

A Review of Alberta Environment's Proposed Regulatory Framework for Managing Environmental Cumulative Effects

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1. Basis for Evaluation

The Pembina Institute's review of Alberta Environment's policy paper, *Towards Environmental Sustainability: Proposed Regulatory Framework for Managing Environmental Cumulative Effects*, is premised upon three analytical starting points:

1. A diagnosis of the problems underlying the Alberta government's current inability to effectively manage cumulative environmental effects;
2. A description of the key elements of cumulative environmental effect management; and,
3. Experience with other attempts at cumulative effects management and integrated resource management in Alberta.

1.1 Diagnosis of the Alberta Government's Current Inability to Manage Cumulative Effects

The Pembina Institute's analysis of this policy paper reflects the following diagnosis of the key deficiencies that are resulting in Alberta's cumulative environmental effects problem:

- Alberta currently has a policy and planning vacuum in relation to cumulative environmental effects.
- Overall land and resource policy is focused on sectoral mandates, usually directed to promoting growth without taking into account the consequences of increasing all types of land uses (oil and gas, oil sands, forestry, urban development etc.) on a shared and finite land base.
- There is currently no effective and integrated regional planning process in Alberta.

As a result, the future of Alberta's landscapes, watersheds and airsheds is largely determined by incremental government decisions on individual projects and activities that are made within departmental "silos." Decision makers within these silos tend to pursue narrow mandates that focus on specific environmental media (e.g., air, water, land) and/or specific resources and activities (e.g., oil and gas, forestry, agriculture, wildlife, recreation). This incrementalism and fragmentation preclude the holistic management of cumulative impacts that is needed when multiple activities produce combined effects on land-use and resource values. The Alberta government's inability to set and achieve landscape-scale objectives means that human activities are transforming Alberta's environment in unplanned, unintended and often undesirable ways.

1.2 Key Elements of Cumulative Effects Management

Cumulative effects management requires a shift from reactive, project-specific decision making to an integrated and planning-based approach to setting and achieving landscape-scale objectives over spatial and temporal scales that are meaningful in terms of the full range of land-use values. Cumulative effects management has five key components:

1. Adoption of a proactive and planning-based approach, the core of which is integrated regional planning that:
 - a. Provides decision makers (e.g., regulators) with landscape-scale objectives and regulatory tools;

- b. Generates baseline (i.e. pre-development; in areas with existing development, this can be achieved through backcasting) environmental data and scenario modeling of cumulative effects to support planning;
 - c. Provides a forum for defining regional land-use objectives, including thresholds and limits; and
 - d. Addresses fragmentation and incrementalism in decision making by ensuring that the full range of activities on the landscape are regulated in a manner that is consistent with a single set of principles, objectives and limits.
2. Leadership by the provincial government in cumulative effects management – recognizing that the government has ultimate responsibility for the stewardship of Alberta’s environment and that government must be both responsible and accountable for setting objectives, establishing priorities, making trade-offs among different land and resource uses, and regulating the full suite of land uses within the province (except land uses within exclusive federal jurisdiction).
3. The establishment of objectives, thresholds and limits for land and resource use is essential for cumulative effects management in Alberta. These should be guided by science-based concepts such as “carrying capacity” and “limits of acceptable change”, as well as recognizing that there are absolute limits on the availability for some resources (e.g., surface water). The process of setting objectives and limits involves three stages:
 - a. Identifying objectives or thresholds for environmental quality based on scientific indicators of health or integrity of the biological communities;
 - b. Determining the socially acceptable trade-offs, if any, between environmental quality and other objectives (e.g., economic or social objectives that have unavoidable and/or inmitigable environmental impacts); and
 - c. Translating these objectives and indicators (biotic or landscape characteristics) into specific limits for land and resource use – i.e., limits on the human land uses that are subject to management and regulation.
4. Establish a regional focus for cumulative effects management through integrated regional planning, recognizing that this landscape-scale planning and management occurs within a broader framework of legislation and policy and that it requires implementation through smaller-scale planning (e.g., sub-regional, resource-specific, municipal) and specific land-use decisions (e.g., land and resource allocation, individual project review and regulation).
5. Establish direct linkages between the setting of landscape-scale objectives through regional planning and the decisions on land and resource use that are needed to achieve those objectives. The foundation for these linkages is the legal and institutional framework for a decision-making hierarchy, including binding legal effect of planning on subsequent decisions.

1.3 Experience with Other Attempts at Cumulative Effects Management and Integrated Resource Management in Alberta

The Pembina Institute's evaluation of the proposed regulatory framework for cumulative effects management also reflects the disappointing record of previous initiatives of the Government of Alberta to address cumulative effects and improve integrated decision making in land and resource management. These initiatives include the Integrated Resource Management (IRM) program that Alberta Environment launched in 1999 and the combined Regional Sustainable Development Strategy (RSDS) for the Athabasca Oil Sands and its implementation in conjunction with the Cumulative Environmental Management Association (CEMA).

This review will not provide a detailed analysis of the failure of these initiatives. However, the key factors underlying these failures include:

- These initiatives did not penetrate below the level of broad policy statements to change the departmental mandates and the fragmented and incremental decision-making processes that are driving cumulative effects. Without structural changes to the legal, institutional and policy framework for decision-making, they could not manage cumulative effects.
- They suffered from a lack of government-wide commitment to meaningful change. In particular, Alberta Environment was unable to translate its mandate to pursue IRM into a management framework that had support from, and was applied to, other departments charged with resource development mandates — notably the Department of Energy. Similarly, the work of CEMA has been undermined by concurrent approval of new oil sands projects, a lack of effective government leadership, and the fact that Alberta Energy is not a participating member. Furthermore, the options for cumulative effects management have been significantly reduced by the Department of Energy's approach to promoting rapid development of oil sands through energy policy (including a preferential royalty regime), mineral lease sales, and project approvals (by the EUB).
- These initiatives had neither the power nor the incentives necessary to make meaningful decisions about land-use priorities, trade-offs among land and resource uses, and limits on impacts and activities.

If the proposed regulatory framework has the same deficiencies as previous processes, it is unlikely to be any more successful than they were.

2. Positive Features of the Proposed Regulatory Framework

The proposed regulatory framework has several positive features:

- Recognition that “there are environmental limits and pushing those limits can result in significant impacts to our environment, our way of life, and our quality of life” (p. 4).
- Defining cumulative effects as “changes to the environment caused by all *past*, present, and reasonably foreseeable future human activities (*emphasis added*)” (p.4). This definition would require adjusting the baseline used for cumulative effects assessment from the current “existing and approved development” to one of pre-development, which will lead to a much more ecologically meaningful assessment.
- Recognition, albeit in excessively qualified language, that Alberta is approaching or has reached important environmental thresholds in certain areas (for example, water availability in the South Saskatchewan River Basin) (p. 5).
- Recognition that the current management framework may not enable Albertans to achieve an appropriate balance of environmental, social, human health and economic values — again, the language is excessively qualified (p.5).
- Recognition that a failure to manage cumulative effects has economic as well as environmental risks — including public withdrawal of companies’ “social licence to operate” and increasing cost, delays and conflict as cumulative effects issues are repeatedly raised in regulatory processes for individual projects and activities. (p. 5).
- Recognition of the need to set environmental objectives for given landscapes and then make the trade-offs needed to achieve those objectives through conscious and explicit choices (p. 6).
- Recognition that this results-based management constitutes a significant change from our current regulatory system and that our current system “is limited in its ability to address the cumulative effects of a number of individually regulated projects and unregulated activities, or to consider impacts across air, land, water and biodiversity in an integrated manner” (p. 6).
- Recognition that it is both costly and ultimately ineffective to try to manage cumulative effects primarily through project-specific cumulative effects assessments (p. 6).
- Recognition of the need for a legislative basis for a “an environmental management system that sets desired objectives for environmental quality for defined parts of the province and ensures human activity is managed to achieve those objectives” (p. 10).
- Recognition of the need for clear accountability within government for cumulative effects management (p. 10).

- Recognition of the need for “quantitative, measurable levels of ambient environmental quality (i.e., what we want the state of air, land, water and biodiversity to be) for planning areas or parts thereof” (p. 12).

These features of the proposed framework highlight some of the key elements needed for cumulative effects management. However, more is required to successfully implement an effective regulatory framework to achieve this objective.

3. Principal Deficiencies in the Proposed Regulatory Framework

“We can't solve problems by using the same kind of thinking we used when we created them.” - Albert Einstein

The proposed framework is weak in five key areas: (1) translation of environmental objectives and thresholds into regulatory limits; (2) governance and accountability; (3) planning process; and (4) government-wide commitment and integration with other initiatives; (5) learning from past experience.

3.1 Translation of Environmental Objectives and Thresholds into Regulatory Limits

The framework refers to quantitative objectives for environmental quality (pp. 10, 12) but is not explicit enough about the need to take the next step and establish quantitative limits on human activities. Air, land, water, biodiversity and their attributes are things that Albertans value, but what the government manages (i.e., regulates) are the multitude of human activities that cumulatively affect these elements of the environment.

In practice, managing cumulative effects requires specific objectives and limits that can be related directly to human activities affecting land and resources – e.g., limits on water withdrawals, limits on air emissions, limits on land disturbance (such as limits on total disturbance and linear disturbance density).

This approach is reflected in the regional air pollution caps proposed in the industrial heartlands pilot project, but it should be made more explicit in the framework as a whole.

3.2 Governance and Accountability

The governance structure for the framework is disappointingly weak and vague in important areas. The term “governance” is used here to refer to the processes and accountability mechanisms for making and enforcing the decisions that will be needed to set and achieve landscape-scale objectives.

As noted earlier in this review, cumulative effects management can only be achieved in Alberta through changes to the legal, institutional and policy structures used for decision making. Broad commitments to improved cooperation, coordination and alignment will not be sufficient if the underlying departmental mandates, objectives and incentive structures are inconsistent with an integrated approach to cumulative effects management.

The proposed regulatory framework does not provide sufficient certainty that the objectives and strategies for cumulative effects management will be implemented through structural changes to decision making and will take the form of binding constraints on decision makers. For example, it states that:

“Adopted objectives and strategies would form government *policy* that would have to be *considered* when making decisions that affect the environment by departments across the provincial government. Those decisions would be *established* in regulations. ... Regulations defining decisions that would have to *consider* objectives and strategies *could* also apply to municipalities (*emphasis added*)” (p.14)

The *emphasized* words suggest that objectives and strategies are policy, and therefore may not be legally binding, since it is unclear what is meant by “established in regulations.” This reading is supported by the statements that these objectives and strategies would have to be “considered” by decision makers, implying that they are not binding and that they could be considered and then disregarded. This uncertainty should be removed by stating clearly that the objectives and strategies for managing cumulative effects will have legal force as legally binding planning decisions.

The policy paper also suggests that the details of the framework for environmental sustainability objectives will be set out in a policy statement, published by the responsible Minister. The language describing this statement suggests that its contents will take the form of “guidance” that allows virtually unfettered discretion regarding key aspects of the framework. For example, it would include (p. 17):

- “criteria that the Minister *may* consider in establishing Planning Areas”
- “*Guidance* to those developing Objectives and Strategies on their *form* and the *process* for developing them”
- “*Guidance* to those decision-makers required to *consider* Objectives and Strategies on the appropriate interpretation of those Objectives”
- “*Appropriate* forms of public and stakeholder involvement” (*emphasis added*).

These important details regarding the framework should be set out in legislation creating clear requirements and obligations, not in policy statements that merely provide “guidance” and leave key aspects of the design and implementation of the framework to the discretion of Ministers and other decision makers.

The regulatory framework for cumulative effects must establish a new way of making decisions that will necessarily differ from the “business as usual” approach. There needs to be a system for setting objectives that will be binding on other decision-makers. This change will necessarily require changes to current departmental mandates – especially mandates that promote the growth of particular sectors and activities without regard to cumulative effects (e.g., mineral rights leasing and project approval by the Department of Energy). For that reason, the following statement of roles is too weak: “All departments in the Government of Alberta work together to make the system work and to achieve agreed upon objectives. Departmental mandates are respected” (p. 10). The regulatory framework should require departments to adjust their mandates and decision making to conform to overarching objectives and limits for cumulative effects that are set through integrated regional planning.

Accountability is also important for cumulative effects management. The framework emphasizes government accountability at some points (p. 10), but it is not clear who within government will ultimately be accountable. It also blurs this concept when it talks about shared stewardship: “Collaborative development of objectives and implementation will promote a culture of shared stewardship and build commitment for the shared responsibility to achieve objectives.” While responsibility for taking action to achieve objectives may be shared, ultimate responsibility for

seeing that those objectives are achieved is not shared – it rests squarely with government as the ultimate steward of Alberta’s land and resources (this applies to both management and monitoring of cumulative environmental effects).

The new legislation should provide the governance structure for cumulative effects management, identify specifically who is accountable, and include effective accountability mechanisms. The policy paper refers to legislation to “enable” the framework, implying that key elements will be developed through subsequent regulations or policy. This approach is not adequate. The legislation should clearly establish the policy, planning and regulatory framework for cumulative effects management, including the principal elements of the planning process and the decision-making hierarchy that will ensure that the objectives and strategies established through that process are binding on subsequent decisions about land and resource use.

3.3 Planning Process

The regulatory framework clearly anticipates a planning process to define regional objectives and establish implementation strategies. However, it is very vague about the characteristics of that process and how the integrated regional planning needed for cumulative effects management will fit with other planning processes.

The policy paper states that: “The actual process used to develop the objectives and strategies will need to integrate and accommodate other planning processes being developed under other government initiatives, such as the Land-use Framework. The process will need to be flexible, to allow for different scales and circumstances and to allow for evolution and improvement over time. At the same time, there needs to be some consistency on the fundamentals and expectations” (p. 14).

These statements are too vague. The regulatory framework should establish a single, integrated regional planning process and provide a clear roadmap for integrating the regional planning components of the Land-use Framework, Water for Life and other initiatives into that process. It should also be very explicit about the “fundamentals and expectations” that will guide that planning process – not leaving these important matters to be defined at some time in the future.

The section on “Options for Developing Objectives and Strategies” is also far too vague. The option of using “multi-stakeholder partnerships of stakeholders and governments” needs to be much more clearly defined, given the failure of the Cumulative Environmental Management Association (CEMA) to develop a framework for managing the cumulative effects of oil sands development. The policy paper uses language about voluntary partnerships, inclusive processes, multistakeholder organizations and even regulatory “backstop” that are reminiscent of CEMA – but it does not explain how it will avoid repeating the failure of CEMA if these approaches are used.

The discussion of “Multi-stakeholder Organizations” also refers to WPACs as a potential model, again without considering how the significant deficiencies regarding the governance structure and planning role of these bodies would be addressed. See further discussion in section 3.5.

The other model suggested is “Government-appointed Advisory Committees”, but here again there is very little detail about the governance structure or planning process to be used. The policy paper refers to the use of “well established processes for consultation and collaboration among Government of Alberta departments, other governments and stakeholders” (p. 15). However, past experience with a multitude of initiatives involving these processes suggests that

they are neither well established nor effective, particularly in addressing the type of contentious issues raised by cumulative effects management (e.g., setting landscape-scale objectives, establishing priorities, making trade-offs among land uses, setting and enforcing limits on activities and impacts, constraining the pursuit of departmental growth mandates, etc.). Examples of failed or unsatisfactory processes involving the government-appointed advisory committee model include the Alberta Forest Conservation Strategy, Special Places 2000, the Northern East Slopes Strategy, and most recently the Oil Sands Multistakeholder Committee. Stakeholders will want much clearer assurance that the proposed process will be designed and implemented to achieve meaningful results before agreeing to this model for the cumulative effects regulatory framework.

The policy paper clearly anticipates a regional planning process at the heart of cumulative effects management – which is entirely consistent with the approach outlined above in Section 1. It even refers explicitly to “planning areas” (p. 11). However, it stops short of making a commitment to the integrated and legislated regional planning process that is essential to make this framework work. Furthermore, the policy paper does not provide a detailed description of how that planning process will operate to set objectives and limits and to create the framework for developing and implementing “Environmental Sustainability Strategies”. Without these details, there can be no confidence that the proposed framework will be effective.

3.4 Government-wide Commitment and Integration with Other Initiatives

The policy paper refers periodically to the need for an integrated approach to cumulative effects management. For example, it states that:

“We need a truly integrated, innovative approach that transcends environmental ‘compartments’ of air, land, water and biodiversity and some of the central challenges, such as climate change, water scarcity and endangered species. ... Addressing the foregoing challenges will require that all aspects of cumulative effects management be undertaken under the umbrella of this legislation. New direction setting and associated actions across sectors and environmental media must be united under one environmental sustainability management system. The legislation will establish legal requirements and an ongoing institutional basis for cumulative effects management in the province” (p. 19).

The policy paper then refers Water for Life, the Land-use Framework and the Clean Air Strategic Alliance (which is currently updating Alberta’s Clean Air Strategy). How the new cumulative effects legislation will relate to these other initiatives is not described, despite the fact that managing cumulative effects is a central issue for all of them. The introduction to the policy paper also says simply that it “should be considered a proposal that can contribute to the progress of those other initiatives” (p. 4).

As noted above, there are also periodic references to integration with other initiatives through a common planning process (or coordination among separate processes). For example, the policy paper states that “A common planning base would support integrated planning for air, land, water and biodiversity” (p. 11).

These passages suggest that the cumulative effects regulatory framework has ambitions to be an overarching legislative framework that would necessarily have profound implications for decisions about environmental and resource management throughout government.

However, the means for achieving this objective are not described and the initiative is, for the moment, being developed by Alberta Environment pursuant to the Minister of the Environment's Mandate Letter. In order to be effective, the commitment to legislation must be endorsed by the Premier and Cabinet as a centre-piece of a new way of managing land and resources. It must be clear that the departments with mandates for land and resource development, including the Department of Energy, have endorsed and agreed to be subject to this overarching legislative framework.

Experience with Alberta Environment's IRM initiative shows clearly that integrated decision making and cumulative effects management cannot be achieved by Alberta Environment alone given the established power structure and departmental mandates within the Government of Alberta. Similarly, implementation of Alberta's Clean Air Strategy was deficient in areas that went beyond the jurisdiction of Alberta Environment. There is also an unfortunate history of other departments with resource development mandates blocking environmental and stewardship initiatives that Alberta Environment has championed. Unless the cumulative effects regulatory framework is elevated from an item in the Minister of Environment's mandate letter to a top government priority, it is unlikely to succeed.

The relationship between the regulatory framework for cumulative effects management and the other strategic initiatives (e.g., Land-use Framework, Water for Life, Clean Air Strategy) needs to be clarified and the Premier and Cabinet need to firmly endorse an integrated and planning-based framework for cumulative effects management as a government-wide commitment.

3.5 Learning from Past Experience in Cumulative Effects Management

Of significant concern is the extent to which the proposed regulatory framework is modeled on the 1999 *Regional Sustainable Development Strategy (RSDS) for the Athabasca Oil Sands Area*, a policy initiative that has been ineffectual at managing cumulative environmental effects from oil sands development.

The overarching model described in this policy paper replicates the adaptive management approach espoused in the RSDS (see figures below).

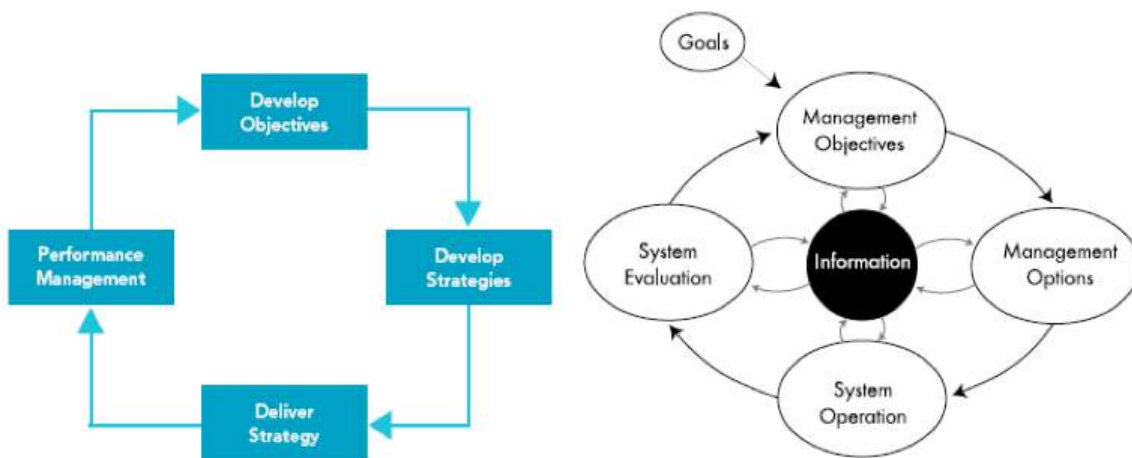


Figure on left, from p.8 of *Towards Environmental Sustainability*; figure on right from p.15 of *RSDS for the Athabasca Oil Sands Area*.

While this model is theoretically sound, it has enjoyed only limited success in the oil sands region (e.g. acid deposition) and has not completed a full cycle (from setting objectives through system evaluation and refinement), nor has it been successfully employed on the most contentious cumulative effects issues. Furthermore, the establishment of management objectives and options has been far more time consuming than was anticipated in the original RSDS timelines. As a result, it is critical that the issues of timeliness and efficiency be considered and that “interim measures” be implemented to ensure environmental protection while the system is being implemented. These might take the form of temporarily ceasing to lease mineral rights and issue project/activity approvals in a given area, or implementing precautionary interim environmental limits using the best science currently available.

The elements of the proposed system framework – clear environmental objectives, place-specific objectives, adaptive, shared stewardship – are also very reminiscent of the RSDS, which included principles regarding environmental protection (objectives), effective resource management, ongoing learning to inform management (adaptive), and shared stewardship. Again, while these elements/principles are admirable their effective implementation is fraught with challenges that the government has yet to overcome.

The new oil sands environmental management division of Alberta Environment is currently undertaking a review of the RSDS and CEMA. The results of this review will be extremely useful and should inform further development of this system framework, particularly the section on multistakeholder organizations (p.15). Experience in the oil sands region has shown that it is incredibly difficult for Alberta government staff to be active participants in multistakeholder groups while also serving in an advisory or resource capacity. Furthermore, it is critical that the right departments be represented on these committees. The experience over the past 8 years in the oil sands region should not be considered anomalous, but rather indicative of the types of issues that will be experienced throughout Alberta, particularly in those areas subject to rapid growth (e.g. Upgrader Alley, critical sour gas wells in central Alberta, the southern east slopes, coalbed methane development etc.).

4. Other Comments

This review does not comment specifically on the proposed “pilots”, including the industrial heartland pilot project. However, it is noted that the IRM Initiative, launched by Alberta Environment in 1999, also followed the model of broad statements of policy and regional pilot projects. These pilot projects were largely unsuccessful, lacking the legal and policy foundation to effect meaningful change in land and resource management. There may well be value in regional pilot projects to test variations of the model and to adapt it to different regional circumstances, but these should be based on a solid legal and policy foundation.

5. Conclusions

The Pembina Institute is supportive of Alberta Environment's recognition that a significant change in the Government of Alberta's approach to cumulative environmental effects is required.

The policy paper correctly identifies the consequences of unmanaged cumulative effects, the need for limits, deficiencies in current decision-making processes, and the need for greater inter-departmental integration. However, the paper is sorely lacking in detail on both the governance and implementation of this proposed strategy and legislative framework. These are the key ingredients that will determine whether its objectives will be met.

A key weakness in the proposed regulatory framework is the lack of accountability that arises from the extensive reliance upon discretion (i.e. the department/Minister/Cabinet should "consider," "enable," "encourage"), rather than clearly spelling out responsibilities and obligations. Furthermore, the proposed framework does not provide an effective roadmap for ensuring integration of various strategies (e.g. Water for Life and the Land-use Framework) at the level of comprehensive regional planning or for breaking down the departmental "silos" that currently prevent intra-governmental cooperation and coordination.

We appreciate Alberta Environment's initial work on this topic and look forward to contributing further to the development of an effective regulatory framework for managing cumulative effects.