

# Ecosystem Services and Biodiversity Network Sector Workshops and Outreach Sessions

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*Final Project Report*

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 has identified an opportunity to develop a series of sector-based workshops and outreach sessions across Alberta in early 2017. The intent of the workshops is 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.

## Background and Strategic Intent

The strategic intent of the ESBN workshops and outreach sessions is to support the development of a recognized comprehensive Ecosystem Services (ES) approach that can be adopted by governments, academics, resource based industries, landowners, and land managers and conservation organizations. This is in support of the overall purpose of the ESBN Roadmap document which states the need for:

*Bringing together an expert network of stakeholders and practitioners to jointly put in place the systems, tools and knowledge to ensure the effective application of market-based instruments for the enhancement of ecosystem services.*

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

1. Use sector focused workshops to ensure the use of common language, understanding, knowledge, experience, regulatory frameworks and consistent approaches amongst participants.
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.

## Objectives

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.

## Implementation Approach

The workshop series was designed to bring key sectors (municipal government, forestry, agriculture and environmental organizations) together in independent workshops to:

1. Focus on ecosystem services building blocks as identified within the ESNB Roadmap.
2. Reference and explore ecosystem services attributes (Provisioning; Regulating; Cultural and Supporting Services) in the context of sector – specific initiatives.
3. Review and provide feedback on proposed approaches that have been developed by the ESNB to date.
4. Identify gaps, additional needs and opportunities to advance implementation of ecosystem services in support of regional land use plans and other provincial planning initiatives.

Two additional workshops were held with representatives from the Government of Alberta (Environment and Parks, Agriculture and Forestry) in an effort to explore linkages between internal ES policy development and the efforts of the ESNB. At the request of the Government of Alberta representatives, content from these two workshops has not been included within this final report owing to ongoing internal planning and development of an ES policy framework.

## Workshop Schedule and Attendance

Date	Sector	Location	Attendance
March 6	Government of Alberta	Edmonton	34
March 7	Municipal Representatives	Nisku	16
April 4	Forest Industry Representatives	Nisku	14
April 26	Agriculture Industry Representatives	Nisku	26
May 10	Government of Alberta	Calgary	11
May 29	Environmental Non Profit Organizations	Nisku	25

## Focusing the Discussion

To support active discussion, meaningful involvement and encourage the sharing of informed perspectives among participants, each workshop focussed the discussions and participant feedback on the five ES Building Blocks required for the successful use of ES and biodiversity markets. Participants were provided with a short expert overview of each of the five ES Building Blocks that support the design and implementation of the ESBN Roadmap. These include:

1. **Assessment:** Research and innovation to better understand the supply and demand of Ecosystem Services.
2. **Data and Information Management:** A centralized data and information management system for valuing Ecosystem Services.
3. **Market Infrastructure:** Establishment of a market-based approach to coordinate buyers and sellers of Ecosystem Services. This was combined with Enabling Policy: Research and innovation to support policy integration, coordination and alignment of Ecosystem Services.
4. **Engagement and Outreach:** Building capacity in stakeholder outreach, engagement and communications of Ecosystem Services.

Participants were then asked to provide their knowledge, thoughts and expertise based on each of the following:

1. What are the opportunities to continue to build on success to enable this building block?
2. What are the gaps that may affect support delivering on this building block?
3. What are the recommendations to address the gaps?
4. What are the risks or barriers to supporting and enabling the implementation of this building block?

A summary of responses to the questions is provided in [Appendices A – D](#).

## Emergent Themes

The ESNB sector workshops and outreach sessions were designed to raise awareness of the ESNB and to help 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. Over 125 individuals and experts from across all sectors participated in the workshop series, providing their knowledge and expertise through facilitated, small group discussions.

As a result of these discussions, several key themes emerged for each of the ES Building Blocks:

1. **Assessment:** Research and innovation to better understand the supply and demand of Ecosystem Services.
  - a. There is an opportunity to refine existing modeling and reporting products to account for regional variability, include information from other databases and to link with various GoA policy frameworks, other models and industry certification processes.
  - b. There is the potential to develop new and use existing models (and associated metrics) to help advance public awareness of ES in lieu of enabling public policy.
  - c. There is the need to incorporate existing planning and management standards to help build capacity and understanding of ES with industry and municipal representatives.
  - d. There is a need to collate current incentive program details that target management and production of ES in order to better inform land owners and land managers about potential revenue opportunities.
  - e. Several gaps need to be addressed regarding key attributes of current models and model data to ensure integration across Alberta.
  - f. There is a need to develop a clear understanding of application and purpose of current models, including how models can help to support and/or create an ES market.
2. **Data and Information Management:** A centralized data and information management system for valuing Ecosystem Services.
  - a. There is a need to continue to progress towards a single, centralized and up-to-date data source with integrated data modules.
  - b. There is a need for an application centre; collated case studies and ES scenarios to be used to assist with planning and assessment of local initiatives.
  - c. There are opportunities to advance the BRIMS application for use within the settled region of Alberta by enhancing data and targeted outreach.
  - d. There is a need to ensure that all data and data management systems have a high level of accuracy and verification in place.
  - e. There is a need to develop capacity that will provide reliable, equal, relevant and effective ES assessment of property (including land management activities) for land owners and land managers.
3. **Market Infrastructure:** Establishment of a market-based approach to coordinate buyers and sellers of Ecosystem Services. Combined with **Enabling Policy:** Research and innovation to support policy integration, coordination and alignment of Ecosystem Services.
  - a. Current GoA policy is lacking and is required to provide a backstop for the market and should be directly linked to municipal planning and development.
  - b. The design of the market infrastructure needs to consider how to bring all the current initiatives, data sets and programs together into a common and consistent 'currency' that is accountable, credible and can be independently be verified.

- c. There is a recognized opportunity for diversification and for incorporation of practices beyond business as usual providing a sustainable market exists.
  - d. There is a defined lack of coordination and dialogue between and within all levels of government.
  - e. There is a need to develop a single “one-stop-shop” for information and data exchange, supporting transactions and as a shared networking site for interested parties.
  - f. There is a need for a coordinated and aligned implementation structure that provides an outline of the process of verification, selling, buying and trading ES into a marketplace.
4. **Engagement and Outreach:** Building capacity in stakeholder outreach, engagement and communications of Ecosystem Services.
- a. There is a need for a comprehensive strategic communications plan that utilizes clear and concise language, defines target audiences and key messages, outlines a marketing strategy, measures and quantifies outputs and links to existing partner networks.
  - b. There is a need to develop case studies, champions and demonstration projects that can help advance ES knowledge and capacity, and be used to educate target audiences.
  - c. There is a need for increased efforts to support the development of an ES Implementation Plan, which will highlight pilot projects, identify roles and responsibilities, communicate the ES concept in a clear and concise way and help to effectively deliver the ESBN initiative.

## Summary

The ESBN workshop and outreach session series was designed as an initial step; to establish a broader network of individuals and organizations with an interest in ES, to outline past and current efforts by the ESBN that can assist with an ES approach for landscape protection and restoration, identify efforts by other individuals and organizations working towards similar outcomes and to identify future policy, research and delivery strategies that can serve as a model for a collaborative and inclusive ES approach towards landscape protection and restoration in Alberta. The outcomes from these workshops provide a foundation for future work and refinement of the ESBN Roadmap to ensure that appropriate and timely effort is focussed on areas of greatest immediate need.

Going forward, it is recognized that for any ES system to be fully integrated, a series of activities would be required including; pilot and test project identification and delivery; development of core discussion papers, presentations and workshop sessions; and the design and implementation of targeted outreach sessions. Outcomes generated from these efforts form the foundation and key elements required to identify additional information/research needs, gaps in current and proposed policy, targeting new and enhancing existing partners with an interest and mandate in ES programming and exploring approaches for implementation of future ES programming in Alberta.

## Appendix A – Assessment

### *OPPORTUNITIES*

- Refinement of modeling and reporting products
  - Refine existing models for regional variability
  - Models need to communicate with each other
  - Link and/or align with agriculture capability index, land suitability and productivity index
  - Link to the various GoA frameworks (i.e. water, biodiversity)
  - Link to existing models (i.e. FRY, NRV, BULLTROUT etc.)
  - Link with existing certification processes (i.e. FSC)
- Potential development of new models (i.e. water storage, recreation.) to advance public awareness of ES in lieu of advancing public policy
  - Climate change predictions linked to current and future ES production
  - Alternative and simplified metrics ( fishable, swimmable, drinkable)
- Incorporation of existing planning and management standards
  - Land management and stewardship principles
  - Retention, conservation and management of natural lands (beyond BAU)
  - Linkages to Green Infrastructure movement
  - Opportunity to build capacity and understanding with industry and municipalities
  - Develop an ES assessment tool and protocol
  - Common goals across jurisdictions could result in shared resources
  - Identify ES gains and losses relative to BMPs and management actions
  - Scalable to provincial and regional levels
- Collate incentive options for management and production of ES
  - Carbon, Land Trust programs etc.

### *GAPS*

- Establish key attributes and requirements for models
  - Scalable, adaptable across the province without requiring sophisticated datasets
  - Temporal
  - Ground – truthed and verified at specific sites
  - Ongoing monitoring
  - Ability to integrate with existing industry models
  - Accessibility of data and models
- Develop clarity of application and purpose, including how models can help to support/create a market
  - Incentives and disincentives at specific targets
  - Targeting of landscapes and most appropriate tools
  - Landscape characteristics; human health, historical and cultural values
- Provide linkages to social licence and trends
- Incorporation of recreational impacts into recreation model
- Ability to adjust to what’s being monitored on a finer scale

### *RECOMMENDATIONS*

- Catalogue and integrate other available data sets
  - Including certification and stewardship performance standards

- Develop clear baseline outputs
  - Develop trends over time
  - Life cycle analysis
  - Work with GoA to develop thresholds
- Communicate the value of land management actions for ES
  - Link monitoring to data
  - Highlight social license
  - Assessment and accounting of cumulative effects or impacts
    - Regionally and at landscape levels
  - Assessment that shows change, such as increases of ES and biodiversity resulting in changes to management actions
- Simplify the biodiversity intactness model
  - Outputs/communications
- Incorporate feedback mechanism to make the models an iterative process
  - Introduce temporal outputs into assessments
  - Incorporate scaling options
  - Incorporate monetization of cultural, regulating and supporting values

## ***RISKS/BARRIERS***

- Data requirements in models
  - Proprietary data issues
  - Cost to GoA of obtaining data held by industry
  - Cost to industry for sharing data
  - Scale/ resolution of data may not be relevant to industry
  - Time lag for data inputs
- Model outputs
  - Could result in penalties for negative impacts (poor management) but not a result of climate change
  - Public perceptions may impair industry outcomes
  - Modelling does not accurately depict land use practices
  - Extrapolating from the broader data, could lead to inaccurate interpretation of the results and not being tied to appropriate management or policy applications
  - Could lead to uncertainty and an overall cost to industry
- A system could be designed that might not end up being used
  - Lack of incentives for participation
  - Political interference
  - Liability for monetizing values
  - Concerns about privacy of information
  - Public perception may not easily translate from model/assessment outputs

## Appendix B – Data and Information Management

### *OPPORTUNITIES*

- Data for specific areas should be kept up-to-date and in real time
- Continue progress towards a single data source
  - Acknowledge data limitations and accuracy levels
  - Scale and reporting needs to be consistent and comparable
  - Application of data and purpose of use requires clarity
- Integrate additional data modules:
  - Wetland inventory
  - Growing Forward BMP data
  - Crop sustainability
  - Federal land cover data
  - Trend analyses
- Develop data application options and case studies/scenarios
  - Beaver County CO2 project with BRIMS – Pilot opportunity
  - Target highest and most appropriate use
  - Municipal master planning
  - Change in land use to assess change in ES
- Explore new technology for data collection (i.e. drones)

### *GAPS*

- Specific to the BRIMS application
  - Land owner support to utilize tool is required and 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 /fine enough detail for the settled areas of Alberta
  - Needs real examples/case studies
  - BMP changes are not easily validated by BRIMS
- Financial and political durability of the system
  - Building, maintaining and long-term sustainability of the system
  - Inventory of existing systems
    - FRY, BULLTROUT, SPADES etc.
- Data management system requirements
  - Level of accuracy and verification process
  - Scale; including rural residential and recreational properties at sub ¼ section scale
  - Regular schedule of data updates
  - GIS compatibility into GIS exchange
  - Spatial and temporal resolution
  - Integration of Indigenous and traditional knowledge (including long-term residents)
- Reliable, equal, relevant and effective ES assessment of property
  - Baseline assessment by qualified organization
  - Utilized for integration into new/existing systems
  - Requires new and more detailed information
  - Linkages to new and existing programs

## **RECOMMENDATIONS**

- Specific to the BRIMS application
  - Explore Beaver County/Augustana University project outcomes (finer scale)
  - Incorporate BMPs into BRIMS
  - Need for better clarity and clarity of purpose, making BRIMS more understandable
  - Integration of Canadian Round Table information (sustainable beef and crop)
- Data management system requirements
  - Finer land cover information (1/4 section)
  - Incorporation of additional protected areas (i.e. Biosphere Reserve)
  - Explore data – sharing with municipalities ( i.e. air photography, eco – value mapping, iTree)
  - Incorporate temporal component ( i.e. harvest sequencing)
  - Incorporate traditional, cultural and local knowledge
  - Regular and timely data updates
  - External data review
    - Standards and practices
    - Information governance
- Field assessment tools and verification process
  - Development of applied outputs/report cards
  - Tracking of ES transactions linked to specific land transactions
- Expanded outreach and communications
  - Case studies in ESNB newsletters
  - Additional workshops and seminars

## **RISKS AND BARRIERS**

- Quality and applicability of data
  - Data not having high enough resolution required to make best decisions
  - Provincial – level data does not have local application
  - Locally generated data is not incorporated
  - Municipal data is not incorporated
- Data liability
  - Waiting for the perfect data results in political uncertainty
  - Ability to link to GoA data (i.e. wetland inventory)
  - Liability associated with inaccurate and old data
  - Single source of data is susceptible to political decision-making and loss of capitalization
- Uncertainty of data collection and processing
  - Affordability of data collection if we keep asking for more data
  - Risk or not doing anything results in paralysis by inaction
  - What is the risk of not doing anything?
    - Cost : effective analysis
  - Legal implication of working with indigenous people
  - Confidentiality and property rights
    - Clarity of how data will be used and what does it mean to the land owner and land manager
- Sustainable funding model is required for data management and updates
- Need to be able to link land management activity with ES
  - Incorporates land owner and land manager involvement into process

- Links activity with outputs
  - Challenge associated with water quality (as example) and forest activity with all other activity upstream from a single point

## Appendix C – Market Infrastructure Combined with Enabling Policy

### OPPORTUNITIES

- Specific to policy
  - Need to link to municipal planning and development
  - Build to build the policy as a backstop for the market
  - Multi-jurisdictional support and alignment is important
  - Explore how ES is linked to food security policy and social license
- Specific to markets
  - Infrastructure design needs to consider how to bring all the current initiatives, data sets and programs together into a common and consistent ‘currency’
  - Build the infrastructure/tools and systems to bring the pieces together
  - Build the connections between ‘players’
    - Marketplace for buyers and sellers
  - Accountability, credibility and verifiability are critical reporting metrics
    - Requires metrics for tracking inputs and outputs
    - Requires high level of transparency of transactions
  - Recognize that MBI’s are already in place as are existing certification systems (i.e. SFI, CS, FSC etc) therefore there is a need to ensure that the system is not overly complicated, allowing the market to utilize and build on what is already in place
  - Clear and effective administration and governance is critical to lowering transaction costs
  - Explore opportunity for stacking and leveraging between programs
- Common themes
  - Understand the differences for public and private land management needs and requirements
  - Opportunities for diversification
    - Incorporation of conservation values
    - Incentives for different certification opportunities
    - Recreation offsets (i.e. trails, stream crossings etc)
    - Additional voluntary setbacks
    - Current municipal land liabilities could become assets
  - It is difficult and expensive to verify how many ES units are being created
    - Payment for outcomes or for management actions

### GAPS

- Centralized access point/portal is required
  - Voluntary and central organization to coordinate information exchange
  - Identification of champions to help determine market systems
- Infrastructure requirements
  - Requires skilled human resources
  - Defines unit of exchange (global, national, provincial , local)
  - Requires certification and verification capacity
  - Alignment of tenure length with offset lengths
  - Establishment of clear baselines and thresholds
- Lack of coordination and dialogue between and within all levels of government

- Requires institutional capacity (i.e. changing carbon rules resulted in loss of previous work)
- Policy impacts change with elected government changes
- Need to clearly define opportunities for sectors
  - Accounting measures
  - Incorporation (or not) of intrinsic values
  - What is the objective for the agriculture sector (and others), as well as the measures that account for it?

## **RECOMMENDATIONS**

- Development of a single “one-stop-shop”
  - Information and data exchange
  - Transactions – buying and selling
  - Shared networking site
  - Tool for landowners to provide their “portfolio” – ES Supply
- Coordinated and aligned implementation structure
  - Common language – defined terminology
  - Shared data and metrics is important – moves to common language
    - Define ownership rights
  - Develop market units linked to values not financial units
    - i.e. fishable, swimmable, drinkable
    - transaction analysis must be simple to calculate, administer and monitor
  - Develop an implementation toolkit
    - Structure of the process
    - Supporting regulation and legislation
    - Identification of current roadblock policies

## **RISKS AND BARRIERS**

- Specific to GoA policy
  - Identify and remove policy barriers
    - Wetland policy excludes carbon should be bundled
  - Policy integration/alignment and coordination is required and not currently in place within GoA
  - GoA policy should not set price
  - Lack of understanding regarding public values and policy implications
  - Lack of consistency in data used to establish policy
- Specific to implementation
  - Not integrated into a single system
  - Need to understand what are the services and what can we see?
  - Lack of capacity at municipal level
  - Establishment of Service – Brokers to connect sellers with credible buyers
    - Qualifications need to be verified and certified
  - Voluntary actions could be discouraged
  - Incentive needs to be greater than cost of implementation
  - Benefits clearly communicated to the public
  - Clearly define ownership and/or property rights on public lands
  - Competing land uses on public land makes it difficult to stack ES

- If an auction was to occur, the risk is that some groups would be outpriced out of the market
- Liability of natural disturbances and effect on ES transactions – who is liable?
- Multiple users on the same landscape
  - Define eligibility of buyers/sellers
  - Multiple price points

## Appendix D – Engagement and Outreach

### OPPORTUNITIES

- Specific to an overall communications strategy
  - Utilize simple, straightforward and common language
  - Concise communication products, identifying series of smaller steps
  - Enhanced social media component
  - Clearly defining audience(s) and key messages
  - Measure and quantify outreach efforts
  - Capitalize on existing networks (i.e. AAMDC, AUMA, WPAC, ASB etc)
  - Identify the “face” of ESNB responsible for implementation
- Develop a network of case studies, champions and demonstration projects
  - Forest Resource Improvement program, caribou planning
  - Including individuals, groups and organizations involved in projects/programs
  - Examples from other jurisdictions including existing certification processes
- Develop a marketing campaign
  - Focus on specific assets and associated ES elements
  - Is certification around ES a possibility? This could be added onto existing certification processes
  - Link to corporate social responsibility programs and reporting
  - Demonstrate the “Why” – benefits to stakeholders
- Capacity building
  - Assist in capacity-building with First Nations and access to information/data sharing
  - Financial resources and infrastructure for municipalities to build capacity

### GAPS

- Specific to current outreach and communications
  - Low landowner awareness (10 – 15%) about ES concepts
  - Low awareness at a municipal level
  - ESNB website is too complicated
  - Lack of common language
  - Lack of social media presence
- Specific to ES overall
  - Increased awareness is needed among buyers, not just suppliers
  - Lack of capacity to implement and/or to coordinate ES programming
  - ES as a concept therefore more public education is required
    - There will be greater awareness and engagement if there’s a market in place/ something more tangible, the stories and communication are not enough
    - Not all ES are problems that require a need to “fix it”
      - i.e. flood controls are normal processes
  - Uncertainty leads to reduced engagement – cannot wait for GoA, ESNB to provide leadership and a new model for implementation
    - What does this mean for a specific sector? Including rules and opportunities.
  - Need to identify those already engaged (early adopters) and move them into well thought-out pilots
    - Supported with technical and financial resources

## RECOMMENDATIONS

- Enhanced communications strategy
  - Clear language with common terms
    - Can be adopted by policy makers and planners for adoption into statutory documents
    - Decrease the jargon and focus on what is being measured and managed for ES
  - Develop fact sheet series, building on past efforts by ESNB and others
  - Incorporate land owner and land manager testimonials
  - Reduce the complexity of ES as a topic
- Support an ES Implementation Plan
  - Develop pilot projects
    - Reduces complexity of topic and provides opportunities for participation
    - Identifies resource requirements for long-term implementation
  - Create a “menu” of services and contracts
  - Identifies roles and responsibilities for a variety of participants
    - Land owners, land managers, municipal government, industry, professional organizations (big 10), trappers
  - Create and inventory of past and present programs that supports ES
  - Explore Citizen Science as a tool to help support ES
  - Prove/provide business case for industry involvement
  - Define ownership of ES resources on private and public land

## RISKS/BARRIERS

- ES as a concept is too complicated
  - Many groups doing the same thing – need one source/group for information, one point of entry
  - Appeals to a western approach only
  - Lack of understanding about how ES is portrayed. Is this a good thing for humans or is it because humans are bad?
- Lack of success for ES as a program because:
  - There is a regulatory burden
  - Programs might not be as appealing for different commodities
  - The perception of oversubscription will create apathy
  - The system won't be self-sustaining
    - There is a need for structure, policy and governance
  - There is an overall lack of resources
    - There is a need for support from other organizations
  - There are competing interests within the GoA
    - Including withholding information
  - There is a requirement for considerable time commitment
    - Engagement process takes time and people may or may not be available
  - There is a constant change in governments at all levels
    - Results in changes in policy direction
  - Lack of indigenous consultation
  - Need to shift from a top-down approach
- Need to shift messaging for incentive programs from paying for ES towards payment for best practices that result in ES

- Need to maintain regular and consistent effort
  - Sustainability of ESNB effort, including succession planning
  - Benefits to long term planning
  - Increase resource allocation to educate stakeholders

## Appendix E – Evaluation Summary

As a part of the workshop process, evaluations were completed by workshop participants to evaluate the success of the workshop objectives, outcomes and process. The following is a summary of all evaluations received from the 4 sector-based workshops: Municipal, Forestry, Agriculture and Environmental Non-Government Organizations (ENGOs). Participants were asked to rate their level of agreement with each of the statements describing the workshop objectives, workshop outcomes, and workshop process.

### Evaluation of Workshop Objectives

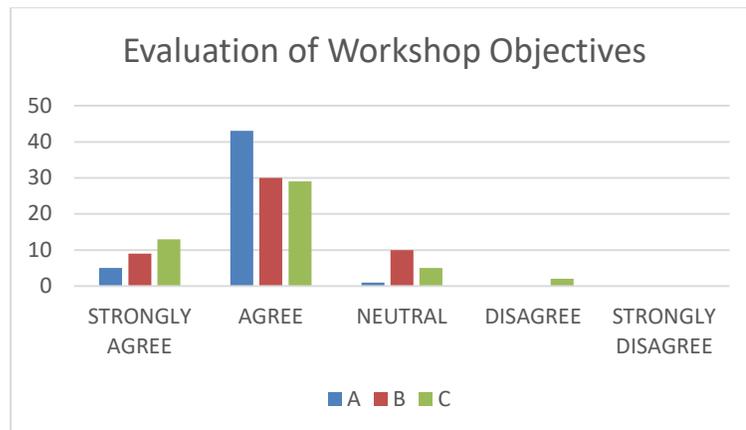
Evaluation Statements:

1. I was able to identify gaps that may affect implementation of an ecosystem services approach to land and resource management
2. I was able to identify additional needs to advance implementation of ecosystem services
3. I had an opportunity to increase my awareness of the elements to implement Alberta’s ecosystem services approach

Results:

With respect to workshop objectives, the majority of participants agreed with statements A, B and C:

1. 88% of participants believed they were able to identify gaps that may affect implementation of an ES approach to land and resource management.
2. 60% of participants were able to identify additional needs to advance implementation of ecosystem services
3. 59% of participants agreed they had the opportunity to increase their awareness of the elements to implement Alberta’s ecosystem services approach



### Evaluation of Workshop Outcomes

Evaluation Statements:

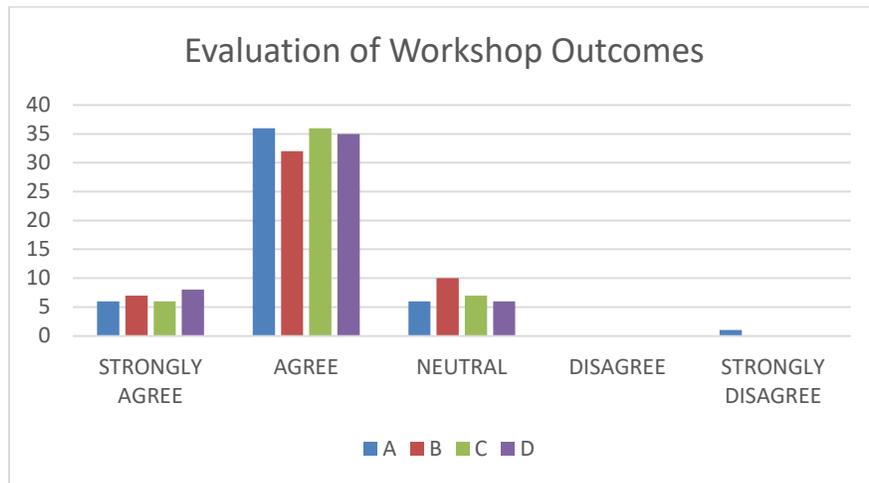
1. I was able to learn about the 4 elements to implement Alberta’s ecosystem services

2. Opportunities to continue to build on success to enable the elements to implement Alberta’s ecosystem services were identified
3. Gaps that may affect support for delivering on the elements to implement Alberta’s ecosystem services were identified
4. Realistic barriers to enabling the implementation of the elements to implement Alberta’s ecosystem services were provided

**Results:**

With respect to workshop objectives, the majority of participants agreed with statements A, B, C and D:

1. 73% believed they were able to learn about the 4 elements to implement Alberta’s ecosystem services
2. 65% felt that opportunities to build on success to enable the elements to implement Alberta’s ecosystem services were identified throughout the workshop
3. 73% agreed gaps that may affect support for delivering on the elements to implement Alberta’s ecosystem services were identified throughout the workshop
4. 71% agreed that the workshop provided realistic barriers to enabling the implementation of the elements to implement Alberta’s ecosystem services



### *Evaluation of Workshop Process*

**Evaluation Statements:**

1. The Agenda accurately reflected the workshop process
2. The instructions during the workshop were clear
3. I had an opportunity to participate and contribute my ideas
4. Overall, the workshop met my expectations

**Results:**

With respect to the workshop process, the majority of participants agreed with statements A and D, and strongly agreed with statements B and C:

1. 60% of participants agreed the agenda accurately reflected the workshop process
2. 64% of participants strongly agreed the instructions during the workshop were clear
3. 53% of participants strongly agreed they had the opportunity to participate and contribute their ideas

4. 63% of participants agreed that, overall, the workshop met their expectations

