

Designing a System to Track and Report on National Afforestation Projects

Thomas WHITE Natural Resources Canada and IEA Bioenergy Task 38 Workshop Victoria, Canada 15 September 2004





Need for an afforestation reporting system



- The Canadian parliament ratified the Kyoto Protocol in 2002.
- Reporting carbon stock changes from Afforestation, Reforestation and Deforestation is mandatory under the Kyoto Protocol.
- Currently there is no national system in place to record afforestation projects for climate change purposes (i.e., carbon accounting, offsets, etc).
- It is difficult to detect afforestation using remote sensing in a time frame consistent with reporting obligations.





Challenges



- Afforestation delivery agents, such as regional forest product marketing associations, universities, municipalities, conservation organizations, forest contractors and other bodies, number in the hundreds.
- Record keeping generally includes information about the type (species, treatment), location and extent of afforestation, but is not always sufficient for C accounting or in a format that is accessible for national reporting.



Internet-Based activity reporting

- The Canadian Forest Service (CFS) has taken a lead role in developing a prototype for an internet-based afforestation reporting system.
- The system provides a simple mechanism for organizations involved with afforestation to report their planting activities.
- The system facilitates the compilation and verification of information provided through activity reporting.



System design



- Through a series of simple web based forms, users can provide information about
 - location
 - contacts
 - land use history
 - site preparation and planting treatments
 - additional supporting information
- All incoming data is reviewed to ensure its authenticity.
- Detailed data are available for reporting.
- Summary data are available for public viewing.







Simple yet secure



- Accessible using a simple Internet connection and a web-browser. No proprietary software requirements.
- Available in both Canada's official languages.
- All transactions are encrypted using https.
- Access to detailed information is managed, to protect the authoritative data stored in the database.









The National Afforestation Inventory (NAI) is integrated with web applications and data stores through the National Forest Information System (NFIS), which provides tools to discover, integrate, and display current, authoritative and accurate information on Canada's forests.





Component of NFCMARS



- The NAI is a component of Canada's National Forest Carbon Monitoring, Accounting and Reporting System (NFCMARS):
 - provide data on afforestation to the Carbon Budget Model of the Canadian Forest Sector (CBM-CFS); when processed through CBM, will fulfill UNFCCC and Kyoto reporting obligations.
 - exchange data on Land Use Change with other agencies (Agriculture Agri-Foods Canada and Environment Canada).











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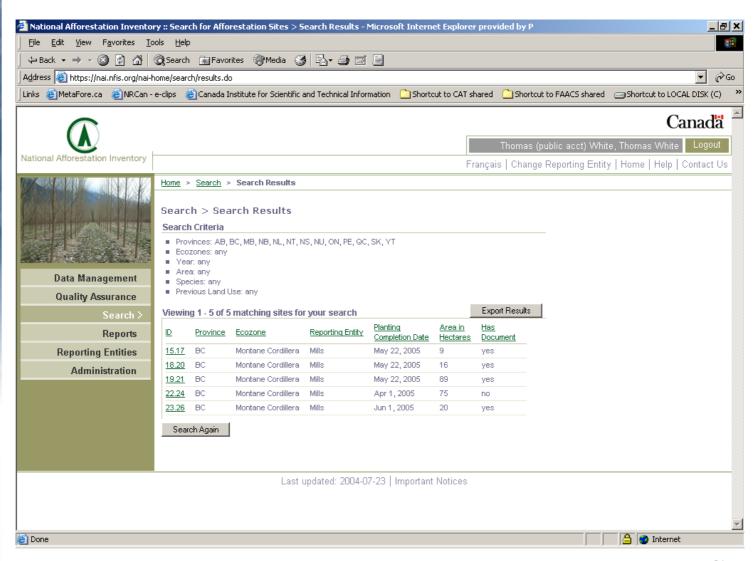












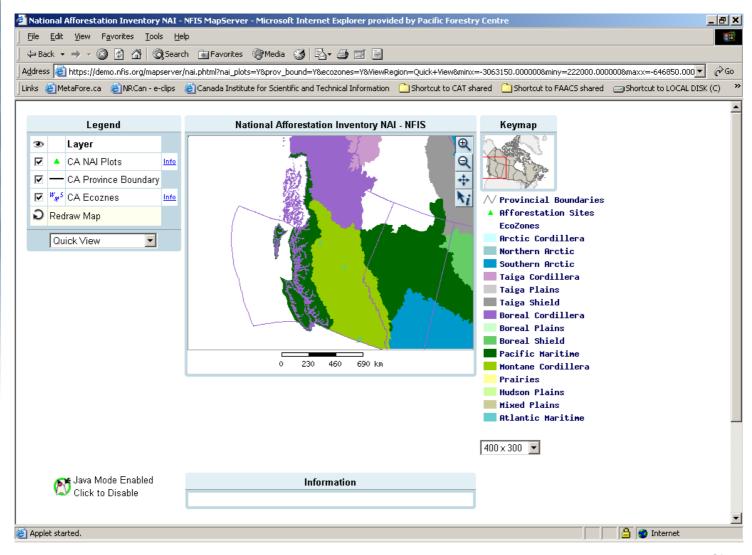


















Current status



- The system is currently being used to track national afforestation projects funded by the Forest 2020 Plantation Demonstration and Assessment, a two-year project to demonstrate the potential of fast-growing tree plantations to help Canada reduce its greenhouse gas (GHG) emissions and effectively address climate change.
- Data on afforestation from 1990-2002 collected as part of another initiative will be rolled into the system by March, 2005







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