



Canadian Institute of Forestry
Institut forestier du Canada

Advancing Canada's Bioeconomy: A Summary of CIF-IFC Initiatives

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Presentation Overview

1. Introduction to the Canadian Institute of Forestry
2. Science – Extension – Education – Knowledge
3. CIF-IFC Bioenergy initiatives
 1. Island Lake Biomass Research and Demonstration Area
 2. Operation Biomass Harvest Study
 3. International Energy Agency Task 43
 4. National Standards for Solid Biomass Fuels
 5. Contribution Agreements
 6. General Knowledge Exchange

Canadian Institute of Forestry – Who We Are

- National voluntary association
 - 19 Sections Across Canada
- Mission: Provide national leadership in forestry, promote competency in forest professionals, and foster public awareness of Canadian and international forestry issues.
- Knowledge Exchange
 - *The Forestry Chronicle*
 - Electronic lectures
 - workshops





- Provide leadership in forest science, extension and knowledge exchange at regional and national scales
- Ready-made audience and platform
 - Membership
 - Partnerships
 - Public at large
- Make science and research accessible and relevant



Science-Extension-Education-Knowledge

Natural
Resource
Inventories
and Spatial
Modeling

Silviculture,
Productivity
and Value

Biodiversity,
Wildlife &
Ecological
Processes

Extension
and
Knowledge
Exchange

Community
Outreach

Sustainable
Biomass for
Bioenergy

Island Lake Biomass Harvest Research and Demonstration Area (Chapleau)

- CFS – MNRF research project
- Objective:
 - Restore high quality boreal conifer stands through integrated forest, biomass harvest and regeneration treatments
- Ecological implication of biomass harvesting:
 - Soil processes
 - Stand productivity
 - Vegetation
 - Soil biodiversity
- Northeast Superior Forest Community
 - Presence of forest products companies
 - Support from the communities
 - Need for economic diversification
- Analyze site level ecological processes
 - treatments in 2 forest conditions: mature commercial forest, and degraded forest
 - Soil processes, stand productivity, microclimate, vegetation and soil biodiversity



Operational Biomass Harvest Study – Petawawa Research Forest

- Canadian Wood Fibre Centre and Ministry of Natural Resources and Forestry research project

- Evaluate the effects of biomass harvesting in partial harvest systems on stand-level productivity and biodiversity, and the economic feasibility

1. Silviculture

- Effectiveness of harvesting low quality pine mixed wood stands into high quality pine stands
- Effects of biofibre harvest on the sustainability of forest biodiversity and soil nutrients

2. Economics

- Compare costs and revenues biofibre harvest vs normal harvesting operations
- Volumes and costs for delivering biofibre
- Investigate if revenue from biofibre harvest can offset silviculture costs

3. Policy

- Influence optimal industrial use of the biofibre



International Energy Agency Task 43

CIF-IFC coordinating Canada's role in IEA Task 43 (2013-2015)

- OPG, CCFM, Alberta Innovates, BC MFLNR
- Task 43: Promote sound bioenergy development that is driven by well-informed decisions in business, governments and elsewhere
 - Monitoring sustainability certification of bioenergy
 - Mobilizing sustainable bioenergy supply chains



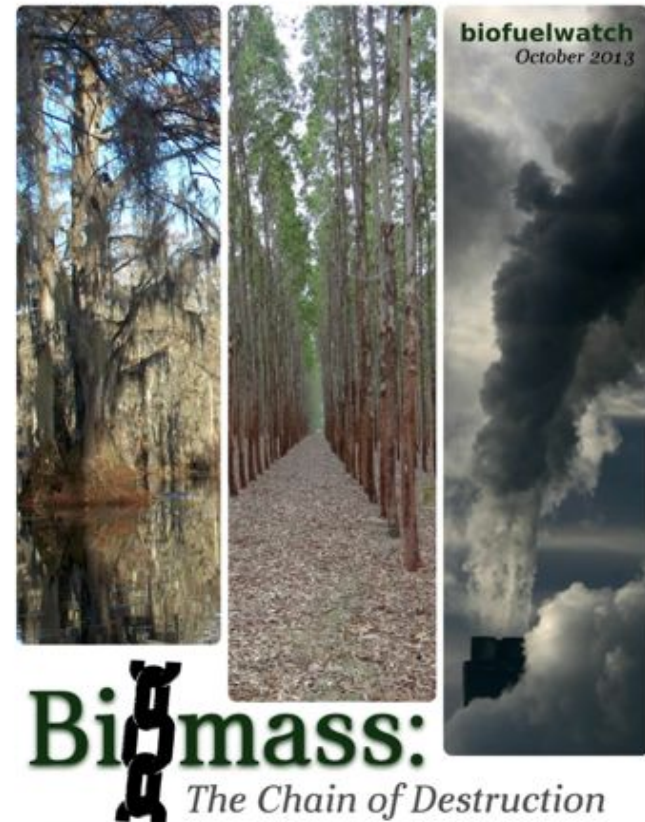
International Energy Agency Task 43

- Canadian Provincial Policies vs EU RED

- Potential to achieve same objectives
- Conflicting concepts of sustainability in terminology
- Potential barriers to access certain international markets

- Knowledge exchange:

- Articles in *The Forestry Chronicle*
- Presentations, lectures, conferences
- Integrations of T43 into other biofibre projects



A report by Almuth Ernsting, Sophie Bastable & Oliver Munnion
Including: *Eucalyptus Plantations for Energy: A case study of Suzano's plantations for wood pellet exports in the Baixo Parnaíba region, Maranhão, Brazil*
by Ivonete Gonçalves de Souza (CEPEDES) and Winfridus Overbeek (WRM)

Development of Standards for Solid Biomass Fuels and Heating Equipment

- NRCan and MNRF research project
 - Improve the business and policy environment for non-residential use of solid biomass fuels for heat
1. Hinders trade/ market development
 - Material quality may result in fires, explosions, off gassing
 2. Inconsistent and non-uniform fuel quality
 - Specs are critical for quality and performance
 - Fuel properties effect performance and emissions
 3. Policy variance
 - Variance of emissions limits across Canada



Contribution Agreements

- Canadian Wood Fibre Centre
- Knowledge Exchange
 - Electronic lecture “Realities and Possibilities: The Power of Forest Biomass”
 - “Success Stories from Canadian Forests” – “Burning Wood to Grow Wood”
 - Target workshops and seminars

THE FOREST ON YOUR DESKTOP
NATIONAL ELECTRONIC LECTURE SERIES
Canadian Institute of Forestry / Institut forestier du Canada

REALITIES AND POSSIBILITIES
THE POWER OF FOREST BIOMASS

In collaboration with the
Canadian Wood Fibre Centre
- Natural Resources Canada

INNOVATIVE WOODY BIOMASS APPLICATIONS
to recover, handle and produce
bioproduct values.
David Skogerboe - Program Manager,
Canadian Wood Fibre Centre
February 4, 2015

SUSTAINABLE BIOMASS HARVESTING IN CENTRAL ONTARIO
Jeff Jones - Forest Research Officer,
Canadian Wood Fibre Centre
February 11, 2015

**FOREST BIOMASS PROCUREMENT - PROGRESS AND
CHALLENGES AROUND THE COUNTRY**
Dustin Sauer - Research Leader,
Forest Research Group, FPInnovations
February 18, 2015

**FOREST SECTOR TRANSFORMATION
TOWARDS THE BIOECONOMY**
Matthew Schuchler - Innovation Program Officer,
Canadian Forest Service
February 25, 2015

**NEW USES OF BIOPRODUCTS FROM CARBON-BASED
FEDSTOCKS OF CANADIAN FOREST BIOMASS**
Harrison J. New & Joel
Research Scientist, Canadian Forest Service
March 4, 2015

CAN WOODY RESIDUES SUPPORT A PULP INDUSTRY? EASTERN ONTARIO AS A CASE STUDY
Suzanne Wilson - Research Scientist, CWFC
Sally Kujala - Professor, University of Toronto
March 11, 2015

MODELLING FOREST BIOMASS SUPPLY CHAINS
Evelyn Thériault
Assistant Professor, Laurentian University
March 18, 2015

THE ATMOSPHERIC BENEFITS OF FOREST BIOMASS
David Poot - Research Scientist,
Canadian Forest Service
March 25, 2015

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Canada
Canadian Wood Fibre Centre

Canadian Wood Fibre Centre
Working together to optimize wood fibre value - creating forest sector solutions with FPInnovations

General Knowledge Exchange

- Teachers tour
- University of Toronto Winter Field Camp
- Over 150 Section events
- National AGM – 2015
Kenora, Ontario





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Thank You

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