



Newsletter Fall 2006

ARTICLES BY LAURA DISANO

Invasive Species Centre Moves into Second Phase of Study



IAS Emerald ash borer – Larvae kill trees by feeding in the cambial layer and eventually girdling the tree

The federal-provincial Invasive Alien Species (IAS) Management Centre proposed for Sault Ste. Marie has made another leap forward, with a second phase of study now underway.

This part of the study involves developing a full rationale and project charter, including detailed operational and strategic implementation plans.

“This is a crucial step to advance the centre toward its completion,” says Errol Caldwell, project champion and executive director of Science Enterprise Algoma (seA).

“There has never been a greater need for an IAS Management centre. Forest and aquatic invasive species continue to cause considerable economic and ecological impacts across Canada. The centre will provide an essential boost to regional and national action plans to develop an integrated and coordinated approach for reducing the impacts of forest and aquatic invasive species.”

The centre’s advisory committee, comprised of representatives from three levels of government, has received support and funding from the City of Sault Ste. Marie, Ontario Ministry of Natural Resources, Canadian Food Inspection Agency, Department of Fisheries and Oceans and Canadian Forest Service. Together these organizations have provided over \$80,000 to support the current study.

The committee has selected Metropolitan Knowledge International (MKI), a consulting firm based in Toronto, to conduct the analysis. Drawing from research, interviews and similar case studies, MKI is examining the proposed structure, mandate, missions and protocols for the centre. MKI will also develop a schedule of implementation milestones and targets.

continued on page 2

science enterprise Algoma was established to take advantage of economic development opportunities that exist in the natural resource and life science industry sectors in the Algoma Region and Northern Ontario.

inside this issue

IAS Centre Moves into Second Phase ~ pg1

Looking at Great Lakes Forestry Centre ~ pg1

upcoming events

Nov 1 ~ BioFinance Early Phase Conference 2006

Nov 7 ~ seA’s Hemp and Flax Seminar: A Growing Opportunity for Northern Ontario?

Nov 18 ~ Growing Your Opportunities: Northern Ontario Farm & Food Conference

Nov 20-21 ~ BioNorth 2006: Canada’s Top 10 Companies Competition, Conference & Exhibition

Dec 5-7 ~ 2006 Forest Pest Management Forum

For more information about these and other future events, please refer to seA’s website at www.seainnovation.com

Innovation in Action The Great Lakes Forestry Centre



Photo courtesy of Mark Primavera, GLFC

Pioneering a new phase in environmental conservation and the emerging bioeconomy, seA is thrilled to announce the Great Lakes Forestry Centre (GLFC) as the “Community Innovator of the Month.” The award acknowledges those organizations that support and contribute to the

economic growth and environmental sustainability of Northern Ontario and the Algoma region.

Located along the St. Mary’s River in Sault Ste. Marie, Ontario, GLFC is one of five Canadian Forest Service (CFS) centres situated across Canada.

Under the direction of Natural Resources Canada (NRCan), GLFC is committed to managing the environment through the latest science-based research. They integrate their scientific findings with the real world by placing emphasis on partnerships, knowledge management, socio-economic analysis and policy.

Research conducted by GLFC staff is categorized into five major areas: forest productivity; forest biotechnology and bioproducts; forest ecosystem processes; climate change and other disturbances; and national program areas. With all this expertise, GLFC is often called upon to provide science-based advice on policies and programs that affect Canada’s forest sector.

Closely aligned with seA’s objectives and benefiting the local community, GLFC’s work specializing in bioproduct research and commercialization deserves special recognition. By confirming that biomass can no longer be thought of as a waste material, but rather as an invaluable marketable commodity and environmental solution, GLFC is laying the foundation for these resources to be used to their full potential.

continued on page 2

IAS Centre Moves into Second Phase of Study

continued from page 1

"The study is on schedule," says MKI senior consultant and project manager Annie Luk. "The data collection phase should be completed by early November, and MKI plans to complete a final report by the end of the year."

Caldwell explains that an integrated IAS centre has been proposed as a key strategic need to advance science capacity and coordinate responses for improved IAS management. For example, species like the Asian long-horned beetle, emerald ash borer, and recent aquatic invaders threaten both Canada's biodiversity and economy. Invasive species cost Canadians an estimated \$13 billion to \$34.5 billion annually.

"All organizations with an interest in invasive species management agree that increased research and management strategies are urgently needed if Canada is to meet its internal and external obligations to prevent, detect and contain these threats to our biosecurity and economy," Caldwell says.

As proposed in an earlier business case, the centre will assist national efforts to combat the threat of IAS by focusing on prevention, early detection, rapid response, management and control. In this way, the centre will act as a research resource and an emergency preparedness model.

The second phase of study will help refine this role in concert with federal and provincial agencies. Once the functions of the IAS centre have been defined, MKI will focus on what physical, human and financial resources are needed to fulfill its mandate.

In addition, the Department of Fisheries and Oceans (DFO) is considering consolidation of its staff and operations within the Great Lakes Forestry Centre. This integration would include the DFO's Sea Lamprey Control Lab, local Fish Habitat Management staff, as well as offices and labs for the Great Lakes Laboratory for Fisheries and Aquatic Sciences.



IAS Sea lamprey – Parasitizes and eventually kills fish

"We have also initiated discussions with Algoma University and Sault College to pursue invasive species research, education, training and public awareness involvement from the local academic community," Caldwell reports. "These activities will augment a well-rounded and coordinated program in collaboration with federal and provincial departments."

The Great Lakes Forestry Centre

continued from page 1

"Our research attracts a lot of outside interest and we have built some strong partnerships with the public and private sectors," says GLFC science director Anthony Hopkin. "As a result, GLFC and its affiliates have been able to identify and develop numerous opportunities for future investment in high-value bioproducts."

For example, research scientist Dr. Mamdouh Abou-Zaid works with industry to identify value-added chemicals and is leading a bioprospecting initiative at GLFC, searching for new chemicals in living things that will have some medical or commercial use. A single plant could host as

many as 300 to 400 compounds, which may have anti-oxidant activity and be effective in helping to prevent cancer.

"Once private and public investors are established, bioprospecting has considerable potential to be developed in Sault Ste. Marie for medicinal uses, as well as to support medical research and establishments," says Abou-Zaid. "Being home to a variety of untapped, undiscovered botanical resources, there is no better place than Sault Ste. Marie to conduct and capitalize on bioprospecting research."

Beginning in 2006, Mr. Steve Dominy, chief of the programs and planning section at GLFC, began working in support of a national bioenergy project by establishing demonstration areas across Ontario using fast-growing clones of willow and poplar. The objective is to test the suitability and benchmark growth and yield for a wide variety of clones under varied soil and climate conditions. This crop is expected to be suitable as a bioenergy feedstock and possibly to supply biochemicals for use by industrial interests.

Dr. Dan McKenney and Denys Yemshanov, of the geospatial tools and economic analysis group at GLFC, are involved in spatial assessments of the economics of biomass for bioenergy. This includes evaluations of fast-growing hybrid poplar plantations established on agricultural lands and willow plantation/agroforestry systems. Models and data are being developed with partners to assess opportunities across Canada and evaluate particular strategies.

Through GLFC's innovative research, the potential value of bioproduct development in Northern Ontario is being acknowledged and taken advantage of as both an economic venture and a method to sustain a healthy environment. As such, the Great Lakes Forestry Centre is very deserving of Science Enterprise Algoma's recognition as the "Community Innovator of the Month."



Photo courtesy of Mark Primavera, GLFC

Dr. Mamdouh Abou-Zaid purifying a plant extract

www.seainnovation.com

For further information contact:

Errol Caldwell, Executive Director
science enterprise Algoma
1219 Queen St. East
Sault Ste. Marie, ON P6A 2E5
Phone: (705) 541-5558
Fax: (705)541-5702
Email: e.caldwell@seainnovation.com



seA's Financial Sponsors



Sault Ste. Marie
ECONOMIC
DEVELOPMENT
CORPORATION



naturally gifted



Natural Resources
Canada

Ressources naturelles
Canada

