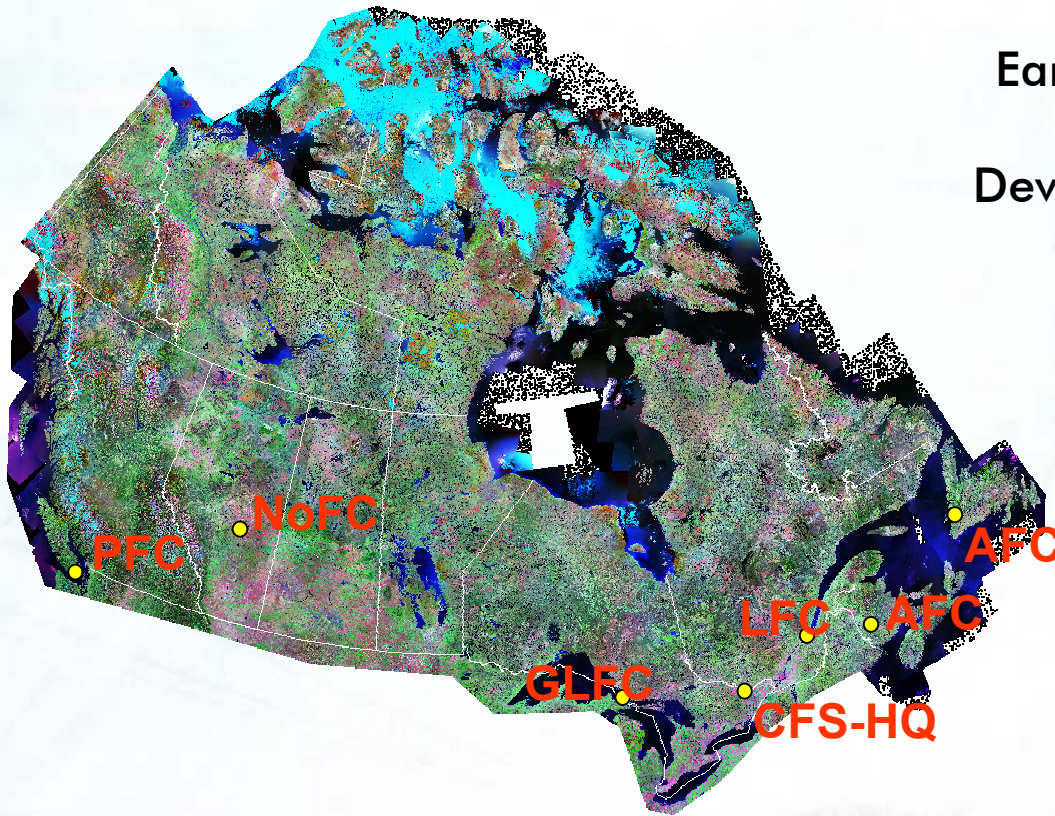


# Monitoring Canada's Forests from Space

Earth Observation for Sustainable Development of Forests (EOSD) Initiative



# Canada's Forests in Context

Forests cover 418 million ha or 45% of Canada's land mass. Most of Canada's forests are publicly owned (94%) and fall under provincial jurisdiction. In total, over 140,000 species make their home in these forested regions.

On a global scale, 10% of the world's forests are found in Canada and 20% of the global fresh water supply comes from forested watersheds.

# EOSD Background

The Earth Observation for Sustainable Development of Forests (EOSD) initiative is a partnership between the Canadian Forest Service (CFS) and the Canadian Space Agency (CSA).

EOSD uses imagery of the earth taken from space to measure the composition, distribution and change of Canada's forests over time.

# EOSD Background

EOSD data will be used to provide information to CFS programs such as the National Forest Inventory and the Forest Carbon Accounting Framework.

Data generated by EOSD will assist Canada in meeting international and national commitments to report on sustainable development of the forests.

Data generated will also be available to the general public.

## Current EOSD Objectives

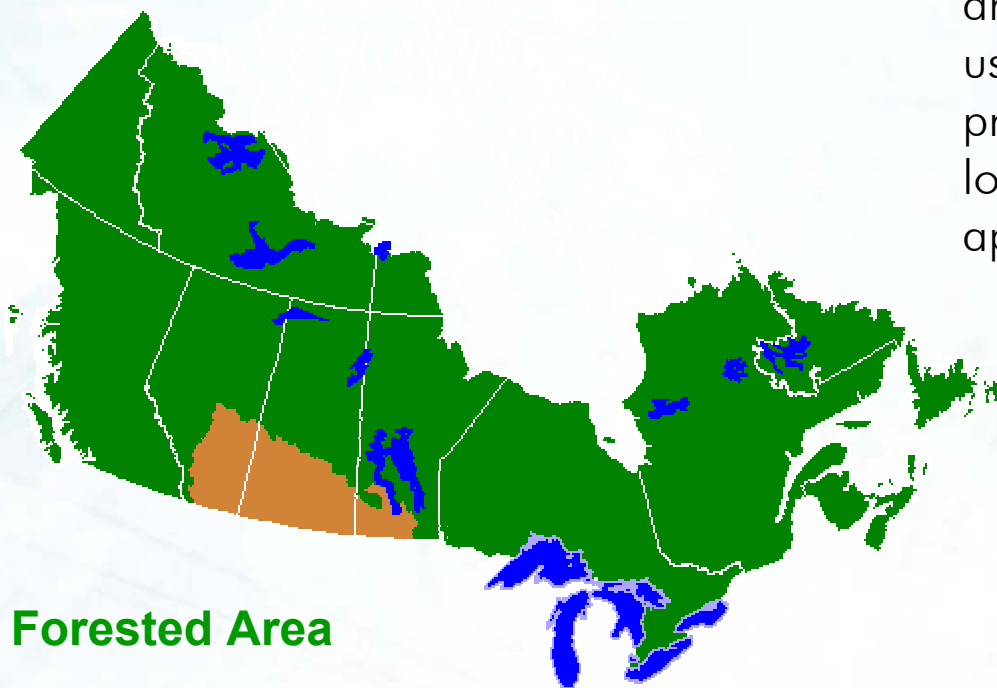
Initial work will focus on mapping the land cover of forested areas focusing on Canada's North.

The land cover mapping will be produced through a partnership with federal and provincial governments, universities and industry.

EOSD will continue to develop techniques and improved methodologies for mapping forest composition, change over time and biomass, and work towards automating these processes.

# Land Cover Mapping

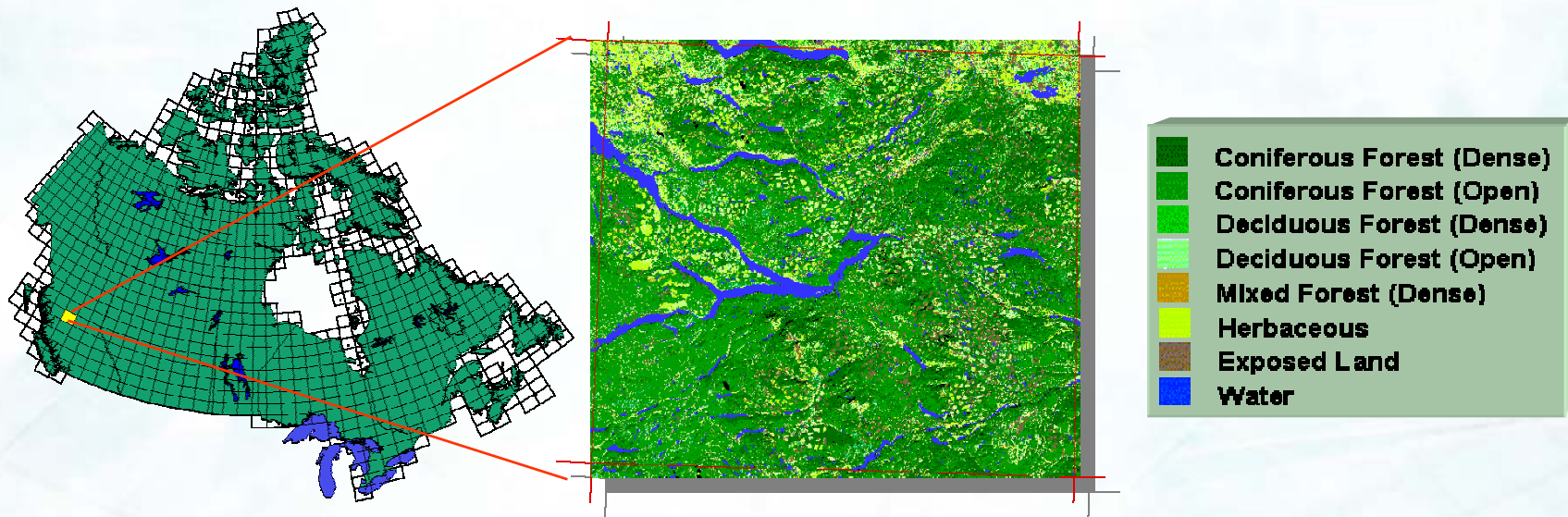
The land cover for the forested area of Canada is being done using Landsat\* data. Landsat provides a new image of every location in Canada approximately every two weeks.



**Forested Area**

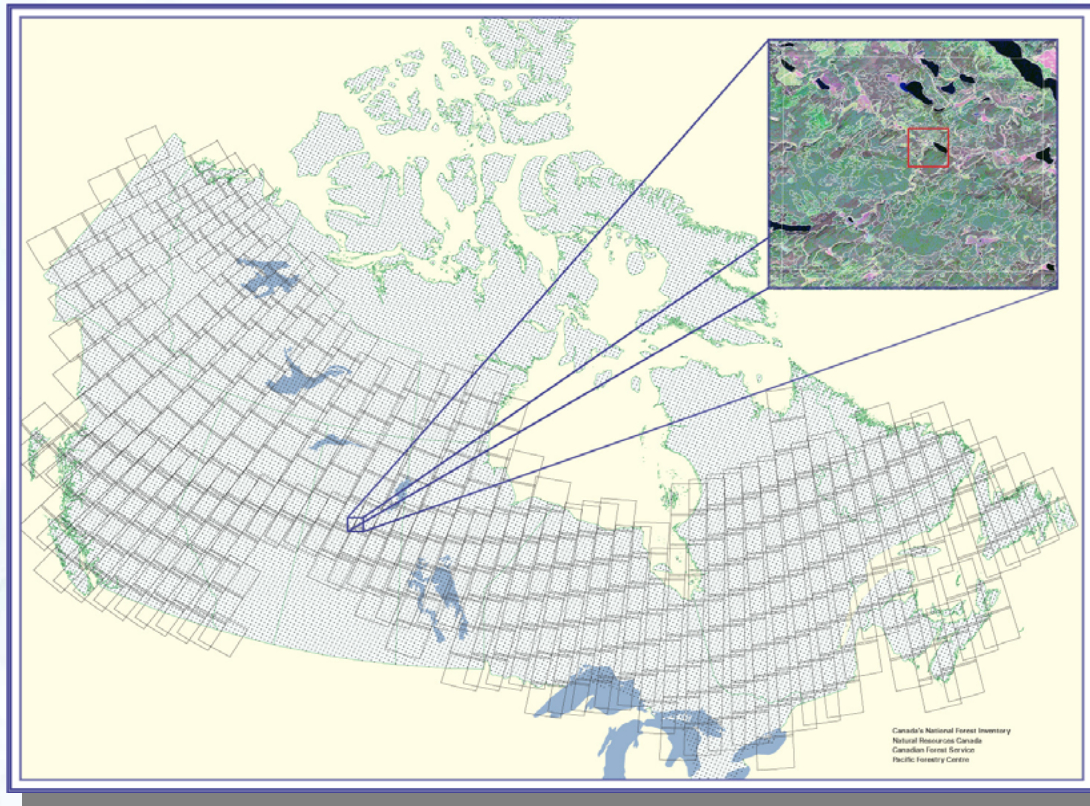
**Prairies**

# Land Cover Classification Product



Map Sheet 93F – Nechako River, B.C.  
Map Area approx. 14,850 km<sup>2</sup>

## National Forest Inventory Product






- 2 x 2 km photo plots every 20 km
- Classified satellite imagery will be used for photo plots in various areas of the Canada

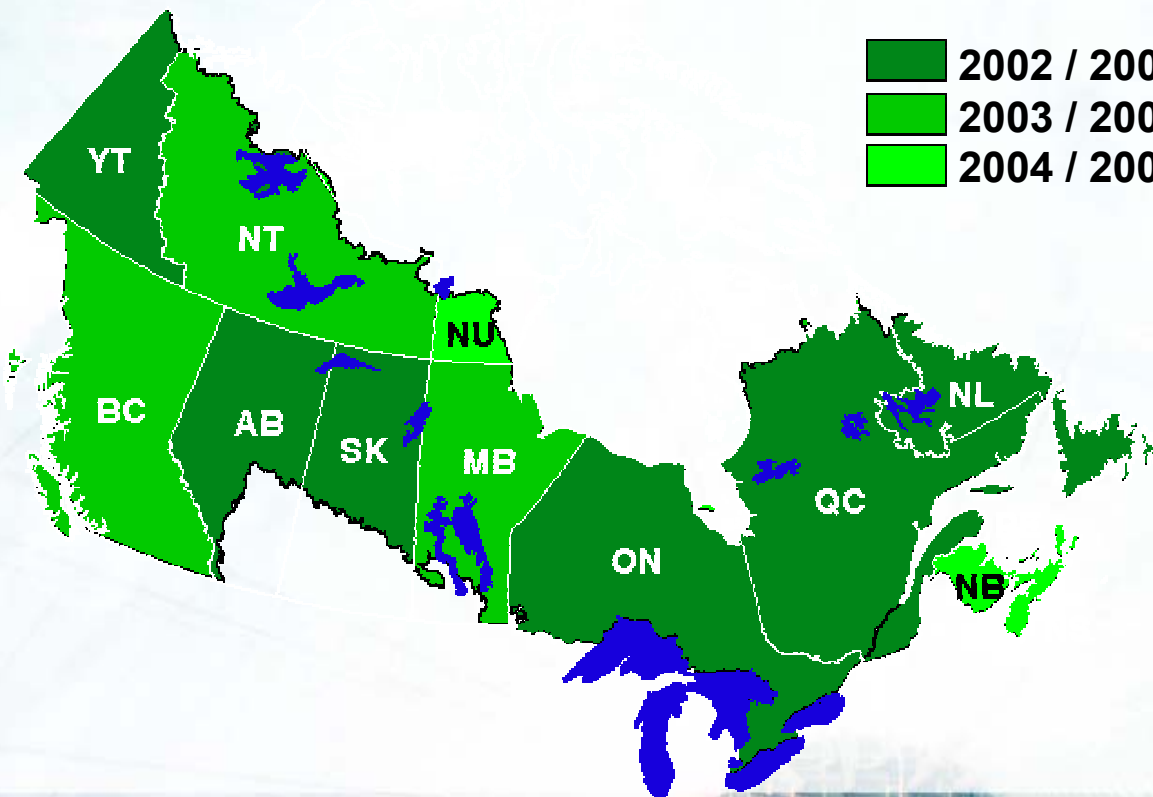
*From NFI Overview, CSA, Dec. 2001 (M. Gillis)*



## Implementation Plan

Land cover mapping work is scheduled for completion in 2006. The following dates indicate when mapping in specific areas will begin.

-  2002 / 2003 – YT, AB, SK, ON, NL, QC
-  2003 / 2004 – BC, MB, NT
-  2004 / 2005 – NU, NB, PE, NS



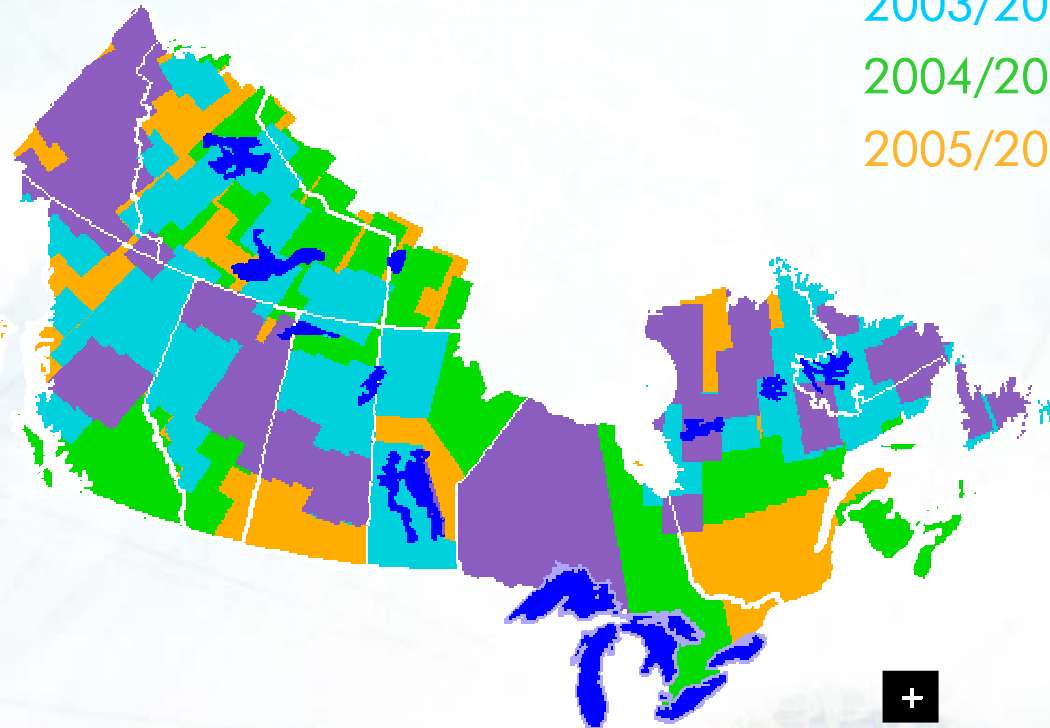
# Production Plan

2002/2003 - CFS  
- Provinces/Territories

2003/2004 - All Partners

2004/2005 - All Partners

2005/2006 - All Partners

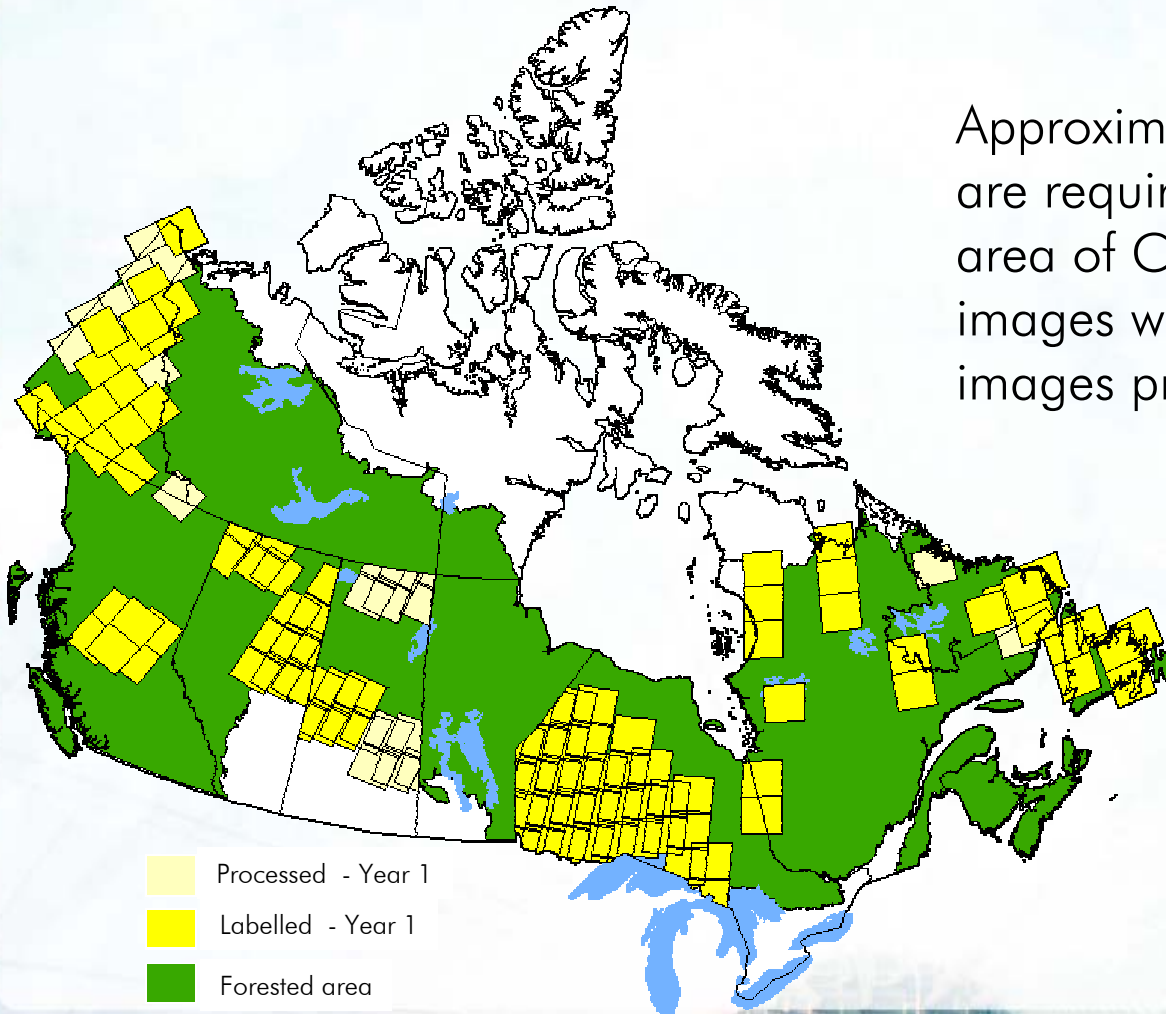


# Regional Production Centres - 2003



## Results for 2002 - 2003

Approximately 500 Landsat images are required to map the forested area of Canada. In 2002/03, 99 images were classified and 121 images processed.



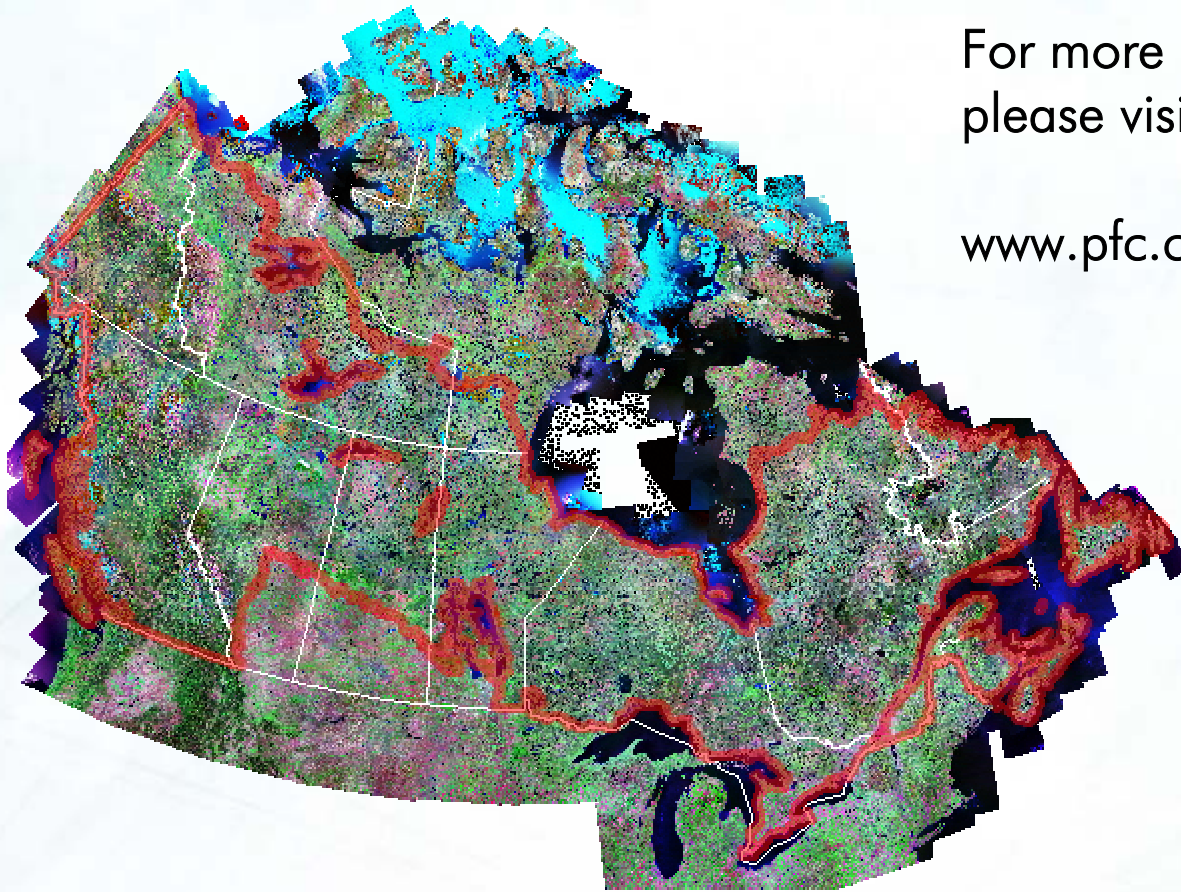
## EOSD Partnerships

- Canada Centre for Remote Sensing, Agriculture and Agri-Food Canada, Canadian Wildlife Service, Department of Indian Affairs and Northern Development.
- Canadian Land Cover Initiative (CLCI).
- GOFC/GOLD.
- Industry Canada Executive Exchange Program.
- Industry - Duck's Unlimited, MacDonald Dettwiler.
- Provinces – Alberta, British Columbia, Newfoundland and Labrador, Manitoba, New Brunswick, Nova Scotia, Ontario, Quebec, Prince Edward Island, Saskatchewan.
- Territories – Yukon and Northwest Territories.
- Saskatchewan Research Council and Saskatchewan Forestry Centre.
- Universities – Alberta, Calgary, Sherbrooke, Toronto, Waterloo, Wilfred Laurier, Victoria.

# Contact Information

For more information,  
please visit:

[www.pfc.cfs.nrcan.gc.ca/eosd/](http://www.pfc.cfs.nrcan.gc.ca/eosd/)





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