

# Ecosystem Services and Biodiversity Network Sector Workshops and Outreach Sessions

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*Agriculture Sector Workshop Summary*

Submitted by:



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## Introduction

The Ecosystem Services and Biodiversity Network (ESBN) is a multidisciplinary group of experts working to build the knowledge required to assist with the implementation of an Ecosystem Services (ES) approach in Alberta. ES are the benefits that humans receive from nature including provisioning (e.g. food, fuel, fibre, fresh water), regulating (e.g. air quality, climate regulation, erosion control, water quality), cultural (e.g. spiritual enrichment, recreation, aesthetic experiences) and supporting services (e.g. production of oxygen, soil formation).

Over the past several years many organizations, various levels of government, academia and industry have been exploring ways to integrate ES into planning and decision-making on working landscapes in Alberta. An important element of this approach is to identify current and future information needs. To meet these needs, solutions need to be developed that are practical, science-based, easy to understand and communicate.

In response, the ESBN developed a series of sector-based workshops to support the development of a recognized, comprehensive ES approach that can be adopted by governments, resource-based industries, landowners and land managers, and conservation organizations. The Agriculture Sector workshop brought together approximately 26 individuals from a cross-section of the agriculture industry including representatives from federal, provincial and municipal governments, commodity groups, environmental non-government agencies and producers.

## Principles for Sector Participant Engagement

The proposed program and process for participant engagement is based on the following principles:

1. Use sector focused workshops to ensure use of common language, understanding, knowledge, experience, regulatory frameworks and consistent approaches.
2. The involvement process will be designed to respect the requirements to address the project outcomes as well as to meet the needs of the participants in sharing their informed perspectives.
3. Participants will be provided the opportunity to be meaningfully engaged, increase and share their knowledge and feel that the event has been valuable to their learning.
4. The use of the results from the workshops will be clearly explained to participants.

The aim of the workshop was to bring together agriculture leaders to discuss and review the following core elements of the ESBN Roadmap:

1. Focus on five ESBN Roadmap building blocks.
2. Reference ecosystem attributes (Provisioning; Regulating; Cultural and Supporting Services).
3. Review and provide feedback on proposed approaches that have been developed to date.
4. Identify gaps, additional needs and opportunities to advance implementation of ecosystem services in support of regional land use plans.

## Workshop Desired Outcomes

The workshop series was designed to help address the following outcomes:

1. Increase the awareness of the Ecosystem Services and Biodiversity Network, the work sponsored to date and identification of areas for future research and collaboration.

2. Enhance the awareness and understanding of past and current landscape and watershed planning efforts and develop a clearer understanding of opportunities for collaboration on public and private land conservation initiatives.
3. Identify partners who can assist with the development of an expanded suite of ES tools.
4. Enhance the understanding of existing landscape planning and implementation programs currently delivered for the conservation and restoration of natural assets in targeted landscapes of Alberta.
5. Enhance the understanding of an integrated and operational ES market and the identification of gaps along with additional information and research needs.

## Key Emergent Themes

The following key themes emerged as a result of the feedback and discussions from the workshop:

1. **Capacity Building**
  - a. There is a need to continue to build knowledge and capacity in the ES area. Consistency in language and messaging is important for everyone involved in with particular emphasize on working together in a more coordinated and efficient manner.
2. **Single Point of Entry**
  - a. There are many ES initiatives and organizations working on a variety of ES projects across the province. A single point of entry and an umbrella organization responsible for dissemination of information is required to ensure effectiveness of effort and enhanced communication is occurring.
3. **Municipal Engagement**
  - a. Municipal planning and development is essential to operationalize ES programming. Currently, municipalities are not fully engaged and there is a general lack of capacity to be able to fully implement ES programing at a local level. The need, therefore, is to provide resources and extension support for municipalities that would allow for local program development and delivery.
4. **Credibility and verifiability**
  - a. There is a need to ensure that those involved in the development and implementation of ES programming are qualified and that the information and data sources can be certified and verified.
5. **Opportunity for a new economy**
  - a. Ecosystem Services presents an opportunity for the development of a new economy that can help to advance local, provincial and federal policies and programs.
6. **Know your stakeholders**
  - a. There is a need to better identify and engage key stakeholders and to build on current ES efforts to ensure that target audiences are effectively engaged.
7. **Use of pilots and demonstration projects**
  - a. There is a need to design and implement 'real world' examples of ES applications in an effort to engage a broader audience and to identify future ES programming needs.

## Workshop Participant Discussion Summary

### Assessment – Opportunities

- Link and/or align with agriculture capability index.
  - Land suitability
  - Productivity index- forage/yield (Ag Canada)
- Recognize agriculture as habitat for species – communicate the value and usefulness for the market
- Communicate the value of ES (i.ee carbon storage) for various management decisions, including leaving native range
- Link to the surface water management framework and the biodiversity management framework
- Follow up to payments – verify (evaluate past success) and evaluate ES assessment link to programs such as NCC, DU. Have consistent metrics
- Include the effects of climate change and weather
- Communication
  - Language is important – terminology inventory; inputs; landscape budget/assets
  - Communication on ESA – how is this accessed, who uses it, target use/tools to audience. Report cards and metrics.

### Assessment – Gaps

- Who are the buyers – linking ESA to buyers
- Habitat for hunting, access
- What does the public want? And who are the beneficiaries? Metrics for value – run scenarios
- Temporal aspects – marginal gains
- Scale- linking to broader outcomes. Input of ‘true’ data – what producers do, or plan to do
- Ground trothing, verification
- Monitoring
- What does the landowner want? i.e. Conservation ethic/their objectives
- Application/use of assessment – frameworks; markets – “so what”
- How is it accessed over time
- Social license – show how industry as improved over time. Demonstrates trends

### Assessment – Recommendations

- Life cycle analysis
- Communicate the value of agriculture for ES
  - Link monitoring to data
  - Highlight social license
- Assessment/accounting of cumulative effects or impacts of sub regions/landscape connectivity
- Assessment that shows change, such as increases of ES and biodiversity for management actions (not necessarily big land use changes) - finer resolution
- Communication is key – need the whole story versus silos
- More input – must mean something to the producers – show how it is used.

## Assessment – Risks/Barriers

- Penalties for negative impacts (for bad management not climate change) – landscape connectivity
- Perception that agriculture is already disturbed and habitat of biodiversity increases are limited/discounted – Balance needs to be recognized
- Assessment that shows certain types of agriculture is bad

## Data and Information Management – Opportunities

- Integrate wetland inventory
- GOA reviewing current wetland inventories, not 100% accurate
- Beaver County CO2 project with BRIMS – Pilot opportunity
- Develop case studies – target municipalities, land owners and NGOs
- Growing Forward BMP data
- Crop sustainability
- Could be used to help ID/target highest and most appropriate use for lands – target protection for Agriculture use
- Link BRIMS to agriculture master plans and municipality ESA plans
- Scenario building: change crop type to assess the change in ES
- AFC – collect land cover data annually since 2010 (high resolution data, 30 m) Could look at lower resolution data for trends
- Agriculture impact assessment process (capital region pilot)
- Water quality management framework

## Data and Information Management – Gaps

- Land owner support to utilize BRIMS: tech support needed, may not be land owner feasible
- Only 40% of producers are insured (AFC)
- Need more land cover type data rather than biomass
- Lack of common language/ general knowledge for BRIMS
- Brims is not spatially explicit
- Needs real examples/case studies
- BMP changes are not easily validated by BRIMS

## Data and Information Management – Recommendations

- Finer land cover (1/4 section)
- Beaver county/ Augustana – finer detail of BRIMS
- Case studies in ESNB newsletters - potential for Beaver County/Augustana as a next step
- Put data for BMPs into BRIMS
- Additional protected areas – i.e. Biosphere reserve
- Have a conversation with municipalities regarding data sharing – lots of details available (i.e. High resolution photos) that can be linked to BRIMS in some way
- Target municipal administration as a tool required for Land owners
- Making BRIMS understandable
- City of Edmonton – eco value mapping
- Ensure time consistency for data inputs
  - Canadian round table – data input into brims – sustainable beef and sustainable crop.

## Data and Information Management – Risks and Barriers

- Stacking outside GOA policy – i.e. wetlands
- Not targeted to landowner involvement
- How BRIMS outputs potentially affect municipal taxes – tax assessments

## Market Infrastructure and Enabling Policy – Opportunities

- Build the connections between players
- Build the infrastructure/tools and systems to bring the pieces together
- Administration and governance is critical to lowering transaction costs, etc.
- Have more direct connection and communication with landowners to get more information and knowledge out the right way
- There is an opportunity for stacking - leverage between programs
- Municipal ASBs – essential and key – municipal planning and development
- AEPA and industry players need to be engaged
- Understand private vs public land needs/requirements
- Infrastructure design needs to consider how to bring all the current initiatives, data sets, programs together in a common consistent “currency”
- Net increase in ES is required for payment in ALUS
- Need metrics to track inputs and outputs
- Accountability, credibility and verifiability are critical – reporting/metrics
- Quantifying value is key for communications
- The idea is a ‘market place’ to connect buyers and sellers

## Market Infrastructure and Enabling Policy – Gaps

- Where would there be access to the infrastructure for the market – online?
- There’s many organization and initiatives. We need one focus point ( i.e. AFSC), a voluntary, central organization to coordinate
- Use existing infrastructure if possible
- Part of the infrastructure needs skilled HR to get it done
- What is the **objective** for the agriculture sector (and others), as well as the measures that account for it?
- What is the unit of exchange – global, national, provincial?
- Important to recognize ES across all land uses
- Who defines what the ES are and what can be accessed?
- Who certifies and verifies?
- Capacity and knowledge building are required
- Is there a way to know what each land parcel provides?

## Market Infrastructure and Enabling Policy – Recommendations

- Need a common source of knowledge/ data/ information – a ‘one stop shop’ coordinating mechanism to exchange information and ultimately money
- Marketing ES to create common language – make a menu of terminology
- Coordinated and aligned delivery mechanism for producers and others
- Common shared networking (one stop shop)
- Common, shared data set and metrics is important – moves to common language
- A tool for landowners to provide their “portfolio” – their supply.

- Structure with the rules of the game – what is the regulation and legislation behind it?

## Market Infrastructure and Enabling Policy – Risks and Barriers

- What are the services and what can we see?
- Is it a free market?
- Remove barriers (policy) i.e. around wetlands
- Bundling of wetland ES (without carbon) why not integrate carbon?
- Policy integration/alignment and coordination is very important
- Wetlands policy excludes carbon
- Provincial policy build up
- Implementation is not happening or integrated
- Capacity is a barrier – assist municipalities in using existing mechanisms
- Provincial consistency and approach
- Service – brokers to connects sellers to credible buyers (credible and verified)
- Qualifications need to be verified and certified

## Engagement and Outreach – Opportunities

- Identify groups already engaged/aware
- Turn knowledge into tangible example
- Create common language – find out how to disseminate information to different groups
- A visual symbol or logo could be an indicator of Ecosystem services (ex. similar to the recycling logo) communicating a high level concept with a brand
- Shorter more useful communication, identifying smaller steps
- Is certification around ES a possibility? This could be added onto existing certification processes
- Use the right words in communication – terms that are understood according to stakeholder groups
- Engage and inform funders and the public – both should be a part of the target audience
- A more progressive communication strategy i.e. Social media is a good way to reach the next generation of producers
- Diversify methods to get the message out and reach a range of audiences
- Know who your audience is
- Consistent messaging is key – keep it simple and straight forward, plain language

## Engagement and Outreach – Gaps

- Increased awareness is needed among buyers, not just suppliers
- Move along the people who are already engaged (early adopters) move them into well thought-out pilots. Ensure that the dollars are in place and the pilots will be a success or we could lose engagement
- Municipal capacity is not big enough for all extension. Design programs with this capacity gap in mind
- Only 10-15% of farmers are aware of what ES is
- Producer needs to get the benefit/payment
- There will be greater awareness and engagement if there's a market in place/ something more tangible, the stories and communication are not enough
- Greater need for municipal engagement, there's almost none at the moment
- There's no continuity of knowledge

## Engagement and Outreach – Recommendations

- Need clear language with common terms
- Producers need to see it being implemented to be engaged
- Keep moving things forward – move into pilots
- Find the municipalities who are eager to support and encourage producers to adopt practices
- Have a simple process
- Create a ‘menu’ for different services and contacts
- Programs need to be sustainable over the long term
- Train the trainer – provide resources to the people who will be educating others. (Planners, Ag Service Boards, etc.)
- Embed ES in GoA regional plans
- Embed the language of statutory documents into municipal policy/bylaws
- Use the Ducks Unlimited fact sheets – look to other outreach organizations and build on information that already exists
- Recognize the role of municipalities in supporting ES implementation, and provide resources to enable and support
- Look for testimonials
- Producer engagement – be respectful of their time and report back

## Engagement and Outreach – Risks and Barriers

- Concept is too complicated
- Setting up a program that wouldn’t be successful
- Many groups doing the same thing – need one source/group for information, one point of entry
- Incentive programs are paying for best practice rather than for ES
- Programs might not be as appealing for different commodities
- There is a regulatory burden
- The perception of oversubscription will create apathy
- The system won’t be self-sustaining – there’s a need for structure, policy and/or governance
- Lack of resources – need support for other organizations
- Competing interests within the GoA (holding information)
- Time – the engagement process takes time and people may or may not be available
- Changing governments at all levels

## Appendix A – Evaluation Summary

### Workshop Objectives

1. I was able to identify gaps that may affect implementation of an ecosystem services approach to land and resource management
  - Strongly agree = 2
  - Agree = 17
  - Neutral = 2
  - Disagree =
  - Strongly Disagree =
2. I was able to identify additional needs to advance implementation of ecosystem services
  - Strongly agree = 4
  - Agree = 13
  - Neutral = 2
  - Disagree =
  - Strongly Disagree =
3. I had an opportunity to increase my awareness of the elements to implement Alberta’s ecosystem services approach
  - Strongly agree = 5
  - Agree = 12
  - Neutral = 1
  - Disagree = 1
  - Strongly Disagree =
4. I was able to learn about the 4 elements to implement Alberta’s ecosystem services
  - Strongly agree = 2
  - Agree = 14
  - Neutral = 3
  - Disagree =
  - Strongly Disagree =
5. Opportunities to continue to build on success to enable the elements to implement Alberta’s ecosystem services were identified
  - Strongly agree = 2
  - Agree = 13
  - Neutral = 4
  - Disagree =
  - Strongly Disagree =
6. Gaps that may affect support for delivering on the elements to implement Alberta’s ecosystem services were identified
  - Strongly agree = 1
  - Agree = 16
  - Neutral = 2
  - Disagree =
  - Strongly Disagree =
7. Realistic barriers to enabling the implementation of the elements to implement Alberta’s ecosystem services were provided
  - Strongly agree = 3
  - Agree = 14

- Neutral = 2  
 Disagree =  
 Strongly Disagree =
8. The Agenda accurately reflected the workshop process  
 Strongly agree = 9  
 Agree = 10  
 Neutral =  
 Disagree =  
 Strongly Disagree =
9. The instructions during the workshop were clear  
 Strongly agree = 10  
 Agree = 7  
 Neutral = 1  
 Disagree = 1  
 Strongly Disagree =
10. I had an opportunity to participate and contribute my ideas  
 Strongly agree = 15  
 Agree = 4  
 Neutral =  
 Disagree =  
 Strongly Disagree =
11. Overall, the workshop met my expectations  
 Strongly agree = 8  
 Agree = 9  
 Neutral = 2  
 Disagree =  
 Strongly Disagree =
12. Additional Comments and Feedback
- ES and Biodiversity are important to keep our landscape clean, healthy and maintained for future generations. We must get it right and maintain a solid program, please don't over regulate and have over administration costs
  - Excellent workshop, simple but effective model to engender quality thoughts and conversation. Has me considering investment models I want in on the ground floor!
  - Would have been better to have presentations from all the group leaders on where they were at with their program development before we went into the interactive sessions.
  - Great forum for sharing ideas and learning more about ES. I liked the format of focusing on the building blocks, it allowed me to gain more detailed understanding of the building blocks and share feedback.
  - Well run, not too jammed in - but perhaps more info upfront would have been helpful.
  - Mixing up the groups as we moved around would have been nice. Other people could twig ideas differently
  - Good workshop, I enjoyed the option to interact in a group setting. Next I would suggest mixing up the groups just to diversify