletti, E.; Bytnerowicz, A.; Andersen, C.; Augustaitis, A.; Ferretti, M.; Grulke, N.; Günthardt-Goerg, M.S.; Innes, J.L.; Johnson, D.; Karnosky, D.; Luangjame, J.; Matyssek, R.; McNulty, S.; Müller-Starck, G.; Musselman, R.; and Percy, K. **Impacts of air pollution and climate change on forest ecosystems – emerging research needs.** *The Scientific World Journal* 2007. Vol: 7, Issue: S1, Pg.1-8.

Phillips, I.D.; Cobb, T.P.; Spence, J.R.; and Brigham, R.M. **Salvage logging, edge effects and carabid beetles: connections to conservation and sustainable forest management.** *Environmental Entomology* 2006. Vol: 35, Pg. 950-957.

Reed, M.G.; and McIlveen, K. **Other voices from the neighbourhood: Re-considering success in community forestry.** *Society and Natural Resources* 2007.

Reed, M.G.; and McIlveen, K. **Toward a pluralistic civic science?: assessing community forestry.** *Society and Natural Resources* 2006. Vol: 19, Issue: 7, Pg. 591-608.

Shahi, C.; Kant, S.; and Yang, F. **The law of one price in the North American softwood lumber markets.** *Forest Science* 2006. Vol: 52, Issue: 4, Pg. 353-366.

Sheppard, S.R.J.; Meitner, M.J.; Harshaw, H.W.; Wilson, N.; and Pearce, C. **Extension Note 3 - Public processes in sustainable forest management for the Arrow Forest District.** *Journal of Ecosystems and Management* 2006. Vol: 7, Issue: 1, Pg. 57-67.

SELECTED REFEREED AND NON-REFEREED JOURNAL ARTICLES

from SFM Network-funded research

Sheppard, S.R.J.; Harshaw, H.W.; and Lewis, J.L. **A review and synthesis of social indicators for sustainable forest management.** *BC Journal of Ecosystem Management* 2007.

Stadt, K.J., and Lieffers, V.J. **Comparing PAR transmission models for forest understorey vegetation.** *Applied Vegetation Science* 2005. Vol: 8, Pg. 65-76.

St-Arnaud, M.; Sauv , L.; and Kneeshaw, D. **For t identitaire, for t partag e : Trajectoire d'une recherche participative chez les Anicinapek de Kitcisakik.** *VertigO* 2006.

Toppinen, A.; L htinen, K.; and Laaksonen-Craig, S. **Performance fluctuations and internationalization of operations: evidence from Finnish forest industry companies.** *Journal of Forest Products Business Research* 2006. Vol: 3, Issue: 2.

Wesley, J.; Williams, D.J.M.; Langor, D.W.; and Spence, J.R. **Spruce beetle (Coleoptera: Scolytidae) parasitoids: cephalic morphology of larvae and a key to species (Hymenoptera: Braconidae, Pteromalidae).** *The Canadian Entomologist* 2006. Vol: 138, Pg. 87-90.

Yang, F.; Kant, S.; and Shahi, C. **Market performance of the government controlled but market-based stumpage system of Ontario.** *Forest Science* 2006. Vol: 52, Issue: 4, Pg. 367-380.

Non-Refereed Contributions

Ambus, L.; **Great expectations for community forest in B.C.** *Dogwood Initiative Lands and People Bulletin* 2006. Vol: 4, Issue: 2.

Claveau, Y.; Kneeshaw, D. et Gauthier, S. **Nos pratiques s'inspirent-elles vraiment des feux?** *L'aubelle* 2007. Vol: 151, Pg. 14-15.

No l, J.; Gauthier, S.; et Drapeau, P. **La coupe de r cup ration dans oles for ts br l es - R colter et conserver le bois mort sur pied.** *Le couvert bor al* 2007. Vol: 3, Pg. 19-21.

Kneeshaw, D., Burton, P.J.; and Munson, A. (Guest eds) **Ecosystem management – Can we manage the matrix while conserving the pieces?** *Canadian Journal of Forest Research* 2006. Vol: 36, Issue: 11.

Kneeshaw, D.; et Gauthier, S.; **Pour un am nagement  cosyst mique au Qu bec : cinq suggestions inspir es d'ailleurs.** *L'aubelle* 2006.

Kneeshaw, D.; et Gauthier, S. **Cinq suggestions inspir es d'ailleurs pour am liorer la foresterie au Qu bec.** *In Vivo* 2006.

Kneeshaw, D.; et Gauthier, S. **Accessibilit  foresti re accrue. Panac e ou bo te de Pandore?** *T oros* 2006. Vol: 25, Pg. 36-40.

Simon, N.; Sturtevant, B.; Fall, A.; and Miranda, B. **Fire-harvest interactions in central Labrador (Canada): Will harvesting change the fire regime?** *Proceedings of the Third International Fire Ecology and Management Congress* 2006.

Nitschke, C.R. **The vulnerability of grassland ecosystems and species over the next 100 years of climate change.** *BC Grasslands*, Spring 2007: Magazine of the Grasslands Conservation Council of British Columbia.

Nitschke, C.R., Hickey, G.M.; and Innes, J.L. **Effectiveness monitoring of biodiversity in dynamic environments: Is it possible?** *General Technical Report PNW-GTR-706*. Portland, OR: U.S. Department of Agriculture, Forest Service 2007. Pg. 144-145.

Graduate Theses

Astrup, Rasmus **Modeling growth of understory aspen and spruce in western boreal Canada.** UBC Degree: PhD Dissertation

Bladon, Kevin **Stress and mortality of four boreal tree species following variable retention harvesting.** University of Alberta Degree: PhD

Boyd, Jeremy **Aboriginal economic development by two Cariboo-Chilcotin forestry joint ventures.** UBC Degree: MSc

Chamberlain, Brent **An evolutionary automata for visual resource management planning and harvest design.** UBC Degree: MSc

Côté, Pascal **Effets de différents scénarios de TRIADE sur le maintien de l'intégrité écologique du territoire.** UQAM Degree: Master

Hazlett, Paul **Effects of forest harvesting practices on shallow groundwater flux and nutrient concentrations in riparian zones adjacent to boreal lakes.** University of Guelph Degree: PhD

Johns, Rob **Intra-tree variation in foliage quality drives the sex-biased foraging behavior of a specialist herbivore, *Pikonema alaskensis*, within juvenile black spruce.** University of New Brunswick Degree: PhD

Kahzri, Olfa **Effect économique du zonage fonctionnel et du maintien de la biodiversité en forêt boréale.** UQAM Degree: PhD

Martin, Adam **Post-harvest tree mortality following single tree selection silviculture.** University of Toronto Degree: Masters in Forest Conservation

McGuigan, Erin **Of Moose and Man: Collaborating to identify First Nations' priorities for cumulative impact assessment in northeast British Columbia.** UBC Degree: MSc

Murray, Sonia **The structure of freshwater fish assemblages and risks posed by oil and gas development in northeastern British Columbia.** UBC Degree: MSc

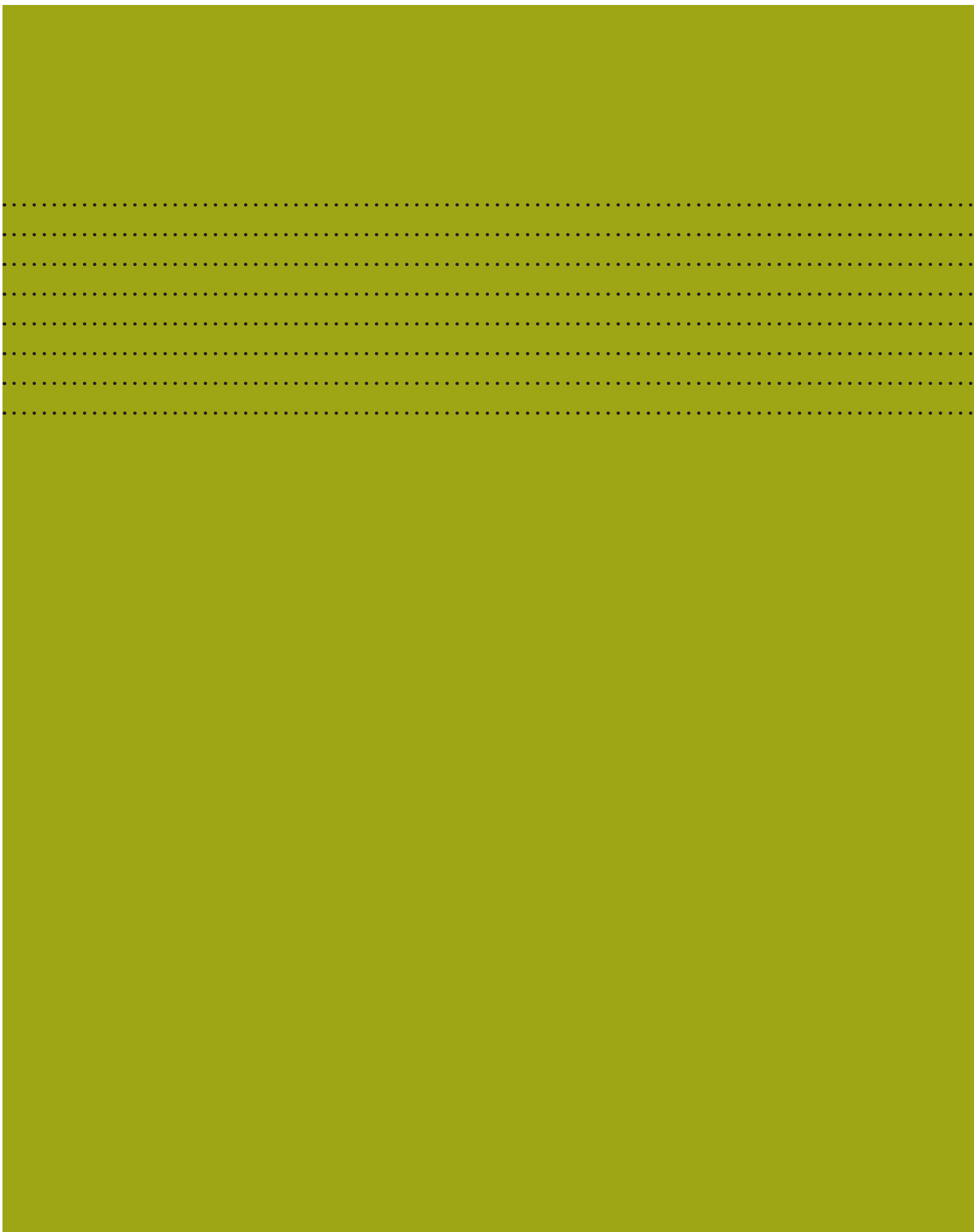
Neilson, Eric **Integrating carbon sequestration objectives into forest management planning.** University of New Brunswick Degree: MScF

Nitschke, Craig **Integrating climate change into forest planning: A spatial and temporal analysis of landscape vulnerability.** UBC Degree: PhD

Oaten, Dustin **Biodiversity within dry forests of the interior of British Columbia: The role of aspen and stand structure.** UBC Degree: MSc

Perger, Orsolya **Spatial and temporal aspects of multiple use forest management.** University of Calgary Degree: MA

Vaillancourt, Marie-Andrée **Caractérisation de la disponibilité des arbres potentiels à la nidification du Garrot d'Islande dans la forêt boréale de l'Est du Québec.** UQAM Degree: Maîtrise





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Ackom, Emmanuel

mcfarlanepimpa13	10
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Allen, D. Grant

mcfarlanepimpa13	10
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Alteyrac, Jerome

mcfarlanepimpa13	10
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Asselin, Hugo

valeriaodéve13	13
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B

Bélanger, Louis

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Bergeron, Yves

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macdonaldeecol13	17

Berkes, Fikret

davidson-huntitowa13	5
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Bokalo, Mike

comeaupinfl13	3
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Boon, Sarah

moorernewm13	12
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Bouthillier, Luc

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Boutin, Stan

adamowiczvecol13	2
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Brais, Suzanne

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Burton, Phil

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Buttle, Jim

creediimpl13	15
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C

Carlyle-Moses, Darryl

moorernewm13	12
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Chalifour, Nathalie

adamowiczvnatu13	14
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Chen, Han

comeaupinfl13	3
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Comeau, Phil

comeaupinfl13	3
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Creed, Irena

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Cumming, Steve

adamowiczvecol13	2
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D

Davidson-Hunt, Iain

davidson-huntitowa13	5
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Desrochers, Andre

cummingsappl13	4
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Donnelly, Margaret

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Doyon, Frédéric

messiercimpl13	11
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Drapeau, Pierre

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valeriaodéve13	13
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Duinker, Peter

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E

Elgie, Stewart

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F

Fortin, Daniel

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Fortin, Marie-Josée

messiercimpl13	11
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Frideres, James S.

frideresjbarr12	6
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SFM Network researchers and collaborators

BY SURNAME

G

Greenway, Ken

comeaupinfl13 3

H

Haider, Wolfgang

wiersmayprot13 18

Hauer, Grant

adamowiczvecol13 2

Hawkins, Chris

comeaupinfl13 3

Howlett, Michael

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Hvenegaard, Glen

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I

Imbeau, Louis

valeriaodéve13 13

Innes, John

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J

Johnston, Mark

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K

Kant, Shashi

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Kneeshaw, Dan

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Kozak, Robert A.

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L

Larson, Bruce

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Leduc, Alain

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M

Macdonald, Ellen

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MacLean, Dave

kneeshawdeval13 8

Mann, Rongzhou

kneeshawdeval13 8

Mcfarlane, Paul

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Messier, Christian

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Moore, Dan

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Moroni, Martin

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Munson, Alison D.

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N

Natcher, Dave

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P

Papaik, Michael

kneeshawdeval13 8

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Parlee, Brenda

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Pelletier, Martin

valeriaodéve13 13

Peters, Alex

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Q

Quideau, Sylvie

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SFM Network researchers and collaborators BY SURNAME

R

Raulier, Frédéric

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valeriaodéve13	13

Rice, Jim

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Ross, Monique

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Rubin, Ben

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S

Schmiegelow, Fiona

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Sidders, Roy

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Spence, John

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Trosper, Ron

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Turner, John

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V

Valeria, Osvaldo

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Vertinsky, Ilan

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W

Weber, Marian

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Weiler, Markus

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Wiersma, Yolanda

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Williamson, Tim

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Work, Tim

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Wyatt, Stephen

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BY ORGANIZATION

Universities

Dalhousie University

Duinker, Peter

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Lakehead University

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Memorial University of Newfoundland

Natcher, Dave

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Simon Fraser University

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Abitibi-Témiscamingue

Bergeron, Yves

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Wyatt, Stephen

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University of Alberta

Adamowicz, Vic

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Bokalo, Mike

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Boutin, Stan

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Comeau, Phil

comeaupinfl13 3

Hauer, Grant

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Quideau, Sylvie

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Spence, John

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University of British Columbia

Ackom, Emmanuel

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Alteyrac, Jerome

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Innes, John

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Kozak, Robert A.

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Mcfarlane, Paul	
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Moore, Dan	
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Trosper, Ron	
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Vertinsky, Ilan	
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Weiler, Markus	
moorernewm13	12

University of Calgary

Frideres, James S.	
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Ross, Monique	
frideresjbarr12	6

University of Manitoba

Berkes, Fikret	
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Davidson-Hunt, Iain	
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University of New Brunswick

MacLean, Dave	
kneeshawdeval13	8

University of Northern British Columbia

Boon, Sarah	
moorernewm13	12

Hawkins, Chris	
comeaupinfl13	3

University of Ottawa

Chalifour, Nathalie	
adamowiczvnatu13	14

Elgie, Stewart	
adamowiczvnatu13	14

University of Toronto

Allen, D. Grant	
mcfarlanepimpa13	10

Fortin, Marie-Josée	
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Kant, Shashi	
kantsthee13	7

University of Western Ontario

Creed, Irena	
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Rubin, Ben	
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Government Agencies

Natural Resources Canada - Canadian Forest Service

Burton, Phil	
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Moroni, Martin	
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Williamson, Tim	
johnstonmclim13	16

Alberta Research Council

Weber, Marian	
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Government of Alberta

Greenway, Ken	
comeaupinfl13	3

Government of Ontario

Sidders, Roy	
davidson-huntitowa13	5

Mann, Rongzhou	
kneeshawdeval13	8

Rice, Jim	
kneeshawdeval13	8

Saskatchewan Research Council

Johnston, Mark	
johnstonmclim13	16

Aboriginal Groups

Moose Cree First Nation

Turner, John	
davidson-huntitowa13	5

Whitefeather Forest Management Corporation

Peters, Alex	
davidson-huntitowa13	5

Other Organizations

Boreal Ecosystems Research Ltd

Cumming, Steve	
adamowiczvecol13	2

Donnelly Ecological Consulting Services

Donnelly, Margaret	
creediimpl13	15

Forêt Modèle Cri de Waswanipi

Pelletier, Martin	
valeriaodéve13	13

Gwich'in Renewable Resource Board, Inuvik, NT

Thompson, Amy	
johnstonmclim13	16

Institut Québécois d'Aménagement de la Forêt Feuillue

Doyon, Frédéric	
messiercimpl13	11

USDA Forest Service (United States)

Sturtevant, Brian	
kneeshawdeval13	8
messiercimpl13	11

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Canadian Forest Service)
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(Ministry of Natural Resources)
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(Ministère des Ressources naturelles et Faune)
- Government of Yukon
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Industries

- Abitibi Bowater Inc.
- Alberta-Pacific Forest Industries Inc.
- Canadian Forest Products Ltd.
- Daishowa-Marubeni International Ltd.
- J.D. Irving, Limited
- Louisiana-Pacific Canada Ltd.
- Manning Diversified Forest Products Ltd.
- Tembec Inc.
- Tolko Industries Ltd.
- Weyerhaeuser Company

NGO

- Ducks Unlimited Canada

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- Heart Lake First Nation
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- Little Red River Cree Nation
- Métis National Council
- Moose Cree First Nation
- Treaty 8 First Nations of Alberta

Institutions

- University of Alberta (host institution)
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- University of Victoria
- University of Waterloo
- University of Western Ontario
- University of Winnipeg
- Wilfrid Laurier University

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- Canadian Institute of Forestry
- Forest Ecosystem Science Cooperative, Inc.
- Forest Engineering Research Institute of Canada (FERIC)
- Fundy Model Forest
- Lake Abitibi Model Forest
- Manitoba Model Forest
- National Aboriginal Forestry Association