science enterprise Algoma

+ science-based economic development and commercialization

through natural resources & life sciences

A Primer on…

Bioproducts, Invasive Alien Species and Intellectual Property

Bioproducts

On behalf of the Northern Ontario Commercialization Initiative (NOCI), seA facilitates bioproduct development throughout the Algoma Region and Northern Ontario.

Bioproducts are commercial applications derived from sustainable biomass. This biomass can be sourced from forestry, agricultural or other sustainable crops, municipal landfill, organic wastes and other sources. Applications include bio-energy and related products, value-added materials such as green chemicals, pharmaceuticals, natural lubricants, plastics, fibre composites and other commodities.

Examples of Bioproducts include:

BIOPRODUCT	MADE FROM	USED FOR
Bio-oil	Forest, agricultural or other biomass	Biofuels and sources of “green chemicals”
Ethanol	Starch and cellulose	Fuel
Wood Pellets	Wood chips / shavings / sawdust	Fuel, livestock bedding
Particle board / MDF	Wood chips / shavings / sawdust	Furniture, cabinets, shelving etc.
Taxol	Canada yew	Anti-cancer treatment
Pesticides	Natural plant or animal material	Natural, organic pest control

Invasive Alien Species (IAS)

seA is championing the establishment of a Centre for Invasive Alien Species in Sault Ste. Marie.

Invasive alien species (IAS) are non-native species that become established outside their natural habitats. They cost Canadians billions of dollars annually in ecological and economic impacts to forest, aquatic and agricultural sectors and are a major threat to our bio-security.

Examples of Invasive Alien Species include:

IAS	IMPACT
Asian longhorn beetle	Wood boring larval stage weaken and eventually kill trees
Emerald ash borer	Larvae kills trees by feeding in the cambial layer and eventually girdling the tree
Sea lamprey	Parasitizes and eventually kills fish
Sirex wood wasp	Attacks and causes mortality in pine species
Dutch elm disease	A beetle carries the fungus that kills elm trees
Mountain pine beetle	Kills pine trees and has potential to spread beyond its native range in B.C.

The aim of the IAS Centre is to move toward a pro-active approach that will prevent, contain and manage the threat of IAS affecting forest species and aquatic ecosystems in Canada. In doing so, the Centre will help reduce environmental and economic costs due to IAS.

Intellectual Property (IP)

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Intellectual property (IP) refers to the exclusive legal rights that protect certain types of information, ideas or other intangibles from being copied or stolen. They can take the form of trade-marks, patents, copyrights and licenses, among others. IP encourages research, innovation and commercialization by improving an organization's investment readiness and marketability.

Commercialization of research is core to seA's vision and mandate.

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As a precondition to commercialization, seA assesses intellectual property (IP) policies, procedures and opportunities in Northern Ontario to facilitate access to IP and ultimately generate economic development.

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Northern Ontario cities rank poorly on a list of Canadian patent registrations; however, there have been a number of patents registered by the Great Lakes Forestry Centre (GLFC) and the Ontario Forest Research Institute (OFRI) over the past year, which demonstrates that Sault Ste. Marie has the potential to generate viable intellectual property.

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By assessing IP, seA's performance target is for the Algoma region to develop the capability for facilitating the transfer of local R&D to the private sector.

seA

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