

Ecosystem Services Market System

Guide for Implementation



March 2010

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Institute for Agriculture, Forestry and the Environment Recommendations for the Government of Alberta

Mandate 1

Develop a recommended policy framework for the evaluation, selection and implementation of market- based instruments that enhance provision of ecosystem services (ES).

Recommendation

The Government of Alberta strengthen its commitment to set specific and attainable environmental outcomes. These outcomes are necessary to enable a functioning ecosystem services market (ESM).

Recommendation

Adopt the Ecosystem Services Market Policy Framework, and commit to creation of the critical system components required for a functioning ecosystem services market system.

Recommendation

Adopt the Ecosystem Services terminology and approach to enable a meaningful shift to balanced, sustainable development of Alberta's natural resources.

Recommendation

The Government of Alberta commit to a two-year transition period and support phased implementation to a fully functioning ecosystem services market. A strategic alliance between an agency outside of government and one within government should be established to provide leadership and management of the transition period. This strategic alliance should ideally consist of Alberta Innovates (Bio-Solutions), the Land-use Secretariat, and Finance and Enterprise. Public assurance and legislative functions remain the responsibility of GOA, while business and market fundamentals and stakeholder engagement should be developed in partnership with other stakeholders.

Mandate 2

Recommend an approach to documenting the environmental integrity, content or management of Alberta's renewable resource products.

Recommendation

Adopt the Ecosystem Services Market Policy Framework, to enable an integrated approach to sustainable development in Alberta. This includes the necessary infrastructure for an internationally recognized and respected system for assessing and documenting ecosystem integrity.

Recommendation

Maintain a voluntary policy approach to traditional certification for product content and management. However, when the internationally recognized certification standards meet or exceed the Government of Alberta regulatory requirements, the certification process should be recognized as fulfilling the Government's requirements and duplicate processes should be eliminated.

Recommendation

Create an internationally respected brand for Alberta based on excellence in the management of ecosystem services.

Mandate 3

Identify and recommend world wide best practices, management strategies and mechanisms to make Alberta an “aggressive first adopter” of practices and systems that support increased stewardship or diversification into new markets based on environmental advantage of renewable resource industries.

Recommendation

Adopt the Ecosystem Services Market Policy Framework, which focuses on outcomes and enables land managers to exhibit leadership and excellence in innovation, and drive the creation of new products, services, businesses and markets, and value-added products.

Recommendation

The Government of Alberta identify ecosystem services as a strategic priority in the Alberta Research and Innovation Strategy to drive commercialization of new “commodities”, services, businesses and markets, and value-added products.

Mandate 4

Lead the development of a conservation and stewardship strategy for private and public lands.

Recommendation

The conservation tools and approaches identified in the Conservation and Stewardship Strategy of the Land-use Framework should be developed in a manner consistent with the Ecosystem Services Market Policy Framework.

Recommendation

Provide provincial policy direction to decision makers that will help determine conservation priorities and achieve environmental outcomes. Policy direction should include criteria and strategic guidance that outlines conservation targets (where, why and how much) on a provincial and regional basis.

Recommendation

Develop a provincial biodiversity strategy to help inform the regional plans in setting priorities and environmental outcomes.

Overview

The following table illustrates the paradigm shift that will occur as we move forward with the Ecosystem Services Market System. This shift reflects the movement into a bold, innovative and dynamic system of policy and ecosystem decision making that will position Alberta and Alberta products at the forefront of the green movement while creating opportunities for managers of the resource base.

From		To
Activity Based – Prescriptive		Outcome Focus – Innovative
Compliance		Beyond Compliance through Incentives to Innovate
Cost		Positive Cash Flow Management
Liability		Asset
Single Issue Focus		Integrated, Bundled Approach and Cumulative Effects Management
Departmental Silos Hierarchical, top down		Coordinated, Cross Government, Cohesive Partnership driven policy and outcome development
Single Sector Focus		Collaborative, Cross Sector
Defending Our Image		Reputation for Leadership and Innovation

Background

The IAFE was mandated by Premier Ed Stelmach in 2008 to develop a policy framework to evaluate, select and implement market based tools to enhance ecosystem services, allowing Alberta to demonstrate leadership in environmental performance, and documentation of environmental integrity. IAFE's approach has been transformational, bringing together government and non-government stakeholders, processes, and systems. The framework links environmental performance to business success in policy development through the creation of a dynamic, effective and efficient market system for protecting and enhancing ecosystem services. The impetus for developing a new approach to ecosystem services is the apparent failure of existing policies and approaches to manage environmental issues and resource use impacts in Alberta. A report aimed at finding solutions to environmental decision-making in the province describes issues with the current approach to decision making in Alberta:

"The problem of unmanaged (and mismanaged) cumulative environmental impacts on Alberta's landscapes is not new, but it is more serious than ever because of Alberta's rapid economic, industrial and population growth. It can be traced to two structural characteristics of decision-making in Alberta. The first is the fragmentation of decisions among departmental 'silos'. The second is the incrementalism that occurs when decision makers issue individual permits, leases, approvals and licenses making way for the addition of new human activities on the landscape".¹

Identified limitations with decision-making processes in Alberta are compounded by the province's rapid pace of development putting extensive pressure on ecosystem functions. Alberta has seen a dramatic change in its landscapes as energy, forestry, agriculture and urban development have re-shaped land-use patterns and impacted the mix of existing ecosystem services received by Albertans.

A market approach offers flexibility and increased certainty by clearly defining the expected outcomes then leaving it up to businesses to determine the most innovative and effective ways to meet and, where the market supports it, surpass environmental requirements.

Strategic Guidance

The Ecosystem Services Market Policy Framework was built through the use of sound strategies focused on: gathering and using expert knowledge and advice integration and alignment, ensuring ongoing stakeholder guidance through engagement, and on ensuring success for the Government of Alberta (GoA). The approach takes the view of establishing a reputation of leadership and excellence in environmental innovation, policy and institutions; enhancing ecosystem services; and building a competitive advantage for Alberta resource industries to better attract investment and add value to our products and services. Recognition of the following key success factors guided the development of this plan:

- Need to clearly define roles and responsibilities of stakeholders including GoA to ensure shared governance within the ESM system. In summary:
 - Roles of GoA include:
 - public assurance, facilitation and infrastructure
 - allocation of scarce resources
 - establishing policy goals and outcomes
 - monitoring, evaluating and public reporting
 - regulatory compliance and enforcement
 - legislative function

¹(Danielle Droitsch, Steven A. Kennett and Dan Woynilowicz (2008)
Curing Environmental Dis-Integration: A Prescription for Integrating the GoA's Strategic Initiatives
(The Pembina Institute and Water Matters)

- Roles of individuals:
 - participate in policy development and decisions
 - ethical responsibility to care for the environment

(The Pembina Institute and Water Matters, 2008)

- Roles of stakeholders:
 - democratically participate in consultations
 - creation of business and market fundamentals
- Principles and approaches taken must be consistent with the framework.
- Integration, coordination, and cohesion of policy must be achieved.
- Improve efficiency, and reduce duplication of processes, approaches, functions, etc. within GoA and other stakeholders.
- Reduce GoA intervention (unnecessary regulation, streamline regulation and bureaucracy, adverse incentives, etc.).
- Build enhanced understanding and capacity in stakeholders including the GoA.
- Phased implementation consistent with the Land Use Framework (LUF).

Ecosystem Services Market Policy Framework

Context

The Ecosystem Services Market Policy Framework outlines an innovative, high-level process for making informed choices about using the important tools and mechanisms identified in the *Land-use Framework* and other GoA policies and legislation.

In the further development and implementation of the Ecosystem Services Market System, it is understood that the GoA's role is specifically around public assurance and to create an environment for Alberta to be successful, innovative, and sustainable by clearly defining outcomes through essential policy, legislation, information and services. It is further understood that industry and other stakeholders are responsible for business and market decisions that determine ultimate success in achieving those outcomes. This demarcation of responsibilities should be used to define the scope of leadership and social responsibility and the roles of the various players in implementing the framework.

*"[M]any of the nations with top-tier competitiveness rankings also have strong environmental performance scores."*² Accepting this balance to the provision of ecosystem services means that GoA policy should first consider the use of market-based approaches to achieve environmental outcomes that go beyond compliance and result in innovation and improved system efficiency.

Market-based approaches are a positive influence focusing on outcomes rather than activities. This encourages people to work toward achieving environmental outcomes through innovation and new ways of doing business rather than using disincentives such as prescriptive approaches, and penalties.

For the GoA, the benefits of a coordinated market system for ecosystem services include:

- Enabling enhanced environmental outcomes, improved system efficiencies, and reduced duplication and the need for GoA intervention.
- Encouraging a partnership-driven approach with Albertans.
- Strengthening Alberta's resource industries by creating opportunities for business innovation to add value, improve competitiveness and investment, and align environmental performance with enhanced efficiency.
- Supporting the GoA's vision and goals for sustainable development.
- Contributing to multiple desired outcomes through bundling and integration of ecosystem services on a landscape basis, thereby ensuring that businesses have access to a range of tools and options to facilitate their effective participation in the market.
- Enabling existing policy direction as described in the GoA's business plan and other policy documents, and which is being integrated through the regional plans developed under the *Land-use Framework*.
- Ensuring the GoA remains responsible and accountable for public assurance of environmental protection, positioning Alberta as a global leader in environmental policy related to land and resource use.

For Albertans the benefits of shifting to a coordinated market system for Ecosystem Services include:

- Spawn a whole new industry, knowledge network and information management system that are bound to be envied and duplicated by other jurisdictions.
- Create opportunities for new jobs as a result of healthier resource industries, increased investment in Alberta's economy and the formation of new businesses needed to support the market operation.
- Provide a way to more fully recognize the value of and better protect the essential ecosystem services that contribute to Alberta's high quality of life.
- Facilitating the achievement the environmental outcomes set out in Alberta's Land Use Framework.

²Michael Porter (1990). *The Competitive Advantage of Nations*. Free Press, New York.

- Enhance water quality and quantity, wildlife habitat, recreation opportunities, scenic beauty and biodiversity.
- Offer a new approach to developing and implementing environmental policies related to land and resources that enables the direct participation of a broader group of stakeholders including: land and resource users and managers, industry, government, environmental non-government organizations, academia and aboriginal communities.
- Expand opportunities to choose products and services based on their documented environmental integrity.
- Support appropriate regulation and public assurance through transparent accounting and measurement systems.

For firms in Alberta a coordinated market system for Ecosystem Services presents an opportunity to enhance the overall competitiveness of resource-based sectors by providing:

- A broader stream of resource revenues for firms that enhance their environmental performance and go beyond compliance.
- Opportunities to improve competitiveness through innovative management practices and strategies that better position firms to compete for ecosystem services revenues.
- A more robust and certain environmental compliance framework for industrial land users, resource-based companies and urban developers.
- A mechanism for companies and whole sectors to benefit from converting inputs to economic outputs as they reduce their production of waste and the footprint of their operations and developments, and as they improve efficiencies in resource inputs.
- More investment certainty through a performance based approach that rewards innovation and improved efficiency.
- Opens the opportunity to new ventures in support of the ecosystem market in the areas of accumulation, validation, verification and certification.

Overarching Strategy for the Ecosystem Services Market System

The intent of the strategy is to support the paradigm shift from a prescriptive, compliance based approach to a focus on environmental outcomes and results. The use of market and price signals will improve environmental performance by incenting and rewarding environmental innovation and performance.

To support Alberta's transition to an integrated, coordinated ecosystem services market and build innovative solutions for greening our growth, a number of critical components must be established to facilitate the following functions and activities:

- The collaboration of specialists, market actors, and policy advisors in a creative and effective environment.
- Development of comprehensive biophysical, community and policy context information.
- Building of capacity across the various stakeholder groups, including the GoA.
- Transparency in reporting.
- Validation of compliance with GoA policy.
- Integration of multiple policy instruments to support the achievement of environmental outcomes.
- Advances in the use and effectiveness of existing and future policy instruments.
- Certainty with regard to policy direction in order to attract investment.
- Partnerships, Strategic Alliances, Networks and Collaboration to ensure joint development and ownership in the ecosystem services market system.
- Build from business and market fundamentals.
- Successful transition through new governance, institutional reform and alignment.
- Foster leading edge science, technology, processes, systems, and international networks of experts.
- Phased Implementation and adaptive management to facilitate learning and continuous improvement.
- Alignment and integration with the Land Use Framework, and other key provincial policies.
- GoA as a catalyst to support and enable the development of a new competitive ecosystem services market model.
- Paradigm shift to Ecosystem Services changes the way trade-off choices are made, and the way systems and processes are organized to achieve it.

Adopting the Ecosystem Services Market enables an alternative approach, integrating the way ecosystem services are managed. Viewing ecosystems and the services they provide in an inclusive way transforms the ability to focus on and assess priorities and to use them accordingly. It creates awareness of the trade-offs made between ecosystem services when land use patterns change, thereby allowing society and land managers to make more informed, inclusive and profitable choices.

Shared Vision

The Ecosystem Services Market System fosters sustainable development and supports the GoA's vision – a vision that reflects the significance of natural resources to Alberta's economic, environmental and social well-being:

"An innovative and prosperous province where Albertans enjoy a high quality of life built on vibrant communities and a healthy environment."

Principles

The Ecosystem Services Market policy framework outlines a shift in policy approach through principles that:

- Promote policy instruments that are performance or outcome-based, are verifiable and yield measurable results.
- Acknowledge the costs and benefits of the land-use and resource-use trade-offs associated with ecosystem services.
- Achieve multiple desired outcomes through bundling and integration of ecosystem services on a landscape basis.
- Support and encourage continuous improvement in business performance in the areas of ecosystem services outcomes.
- Ensure that businesses have access to a range of policy instruments, tools and options to facilitate effective participation in the marketplace and that, where possible, all players influencing a specific ecosystem service are incorporated into the market.
- Enable creativity and innovation in systems, processes, science and research, technology, and institutions that add value to Alberta's resource-based industries and the way they enhance ecosystem services, while generating improved economic returns.
- Apply an integrated systems approach to assess and understand the potential implications that policy trade-off choices might have for an ecosystem service or the competitiveness of a sector.

Policy Outcomes

The Ecosystem Services Market Policy Framework is a response to the GoA's desire for integrated policy approaches that:

- Achieves environmental outcomes,
- Recognizes and facilitates cumulative effects management,
- Improves industry competitiveness, and
- Expands business opportunities and investment in Alberta's agriculture and forestry sectors and in other resource-based industries.

Synergies with other Government Policies

Various Alberta policies support the use of a market-based approach to natural resource management; examples include the *Land-use Framework*, the *Water for Life Strategy*, and *Launching Alberta's Energy Future*. As a policy tool, the use of markets enables improved outcomes and efficiencies, and creates opportunities for innovation. The GoA has acknowledged the continued need to focus on policy integration, cohesion, and alignment as well as the importance of ongoing multi-stakeholder involvement.

The Land Use Framework specifies that land use planning and decision making must be guided by and consistent with defined outcomes and principles. The LUF is responsible for the development of seven regional plans that define regional outcomes (economic, environmental and social) for land and natural resource use for public and private lands. Setting clearly defined environmental outcomes is critical in LUF's results oriented planning process and for the successful operation of an ESM. Once environmental outcomes have been set, a cumulative effects management approach will be used to manage those outcomes so that land development and activities do not exceed the carrying capacity of the environment. The effective implementation of the ESM system enables achievement of the environmental outcomes.

Transition Model for Evolving Governance (Two Year)

Ecosystem services markets and the necessary governance structure will need to be established in phases. Bringing the various stakeholders together, building a common understanding, and working jointly to create the various system components, will require dedication, commitment and focus. Testing of the outcomes and the system to ensure integrity and functionality will also be necessary, allowing for adaptation and adjustment along the way.

A two year transition plan will require identification and definition of specific roles and responsibilities including:

- A GoA Champion and strategic leadership for Cross ministry coordination within the GoA, and
- An external Champion and strategic leadership to bring the business, market and stakeholder initiatives together.

The following performance targets to March 31, 2012 are recommended:

- A business plan and governance model for the implementation of the initial ecosystem services markets in Alberta.
- Identification of the market authority institution as a legal entity (or entities), as a successor to the IAFE.
- Proof of concept for ecosystems services markets in Alberta, as demonstrated by the establishment of a formal working public / private partnership model organized by and around this market authority institution.
- Launch of the first ecosystem services markets by April 1, 2012.

Guidance for Implementation

To support transition to a fully functioning, public private partnership model for management for an integrated ecosystem services market system, a two-year transition period is suggested, managed by a strategic alliance created between Alberta Innovates (AI) and the Land Use Secretariat (LUS) and a champion GoA Minister to provide leadership within GoA (ie. Advanced Education and Technology and/or Finance and Enterprise) to:

- Provide the necessary strategic guidance and support for development, both within and outside of the GoA.
- Potential partners, including the GoA, will need to be fully engaged in defining and articulating a comprehensive vision for fully developed ecosystem services markets in Alberta; and in beginning its implementation.

Tasks and Actions

Alberta Innovates (AI)

Consider the creation of a formal stakeholder advisory process that engages the past Board members and advisors of the IAFE to provide continuity in the establishment of the ESM system, and ensure co-development with stakeholders, facilitate joint communication and partnership development.

Establish and resource an office for Ecosystem Services within the AI system (working directly with and through the Land Use Secretariat for cross GoA coordination, engagement and action), to provide leadership and direction for a two year period, accountable to:

- Partner with GoA through the Land-Use Secretariat (LUS).
- Ensure integration across the AI Corporations.
- Facilitate the creation of a distributed network of appropriate experts and stakeholders for development and implementation of each of the system components.
- Integrate required business processes into a comprehensive system that fulfills the necessary functions for a successful market
- Identify priority ecosystem services for research, analysis and guideline development.
- Develop ES inventory, assessment and measuring services, methods, guide data quality, verification and reporting.
- Ensure the use of the latest science and technical information.

- Establish and lead a Global Network of experts and practitioners.
- Identify and quantify the competitive advantages provided to Alberta's industries through the ESMPF.
- Establishment of a multi-stakeholder coalition responsible to GoA for the management of the ES market system.
- Working with stakeholders, including GoA, identify the appropriate institutional structure and governance for credit registration and trading.
- Test environmental outcomes and objectives to ensure they are clear, specific and measurable enough to allow the ESMP framework to function.
- Build business case and plan for a phased approach, resourcing and cost savings through efficiency in processes and systems, and anticipated funding required to establish the market system.
- Develop proof of concepts and case studies.
- Develop and implement a stakeholder investment strategy
- Develop and execute a strategic communications plan
- Develop and execute a partnership development plan for the long term management of the market system
- Build and deliver stakeholder engagement plans that ensure understanding and involvement of key stakeholders throughout the various stages of design, implementation and decision-making. This should include a focus on capacity building.

Land Use Secretariat

Establish two positions within the Land Use Secretariat with the responsibility for coordination and communication within GOA pertaining to the legislative, regulatory and policy processes for an ES market system. The LUS would be accountable to:

- Develop and implement regional plans with clear, specific outcomes.
- Develop Biodiversity Strategy
- Develop policy guidance and direction on identifying conservation areas
- Ensure the competitiveness reviews and regulatory re-alignment processes and initiatives with the GOA take into consideration opportunities provided by the ecosystem services market policy framework.
- Ensure the necessary legislative and regulatory framework is established to enable the market system to function effectively. Significant research and analysis will have to be undertaken to properly map out the required changes in policies, legislation, regulations, and programs to enable ES in Alberta. These analyses will prepare the GoA, industry, and communities for wide-scale adoption of ecosystem services.
- Develop a competency based course for delivery to appropriate GoA departments to build capacity and enable movement to the ES approach to environmental management.
- Realign GOA systems and structures to ensure ability to respond to LUF implementation and ESMPF.
- Review existing related programs to identify those contrary to ES market policy framework, and redesign to align and support as appropriate.

Finance and Enterprise or Advanced Education and Technology

Minister to champion within Cabinet, the two year transition for a functional and effective ES market system. This will include:

- Provide leadership within GoA for cross ministry coordination
- Public reporting

Priority Initiatives

This guide to implementation provides high-level direction that GoA and others will pursue to successfully establish the Ecosystem Services Market. These priority initiatives are required for Alberta's transition to an integrated, coordinated ecosystems services market system and to build innovative solutions for greening our growth.

Policy Commitments of the Government of Alberta (GoA)

The GoA is responsible and accountable for public assurance of ecosystem integrity, including compliance and enforcement, monitoring and public reporting. Policy goals and desired outcomes are set by the GoA.

The market-based approach is innovative and is part of the larger suite of policy tools available to achieve desired ecosystem outcomes. Through the cumulative effects management approach outlined in the Land Use Framework, opportunities for economic growth will take into account environmental and social outcomes.

In order to function effectively and enable success for the GoA, a comprehensive commitment by the GOA to set specific, measurable environmental outcomes is required. The market for ecosystem services requires thresholds or limits to enable trading.

Guidance for Implementation

- Position ecosystem services markets within the broad context of comprehensive, integrated environmental outcomes. Organize and integrated GoA policy around environmental outcomes on defined landscapes. This means setting specific measurable environmental outcomes.
- The use of the Ecosystem Services terminology and approach will transform how the environment is viewed and facilitate balanced, informed decision making and trade off choices, and will facilitate transformation by building a common understanding and approach within and across GoA departments.
- Commit to re-engineering and re-alignment of GoA to enable it to be responsive to requirements related to the Land Use Framework including the development of the regional plans, specific measurable outcomes, and implementation of those plans and the ecosystem services market system.
- Help create an environment for ES markets to be successful with industry remaining as the driver.
- Review and align GoA policies and programs to strategic priorities.
- Make strategic investments in transition.

Tasks and Actions

- Adopt ecosystem services approach and associated terminology and develop a common understanding within the GoA. Build awareness and knowledge of the market system.
- Assign the necessary resources to the Land Use Secretariat to ensure it has the capacity and ability to carry out its critical mandate; focus provincial government efforts on the effective execution of the Land Use Framework and the development and implementation of regional plans.
- Set clear, specific, and measurable environmental outcomes to enable a functioning marketplace. This should be defined through the Land Use Framework regional plans and other planning processes.
- Develop a provincial biodiversity strategy to help inform the regional plans in setting priorities and environmental outcomes.
- Develop provincial strategic guidance and policy direction for defining conservation areas as a means to achieving environmental outcomes.

Legislative Framework, Regulatory and Program Alignment

A legislative framework will be required to allow an ecosystems services market system to function in Alberta. Various Alberta policies are compatible with the use of a market-based approach to natural resource management; examples include the *Land-use Framework*, the *Water for Life Strategy*, and *Launching Alberta's Energy Future*. Legislatively, the Alberta Land Stewardship Act has been set up to enable the use of market-based approaches.

*"First, the market and its main economic actors should not only be interpreted as forces that disturb the environment, as was common opinion among environmental advocates in the 1970s and most of the 1980s. Major economic actors (such as producers, insurance companies, consumers, retailers, unions and credit institutions) and market institutions can also work in favour of environmental reform...Secondly, while the environmental state [Government] remains an important institution in safeguarding environmental quality, it needs to be restructured; moving from a bureaucratic, hierarchical, reactive, command and control state, towards a flexible, decentralized and preventive institution that creates networks with other societal actors and applies a variety of approaches and instruments to guide society into directions of sustainability."*³

Many policies exist to encourage provisioning services (commodity production). These policies are established for social or economic reasons but they may also be supporting actions that negatively affect the provision of other ecosystem services. If such policies are not removed, reformed or reaffirmed before new market-based instruments are introduced, the efficiency of the market-based approach may be compromised.

Assessment of current policies and programs and their impact on ecosystem services is required to determine what actions are causing adverse ecosystem service outcomes; and which current policies may be influencing these actions. Once existing policies and programs have been assessed for adverse incentives, policy makers must decide whether ecosystem service policy goals can be achieved by eliminating or reforming an existing policy.

Guidance for Implementation

- Commit GoA resources for system development over a two year period to March 2012 to ensure current GoA policies, programs, and processes enable successful execution of the market based approach.
- Review current policies including legislation, regulation, monitoring systems, and programs, to identify gaps, reduce the presence of adverse incentives, and ensure an adequate legal framework exists to allow for successful execution of the market based approach.

Tasks and Actions

Led by the LUS cross-ministry teams:

- Analyze and develop a legislated framework for new policies, legislation, regulations, and programs that the GoA would need to enable the creation and functioning of the ES market system.
- Ensure the competitiveness reviews and regulatory re-alignment processes and initiatives with the GOA take into consideration opportunities provided by the ecosystem services market.
- Review existing related programs to identify those contrary to ES market policy framework, and redesign to align and support as appropriate. Significant research and analysis will have to be undertaken to properly map out the required changes in policies, legislation, regulations, and programs to enable ES in Alberta. These analyses will prepare the GoA, industry, and communities for wide-scale adoption of ecosystem services.
- Align and re-engineer GoA policies, processes, and systems as appropriate to enable its ability to respond effectively to implement the regional land use plans, and support the ecosystem services market system.

³ Arthur Mol et al., eds., (2009). *The Ecological Modernisation Reader: Environmental Reform in Theory and Practice*. Routledge Taylor and Francis Group.

- Work with the federal government to review existing trade policies pertaining to natural resource sectors in Alberta to identify the competitive advantages provided to Alberta's industries through the ES policy framework.

Development of the Ecosystem Services Market System

The critical components of a market-based approach are illustrated in Figure 1. The multi-stakeholder, arm's-length body designated as the "Central Market Authority" must be established to manage and coordinate the components of the market system and will have other important responsibilities associated with risk management, financing, cost-benefit analysis, stakeholder engagement and creation of effective and collaborative partnerships.

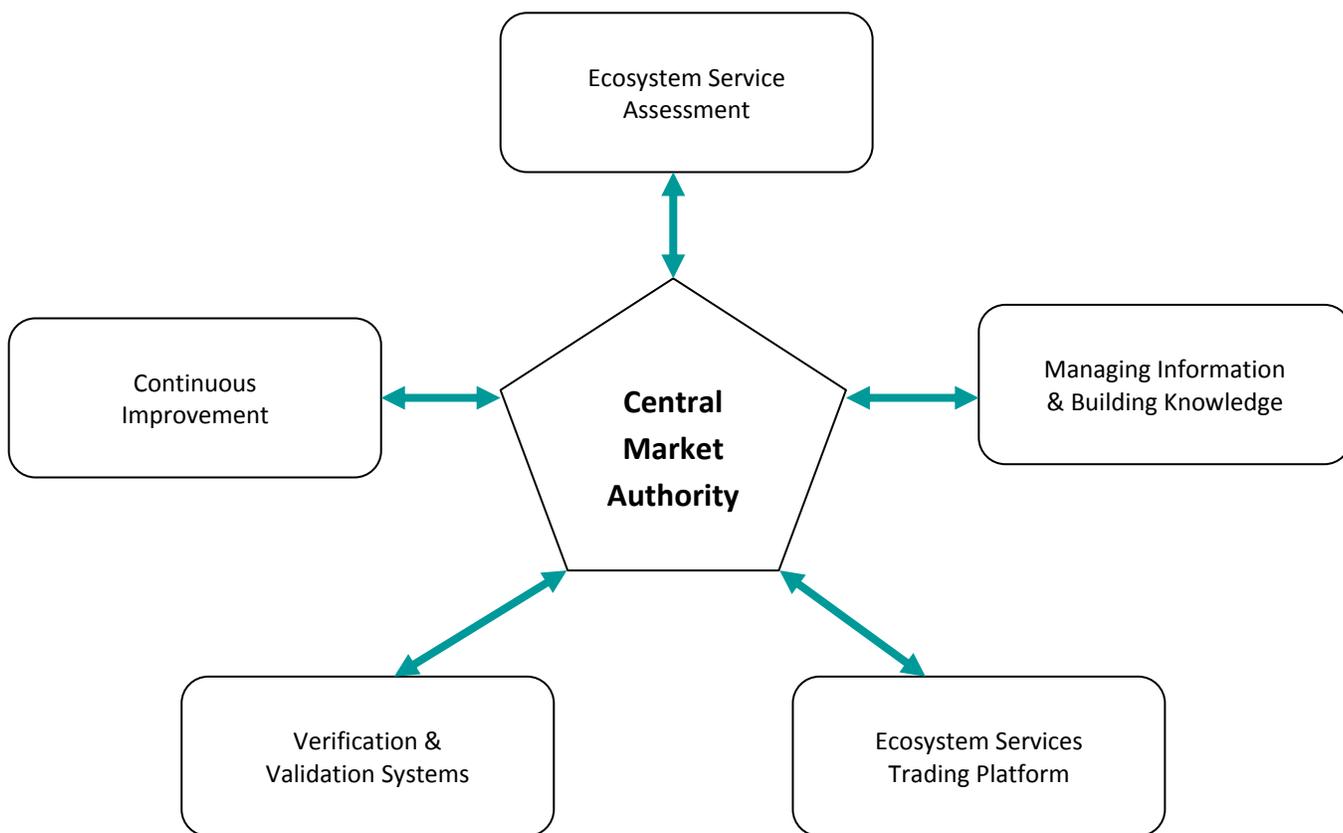


Figure 1. Critical Components for a Successful Market-Based System

Source: IAFE, *Ecosystem Service Market Policy Framework* (March 2010)

A number of components must be established to achieve an efficient and functioning market place for ecosystem services and are illustrated in Figure 1. The multi-stakeholder, arm's length body designated as the "Central Market Authority" will manage and coordinate the components of the Ecosystem Services Market System.

Institutions and processes supporting the ESM should function as a distributed network as illustrated in Figure 2. It must be coordinated and managed through a central market authority to ensure: sharing of resources and information; integrated, aligned, effective, coordinated, and focused action; and involvement of the appropriate experts and stakeholders.

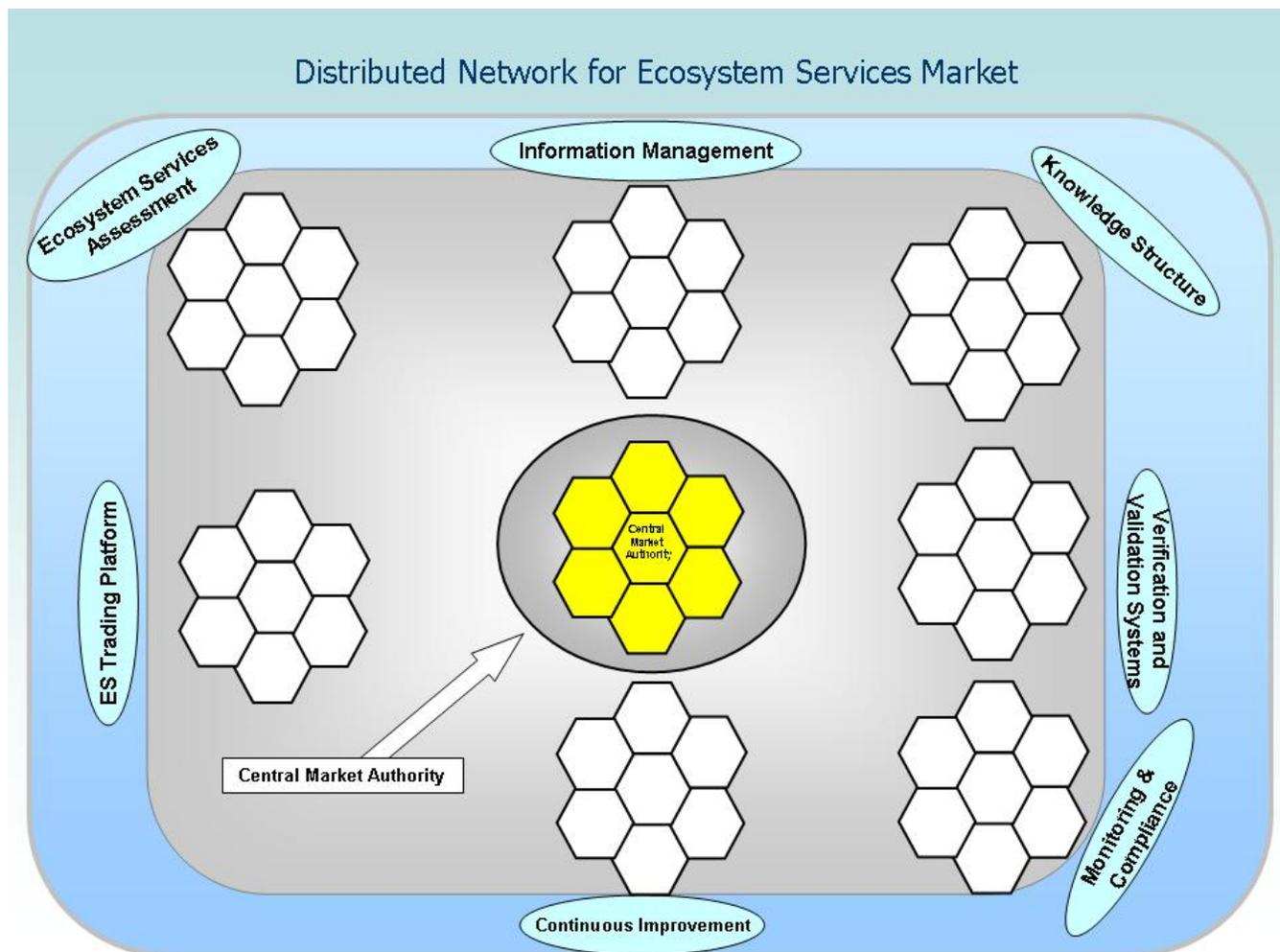


Figure 2: Distributed Network for Ecosystem Services Market Development and Management

Create an Internationally Recognised Ecosystem Services Assessment

Ecosystem services assessments are done to identify the ecosystems services available and determine the condition and extent of each of the ecosystem services in Alberta. This information provides baselines against which future changes can be measured and transactions verified. The assessment system must be integrated across provincial, regional and local scales and enable prioritization and the assigning of a value (or currency) to the particular ecosystem service attached to the area. The assessment function includes the development, collection, management, and communication of ecological knowledge and is a significant undertaking.

Guidance for Implementation

As part of the ecosystem service market system, use a distributed network approach that brings together appropriate experts and stakeholders to define and establish an ES assessment. An accepted, science based, systematic way of assessing ecosystem services underpins the Ecosystem Services market system and enables the establishment of metrics and currencies to facilitate identification and registration of ecosystem service units. Assessments must be done to identify the ecosystem services available and determine the condition and extent of each of the ecosystem services in Alberta and within a given region.

Tasks and Actions

Develop the ecosystem service assessment function, working jointly with key experts and stakeholders. It is recommended that the Alberta Biodiversity Monitoring Institute (ABMI) lead and house the central, integrated assessment function.

- *Choose a Business Model for Assessing Ecosystem Services*

Ecosystem service assessments to support ecosystem services markets could be conducted by GoA, market participants (buyers and sellers), or third parties such as brokers. A business model in which a third party is responsible for assessing ecosystem services is recommended because market participants should not play any role in the assessment function. Separating the assessment function from GoA, buyers, and sellers helps ensure there is no conflict of interest, and enhances credibility. Independent of market transactions: the assessment provider cannot have a vested interest in the outcome of the market transaction:

- Scientifically credible
- Not a management agency
- Accountable for performance
- One organization responsible to ensure clear accountability

The ABMI already has several desirable characteristics including:

- Independent governance: The ABMI is a not-for-profit society that is arms-length from government, industry, and environmental groups.
- Assessment not management: The institute is not a management agency and has no vested interest in the outcome of any market transactions.
- Proven scientific track-record: The ABMI is built on a foundation of high-quality science with contributions from more than 40 Alberta-based scientists;
- Broadly supported: The ABMI is recognized as one of the most broadly supported monitoring programs in Alberta;
- Value-neutral: The ABMI reports and communicates in a value-neutral manner;
- Building upon success: The ABMI is already considered an essential piece of Alberta's overall approach to land planning and evaluation of land management results under the *Land-use Framework* and other provincial policy.

- *Establish a Common Assessment Platform*

The development of a common ecosystem service assessment platform should occur in consultation with relevant provincial government departments such as Alberta Environment and Alberta Sustainable Resource Development, and non-government organizations that currently conduct market-related ecosystem assessments such as the Alberta Conservation Association, Ducks Unlimited Canada, and the Nature Conservancy of Canada. Additional expertise may be found in the list of key actors and initiatives related to ecosystem service assessment Alberta.

- *Develop the Ecosystem Services Assessment Functions*

Ecosystem service assessments to support emerging markets need to provide the following functions:

- Protocol development and maintenance, including measurement methodologies, predictive modeling capability, and verification standards.
- Development of training and certification standards to ensure assessment protocols are implemented in a consistent and accurate fashion.
- Research and development to address shortfalls in available understanding, particularly of the ecological response to management actions intended to improve ecosystem services. This would also facilitate the development and refinement of new management actions intended to produce positive environmental outcomes.
- Software development to expedite and at least partly automate the storage and manipulation of information collected during an assessment and, where appropriate, to generate estimates and predictions of ecosystem services.

- Regional ecosystem assessment and monitoring to guide the design and evaluate the performance of ecosystem services markets.
- *Align Market Design with the Design of Assessments*
Because the design of an ecosystem assessment approach needs to consider the design of the ecosystem services markets they are intended to support (and vice versa), the two design processes should be coordinated.
- *Fill Critical Knowledge and Information Gaps on a Priority Basis*
Provincial geographic information data related to soils, land cover, hydrology, and human footprint needs to be developed, aggregated, and maintained. A province-wide ecosystem map should be completed that integrates existing sources such as the Alberta Vegetation Inventory, Grassland Vegetation Inventory and the Alberta Ground Cover Classification. This is a significant undertaking but the information is required as a foundation for assessing ecosystem services at a range of spatial scales.
- *Ensure Assessments Become Financially Self-Sustaining*
It is recommended that the assessment function be financially self-sustaining using a fee-for-service business model. For every ecosystem service assessment conducted, a fee would be collected to cover the costs of the assessment function. Until ecosystem service markets are successfully implemented, a fee-for-service model will not generate enough revenue to develop and maintain the assessment function. Therefore, investments in building and maintaining the assessment function until market transactions enable it to become self-sustaining will be required.

Develop an Information Management System and Knowledge Infrastructure

Managing information and building knowledge is critical to the development of the ecosystem service marketplace. This component of the marketplace system involves two key functions: a robust information management system and a collaborative knowledge network.

Guidance for Implementation

As part of the ecosystem services, use a distributed network approach that brings together appropriate experts and stakeholders to define and establish the information management system and knowledge infrastructure.

A solid foundation of collaboration and cooperation between GoA, business and communities in the collection and use of information will change the way solutions are developed for complex environmental issues. Shared participation and collaboration across all resource management sectors will help to bring about a new environmental management paradigm and brand Alberta as an environmental leader. The significance of supporting collaboration by ensuring that the institutional infrastructure and tools are reformed and in place to promote open innovation and build capacity within and outside of government cannot be overstated.

Tasks and Actions

LUS and AI will:

- Build a robust information management system that is based on collaboration, cooperation, transparency, and data sharing among all stakeholders and partners to achieve high efficiency and effectiveness.
- Develop a distributed knowledge infrastructure that supports an understanding of the opportunities for ecosystem services markets, data management, policy instrument evaluation, and the integrity of marketplace transaction and institutional networks.
- Build infrastructure that promotes buy-in and builds capacity in personnel, science, research and innovation, and policy analysis management.
- Include ES and market related knowledge, expertise, and contacts in the development of LUF information management systems and knowledge network strategies.

Enable Third Party Verification and Validation

An accepted, science based, systematic method of assessing ecosystem services underpins the Ecosystem Services market system and enables the establishment of metrics and currencies to facilitate identification and registration of ecosystem service units. This information provides baselines against which future changes can be measured and transactions verified. The assessment system will be integrated across provincial, regional and local scales and enable prioritization and the assigning of a value (or currency) to the particular ecosystem service.

Guidance for Implementation

The market coalition that oversees the marketplace must verify that exchanges between buyers and sellers are valid. Documenting ecosystem service outcomes is based on the use of quantitative methods to measure the ecosystem services achieved by applying a particular instrument and verifying that the action directly achieves or connects to the broader designated ecosystem outcomes. Protocol development will be required. A credible, globally recognized validation system will assure Albertans and global consumers that desired ecosystem outcomes and transactions are being achieved and that claims made in the marketplace are legitimate.

Tasks and Actions

- Working through the ES assessment, develop protocols, standards, and criteria for third party verification and validation.

Establish an Ecosystem Services Trading Platform

A trading platform to facilitate and register transactions in the marketplace is required. A properly operating provincial platform provides credibility and transparency; is efficient and should yield a starting point for building on and interacting with international market exchange platforms. The ecosystem service trading platform serves as a central point for buyers and sellers to exchange ecosystem system service units and incorporates a range of potential functions including:

- Bilateral trades: where one-on-one negotiations are undertaken through a bargaining process and market participants only require the registration of the traded ecosystem service units.
- Exchanges: a public forum where buyers and sellers can meet and exchange ecosystem service units in a transparent pricing environment.

Guidance for Implementation

Along with facilitating transactions, the ecosystem services trading platform will include the management or coordination of the following components.

- Data inventory: Ecosystem service baselines need to be calculated for each regulated component and, overall, for the ecosystem. Baselines help identify appropriate ecosystem targets and to monitor movement.
- Registry: A registry acts as an exchange-recording entity and a custodial system for credits. A registry enhances the credibility and transparency of environmental transactions and provides confidence to the marketplace, reducing risk and facilitating lower transaction costs.
- Common protocols: Use of internationally accepted ecosystem services accounting methodologies increases the interchange ability of credits and the legitimacy of the program.
- Determination of initial allocation: Fair and clearly defined allocation of credits and limits of credits are integral to reducing uncertainty for regulated parties. This forms the basis for initial ownership for ecosystem services as recorded in the registry.

- Public reporting: Public reporting encourages transparency and accountability of the trading platform.

Numerous trading platforms exist provincially, nationally and internationally and should be considered and evaluated as possibilities.

Tasks and Actions

- Evaluate existing platforms within and outside of Alberta for applicability and ability to deliver the requirements of the ESMPF.
- Working with ES assessment, define the currency and credits for ES to be traded, including science protocol standards.

Build Processes and Metrics to Ensure Continuous Improvement (Adaptive Management)

Continuous improvement is essential to effective policy development and application and to making the Ecosystem Services Market system better. Responding to changing economic conditions and societal preferences is a reality but such challenges can lead to innovative solutions. Properly formulated systems that support the marketplace will respond to and adapt to allow for continuous improvements in approaches, technology and innovation, components, the system, and environmental and economic outcomes.

Guidance for Implementation

Continuous improvement requires a focus on system innovation, new processes, technology, and ongoing measurement and evaluation, monitoring, and adaptive management. The system must be constructed collaboratively with the appropriate experts and stakeholders to include processes that allow for effective tool development, cost benefit analysis, full cost accounting, reporting, and system performance management.

Tasks and Actions

Alberta Innovates, LUS and cross-ministry teams will:

- Develop process and metrics to continually evaluate the impacts of policy decisions.
- Test case studies (LARP and SSRP) through ESMPF system building on the offset work by Canadian Boreal Initiative stakeholders. Other examples: wetlands policy, green energy, wildlife management, and development of the ES credit system.
- Tool development with stakeholders.

Develop a Public/Private Partnership Model for Management of the Market System

Shared responsibility, governance and engaged partnerships result in more efficient, effective use of resources achieved through open sharing and collaboration (reduced duplication) both within and outside of government. Shared responsibility for the creation, management, and evaluation of the system components is a shared responsibility of a network of stakeholders, partnerships.

A good governance structure with clear delineation of decision making and of the roles and responsibilities of GoA, business, and other stakeholders is critical to the success of the market-based approach for providing ecosystem services. The GoA will continue to be responsible and accountable for the public assurance component of ecosystem management, including compliance with and monitoring of outcomes. There will be specific governance roles for buyers and sellers of ecosystem services, for the marketplace regulator, and for GoA in ensuring market and policy efficiency and effectiveness.

Governance of a functioning marketplace must be supported by:

- Coordination and management of the components to ensure a functioning market system;
- Undertaking of appropriate evaluation and analysis of costs and benefits to help inform decision making;
- Adopting risk management and mitigation strategies;
- Stakeholder engagement and partnership development;
- Creation and maintenance of distributed networks;
- Capacity building;
- Communications and reporting activities; and
- Financing and funding of the market structure.

Guidance for Implementation

- Develop and implement a comprehensive, partnership driven strategy to ensure the ES market system is built as an efficient, open systems for sharing, transferring and applying information and knowledge networks.
- Using a public/private partnership distributed network bring together expertise, experience and resources from industry, government, academia, community, and non-government organizations to establish and implement the critical system components for an effective functioning market for ecosystem services.
- The GoA and other key institutions which have mandates related to the development and support of ecosystem services markets must collaborate fully, appropriately and transparently in championing, creating, participating in and managing ecosystem services markets as a broadly based initiative which extends beyond the GoA. The engagement of potential partners (e.g., business, governmental, Aboriginal and non-governmental institutions) in defining and articulating a comprehensive vision for fully developed ecosystem services markets in Alberta, and committing to its implementation, will require at least one not-for-profit corporate entity to ultimately manage the ecosystem services market.

This body would be accountable to the GoA (for example through a Minister such as Finance and Enterprise), and would report to the GoA and to Albertans on a regular basis.

Tasks and Actions

AI, working with stakeholders will:

- Develop an independent, multi-stakeholder body, acting in the public interest, to coordinate and to provide oversight and executive management functions to support the market.
- Develop business case and terms of reference for market management authority.

Document Environmental Integrity

To facilitate global recognition, acceptance, and participation, globally recognized third-party verification systems for documenting the integrity of ecosystem system service units will be required. The system will provide opportunities for traditional commodity producers and retailers to use tools like eco-labelling or branding to tell consumers when a product is validated as “environmentally friendly.” Traditional products supplied by marketplace participants can be assessed to validate the products to assure consumers that they meet specific environmental standards.

The Ecosystem Services Market system, through the verification and validation component, will provide opportunities for traditional commodity producers to use tools like eco-labelling or branding to tell consumers when a product is validated as “environmentally friendly.” Traditional products supplied by marketplace participants can be assessed to validate the products to assure consumers that they meet specific environmental standards.

Guidance for Implementation

The approach taken to documenting environmental integrity, content or management of Alberta's renewable resource products would be based on ecosystem services through the development and application of an internationally recognized, standardized ecosystem service assessment built on current expertise and experience.

Ecosystem Services Assessment is the foundation for documenting integrity.

Tasks and Actions

- Build on existing internationally recognized certification systems, criteria and indicators and link other measuring and monitoring approaches (eg ABMI) for documenting ES integrity to ensure confidence and credibility in the market and of Alberta's environmental performance
- Evaluate current certification schemes against the ESMPF; current GoA standards and requirements.
- Working with the Forestry industry, evaluate current certification schemes against GoA regulations and standards.
- Develop a policy that considers Forest Certification Product content and management protocols that meet or exceed GOA standards, as meeting regulatory requirements.
- Create the infrastructure and systems to enable Alberta to establish a credible environmental brand based on ecosystem services; and for Alberta natural resource industries to meet customer demand and capture added value.
- Initiate a global scanning system to determine emerging ES trends to enable Alberta ES managers to be at the forefront in producing into these new markets.
- Initiate a long term strategic process through Brand Alberta, to demonstrate Alberta's leadership in developing or integrating into existing and/or emerging international brands to establish an "environmental brand" for Alberta based on excellence in environmental performance and ES.

Drive Innovation

The Ecosystem Services Market enables management strategies, processes, systems, institutions, technology, leadership and innovation that will make Alberta an aggressive first adopter of policy, practices and systems that will enhance and improve ecosystem services in Alberta creating new products, services, business and value-added.

Entrepreneurial attitude reflects the willingness to evaluate options, take the risks, and reap the rewards of innovation. As the Framework is applied, it will stimulate innovation that is characterized as:

- Being adaptive and flexible in achieving outcomes;
- Building and using collaborative networks to promote opportunity;
- Strengthening entrepreneurship by giving more choice; and
- Stimulating ongoing research and development on new instruments and new structures

Guidance for Implementation

Ecosystem Services must be identified as a priority in the Alberta Research and Innovation Strategy. Once the GoA commits to ES markets as a provincial priority, AI, working in partnership with stakeholders builds on and enhances existing science and innovation network for resource and funding.

Tasks and Actions

Led by AI:

- The Research and Innovation System, including AI Corporations builds on and enhances the science, business, and innovation components necessary to enable the ES Market system. This is done through networks with academics and researchers, industry stakeholders, non-government organizations, Land Use Secretariat, and GoA Ministries.
- Develop a strategic research and innovation plan that ensures the necessary science, data, and technology is in place to support the ecosystem services market system.
- Adopt a policy of open innovation for the purposes of processes, systems, and institutions enabled, required, or supported through the ESMPF.
- Initiate a global scanning system to determine emerging ES trends to enable Alberta ES managers to be at the forefront in producing into these new markets.
- Create and provide leadership for an international network of experts in ES and markets, with annual exchange of knowledge and progress.
- Ensure support for ESMPF implementation phase until the creation of markets, opportunity for profit and industry diversification will bring about change and fulfill the innovation agenda and mandate.
- Measure success through the development of science based metrics to support ES assessment and continuous improvement of the system.
- Enable institutions and processes supporting the market system to function as a distributed network, building from the appropriate knowledge, expertise, and investments of stakeholders, and coordinated and managed (in the long term) through a Central Market Authority.
- For the purposes of the ESM system, enable a policy of open innovation to enable success of the market.
- Support creative information management systems and knowledge network components required for the market system such as those identified in the Land Use Framework, to ensure efficient use of resources, coordination, and alignment. Include ES and market related knowledge, expertise and contacts.
- Establish and provide leadership for a Global Network of ES experts to ensure development continues to be based on international expertise and experience.

Build Capacity

Building capacity to support the ESM system will be essential. This will include building knowledge and understanding of market-based approaches and processes and training required on technical aspects of ecosystem services of all participants and stakeholders.

Guidance for Implementation

The approach taken to building capacity should be through a variety of coordinated, balanced and collaborative initiatives to support the go forward strategy for ESM. These strategic initiatives should be build on current expertise and experience through collaboration between the GoA, academic institutions, industry, ENGOs, First Nations and Metis, and other stakeholders.

Tasks and Actions

AI, LUS and appropriate ministries need to initiate a long term strategic process to:

- Strengthen learning partnerships among industry, Alberta's academic institutions and other stakeholders for continuous improvement in the ESMS including increased opportunities and mechanisms for collaboration and interaction within and between each group, i.e. students, academic staff, business school and resource business community.
- Build on existing and support development of communities of practices to enhance stakeholder collaboration, understanding, and practical knowledge for participation and delivery of the ESMS.
- Identify processes and mechanisms to ensure transparency, access and dissemination of information to build understanding and capacity for on-going participation in the ESMS.

- Include ESMS training through professional development in the workplace.
- Develop programs to embed ESMS education within Alberta's business schools and across other disciplinary areas.
- Establish a chair in a business school for ecosystem service markets.
- Develop a competency based course for delivery to appropriate GoA departments to build capacity and enable movement to the ES approach to environmental management.

Execute Strategic Communication and Engagement Plan

Creation of a stakeholder enabled communications and engagement platform that builds from strategic communications, to stakeholder involvement, to partnership development, is essential and can be created by working collaboratively and cooperatively with stakeholders to design, deliver, and evaluate the communication network

The ES marketplace will be dependent on a number of stakeholder organizations to undertake critical tasks and services to facilitate the marketplace. The Ecosystem Services Market System will need to be introduced and understood in a strategic way to be supported by Alberta stakeholders. To ensure success, the appropriate experts and the right stakeholders must be engaged at the appropriate time and way.

Strategic assessment of the various audiences, the types of information they require, methods of reaching and engaging those audiences and an analysis of how to present and share information to those audiences will be required for successful communication.

Successfully achieving transition from the current prescriptive, compliance based approach to an outcome focused market system, will require a sustained, strategic and focused communications and engagement process that will likely extend over several years.

Building a common understanding, commitment, and capacity to respond to the new direction will be based on meaningful, ongoing, open engagement with key stakeholders. A process that is strategically focused, sequenced and disciplined will build the capacity necessary for high-performing, profitable, competitive, and self-reliant natural resource and environmental sectors.

The likelihood of success is improved if the transition is rapid, comprehensive and managed in a coordinated and integrated manner, with key stakeholders involved in all aspects of the plan, from development to delivery (shared messaging).

GoA's role is as catalyst, enabler, and initial investor for the transition.

Guidance for Implementation

The strategic communication and engagement plan is a guide to managing the implementation of the new strategy. It provides the processes, strategies and tactics to ensure consistent and current messaging and will:

- Increase focus, coordination, integration and accountability of efforts between the GoA, industry, companies, businesses, environmental organizations, and other stakeholders;
- Communicate Alberta's new strategy and plan for achieving enhanced environmental outcomes, leadership in innovation and environmental management, a new competitive model, new businesses and services, through a robust, integrated, ecosystem services market system.
- Communicate with all stakeholders including the general public in a concise understandable way to create buy-in and relieve any concerns about the objective and implications of the ESM policy
- Engage stakeholders in the joint development of the system components, and governance structure; and development and delivery of the communications messages
- Support the changes required for successful transition.

Multiple audience groups are included within this multi- stakeholder engagement plan, and divided into three clusters based on the intensity of engagement required. Key stakeholders groups include:

- Public
- First Nations and Metis
- Industry and business community
- Municipalities
- GOA including policy and decision makers
- Non government organizations and environmental groups
- Federal government
- Research and academic community

Task and Actions

AI, LUS and Public Affairs Bureau:

- Engage industry stakeholders in executing the new strategy
- Co- creation and management of communication and engagement programs with an emphasis on stakeholder progress reporting, accountability, change management, continuous improvement and shared learning, and continuing implementation.
- Jointly announce and introduce direction and strategy with key stakeholders (ie. Premier, Pembina, OSLI, agriculture and forestry).
- GoA staff and supportive industry and ENGO leaders collaborate for rollout of ESM system strategy via communications and engagement activities
- Inform MLA's via Caucus briefings and regular progress update

Risks and Mitigation to Implementation

Risks

- There is a need to think corporately at a GOA policy level, outside of Ministry business plans to manage competing priorities.
- Important to have an enabling ecosystem services market policy framework that allows transformation and innovation in business, and must be designed based on business and market fundamentals.
- Public perception regarding the transfer of responsibility for environment to the private sector will be a risk. GoA retains responsibility for public assurance.
- Messaging regarding public communication and collaboration with industry and key ENGO is critical.
- Shift in the role and functions of government and the private sector in the management of the environment. Feedback from stakeholders is supportive of direction and need to shift roles and responsibilities for management of the environment outside of the GoA.
- Institutional alignment and re-engineering will be necessary.

Because of the need to transform processes, systems and approaches within (and outside of) GOA, there is some risk of resistance to the required changes from the GOA departments and divisions.

Mitigation

- Assign resources to the Land Use Secretariat to allow for effective, timely, integrated cross-ministry engagement and coordination.
- Assign resources to the AI Corporations to ensure effective stakeholder communications, engagement, and joint development of science, systems, technology, and processes.
- Facilitate joint awareness and education session across GOA with cross ministry participation
- Create cross ministry and disciplinary teams to complete the various tasks and actions necessary to enable the ESM System. .
- Ensure clear communication across GOA regarding the importance of the LUF and ESM System as a priority for GOA.
- Effective, strategic communication planning and execution (internal and external audiences)

Timeline, Projected Budget and Performance Metrics

Priority Initiatives	Target Date	Annual Budget
Policy Commitment (GOA)		
Adopt ES approach	May 2010	See Capacity
Review and re-alignment processes	March 2011	LUS positions with Cross Ministry team support
Resource allocation to LUS and AI	May 2010	2 positions assigned to LUS 3 positions assigned to AI = \$500,000
Environmental Outcomes	Regional Plans	LUF process
Strategic Direction for Conservation and a Biodiversity Strategy	September 2010	LUS positions and Cross Ministry team support
Legislative Framework		
Review programs, regs, policies, etc.	March 2011	LUS positions with Cross Ministry team support
Develop ES Market System		
ES Assessment	March 2012	AI positions and Stakeholder Investment
Information and Knowledge Systems	March 2012	AI positions and Stakeholder Investment
Information and Knowledge Systems	March 2012	AI/LUS positions and Stakeholder investment
Verification and Validation	March 2012	AI positions and Stakeholder Investment
Trading Platform	March 2012	AI/LUS positions and Stakeholder Investment
Continuous Improvement	March 2012	AI/LUS positions and Stakeholder Investment
Public/Private Partnership – Central Market Authority	March 2012	Stakeholder Investment and Engagement, AI positions
Documenting Environmental Integrity		
Certification and Forest Regulatory alignment	March 2011	LUS and Cross Ministry team assignment
Brand Alberta	March 2012	
Build Capacity	May 2010 - March 2012	\$100,000 plus Stakeholder investment, LUS and AI positions
Strategic Communications and Engagement	May 2010 – March 2012	\$100,000 plus Stakeholder investment, LUS and AI positions

The following performance targets to March 31, 2012 are recommended:

- A business plan and governance model for the implementation of the initial ecosystem services markets in Alberta.
- Identification of the market authority institution as a legal entity (or entities), as a successor to the IAFE.
- Proof of concept for ecosystems services markets in Alberta, as demonstrated by the establishment of a formal working public / private partnership model organized by and around this market authority institution.
- Legislative and regulatory framework in place.
- Program review and adjustments complete.
- Case studies tested and ready for full implementation.
- Launch of the first ecosystem services markets by April 1, 2012.

Contributors

Over the past two years, the IAFE has engaged many local and international experts with experience in the use of market-based approaches for ecosystem services. In addition to holding an International Think Tank and various stakeholder workshops, the IAFE has had over 100 meetings with key Alberta stakeholders representing industry, government (provincial, federal and municipal), academic institutions and environmental non-government organizations. Contributions were made by individuals, organizations and companies representing different sectors, ministries and organizations. The IAFE Board was also invited to participate in several provincial, national and international events that informed its work. The information and advice from these discussions was instrumental in developing the policy framework. It has been an outstanding example of the creativity and innovative thinking that can emerge from integration and coordination across agencies and disciplines.

The IAFE acknowledges the contributions made by the Agri-Environmental Partnership of Alberta for establishing project teams and facilitating agriculture industry input to the IAFE through various meetings and workshops and the Alberta Forest Products Association for facilitating input from the forest industry. The IAFE also wants to acknowledge specific contributions to the guide to implementation by the Experts Advisory Panel, Alberta Biodiversity Monitoring Institute, Canadian Boreal Initiative, Climate Change Central, Environmental Law Centre, Miistakis Institute, Pembina Institute, University of Alberta, and Willamette Partnership.