



Land-use Framework Multi-Stakeholder Working Groups Roll-up Report

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Alberta

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Summary Statement from the Four Working Groups

It is essential to begin by noting the extraordinary character of the working group process. This was not a conventional public consultation, but rather one that drew together more than 100 participants for seven to ten days of intensive and difficult discussions. The participants, moreover, brought a great deal of experience and expertise to the table; many had been working with land-use issues for most of their career, if not most of their lives.

The participants were not bound together by a common set of interests, for they came from across the province and from a multitude of professional, industrial, recreational and environmental backgrounds. In short, they represented the diversity that is contemporary Alberta. However, they were bound together by a shared conviction about the importance of their task, about the need to improve the land management system in Alberta, and about the need to move with all due speed in so doing. If anything, engagement in the working group process reinforced the conviction about the necessity of a comprehensive Land-Use Framework if Alberta is to cope with the pressures of growth on a finite provincial land base.

None of this, of course, produced a complete consensus within the working groups, and the process did not allow the time for the four working groups to systematically compare conclusions and reconcile possible differences. However, there was remarkable agreement on the broad strokes, on the architectural principles that should shape a provincial Land-Use Framework. This summary identifies those broad strokes while at the same time emphatically directing the Government of Alberta to the four detailed working group reports. These reports provide an invaluable source of advice and insight as the Alberta government moves forward with crafting the Land-Use Framework.

What, then, are the bold strokes, the conclusions and architectural principles that emerged from the working group process?

- Growth pressures on the provincial land base have reached the point where the sustainability of ecological values, our quality of life and economic prosperity are being called into question. As a consequence, there is a need for a comprehensive provincial policy response, for a land management system if we are to balance economic development with environmental protection. In short, the working groups endorse the need, indeed the pressing need, for a provincial Land-Use Framework.
- It is essential that the Alberta government assume primary responsibility for land conservation and stewardship, notwithstanding the fact that a conservation and stewardship ethic is practiced by many landowners, industries, other orders of government, and individuals. There is an inescapable need for provincial leadership in the identification of land-use principles, objectives, targets and priorities.
- Any comprehensive policy paradigm must recognize both the value of ecological goods and services to the human population, and the intrinsic value of natural habitat and biodiversity. This means conservation and stewardship programs that are well designed, realistically resourced and thoughtfully implemented.
- The Land-Use Framework should reflect a clear vision statement and rest upon an explicit set of principles. For example, the Conservation and Stewardship Working Group proposed the following Vision Statement: “Alberta’s lands are deliberately and effectively managed to ensure that healthy ecological systems are maintained and/or restored.” The group also proposed the following guiding principle: “The intent of conservation and stewardship is to conserve and steward a perpetually sustained mosaic of natural, urban, rural and

working landscapes, to ensure the provision of ecological goods and services.” Other groups proposed other guiding principles, but all converged on the need for the Land-Use Framework to rest upon a principled foundation.

- Alberta needs a systems approach to land management that takes into account the cumulative effect of land-use decisions on the Alberta land base, including the wildlife and human populations that live upon it, the ecosystems it supports, the air and water systems that flow across it, and the resources that lie upon and beneath it.
- This systems approach must be animated and bounded by provincial government policies relating to Alberta’s land base. Explicit land-use outcomes need to be identified (12 are suggested) and used for policy integration across ministries. Linked to this is the need for a regional planning capacity to bridge provincial policy and local land-use decision-making.
- The overall system objective is to ensure that land-use planning takes place at the appropriate scale, and that land-use decisions are made within the context of regional planning and a clearly articulated provincial Land-Use Framework.
- A strong majority of the Planning and Decision-Making Working Group supports creating legislation for the Land-Use Framework through a new Act; enhanced bureaucratic support through a Land-Use Secretariat within the Executive Council Office; and a regional planning process encapsulated in Regional Planning Councils to interpret and apply provincial policies on a regional scale. In this way, the Land-Use Framework can build upon the processes that are already in place for local land-use decision-making, including the appeals mechanisms therein.
- Participants throughout the process saw the Land-Use Framework and growth management as two sides of the same policy coin. Both need to be grounded in better information on the current use of land and on the carrying capacity of the land base at local, regional and provincial scales.
- The working group discussions were framed by the need to address a Triple Bottom Line — economic, environmental and social sustainability — and in some cases a Quadruple Bottom Line with the addition of cultural sustainability (used to include the particular concerns and aspirations of Aboriginal communities).
- The Land-Use Framework should be designed to manage the impacts of human activities on the land, and not necessarily the activities themselves. With this in mind, the focus of growth and resource management should be on the carrying capacity of the landscape to ensure that impacts remain within the limits of that carrying capacity.
- The working groups came back repeatedly to the essential importance of scientific and traditional knowledge as tools in land management, and therefore proposed a variety of ways in which the collection and sharing of such knowledge could be improved. Scientific knowledge was considered to include traditional ecological knowledge along with the biophysical, health and social sciences.
- All four working groups recognized that a systems approach to land management requires effective methods for monitoring, evaluation and reporting, and that these provide both the tools for continuous improvement and the means by which full-cost accounting can be achieved.
- The Monitoring and Evaluation Working Group used an Outcome-Orientated Indicator Framework to structure the proposed monitoring, evaluation and reporting framework. The Outcome-Orientated Indicator Framework structures monitoring, evaluation and reporting around outcomes to be achieved, attributes that define each outcome, condition indicators that capture the state of the underlying systems and define each attribute, and influencer indicators that affect or change the condition indicator.

- A monitoring, evaluation and reporting framework should address Well-Planned Places to live, work and play (social outcomes), Sustainable Prosperity supported by our land and natural resources (economic outcomes), and Healthy Environment and Ecosystems (environmental outcomes). In so doing, it should address produced, natural, social and human capital.
- If the monitoring, evaluation and reporting framework for the Land-Use Framework is to be an effective guide for land-use planning and decision-making it should be comprehensive, understandable, forward-looking and adaptive.
- Once the Land-Use Framework is in place, the working groups advise the Alberta government to initiate a review of existing provincial policies that impact land, air and water to ensure their integration and alignment with the Land-Use Framework vision and outcomes.
- The working groups are pleased with what they were able to accomplish over a compressed summer time period. At the same time, they recognize that they were only able to provide preliminary answers to a large set of difficult questions; there is still a good deal of work to be done, including the more comprehensive integration of learning from other jurisdictions.
- In conclusion, it is essential to stress again the importance of the four working group reports, and the wealth of insight they provide. With that said, the working groups are pleased to pass the land-use baton to the Alberta government, although many of the participants would also be pleased to run another lap. The land-use challenge is just that important.

Working Group Process: Overview

The working group process ran from June through to early October 2007. The Government of Alberta initiated this phase of the Land-Use Framework consultation process to assist it in further developing a comprehensive framework. The work of these groups built upon the multi-stakeholder and public consultation processes that began in 2006. The Alberta government identified members and reviewers for the working groups through a 'Call of Expression of Interest', which was undertaken in April 2007. Representing a broad range of multi-stakeholders in Alberta, members and reviewers possessed extensive experience and expertise in the area of land use.

The working groups were tasked with exploring a number of land-use issues pertaining to both private and public lands, and developing a set of goals, strategies, and actions for each of the issues under investigation. In addition, each group was asked to identify, where possible, timelines for the implementation for their respective proposed strategies and actions.

Each working group also had a set of reviewers. Unlike the working group members, reviewers did not attend the working group meetings but rather were provided the opportunity to review the ongoing draft work of each group, and to submit their feedback to the working groups on an ongoing basis.

Outline of the Key Goals, Strategies and Actions Proposed by the Land-use Framework Groups

This section presents a cursory overview and list of the directions, goals, strategies and actions proposed by each of the four Land-Use Framework workings groups in response to the issues put before them by the Government of Alberta. It is imperative for the reader to note that this section merely provides an outline of the key findings of each group, and thus, it is unable to capture the depth, specificity and richness of the various proposals forwarded by each working group.

Similarly, it is not the purpose of this section to provide a synthesis of the approaches or arguments informing the findings of each group. Rather, a detailed description and analysis of each working group's findings is elaborated in the four final reports prepared by each of the working groups, and thus the reader should combine the reading of the following section with an examination of the respective reports.

The working group final reports also discuss issues such as the level of working group member support for the proposed strategies and actions, and speak to any differing views raised within the working groups. The four working group final reports are included in this Roll-up Report and appear in the Appendices.

A. Growth and Resource Management: Overview

Introduction

The findings of the Growth and Resource Management working group (GRMWG) represent a critical balance in the issues to be addressed in the Land-Use Framework, representing agreement among the perspectives of a number of sectors including industry, conservation, agriculture, recreation, landowners, provincial and local governments, and Aboriginal Peoples.

The GRMWG identified six key directions that are critical to how growth and resource management should be addressed within the Land-Use Framework. These key directions are accompanied by strategies and actions needed to ensure that the key directions are reflected and implemented under the framework.

It is essential to understand that these six key directions represent parallel and integrated processes that, in terms of implementation and timing, are neither discrete nor necessarily linear in nature. Taken together, the six directions provide the foundation for managing growth in Alberta. The GRMWG defined “land-use” as the integration of land, air and water management. Subsurface, surface and airshed implications are included within the meaning of the terms “land” and “land-use”, such that their use here is fully inclusive of land, air and water resources.

Key Directions for Growth and Resource Management

Direction 1: Adopt the Land-Use Framework Vision and Outcomes

The GRMWG fully supports the draft Land-Use Framework vision. The working group advises that the LUF vision statement must be incorporated into relevant existing and new legislation, regulation and/or policy relating to land, air and water. Mechanisms to ensure the vision is reflected across ministries associated with land, air and water are also required.

Strategy 1.1 Adopt and use the Land-use Framework vision and outcomes

Action 1.1.1

Enact the vision and combined outcomes into legislation, regulation and/or policy so that land-use decisions consistently reflect the intention of the LUF and to ensure cross-ministry alignment.

Combined Land-Use Framework Outcomes

The Land-Use Framework will do the following.

- Protect key environmental assets. The quality of land, air, water and biodiversity is assured.
- Promote shared stewardship of the land. Albertans are stewards of the environment and the economy.
- Ensure that Albertans live within the province's natural carrying capacity.
- Help promote integrated land-use planning between urban and rural jurisdictions.
- Ensure a healthy quality of life for Albertans. Urban and rural communities offer a healthy environment for living.
- Define clearly the roles and responsibilities for all groups.
- Support protection of agricultural lands.
- Ensure effective and timely reclamation of lands.
- Provide for an economy that is healthy.
- Enable market forces and regulatory systems to work for sustainable development.

- Help Albertans to be educated and informed about the four pillars of sustainability: cultural, economic, environmental and social.
- Enables Albertans to be responsible global citizens.

Action 1.1.2

Establish a long-term multi-generational land-use vision (e.g., 100+ years) that reflects adaptations to the cultural, economic, environment and social interests of Albertans; enables regional determination of carrying capacity; and recognizes cumulative effects.

Direction 2: Understand the Land and Recognize Carrying Capacity

The GRMWG was asked to address the question, "How can the Province be most effective in taking a leadership role in growth and land-use management?"

The Government of Alberta needs to provide leadership and support in building an understanding of the land by developing comprehensive inventories of historical and current land-uses, biophysical data and social system knowledge. The accumulation, coordination, assessment and dissemination of this baseline and endpoint information will help inform decisions pertaining to impacts on carrying capacity at the local, regional and provincial scales. Further, in order to fully incorporate the Quadruple Bottom Line (QBL) model of sustainability (see Direction 3) into decisions that may affect carrying capacity, it is essential to begin accounting for natural capital, the quantifiable economic value of ecological goods and services.

Strategy 2.1 Develop a comprehensive inventory to support provincial, regional and local decision-making

Action 2.1.1

Develop a comprehensive database of existing land-uses and land information to enable assessment of natural regions; permit gap analyses; and support planning and decision-making.

Action 2.1.2

Conduct a state-of-the-land review to help define carrying capacity in the context of the QBL model.

Action 2.1.3

Identify and define Alberta's natural capital so that it is accounted for when applying the QBL model.

Strategy 2.2

Build on all types of knowledge, science and values to obtain baseline and endpoint information

Action 2.2.1

Support and share ongoing research and improvement by overcoming existing barriers to accessing information, taking advantage of all types of science including the physical and social sciences as well as traditional ecological knowledge.

Direction 3: Review and Align Provincial Policies Affecting Land-use with the Land-use Framework Vision and Outcomes Using a Quadruple Bottom Line Model

The GRMWG suggests that Direction 3 is a starting point for the realignment of provincial policies and the development of mechanisms to achieve that alignment.

The Quadruple Bottom Line ("QBL") model includes balanced consideration of the cultural, economic, environmental and social impacts of land-use decisions. The GRMWG suggests adoption of the QBL model to encompass all four pillars of sustainability to reliably embed them into Land-Use Framework decision-making.

Strategy 3.1

Realign provincial strategic policy directions to implement the LUF vision and outcomes

Action 3.1.1

Review and align provincial policies that affect land, examining critical areas or issues first and phasing in efforts on additional areas or issues.

Action 3.1.2

Establish a government-led stakeholder task force to begin immediate implementation of Action 3.1.1, including input from similar consultation processes in Alberta addressing water and air quality.

Action 3.1.3

Ensure government alignment for QBL decision-making by establishing a clear structure for participation across ministries and between jurisdictional levels of government.

Strategy 3.2

Planning and decision-making at all levels and authorities must be aligned with the LUF vision and outcomes

Strategy 3.3

All decision-making must be based on balancing the QBL

Direction 4: Limit Impacts to Manage Growth

The GRMWG observed that the five land management approaches it was asked to examine (applying criteria for patterns of activity; limiting/capping activities; setting priority uses; increasing/directing activities to certain areas; phasing activities) tend to focus on managing activities on the landscape. The GRMWG determined that in terms of growth and resource management outcomes, the Land-Use Framework should manage the impacts of human activities on the land, not necessarily manage the activities themselves. Further, the LUF should enable growth through more efficient use of land without compromising its natural carrying capacity. Hence, the focus of growth and resource management ought to be on understanding the carrying capacity of the landscape to ensure that impacts remain within the limits of the carrying capacity. Central to implementing such an approach is to understand and account for cumulative effects in decision-making about activities. Implementation of this management approach must be supported by the Alberta government with an oversight function as well as integrated legislation, regulation and/or policy. The overarching objective is to enable growth while managing its ecological footprint.

Strategy 4.1

Focus management approaches on outcomes

The GRMWG was asked to address five land management approaches identified in the questions posed to the group under the Terms of Reference forwarded by the Alberta government. These are identified below; where appropriate the GRMWG identified actions to support these approaches.

Approach A

Applying criteria for patterns of density, intensity or rates, and type of activity

Criteria are necessary to sustain the integrity and health of the QBL. These must be measurable, understood and applied to all activities on the landscape. The application of criteria must occur within provincial guidelines; an aligned regulatory framework; the integration of water, air and land strategies; the use of regional mechanisms to enable local involvement; an outcomes-based provincial plan that identifies limits and targets; and ongoing review.

Approach B

Limiting or capping specific activities

The encouragement of more efficient use of land within its carrying capacity should take priority over arbitrary setting of limits and/or caps on activities, and any limits or caps must be subject to defining the QBL values to meet carrying capacity.

Action 4.1.1

The Province should develop and put in place systems to determine the application of limits within/across regions.

Approach C

Setting priority land-uses

The GRMWG concluded that priority land-use could be appropriate as an overall management approach to resolve conflict; the working group also acknowledged that this approach may create conflict among land users. Setting priority land-uses must be made in the context of managing impacts at a regional or sub-regional scale to protect a provincial value, and should focus on identifying compatible land-uses, some preferred over others, rather than identifying a single land-use to the exclusion of all others.

Approach D

Increasing, decreasing¹ or directing activities in certain areas

The GRMWG recognized that this approach may be acceptable in theory but its appropriateness may be limited due to geographical placement of natural features. The working group concluded that arbitrarily increasing, decreasing or directing activities should only be considered where there is clear evidence of a threat to the carrying capacity of a regional or sub-regional area in which activity is occurring or is proposed to occur.

Strategy 4.2

Apply a three-pronged management approach

The three-pronged approach should be incorporated into the systems discussion set out in Strategy 4.1. It is a method of identifying areas that require greatest attention. It allows planning agencies to establish thresholds based on three levels of usage. These levels are:

- intensive use (e.g., cities and industrial areas like oil sands);
- zero use (e.g., protected areas, benchmark areas); and
- somewhere in between (e.g., areas where best management practices and efficient use of land are compatible with existing/future land-uses).

Approach E

Phasing activities over space and time

The GRMWG suggests that this approach, if applied, must be flexible to allow for implementation of new technology and innovation; ensure that it does not disproportionately affect one industry over another; and ensure that the phasing of activities may be used as a management tool with consideration given to the type of activity.

¹ The word “decreasing” was added by the GRMWG to represent a balanced approach.

Strategy 4.3

Establish targets, limits and thresholds on impacts

The Land-Use Framework must provide targets based on objectives for each of the four pillars of sustainability that will guide land-use decision-making.

Action 4.3.1

Identify and address “hotspots” and over-capacity areas immediately.

Action 4.3.2

Integrate with other provincial planning initiatives.

Action 4.3.3

Identify beneficial management practices.

Action 4.3.4

Build on experiences of other jurisdictions.

Strategy 4.4

Account for cumulative effects to manage long-term results

Action 4.4.1

Implement legislation, regulation and policy to address cumulative effects, ensuring cross-ministerial alignment and commitment.

Action 4.4.2

Within legislation, establish a governing body for cumulative effects that includes multiple stakeholders and Aboriginal representation and authority.

Direction 5: Promote Eco-Efficiency and Innovation

Ecoefficiency is achieved by providing goods and services that meet human needs and bring quality of life while progressively reducing ecological impacts and staying within carrying capacity. To aid Albertans to be eco-efficient, there is a clear need to develop a practical toolkit to enable Directions 1 through 4 to be implemented on the ground. The GRMWG advises that incentives, as well as planning, adaptive, and compliance tools, are all appropriate for use. For example, a provincial repository of scientific and traditional knowledge reflecting the cultural, economic, environmental and social pillars of the QBL model is required. Proposed as an independent and flexible centre of excellence, this repository will develop, house

and share inventory databases; share information on the suite of tools available for best practices; promote and support innovation; and integrate science and policy. It is essential that the Government of Alberta demonstrates leadership, including providing funding and expertise, and the amendment of its own regulatory and policy frameworks, to ensure that the expertise in this repository is duly considered in land-use and growth decisions.

Strategy 5.1

Create and encourage a toolkit of compliance, knowledge, innovation, incentive and planning tools

Action 5.1.1

Develop compliance tools including legislation and regulation.

Action 5.1.2

Develop knowledge and innovation tools.

Action 5.1.3

Develop incentives to motivate Albertans to adopt beneficial land management practices.

Action 5.1.4

Develop planning tools such as zoning and development planning tools; land-use forecasting simulators; density transfer tools, etc.

Strategy 5.2

Support continuing development of tools

Action 5.2.1

Develop continuous improvement tools to support management adaption based on targeted research, thorough monitoring practices and identification of practices that maximize land-use efficiency and improve mitigation efforts.

**Direction 6: Distribute Decision Making
Appropriately at Provincial, Regional
and Local Scales**

Notwithstanding the detailed advice forthcoming from the Planning and Decision-making Working Group, the GRMWG advises that a well-structured decision-making infrastructure is essential to underpin the five key directions outlined above for managing growth.

Specifically, the Land-use Framework requires strong leadership by the Government of Alberta; integrated and coordinated planning at the regional scale; public and Aboriginal involvement; and implementation by local decision-makers. A structure of this type supports:

- the application of the Land-Use Framework vision and outcomes;
- the integration of the QBL model across scales and across jurisdictions;
- the assurance that decisions are driven by an understanding of natural capital, carrying capacity and cumulative effects;
- a focus on managing for impacts of activities; and
- incorporation of a practical toolkit for decision-makers.

Principles inherent to this type of infrastructure include:

- provincial leadership that directs the values and principles of growth management;
- integrated planning across provincial, regional and local scales;
- local implementation and decision-making following the provincial and region-based principles;
- multi-stakeholder and Aboriginal involvement; and
- an appeal process and auditor to ensure accessibility and transparency.

Strategy 6.1

Establish a comprehensive provincial structure for land-use decision-making

A diagram outlining GRMWG's proposed structure for land-use decision-making appears in the appendix Growth and Resource Management Final Report.

Action 6.1.1

Establish a provincial authority to provide leadership in land-use, which sets core values and principles to guide regional planning and local implementation.

Action 6.1.2

Establish regional coordinating bodies for local authorities using ecological rather than political boundaries.

Action 6.1.3

Establish the short-term and long-term mechanisms to develop the decision process incorporating scientific and public input and an interim process to deal with critical areas/issues.

B. Planning and Decision-making: Overview

Introduction

A wide range of public authorities, landowners and land users are brought into play in the development of land management policies and their implementation on the provincial land base. The Planning and Decision-Making Working Group (PDMWG) tackled the planning and governance backbone of the Land-use Framework. The working group's focus was on how decisions should be made rather than on what decisions should be made.

The work of the PDMWG addressed the following three basic sets of issues:

- the ideal attributes of a planning and decision-making system for the Land-use Framework;
- the potential role and form of regional entities; and
- the positioning of the Land-use Framework within the policy and administrative architecture of the provincial government.

These issues are based on a suite of questions posed in the Terms of Reference forwarded by the Government of Alberta.²

The PDMWG sought to develop an approach to land management that took into account the cumulative effect of land-use decisions on the Alberta land base. The working group interpreted land base to include the wildlife and human populations that live upon it, the ecosystems it supports, the water and air systems that flow across it, and the resources that lie upon and beneath it. In essence, the PDMWG called for a land-use planning system that strives to bring all these factors into play, addresses both the spatial and temporal dimensions of land-use planning, and provides a planning context within which discrete land-use decisions can be made. Ultimately, the PDMWG proposed a more systematic approach to land-use planning and decision-making in Alberta.

Further, the PDMWG concluded that land-use decision-making in Alberta needs to be better guided by the values Albertans attach to the land, by a provincial policy framework (objectives, goals, priorities), and by regional planning that takes into account cumulative effects on the landscape. Thus, the PDMWG suggested three significant changes to the land management status quo:

- the identification and policy expression of those values and principles that Albertans attach to land and land management;
- the clear articulation of provincial government policies, goals and priorities relating to the land base; and
- the creation of a regional planning capacity to address the cumulative impact of land-use decisions on the Alberta landscape.

The LUF organizational model proposed by the PDMWG is captured in Figure 2, of the Planning and Decision-making Working Group Final Report in the Appendices. It illustrates the changes to and underscores that the changes under discussion would not constitute radical departures from the current system of land management. In fact, they strengthen rather than reject the planning and decision-making processes currently in place. Also embedded in PDMWG's systematic approach to land-use planning and decision-making are mechanisms to facilitate continuous improvement in the land management system. These processes are outlined in Figure 1 of the PDMWG Final Report in the Appendices.

The following sections identify the main characteristics and functions of the planning and decision-making land-use management system proposed by the PDMWG.

² The specific questions forwarded by the GoA appear in Appendix II: Planning and Decision-making Working Group: Final Summary Report, p. 134.

Defining a Systems Approach

The notion of a land management system implies that individual land-use decisions and decision-makers are constrained, that not all possible outcomes are equally desirable or achievable. The PDMWG advises that individual land-use decisions should be made in the context of and consistent with:

- the principles and priorities articulated in the Land-use Framework;
- more clearly articulated provincial government policies, objectives and priorities relating to Alberta's land base; and
- regional planning processes that take into account the cumulative impact of land-use decisions on the Alberta landscape.

More specifically, the PDMWG developed three basic strategic responses to realize the above characteristics:

- 1) the identification of principles that should govern land-use planning and decision-making;
- 2) strengthening the articulation of provincial land-use objectives and priorities; and
- 3) the creation of a regional planning capacity. The overall system objective is to ensure that land-use planning takes place at the appropriate scale, and that land-use decisions are made within the context of regional planning and a clearly articulated provincial land-use framework.

In addition, the working group concluded that an effective land management system for such a complex province must maintain:

- a reasonable degree of sub-system autonomy; and
- a reasonable measure of flexibility in order to reflect regional differences in circumstance.

However, this subsystem autonomy and flexibility must still be guided by and consistent with the principles, policies, goals and priorities of the Alberta government. The land management system guides rather than rigidly determines land-use decisions.

System Principles

The PDMWG contributes to the work undertaken on the Land-use Framework, to date. The PDMWG proposes that the Land-use Framework should:

- provide an explicit statement of provincial land-use objectives and priorities;
- build upon values held by all Albertans, while recognizing that such values may change over time;
- embrace a long-term planning horizon, clear policy objectives, and measurable outcomes;
- solicit and incorporate traditional knowledge and values where it is appropriate to do so;
- facilitate commercial/industrial access to land in keeping with the provincial government's sustainable development goals; and
- be guided by an over-arching commitment to sustainability.

The PDMWG assumed that land-use planning and decision-making processes must respect:

- the broader environment within which Alberta's residents and governments operate;
- Alberta's regional, national and international obligations, property rights and existing resource agreements; and
- Alberta's obligations to First Nations, Métis, and Aboriginal Peoples as expressed through treaties, the *Natural Resources Transfer Act (1930)*, provincial legislation, court decisions, international conventions, and existing consultation agreements.

More specifically, the PDMWG concluded that the planning and decision-making processes for the Land-use Framework should be guided by the following principles:

- have the capacity to manage the impact of cumulative effects;
- recognize the need for equitable public and stakeholder participation and input;
- be applicable across provincial, regional and local scales;

- rest upon a high quality and publicly accessible land and resource information base;
- provide for vertical and horizontal policy integration within and across governments;
- connect land, water and air policy and planning, and more generally, take into account the variety of ways in which Alberta communities connect (e.g., recreation corridors, transportation systems, utility corridors, provision of government services);
- enhance efficiency and timeliness for those industries and individuals operating on the provincial land base;
- integrate surface land-use planning and subsurface resource development;
- create clear lines of accountability; and
- recognize that land-use planning is an ongoing, iterative process that must be adaptable to changing circumstances and values.

In advancing this set of principles, the PDMWG stresses that it did not want to unduly privilege the status quo, and that planning and decision-making will always involve trade-offs among competing values. To be effective principles must have a real voice. This leads to the critically important role of the Alberta government in an effective land-use planning and decision-making system.

Strengthening the Provincial Role

The PDMWG agreed that provincial leadership in the land management system must be strengthened. Existing decision-making processes at the local level are not sufficiently guided by explicit provincial priorities and objectives. There is a need for a provincial land-use framework that is:

- fully implemented,
- monitored,
- publicly reported,
- reviewed, and
- adjusted.

The Land-use Framework's strategic direction should be applicable to parties engaged in land-use activities including:

- municipal governments,
- land users, and
- government departments.

The provincial government should not be micro-managing land-use decisions in the province. The province should be addressing those issues that need to be addressed at the provincial scale. Policy integration within and across governments will follow from the explicit identification of provincial objectives and priorities.

The PDMWG concluded there is a need to:

- articulate clearly the provincial goals and priorities in the land management system;
- synthesize one clear, comprehensive set of provincial goals, objectives and targets to manage the cumulative impact of human activities on Alberta's landscape; and
- provide an institutional home for the Land-use Framework.

After concluding there is a need for more clearly articulated provincial goals and priorities in the land management system as well as a need to provide an institutional home for the framework, the PDMWG considered two options:

- 1) Include greater public service support for the Executive Council Office with respect to land-use planning and decision-making. A Land-Use Secretariat could provide a central agency support function that could extend to mandate letters for regional planning councils (discussed below), nominations for such councils, and planning support. The Secretariat would facilitate the synthesis of over-arching provincial goals, objectives, targets and measurable outcomes. It would be internal to the Alberta government, with limited public profile, much like Sustainable

Resources and Environmental Management (SREM) today. The Secretariat would not be under the mandate of a single department, and would therefore have the independence to articulate government-wide perspectives.

- 2) The second option would entail a more formal and robust Provincial Land-use Commission that could supply not only the support noted above but also land-use policy advice to the provincial government. It would be a champion for the Land-use Framework and for the central role of land-use planning within the broader framework of government decision-making. Such a Commission could provide formal seats at the table for such groups as municipal government associations and Treaty associations. It would give higher public profile to the importance of land-use management in the province, and could provide a repository for both expertise and experiential learning.

A strong majority of the PDMWG members supported the first option emphasizing the need for a more clearly articulated provincial voice to animate the planning process.

On the issue of how the Land-use Framework should be embedded within the policy or legal architecture of the Alberta government, the PDMWG identified three options for moving forward:

- 1) Situate the Land-use Framework at a policy level, without legislative enactment through either new legislation or amendments to existing legislation.
- 2) Operationalize the framework through amendments to existing legislation (e.g., the *Municipal Government* and *Public Lands Acts*).
- 3) Enact a new piece of legislation to embody the Land-use Framework. This new Act would enable and give statutory authority to the land-use planning and decision-making innovations discussed in this report. It would also require amendments to existing pieces of legislation.

There was a virtual consensus within the PDMWG supporting the third option, which would highlight and give public visibility to the importance of land-use planning for Alberta. Stand-alone legislation could be used to give voice to the principles and values that the

Land-use Framework has identified. New legislation would also identify clear lines of political accountability for the framework, and would give greater permanence to the government's commitment to land management. While new legislation and legislative reforms are planned and debated, the provincial government can move forward through existing legislation (e.g., the creation of Regional Planning Councils).

If the framework is to lead to an effective land management system in Alberta, it is essential that it be integrated with other closely related policy initiatives. The PDMWG wrestled with the two following approaches to integration.

- 1) The Land-use Framework would serve as the land counterpart to the Water for Life Strategy and other somewhat autonomous elements of a complex system (e.g., Alberta's Biodiversity and Wetlands Strategies).
- 2) The Land-use Framework itself would serve as the over-arching vehicle for integration.
 - Land, air and water management would be pulled together through the Land-use Framework and the planning mechanisms discussed below.

The PDMWG leaned towards the second, more expansive approach. The Land-use Framework provides an opportunity to create a more holistic approach to planning, and to recognize the inescapable linkages among land, air and water planning. However, this more expansive approach should be seen as an evolutionary rather than immediate goal.

Creating a Regional Planning Capacity

Although Alberta's land base is profoundly affected by the allocation of land and resources to various uses and users, the approval and regulation of specific projects and activities, and the implementation of management decisions at the operational level, there is no capacity to assess and plan for the cumulative effects of these on a regional scale. The PDMWG therefore concluded emphatically that the effective implementation of the

framework requires the creation of some significant regional planning capacity.

The majority of working group members opted for the creation of Regional Planning Councils (RPCs). RPCs should be created, mandated and fully supported by the Alberta government. RPCs would serve to:

- develop regional plans and submit such plans for approval by the Executive Council, thereby ensuring regional alignment with provincial land-use policies, objectives and priorities;
- interpret and apply provincial land-use policies and priorities into regional plans, thereby establishing a regional planning context within which local land-use decision-making can occur, and within which users of the land can operate;
- convey regional interests and values upwards to the provincial government; and
- serve as a two-way transmission belt, conveying provincial land-use priorities and objectives downward to local communities and land users, and conveying local preferences and practical approaches upward to the provincial government.

Regional plans (RPs) would represent the intersection of regional perspectives and values, on the one hand, and provincial interests shared by all Albertans, on the other. Provincial sign-off would ensure that each planning document meets the basic terms of reference and is in a form that is suitable for engaging higher level (e.g., Cabinet) deliberation, just as municipal government approval of the regional plan would provide the foundation for compliance. These plans should be evergreen, subject to a mandated periodic review.

RPCs, to be effective, should:

- be supported by the Government of Alberta including the necessary financial and access to planning, data, and modeling expertise;
- cover the entire provincial land base with the exception of national parks, Government of Canada lands, First Nations, and Métis Settlements, although in all such cases, engagement in the regional planning process must be encouraged

because cumulative effects do not stop at administrative boundaries; and

- it is essential that the regional planning process be supported by the monitoring and evaluation mechanisms developed as part of the Land-use Framework, for an adaptive management system requires continuous feedback.

The PDMWG is not calling for replacing other forms of planning at the sub-regional or local scale (e.g., Watershed Planning and Advisory Councils, airshed plans) but instead would be providing a forum in which these could be brought together.

The RPCs should not:

- be charged with ensuring compliance with regional plans,
- have subdivision and development approval authority,
- have zoning authority,
- be an appeals body for local decision-making,
- create or approve operational plans for forest companies, or
- duplicate the functions of the Alberta Energy Utilities Board (EUB), Integrated Land Management (ILM) agreements, or Municipal Development Plans (MDP) as instruments for policy implementation. However, the mandates of regulatory bodies such as the EUB and Natural Resources Conservation Board (NRCB) should be expanded to include consideration of regional plans, and the cumulative effects of development within a region.

Cabinet signoff for the regional plans applies only to those aspects falling within provincial jurisdiction; at times, the plans may embrace elements that will bring other governments (Government of Canada, municipal governments, First Nations) into play.

Setting regional boundaries

RPCs need to be bounded in some form. Regional planning boundaries define the physical space for collective deliberation on land-use priorities and trade-offs, within a broader policy and institutional framework that recognizes the need to address some important

issues at different spatial scales. The PDMWG offers the following design principles for consideration by the Government of Alberta.

- The planning regions should be sufficiently large to work at the landscape level, and to avoid being embroiled in local land-use decisions, but sufficiently small to be meaningful. To be avoided are regions that are so large as to be meaningless in a planning sense (e.g., “southern Alberta”).
- Regional boundaries could be congruent with (1) natural landscapes such as watersheds or river basins; (2) commonly understood ecological zones such as the Eastern Slopes; (3) the natural regions and sub-regions of Alberta (e.g., the Central Parkland, Dry Mixed Grass, the Lower Foothills, the Central Mixed Wood, the Sub-alpine and Peace-Athabasca Delta); Treaty areas (e.g., Treaty 8); or municipal boundaries.
- Watersheds could be used to define the boundaries of RPCs. Here it was noted that watersheds are used to operationalize the Water for Life Strategy, and are referred to within the *Public Lands Act*.
- Congruency with existing political and administrative boundaries such as existing municipal and Forest Management Agreement boundaries would be an asset. To be avoided are boundaries that would split existing municipalities.
- RPCs for metro-Calgary and metro-Edmonton are unavoidable.

Populating the Regional Planning Councils

The PDMWG did not discuss the issue of populating the RPCs in a conclusive way, and therefore can only offer the following thoughts for consideration in developing the RPCs.

- Some participation by the GoA on the RPCs is essential, although the appropriate form of participation is not clear. Selection of GoA representation on specific RPCs could be determined by the Land-Use Secretariat and Cabinet.
- Given the emphasis on planning and planning expertise, and given the sensitivities of municipal

councils, the RPCs should not be elected. However, the intricacies of appointment (by the GoA, by municipalities, stakeholders, etc.) remain to be determined.

- It is not clear to what extent the RPCs should be intergovernmental in character. There needs to be flexibility on this point.
- Authority members charged with representing the public interest may be desirable.
- The composition of the Councils may provide an opportunity to strengthen interaction with Watershed Planning and Advisory Councils.
- The composition of the RPCs may vary from region to region, thereby accommodating unique patterns of land use, while still retaining some common elements.
- Some members of the PDMWG proposed the creation of Regional Advisory Commissions to supplement the RPCs. Such Commissions could be composed of the RPC and additional invited stakeholders who would establish the values and objectives for the regional plans while incorporating provincial values and objectives.
- It is not possible for RPCs to represent all interests. Therefore the RPCs must be supplemented with robust public and stakeholder consultations, framed by provincial policies.

Implementation Timelines

The implementation of the Land-Use Secretariat and the RPCs could be done today within existing legislation. Given the present circumstances of the province, the GoA should move forward to identify its regions of highest priority for developing regional plans and begin the selection process for RPCs as soon as possible. Once the RPCs are in place it will take perhaps two to three years to develop regional plans. Concurrently, however, the GoA can move forward with establishing the process to develop over-arching provincial goals and priorities, as well as undertaking a thorough review of the legislative proposals recommended herein. The GoA

should provide itself with a year from the time it adopts these recommendations to have legislative changes made and a first set of provincial goals and priorities established.

The need for speed is particularly acute in those regions of the province where growth pressures are greatest—the oil sands, the Edmonton-Calgary corridor, and the eastern slopes of the Rockies.

Dissenting Views

Finally, the PDMWG recognizes that its report cannot capture the full range of minority viewpoints expressed throughout its work. However, it would like to acknowledge (although neither endorse nor reject) the input received from Treaty 8, which called for:

- the recognition of the sui generis nature of Treaty 8 First Nation rights and interests in provincial lands and resources;
- the need for a “quadruple bottom line” in land-use planning that would go beyond social, economic and environmental needs to bring the interests of First Nations more directly into play;
- the establishment of a provincial Land-Use Council with broad-based representation including First Nation representatives appointed by provincial Treaty organizations;
- First Nation representation on regional planning groups, and on sub-regional and local planning authorities;
- the requirement that First Nation governments sign-off on regional plans having the potential to infringe upon First Nation rights and interests; and
- a clear and transparent appeal process for land-use decisions, not consistent with approved land-use plans.

More broadly, the Treaty 8 approach reinforces many of the conclusions noted above (e.g., the creation of a Land-use Framework by legislation) while elaborating on those conclusions with respect to Treaty 8 participation in the land management system (see Appendix C of the Planning and Decision-making Working Group Final Report).

C. Conservation and Stewardship: Overview

Introduction

The Conservation and Stewardship Working Group (CSWG) recognizes the Government of Alberta as the primary authority responsible for enabling, facilitating, supporting, and partnering with individuals, organizations, private groups, NGOs, other levels of government, and industry to initiate and implement conservation and stewardship programs. The CSWG also recognizes the need for the Alberta government to ensure that ecological systems are maintained or restored.

The ideas and concepts, identified in this report define the role of conservation and stewardship in the Land-use Framework, and should be integrated with the ideas and concepts of the other three groups.

Operating within the over-arching parameters set by the concept of “Ecological Goods and Services”, the CSWG has attempted to identify short, medium and long-term actions and strategies, expressed in a wide range of recommendations that pertain to both private and public land.

Where Are We Now? - Current Level of Activity

The CSWG noted that the current level of conservation and stewardship effort in Alberta is not sufficient to keep pace with the kind of growth facing the province over the next few decades. It became clear that without thoughtful planning and strategic action the current level of population growth, land use and industrial development will have a significant negative effect on ecological systems. Failure to plan and act now will result in serious loss of biodiversity, which will mean a significant reduction in the quality of life for everyone.

The CSWG began its work with an investigation and evaluation of the lessons learned by other jurisdictions, both nationally and globally. The CSWG developed a list of 15 key examples from conservation and stewardship programs throughout the world. A full list of the

documents studied and a list of the lessons learned is included in the Conservation and Stewardship Working Group Final Report. From these findings the CSWG arrived at the following over-arching general lesson, which helped to guide its work:

Successful conservation and stewardship programs must be well designed, realistically resourced and thoughtfully implemented to be successful over the long term.

The CSWG also identified a list of key barriers in Alberta that impede the progress and success of conservation and stewardship programs and initiatives. The working group used this list as a tool to discover where significant improvement can be made. A comprehensive list of the barriers appears in Conservation and Stewardship Working Group Final Report.

Where Do We Want To Be and How Do We Get There? - Vision, Goals and Actions

The CSWG developed a vision which served as guiding principle and helped the working group focus their recommendations specifically conservation and stewardship issues.

Recognizing the inter-relationship between the quadruple bottom line concept (economic, social, environmental and cultural) and land management, the CSWG vision is:

Alberta's lands are deliberately and effectively managed to ensure that healthy ecological systems are maintained and/or restored.

In support of the Vision, the CSWG recommends the following guiding principle:

The intent of conservation and stewardship is to conserve and steward a perpetually sustained mosaic of natural, urban, rural and working landscapes, to ensure the provision of ecological goods and services.

Goals, Strategies, and Actions

The CSWG developed three over-arching goals, and within them, a series of strategies and actions that describe how to make the vision a reality. Goals have to reflect diverse landscapes, ranging from parks and protected areas, to full working landscapes including both public and private lands. The listing of actions is not intended to be exhaustive, but instead is provided as additional ideas that help to flesh out some of the goals and strategies.

Goal 1.0: For Alberta to be a National and International Leader in Delivering Conservation and Stewardship Strategies and Initiatives.

Strategy 1.1

Align relevant provincial, federal, municipal and aboriginal policies, legislation and resources toward a cohesive conservation and stewardship vision

Action 1.1.1

Embed the Conservation and Stewardship (C&S) vision into the provincial business plan

Action 1.1.2

Develop legislation with respect to a provincial Land-use Framework

Action 1.1.3

Embed the LUF priorities in the work plans of all appropriate departments

Action 1.1.4

Institute a process to review current legislation to identify what is enabling or disabling C&S

Strategy 1.2

Increase and improve significantly the capacity of stakeholders (industries, governments, individuals and NGOs) to contribute to conservation and stewardship in Alberta

Action 1.2.1

Develop a strategy to implement the conservation and stewardship components within the LUF. The strategy should be based on consultation with stakeholders and should:

- determine and/or revise powers, responsibilities, and partnerships within the policies and

legislation to improve the capacity of the stakeholders;

- increase capacity within the planning and delivery agencies (e.g., government, NGOs);
- develop specific schedules, timelines, and budget for implementation of the Land-use Framework; and
- implement a monitoring strategy to ensure the long-term effectiveness of the program.

Action 1.2.2

Make increased funding available for C&S work within all departments that deal with C&S (such as enforcement, recreation management, planning, public education, monitoring, and research).

Strategy 1.3

Encourage increased integration, cooperation, communication and coordination through conservation and stewardship administrative bodies at provincial and regional levels, with representative stakeholder involvement (including all levels of government)

Action 1.3.1

Demonstrate a commitment to sustainable land management by:

- strongly encouraging the implementation of conservation Best Management Practices (BMP) in all sectors; and
- developing a better working relationship with all stakeholders (NGOs, industry etc.).

Action 1.3.2

Improve C&S program coordination and dialogue among and within government departments, NGOs, industry and other government agencies (at regional, watershed, and natural region levels).

Strategy 1.4

Develop and use a long term planning process to support conservation and stewardship goals

Action 1.4.1

Demonstrate a commitment to sustainable land management by:

- developing and implementing conservation plans at various scales;

- increasing areas dedicated to C&S (e.g., protected areas representative of the provinces natural regions and sub regions);
- planning proactively and making the tough decisions (e.g., what happens if there is a major development request, or what happens post development); and
- implementing conservation BMP.

Action 1.4.2

Implement monitoring to ensure the long-term effectiveness of the program

Action 1.4.3

Develop an overall recreational strategy for the province which would support the C&S vision by considering diverse recreation opportunities are available for Albertans in areas of the province where they are appropriate

Goal 2.0: Increase Understanding of Ecosystems Through Shared Research and Education to Build Public Awareness and Support for Conservation and Stewardship

Strategy 2.1

Significantly increase and sustain provincial efforts toward researching, undertaking inventory and monitoring landscape elements that are essential for healthy ecosystems

Action 2.1.1

Use research to help establish science-based targets and thresholds for cumulative effects on managed and natural ecosystems

Action 2.1.2

Collect baseline data on ecosystem features that reflect our vision of sustainability

Action 2.1.3

Continue to research and improve conservation BMP in all industries and sectors

Action 2.1.4

Focus and enhance research on determining the economic value of defined ecological goods and services (benefits from our landscapes)

Action 2.1.5

Focus and enhance research on determining the value of social and cultural goods and services supplied by our landscapes

Action 2.1.6

Establish science-based monitoring protocols for those features that reflect our vision of sustainable ecosystems

Action 2.1.7

Establish monitoring networks to assess the effectiveness of land management practices and identify ecosystem sustainability concerns

Strategy 2.2

Design, implement and support a coordinated communications, education and engagement strategy to assist cultural change: to encourage a society that values conservation and stewardship of the natural elements that support or increase ecosystem health (integrity)

Action 2.2.1

Evaluate public awareness of conservation and stewardship

Action 2.2.2

Enhance and promote current successful Public Education and Outreach (PEO) initiatives, such as the Respect the Land initiative

Action 2.2.3

Inventory and assess the public awareness programs currently available

Action 2.2.4

Assess current level of PEO services

Action 2.2.5

Develop an overall education and outreach strategy on conservation and stewardship

Action 2.2.6

Coordinate PEO initiatives in all government departments

Goal 3.0: Significantly Increase the Capacity, Development and Deployment of Policy, Program Initiatives and Related Tools Necessary to Address Conservation and Stewardship in Ecosystems.

Strategy 3.1

Establish sustainable, dedicated funding (e.g., trust fund) of sufficient size to increase capacity, tools and program initiatives for conservation and stewardship

Action 3.1.1

Make funds available for:

- C&S public awareness and education campaigns;
- C&S initiatives, especially within the volunteer sector; and
- C&S technology, research and implementation plans.

Action 3.1.2

Increase the funding for stewardship in recreation management, both within and outside of parks (examples of which could include user awareness and safety programs)

Action 3.1.3

Enable publicly generated funding to support C&S initiatives

Action 3.1.4

Review the funding commitment every 10 years

Action 3.1.5

Purchase and steward land or easements

Action 3.1.6

Consider a diverse stream of funding sources

Strategy 3.2

Initiate a program of incentives, and where necessary, disincentives to foster and promote the maintenance of ecological goods and services on private and public land

Action 3.2.1

Develop and use incentives for restoration of native landscapes as a condition of licences to operate

Action 3.2.2

Encourage creation of a tax tool that will provide land-rich, cash-poor donors of eco-gifts (gifts of lands or conservation easements) with the right to sell their tax receipts (e.g., The Colorado Land Trust)

Action 3.2.3

Develop and use incentives for maintaining ecological goods and services on private lands (both urban and rural)

Action 3.2.4

Conduct a review of current funding/incentives/subsidies/royalty rates that may impact C&S (positive and negative impacts)

Action 3.2.5

Develop and use incentives for coordination of subsurface and surface activities

Action 3.2.6

Encourage adoption of conservation BMP in all sectors

Potential Action Plans

The Conservation and Stewardship Final Report in the Appendices provides a series of tables with a further listing of the suggested actions generated by the CSWG. The listing of actions is not intended to be exhaustive, but instead is provided as additional ideas that help to flesh out some of the goals and strategies.

D. Monitoring and Evaluation: Overview

Defining the Role of Monitoring, Evaluation and Reporting³ within Alberta's Land-use Framework

The Monitoring and Evaluation Working Group (MEWG) was asked to identify the “key land use, natural resource and other indicators that should be used to measure progress toward achieving the proposed vision and outcomes of the Land-Use Framework.”

Specifically, the MEWG was tasked with developing a monitoring framework for three main outcomes:

- 1) Well-planned places to live, work, and play (social outcome)
- 2) Sustainable prosperity supported by our land and natural resources (economic outcome)
- 3) Healthy environment and ecosystems (environmental outcome)

The Alberta government asked the MEWG to address three key questions:

- 1) What should be measured?
- 2) How should it be measured?
- 3) How should the measured results be used in a continuous improvement process?

It should be noted that there was an opinion put forth by an Aboriginal member of the group that culture should be added to social, economic outcome and environmental outcome as a fourth pillars which is sustained under the planning, management, monitoring and assessment components of the framework and that the reader consider culture wherever social, economic, and environmental outcomes or values appear in this report.

In the context of the Land-use Framework the role of monitoring, evaluation, and reporting is to tell us where we are in relation to our desired outcomes, whether we are moving closer or farther away from these outcomes, and thus whether we need to change policies so that we do not “crash into the rocks.” Even though the MEWG could not address the strengths and weaknesses of existing monitoring programs, it forwarded the following suggestions:

- Monitoring programs need to use standardized data collection processes and standardized metrics so that the same program can be applied across jurisdictions. Currently, it seems that this is not being achieved across different regions, ministries and departments. Further, monitoring needs to be more integrated.
- The Monitoring and Evaluation framework needs to be embedded within a legal framework that ensures accountability and sufficient resources to conduct effective monitoring, evaluation, and reporting.
- Current monitoring programs are not doing a good job of reporting or synthesizing the information across spatial scales and across indicators. Reporting and integration between monitoring programs needs to be improved.

What New Systems and Processes are Needed?

The MEWG proposed a monitoring, evaluation, and reporting framework capable of supporting full-cost accounting, that is, one in which economic, ecological, and social values are considered in decision-making. Such a monitoring system currently does not exist and needs to be created. Such a system would take the information produced by monitoring programs for each attribute and roll-up such information in ways that

³ The MEWG felt it important that there be a “reporting” component added to Monitoring and Evaluation.

⁴ The MEWG added the word “work” to Outcome 1).

would support decision-making at regional and provincial scales. The process by which such information would be used in decision-making also needs to be developed.

In terms of the actual monitoring and evaluation systems needed to support such a system, it seems likely for many of the attributes (e.g., quantities of natural resource production, economic value of natural resource production, maintenance of biodiversity) the required indicators are likely already being measured, and thus the programs for such attributes would simply have to ensure that the information is reported in a manner that facilitates full-cost accounting. For other attributes (e.g., disturbance, water quality and quantity of groundwater) entire new monitoring programs must be created. This point will become clear once existing monitoring programs are inventoried.

Developing the Monitoring, Evaluation and Reporting Framework

In developing its monitoring, evaluation and reporting framework, the MEWG concluded that the following criteria are the broad principles that the monitoring, evaluation, and reporting framework must satisfy to be effective within the context of the Land-use Framework:

- comprehensive — monitor social, economic and environmental outcomes;
- guide decision-making — results from monitoring must support decision-making;
- understandable — by government and the public;
- forward looking — reports on outcomes that are relevant now and in the future; and
- adaptive — framework can adapt to new knowledge and issues

What Should be Measured?

The MEWG used the Outcome-Oriented Indicator Framework (Monitoring and Evaluation Working Group Final Report reference Olsson 2006) to structure the monitoring, framework proposed. This framework structures monitoring, evaluation, and reporting around the:

Outcomes that one is trying to achieve; for the Land-use Framework this means:

- the three broad environmental, economic, and social values – and if the GoA accepts the Aboriginal perspective – cultural values should be added.

Attributes that define each outcome.

Condition indicators that capture the state of the underlying systems and define each attribute; for the Land-use Framework these measure:

- the state of the attributes associated with the social, economic, or environmental systems.

Influencer indicators that affect or bring about changes in the state of the condition indicators; for the Land-use Framework these measure:

- what is affecting the condition indicators, provide useful information to guide management actions or policy decisions.

Monitoring, Evaluation, and Reporting Framework

The MEWG developed a broad outline of the monitoring framework. The list of attributes is not exhaustive. Similarly, the indicators listed under each attribute are included primarily to clarify the meaning of the attribute label. The MEWG did not have sufficient time to identify and group the influencer indicators into “influencer attributes.” Instead, we listed potential influencers for each outcome at the end of each subsection. Future work needs to address this short-coming.

A member offered that within the LUF, Western Scientific Knowledge and Aboriginal Traditional Ecological Knowledge should be consistently integrated within its planning, managing, monitoring and assessment components.

Outcome: Well-Planned Places to Live, Work, and Play (Social Values)

The Group added the word “work” to this outcome so that it covered where we lived, recreate, and work. This outcome was interpreted as largely equivalent to “quality of life.” This is defined by five major attributes: safety, access to services, diversity of community and lifestyles, sustainability of land use, and social capital. Human capital is subsumed under the attribute ‘Diversity of community and lifestyles’.

Attribute: Safety

Possible Condition Indicators: crime rate (reported and perceived), traffic incidents (e.g., number, severity peak/non-peak), emergency service response times, workplace incidents, etc.

Attribute: Access to services

Possible condition indicators: emergency health care availability, health care generally (proximity, wait times, delivery options, user and provider costs, capacity to meet demand), education, recreation (e.g., area per capita), social services, business services, cultural and heritage services, etc.

Attribute: Diversity of community and lifestyles (Human capital)

Possible condition indicators: cost of living, housing options/distribution, diversity of employment options/distribution, recreational options/distribution, population (size, age, gender, cultural diversity, ethnicity), personal income index, educational attainment (formal, informal), size and diversity of skills in labor force, employment/unemployment rates, income distribution, debt rates.

Attribute: Sustainability of land use

Possible condition Indicators: density, effectiveness, and efficiency of commercial, industrial, and institutional development. Density of housing, infrastructure capacity and availability, wastewater management (septic fields, sewage disposal, etc), electricity supply/demand, water supply capacity, costs of delivering infrastructure, changes in existing land uses (e.g., conversion of agricultural lands), succession planning, security of food supply.

Attribute: Social capital

Possible condition indicators: democratic participation (voting rates, rates of membership in social organizations), substance abuse rates, rates of volunteerism, divorce/marriage/common law rates, suicide rates, family structure (# kids, # parents, household size), cultural/heritage options and distribution as it relates to land use, community stability.

Potential influencer indicators

Zoning and density of development, loss of educational opportunities (formal & informal), immigration/emigration, changes in population demographics, societal demands or values, cost of living.

Outcome: Sustainable Prosperity Supported by our Land and Natural Resources (Economic Values)

The MEWG interpreted the intent of this outcome as measuring the economic value of goods or services derived directly from the land. This represents a subset of the overall economic production of the province. The attributes listed below only capture the economic contribution of highly “land-based” industries.

Attribute: Quantities of natural resource production

Possible condition indicators: quantities of hydrocarbon extracted, crops produced, livestock produced, volume of timber harvested, tonnes of ore extracted, mega-watts of electricity generated, etc.

Attribute: Economic value of natural resource production

Possible condition indicators: economic value of each of the natural resources produced (timber, hydrocarbon, crops, etc.), economic value on a per-unit basis, economic value on a per-unit of land disturbed.

Attribute: Economic value of intact landscapes

Possible condition indicators: economic value derived from activities on intact landscapes such as trapping, outfitters, hunting, fishing, ecotourism, and recreation.

Potential influencer indicators

Availability of resources (e.g., labor, materials, natural resources such as water, financial capital), production costs (labor, equipment, materials, infrastructure, royalties, technology, energy), tax structure, land-use zoning, market accessibility.

Outcome: Healthy Environment and Ecosystems (Environmental Values)

Alberta currently lacks an integrated approach for monitoring the environmental health and status of ecosystem goods and services. This requires the systematic and coordinated monitoring of land, air, water, and biodiversity in addition to the cumulative disturbance of human activity on the land.

Attribute: Water quality and quantity

Possible quality condition indicators: total dissolved solids, heavy metal concentrations, pesticide concentrations, concentration of organic contaminants. Refer to Alberta Water Council or other similar bodies.

Possible quantity condition indicators: in-stream flow, surface water levels, groundwater use/recharge, seasonal variability. Refer to Alberta Water Council or other similar bodies.

Attribute: Air Quality

Possible condition indicators: levels of hydrogen sulfide, mercury, particulate levels, nitrous oxide, etc. Refer to Clean Air Strategy.

Attribute: Soil Quality

Possible condition indicators: erosion, compaction, salinity, carbon balance, capability for current and future land uses, contamination, amount of different soil types and potential for use, soil diseases (anthrax, club root), etc.

Attribute: Biodiversity

Possible indicators: amount and quality of habitats for native species, population viability and abundances for native species, ability of land to meet traditional use needs of Aboriginal Peoples. Where possible, refer to existing monitoring programs including the Alberta Biodiversity Monitoring Institute, Species at Risk, Foothills Model Forest, Water For Life, and provincial wildlife surveys.

Potential influencer indicators

Farming practices, water management practices, rates of pesticide use, rates of fertilizer use, land conversion, grazing practices, forestry practices, oil and gas industry practices, linear disturbance, cumulative amount of surface disturbance/habitat loss, recreational use intensity, other activities and movements that occur as part of economic and social activities, land-use zoning.

Linking Monitoring to Decision-making

The MEWG emphasized that while monitoring, evaluation, and reporting are intended to support decision-making, monitoring programs by themselves do not create the decision-making processes or systems that balance desired social, economic, and ecological outcomes. Such decision processes and decision support systems must be developed.

Reporting on Performance: Evaluation and Reporting

The MEWG concluded that thresholds and targets are essential elements in facilitating evaluation and reporting. These are defined as:

Threshold is a technically or socially-based standard that identifies the points at which an indicator changes to an acceptable or unacceptable condition. Thresholds provide a baseline against which performance can be measured.

Target refers to a goal statement about a desired endpoint to be achieved over a given time period.

Evaluation refers to the process of comparing the level of each indicator to these thresholds.

Reporting refers to the process of communicating performance levels across spatial (local, regional, provincial) and temporal scales to the general public and decision makers in a manner that they can understand. This implies rolling-up the performance measures for individual indicators into meaningful indices that measure performance for each attribute and outcome. Without such information roll-up, decision-makers and the general public will drown in a sea of seemingly useless information.

The Group envisioned that at least two threshold values would be set as follows to help inform when action should be taken, thus:

- when the value of the indicator is in the red region, it means that corrective actions need to be taken.
- the yellow region (appearing between the red and green regions) indicates that caution is required and that corrective actions may need to be taken if conditions do not improve.

- in the green area, the value is deemed acceptable and no corrective action needs to be taken.
- the boundaries between the green-yellow and yellow-red zones are determined by the thresholds set.

Facilitating Continuous Improvement

The MEWG emphasized the need for the monitoring, evaluation and reporting system to contribute to the process of continual improvement. This is illustrated in Section 1.1 in the Monitoring and Evaluation Working Group Final Report. Once the key attributes defining each outcome have been identified, condition indicators are chosen that will enable measurement of the state of each attribute. Influencer indicators are also selected to enable understanding of what things are altering the overall state of the condition indicators. Monitoring is then conducted and performance evaluated relative to the thresholds set for the indicators. After rolling up all of this information into meaningful and understandable indices, policy decisions and management actions can then be informed by this information. Continuous improvement in the outcomes is achieved by modifying decisions and policies in response to the levels of performance observed and measuring the changes in the performance outcomes that result from such modifications.

In addition to guiding policy adaptation, the framework is flexible enough to enable changes in the targets or thresholds set as a result of changing societal values or as our knowledge and understanding increases. The framework will enable us to determine the impacts of our decisions and whether we need to make changes. In this way, the framework is able to deliver on the goal of sustainability by enabling us to adapt our decisions so that current and future generations achieve the ecological, social, and economic outcomes desired.

Linking Monitoring to Full-cost Decision-making

Given that one of the objectives of the Land-use Framework is to facilitate the integration of environmental, social, and economic considerations in decision processes, the MEWG believes strongly that any monitoring framework developed for Alberta should contribute to the aim of full-cost accounting.

The Capital Model (on the previous page) takes a broad view of capital — defining it from both economic and non-economic perspectives focusing on produced capital, natural capital, human capital, and social capital.

The three major outcomes of the Land-Use Framework have been harmonized with this Capital Model as follows:

- social and human capital = Well-planned places to live, work, and play.
- produced capital = Sustainable prosperity supported by our land and natural resources.
- natural capital = Healthy environment and ecosystems.

The Capital Model distinguishes between what needs to be measured to support decision-making and the full-cost accounting method used to make such decisions. Such a separation is essential for developing effective monitoring, evaluation, and reporting programs as it separates the information needed to support decision making from the decision processes that are designed to achieve sustainability. Thus, the role of this working group is to ensure that the appropriate information is monitored and reported, while the role of the Planning and Decision-making Working Group is to determine the process by which such information will be balanced in decision-making.

Strategy for Implementing the Monitoring Evaluation & Reporting Framework

To provide a strategy for implementing this monitoring, evaluation, and reporting framework it is necessary first to identify what outcome this strategy is to deliver. The primary outcome desired is operational monitoring, evaluating, and reporting programs for the attributes identified above. A minority opinion that was offered stated that within the Land-use Framework, western scientific knowledge and traditional ecological knowledge should be consistently integrated within its planning, managing, monitoring and assessment components.

Strategy 1

Integrate the work of the four Land-use Framework Working Groups into a viable Land-Use Framework

Action 1.1

Achieving a workable Land-use Framework requires that the four groups integrate their findings. This could be accomplished by selecting members from each of the four working groups to form a new working group to:

- identify linkages;
- resolve gaps and inconsistencies; and
- present the emerging, integrated framework to their respective working groups.

Timeline

This strategy needs to be accomplished within a month of presenting the findings on 9 October 2007.

Strategy 2

Convene separate groups of knowledgeable and experienced experts to design, test, and implement monitoring programs for the attributes identified

Action 2.1

For each attribute, a group of individuals who are both knowledgeable and extremely experienced with respect to the subject areas covered by the attribute needs to be convened to take on this work. At a high level, the following things need to be achieved by such groups:

- determine the steps required to achieve effective programs for the particular attribute and the costs of program development;
- determine and confirm indicators for each attribute;
- define the level of monitoring accuracy the program should achieve, and why;
- identify existing monitoring programs. (Are programs accountable and transparent?);
- build and test programs;
- determine how the monitoring information obtained from the suite of indicators will be rolled-up into aggregate indices and how changes in the underlying indicators will affect

the overall behavior of the index; and

- determine the reporting requirements for each program.

Action 2.2

The MEWG believes that greater resources need to be devoted to attributes where monitoring is the weakest

Timeline

The MEWG believes that this entire strategy must be completed within the next two years, while the inventory of existing monitoring programs needs to be completed in the next year.

Strategy 3

Establish a governance structure for the monitoring, evaluation, and reporting programs

Governance relates to the question of how monitoring, evaluation, and reporting is to be accomplished and covers a range of issues. The main conclusion reached by the MEWG is that the Alberta government must ultimately be responsible for the development and governance of the monitoring, evaluation, and reporting programs. That is to say, the provincial government must take the lead role. This does not preclude a role for the regions and industry in the creation and implementation of programs.

Action 3.1

The MEWG concluded that the governance and funding structure must:

- enable ongoing monitoring over the long term;
- be adaptive to emerging needs and increases in understanding; and
- be transparent so the trust of all stakeholders is maintained even as they are impacted by the evaluation results.

Action 3.2

More specifically, the MEWG advises that the:

- Provincial government responsibilities should include:
 - overseeing programs;
 - ensuring consistency of what is measured and reported; and
 - using its enforcement authority.

- Alberta government must take the lead role in developing and funding the required monitoring programs. Programs should be “arms-length” from the Government of Alberta so monitoring persists over the long-term; and
- a group of knowledgeable and experienced individuals should be formed to address the critical issue of how monitoring and reporting programs should be governed.

Timeline

The MEWG believes that this strategy should be completed in the next two years.

Strategy 4

Determine how information from the separate monitoring programs will be aggregated and reported to inform decision processes

The monitoring, evaluation, and reporting framework presented in this report is designed to support the process of decision-making. It is critical that separate program information be aggregated to enable decision-making.

Action 4.1

The provincial government has full responsibility for monitoring, evaluation, and reporting, as well as full responsibility for housing this information. This will require further significant investment in integrated information systems. The MEWG proposes a model of separate programs, each maintaining their respective databases accessible through a single central portal to facilitate seamless delivery of information to multiple users. This instrument will help to facilitate full-cost accounting in the decision-making process.

Action 4.2

The MEWG suggests the creation of a working group with expertise in data delivery to consult on the development of a system that ensures:

- easy access to information; and
- an interface that minimizes chances for misinterpreting results.

Timeline

The MEWG believes that this strategy should be completed within the next three years.