CALL FOR PROPOSALS FOR RESEARCH GRANTS

Alberta Land Institute announces a Call for Proposals for its research grants competition in two research areas. The deadline for receipt of applications is **January 25, 2016.** We expect that successful applicants will be notified by **March 31, 2016**.

About Alberta Land Institute (ALI)
Alberta Land Institute (ALI) was established at the University of Alberta in 2012 to connect research and policy for improved land use planning and land management in the province. ALI supports multidisciplinary research to develop, evaluate and promote innovative land-use policies, including those that explore a variety of policy, regulatory and market instruments that will consider and evaluate environmental, social, and economic outcomes. ALI works with stakeholders to identify specific research gaps related to a land use planning issue or policy, then supports researchers at the University of Alberta (with possible collaborators from other institutions) to examine the issue. From 2012-2015, ALI is focusing on four key policy areas: agriculture, water, municipal development, and governance.

Selection Process
Applications will be pre-screened by ALI staff and then reviewed by the Research Advisory Committee (RAC). Upon the recommendations of the RAC, the Executive Director and Research Director will make the final decision on the awards.

Requirements
Applicants must submit a completed application form along with a personal data form from a tri-council agency for themselves and each Co-Investigator. Application forms and guidelines can be downloaded from the following website: http://www.albertalandinstitute.ca/research/callforproposals. Please review the guidelines carefully before completing the application form. Please submit one PDF containing all required information and documentation on or before the deadline to albertalandinstitute@ualberta.ca.

A final report must be submitted within two months of project completion (i.e., by June 1, 2017 for one year projects). The report must describe the research findings, methodology and conclusions as well as – and in a substantive manner – the policy issue that the research addresses and the implications of the report for policy and/or practice. For some projects specific synthesis reports will be required as outlined in the description of research areas. These reports will be posted on the ALI website.

Subsequent applications will only be considered if satisfactory final or interim progress reports of all previous and existing ALI grants have been fulfilled prior to the new application.

Any published work that is derivative of the research supported by the grant must acknowledge the financial support received from the ALI. ALI must be provided with a copy of any publications.

Timeline
The application deadline is 4:00pm, **January 25, 2016**. We expect to notify successful applicants by **March 31, 2016**.

Contact
All inquiries can be addressed to: albertalandinstitute@ualberta.ca. Please clearly indicate the nature of your email in the subject line.

Additional information about the ALI and the Call for Proposals is available at: http://www.albertalandinstitute.ca/research/callforproposals. Please refer to the attached Grant Guidelines and Application for further information on the application process.

RESEARCH AREAS – FALL 2015 CALL FOR PROPOSALS

1) Natural Capital Accounting – Examining the Valuation of Agricultural Land, Stocks and Flows in Alberta.

Background

Canada has been active in the development and reporting of natural resource accounts, including accounts for energy resources, timber and minerals. Measures of these forms of "natural capital" have been proposed for use in the assessment of sustainable development, or as indicators of whether regions and countries are on sustainable paths. In essence, these accounts provide information on whether a region of "natural capital" is appreciating or depreciating in stock and/or value.

Natural capital is generally defined as an area's supply of natural resources and ecosystems that provide flows of goods and services (Sustainable Prosperity, 2014). Some examples of these resources and ecosystems include soil, air, water and forests. These assets are converted into ecosystem goods by humans, such as minerals, fossil fuels, crops, timber, freshwater and alternative energy sources. The assets may also translate into ecosystem services that provide direct benefits to humans, such as pollination that supports crops, recreation, aesthetics and habitat for wildlife viewing. However, these goods and services are often unaccounted for in national wealth accounts and therefore, the entirety of natural capital's wealth is not fully represented. Conversely, a number of conceptual and empirical limitations remain in the construction of natural capital accounts for agriculture, forests, minerals and energy.

To illustrate this, when measuring a country's wealth, Gross Domestic Product (GDP) is often a prevailing indicator. Unfortunately, GDP only examines income, a single part of economic performance, but not the wealth and assets that underlie this income (World Bank, 2015). An example of this is the fragmentation and conversion of arable farmland to industrial or commercial use. The declining or elimination of ecosystem services provided by arable land (natural capital) are not considered in GDP assessments and are therefore not measured.

It therefore becomes important that agricultural land accounts be developed thoroughly or on par with other natural resource accounts, especially with Alberta's agriculturally focused landscape and economy. An agricultural land natural capital account could inform a number of important policy issues, including: the impact of conversion of agricultural land to non-agricultural purposes, the role of agricultural land in the provision of market ecosystem services (crops, livestock) and non-market services (recreation, carbon, etc.), and productive capacity in agriculture.

This discussion is very relevant as Canada's economy is certainly linked to the country's natural capital. Furthermore, wealth accounting plays an integral role in assessing economic performance and sustainability. This is especially the case for agriculture in Alberta, where agricultural and agri-food industries contribute approximately $13 billion to Alberta's GDP and $5.6 billion to Alberta's exports annually (Government of Alberta, 2014). These valuations do not include other agricultural contributors, such as agri-tourism.

Research Questions

The applicant(s) will be expected to:

- Assemble a group of experts in the field(s) of economics, agriculture, natural sciences;
- Develop an exploratory study that would:
    - Provide clarity around the conceptual framework of valuing agricultural land's natural capital. This would include what determines total wealth from an agricultural land perspective, outlining conceptual and empirical challenges, and defining relevant indicators/metrics that could be used to do so.
    - Determine whether or not an empirical methodology to value agricultural land's natural capital is feasible. Based on this, the identification of data needs or gaps that would be needed to provide a natural capital account of agricultural land should be included.
    - Lead to the development of a natural capital account for agricultural land in Alberta and potentially other provinces in Canada.

ALI plans to use recommendations provided in the exploratory study to develop future Calls for Proposals or to extend the project contingent on funding.

Project Objectives

- Development of the key research questions and research design (hypotheses, study design) to compare and contrast environmental, economic and social outcomes of measuring the value of agricultural land accounts.
- Development of a detailed research plan outlining the process for exploring methodology to measure the value of agricultural land's natural capital. This should include the identification of a multidisciplinary research team, research sites, resource requirements, research partners/participants and potential funding partners.

Project Period: Call for Proposals in November 30, 2015 with project completion by June 1, 2017.

Proposed Budget: A maximum of $50,000 for the first year (research design phase), and potential additional funding for subsequent years of the study. This future funding is dependent on the results of the design phase and the proposed approach.

It is expected that the selected applicant(s) will work in conjunction with the ALI to coordinate funding application(s) to potential funding partners, in addition to ALI funding, to implement a possible multi-year research program. Please note that funding for future years is contingent upon satisfactory progress reports and financial statements.

Additional Notes: It is expected that this project will involve linkages with the Alberta's provincial government and the Canadian federal government as well as other governmental and non-governmental organizations. The ALI can assist in helping with the development of such linkages.

References:

Government of Alberta. (2014). Alberta Agriculture and Rural Development: Annual Report 2013-2014.

Sustainable Prosperity. (2014). Policy Brief: The Importance of Natural Capital to Canada's Economy.

World Bank. (2015). Brief. *Natural Capital Accounting*. Retrieved from https://www.worldbank.org/en/topic/environment/brief/environmental-economics-natural-capital-accounting.

2) Funding Payments for Ecosystem Services: Examining Legal and Economic Aspects of Private / Local Methods for Compensating Landowners

Background

Alberta's farms and ranches are known to produce high quality and large quantities of agricultural products, but are lesser known to be providers of valuable ecological goods such as, watersheds, wildlife and their habitats (Knopff & Gates, 2013). The difference between these two goods is that farmers are compensated for their agricultural products, and not for ecosystem goods and services as a market for ecosystem services does not traditionally exist. As economic pressures mount from urban centres and increased land development, accurate reflection and capture of the benefits of non-market goods and services is important to inform land use decisions. It should also be noted that private agricultural lands make up 75 per cent of the province's agriculturally developed area, also known as the "White Zone" (Ministry of Environment and Sustainable Resource Development, 2011).

Many jurisdictions, including Alberta, have supported the provision of ecosystem services from private land (Canada West Foundation, 2012). However, generating funding to compensate landowners remains a challenge. Conservation offset programs are being explored but these mechanisms rely on a constraint such as "no net loss" or similar requirement which will not apply to many important ecosystem services

(Noga & Adamowicz, 2014). Programs that provide direct funding for ecosystem services from government agencies, such as Beneficial Management Practices (BMP) in agriculture programs, are also being employed, but these programs are also relatively limited in scope (Trautman et al., 2013).

Recently a range of novel private or local community level initiatives to generate incentives for conservation or funding for ecosystem service provision on private land have been tested in Alberta and in other provinces (Knopff & Gates, 2013; South Okanagan-Similkameen Conservation Program, 2011, Delta Water Fowl, 2015). These programs include payments by hunters and recreationists for improved habitat and recreational experiences, local referenda to support the provision of local ecosystem services, and other direct funding mechanisms such as crowdsourcing and related tools. In part, these have been based on experiences in the U.S. that included crowdfunding and referenda (Hörisch, 2015; Banzhaf et al., 2011). However, the feasibility and effectiveness of such programs in a Canadian/Albertan context and the barriers to effective implementation, remain largely unknown.

Research Questions

- Develop an exploratory study that would address the following:
    - What has been learned from previous research and experience with direct private or local community mechanisms for compensating landowners for the provision of ecosystem services in Alberta and other Canadian provinces (such as direct payments by recreationists / hunters, local referenda and related instruments)?
    - Are such mechanisms socially acceptable? Are they supported broadly in the community or are the differences of opinion across groups in the community that may limit adoption?
    - What, if any, legal or regulatory barriers exist regarding the implementation of such private or local community direct methods of compensation?
    - Can these mechanisms result in improved ecosystem service provision?
    - Are such mechanisms economically feasible?
    - Could a pilot, or set of pilots, be designed to test and evaluate direct funding or payment mechanisms and investigate the legal and economic aspects of such mechanisms?

ALI plans to use recommendations provided in the exploratory study to develop future Calls for Proposals or to extend the project contingent on funding.

Project Objectives

- Development of the key research questions and research design (hypotheses, experimental design, and pilots) to compare and contrast environmental, economic and social outcomes of establishing a variety of direct private or local community mechanisms for payment for landowners for the provision of ecosystem services.
- Development of a detailed research plan outlining the process for exploring methodology(ies) to compensate landowners for the provision of ecosystem services, especially the potential source(s) of this compensation. This should include the identification of a multidisciplinary research team, research sites, resource requirements, research partners/participants and potential funding partners.

Project Period: Call for Proposals in November 30, 2015 with project completion by June 1, 2017.

Proposed Budget: A maximum of $50,000 for the first year (research design phase), and potential additional funding for subsequent years of the study. This future funding is dependent on the results of the design phase and the proposed approach.

It is expected that the selected applicant(s) will work in conjunction with the ALI to coordinate funding application(s) to potential funding partners, in addition to ALI funding, to implement a possible multi-year research program.

References:

Banzhaf, H. S., W. E. Oates and J. N. Sanchirico. (2010). "Success and design of local referenda for land conservation." *Journal of Policy Analysis and Management* 29(4): 769-798.

Canada West Foundation. (2012). *The Invisible Hand's Green Thumb: Market-based Instruments for Environmental Instruments in Alberta*. Canada West Foundation, Calgary, Alberta. Retrieved from https://canadawestfoundation.worldsecuresystems.com/pdf-docs/publications/Market_Based_Instruments_in_Alberta_January%202012.pdf

Delta Water Fowl. (2015). Delta Water Fowl: 2015 Ducks Report.

Hörisch, J. (2015). "Crowdfunding for environmental ventures: an empirical analysis of the influence of environmental orientation on the success of crowdfunding initiatives." *Journal for Cleaner Production* 107: 636-645.

Knopff R. & C. Gates. (2013). "Hunting for Habitat: The Rise and fall of an Alberta Proposal for Private Production of Ecological Goods and Services." *Policy Series* 146: 23pp. Frontier Centre for Public Policy.

Ministry of Environment and Sustainable Resource Development. (2011). Sustainable Forest Management: Current Facts and Statistics. Retrieved from http://esrd.alberta.ca/lands-forests/forest-management/forest-management-facts-statistics/documents/GeneralBoundary-CurrentFactsAndStatistics-2011.pdf.

Noga W. & W.L. (Vic) Adamowicz. (2014). "A Study of Canadian Conservation Offset Programs: Lessons Learned from a Review of Programs, Analysis of Stakeholder Perceptions, and Investigation of Transactions Costs." Sustainable Prosperity Research Paper, University of Ottawa.

South Okanagan-Similkameen Conservation Program. (2011). *Establishing a Regional Conservation Fund in British Columbia: A Guide for Local Governments and Community Organizations*.

Trautman, D., S. Jeffrey & J. Unterschultz. (2013). *Beneficial Management Practice (BMP) Adoption: Direct Farm Cost/Benefit Tradeoffs*. Department of Resource Economics and Environmental Sociology, University of Alberta.