ECOSYSTEM SERVICES + BIODIVERSITY NETWORK

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Project Summary: Bio Resource Information Management System

What is This Project About?

The Bio-Resource Information Management System (BRIMS) is a world-class, publicly available data and information management system that collates inventories from forestry, agriculture, and municipal sectors to create a centralized, comprehensive assessment of Alberta's biomass, ecosystem services, and land-use data. Users are able to easily target, search and download biomass reports as well as understand the land use tradeoffs of a specified region.

How is this Work Relevant to ES Market Innovation?

Mapping biomass inventories improves investor certainty in the supply chain by informing potential investors about biomass quantities, spatial locations, and the components and quality of the biomass. By also mapping ecosystem services, informed decisions can be made when managing bio-resources on the landscape as well as creating opportunities for understanding landscape trade-offs and any potential markets for ecosystem services.

Other spatial data in the information management system can help drive investment by allowing users to locate nearby facilities, transportation networks, and other potential sources of biomass. BRIMS outputs provide a foundation for further supply chain analysis that would consider ownership, allocation, environment and other logistics. Investment and market opportunities are also expected with the incorporation of ecosystem service data. For example, agricultural producers may be able to generate additional ecosystem services on non-productive land by implementing best management practices which could be bought and sold similar to traditional goods and services (i.e. wetland restoration).

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Who Benefits from This Work?

BRIMS is expected to benefit all Albertans by improving bioeconomic opportunities in the province. Policymakers can use the tool to make better, more informed decisions regarding land use trade-offs. They can incorporate those ecosystem service values into their decision-making with respect to any kind of land-use decision. Investors and businesses can incorporate any layer they feel relevant to their opportunity and use that information to their advantage in the decision-making processes. For example, an individual may see an area of the province with high levels of crop residue biomass, hoping to build a biofuel facility, but realize that the area is too far from any centralized location with substantial infrastructure, thus allowing them to avoid further viability assessments. Producers like farmers and tree lot owners can benefit by increased opportunities associated with their products and residues as markets for those goods improve. Non-government organizations can also use BRIMS to analyze beneficial aspects of the landscape with respect to biomass and other ecosystem services.

How Does this Work Support the ESBN Vision?

A key aspect of the ESBN vision is a functional market for ecosystem services. BRIMS helps feed the information required for ecosystem service and biomass markets as a publicly available, spatially explicit tool. BRIMS creates conditions to help the creation of market transactions for biomass and other ecosystem services, thus supporting the fourth Strategic Goal of the ESBN; "Successfully undertake new market transactions for ES". The BRIMS tool is also designed to help overcome challenges associated with information imbalances to support investment in biomass-related industries and creates opportunities for communities, investors, and businesses. In doing so, BRIMS supports the seventh Strategic Goal of the ESBN; Market tools are aligned and support stakeholder needs, challenges and, opportunities". Finally, BRIMS provides key spatially explicit and up-to-date data for Alberta's biomass resources and other ecosystem services thus supporting the ESBNs overarching goal of an enabled green economy in Alberta and the efficient use of natural resources.