

Ecological Goods and Services a Manitoba Perspective

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A Little History

- 1999 the Keystone Agricultural Producers (KAP) released a paper titled “Alternate Land Use Services” (ALUS)
- Delta Waterfowl Foundation became involved.
- 2000 Little Saskatchewan River Conservation River (LSRCD) became involved in investigating a pilot project.

History

- Early interest from agricultural sector in annual payments for environmental services
 - Eg. Alternate Land Use Services (ALUS) pilot
- Complementary ongoing work by Environment Canada, ENGO's, etc on Natural Capital concept
- EG&S was first discussed by Agricultural Ministers in September 2004 and has since been on the agenda of the FPT ADM, DM and MIN meetings

Why Are We Interested?

Agriculture as a Solution Provider

- Healthy Landscapes
- Healthy People?

Ecological Goods & Services (EG&S)

Positive environmental benefits that Canadians derive from healthy ecosystems, including clean water and air, and enhanced biodiversity.

Agriculture is both a beneficiary and a provider of EG&S:

- Ecosystem processes: soil renewal, climate regulation and precipitation....
- Benefits to broader society: wildlife, scenic view, purification of air and water...

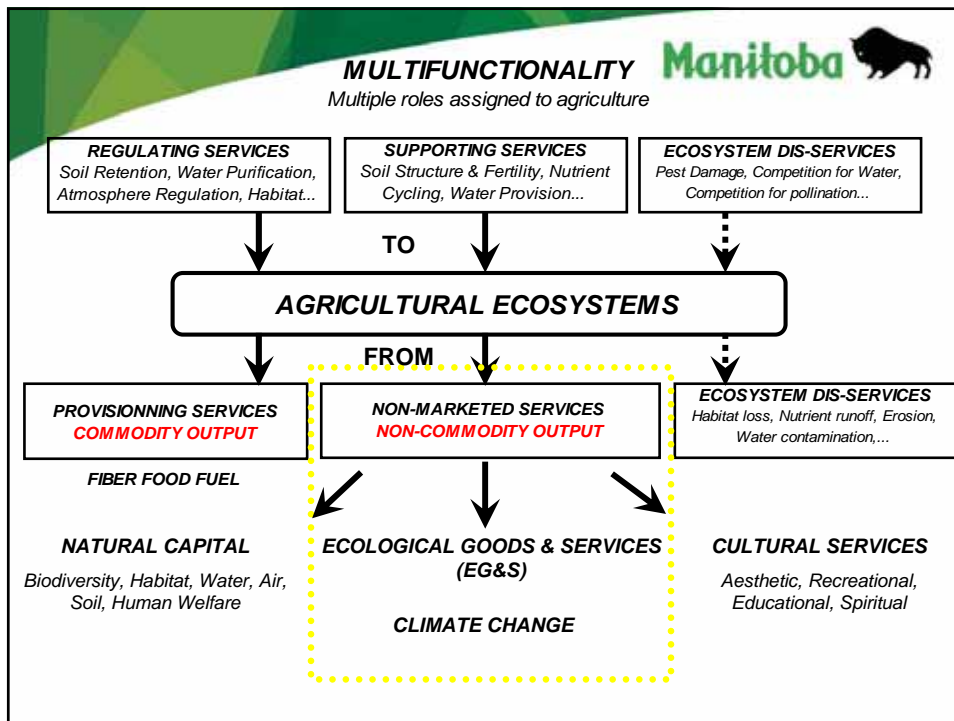
Our Drivers

Water Quality
Climate Change

EG&S is not new...



- APF initiatives
 - Setting targets, reporting to Canadians
 - Using scans, and environmental farm plans
 - Incentives for BMP's, Greencover, and shelterbelts
 - Looking at standards and certification
 - Investing in both bio-physical and socio-economic research
- GHG offset system:
 - Creating a new market for a critical EG&S
 - Enabling producers to be paid for a global societal good



Activities in Manitoba



- Alternate Land Use Services
 - Pilot project RM of Blanshard
- A Pilot Watershed Approach for Wetland Restoration and Retention
 - Pilot project South Tobacco Creek
- Estimating Program Uptake and the Nature of Costs/Benefits for Manitoba
 - George Morris Centre



Where is the
Manitoba ALUS
project?

Background of ALUS

- A mix of public and private ownership exists on private land, so the stewardship of natural capital must be a shared responsibility of governments and landowners.
- Stewardship and conservation are services, they must be assigned a fair market value.
- ALUS will recognize payments for the maintenance of existing natural assets and provide incentives for improvements.
- Farmers and ranchers are in the best position to deliver EG&S on their land.
- ALUS will be audited by trusted farm organizations and monitored by existing institutions that have the required expertise and experience.

Land types eligible under ALUS

1. Wetland Services
2. Riparian Buffer Services
3. Natural Area Services
4. Ecologically Sensitive Land Services

Integration of Watershed Planning and the Agricultural
Policy Framework For the Provision of Ecological Goods
and Services:

A Pilot Watershed Approach
For
Wetland Restoration and Retention

Ducks Unlimited Canada
University of Guelph
University of Alberta

Objectives

- Develop a prototype of integrated economic and wetland-watershed hydrologic modelling system to estimate restoration and retention costs and water quality benefits of prairie wetlands:
- Calibrate and validate the prototype modelling system to fit into the conditions of a representative watershed
- Apply the prototype modelling system to prioritize wetlands for restoration and retention

*Ecological Goods and Services:
Estimating Program Uptake and
the Nature of Costs/Benefits in
Agro-Manitoba*

A Study by George Morris Centre

Objectives of the project

Evaluate the costs and benefits of a potential EG&S program with consideration to the various agri-environmental regions of Agro-Manitoba

- ✓ To determine the nature and extent of EG&S qualifying lands throughout Manitoba and across various agri-environmental regions.*
- ✓ To describe the potential environmental and other benefits from an EG&S program and the main environmental practices involved.*

Objectives of the project

- ✓ *To estimate program expenses for low, medium & high adoption rates on EG&S qualifying lands.*
- ✓ *To estimate the value of environmental and other benefits resulting from low, medium & high adoption rates on EG&S qualifying lands.*
- ✓ *To develop an analytical framework that compares the costs & benefits of various scenarios.*
- ✓ *To recommend an approach for staging the introduction of an EG&S program based on cost/benefit parameters.*

In Summary.....

- ✓ *A broad EG&S program across agro-MB will require a large budget...*
- ✓ *However, there will be positive net benefits to Manitobans...*
- ✓ *The potential costs of such a program will be highly variable, depending on program parameters...*
- ✓ *Opportunity costs drive overall program costs...*

Other Considerations

- ✓ *Level of funding and any uncertainties surrounding funding*
- ✓ *Landowner perceptions*
- ✓ *Public perceptions and relations*
- ✓ *Uncertainty in terms of program design with respect to science and market realities*
- ✓ *Difficulties in selecting areas to target for potential EG&S program delivery.*
 - *GMC was requested to pursue this issue with stakeholders in their research, but this line of questioning was ultimately unproductive.*
- ✓ *Administrative costs*
- ✓ *Program delivery*

Future Research Recommendations

- ✓ *Compare this research with a targeted BMP program for specific environmental issues (e.g. intensified manure management program).*
- ✓ *Examine environmental issues more closely at a watershed level and compare across watersheds (i.e. for improved targeting, design and funding allocations).*
- ✓ *Conduct a cost-benefit analysis based on local or targeted areas.*
- ✓ *Additional research on current wetland values in Manitoba would help to improve the estimation of the benefits of a potential EG&S program, which could have significant policy implications.*

A Manitoba Perspective



Why Are We Interested?



- Agricultural Producers have been providing services from agricultural landscapes which benefit all citizens
- Agriculture can be a solution provider, maintenance of natural capital
- May provide producers further diversification options

Issues

- Not enough known on the potential of environmental services that could be provided
- Payments should be for the production of a well defined ecological good or service
- Monitoring and measurement is difficult and unproven
- Limited funding
- partnerships

Challenges

- The perception that this is a farm income support program
- Educate the producer of the contractual obligation to provide the service contracted
- Research needed to provide the optimum technical input as to the practice supported by payment and its effectiveness
- partnerships

Conclusions

- EGS and its possibilities in connection with agricultural landscapes is an exciting initiative
- Governments need to provide the framework for the development of this service and its provisions
- EGS may be an excellent opportunity to create the balance between agricultural production and positive environmental outcomes

Lingering Questions

- What are the types of policies that encourage
 - Land managers to provide EGS
 - Society/consumers business to invest in EGS
 - Governments to facilitate the environment for EGS to be maintained and enhanced

- What is the optimal mix of tools to achieve our objectives?
- What are the fiscal implications
- What is the best method for valuation
- How do we communicate to the public

Thank you for your kind attention

The determinants of competitive advantage have changed over time.....

- Late 18th and early 19th centuries
 - Driven by need to economize labour (a scarce resource)
 - with mechanization labour productivity increased 200-fold
 - First movers (Britain) became industrial leaders for decades
- Late 19th and early 20th centuries
 - Driven by need to exploit natural resources more effectively, and new technologies (eg electricity, internal combustion engine)
 - US became new powerhouse, Britain failed to react and fell behind
- Late 20th century
 - Driven by globalization of industry and finance through information technologies
 - Success based on ability to adapt quickly – with high value placed on a skilled workforce (integration of economic and social policy)
 - US remained a world leader
- Canada was a leader in the latest industrial revolution – transforming into a knowledge-based economy – giving Canadians a quality of life that is among the best in the world

And as we enter the 21st century, the model is changing again...

- **Environmental sustainability is emerging as a key driver of our economic competitiveness.**
- The emerging model of competitiveness recognizes that:
 - Sustained, long-term economic growth requires a long-term, comprehensive approach to sustainability;
 - Climate change is our single greatest sustainability challenge; and
 - Adopting a sustainable approach requires buy-in-from citizens, industry and governments – to be successful