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# Knowledge Exchange at the Canadian Forest Service – a National Perspective

CIF National Conference & AGM  
October 6-9, 2019  
Pembroke, Ontario



# Acknowledgements

- ❖ Lara Van Akker – Pacific Forestry Centre
- ❖ Stan Phippen – Great Lakes Forestry Centre
- ❖ Pierre Godbout – Laurentian Forestry Centre
- ❖ Bernie Daigle – Atlantic Forestry Centre
- ❖ Steve D'eon – Canadian Wood Fibre Centre



# What is Knowledge Exchange?

❖ What do *you* think it is?



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# What is Knowledge Exchange?

- Many KE Definitions – Mostly Healthcare
  - Knowledge Exchange (KE)
  - Knowledge Transfer (KT)
  - Knowledge Translation (KT)
  - Knowledge Synthesis (KS)
  - Knowledge Brokering (KB)
  - Technology Transfer (TT, or TOT)



# CFS Director's Forum

## Sault Ste. Marie, February 2011

- ❖ *Knowledge Exchange (KE) is a practice aimed at engaging the funders, producers and users of knowledge so as to identify needs and help increase uptake and application of products and services by stakeholders. It must be part and parcel of the science planning and implementation process.*



# Knowledge Transfer: a one-way flow

*Develop  
Products &  
Activities*



*Knowledge  
Push*



*Implement  
Products &  
Activities*

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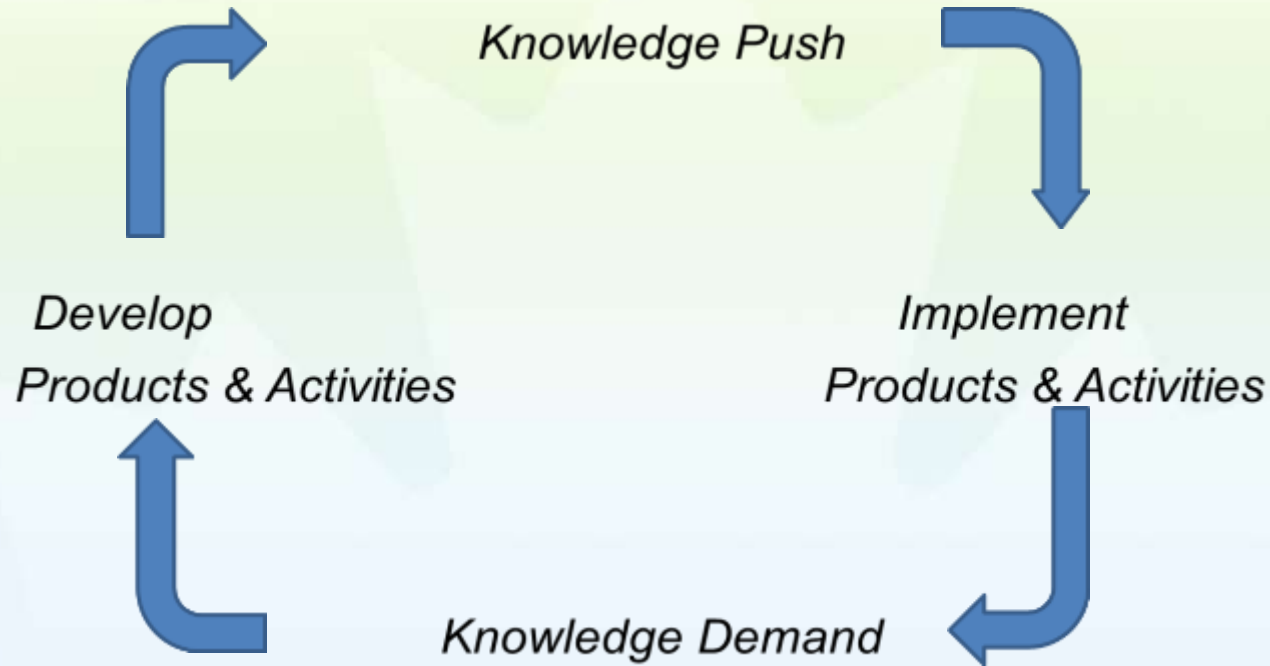


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# Knowledge Exchange: a two-way flow



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# Why is KE Important?

## ➤ Main Objective of KE

- Close the gap between knowledge creators and knowledge users.
- Reduce the time it takes for knowledge/evidence to get into the hands end-users (i.e., practitioners).





# Recent Developments at CFS

- *CFS Strategic Knowledge Exchange Framework.*
- Approved by ADM Beth McNeil, October 2018.
- KE now CFS policy.
- Mandate to make Knowledge Exchange a “*corporate responsibility, and a part of everyone’s work*”.
- “*The main objective of the framework is to have a greater impact on the forest sector, by providing solutions to emerging challenges and opportunities, as well as continuing to build relationships with key partners and collaborators.*”



# Building on KE at CFS

- CFS researchers have a rich history of applying KE:
  - CFS James Wright and Herbert Beall understood value of applying KE and engaging practitioners in the 1930s. Wright and Beall's research laid the foundation that would make Canada a world leader in forest-fire science, and create a legacy to the modern Canadian Forest Fire Danger Rating System (Richard Rajala, 2005).



# About the Canadian Forest Service (CFS)

- ✓ Established over 120 years ago.
- ✓ Over 350 scientists and research staff.
- ✓ 6 research centres Coast-2-Coast – HQ Ottawa
- ✓ Research - solutions to emerging forest issues.
- ✓ Collaborate closely with Canada's provinces and territories, federal departments/agencies, fire management agencies, international, etc.

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# KE at the CFS

- 800+ Information reports, journal articles, working papers, tech transfer notes.
- 400 to 500 Media interviews
- 150 to 200 + Conferences and workshops
- 50+ E-lectures/webinars/podcasts
- 30+ Tours (stakeholder/public outreach)

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# KE at the CFS

## ➤ Social Media:

- Twitter
- NRCan/CFS website
- LinkedIn
- Research Gate
- FB



# Pacific Forestry Centre (PFC)

Forest Inventory  
and Analysis/LIDAR  
Mike Wulder  
CFS Senior Scientist  
2,976 tweets  
3,139 followers



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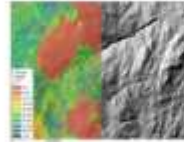
# Pacific Forestry Centre (PFC)

Knowledge transfer  
agreement with  
*Tree Frog*  
*Forestry News*

## What's the Difference Between EFI and NFI?

By Graham Stinson and Joanne White, Natural Resources Canada  
Natural Resources Canada  
February 26, 2016

Category: Special Feature  
Region: Canada



Forest inventories in Canada are evolving as new technologies are incorporated into the inventory process. Governments and industry are under increasing pressure to reduce inventory costs, while simultaneously producing improved information to support the increasingly complex demands associated with forest management. For forest professionals, keeping up-to-date on technological innovations and understanding the different sources of forest inventory information available (and the associated terminology) can be challenging. Amidst all this change in

forest inventories in Canada, there are two acronyms in particular that seem to invite confusion: NFI and EFI. NFI stands for National Forest Inventory and represents a type of inventory with a very specific purpose: an NFI is typically designed to provide high-level information to support national-level forest policy and reporting information needs.

[> Read More](#)

## Pacific Forestry Centre assists Province and industry in assessing efficacy of breeding programs in southern Vancouver Island seed orchards

By David Dunn, Robert Kowbel, and Annette van Nieuwenhuis  
Natural Resources Canada  
March 14, 2016

Category: Forestry  
Region: Canada, Canada West



The Natural Resources Canada, Pacific Forestry Centre (PFC), Analytical Chemistry Lab is performing DNA microsatellite marker analysis of select foliage and seed to assess self-pollination rates in Western redcedar (*Thuja plicata*) and external pollen contamination rates in Coastal Douglas-fir (*Pseudotsuga menziesii* var. *menziesii*) in southern Vancouver Island seed orchards. Approximately 5,000 individual tests of Western

redcedar and Douglas-fir are being conducted at the PFC lab to help orchardists ensure sufficient seed of high genetic value is produced through tree breeding, seed-orchard production, and related activities to meet reforestation objectives and enhance timber supply and quality.

[> Read More](#)



# Pacific Forestry Centre (PFC)

- Carbon Accounting Team
  - CBM – 30, 3-day workshops
  - Canada, Russia, China, Poland, Chile, Italy and Mexico.
  - Over 700 trained.
  - Released to the public in 2005.
  - Available on-line.



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# Northern Forestry Centre (NoFC)

## ➤ E-Lecture series: (2012 – present)

- 7 e-lectures (last 3 national)
- 59 presentations
- 80+ researchers

## ✓ In partnership with CIF

## ✓ 250+ participants per/e-Lecture

- Forest sector companies,
- Forest sector associations,
- Terr/Prov/Fed, NGOs, ENGOs,
- Intl

## ➤ Modelled after GLFC

**THE FOREST ON YOUR DESKTOP  
NATIONAL ELECTRONIC LECTURE SERIES**  
Canadian Institute of Forestry / Institut forestier du Canada  
NORTHERN FORESTRY CENTRE  
YOUR PARTNERS IN FORESTRY RESEARCH  
In partnership with the Northern Forestry Centre – Natural Resources Canada

**Workshop on the Use of Forests in the Mountains**  
Research Scientist, Forest Ecology  
Northern Forestry Centre, Canadian Forest Service  
November 20, 2012

**Forest Development Indicators and Indicators for Climate Change**  
Research Scientist, Canadian Forest Service  
January 1, 2013

**Forest and Land-Use Change in the Canadian Wilderness**  
Wilderness Ecologist, Canadian Forest Service  
Northern Forestry Centre, Canadian Forest Service  
Forest Ecology and Management Division  
Northern Forestry Centre, Canadian Forest Service  
January 14, 2013

**Building the network for climate and the forest sector of the  
Northwest Territories (The Forest Ecology)**  
Northern Forestry Centre, Canadian Forest Service  
January 20, 2013

**Canadian Wildlife for Forestry (Canadian Wildlife)**  
Research Scientist, Forest Ecology  
Northern Forestry Centre, Canadian Forest Service  
January 20, 2013

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# Northern Forestry Centre (NoFC)

- **Newsletters – 14 issues, 28 articles, 40 contributors**
  - Northern Notes – 6*
  - Insights – 8*



- **Modelled after LFC**

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# Northern Forestry Centre (NoFC)

- Site tours – 25 (18 local, 7 intl.)
  - Post secondary, provincial govt., industry, associations, etc.
  - *Meet the scientist in her/his lab.*



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# Northern Forestry Centre (NoFC)

Understanding wildfire effects on Indigenous communities (CFS, University of Alberta, First Nations communities in Ontario, Saskatchewan and Alberta, agencies responsible for conducting or providing support during evacuations of First Nations communities).



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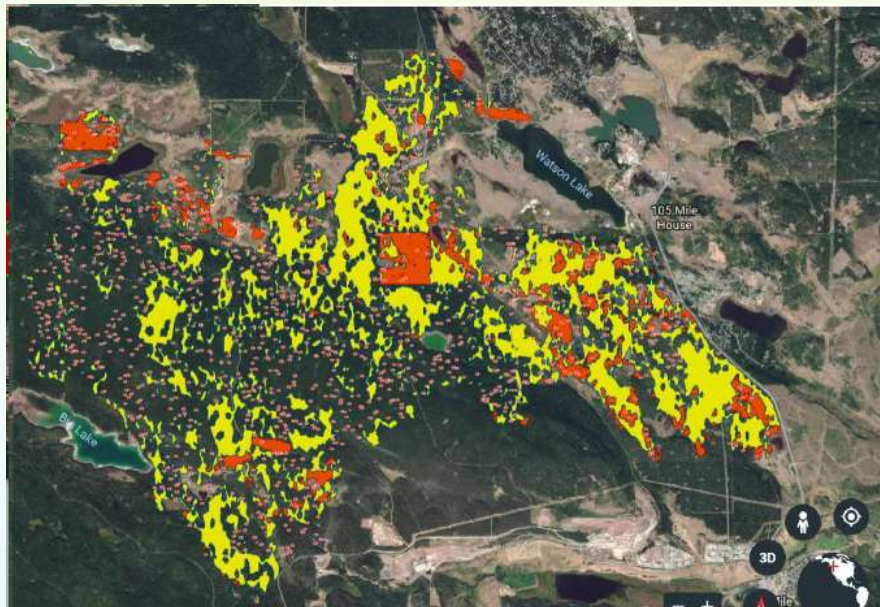
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# Great Lakes Forestry Centre (GLFC)

- Torchlight - New Remote Sensing Tool for Emergency Forest Fire Situations.
- Remote sensing technology and computer vision techniques.
- Maps active fire perimeters and shows areas of intense heat, scattered heat and isolated heat from wildfires.
- Researcher Joshua Johnston.



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# Great Lakes Forestry Centre (GLFC)

## ➤ Pest Research:

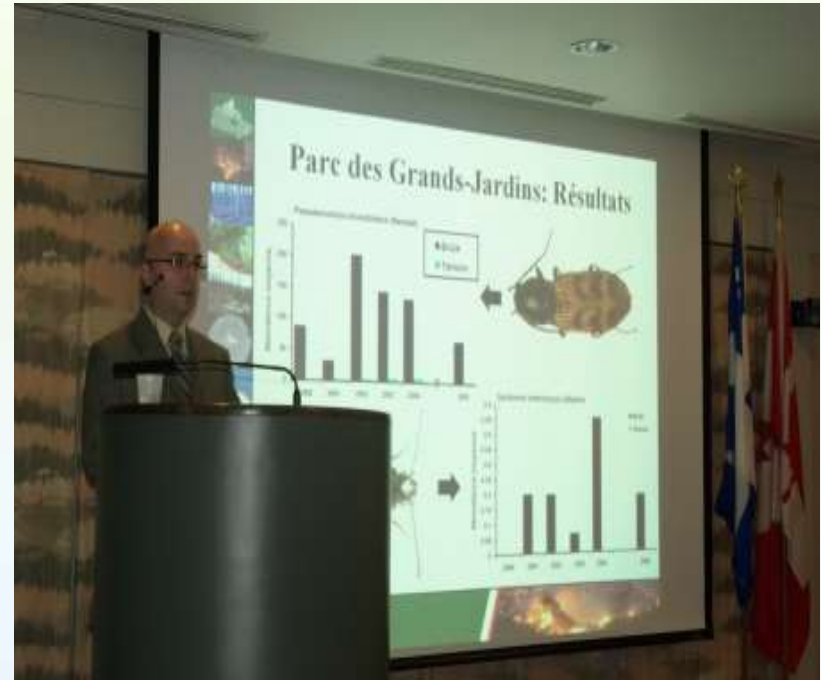
- Tools for Insect Control
- Branch Sampling Tool to Detect EAB
- Use of Pheromones (traps) for Spruce Budworm
- Bio-insecticide TreeAzin®



# Laurentian Forestry Centre (LFC)

## CFS-LFC lectures

- 10 regional conferences since 1987.
- Since 2004, about 1,000 participants/yr
- Collaboration with regional partners.
- Annual national CFS-CIF e-lecture series.



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# Laurentian Forestry Centre (LFC)

## Knowledge exchange seminars

- 1-2 per year; reaching about 125 stakeholders.
- For Québec's forest community based on current issues. Organized with partners.
- Adapted for practitioners.



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# Laurentian Forestry Centre (LFC)

## Field demonstration activities

- Organized with regional partners.
- Silvicultural techniques, exotic forest pests, white pine weevil, white pine blister rust, etc.
- Train the trainer.



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# Laurentian Forestry Centre (LFC)

## Conference program

- Since 2009.
- Focus on partners.
- More than 30 free conferences.
- LFC and CWFC research scientists.
- Climate change, biomass, silvicultural practices, etc.



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# Atlantic Forestry Centre (AFC)



- Four provinces
- Two offices (Fredericton, NB and Corner Brook, NL)
- 50% rural.

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# Atlantic Forestry Centre (AFC)

- Strong partnerships developed and nurtured over many years.
- Canadian Woodlands Forum, Fundy Model Forest, provincial governments, the forest industry, and private woodlot organisations.



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# Atlantic Forestry Centre (AFC)

- Workshop at Acadia Research Forest near Fredericton
- Lead organizer Canadian Woodlands Forum



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# Atlantic Forestry Centre (AFC)



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# Knowledge Exchange Group (KEG)

- ✓ CFS Regional Working Group
- ✓ KE officers from all 6 CFS centres HQ.
- ✓ Formed in September 2013. Meet quarterly.
- ✓ Work collaboratively, share info on KE activities and BMPs.
- ✓ Exploring national coordination of KE activities.

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# Knowledge Exchange Group (KEG)

- ✓ Provided input to senior management for CFS national KE Strategic Framework.
- ✓ Will help in national/regional delivery of CFS research areas.
- ✓ *Support CFS researchers!*





*Thank you!*

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