

**Canadian Institute of Resources Law
Institut canadien du droit des ressources**

**Legal and Institutional Responses to
Conflicts Involving the
Oil and Gas and Forestry Sectors**

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Executive Summary

This paper examines the inter-sectoral conflicts and ecological impacts resulting from the development of oil and gas and forestry resources in Alberta's boreal forest region and evaluates the legal regime under which the two resource sectors operate. It argues that current policies, legislation and regulations are inadequate to meet the challenge of intensifying resource use and increasing ecological impacts. Structural reforms to the legal and policy regime and clear political leadership are required in order to achieve the effective integration and sustainable development of oil and gas and forest resources. Integration of development activities is seen as a way to minimize the collective industrial footprint on the landscape and protect the health of ecosystems, as well as to reduce operational and planning costs and resolve inter-sectoral disputes.

The paper begins with a brief overview of oil and gas and forestry developments in northern Alberta and identifies the implications of the intensification of these developments over the past 20 years. The cumulative ecological impacts of both resource sectors are severe and compromise the long-term maintenance of biological diversity and the ecological integrity of the boreal forest region. In addition, conflicts arise between the oil and gas and the forest sector sharing the same land-base. The issues giving rise to inter-sectoral conflicts include: 1) the loss of standing timber; 2) the quantum of compensation for timber damage; 3) the loss of productive forest land-base; 4) access management; and 5) land reclamation. A larger and potentially more serious issue is the capability of the forest industry to move towards ecosystem-based forest management in the face of multiple and unforeseen oil and gas developments on the productive forest land base.

A review of the legal regime under which the two resources are allocated and managed follows. The analysis focuses on the level of integration achieved at each stage of development: 1) land-use planning, 2) rights disposition; and 3) project review and regulatory approvals. The lack of a comprehensive planning framework and of reliable planning tools available to decision-makers is noted. The integrated resource plans (IRPs) developed in the 1970s and 1980s are often outdated and are lacking for the majority of the boreal forest region, and the more recent integrated resource management (IRM) initiative has not yet produced concrete results to guide the decision-making process. At the rights disposition stage, the analysis underlines the incremental, fragmented and highly discretionary nature of the allocation process and the lack of statutory integrative mechanisms. For both mineral and forest resources, the allocation of surface and subsurface rights does not factor in the cumulative impacts of multiple developments on the same land base. A higher level of integration is achieved in the review and regulatory approval of individual projects, at least within each resource sector. However, there exist few legal and regulatory mechanisms for interagency coordination and for addressing multiple use and cumulative impacts issues. Rather, land and resource managers rely upon administrative mechanisms such as internal referrals and procedural coordination of approval processes to achieve some level of integration.

The paper then turns to an examination of a range of options designed to promote integration of resource developments and to address inter-sectoral conflicts as well as the ecological challenges of intensifying land and resource use. The discussion is based on the results of a workshop convened by CIRL in the Fall of 2001 to assess current industry and government initiatives promoting integration and to determine whether structural changes in the policy, legal and

regulatory regime are required. The initiatives reviewed represent a progression from voluntary, industry-led efforts to increasing levels of government and multi-stakeholder involvement. It is noted that these integrative efforts are achieving some important gains, notably a reduction in inter-sectoral conflicts and in the ecological footprint of developments. Their major limitation is their inability to properly address cumulative impacts issues, absent a comprehensive planning framework and a clear government commitment to implement ecosystem-based resource management. The discussion then focuses on options for reform to the legal and policy framework for oil and gas and forest development. The benefits of minor adjustments in regulations and regulatory processes are noted. However, it is argued that significant structural reforms of existing statutes and policies are needed to establish an integrated resource management regime that is ecologically grounded. Land and resource legislation and policies reflecting a commitment to principles of sustainable development and integration would provide the foundation upon which a truly integrated resource-decision system can rest. Short of these fundamental changes, the development of the province's mineral and forest resources will continue to be undermined by increasing inter-sectoral conflicts and negative ecological impacts.

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1.0 Introduction

Conventional oil and gas and oil sands resources are the backbone of Alberta's economy. In the boreal forest region, which encompasses 43% of the province and covers most of the province north of Edmonton, exploration and development of these resources have been ongoing since the 1960s and they have accelerated since the 1980s. Under a multiple-use policy, government encourages multiple resource developments on the same land base. Over the past 15 years, almost all productive forest lands in the boreal region have been allocated to the forest industry for timber production.

The cumulative impacts of oil and gas and forestry developments on the boreal forest are considerable and create concerns for the ecological integrity of forest ecosystems. Further, the intensity of development is such that resource industries feel increasingly constrained in their respective activities and the potential for inter-sectoral conflicts increases.

Integrated land and resource management has been recognized for many years as a strategy to address the ecological, social and economic costs of multiple incremental resource developments.¹ Both the provincial government and industry associations acknowledge the need for an integrated approach to land and resource management and have affirmed their commitment to move towards that goal.² Integration of development activities is seen as a way to minimize the collective industrial footprint on the landscape and protect the health of ecosystems, as well as to reduce operational and planning costs and to resolve inter-sectoral disputes.

The oil and gas and forest industries operate under separate and very different legislative and regulatory regimes. The question is whether or not these regimes adequately address the issue of integration of resource developments. The purpose of this paper is to review the legal and policy framework of oil and gas and forest management in order to determine the way in which this regime enhances, or on the contrary prevents, the integration and coordination of resource developments and to identify some of the root causes of the conflicts between the two sectors.

The paper begins with a brief overview of resource developments in northern Alberta and identifies key issues with respect to ecological impacts and inter-sectoral conflicts. A review of the legal regime under which the two resources are allocated and developed follows: the analysis focuses on the level of integration achieved and the capability of that regime to respond to the ecological and regulatory challenges of intensifying developments. The paper then discusses a range of options designed to promote integration between the two resource sectors and to address inter-sectoral conflicts as well as ecological challenges of resource developments.

¹ See for example Reg Lang, ed., *Integrated Approaches to Resource Planning and Management*, The Banff Centre for Continuing Education (Calgary: University of Calgary Press, 1986), which discusses concepts and methods of Integrated Resource Management, as well as specific applications, including Alberta's Eastern Slopes Policy and IRM initiative.

² *Alberta's Commitment to Sustainable Resource and Environmental Management*, March 1999; Peter Miller, *Integrated Landscape Management – Alberta Chamber of Resources*, March 2000, The Canadian Bar Association, National Environmental Law Conference.

2.0 Oil and Gas and Forestry Developments in Northern Alberta: Issues and Concerns

2.1 The Intensification of Resource Developments

The Western Canadian Sedimentary Basin, which occupies 545,000 km² of forest in Alberta and northeastern BC, is Canada's major oil and gas producing region.³ In Alberta, the boreal forest natural region overlies 80 named oilfields, 306 natural gas fields and four oil sands deposits.⁴ It has been calculated that only 12.7% of the total area of Alberta does **not** contain oil and gas potential.⁵ Since the discovery of oil at Leduc in 1947, energy exploration and development have grown steadily. By 1977, up to 378,200 km of seismic lines had been cut through the Green Area, amounting to an overall land disturbance of 234,700 hectares, compared to 255,692 hectares cut in timber harvesting operations from 1956 to 1976.⁶ Between 1979 and 1995, an additional 924,016 km of seismic lines were approved in the Green Area.⁷ The number of well sites that have been drilled in the province is considerable. As of 1998, of the 254,566 well sites drilled in Alberta, 88,588 (34.8%) were located in the boreal forest. Assuming an average lease size of one hectare per well site, it is estimated that an area of approximately 885,888 km² (88,588 ha) has been cleared for well sites in the boreal forest region.⁸ In addition, an extensive network of access road, estimated at 141,740 km in 1998, has been built in conjunction with exploration and development activities.⁹ Transportation of oil and gas production also necessitates the construction of pipelines; the length of oil and gas collection pipelines in the boreal forest area was estimated at 73,102 km in 1996.¹⁰

A study completed recently for the northwestern region of the boreal forest estimates that activity by the energy sector is likely to last a minimum of 40-70 years for conventional oil and gas

³ Wynet Smith & Peter Lee (managing editors), *Canada's Forests at a Crossroads: An Assessment in the Year 2000*, A Global Forest Watch Canada Report (Washington, DC: World Resources Institute, 2000) at 30.

⁴ Alberta Environmental Protection, *The Boreal Forest Natural Region of Alberta*, Report of the Special Places 2000 Provincial Coordinating Committee (Edmonton: Alberta Environmental Protection, 1998) at 75; Petroleum Communication Foundation, *Exploring Canada's Oil and Gas Industry* (Calgary: Petroleum Communication Foundation, 1999).

⁵ Richard Schneider, unpublished data based on ERCB. 1992. Report 92-A: Ultimate Potential and Supply of Natural Gas in Alberta.

⁶ Environment Council of Alberta, *The Environmental Effects of Forestry Operations in Alberta – Report and Recommendations* (Edmonton: Environment Council of Alberta, February 1979) at 28.

⁷ *Supra* note 4 at 75.

⁸ *Ibid.*

⁹ *Supra* note 4 at 80.

¹⁰ *Ibid.*

deposits and 200-300 years for oil sands exploration and extraction.¹¹ In Alberta, conventional oil reserves peaked in the late 1960s, and gas reserves peaked in the early 1980s. As supplies are progressively exhausted, pressure to find and exploit remaining reserves intensifies. It is anticipated that levels of oil and gas extraction will increase for another 20-30 years before activity begins to wind down.¹² Alberta's Energy and Utilities Board (EUB) recently released a report on energy reserves and supply and the demand outlook to 2010, in which a 71% increase in the production from conventional oil, oil sands sources and pentanes is anticipated by 2010.¹³ The same report states that the year 2000 was a record natural gas drilling year, with a 37% increase in gas wells drilled.

By contrast, until the late 1980s the forest products industry experienced much slower growth. Timber resources were considered economically inaccessible and the technology to process trembling aspen¹⁴ into pulp had not yet been developed. In Alberta, the first softwood pulp mill was built at Hinton in 1954. It was not until 1986 that Alberta embarked on a policy of encouraging massive expansion of the province's pulp and paper industry in the boreal forest region. In the late 1980s, the government committed over \$1.35 billion in loan guarantees, debentures and infrastructure development to forestry projects and between 1986 and 1994, nearly four billion dollars in capital investments were made to the pulp and paper industry.¹⁵ In 1971, only 2% of the provincial Annual Allowable Cut (AAC) for hardwood species (aspen and poplar) was allocated to forest companies. This increased to 73% in 1994,¹⁶ and by 2000, more than 98% of the AAC for hardwoods was allocated.¹⁷

Most of the productive forest lands are currently managed by large integrated forest companies under long-term Forest Management Agreements (FMAs). As of 2000, FMAs covered an estimated area of over 20 million hectares, out of a total 22.5 million hectares of productive

¹¹ J. Brad Stelfox & Bob Wynes, *A Physical, Biological and Land-Use Synopsis of the Boreal Forest's Natural Regions of Northwest Alberta* (Peace River: September 1999) Chapter 9 at 9-1.

¹² Forest Watch Alberta – Oil and Gas, Conventional Oil Reserves (based on AEUB 1996 and 2000). Online at www.forestwatchalberta.ca. Established reserves for natural gas are estimated at 1284 billion m³, established reserves for oil total 326 million m³, and the oil sands are estimated to contain 300 billion barrels of oil, representing the world's second largest known source of oil.

¹³ Alberta Energy and Utilities Board, *Across the Board*, June/July 2001, Features Articles, Article 1, "Alberta's Energy Resource Picture".

¹⁴ Trembling aspen is the dominant hardwood species in the boreal mixed wood forest. Long considered a "weed" with no economic value, it became valued by the forest industry when the technology was developed in the early 1980s to convert it into pulp to make fine papers and other products.

¹⁵ Larry Pratt & Ian Urquhart, *The Last Great Forest – Japanese Multinationals and Alberta's Northern Forests* (Edmonton: NeWest Press, 1994) at 5-6.

¹⁶ J. Brad Stelfox, ed., *Relationships between stand age, stand structure, and biodiversity in aspen mixed wood forest in Alberta* (Edmonton: Alberta Environmental Centre and Canadian Forest Service, 1995) at 3.

¹⁷ The total provincial AAC is 23.8 million m³, of which 249,488 m³, or 1.05% is unallocated (99.53% of the coniferous AAC, and 98.19% of the deciduous AAC are currently allocated). Alberta government figures, August 2000.

public forest land in the province,¹⁸ and additional FMAs are currently being negotiated between the provincial government and forest companies. In the boreal forest region, the areas allocated to the private sector for commercial timber production are considerable: the forest management areas of only two forest companies, Daishowa-Marubeni International Ltd. and Alberta-Pacific Forest Industries Inc., are about the size of Great Britain. Timber quotas and commercial timber permits often overlay these FMAs, with different species of timber allocated to different companies within FMA areas. These overlapping allocations add to the intensity of timber utilization. Thus, commercial logging “has emerged as a primary disturbance in boreal mixed wood forests and is now the basis of a large forest industry”.¹⁹ The *1996 State of Canada’s Environment* notes that “The most recent and ongoing trend in human disturbances in the Boreal Plains ecozone is the increased rate of forest harvesting, especially of the previously little-used aspen stands. This increase is most evident in Alberta, where the annual area of land harvested increased by 125% between 1975 and 1993.”²⁰

2.2 The Consequences of Intensified Resource Use

Ecological Impacts

The ecological impacts of intensifying resource developments on the boreal forest have been the subject of several recently published reports.²¹ The report of the Sub-Committee on Boreal Forest of the Standing Senate Committee on Agriculture and Forestry warns as follows:

Portions of Canada’s remaining natural, undisturbed boreal forest and its areas of old growth are now at risk, from both climate change and over cutting. In addition, the demands and expectations placed on Canada’s boreal forest have escalated to the point where they cannot all be met under the current management regime. Highly mechanized timber harvesting is proceeding at a rapid pace, as is mineral and petroleum exploration and extraction.²²

Focusing on Alberta’s boreal forest region, one of these studies suggests that:

While the forest industry may eventually supersede it in terms of its environmental impact, with respect to the entire boreal forest natural region the

¹⁸ This figure does not include national or provincial parks.

¹⁹ Stelfox, *supra* note 16 at 3.

²⁰ Cited in *The Boreal Forest Natural Region of Alberta*, *supra* note 4 at 88.

²¹ *The Boreal Forest Natural Region of Alberta*, *supra* note 4; *Competing Realities: The Boreal Forest at Risk*, Report of the Subcommittee on Boreal Forest of the Standing Senate Committee on Agriculture and Forestry (Ottawa: Government of Canada, June 1999); *Canada’s Forests at a Crossroads: An Assessment in the Year 2000*, *supra* note 3; Gail MacCrimmon and Thomas Marr-Laing, *Patchwork Policy, Fragmented Forests* (Drayton Valley: Pembina Institute for Appropriate Development, May 2000).

²² *Competing Realities*, *supra* note 21, at i Executive Summary.

oil and gas industry has, arguably, left the most pervasive and intense “ecological footprint” of any human activity in the Region.²³

The significance of the environmental impacts of oil and gas operations had already been documented in Alberta. In the late 1970s, the provincial government requested the Environment Council of Alberta to conduct public hearings on the Environmental Effects of Forestry Operations in Alberta.²⁴ In its overall assessment of the environmental impacts of all resource developments in the Green Area of the province, the Council paid particular attention to the impacts of non-renewable resource uses, notably petroleum exploration and extraction, on the forest resources. The Council compared the acreage cleared by the petroleum industry for well sites, access roads, pipeline rights-of-way and seismic lines with that harvested by the forest industry, and concluded that the combined effects of extraction of the non-renewable resources of gas, oil and coal on the renewable forest resources were considerable.²⁵ Exploration by petroleum companies had “more negative impact on the Green Area than any of their other operations”, with the amount of land disturbed by seismic lines alone almost equivalent to the area cut in timber harvesting operations between 1956 and 1976.²⁶ This is confirmed by recent studies, which identify seismic activity as having the most significant impact in terms of timber removal on the land base.²⁷

The ecological impacts of forestry developments have also been analyzed in various publications, including the above-mentioned report of the Environment Council of Alberta. In particular, the practice of clear-cutting and the construction of forestry roads have been singled out as having the most deleterious effects on biological diversity and ecological processes.²⁸ With respect to Alberta’s boreal forest, it has been suggested that “from a biodiversity conservation/protected areas perspective, the creation of new, widespread road networks – which render previously remote and relatively undisturbed areas accessible to other industries and the general populace, plus the on-going liquidation of the Region’s old-growth forest communities, are the most significant and pressing impacts of forestry activities (past, present and future) in

²³ *Supra* note 4 at 75.

²⁴ *The Environmental Effects of Forestry Operations in Alberta*, *supra* note 6.

²⁵ *Ibid.* at 31. In 1976, 35,850 acres were cleared by the petroleum industry, while 47,198 acres were harvested by the forest industry. The Council remarked that while the forest industry must regenerate cut-over areas within ten years of harvest, the petroleum industry is not required to regenerate seismic lines and only has to reclaim other disturbed sites after abandonment, which could be several years after construction.

²⁶ *Ibid.* at 28.

²⁷ Stelfox & Wynes, *supra* note 11 at 9-58: “Each of the energy sector activities discussed previously involves the harvesting of forest resources. Based on features associated with the energy sector that were identified on AVI coverage to 1993, seismic operations were the largest single contributor to forest harvesting”.

²⁸ *The Environmental Effects of Forestry Operations in Alberta*, *supra* note 6; *Competing Realities*, *supra* note 21 at 21; Stelfox, *supra* note 16 at 263; *The Boreal Forest Natural Region*, *supra* note 4 at 87-95; Elizabeth May, *At the Cutting Edge: The Crisis in Canada’s Forests* (Toronto: Key Porter Books, 1998).

the boreal forest natural region that have consequences for designing a protected areas network.”²⁹

The intensification of oil and gas and forestry developments over the past 20 years has compounded these ecological impacts. Recent studies confirm that linear disturbances or access density associated with forestry and oil and gas activity, which result in habitat loss and fragmentation, have the most severe and detrimental ecological impacts on the boreal forest.³⁰ Not only do linear disturbances have direct impacts on wildlife (species and habitat disruption, direct and indirect mortality), they also have severe indirect impacts, notably by facilitating human access to previously inaccessible habitat. Alberta has one of the highest percentage of accessed forests in Canada (83%), with an average access density estimated at 2.4 km/km². In 1998, it was calculated that a mere 8.9% of the boreal forest natural region remained in “pristine” condition or qualified as “wilderness”.³¹ Scientists have warned that “it is the cumulative environmental impacts of these industries together with those of a host of other human activities occurring in the boreal forest natural region, that comprise the largest consequences on the long-term maintenance of biological diversity in the Region”.³² As the pace of oil and gas and forestry developments accelerates, the ecological integrity of the remaining wilderness becomes even more seriously compromised.

Inter-Sectoral Conflicts

Conflicts between the oil and gas and the forestry sector are not a new phenomenon in Alberta. North Western Pulp and Paper, the company which was granted the first FMA in Alberta in 1954, is reported to have complained to government that “the concept of multiple use – that forestry should share access to the land with other industrial, agricultural, and recreational pursuits – badly compromised the government’s commitment that the primary use of these lands would be timber production.”³³ In its 1979 report, the Environment Council of Alberta concurred with this view.³⁴ The Council suggested that government take measures to minimize and resolve conflicts between the two resource sectors:

The serious and widespread effects of the oil and gas exploration and production industries in the Green Area must receive more attention and control. The great

²⁹ *The Boreal Forest Natural Region of Alberta*, *supra* note 4 at 93-94.

³⁰ *The Boreal Forest Natural Region*, *supra* note 4; *Canada’s Forests at a Crossroads*, *supra* note 3; *Patchwork Policy, Fragmented Forests*, *supra* note 21.

³¹ *Supra* note 4 at 134-141.

³² *Ibid.* at 165.

³³ Pratt & Urquhart, *supra* note 15 at 19. The authors report that “formal requests to the Minister of Lands and Forests that the government enforce existing land use protections and compensate the company for timber in its FMA destroyed by petroleum exploration were ignored.”

³⁴ *The Environmental Effects of Forestry Operations in Alberta*, *supra* note 6 at 31: “the result [of non-renewable resource extraction] appears to be a contravention of the contractual agreement (Forest Management Agreement) that the growing of timber constitutes the prime use of the land”.

value of the extracted resource does not justify substantial impairment of other resources. Many of the problems appear to relate to practices instituted when it was necessary to attract these industries to Alberta. That situation no longer exists. It is time for the petroleum industry to accept its responsibility as a user, along with others, of the Green Area.³⁵

With the allocation over the past 15 years of very large, previously unallocated, areas of boreal forest to forest companies for pulp production, tensions between the two industries sharing the same land base have escalated. The energy sector has had to negotiate access to subsurface minerals with new industrial users who have been granted long-term surface rights. The need to consult with, and obtain permission to enter from, FMA holders is perceived by the energy sector as reducing access and imposing additional delays and operating costs on the industry. The costs associated with compensation for timber loss or timber damage have also increased considerably and been a source of disagreement between the two sectors. For their part, forest companies have come to realize that the activities of oil and gas companies on lands dedicated to timber production have tremendous impacts on the forest resource and interfere with their own planning and operations. In certain FMAs, the amount of land removed for oil and gas developments is almost as large as the area harvested by forest companies for timber production.³⁶ Forest companies have expressed concern about the long-term availability of timber supplies, and the implications in terms of the type of forest management they may be forced into.

The following list of issues giving rise to specific conflicts between the two sectors has been drawn from a series of interviews conducted with resource companies and government representatives: 1) loss of standing timber; 2) quantum of compensation for timber damage; 3) loss of productive forest land-base; 4) access; 5) land reclamation.³⁷ Each of these will be briefly described. In addition, the larger issue of the capability of the forest industry to move towards ecosystem-based management is raised.

³⁵ *Ibid.* at 130. The Council recommended the creation of a Resources Department which, on the basis of inventories of the various resources, would assign priorities for management of all areas of the Green Area. The Council also suggested reducing the land area required for all aspects of mineral exploration, production and development, and the pooling of exploration information (at 154).

³⁶ *Competing Realities, supra* note 21 at 18; see also MacKendrick, Fluet, Davidson, Krogman and Ross, *Integrated Resource Management in Alberta's Boreal Forest: Opportunities and Constraints* (Edmonton: Network of Centres of Excellence, Project Report 2001-22) at 17. This publication reports that in Weyerhaeuser's Edson FMA, from July 1997 to March 2001, a total of 4,335 hectares had been removed for wellsites, access roads, pipeline right-of-ways and miscellaneous purposes, while the area harvested by the forest company amounts to 7,000 hectares. In the Alpac FMA, approximately 16,000 hectares per year are harvested for timber production while oil and gas companies operate on a land base of 11,000 hectares per year. These figures do not take into account land removals for seismic lines.

³⁷ Interviews were conducted with: 1) government representatives from various divisions within Alberta Environment, Alberta Resource Development, Alberta Energy, both at the central and regional levels, as well as from the Energy and Utilities Board and the Natural Resources Conservation Board; 2) industry representatives from the oil and gas, oil sands, pipeline sector and industry associations (e.g., CAPP, Canadian Association of Geophysical Contractors) as well as representatives from several forest companies.

A first issue relates to the loss of standing timber. As noted earlier, a large proportion of oil and gas activities (62% for the northwest area) occur on productive forest lands and the volumes of timber harvested by the energy sector are substantial. Some of this timber is salvaged and is made available to and utilized by surrounding sawmills or pulp and paper mills. However, the majority of the merchantable timber harvested is left behind in the woods, either because it is too young or because of logistical or financial considerations. In the Daishowa FMA, it has been calculated that from 1989 to 1993, 1,288.795 m³ of trees were harvested as a result of linear disturbances (seismic lines, pipelines and roads).³⁸ During the same period, the company's total harvest amounted to 4,579.693 m³. Of the merchantable-sized trees harvested between 1989 and 1997, only 50.4% were salvaged. When merchantable timber cannot be salvaged, the net effect is a reduction of the annual allowable cut allocated to forest companies. The lost volumes of timber must be found elsewhere in order to continue supplying the company mills. Alternatively, the harvest levels may have to decline or forest management may have to become more intensive.

A second related issue is the quantum of compensation to be paid by energy companies for timber loss or timber damage. This has been one of the most contentious issues between the oil and gas and the forestry sector.³⁹ Oil and gas companies using FMA lands for exploration and development are legally required to pay timber damages to FMA holders. The amount of timber damage is determined by the FMA holders and the two sectors have long disagreed on the value of the trees and on the quantum of compensation to be paid.⁴⁰ The non-renewable resource industry has also argued that timber damages should be paid to the Crown, not to FMA holders. The provincial government has adopted and regularly updates a Timber Damage Assessment (TDA) Table which is used as a guide by FMA holders in their calculation of compensation.⁴¹ At the present time, the conflict between the two sectors over timber damage assessment appears to be less acute than it was in the early 1990s. The current debate centers around the amount of timber damage that should be paid when low-impact seismic or avoidance cutting is utilized. The Alberta government offers a rebate to companies using low-impact seismic, and some forest companies are considering adopting a similar policy. The difficulty lies in calculating the exact decrease in damage resulting from low-impact seismic as compared to conventional seismic activity.

A third issue of concern to the forest industry is the loss of productive timber lands resulting from the lack of regeneration of disturbed sites. As discussed in Section 3.3 of this paper, seismic lines do not have to be replanted; they are simply reseeded to ensure some vegetation cover on the site. Well sites and access roads are reclaimed after abandonment, which may be several years after construction, and in most cases are not replanted, but simply reseeded. If previously

³⁸ Stelfox & Wynes, *supra* note 11 at 9-58.

³⁹ Alberta Energy, Forestry, Lands and Wildlife, Information Letter 92-13, May 5, 1992. "Since 1981, the issues of access, salvage and compensation for damaged timber have become increasingly significant, escalating the tensions between the energy and forest industries"; Stacey Cohen, "The Timber Battle" (September-October 1993) 5(3) Forestry Oil & Gas Review 18-21.

⁴⁰ See *The Environmental Effects of Forestry Operations in Alberta*, *supra* note 6 at 37-42.

⁴¹ The setting of rates for timber damage by the government involves discussions with the forest and the non-renewable resource sectors. See Information Letter 92-13, *supra* note 39.

forested areas do not grow back, forest land is removed from production either permanently, or at least for one rotation. Although it is still too early to assess regeneration rates empirically, since the energy industry is only fifty old, preliminary research on revegetation rates of seismic lines indicates that these linear features may persist for decades.⁴² Even if the trees grow back, regeneration may be out of phase with the surrounding stands and the trees may not have grown to merchantable size by the time the area is harvested by a forest company. They will be cut but may not be commercially usable. With new energy developments being announced, the area taken out of timber production, either temporarily or permanently, is expected to increase. It has been stated in a recent study that “the rate at which current and future landbase deletions revegetate to commercial tree species will significantly affect the long-term sustainability of current harvest levels of forest companies operating in northwest Alberta”.⁴³

A fourth issue relates to access. As discussed in Section 3.3 of this paper, oil and gas companies need to obtain the consent of FMA holders before they can be issued surface rights. Because they operate under very short time constraints, they expect that consent to be issued quickly. Indeed, the approval process for oil and gas operations is very fast; surface leases are routinely reviewed within an average of thirteen days, and routine well applications are reviewed within two or three working days. Forest companies, which are used to plan for the long-term, find it difficult to accommodate the needs of the energy sector on such short notice. Another access issue arises in relation to access roads and includes problems of proliferation of roads, shared use, and reclamation. Uncoordinated development of access roads can result in unnecessary costs and wasteful practices. Oil and gas companies sometimes construct roads in areas that have been newly replanted by forest companies. Alternatively, forest companies may begin harvesting in areas that have recently been reclaimed by oil and gas companies. With better coordination, the waste of resources could be avoided and replanting could take place when an access road is no longer utilized. Forest companies have long-term road plans, and if notified of oil and gas companies’ road needs, may be able to coordinate access. They may offer the use of an existing forestry road to an oil and gas company and enter into a road use agreement with that company, setting out specific terms and conditions for that use. In turn, oil and gas companies that no longer require the use of access roads may ask forest companies if they will take over the roads. The coordination of access roads requires good will and determination on the part of the two resource sectors, as the standards of road construction may differ, the location of existing roadways may not be convenient for either oil and gas or forest companies, and their shared use may result in conflicts.

A fifth issue relates to the reclamation of disturbed sites. Energy companies point out that they are bound by stricter reclamation standards than forest companies. Under provincial legislation, they must bring the disturbed land back to a standard of “equivalent capability” which necessitates addressing the chemical and physical aspects of soil disturbance. With respect to access roads, oil and gas companies need to obtain a reclamation certificate for the temporary access roads they build. This is not always the case for forest companies, since the major forestry roads often become permanent roads and temporary forest roads are simply replanted. Oil and

⁴² Stelfox & Wynes, *supra* note 11 at 9-58.

⁴³ *Ibid.* at 9-1.

gas companies also complain that they are sometimes required to reclaim well-site areas to a better standard than they found the site in. If for instance a well-site is located in a clear-cut area, a large investment may be required to meet the provincial reclamation requirements. On the other hand, from the standpoint of forest companies, the standards of reclamation imposed on oil and gas companies are inadequate to bring forest land back into commercial production. As stated earlier, seismic lines only need to be reseeded, and the criteria for reclamation of mineral surface leases (for well sites, roads, processing facilities) may be met by grass seeding rather than revegetation with seedlings. By contrast, forest companies are legally required to reforest the areas they have cut and are bound by strict regeneration standards.⁴⁴ They will attempt to incorporate well-sites, roads and seismic lines into their reforestation plans to the extent possible, in order to return these areas to productive timber status.

A larger issue arises, that of the overall implications for the forest sector of the activities of oil and gas operators on forest management areas. The problem relates not only to diminishing timber supplies and the long-term repercussions of the loss of AAC volumes and productive timber lands on forestry operations. A broader issue is the cumulative impact of small but numerous and unforeseen oil and gas developments on the forest industry's attempts to manage forests in a sustainable manner. In accordance with international and national commitments, forest companies are expected to move from a type of management focused on the maintenance of timber supplies (sustained-yield timber management) to a form of management purporting to sustain entire forest ecosystems and conserve not only the long-term productivity of forests, but also their ecological integrity and biological diversity (ecosystem-based forest management).⁴⁵ A landscape approach to management is seen as fundamental to this type of ecological management and the conservation of ecosystems.⁴⁶ From the standpoint of forest companies, it is difficult to practice landscape management on an area which is periodically disturbed by new activities which they have not anticipated and which are largely out of their control, and to attempt to integrate these disturbances into their planning and operations.

Attempts by the forest sector to maintain landscape patterns in the boreal forest consistent with forest ecosystem management principles will fail without the cooperation of the oil and gas industry. Although these two sectors have

⁴⁴ *Timber Management Regulation*, AR. 60/73, Part 6 – Reforestation, and Alberta Regeneration Survey Manual.

⁴⁵ See Canadian Council of Forest Ministers, *Sustainable Forests – A Canadian Commitment*, National Forest Strategy 1998-2003 (Ottawa: Canadian Council of Forest Ministers, 1998); Alberta Environmental Protection, Land and Forest Service, *Interim Forest Management Planning Manual – Guidelines to Plan Development*, Version: April 1998 at 5: “Current sustained yield timber management planning is required under existing legislation but planning should move toward sustainable forest management (SFM)”; Alberta Environmental Protection, *NFS (1998-2003) Implementation Action Plan*, Strategic Direction 2.0, Commitment 2.8, at 24.

⁴⁶ *Interim Forest Management Planning Manual*, *supra* note 45 at 23: “[...] the resource management philosophy and goals should address the biological, economic and social aspects of the area. This information is obtained through a landscape assessment.[...] One approach to conservation of biodiversity focuses on the management of landscape pattern and structure.” See also *Competing Realities*, *supra* note 21 at 91, where natural landscape management or ecosystem management is described as follows: “It requires that managers have a good understanding of the natural processes and diversity within the forest so as to judge the level of harvesting that the forest ecosystem can handle. All components of the forest ecosystem – water, soil, trees, wildlife, air – must be managed together, as must all human activities within or impinging upon the forest.”

historically operated independently, new integrated approaches are required to satisfy landscape goals intended to maintain ecological integrity.⁴⁷

The “inability of Alberta’s forest industry to manage forests for ecological sustainability due to the activities of Alberta’s petroleum industry” has been identified as one of two major structural impediments to international certification of forest operations under the Forest Stewardship Council (FSC) system of forest certification.⁴⁸

Most of the conflicts listed above result from the very different nature and planning horizon of the two resource sectors. The forest industry manages a renewable resource for the long-term. Energy companies on the other hand, because of the uncertainty associated with the search for oil and gas, and as a result of operational constraints, operate under very short planning horizons. Beside the difficulties associated with the fundamental differences between the two sectors, the lack of legal mechanisms for integrated planning and development of oil and gas and forestry resources contributes to aggravate their combined ecological footprint and inter-sectoral conflicts.

3.0 The Law Applicable to the Development of Oil and Gas and Forestry Resources

3.1 Analytical Framework: Integrated Land and Resource Management

The provincial government manages its public lands and resources by means of a variety of statutes and regulations, which enable the relevant Ministers to dispose of the Crown’s interests in land and resources through various legal arrangements. Under a multiple use policy of maximizing aggregate benefits of public lands and resources, surface and subsurface resources are simultaneously allocated to a range of users. The list of statutes and regulations applicable to oil and gas and forestry developments is extensive. Added to these are an array of administrative instruments, such as directives, guidelines, information letters and ground rules, which provide specific direction to land managers both in government and in the private sector. The relevant statutes will be referred to in the context of the description of the various stages of resource allocation and development.

A framework for analysis of the legal and institutional regime for public lands and resources has been outlined elsewhere.⁴⁹ The necessary components of an integrated public land management

⁴⁷ Stelfox & Wynes, *supra* note 11 at 9-58.

⁴⁸ *Structural Impediments to FSC Certification in Alberta: Overcoming Barriers to Well-Managed Forests*, A report by: Alberta Wilderness Association, Albertans for a Wild Chinchaga, Canadian Parks and Wilderness Society-Edmonton Chapter; and the Federation of Alberta Naturalists, November 2001, Executive Summary (available at: www.borealcentre.ca).

⁴⁹ Steven A. Kennett, *New Directions for Public Land Law*, Occasional Paper #4, (Calgary: Canadian Institute of Resources Law, University of Calgary, 1998); Steven A. Kennett & Monique M. Ross, *In Search of Public Land Law in Alberta*, Occasional Paper #5, (Calgary: Canadian Institute of Resources Law, University of Calgary, 1998).

system were identified as including: 1) a policy framework that reflects a commitment to principles of integration and ecosystem management; 2) comprehensive land use planning; 3) integration among the stages of decision-making (rights disposition, project-specific review and regulation); and 4) interjurisdictional and interagency coordination. The review of the legal and policy framework for land and resource management in Alberta led to the following conclusions: 1) Alberta has no overarching policy framework to ensure integration of the various stages of public land management; 2) there is no comprehensive land use planning for public lands and resources; 3) there are few legal mechanisms linking the various stages of decision-making; 4) integration is mostly achieved by administrative and policy-based mechanisms for interagency coordination.

The following review builds upon the previous analysis and focuses on the regime applicable to oil and gas and forest resource development. The government has stated the need “to ensure that our policies, laws and regulations reflect the principles of sustainable development and integrated resource management”.⁵⁰ The purpose of this analysis is to assess whether progress in this area has been achieved since our last review.⁵¹ The three stages of decision-making: land use planning, rights disposition and project-review and regulation are analyzed to identify obstacles to integration and some of the root causes of the conflicts between the oil and gas and the forestry sectors.

3.2 Comprehensive Land Use Planning

The planning function is essential to effective land and resource management. The case for comprehensive land use planning as a fundamental element of an integrated framework for land and resource management has been made in the above noted publications.⁵² A more recent CIRL publication reiterates the critical need for a comprehensive planning approach to manage the cumulative effects of multiple resource developments on the landscape.⁵³ Further, it has been suggested that this comprehensive planning process should be founded on an ecosystem management approach, not on the multiple use approach that has prevailed in this province and is still endorsed in recent provincial policies.⁵⁴ Ecosystem management should provide the normative basis upon which an integrated regime for public land management can be built.

Alberta’s Integrated Resource Planning (IRP) system, adopted in 1977, resulted in the development of regional and sub-regional plans that identified land use zones, and for each zone

⁵⁰ *Alberta’s Commitment to Sustainable Resource and Environmental Management*, *supra* note 2 at 8.

⁵¹ Kennett & Ross, *supra* note 49.

⁵² Kennett, *supra* note 49 and Kennett & Ross, *supra* note 49.

⁵³ Steven A. Kennett, *Towards a New Paradigm for Cumulative Effects Management*, Occasional Paper #8, (Calgary: Canadian Institute of Resources Law, University of Calgary, December 1999).

⁵⁴ *Alberta’s Commitment to Sustainable Resource and Environmental Management*, *supra* note 2, states that “Alberta’s natural resources shall be managed for multiple benefits” and affirms that natural resources shall be managed to provide a wide range of products and values and that access shall be provided to those resources (at 5).

outlined permitted, restricted and non-permitted land use activities.⁵⁵ Despite its shortcomings, the system provided direction to resource managers at the rights disposition and project review stages. The IRP system was discontinued as a systematic planning program in the 1990s and the government launched the Integrated Resource Management (IRM) initiative discussed in Section 4.2.2 of this paper. However existing IRPs, many of them out of date, continue to be used by decision makers for lack of other policy guidance in key resource allocation and management decisions. Creasey notes that: “the plans produced under the IRP system nonetheless exist as the only planning documents in the green zone areas” and further, “...the IRP product remains the basis for several of the decision points in the wellsite regulatory approval process. In fact, all components of the wellsite approval process, from the CMDRC’s (Crown Mineral Disposition Review Committee) access restrictions, to the acquisition of surface access, to the application process of the EUB, rely to some degree upon the deliberations and zoning decisions of the existing IRP process.”⁵⁶

Even though these observations date back to 1998, they remain valid in 2001. The provincial government’s commitment, as stated in its 1999 policy, to develop comprehensive integrated plans for major river basins remains unfulfilled to date, and none of the integrated resource plans that were to “provide specific direction and resolve resource conflicts or issues” has materialized yet.⁵⁷ Given the preliminary stage of the regional strategies launched under the IRM initiative, the only integrated resource planning tools that are available to decision-makers at the rights allocation, project review and approval stages are the existing IRPs. Since no IRPs were ever developed for the majority of the boreal forest region, the comprehensive planning framework needed to support integrated resource management and to resolve inter-sectoral conflicts in the boreal forest is currently lacking.

3.3 Rights Disposition

The processes by which the provincial government disposes of its mineral and forest resources and the nature of the legal arrangements (tenures) utilized vary according to the types of resources and the political and economic objectives pursued by government. A common feature of these resource allocation processes is the considerable latitude retained by government, as reflected in the statutory provisions governing the disposition of rights to both minerals and forests.

3.3.1 Oil and Gas (Mineral) Resources

The disposition of rights to develop oil and gas resources involves not only the issuance of rights to the subsurface minerals, but also the issuance of rights to the surface of the land, or surface rights. The two main provincial statutes governing the allocation of subsurface and surface rights are the *Mines and Minerals Act* and the *Public Lands Act*. Before addressing the subsurface and

⁵⁵ An analysis of the IRP system is found in Kennett & Ross, *supra* note 49 at 22-29; J. Roger Creasey, *Cumulative Effects and the Wellsite Approval Process* (Calgary: Faculty of Graduate Studies, University of Calgary, December 1998) at 75-79.

⁵⁶ Creasey, *ibid.* at 79.

⁵⁷ *Alberta’s Commitment to Sustainable Resource and Environmental Management*, *supra* note 2 at 6.

surface rights disposition processes, the initial phase of exploration, which does not involve the actual acquisition of mineral rights, will be reviewed first.

Exploration Activities

Exploration in relation to oil and gas is defined under section 150 of the *Mines and Minerals Act* as “any operations on or over land or water to determine geologic conditions underlying the surface of land or water” as well as operations preparatory to or otherwise connected to these operations.⁵⁸ Exploration involves conducting seismic surveys and drilling test holes. Some types of seismic operations may necessitate the use of explosives. Pursuant to section 151 of the Act, exploration should only be conducted with an exploration licence and under an approved exploration program, and no one can operate exploration equipment without an exploration permit. However, no exploration approval is needed for aerial surveys or ground geophysical or geochemical surveys that do not disturb the land or vegetation cover. The Minister has discretionary powers to refuse to grant an approval, a licence or a permit, or to issue them subject to any conditions he prescribes.⁵⁹

The *Exploration Regulation*, administered by the Department of Sustainable Resource Development, details the approval process for exploration licences, permits and approvals. An *exploration licence* is issued for both seismic and mineral exploration. It is a province-wide permission to explore and remains in effect as long as the company is operating in the province. The licence does not allow any actual field operation to be carried out until an exploration approval has been obtained. An *exploration approval* enables its holder to explore in a specified location and for specified types of minerals.⁶⁰ A licensee does not need to hold the mineral rights for an area to apply for an exploration approval. An *exploration permit* must also be obtained by a licensee in order to use exploration equipment, such as a seismic drilling rig.

Part 5 of the regulation details the rules applicable to field operations, such as distance requirements, the clearing of land and salvage of timber, water contamination, road damage, abandonment of shot holes and test holes, etc. Copies of the preliminary plan and program of exploration are filed with officials of the Land and Forest Service, along with a copy of the application for an exploration approval. Applicants must prepare a Geophysical Field Report that details how environmental issues will be addressed during all phases of the exploration program. Government officials review the program of exploration to determine whether the application meets environmental operating conditions.

Exploration activities are restricted in certain areas of the province identified in the *Exploration Regulation*. In protected areas (such as Natural Areas, Ecological Reserves, Provincial Parks), seismic activity is generally not permitted. In addition, in those areas of the province where IRPs were developed, exploration activities are normally not permitted on lands designated as Zone 1

⁵⁸ *Mines and Minerals Act*, R.S.A. 1980, c. M-15.

⁵⁹ Subsection 153(1) of the Act.

⁶⁰ *Exploration Regulation*, Alta. Reg. 214/98, s. 9.

(Prime Protection).⁶¹ On lands allocated to forest companies for timber harvesting, the government retains the right to authorize exploration and FMA holders have no control over exploration activities.

Pursuant to the *Exploration Regulation*, permission to enter to conduct geophysical operations (seismic surveys) must be obtained from the owner or person in possession of the land.⁶² However, FMA holders do not own an interest in land and are therefore not “in possession” of FMA lands: they simply are “occupants” of the land and in that capacity, cannot control access for exploration. Under section 29 of the regulation, FMA holders are merely *notified* of the program of exploration and provided with a copy of the approved preliminary plan of exploration. In practice, forest companies are often notified one or two days before the start of field operations. As noted below in subsection 3.3.2, FMA holders are entitled to be compensated by the company conducting the exploration program for any loss or damage resulting from exploration activities. They also receive a copy of the final plan of exploration which is filed with the Minister within 60 days after completion of the conduct of exploration.⁶³

Reclamation requirements for exploration programs are usually restricted to reseedling so as to ensure revegetation of the site. Operators must apply for a letter of clearance within two growing seasons after completion of their operations.

Acquisition of Sub-Surface Mineral Rights

Section 16 of the *Mines and Minerals Act* authorizes the Minister of Energy to issue an agreement in respect of a mineral on application, “if the Minister considers the issuance of the agreement warranted in the circumstances”, by way of sale by public tender or pursuant to another procedure determined by the Minister.⁶⁴ The Minister may restrict the issuance of such agreements in certain areas and withdraw minerals from disposition (s. 17(1)). The legislative scheme for disposing of mineral resources is highly discretionary; it provides the Minister wide latitude and little guidance in the disposition of mineral resources.

Pursuant to the *Petroleum and Natural Gas Tenure (Agreement) Regulations*, “an agreement granting rights to petroleum and natural gas or both conveys (a) the exclusive right to drill for and recover petroleum and natural gas in the location of the agreement in respect of which rights are granted by the agreement, and (b) the right to remove from the location any petroleum and natural gas recovered pursuant to clause (a)”.⁶⁵ The rights are granted under petroleum and

⁶¹ Alberta Energy, *Environmental Regulation of Natural Gas Development in Alberta, Canada* (Edmonton: Alberta Energy, 1996) at 16. However, a grand-fathering clause stipulates that government will honor pre-existing legal commitments and allow exploration and development of gas or oil pools discovered prior to the implementation of the Eastern Slopes Policy in 1977.

⁶² Section 4 of the *Exploration Regulation* states: “no person shall conduct exploration on ... occupied public land except with the consent of the person in possession”.

⁶³ Subsection 22(3) of the *Exploration Regulation*.

⁶⁴ *Mines and Minerals Act*, R.S.A. 1980, c. M-15.

⁶⁵ *Petroleum and Natural Gas Tenure Agreement Regulations*, Alta. Reg. 188/85, s. 4(1).

natural gas leases or petroleum and natural gas licences, with the prevailing form of tenure currently being the licence.⁶⁶ Mineral rights are sold by public tender through a competitive bidding process. Individuals may request a posting of rights for sale. A licence is issued for an initial term of two, four or five years depending on the area of the province. If the licensee validates the licence by drilling a validating well, the licence is continued as a lease for an intermediate term of another five years, and may be further continued if the well is capable of production.

Some degree of interagency consultation in the disposition of subsurface rights is achieved through an interdepartmental committee, the Crown Mineral Disposition Review Committee (CMDRC).⁶⁷ This committee, which exists under subsection 10(2) of the *Environmental Protection and Enhancement Act* (EPEA), reviews all proposed sales of mineral rights to identify potential environmental impacts and constraints on the development process. It is an advisory body that provides recommendations to the Minister of Energy. The CMDRC review process may result in surface access restrictions or denial of surface access on specific lands such as Ecological Reserves and Provincial Parks or when major environmental concerns cannot be mitigated. It is noteworthy that even if surface access is restricted or prohibited, a party can still enter into a tenure agreement for the acquisition of subsurface mineral rights. The agreement is issued with access restrictions contained in an addendum forming part of the agreement.

Creasey describes the CMDRC review process as “a general assessment based on existing land use policy and plans”, and notes that “The IRP information has been used as the sole reference when conditions to the mineral lease are considered, meaning that the review of mineral postings is usually limited to a reference to the zoning suggestions of the IRP.”⁶⁸ As noted earlier, the IRP system was abandoned by the provincial government in the 1990s and the vacuum left by the discontinuation of the integrated regional planning process has not yet been filled by the new integrated resource management initiative. In the absence of other land-use planning documents, decision-makers, including the CMDRC, continue to rely upon existing, although often outdated, IRP documents for an indication of the government’s land use goals for a particular area of the province.

Acquisition of Surface Rights

In order to carry out mineral development, oil and gas companies must secure access to the surface of the land by acquiring surface rights. The disposition of public lands is governed by the *Public Lands Act* and accompanying regulations, currently administered by the Department of Sustainable Resource Development.⁶⁹ As with mineral rights, the Minister has sweeping powers

⁶⁶ Part 5 of the Act – Petroleum and Natural Gas.

⁶⁷ The Committee is comprised of representatives from Alberta Energy, Environment, Agriculture, Community Development, Municipal Affairs, Sustainable Resource Development and the EUB.

⁶⁸ Creasey, *supra* note 55 at 62-63.

⁶⁹ *Public Lands Act*, R.S.A. 1980, c. P-30.

to dispose of surface rights on public lands and the Act offers no guidance as to the objectives to be pursued in the allocation of these lands.⁷⁰

The development of minerals requires the issuance of a Mineral Surface Lease (MSL) for the construction of wells and production facilities, a Licence of Occupation (LOC) for access roads, or only a MSL for both, as well as a Pipeline Agreement (PLA) for pipeline right-of-ways. All three of these land dispositions are currently issued pursuant to the *Dispositions and Fees Regulation*.⁷¹ The regulation allows the Minister to “issue mineral surface leases of public land to mineral producers who require the land for purposes in connection with or incidental to the recovery and production of mines and minerals” (s. 76). The MSL is issued for a maximum term of 25 years (s. 77). The Minister may grant a licence of occupation to an applicant authorizing the holder to use the licensed area for the purpose specified in the licence (s. 67), notably the construction of a road (s. 70). Finally, under Part 8 of the regulation, the Minister may enter into an agreement with an operator who requires public land for the construction of a pipeline and a right of way installation that is incidental to the pipeline (s. 99(1)), as well as issue a lease to an operator for a pipeline installation (s. 105(1)).

The leases, licenses and agreements are issued by the Land and Forest Service of the Department of Sustainable Resource Development. Forestry officers as land managers deal directly with the energy companies in establishing the terms and conditions imposed under a MSL. The lease includes guidelines to control activity and may stipulate requirements such as setbacks from rivers and nesting areas, and restricted access at certain times of the year. The lease may be issued subject to surface access restrictions identified by the CMDRC as follows: 1) surface access is not permitted (Ecological reserve, Provincial Parks); 2) surface access is subject to specific restrictions (e.g., key habitat areas such as caribou habitat, Historical Resources Management Areas); and 3) surface access has not yet been determined (e.g., proposed provincial park). A Restricted Areas Book identifying restrictions in all townships (designated protected areas, research study areas, recreation areas, etc) is kept by Alberta Energy.

Consent from the holders of timber dispositions is needed for the issuance of MSLs, LOCs and PLAs. Pursuant to subsection 7(2) of the *Dispositions and Fees Regulation*, when the land disposition applied for under an MSL, LOC or PLA is in part or entirely subject to a timber disposition under the *Forests Act*, the applicant must obtain “the written consent of the holder of that timber disposition to the issuing of the disposition applied for”.

The consent requirements are also found in the *Surface Rights Act*.⁷² Pursuant to section 12 of the Act, operators (including persons having the right to a mineral or the right to work it) cannot enter land to remove minerals, to mine, drill or construct or operate a pipeline, power transmission line or telephone line without obtaining the consent of the owner and the occupant of the surface of the land. If the negotiations between an operator and a landowner or occupant

⁷⁰ See ss. 11-14 of the Act.

⁷¹ A.R. 54/2000. This regulation repeals and replaces the previous *Mineral Surface Lease Regulation* (A.R. 228/58), the *Licence of Occupation Regulation* (A.R. 448/81) and the *Public Lands Pipe Line Regulations* (A.R. 246/58).

⁷² R.S.A. 1980, c. S-27.

do not result in a surface lease or agreement, the Surface Rights Board (SRB) may issue a right of entry order under the Act (s. 12(3)). If the operations require a licence, permit or other approval from the Energy and Utilities Board (EUB), the SRB's entry order must not be inconsistent with any relevant EUB licence or approval. The SRB's practice is to require that a well licence have been issued prior to granting a right of entry. In fact, if an operator has been granted a well licence or pipeline permit by the EUB, the SRB has no choice but to issue a right of entry order, and if the location has been fixed by the EUB, the SRB cannot change it.

It is at this stage in the mineral development process that forest companies are involved in the approval process. As explained in the next section (3.3.2), their options are however limited since the government retains the right to withdraw from their forest management area lands required for industrial purposes. In practice, the Surface Rights Board has never been asked to issue a right of entry order to enable an oil and gas company to gain access to areas managed by forest companies.

3.3.2 Forest Resources

The allocation of forest resources is governed by the *Forests Act*.⁷³ The Act enables the Minister, currently the Minister of Sustainable Resource Development, to determine an annual allowable cut for forest management units, and to dispose of Crown timber in one of the three following ways: 1) a forest management agreement (FMA); 2) a timber quota certificate and a timber licence;⁷⁴ or 3) a timber permit. As is the case with the disposition of mineral rights, the Act does not specify any criteria governing the allocation of forest resources. The only substantive requirement imposed on the Minister is to ensure that FMAs are designed to provide a perpetual sustained yield of timber. The following analysis focuses on the allocation of FMAs and timber quotas and licences.

Forest Management Agreement (FMA)

In accordance with subsection 16(1) of the Act, the Minister may allocate a forest management agreement (FMA) with Cabinet approval. FMAs are granted for a term of 20 years renewable for a further 20 years. The allocation of an FMA does not involve formal consultation with other government departments through an interdepartmental body such as the CMDRC. Any consultations with other government departments that may occur are informal. The allocation process is not advertised nor is it subject to any form of environmental impact assessment and public review. It is a highly discretionary process which is the outcome of private negotiations between the Minister and a forest company.⁷⁵

⁷³ R.S.A. 1980, c. F-16.

⁷⁴ Pursuant to s. 17 of the Act, timber quotas are allocated as either coniferous timber quotas or as deciduous timber quotas (also called deciduous timber allocations). The holder of a quota is entitled to a certain volume of timber. However, a quota holder must also obtain a licence in order to begin harvesting the trees.

⁷⁵ The wood processing facility which an FMA holder undertakes to build as a condition of the FMA allocation may be subject to review by the Natural Resources Conservation Board (NRCB). The review of the proposed mill could open up the allocation and management of woodlands to public scrutiny. However, as discussed in Section 3.4.1 of

The agreement enables the FMA holder to “enter on forest land for the purpose of establishing, growing, and harvesting timber in a manner designed to provide a perpetual sustained yield.”⁷⁶ The Act specifies that, “except as against the Crown and subject to any agreement to the contrary, ownership of all Crown timber on land subject to a forest management agreement or forest management lease is, during the term of the agreement or lease, vested in the holder of the agreement or lease, who is entitled to reasonable compensation from any person who causes loss or damage to any of the timber or any improvements created by the holder.”⁷⁷ FMA holders are thus given clear ownership of the standing timber which has been allocated to them under the terms of the agreement. This section provides the legal basis for the obligation imposed on oil and gas companies operating on FMA lands to compensate FMA holders for timber loss or timber damage. It is noteworthy that FMA holders do not necessarily acquire rights to all species of trees in their forest management area. They usually only receive rights to the coniferous or to the deciduous timber, and the Crown reserves the right to allocate the remaining timber to third parties by way of timber quotas or timber permits.

The existence of pools of minerals in the subsurface of the forest management area does not appear to affect the disposition process in any significant way. The assumption is that both resources can be simultaneously developed on the same land. It is expected that the reserves of minerals underlying the forest management area, if economically recoverable, will be extracted. However, the overall impact of exploration and development activities on the timber resources made available to forest companies to supply their mills is unknown and is not accounted for at the time of allocation. Forest companies entering into FMAs are fully aware of the fact that, pursuant to the provincial multiple use policy, the rights to explore for and extract subsurface minerals already have been or may be granted to energy companies in the future. FMA agreements contain standard provisions that enable the government to facilitate oil and gas exploration and development on FMA lands in the following ways: 1) some lands are excepted out of the FMA area at the time of allocation; 2) lands may be withdrawn from the FMA area as the need for industrial development arises, and 3) the provincial government preserves its right to authorize exploration activities.⁷⁸

First, section 4 of the FMA specifies that, out of the forest management area, the following areas are excepted:

- (b) lands which are the subject of a disposition issued pursuant to the *Public Lands Act*, prior to the date of the Agreement;

this paper, the NRCB has not yet been involved in the review and approval of a major wood-processing facility, and the tenure allocation process remains secretive.

⁷⁶ Subsection 16(1) of the Act.

⁷⁷ Subsection 16(2) of the Act.

⁷⁸ The FMA clauses discussed in this section are almost identical in all agreements. The agreement negotiated between the provincial government and Daishowa-Marubeni International Ltd., O.C. 424/89 including amendments authorized by O.C. 620/92; 767/93; 628/96 and 226/99, is utilized for the purposes of the discussion.

- (c) lands heretofore sold, patented, leased or applied for in respect of which any disposition is pending.

As a result, all areas for which MSLs, LOCs and PLAs have already been issued or are in the process of being issued to oil and gas companies are taken out of the FMA area and do not form part of the net productive area. If any of the lands excepted become subsequently available for disposition, and provided that these lands are timber productive or potentially productive, these lands must be returned back to the forest management area “in a potentially productive state”.⁷⁹

Second, subsection 6(1) of the FMA specifies that the Minister may withdraw from the forest management area, either permanently or for a specified term, and after consultation with the forest company, “(b) any lands required for rights-of-way” and “(c) any lands required for commercial and industrial purposes”. This provision enables the government, subsequent to an FMA allocation, to withdraw lands needed for oil and gas development, processing and transportation (e.g., well sites, access roads, facility sites, pipelines, power lines, etc.). All surface dispositions issued to energy companies (e.g., MSL, LOC, PLA) entail the withdrawal of lands from the FMA, with the consent of the FMA holder. When land is withdrawn for use by industrial users, such as oil and gas or pipeline companies, these users must pay the FMA holder reasonable compensation “for any loss of profit or other damage or loss suffered by the Company, including by way of example, but without limitation, damage to timber, improvements, regeneration, forest growth, or to its operations on the forest management area resulting from such withdrawals” (subs. 6(3)). Forest companies have developed a standard Master Agreement for Consent to the Withdrawal of Lands from a FMA, that spells out the terms and conditions under which their consent to surface land dispositions is granted. These include the payment of compensation, the salvage of merchantable timber and rights of access retained by FMA holders on or across the lands withdrawn.⁸⁰

Finally, subsection 8(1) of the FMA enables the Minister, “in keeping with the policy of providing for multiple uses of the same public land”, to reserve all land rights not specifically allocated to the FMA holder. These include, in particular: “(b) the right to authorize any person to conduct any work in connection with or incidental to geological or geophysical exploration pursuant to the *Mines and Minerals Act*, or the Exploration Regulation.” In this case again, the forest company is “entitled to reasonable compensation, from the person conducting the exploration, for any loss or damage suffered by the Company and resulting from such exploration”, such as damage to timber, forest growth, regeneration, improvements or to any of its operations on the forest management area. However, forest companies are not entitled to be compensated for loss of profit, as is the case with land withdrawals.

Companies are only compensated for loss or damage to the timber to which they have been granted rights. Thus, if an FMA holder has only been allocated rights to coniferous timber in the forest management area, he is not entitled to be compensated for loss or damage to deciduous timber.

⁷⁹ Section 5 of the FMA.

⁸⁰ Alberta Forest Product Association, Master Agreement for Consent to the Withdrawal of Lands from AFPA’s Forest Management Agreement Area, October 20, 1998 ratification.

FMA agreements further specify that “for the purpose of interpreting the *Surface Rights Act*, ..., the Company is an occupant of the public lands comprising the forest management area.”⁸¹ This clause confirms the status of FMA holders as “occupants” of the forest management area and their entitlement to be consulted to allow other resource users, such as oil and gas companies, to gain access to FMA lands. This right to consent to access (and to charge a fee for access) is independent of the right to be compensated for loss or damage to timber resulting from oil and gas activities.

Timber Quota

Section 17 of the *Forests Act* enables the Minister to establish an annual allowable cut (AAC) for a forest management unit, and to allocate the AAC by way of coniferous or deciduous timber quotas. Timber quotas give their holders the right to a certain volume of timber, rather than to a specific area of land. By contrast with FMAs, quotas are advertised and sold by public auction. When a decision is made to offer an AAC volume to the private sector in one or more forest management units, the government publishes a request for proposals for the use of the available timber in wood processing facilities. Similar to FMAs, the allocation of timber quotas must receive Cabinet approval. Before they begin harvesting timber, quota holders must obtain a timber licence that specifies the lands on which the volumes of timber may be harvested, the species of timber to be harvested, the period of harvest and other terms and conditions.⁸²

Quota holders do not acquire any right or interest in the forest land that is the subject of the quota or licence. They do not acquire ownership of the standing timber, but only of the timber when it is actually cut.⁸³ Nevertheless, as is the case with FMA holders, oil and gas companies need to obtain the written consent of licence holders to enter and access forest lands that are allocated under timber licences.⁸⁴ With respect to compensation, quota holders are not entitled to be compensated for loss or damage to standing timber resulting from oil and gas operations. Any compensation owing must be paid to the Crown as the owner of the timber. However, quota holders are entitled to cut and recover the volumes of timber allocated to them by the government. Subsection 28(4) of the Act provides that a quota holder is “entitled, except as against the Crown, to compensation from any person who deprives him of his right to cut and recover any timber”. The issue of compensation does not arise when oil and gas companies cut timber in licensed areas and make the timber available to the licence holders. However, the issue of compensation of quota holders for a reduction in available timber supplies remains contentious. Quota holders have argued that, like FMA holders, they too should be compensated for any losses they incur as a result of a reduction in volumes of timber resulting from oil and gas activity and affecting their quotas.

⁸¹ Subsection 7(2) of the FMA.

⁸² Section 21 of the Act.

⁸³ Section 28 of the Act.

⁸⁴ See Section 3.3.1 above, under Acquisition of surface rights. Pursuant to the *Dispositions and Fees Regulation*, the issuance of surface dispositions such as MSLs, LOCs and PLAs requires the written consent of the holders of timber dispositions under the *Forests Act*.

3.3.3 Issues that Arise out of the Rights Disposition Process

The legal provisions described above underline the highly discretionary nature of the disposition of public lands and resources and the lack of statutory guidance that characterizes ministerial allocation decisions. There are no statutory integrative mechanisms at this stage of the resource development process.

Any integration that is achieved in the process of allocating overlapping resources results from administrative mechanisms, such as interdepartmental consultation. In the case of forest resources, no formal review by an interdepartmental committee occurs at the time of disposition. In the case of mineral resources, the only formal interdepartmental institution with a mandate to review the issuance of mineral rights and to submit recommendations to the Minister of Energy is the CMDRC. The CMDRC review is at most a very general assessment of the potential environmental impacts of mineral developments, since, as noted by Creasey, “at the time of the CMDRC review, there is no formal proposal, only a request to purchase the mineral rights for future potential developments.”⁸⁵ Even if the mandate of the CMDRC was enlarged to include an assessment of the costs and benefits and of the cumulative impacts of issuing mineral rights, in light of existing and proposed forest resource developments in a given area, the committee would have no means to carry out its assessment. The only tool available to the committee and to the Ministers in their resource allocation decisions is a set of incomplete, out-of-date integrated resource plans developed under a planning process which is no longer endorsed by the provincial government. Further, the existing IRPs simply provide indication as to permitted uses within a set of zones; they do not establish clear landscape objectives and ecological thresholds that would enable decision-makers to determine the acceptability of proposed land and resource allocations in a regional context. Currently, rights disposition decisions are not informed by a comprehensive planning process that would enable the overall impacts and sustainability of multiple resource developments on the same land base to be assessed.

The compensation, notification and consent provisions found in oil and gas and forest legislation or tenure arrangements and described above are designed to alleviate the concerns of the surface operators and to reduce some of the inter-sectoral conflicts listed in section 2, namely those associated with loss of timber, access and compensation issues. In addition, the issuance of exploration approvals and of surface dispositions has become increasingly subject to terms and conditions that are designed to mitigate environmental impacts and to reduce timber loss and timber damage. However, these provisions do not address the more fundamental land use and resource use concerns arising from the multiple use policy pursued by the provincial government. To a large extent, resource allocations remain incremental, fragmented, uncoordinated and do not factor in the cumulative impacts of multiple developments on the same land base and the issue of the long-term loss and degradation of the productive land base. In particular, the licensing and approval process for exploration activities is inadequate, considering the substantial and long-term impacts of seismic lines discussed in subsection 2.2 of this paper. Ultimately, the lack of policy direction and integration at this critical stage in the resource development process jeopardizes the long-term sustainability of the development of both resources.

⁸⁵ Creasey, *supra* note 55 at 62.

3.4 Project Review and Regulatory Approvals

The review of specific industrial projects in both the energy and the forestry sectors is conducted pursuant to Alberta's principal environmental statute, the *Environmental Protection and Enhancement Act* (EPEA), as well as various statutes governing the two regulatory boards mandated to review energy and forestry projects. The EPEA and associated regulations detail the environmental assessment process applicable to proposed industrial projects and the approvals required to conduct various activities associated with these projects, including the release of substances into the environment, and the conservation and reclamation of land. The *Natural Resources Conservation Board Act* establishes the Natural Resources Conservation Board (NRCB) as a review board for forest industry projects, and the *Energy and Utilities Board Act* establishes the Energy and Utilities Board (EUB) as a review board for energy projects.⁸⁶ The mandate of the EUB goes well beyond the review and approval of specific energy projects. The board also regulates various aspects of energy exploration and development pursuant to more than 30 pieces of legislation. An overview of the review processes and regulatory approvals applicable to energy and forestry projects is provided from the standpoint of the level of integration achieved in the resource development process, at the project-specific stage.

3.4.1 Oil and Gas Resources

The development of mineral resources involves their production, gathering, processing and transportation (the construction and operation of wellsites, access roads, processing plants, pipelines) and the abandonment and reclamation of these facilities when they are no longer needed. The Energy and Utilities Board (EUB) plays a key role at this stage of the oil and gas development process. The board grants well licences, approves access roads and production facilities, and delivers permits for the construction and operation of pipelines.

Only selected oil and gas developments are subject to a formal environmental impact assessment (EIA) process under the EPEA. Oil and gas wells are expressly excepted from the requirement to undergo an EIA, as are also certain sweet gas processing plants.⁸⁷ The only facilities that are classified as "mandatory" activities for which an EIA report must be prepared by the proponent are sour gas processing plants that exceed a certain emission level, and oil refineries.⁸⁸ Other facilities, such as pipelines or transmission lines of a certain size, may be subject to a full EIA review by Alberta Environment if the Director of Environmental Assessment determines that an EIA report is needed. In effect, the environmental impacts of the vast majority of oil and gas development projects are not subject to a formal EIA process, although as explained below various aspects of those developments must meet environmental standards and need approval by Alberta Environment. The EUB, in its determination of whether a specific project is "in the public interest", must balance the social, economic and environmental aspects of a project and

⁸⁶ *Natural Resources Conservation Board Act*, S.A. 1991, c. N-5.5; *Energy and Utilities Board Act*, S.A. 1994, c. A-19.5. The predecessor to the EUB was the Energy Resources Conservation Board (ERCB), established pursuant to the *Energy Resources Conservation Act*, S.A. 1971, c. 30 (now R.S.A. 1980, c. E-11).

⁸⁷ *Environmental Assessment (Mandatory and Exempted Activities) Regulation*, A.R. 111/93, Schedule 2(e).

⁸⁸ *Ibid.*, Schedule 1(n) and (q).

will consider the environmental impacts along with other considerations.⁸⁹ In one area of the province, the southern portion of the Eastern Slopes, the EUB has specifically requested oil and gas operators to carry out environmental assessments of their development projects.⁹⁰ This remains an exceptional situation that has not been replicated elsewhere in the province.

Parts 2 to 5 of the *Oil and Gas Conservation Act* define the EUB's powers, and Parts 6 to 9 set out the rules for the drilling of wells, the production and use of oil and gas, and the suspension and shutting down of wells.⁹¹ Subsection 11(1) of the Act provides that "no person shall commence to drill a well or undertake any operations preparatory or incidental to the drilling of a well [...] unless a licence has been issued [...]." Further, pursuant to subsection 26(1), the Board's approval is required for any scheme for the recovery of oil or gas, processing, storage or disposal. The EUB approval process for energy developments is quite rigorous and is detailed in numerous information letters, interim directives and general bulletins as well as comprehensive guides defining the way in which applications should be filed with the Board.⁹² A company can apply for all the facilities and pipelines associated with a specific project with one Energy Development Application package. However, wells must be applied for separately. All surface access issues must have been dealt with and the required surface access approvals (e.g., MSL, LOC and PLA) obtained from the relevant government department before applying for EUB approval.

The public notification requirements of the EUB are quite extensive and are described in the *Public Involvement Guidelines*. Applicants must attach to their application a detailed summary of their public involvement program as well as outstanding concerns. If outstanding concerns cannot be resolved, the application may be heard at an EUB public hearing. Failure to conduct proper public notification may result in suspension of the EUB approval. Landowners as well as occupants must be consulted. FMA holders, as occupants of their forest management areas, are therefore entitled to be consulted and to voice their concerns at the project review stage. Most of the consultations and negotiations between oil and gas companies and FMA holders, including consent to surface dispositions and land withdrawals, sharing of access roads and the calculation of compensation for timber loss or timber damage would have taken place at the stage of issuance of surface rights. However, should there remain some unresolved issues between the companies, FMA holders may also send statements of concerns to the EUB and to Alberta Environment at the project review and regulatory approval stage.

⁸⁹ *Energy Resources Conservation Act*, R.S.A. 1980, c. E-11, s. 2.1: the board shall "give consideration to whether the project is in the public interest, having regard to the social and economic effects of the project and the effects of the project on the environment."

⁹⁰ Alberta Energy and Utilities Board, Information Letter IL 93-9, *Oil and Gas Developments Eastern Slopes (Southern Portion)*. This initiative is discussed in Section 4.2 of this paper.

⁹¹ R.S.A. 1980, c. 0-5.

⁹² The most important of these guides is *Guide 56: Energy Development Application Guide and Schedules*.

A proposed energy development may also require approval or registration under the EPEA⁹³ and other statutes.⁹⁴ The approval or registration process with Alberta Environment is designed to address any possible environmental damage and issues of site conservation and reclamation. Before submitting an application to the EUB, an applicant must obtain necessary approvals from Alberta Environment. The regulatory approval process for energy projects is well integrated between the EUB and Alberta Environment and this integration is supported by statutory provisions. For instance, subsection 65(4) of the EPEA provides that a Director must consider any applicable written decision of the EUB before issuing an approval or registration. In turn, copies of certain applications submitted to the EUB are forwarded to Alberta Environment and to other interested government departments prior to approval by the Board. Their recommendations and conditions are then forwarded to the Board and included in the licenses and permits issued by the EUB.⁹⁵

Part 5 of the EPEA details the provisions applicable to industrial operators who must reclaim the area utilized after operations cease. Conservation and reclamation must be carried out in accordance with the terms and conditions of any applicable approval and a reclamation certificate must be obtained from a government inspector pursuant to section 123 of the Act. Alberta Environment utilizes certain reclamation criteria to determine whether a reclamation certificate should be issued. These are outlined in Information Letters issued by the Department. The EUB will not issue licenses until the required approvals have been issued. The Act also provides that a surface lease cannot be surrendered until a certificate of reclamation has been issued (s. 129).

3.4.2 Forest Resources

It is important to note that the environmental assessment process and regulatory review of forest industry projects by Alberta Environment and the NRCB under the EPEA and the *Natural Resources Conservation Board Act* only apply to the construction of wood processing facilities, not to the activities of timber harvesting, transportation and reforestation (forest management operations).

For the most part, forest management operations are regulated and authorized pursuant to the *Forests Act* and associated regulations, guidelines, rules, and other administrative instruments.⁹⁶ Forest tenure holders must prepare and obtain government approval for various types of forest management plans that describe the long-term management objectives of the company as well as the detailed operations that will be undertaken in the medium and short-term. Detailed forest management plans for the entire FMA area are prepared for a 20 year planning period that

⁹³ Section 58 of the EPEA and *Activities Designation Regulation*, Alta. Reg. 211/96.

⁹⁴ For instance the *Water Act*, S.A. 1996, c. W-3.5.

⁹⁵ E.g., ss. 21(1)-(2) of the *Coal Conservation Act*, R.S.A. 1980, c. C-14; ss. 8(1)-(2) of the *Pipeline Act*, R.S.A. 1980, c. P-8.

⁹⁶ Other provincial statutes which may affect certain operations or under which specific authorizations may be required (e.g., for road construction) include the *Forest and Prairie Protection Act*, the *Forest Reserves Act*, the *Public Lands Act* and the *Water Act*.

corresponds to the term of the tenure agreement, while annual operating plans describe the company's proposed operations for specific cutting areas for the following year.⁹⁷ The review and approval of company plans and of the multitude of operations carried out in the course of harvesting and regenerating a forest are mostly internal to the Land and Forest Service of the Department of Sustainable Resource Development. Only selected forest management practices, such as the use of hazardous substances or the spraying of pesticides, are regulated under the EPEA and require specific approvals by Alberta Environment.

By contrast, the construction, operation and reclamation of industrial plants for the processing of timber are regulated and authorized by Alberta Environment under the EPEA and other relevant legislation, such as the *Water Act*, and may require the approval of the Natural Resources Conservation Board (NRCB). Not all wood products manufacturing facilities are subject to a full EIA and review by the NRCB. Under the EPEA and associated regulations, an environmental impact assessment (EIA) report must only be prepared for those activities designated as "mandatory activities" by regulation. The *Environmental Assessment (Mandatory and Exempted Activities) Regulation* has designated large pulp, paper, newsprint or recycled fibre mills with a capacity of more than 100 tonnes/day as mandatory activities.⁹⁸ Other forest industry projects, such as lumber, veneer, panel board or treated wood facilities, may or may not be subject to a full EIA, depending upon the decision of the Director of Environmental Assessment.⁹⁹ The requirement to prepare an EIA report in turn triggers the need for NRCB approval, and the EIA report forms part of the application to the NRCB.¹⁰⁰ The NRCB may direct that no regulatory approvals be issued until a project has been approved by the board.

In its eleven years of existence, the NRCB has only reviewed one forest industry project, a waste paper recycling facility.¹⁰¹ The project did not involve any wood allocation by way of a tenure agreement, was not controversial and was approved by the board without a public hearing. The province's existing nine pulp mills and one newsprint mill had already been built by the time the NRCB was established and, with the exception of the Al-Pac mill, were not subject to an EIA and a public review process.¹⁰² The only major project for the construction of a paper mill which is currently undergoing a full EIA by Alberta Environment and would require approval by the NRCB is the Grande Alberta Paper Ltd.'s proposal to build a lightweight coated paper mill.¹⁰³

⁹⁷ Land and Forest Service, Alberta Environmental Protection, *Interim Forest Management Planning Manual, Guidelines to Plan Development*, April 1998.

⁹⁸ Alta. Reg. 112/93, Schedule 1(a).

⁹⁹ Sections 42 and 43 of the EPEA.

¹⁰⁰ *Natural Resources Conservation Board Act*, S.A. 1990, c. N-5.5, ss. 1(e) and s. 4.

¹⁰¹ Natural Resources Conservation Board, *Decision Report – Waste Paper Recycling Facility in the Town of Redcliff*, Alberta, April 27, 1993.

¹⁰² The proposed Al-Pac pulp mill was jointly reviewed by the provincial and the federal governments under an agreement signed in July 1989 establishing a single review board. See Alberta Environment, *The Proposed Alberta-Pacific Pulp Mill: Report of the EIA Review Board*, March 1990.

¹⁰³ The Grande Alberta proposal dates back to 1992, when the provincial government and Grande Alberta signed a

Therefore, the NRCB review and approval process for large forest industry projects still remains untested. This is unfortunate, since the preparation of an EIA report and the NRCB review would entail a full assessment, and likely a formal public review, not only of the mill facilities, but also of the availability of timber supplies for the proposed mill, as well as proposed forest management operations and their regional and cumulative impacts on other resources and resource uses.¹⁰⁴ They may also entail an assessment of the sustainability of a large forestry project in light of existing and projected oil and gas developments. Under terms of reference issued by Alberta Environment and the NRCB to Grande Alberta Paper Ltd for the preparation of its EIA report, the company has been requested to assess the availability and the sustainability of the fibre supply for the proposed facility, including an evaluation of the impact of other resource uses, such as mineral resources production, on forest operations. The forest company has also been asked to outline its approach to integrating its operations with other resource users and how it proposes to incorporate access planning and access management.¹⁰⁵ The EIA and NRCB review of forest industry projects thus have the potential to provide a mechanism for a full assessment of the cumulative impacts of a proposed forestry operation, including the impacts of oil and gas developments on that project, before plans are finalized and actual approvals are issued. Most importantly, such a review process would bring the rights disposition process under public scrutiny, since FMAs cannot be allocated until the NRCB has approved the proposed mill, with Cabinet authorization.

Alberta Environment and the two regulatory boards recently issued a joint document outlining how proponents should approach the issue of cumulative effects assessment in preparing their EIA report.¹⁰⁶ However, this integrative mechanism can only have a limited impact, since neither seismic activities nor oil and gas wells, two of the energy activities that have the greatest cumulative environmental impacts, are subject to an EIA, and large forest industry projects have escaped a full assessment under the EPEA.

3.4.3 Issues that Arise out of the Project Review and Regulatory Approvals Stage

The level of integration achieved in the review and regulatory approval processes of individual projects within each resource sector is higher than at the rights disposition stage. A number of

“No objection in principle” agreement granting the company rights to certain forest areas, subject to project approval by the NRCB. The proposal has been mired in difficulties, and even though several fibre supply studies have been conducted and other agreements in principle have been signed with the provincial government, the proposal has not yet been submitted for review to the NRCB and its fate is uncertain.

¹⁰⁴ *Rules of Practice of the Natural Resources Conservation Board*, Alta. Reg. 345/91, Schedule – Appendix 1.

¹⁰⁵ Alberta Environmental Protection, *Grande Alberta Paper Ltd. Environmental Impact Assessment – Final Terms of Reference for the lightweight coated paper mill near Grande Prairie, Alberta*, November 24, 1998. Under s. 8.4.3, the company must “describe the potential for reduction of the fibre supply due to uncertainties, such as withdrawals that may be made to accommodate other uses”. Under s. 9.1, it must “identify all commitments on these Crown lands and their significance to the region” and outline its “approach to integrated resource management to accommodate multi-users in the planning process”.

¹⁰⁶ Alberta Environment-EUB-NRCB, *Cumulative Effects Assessment in Environmental Impact Assessment Reports Required under the Alberta Environmental Protection and Enhancement Act*, July 31, 2000.

statutory provisions are designed to ensure that the regulatory boards and the relevant government departments work cooperatively in the review of specific projects or activities and that the final approvals or permits reflect the recommendations of the various resource managers. Interdepartmental coordination is also achieved by administrative mechanisms, such as internal referrals and the development of procedures for the coordination of applications and approval processes.

However, the incremental nature of the review and approval process of specific projects prevents a full assessment of the cumulative impacts of developments and of their ecological sustainability. Not only are the collective impacts of numerous single development projects within each resource sector not addressed by the current review process, but there exist few legal and regulatory mechanisms for achieving *inter-sectoral* integration. The two regulatory boards reviewing energy and forestry projects have separate mandates and do not have the ability to conduct full assessments of the cumulative impacts of the activities of both sectors in a specific region. Further, the environmental impact assessment process under the EPEA, which could serve as an avenue for addressing multiple use issues and cumulative impacts at the project-specific stage, is seldom used to review oil and gas and forestry projects, most of which are exempted from it.

Informal, administrative mechanisms are relied upon by land and resource managers in the permitting process to address issues of cumulative impacts and inter-sectoral conflicts. A number of committees made up of government and industry representatives of the various resource sectors that are mutually affected by resource developments have been set up to promote dialogue and identify solutions. Government officials also encourage energy and forestry companies to cooperate in planning their operations and mitigating their footprint on the land, using financial incentives and rewards. Some of these integrative initiatives are reviewed in section 4 of this paper.

Nevertheless, the review and regulatory approval processes remain for the most part segregated and incremental, and the administrative mechanisms can only address the inter-sectoral conflicts and cumulative ecological impacts resulting from the sheer number of activities on the land base in a limited way. The deficiencies identified at the planning and the rights disposition stages undermine integrative efforts at this stage of the resource development process.

4.0 Options for Integration Between the Oil and Gas and the Forestry Sectors

In October 2001, the Canadian Institute of Resources Law convened a workshop on issues of integrated resource management (IRM), focusing on the oil and gas and forestry interface. The purpose of the workshop was to assess current integration initiatives, and to determine whether structural changes in Alberta's current policy, legal and regulatory regime were required. The workshop included representatives from the oil and gas industry, the forest industry, industry associations, government departments and regulatory boards, environmental non-governmental organizations, as well as scientists and academics. The overall consensus of the participants was that some progress towards integration was being achieved through various initiatives. However,

these initiatives could not address the fundamental obstacles to integration resulting from the lack of a clear policy framework and political leadership, the lack of comprehensive land-use planning, and the inadequacy of the legal and regulatory regime. The following sections describe some examples of integration and their inherent limitations and discuss the need for more fundamental structural changes to achieve effective integration of oil and gas and forestry activities. The discussion draws to a large extent from the above-mentioned workshop.

4.1 Current Government and Industry Initiatives Promoting an Integrated Approach to Oil and Gas and Forestry Developments

As stated earlier, there exist few inter-sectoral integrative mechanisms in the legal and regulatory regime pertaining to oil and gas and forestry allocations and developments. The emergence of inter-industry conflicts, and the desire to mitigate the ecological impacts of resource developments on the land, have led the private sector and government to seek ways to address the conflicts and the ecological impacts without changing the existing legal and regulatory framework. The initiatives described below represent a progression from voluntary, industry-led efforts to increasing levels of government and multi-stakeholder involvement.

4.1.1 Inter-Industry Initiatives

There are several examples of industry-led initiatives designed to reduce the industrial footprint on the land and to achieve cost savings through cooperation. A much cited example is the Al-Pac/Gulf-Surmont project, involving coordinated planning of their operations (e.g., road access and forest regeneration) by Gulf Canada Resources and Alberta Pacific Forest Industries. Other oil and gas and forest companies attempt to integrate their activities by entering into road-sharing agreements and sharing their development plans (e.g., timber salvage, coordinated access, timing of reclamation). The Alberta Chamber of Resources has recently launched an Integrated Landscape Management (ILM) Program. The three cornerstones of this program are: 1) integration of activities; 2) reclamation of disturbances; 3) minimizing the industrial footprint in terms of its size, duration and time on the landbase.¹⁰⁷ For the private sector, the advantages of integration include reduced operational and planning costs, positive ecological impacts, and addressing stakeholder concerns at the project and regulatory levels.

The benefits of inter-industry cooperation at the operational level are undeniable and the consensus appears to be that important gains have been achieved in the past few years. However, the limitations of this approach to integration are equally apparent. These limitations were addressed in the above-mentioned workshop and are listed in the workshop summary.¹⁰⁸ Some of them are associated with the very different nature of the industries (multitude of small players in the oil and gas sector as opposed to a few big players in the forest sector, different planning horizons). Others result from the lack of clear government policy (e.g., absence of measurable landscape objectives against which industry performance can be measured) or from legislation and regulations that are inconsistent with cooperative efforts. It is clear that the major limitation

¹⁰⁷ See Miller, *supra* note 2.

¹⁰⁸ Steven Kennett & Monique Ross, *Legal and Regulatory Approaches to Integrated Resource Management: The Oil and Gas/Forestry Interface*, Edmonton, October 29, 2001, Workshop Summary (Calgary: CIRL, 2001).

of these types of initiatives is their inability to address cumulative effects issues other than in a piece-meal fashion.

4.1.2 Industry-Government Initiatives

The next step in integrative efforts involves cooperation between the private sector and government. Some initiatives are simply facilitated by government, while in other cases the government plays a more active role of initiator.

The Alberta Joint Energy/Utility and Forest Industry Management Committee was formed in response to a crisis situation, when conflict erupted between a forest company, Weldwood and oil and gas producers with respect to the calculation and payment of timber damages. The committee has been in existence since 1995. It is composed of members from forest companies and from industry associations representing the interests of the coal, petroleum, geophysical and pipeline sectors. One government representative sits on the committee as an ex-officio member. The committee is “advisory to its constituent association, company members and Minister of Sustainable Resource Development” and its decisions are consensus-based.¹⁰⁹ Its original mandate, which was to regularly update the stand damage appraisal tables (or TDA) used by government and forest companies to calculate compensation owed by energy companies for timber loss or damage, has been expanded to address other issues and concerns raised by its members. For instance, the committee has developed and facilitated the implementation of the standardized consent to withdraw and access agreement, used by forest companies when lands are withdrawn from their FMAs for surface dispositions, and it has developed dispute resolution processes. The role of government in that initiative has been to facilitate discussions between industrial sectors and to implement the changes (e.g., to the provincial TDA tables) recommended by the industrial representatives.

Another example of industry-government efforts towards integration are the Woodland Caribou Committees established to protect woodland caribou, a threatened species in Alberta. In the 1980s, concern for woodland caribou resulted in the development of restrictive industrial land use regulations for use on caribou range. The industrial operators opposed these restrictions, and in an attempt to resolve the conflict between the private sector and regulatory agencies, the government established regional industry/government working groups.¹¹⁰ The Procedural Guide for Oil and Gas Activity on Caribou Range (Information Letter 91.17), adopted jointly by the departments of Energy and Forestry, Lands and Wildlife in 1991, was announced as “the first component of a multi-sectoral, integrated approach by government to manage woodland caribou in Alberta”.¹¹¹ The overall objective was to maintain long-term populations and distribution of

¹⁰⁹ KPMG Consulting, Alberta Joint Energy/Utility and Forest Industry Management Committee, Terms of Reference, November 20, 1996 – reviewed and revised October 18, 2000 (updated October 19, 2001) at 4.

¹¹⁰ Elston Dzus & Stan Boutin, *Proactive Partnerships for Caribou Conservation in Northern Alberta*, WSI 3461 (bi) ODC 156, 1998 Annual Meeting; Blair Rippin, Colin Edey, Daryl Hebert & Jeff Kneteman, *A Cooperative Industry-Government Woodland Caribou Research Program in Northeastern Alberta*, Rangifer, Special Issue No. 9, 1996.

¹¹¹ Alberta Resource Development, Information Letter 91-17, July 12, 1991, Subject: *Procedural Guide for Oil and Gas Activity on Caribou Range*, at 2.

caribou while accommodating resource extraction. Exploration and development activities on caribou range would be allowed “provided the integrity of the habitat is maintained to support its use by caribou”.¹¹² Government-industry cooperation was achieved by the establishment of regional standing committees designed to foster cooperation, share information and advice on the level of protection required for the caribou, and develop area-specific mitigation plans.¹¹³ The committees are composed of representatives from petroleum companies, forest companies, peat companies, and government departments.

In the past ten years, progress has been achieved in the area of research and in the formulation of caribou conservation strategies and operational guidelines to mitigate the impacts of industrial developments.¹¹⁴ Companies operating in a caribou range must now prepare Caribou Protection Plans when submitting applications to government: these plans are incorporated into the regulatory approval process. However, even though research completed in 1999 demonstrated the substantial impact of industrial development on caribou habitat and population trends show a decline for several caribou ranges in northern Alberta, no specific habitat targets or thresholds of development have been set by the committees yet.¹¹⁵ The effectiveness of the cooperative, voluntary approach to caribou conservation was questioned by a coalition of environmental groups in early 2000. These groups have stated that the province’s experimentation with trying to integrate industrial activity into caribou habitat, without setting aside large habitat areas for at least a couple of viable populations, has failed.¹¹⁶ The result is a contravention of the objective stated in the 1991 Procedural Guide that the integrity of caribou habitat would be maintained.

These two examples of government-industry cooperation illustrate the benefits and the limitations of this approach to integration. On the one hand, practical resolution of a conflict is facilitated by involving industry in the design of solutions it can live with and is willing to implement. This is an appropriate solution when the conflict only concerns the interests of the industrial sectors and does not raise public policy issues. When a critical public policy issue of wildlife conservation arises, as in the case of woodland caribou, the use of a government-industry process is questionable on several grounds. First, the process is closed to non-industry participants, such as environmental non-governmental organizations. It may be argued that these committees are not representative, not accountable, and that it is inappropriate for them to establish public policy on resource management and land-use issues. Second, absent a clear

¹¹² *Ibid.*

¹¹³ There are currently two regional caribou committees: the Boreal Caribou Committee manages caribou range in northern Alberta, while the West Central Alberta Caribou Standing Committee manages caribou range in the rest of the province.

¹¹⁴ The Boreal Caribou Committee just released its strategic plan and industrial guidelines: *Strategic Plan and Industrial Guidelines for Boreal Caribou Ranges in Northern Alberta*, Ratified for implementation by the Boreal Caribou Committee, September 2001.

¹¹⁵ The 2001 Boreal Caribou Committee strategy calls for the development of range plans for each caribou range. These plans will establish habitat and activity targets that will act as a minimum requirement for each range.

¹¹⁶ Canadian Parks and Wilderness Society, World Wildlife Fund Canada, Alberta Wilderness Association, *Oil and Gas Industry contravenes Alberta Government Guidelines for Woodland Caribou Protection*, 26 January 2000 (available at: www.cpaws.org/press/caribou-protection).

government commitment that caribou conservation will take precedence over resource extraction when the intensity of development is such that habitat cannot be maintained, the establishment by a group of industrial users of ecological thresholds that may ultimately limit industrial activities is proving to be extremely difficult. Third, this type of operational coordination does not address the issue of structural fragmentation of resource management regimes. Key resource allocation decisions continue to be made sectorally, in the absence of established land use objectives and environmental thresholds and without the benefit of a comprehensive land use planning process. The Boreal Caribou Committee has undertaken to develop, for each caribou range, a set of range plans that will seek to integrate caribou conservation and industrial development. However, it is unclear how these plans will fit with other planning processes (e.g. regional strategies, forest management plans), and how they will be implemented by government.

4.1.3 Multi-Stakeholder Initiatives

A third step in the process of integration involves setting up multi-stakeholder processes at a regional level. This type of initiative avoids some of the obstacles identified for industry-government processes, notably the problem of their representation and inclusiveness. One such process is the Cumulative Effects Management Association (CEMA). Launched in 1997 as an industry initiative to address cumulative impacts of oil sands development in the Athabasca region, it has evolved into a voluntary, multi-stakeholder partnership, composed of representatives from the oil sands industry, other resource developers, aboriginal groups, various levels of government and other interested groups. The original mandate of the group was “to provide a framework for industry to ensure a common approach to cumulative effects assessment among projects”.¹¹⁷ This mandate has now evolved to “develop a regional, formal, multi-stakeholder environmental management system for managing cumulative effects”.¹¹⁸ Progress has been achieved in setting up a regional database, identifying priority issues and blueprints for action for identified themes. However, the definition of regional environmental thresholds has been very slow. Meanwhile, oil sands projects continue to be approved at a rapid pace, without the benefit of a regional management approach to cumulative impacts. The EUB has expressed concern that regional multi-stakeholders initiatives, such as CEMA, that are designed to address issues of cumulative environmental effects are not progressing fast enough given the intensity of industrial developments.¹¹⁹

¹¹⁷ Harry Spaling, Janelle Zwier, William Ross & Roger Creasey, “Managing Regional Cumulative Effects of Oil Sands Development in Alberta, Canada” (December 2000) 2(4) *Journal of Environmental Assessment Policy and Management* at 514.

¹¹⁸ *Ibid.*

¹¹⁹ In its decision on the Shell Muskeg River Mine in 1999, the EUB stated: “... well over a year has transpired since the announcement of several new development projects, yet the cumulative environmental effects management initiative is just beginning to address certain aspects of its structures and operating processes. The Board is becoming increasingly concerned that these processes may not be moving forward at a sufficient speed to meet the Board’s regulatory requirements ...”: cited in Spaling *et al.*, *supra* note 117 at 521.

Many of the limitations noted above with respect to the caribou committees also apply to CEMA.¹²⁰ As with the caribou committees, CEMA's progress has been hindered by the lack of data, the multiplicity of interests, the complexity of the issues and the lack of human resources. The two most fundamental limitations of this type of voluntary, multi-stakeholder initiative are the policy vacuum within which it operates, and the uncertainty that surrounds the implementation of its recommendations. There is no clear government commitment to endorse the management actions adopted by the group and to abide by environmental thresholds or limits defining acceptable amounts of stress on an ecosystem, should they be established by that group. The CEMA process has been linked with the Regional Sustainable Development Strategy (RSDS), which is to provide "regulatory backing of consensus-based but voluntary management of cumulative effects in the region".¹²¹ However, as noted below, it is equally uncertain how regional strategies will be implemented, and in which way the outcomes of these multi-stakeholder processes will influence resource management decisions at the rights allocation and project review and regulatory stages.

4.2 Options for Reform to the Legal and Policy Framework for Resource Allocation and Management

The above discussion highlights the benefits, but also the inherent limitations of cooperative processes that are designed to function within the existing legal and regulatory regime. One of the most significant barriers to IRM is the fact that the legal and regulatory regime within which these *ad hoc* processes operate is itself not integrated. This section focuses on the need and the prospects for legal and policy reform to the current resource management regimes. Reform may be accomplished by minor adjustments to the regulations and regulatory processes applicable to resource developments. However, more fundamental changes to policies and legislation are needed to achieve consistency of resource developments with the principles of sustainable development and integrated resource management.

4.2.1 Minor Adjustments in Regulations and Regulatory Processes

There are many examples of adjustments to regulatory processes that are designed to better address environmental and cumulative impacts issues and reduce inter-sectoral conflicts. For instance, the geophysical field reports that must be submitted by companies seeking geophysical exploration approvals have become more demanding with time. In timber productive areas, low impact seismic and timber salvage are now generally required to minimize losses of timber and reduce disturbance to vegetation. Similarly, the requirements for the environmental field reports submitted with applications for surface dispositions have become more stringent with respect to environmental concerns and integration with other activities.¹²²

The topic of minor adjustments to regulatory processes was discussed at the workshop. The

¹²⁰ A more detailed list of limitations of multi-stakeholder processes is provided in the Workshop Summary, *supra* note 108 at 5-6.

¹²¹ Spaling *et al.*, *supra* note 117 at 522.

¹²² Alberta Sustainable Resource Development, Instructions for the submission of the Environmental Field Report with applications for dispositions under the *Public Lands Act*, Revised September 2001.

example selected for discussion was the attempt by the ERCB (now the EUB) to implement a comprehensive approach to oil and gas developments in the southern portion of the Eastern Slopes, an area where environmental sensitivities are particularly high. As noted in Section 3.4.1, many oil and gas developments, such as wells, are not subject to the EIA process under EPEA. Further, the Board's review and approval of specific projects is incremental. As a result, the Board is unable to conduct a comprehensive assessment of the overall impacts of oil and gas developments at a regional level. To some extent, the Board relies on existing IRPs to assess the appropriateness of proposed developments; however, the IRPs only provide guidance as to permitted uses in specific zones, without taking into account the cumulative impacts of these uses and the carrying capacity of ecosystems. In order to overcome the shortcomings of the policy and regulatory regime and to better serve the public interest, in a bold step in 1993, the Board adopted Information Letter IL 93-9.¹²³ The key changes to the normal approval process for oil and gas developments were: 1) requirements for a thorough and effective public consultation process; 2) requirement that applications be submitted as part of an overall "development plan" rather than on a piece-meal or single-well approach; 3) requirements for filing an environmental assessment, including the description and analysis of the significance of regional, temporal and cumulative impacts; and 4) requirements for consolidated plans amongst operators, including the sharing of data and use of common roads, pipeline and utility right-of-ways.

Information Letter 93-9 has led to increased cooperation among oil and gas operators in that area of the province and the Board's attempt to fill the gaps in the regulatory process and to deal with difficult issues of cumulative impacts is to be applauded. However, there are inherent limitations to this approach to integration.¹²⁴ First, a regulatory agency responsible for the review and approval of oil and gas developments is not the proper body to assess the cumulative impacts of multiple resource developments in a given area, let alone to manage these impacts. The EUB's jurisdiction is limited to energy projects, and as a regulator it has neither the mandate nor the capacity to manage lands and resources in a comprehensive way. Second, the project review and approval stage is the wrong place in the decision-making process to address cumulative effects issues. The Board can only respond to applications, it cannot anticipate and manage the cumulative impacts of the projects it approves. Cumulative impact management should take place at the comprehensive land use planning and resource allocation stages. Third, the Board's ability to make land and resource use decisions is hindered by the lack of clear policy guidance in terms of land use objectives and environmental thresholds. The Board needs clearly identified ecological thresholds upon which to base its review and approval of projects and make the necessary trade-offs between economic, social and environmental costs and benefits.

Of course, minor adjustments to the regulatory framework of resource developments form an integral part of an IRM strategy. More progress could be achieved in this area. For instance, regulatory requirements applicable to geophysical exploration programs could be tightened, and reclamation standards for geophysical and oil and gas operations could become more stringent (e.g., revegetation to trees of seismic lines and well sites) in order to reduce losses of timber and

¹²³ Alberta Energy and Utilities Board, *Information Letter IL 93-9, Oil and Gas Developments Eastern Slopes (Southern Portion)*, 13 December 1993.

¹²⁴ See the Workshop Summary, *supra* note 108 at 6-7.

timber productive land. However, minor regulatory adjustments at the project review and approval stage fail to address structural deficiencies in the policy, planning and legislative framework of resource allocation and management.

4.2.2 Major Structural Changes

The issue of structural changes to the legal and policy regime of resource allocation and management was discussed in a limited way during the workshop. The participants agreed that there was a critical need for a clearer policy framework for IRM and that government should take the lead in establishing the broad policy objectives and the parameters that are needed to support ongoing initiatives. The need for comprehensive land use planning was also addressed; a certain reluctance to legal entrenchment of the planning process was expressed by various industry participants, but no clear consensus was achieved on what would constitute a satisfactory planning process. The topic of legislative reform was not discussed in any significant way at the workshop.

In Section 3 of this paper, the necessary components of an integrated resource management system were identified as follows: 1) an overarching policy framework that reflects a commitment to principles of integration and ecosystem management; 2) comprehensive land use planning; and 3) legal mechanisms for integration at the resource allocation and management stages. The prospects for structural reform in all three components are briefly addressed.

- 1) Despite mounting evidence of the seriousness of the ecological footprint of multiple resource developments, Alberta still does not have an overall land and resource policy that establishes a solid ground for ecologically, and therefore economically, sustainable resource development and resource use integration. The 1999 provincial strategy asserts that we can manage natural resources for a multiplicity of benefits and that industrial access to natural resources will be maintained. Despite warnings from scientists and industry representatives that the current rate and intensity of development may not be sustainable in the long term, it assumes that Alberta's economy and high level of prosperity can be sustained while also preserving the long-term viability of natural resources and the environment. Land and resource management under the multiple use approach still advocated by the provincial government is increasingly proving to be unsustainable, as discussed in Section 2 of this paper. A previous publication has developed an argument for the need to replace this multiple use approach with an ecosystem management approach.¹²⁵ At least in the forest sector, an ecosystem approach to management appears to be currently favored by both government and industry. The provincial government should make a commitment to manage all provincial public lands and resources on the same basis. This ecosystem-based approach to management would provide a solid normative basis for the other two components of an IRM system: comprehensive land-use planning and fully integrated resource legislation.
- 2) The importance of comprehensive land use planning as a means to attain ecosystem viability and an appropriate balance of uses and as the primary instrument for cumulative

¹²⁵ See Kennett, *supra* note 49 at 10-23.

effects management has been stated earlier. Land-use plans provide an integrated strategic framework for decision-making in land and resource management. On several occasions, both the NRCB and the EUB have stated the need for a planning approach to development that addresses cumulative environmental effects.¹²⁶ The integrative initiatives discussed above, such as the caribou committees and CEMA, are struggling with the need to establish land use objectives and ecological thresholds. A comprehensive land use planning process would provide the tools (e.g., systematic data collection and analysis) and the context within which land use objectives and ecological thresholds could be defined at a regional level.

It remains to be seen whether the IRM initiative, launched in 1997 as “an interdisciplinary and comprehensive approach to land and natural resource decision-making that strives to maximize society’s long-term benefits and minimize conflicts”, will fill the gap in comprehensive land use planning. Two regional strategies are currently being developed, for the northeast region of the boreal forest and for the Eastern Slopes region. The first, the Regional Sustainable Development Strategy (RSDS) for the Athabasca Oil Sands Area in northeastern Alberta, was announced in September 1998.¹²⁷ The second, the Northern East Slopes Sustainable Resource and Environmental Management Strategy (NES Strategy), was announced in April 2000.¹²⁸ In both cases, the need to address the cumulative effects of existing and proposed development projects and to reduce the collective footprint of these demands was identified as critical. Whether or not these regional strategies will produce integrated resource *plans* is unclear. To date, partnerships have been forged between resource users and regional “stakeholders”, issues and concerns have been identified, principles developed, regional goals and objectives set, management tools identified and research undertaken, but no regional plan has yet materialized. What will be the practical implications of setting regional goals, objectives and indicators for resource and land managers who issue tenures or approve specific projects? How will the management options identified by the participants in these strategies be implemented within the existing legal and regulatory framework? As noted in a companion paper, there is no legislative framework for these initiatives, and it is uncertain how the strategies will influence resource management decisions at the rights allocation, project review and regulatory stages.¹²⁹

The need for firm provincial leadership in designing a comprehensive land use planning process that is ecologically grounded is urgent. Further, this process

¹²⁶ See for example the NRCB’s West Castle decision, reviewed in Kennett & Ross, *supra* note 49 at 26-27 and 36, and in Steven Kennett, “The NRCB’s West Castle Decision: Sustainable Development Decision-Making in Practice” (1994) 46 Resources 1; and the EUB’s comments on the need for a coordinated approach to regional development in the oil sands area, as cited in Spaling *et al.*, *supra* note 117 at 521.

¹²⁷ Alberta Environment, *Regional Sustainable Development Strategy for the Athabasca Oil Sands Area*, July 1999.

¹²⁸ Government of Alberta News Release, No. 00-030, April 14, 2000.

¹²⁹ Steven A. Kennett, *Integrated Watershed Planning for the Northern River Basin: Thirty Years and Counting* (2001) 26 Canadian Water Resources Journal 325.

should have a legal foundation. A Canadian example of an integrated approach to resource management that accords a central place to land use planning is the Northwest Territories *Mackenzie Valley Resource Management Act*, adopted in 1998.¹³⁰ This Act details the requirements and structures for land use planning in two regions of the Mackenzie Valley. Once land use plans are approved by the planning boards, the boards must ensure that proposed developments conform with these plans, and the land and water boards cannot issue licences, permits or authorizations that do not comply with the plans. This regime thus establishes a legal basis for a truly integrated system of land and water management.

- 3) Legislative reform is the third component of an effective IRM strategy. Land and resource statutes should have a normative basis reflecting a commitment to integrative principles and objectives and to principles of ecosystem management. The various provincial statutes governing the allocation and development of oil and gas and forestry resources do not form a cohesive, coordinated set of legislation. Each statute, and the departments entrusted with their administration, operate independently. Further, these statutes date back to a time when the ecological impact of intense resource developments on the land was not a concern. The statutes provide wide discretion and no guidance to decision-makers in their allocation decisions. Their major concern is the orderly development of provincial resources, more than the long-term sustainability of ecological processes.

It is time to reform outdated resource legislation and to adopt the principles of ecological sustainability and integration as its foundation. The provincial government has already endorsed these principles in provincial policies. They should now be given legal sanction. An example of a modern statute that provides a normative basis for resource developments reflecting a commitment to principles of sustainable development and integrated resource management is New Zealand's *Resource Management Act*.¹³¹ The Act contains provisions describing its purposes and principles that set the standards upon which the entire integrated decision-making system rests.¹³² This statute integrates the management of land, water and air resources "into one coherent enactment governed by a common purpose and providing a consistent policy-making, planning, consent giving and

¹³⁰ S.C. 1998, c. 25.

¹³¹ Resource Management Act 1991, Sixth Schedule.

¹³² The purpose clause of this act reads as follows:

- (1) The purpose of this Act is to promote the sustainable management of natural and physical resources.
- (2) In this Act, "sustainable management" means managing the use, and development, and protection of natural and physical resources in a way, or at a rate, which enables people and communities to provide for their social, economic, and cultural well being and for their health and safety while –
 - (a) Sustaining the potential of natural and physical resources (excluding minerals) to meet the reasonably foreseeable needs of future generations; and
 - (b) Safeguarding the life-supporting capacity of air, water, soil and ecosystems; andAvoiding, remedying, or mitigating any adverse effects of activities on the environment.

enforcement structure”.¹³³

Short of undertaking a massive overhaul of resource legislation as in New Zealand, a more modest reform of individual resource statutes could be envisioned in Alberta. Judging by the fate of the Forest Conservation Strategy however, the prospects for legislative reform of oil and gas and forestry statutes do not appear to be very good. When the Alberta Forest Conservation Strategy was launched in 1993, the government stated its intention to extensively review the *Forests Act* and to either amend the Act or draft new forest legislation to implement the strategy.¹³⁴ After more than three years of extensive work by a broad range of stakeholders, the final strategy was submitted to the government in 1997.¹³⁵ The strategy presented the government with a new vision for the future of Alberta’s forests grounded on the principle of ecological as well as economic sustainability. Unfortunately, this new vision of forest management has not yet been enshrined in forest legislation.

5.0 Conclusion

In the absence of fundamental policy and legislative reform founded on the principles of ecological sustainability and integration, IRM will continue to remain an elusive goal in Alberta. Operational fixes and minor adjustments to regulatory processes will only mitigate the worst impacts of oil and gas and forestry developments on the land base and delay the need to address structural deficiencies in the current legal and policy regime. The provincial government appears reluctant to provide the leadership needed to address these deficiencies. It is to be hoped that the impetus for change will come from concerned citizens and responsible industry players and that government will come to recognize the long-term ecological and economic benefits, for all Albertans, of legislative as well as policy reform of the framework of resource development.

¹³³ David Grinlinton, “Natural Resources Law Reform in New Zealand – Integrating Law, Policy and Sustainability”, (1995) 2(1) *The Australasian Journal of Natural Resources Law and Policy* at 27; see also Sir Geoffrey Palmer, *Sustainability – New Zealand’s Resource Management Legislation*, (Spring 1991) 34 *Resources: The Newsletter of the Canadian Institute of Resources Law* at 3.

¹³⁴ Alberta Government, *The Alberta Forest Conservation Strategy – Background and Objectives – Preliminary Process Components*, October 5, 1993 at 3.

¹³⁵ Alberta Environmental Protection, News Release, *Alberta Forest Conservation Strategy received by Government*, May 8, 1997. More than 800 Albertans from 95 communities participated in public consultations that led to the development of the strategy.

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