THE CHANGING FACE OF ENVIRONMENTAL LAW AND POLICY

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It is a great honour to have been invited to deliver the 15th Viscount Bennett Memorial Lecture. Viscount Bennett gives New Brunswickers like you and Calgarians like me something in common: we both claim pride in his great accomplishments, you because this was his birthplace and where his formative years were spent, we because of the many years he spent in Calgary as a lawyer and politician.

Soon after Bennett took up his seat in the Legislature of Alberta in February 1910, a scandal concerning the Alberta and Great Waterways Company came to the attention of the Legislature. On March 2, Bennett gave a five-hour speech to the Legislature, a speech that is said to have been recognized as outstanding even by his opponents. As Watkins, one of his biographers, puts it:[1]

> His success, so those who heard the speech thought, lay in his immense capacity to digest the material and to present such a complicated story in a way that laid it clear and naked before his audience, the jurors at the inquest on the Alberta and Great Waterways Railway.

You will be delighted to learn that unlike Bennett, I do not intend to deliver a five hour speech; but, like him, I hope to be able to present some complicated material in a way that makes it clear to you, my audience.

Bennett's political life, especially the period during which he served as Prime Minister, was marked by social and economic change and upheaval. His response to this – and ultimately the one that led to his party's defeat – was the enactment of a series of legislative measures that were considered extremely radical at the time. Many of these measures were struck down by the Privy Council as *ultra vires*; some, however, (and in particular his attempt to establish a system of unemployment insurance) later became an accepted part of the fabric of Canadian life. In certain respects, then, he was a man ahead of his time, who saw the societal challenges arising from the times in which he lived and who took concrete actions to remedy them.

Like Bennett, we face a major challenge today. I speak of the challenge of learning how to populate the globe, feed the hungry, and utilize the world's natural resources, all without destroying or changing beyond recognition the planet which

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[1]E. Watkins, *R.B. Bennett* (London: Secker and Warburg, 1963) at 64.

we inhabit.

In 1962, Rachael Carson's famous book, *Silent Spring*,[2] was published. In the opening chapter, she described an idyllic town in the heart of America. This town, she wrote, had been altered by a strange blight – animals died, people sickened, birds were no longer to be heard, vegetation withered and died. This was her prediction for the future if the world continued to use chemicals without understanding their effects.

Carson's shocking book ushered in the first stage of the modern environmental movement. By the late 1960s and early 1970s, this movement had influenced all jurisdictions in Canada to establish departments of the environment and to pass legislation intended to improve, among other things, the quality of our air and water.

Yet, some three decades later, it must be acknowledged that, as a global society, we have fundamentally failed to deal with the problems so strikingly described by Carson. In its 1987 report, entitled *Our Common Future*,[3] the United Nation's World Commission on Environment and Development (hereinafter referred to as the *Brundtland Report*) outlined some of the forces that threaten our planet and all its inhabitants. These include the annual desertification of some 6 million hectares of productive land, an area that over three decades would be roughly equal in size to Saudi Arabia; the annual destruction of more than 11 million hectares of forests, totalling, over three decades, an area the size of India; the destruction of lakes, forests and architectural heritage in Europe by acid precipitation; the warming of the global environment to such a degree that agricultural production areas may be shifted and coastal cities flooded; the destruction of the planet's protective ozone layer by industrial gases, causing a rapid increase in cancer and the destruction of food chains in the oceans of the world; and the deposit of toxic substances into the food chain and underground water tables.[4] The recent opening of eastern Europe has revealed yet another set of environmental nightmares.

The 1987 *Brundtland Report* was more than a recipe of gloom and doom. Rather, it advocated a broad course of action toward a new development path, one that sustained human progress not only for a few years but for the entire planet into the distant future. This vision of so-called "sustainable development" has become a rallying cry for politicians, industrial leaders and concerned members of

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[2]R. Carson, *Silent Spring* (Boston: Houghton Mifflin Company, 1962).

[3]The World Commission on Environment and Development, *Our Common Future* (Oxford: Oxford University Press, 1987).

[4]*Ibid.* at 2-3.

the public.

The popularization of the concept of sustainable development has led many sectors of society, both internationally and domestically, to accept the notion that environmental factors must become more fully integrated into economic decision-making. The Premier of New Brunswick, along with other Canadian leaders, has established a Round Table on the Environment and the Economy. Its proposed sustainable development strategy for New Brunswick sets out very clearly the economic importance, to the people of this province, of a number of natural resource-based industries.

Take the example of the forestry sector, which represents an annual gross production value of $1.8 billion; one quarter of all goods produced in the province and 47 per cent of provincial exports are forest-related. Fifteen thousand people are directly employed in the forest industry, with annual wages of approximately $400 million. There are, as well, close to twenty thousand people indirectly employed in jobs created by the forestry industry.[5]

But the forests, which are also of tremendous importance from the point of view of wildlife and fish and tourism, are threatened by a number of forces including global climate change. There are, moreover, deeply held, differing views about such forest management practices as the use of chemical herbicides and pesticides, clear-cutting and replanting. And the issues arising from the forestry sector are mirrored in other sectors such as energy, mining, agriculture, fisheries and aquaculture, each of which poses its unique questions for the members of the Round Table.

The need to approach our natural resources in a way that allows their economic utilization but that takes account of the environment poses a major challenge, since we have tended to consider environmental factors in isolation from economic planning. Laws and legal institutions, I suggest, have an important – though by no means exclusive – role to play in the reshaping of decision-making so that the environment becomes more central. What I want to do today is ask some questions. How are we doing? To what degree have we developed appropriate legal mechanisms to meet this global challenge? What are some of the impediments that we face? Where they exist, how can they be overcome? And what can we, the lawyers, law students, judges and law professors do to improve the contribution of law and policy to the resolution of these pressing problems?

In so doing, I will consider the growing international dimension; the difficulties

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[5]Draft Report of Round Table on Environment and Economy, *A Proposed Sustainable Development Strategy for New Brunswick* at 20.

we face in Canada by virtue of being a federal state; some of the recent trends in domestic law and policy; and, finally, what these changes imply for members of our profession in the late 21st century and beyond.

I. The Internationalization Of Environmental Law

In Canada, there have been decades-old indications that environmental problems transcend state boundaries. Our sensitivity to this reality can be traced in part to the fact that we share one of the longest land boundaries in the world with the United States, a boundary transfixed by rivers and lakes. Other factors include our long coastlines and the importance of the fishery, our problems with acid rain, the deterioration of water quality in the Great Lakes, and our growing realization that the Arctic, with its peculiar environmental vulnerabilities, is part of a circumpolar system.

Notwithstanding this historical appreciation in Canada, the *Brundtland Report* has engendered a more profound realization of the global dimension of the environment. An international legal experts group, working alongside the Commission, proposed a companion set of legal principles,[6] including the notions that states have an obligation to conserve and use the environment and natural resources for the benefit of present and future generations[7] and to maintain ecosystems and ecological processes essential for the functioning of the biosphere. Notably, the *Report* itself articulated an urgent need to establish and apply new norms for state and interstate behaviour to achieve sustainable development and to strengthen and extend the application of existing laws and international agreements in support of sustainable development.[8]

Given the snail's pace at which much international law-making proceeds, developments at this level over the nearly half a decade since the release of the *Brundtland Report* have occurred with almost dizzying speed. Consider, for example, the signing in September 1987 of the Montreal Protocol to the *Vienna Ozone Convention*, calling for a staged reduction of CFCs and other ozone-

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[6]These proposals are found in: Experts Group on Environmental Law of the WCED, *Environmental Protection and Sustainable Development: Legal Principles and Recommendations* (London: Graham & Trotman/Martinus Nijhof, 1987). They are also summarized as Annexe 1 of the *Brundtland Report*, *supra*, note 3.

[7]This is the principle of intergenerational equity. For a discussion of this concept, see E. Brown-Weiss, "The Planetary Trust: Conservation and Intergenerational Equity" (1984) 11 Ecol. L.Q. 495 or E. Brown-Weiss, *In Fairness to Future Generations: International Law, Common Patrimony, and Intergenerational Law* (Tokyo: The United Nations University, 1988).

[8]*Supra*, note 3 at 330.

depleting substances.[9] Consider the 1988 *Sofia Protocol* requiring parties, by 1994, to control or reduce their nitrogen oxide emissions to 1987 levels.[10] In March, 1989, 24 states signed the *Hague Declaration* calling for, in relation to the world's atmospheric problems, the "development of new principles of international law including new and more effective decision-making and enforcement mechanisms."[11] The same month, the *Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal* was adopted.[12] In early 1991, a *Convention on Environmental Impact Assessment in a Transboundary Context* was signed, obliging signatories to notify others of certain proposed activities that are likely to cause a significant adverse transboundary effect, and to undertake environmental impact assessments that provide participation opportunities in relevant EIA procedures.[13] Planning is now underway for Brazil '92, the United Nations Conference on Environment and Development (UNCED). Among the items likely to be on its agenda are conventions on climate change, biodiversity and possibly forestry, and an Earth Charter or declaration of basic principles.[14]

Canada has been an active participant in many of these initiatives. It has also entered into an escalating number of bilateral and regional arrangements relating to the environment.[15] Its agencies are hard at work in preparations for Brazil '92. Not surprisingly, one finds increasing references to international actions and

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[9]N. Bankes, "Legal Prescriptions for an Atmosphere That Will Sustain the Earth," in *The Legal Challenge of Sustainable Development* (Calgary: Canadian Institute of Resources Law, 1990) at 162. Amendments to the Protocol to increase the level of reductions were agreed to in London in June 1990. Environment Canada, 10:2 *Environment Update* Winter 1990-91 2.

[10]*Ibid.* at 165. Note also the protocol to the 1979 ECE Convention on Long-Range Transboundary Air Pollution (LRTAP). For a discussion, see A. Fraenkel, "The Convention on Long-Range Transboundary Air Pollution: Meeting the Challenge of International Cooperation" (1989) 30 Harvard International Law Journal 447 at 447–48.

[11]P. Sands, "The Environment, Community and International Law" (1989) 30 Harvard International Law Journal 393 at 418 (Appendix).

[12]For a discussion of this, see G. Handl and R. Lutz, "An International Policy Perspective on the Trade of Hazardous Materials and Technologies" (1989) 30 Harvard International Law Journal 351.

[13]*Convention on Environmental Impact Assessment In a Transboundary Context* (uncertified copy), 25 February 1991 (signed in Espoo, Finland by 27 states) (1991) 30 I.L.M. 800.

[14]C. Tinker, "United Nations Conference on Environment and Development" (1990) 1 Yb. Intn'l. Env. L. at 68.

[15]Examples are: *Arctic Environmental Protection Strategy*, 13 & 14 June 1991 (signed in Rovaniemi, Finland by 8 circumpolar states); *Memorandum of Understanding on Environmental Cooperation*, September 1990 between Canada and the Federal Republic of Germany; *Agreement Between the Government of the USA and the Government of Canada on Air Quality*, 13 March 1991, Ottawa, (1991) 30 I.L.M. 676 (1991).

obligations in policy statements,[16] laws,[17] and task force reports and recommendations.[18] The international dimensions of environmental problems are also influencing judicial thinking.[19]

The environmental crisis that the world faces is creating unprecedented challenges for the international law system[20] but it is far from clear that the system is up to the task. The interests of developing and developed countries often diverge and while some modest steps have been taken to respond to the technological and financial needs of developing countries,[21] the gaps remain enormous and potentially unbridgeable. Rapid action is often needed, yet one of the key tools of traditional international law-making – the multilateral convention – is painfully slow. For example, the United Nation's International Law Commission has spent nearly 20 years developing draft articles concerning the non-navigational uses of water, a subject of enormous importance to the environment. The resulting draft articles have been heavily influenced by customary law concepts that give considerable weight to the economic interests of the upstream state and reflect only marginally the kind of thinking urged upon the world community by the Brundtland Commission.[22] The setting of standards at the lowest common denominator seems an almost inevitable by-product of multi-party law-making.

Even if it is possible to foster new, more responsive types of international law

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[16]Wildlife Ministers' Council of Canada, *A Wildlife Policy for Canada*, 1990 at 14; *Canada's Green Plan for a Healthy Environment 1990* at 132.

[17]*Canadian Environmental Protection Act* (CEPA), S.C. 1988, c. 22, ss. 61-65; Bill C-13, *Canadian Environmental Assessment Act* (CEAA), 1991, 22.43-49.

[18]Public Review Panel on Tanker Safety and Marine Spills Response Capability, *Protecting Our Waters*, September 1990 at 87.

[19]*R.* v. *Crown Zellerbach Canada*, [1988] 1 S.C.R. 401.

[20]These have been summarized by G. Handl in "Environmental Security and Global Change: The Challenge to International Law" (1990) 1 Yb. Int'l. Env. L. at 3.

[21]For example, the London meeting on the ozone resulted in the establishment of a Multilateral Fund to help developing countries to fulfil their international obligations. The up to US$240 Fund will be used over a three year period to identify and meet the scientific and technical needs of developing nations through technological transfer, training and information. See *Environmental Update* Winter 1990-91, *supra*, note 9 at 2. In 1989, a Special Fund for Atmospheric and Climate Studies was established by the World Meteorological Organization, a United Nations agency that advises on global atmosphere and change; the Fund will be used to help improve global knowledge and to foster technical capabilities for climate change detection in developing countries.

[22]For a discussion of the ILC's draft rules, see a forthcoming issue of *The Colorado Journal of International Law and Policy* which contains papers presented at the 2nd Nicholas R. Doman Colloquium on International Law, 18 October 1991.

instruments,[23] other problems abound. Domestic laws are ill-suited at requiring that transboundary effects of activities be taken into account.[24] Enforcement mechanisms at the international level are weak or non-existent, a point of remarkable significance when one considers the global implications of a Chernobyl or Exxon-Valdez disaster. The role of the public and the private sector in developing and enforcing international laws is not well-defined even in a bilateral context.[25] In the increasingly-encountered conflict between poorly developed, "soft" principles of environmental law and well-defined, narrow principles of trade law, the latter inevitably triumph.[26] Compensation to individuals for damage caused by transboundary pollution (such as Chernobyl and offshore oil spills) is a problem that has yet to be addressed in a meaningful way.[27]

Despite this litany of unresolved problems, it is clear that the international arena will be the site of much of the future action. The international dimensions of the environment, as will be discussed in more detail later, have important implications for the role of law and lawyers in Canada.

II. Environmental Law And Policy In A Federal State

The challenges posed for international law-making by sustainable development are in many ways duplicated in Canada by virtue of our federal system of government. Consider some of the things we ought to expect of a legal system if it is to help us integrate the environment and the economy. Four points come to mind:

- The laws should be clear and lead to relatively predictable results;

- The laws should provide a process that is fair to affected parties;

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[23]Such as the framework agreement. See *supra*, note 20 at 5-7.

[24]J. Keeping, "Canadian Gas Export Policy: Part of the Problem", in *The Legal Challenge of Sustainable Development* (Calgary: Canadian Institute of Resources Law, 1990) 356.

[25]*Agreement Between the Government of Canada and the Government of the United States of America for Water Supply and Flood Control in the Souris River Basin*, 26 October 1989. This agreement was negotiated behind closed doors without public input. Rawson Academy of Aquatic Science, *The Rafferty Alameda: Who Benefits, Who Pays and Who Controls?* (March 1991, Discussion Draft) at 1.

[26]J.O. Saunders, "Legal Aspects of Trade and Sustainable Development" in *The Legal Challenge of Sustainable Development* (Calgary: Canadian Institute of Resources Law, 1990) 370. See also, "Trade agreements ignore environment" *Globe and Mail* (4 November 1991) B4, citing a report of the C.D. Howe Institute which states that in the future trade negotiations may provide the most important forum for environmental concerns; and T. McDorman, "The GATT Consistency of U.S. Fish Import Embargoes to Stop Fishing and Save Whales, Dolphins and Turtles" (1991) 24 George Washington Journal of International Law and Economics 477.

[27]For example, the ILC left compensation out of its draft rules on the non-navigational use of waters. See *supra*, note 22.

- The laws should be able to react relatively quickly to newly identified problems;

- The laws should facilitate the making of decisions today in such a way that natural resources are available to meet the needs of future generations.

In my opinion, the existence of a federal system has posed a number of challenges to the attainment of environmental laws that can accomplish these objectives. Out of a myriad of possible examples, three help illustrate the difficulties we face but have not yet entirely resolved. Proposals for constitutional reform will not necessarily remedy these difficulties.

A. Current Problems

1. Authority Over The Environmental Impact Assessment of Projects

Environmental impact assessment (EIA) has emerged as an important technique for trying to predict what effect proposed projects will have on the environment, whether the costs of those effects outweigh the benefit of the proposed project, and whether (and if so, how) the negative effects can be mitigated. All jurisdictions in Canada now have procedures for the conduct of EIA; some of these exist pursuant to legislation, others pursuant to policy.[28] Since the procedures are applied by both levels of government, and since major projects can have both federal and provincial ramifications, some form of intergovernmental approach is needed in relation to certain projects. Otherwise, a proponent could face the possibility of having to prepare and undergo two parallel procedures, something that would be expensive and time-consuming but not necessarily result in a better decision.

In a number of cases, the problem of duplication and overlap has been resolved through the public conduct of a joint federal-provincial assessment process. Examples include the Hibernia and Venture offshore petroleum projects

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[28]See W. Couch, *Environmental Assessment in Canada: 1988 Summary of Current Practice* (Ottawa: Supply & Services Canada, 1988); R. Franson & A. Lucas, *Canadian Environmental Law* (Toronto: Butterworths, 1976); Emond, "The Legal Framework of Environmental Impact Assessment in Canada and Application of the Legislation" in J. Whitney & V. MacLaren, eds., *Environmental Impact Assessment: The Canadian Experience* (Toronto: Institute of Environmental Studies, University of Toronto, 1985) at 53; R. Gibson & B. Savan, "Environmental Assessment in Ontario" (1986); D. Emond, "Environmental Assessment Law in Canada" (1978); Lucas, "The Canadian Experience in Environmental Assessment in Australia and Canada" 141 in S. Clark, ed., 1981; Elder, "Environmental Impact Assessment in Canada: The Slave River Project" (1986) 24 Alberta L. Rev. 205; Elder, "Environmental Impact Assessment in Alberta" (1985) 23 Alberta L. Rev. 286; Rounthwaite, "The Saskatchewan Environmental Assessment Act" (1981) 45 Saskatchewan L. Rev. 335; McCullum, "Environmental Assessment: Where Did We Go Wrong?" (1988) Probe Post 42.

and, in New Brunswick, the proposal for Point Lepreau's second nuclear reactor.[29]

In other cases, federal officials have taken the view that a public federal assessment is unnecessary, either because the provincial procedures meet federal concerns or because the federal implications are not of such a nature that a public review is required. Federal procedures – the so-called EARP Guidelines Order,[30] which was put into place through an Order in Council in 1984 – were thought to give the federal government considerable latitude in applying its form of EIA. As a result of citizen-instituted litigation concerning dam projects located in western Canada, however, the Federal Court of Appeal has held that the EARP Guidelines Order has the force of law. Thus, the question of whether or not the Guidelines have been complied with is subject to judicial supervision.

These two cases – concerning the Rafferty and Alameda dams in Saskatchewan[31] and the Oldman dam in Alberta[32] – have revolutionized environmental law in our country over a very short period. Among other things, they have spawned other lawsuits, many of them initiated by aboriginal and other citizens' groups, forced federal officials to more carefully comply with the precise requirements of the Guidelines Order, caused regulators such as the National Energy Board to review their EIA practices, led to a joint federal-provincial assessment of a major pulp and paper project in Alberta that otherwise would not likely have come under public review, hastened the introduction or enactment of new statutes concerning EIA at both federal and provincial levels,[33] and sent to the Supreme Court of Canada the question of whether, due to its breadth, the EARP Guidelines Order offends ss. 92 and 92A of the Constitution and is thus inapplicable to a dam owned by the province of Alberta.[34]

The dam cases have revolutionized Canada's environmental law. But it is hard

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[29]For an assessment see M. Ross, "Perspective on Joint Environmental Impact Assessments," prepared for the Fifth Canadian Institute of Resources Law (CIRL) Conference on Natural Resources Law, *Growing Demands on a Shrinking Heritage: Managing Resource Use Conflict*, held in Ottawa, Ontario on 9-11 May 1991 (forthcoming in Conference Proceedings).

[30]*Environmental Assessment and Review Process Guidelines Order*, SOR/84–467, 22 June 1984.

[31]*Canadian Wildlife Federation* v. *Minister of Environment*, [1989] 3 C.E.L.R. 287 (F.C.T.D.), aff'd 99 N.R. 72 (F.C.A.D.).

[32]*Friends of the Oldman River Society* v. *Minister of Transport of Alberta*, [1990] 108 N.R. 241 (F.C.A.D.). On 23 January 1992, the Supreme Court of Canada held that a federal EARP is validly invoked when that undertaking requires a federal license.

[33]Examples are: Bill C-13, 3rd Sess., 34th Parl., *Canadian Environmental Assessment Act* 1991; Bill 53, 3d Sess., 22d Leg., *The Environmental Protection and Enhancement Act*, Alberta 1991; *Natural Resources Conservation Board Act*, S.A. 1990, c. N-5.5.

[34]*Supra*, note 32.

to argue that this legal revolution has moved us further along a path toward sustainable development. Because of the timing of the litigation and a number of other complexities, the projects were largely completed before the public federal EIA reviews were begun.[35] If these reviews conclude that the projects will lead to (or indeed have already had) seriously negative effects that cannot be mitigated,[36] what will governments do? It is hard to imagine that the dams would be "deconstructed" but the process to date has done little to increase public confidence in law as a tool of sustainable development or in EIA as a predictive mode. Moreover, to the extent that EIA is to help us weigh costs against benefits, it may have failed here: for experts appearing in front of the federal EIA panel reviewing the Oldman project claim that it is uneconomical and that the benefits from more agricultural land coming under irrigation would not warrant the public funds being spent.[37] The lack of clarity in the drafting of the EARP Guidelines themselves has been demonstrated through these and other lawsuits; while this experience does not necessarily lead to the conclusion that environmental laws are incapable of being drafted in language that is clear and will lead to relatively predictable results, that seems to have been the result in relation to the EARP Guidelines.

Moreover, the Federal Court of Appeal has recently struck down EIA-type conditions in licences granted by the National Energy Board pertaining to Hydro-Quebec's application to export power from the Great Whale project in northern Quebec.[38] One commentator has characterized this as sound administrative law but not necessarily good sense, since export licences that economically justify an energy megaproject have now been hived off from the process in which the production facilities are approved. As she points out, in addition to the likelihood of wasteful, duplicative procedures, approval in one process may lend credibility to the project in another review process. Furthermore:[39]

> ...the artificiality of splitting a proposal up into administrative, or any other body of law dictated parts must greatly undermine public confidence in the regulatory process. It has been said that if one can think of a thing without also thinking about another thing to which the first is inextricably connected, then one has a

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[35]"Dam may be illegal but it's very solid" *Calgary Herald* (5 November 1991), where the Oldman dam is described as being a 76 metre-high wall of rockfill and clay.

[36]One scientist appearing at the EIA hearings has expressed grave doubts about whether the proposed mitigation program will work. "Biologist claims province has squandered dam cash" *Calgary Herald* (9 November 1991) B3.

[37]"Oldman dam price tag soars" *Calgary Herald* (8 November 1991) A3.

[38]*Attorney General of Quebec* v. *National Energy Board*, (9 July 1991) (F.C.A.D.), appeal from decisions EH.3.89 of N.E.B. (August 1990).

[39]J. Keeping, "The Environmental Assessment of Electricity Exports: The Whale That Ate the NEB" (1991) 35 Resources 1 (Newsletter of the Canadian Institute of Resources Law).

legal mind. But even if legal minds can keep the inextricably connected separate, most people cannot.

2. A Strategy for Dealing with Global Warming

Global warming was identified by the *Brundtland Report* as one of the world's most pressing problems. Many attempts have been made at the international level to find ways of dealing with greenhouse gases such as carbon dioxide. In June 1988, at the Toronto Conference on the Changing Atmosphere, a recommendation was made that countries reduce their carbon dioxide emissions by 20 per cent by the year 2005. Canada, like other countries, then had to address the question of how this goal might be achieved.

One response was the establishment, by Canada's energy ministers, of an intergovernmental task force to make recommendations on these proposals. The Task Force's approach – encouraging everyone to work toward a reduction of such emissions – was endorsed by the Ministers at their August 1989 meeting.[40] The following year, after receiving a further report from the Task Force, the Ministers again declined to adopt any firm targets for dealing with this problem, merely emphasizing the need for coordination and consensus.[41]

The Canadian Council of Ministers of the Environment (CCME), which is also addressing this problem, has recently supported the desirability of a comprehensive approach to global warming, one that takes cognizance of the international dimensions, is flexible so as to respond to new information, and recognizes regional differences in the country.[42] The report of the Environment Ministers contains a list of "the sort of first step initiatives that are being generally contemplated to reduce greenhouse gas emissions."[43] The report notes that different government jurisdictions could chose different sets of instruments. The Green Plan released by the federal government a month later reiterates that it is contemplated that specific action plans for the limitation of greenhouse gases will be announced independently by each level of government.[44]

Modest steps have been taken. For example, the federal government recently introduced energy efficiency legislation, an important development given the broad

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[40]*Report of the Federal/Provincial/Territorial Task Force on Energy and the Environment*, (16 August 1989).

[41]*Report of the Federal/Provincial/Territorial Task Force on Energy and the Environment*, (2 April 1990).

[42]Canadian Council of Ministers of the Environment, *National Action Strategy on Global Warming*, November 1990, at 19-20.

[43]*Ibid.* at 27.

[44]*Canada's Green Plan For a Healthy Environment, 1990* at 102.

recognition that energy conservation will be one of the most effective ways of dealing with global warming.[45] It is also encouraging to note that, in New Brunswick, a comprehensive energy policy to the year 2005 has recently been put forward, which has as its cornerstone energy efficiency and conservation.[46] And, in January 1992, the federal government announced a major plan to study global warming.[47]

Notwithstanding these hopeful indicators, a sobering note was struck when, for the first time, the National Energy Board included in its energy supply and demand assessment an estimate of emissions of gases from the production and use of energy, including gases linked to the greenhouse effect, acid rain and low-level ozone. It concluded that "notwithstanding environmental policies in place at the end of 1990 and allowances for ongoing improvement in energy efficiency, emissions of carbon dioxide and nitrogen oxides are projected to increase."[48] This discouraging news casts doubt upon whether current strategies are going to do enough to solve these problems.[49]

3. Unintended Conflict Between Federal and Provincial Policies

Even if the division of legislative authority over the environment were more clear, a couple of examples suggest that our constitutional arrangements can impede the attainment of sustainable development.

In Alberta, the main energy regulatory body, the Energy Resources Conservation Board (ERCB), has developed growing concern over the problem of so-called "orphan wells," namely wells whose owners have become insolvent or left the jurisdiction without following proper abandonment procedures in regard to these facilities. While the exact scope of the problem is not known, estimates of the resulting costs run as high as $440 million.[50] The Board has engaged in

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[45]Bill C-41, *An Act Respecting the Energy Efficiency of Energy-Using Products and the Use of Alternative Energy Sources*, 3d Sess., 34th Parl., 1991 (First Reading, 29 October 1991).

[46]*An Energy Policy 1991-2005* (New Brunswick, December 1990).

[47]"Ottawa unveils plans to study the effects of global warming" *Globe and Mail* (28 January 1992) A1.

[48]National Energy Board News release (16 September 1991) 3. In contrast, Canada is reportedly ahead on its commitment to eliminate CFCs. At the same time, recent studies indicate that the ozone layer is being depleted even more rapidly than previously thought. "Canada ahead on commitment to eliminate CFCs" and "U.S. ozone data worrisome" (1991) 2:6 Environment Policy and Law 290.

[49]For a critique of the Canadian approach, see R. MacIntosh, "Federal Inaction on Climate Change" (1991) 13 Environment Network News 22.

[50]C. Hunt & H. Prus, "Abandonment and Reclamation of Energy Sites and Facilities: Canada" (1992) 10 Journal of Energy and Resources Law 87.

lengthy consultations with the petroleum industry in an effort to find long–term solutions.

In the meantime, in one such case,[51] the Board ordered the court-appointed Receiver/Manager of an insolvent and bankrupt oil company to carry out proper abandonment procedures on seven suspended oil wells, in the interests of environmental safety. This order was successfully opposed at trial by a secured creditor, on the ground that the securing of the wells would be at the expense of its rights under the *Bankruptcy Act* and was thus beyond the province's constitutional authority. On appeal, then Chief Justice Laycraft framed the issue in the case as whether the *Bankruptcy Act* requires that the assets in the estate of an insolvent well licensee should be distributed to creditors, leaving behind the duties respecting environmental safety, which are liabilities, as a charge to the public. He concluded that the receiver could not pick and choose as to whether a particular operation is profitable in deciding whether or not to carry it out. He stated at page 59:

> If one of the wells which the receiver has chosen to take control should blow out of control or catch fire, it would be a remarkable rule of law which would permit him to walk away from the disaster saying simply that remedial action would diminish distribution to unsecured creditors.

He further rejected the notion that the *Bankruptcy Act* overrode provincial conservation legislation, finding that there was no direct conflict between the two, even though the provincial legislation might have an incidental effect on the federal laws.

In the result, then, provincial regulatory attempts to protect the public interest were upheld; nevertheless, the case demonstrates some of the complexities of the federal system, more of which are likely to be revealed as all legislators seek innovative solutions to environmental problems.

Another example concerns the efforts of the government of British Columbia to cope with the problem of mine reclamation.[52] Like the orphan well situation, provincial regulators are eager to find a way of guaranteeing clean-up costs after the life of a mine, even where the owner is no longer on the scene or lacks the income to cover remediation costs. One possible solution has been the establishment of a reclamation fund into which an owner could make deposits throughout the life of the mine, to be drawn upon at an appropriate time to fund reclamation activities. A major shortcoming of this proposed solution, however, is that such deposits are not treated as tax deductible for the purposes of federal

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[51] *Panamericana De Bienes y Servicios, S.A.* v. *Northern Badger Oil & Gas Ltd.*, [1991] 117 A.R. 44 (C.A.).

[52] For a discussion, see *supra*, note 50.

income tax payments, even though they seem to be a legitimate business expense. In areas such as these, coordination between the two levels of government is essential if integration between the environment/economy is to be achieved.

B. Proposals For Constitutional Change

If our present constitutional arrangements do not seem to aid our search for sustainable development, what about proposals for the future?

Recent federal proposals[53] have obvious ramifications for our environmental future. Other proposals for constitutional change (such as the *Allaire Report*[54] from Quebec and the independent proposals by the Group of 22[55]) have advocated decentralization to the provinces in this regard.

One of the recent federal proposals is that the *Charter of Rights and Freedoms* would be amended to guarantee property rights.[56] While this idea is not entirely new, no rationale as to why such a recognition is required has been given.[57] What is the evil against which such a protection would be directed? What are the shortcomings of the present system that make this recognition necessary? Like other *Charter* rights, a property right would be subject to interpretation by the courts and tested against s. 1 (reasonable limits consistent with the values of a free and democratic society). It is worth noting that American judicial interpretation of property rights has to at least some extent limited the freedom of government to pursue environmentally motivated regulation.[58] Even if a Charterized property right could improve environmental protection, the mere existence of such a novel right could cause uncertainty which could itself compromise our ability to act

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[53]*Shaping Canada's Future Together (1991 Proposals for Constitutional Change)*. For a critique of these proposals vis-a-vis the problem of climate change, see N. Bankes, "Shaping the Future or Meeting the Challenge? The Federal Constitutional Proposals and Global Warming" (1991) 36 Resources 1.

[54]J. Allaire, *A Quebec Free to Choose: Report of the Constitutional Committee of the Quebec Liberal Party* (28 January 1991) at 7.

[55]*Some Practical Suggestions for Canada, Report of the Group of 22*, (June 1991) at 10.

[56]*Supra*, note 53.

[57]In a 1983 New Brunswick Court of Appeal case considering whether a Crown lien, created to enforce the duty of vendors to collect sales tax, attached to property not owned by such a vendor, Justice LaForest (as he then was) speculated on why the *Charter* did not expressly protect the security of property. He observed that it was probably to avoid the difficulty that courts might find themselves in were they put in a position of "frustrating regulatory schemes or measures obviously intended to reallocate rights and resources simply because they affect vested rights," *New Brunswick* v. *Fisherman's Wharf, (sub nom. New Brunswick* v. *Estabrooks Pontiac Buick Ltd.)* [1983] 144 D.L.R. (3d) 21 at 31.

[58]J. McBean, "The Implications of Entrenching Property Rights in Section 7 of the *Charter of Rights*" (1988) 26 Alta L.Rev. 548 at 566-67.

quickly in the interest of environmental protection.

The proposal for an entrenched property right has been placed alongside a proposed recognition of the objective of sustainable development in the Canada clause.[59] Such a recognition could help raise public awareness about sustainable development; but since the Canada clause is intended to give "symbolic" expression to the identity and aspirations of the people of Canada, it is difficult to imagine its having significant legal content, especially should the sustainable development notion come into conflict with an entrenched property right.

Section 121, the "common market" clause, would be broadened to facilitate the free movement of persons, goods, service and capital. Aside from concerns about whether this would permit environmental standards in one province to be attacked as trade barriers, the proposal envisages exceptions for reasons such as equalization and regional development but not for environmental protection. A "national interest" exception is contemplated, but only where approved by the governments of two-thirds of the provinces with at least 50 per cent of the population. Such a cumbersome approval mechanism could make it difficult to attain a "national interest" declaration.

The proposals advocate guaranteeing the permanence of intergovernmental agreements through constitutional entrenchment.[60] Intergovernmental agreements have been extremely successful in some areas of resource management, but provinces continue to have concerns about their enforceability.[61] A proposal to recognize the ability of governments to interdelegate legislative authority could provide flexibility, eliminating the past need to design unduly complex systems of resource management in order to overcome judicially-imposed constraints upon governmental powers in this regard.[62]

The emphasis in the federal proposals on the need to streamline government in order to eliminate unnecessary overlap and duplication and reduce the cost of government will draw loud cheers from taxpayers. Yet the suggestion that an early candidate for streamlining is wildlife conservation and protection raises the

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[59]The proposed clause reads "a commitment to the objective of sustainable development in recognition of the importance of the land, the air and the water and our responsibility to prevent and protect our environment for future generations." *Supra*, note 53 at 10.

[60]*Ibid.* at 33.

[61]*Canada-Newfoundland Atlantic Accord Implementation Act*, S.C. 1987. In this Accord, the federal government had agreed to attempt to entrench the agreement constitutionally. Provincial concerns about the enforceability of intergovernmental agreements may be more acute as a result of *Reference Re Canada Assistance Plan*, [1991] 6 W.W.R. 1 (S.C.C.).

[62]An example is the *Canada-Nova Scotia Offshore Petroleum Resources Accord Implementation Act*, S.C. 1988, c. 28.

question whether the resulting system would provide adequate tools for the Green Plan's *National Wildlife Strategy*,[63] with its emphasis on the protection of wildlife diversity and its observation that the number of Canadian wildlife species at risk continues to grow by about 10 a year. The current rate of species disappearance – which seems in danger of escalating[64] – is a serious problem which may require more action than the streamlining of government.

III. Trends And Issues In Domestic Law And Policy

Legislators and officials at both levels of government have expended remarkable amounts of recent time and energy attempting to face the challenges of sustainable development. How much has changed? Are the new approaches to law significant and have they made a difference? And even if they have made a difference, have they made enough of a difference to matter? The following section examines some illustrative trends in Canadian law and policy in an attempt to answer these questions.

A. The Use Of Financial Mechanisms

The CCREM's (the predecessor to CCEM) National Task Force on Environment and Economy, in releasing its report just a few months after that of the *Brundtland Report*, expressed support for the main conclusions and recommendations of the Brundtland Commission.[65] Among other things, it stressed that the creativity of the market system should be harnessed to pursue the goals of sustainable development.[66] Thus, it suggested that economic mechanisms such as contaminant charge schemes, tradable emission/discharge rights, financial assurance and performance deposits, investment tax credits, credits for exceeding environmental standards, and reduced interest bonds should be some of the mechanisms to be explored as a means of ensuring more efficient and effective environment-economy integration.

This notion – that the market could help us achieve a better future – is an attractive one that has received much positive attention. Yet, aside from a few exceptions, relatively little of a concrete nature has been accomplished. Thus, this

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[63]*Canada's Green Plan for a Healthy Environment*, 1990, at 85.

[64]See, "More wildlife at risk" (1991) 2:6 Environment Policy and Law 292, where it is reported that the number of endangered species in Canada in 1991 rose from 192 to 211.

[65]National Task Force on Environment and Economy, *Report to Canadian Council of Resource and Environment Ministers* (24 September 1987) at 1.

[66]*Ibid.* at 4.

avenue may not hold out as much promise as was hoped.

It is true that the tax system is being utilized to encourage the development of co-generation projects, which are a positive step toward energy conservation.[67] The province of Ontario has developed taxes on gas-guzzling cars and Ontario Hydro is using incentives to encourage customers to switch to energy saving devices.[68] Similarly in New Brunswick, the recently released energy policy contemplates the use of fiscal measures such as rate regulation techniques and different pricing and tax structures for fuels and vehicles to encourage efficiency and conservation.[69]

Another innovative approach has been the federal government's establishment of the Environmental Choice Program, which licences private manufacturers, distributors and retailers to use the ECOLOGO on products that comply with guidelines.[70]

The federal *Green Plan*, however, focuses little on the use of economic measures. While noting the potential usefulness of emission trading programs, it promises only to consider the extent to which such as approach can be used in regard to a smog control program.[71] Beyond this, it promises to support research programs in this area, and in the spring of 1991, to release a discussion paper on the topic.[72] The latter is still awaited.

In the meantime, new problems have emerged that show how out of sync many financial tools are when they come face to face with environmental issues. For example, a Montreal-based company has successfully argued that it should be given a reduced property tax load due to the lowered market value of land which it had polluted by its own activities.[73] Announcements in the United States that the settlement entered into by Exxon in regard to the Valdez oil spill off Alaska would be largely tax-deductible have caused outrage among those who see this as, in effect, a reward for corporate irresponsibility.

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[67]J. Brett & Thomas *et al.*, "Cogeneration: An Overview", forthcoming in the Alta L.Rev.

[68]See, "Hydro plan promotes energy conservation" (1991) 2:6 Environment Policy and Law 284.

[69]*Supra*, note 46 at 31-2.

[70]For a discussion of the administrative law aspects of this program, see D. Cohen, "Procedural Fairness and Incentive Programs: Reflections on the Environmental Choice Program" prepared for the Policy and Planning Subcommittee of the Environmental Choice Board (August 1990).

[71]*Supra*, note 44 at 55.

[72]*Ibid.* at 157-58.

[73]"Polluting land wins tax break" *Globe and Mail* (29 October 1991) B-1. The company later agreed not to claim the tax reduction it had been awarded and has stated that it is concentrating on cleaning up the site. "Tax fight over, toxin battle begins" *Calgary Herald* (2 November 1991) B4.

In general, there remain deeply rooted questions about whether or not the traditional approach to market-based economics will ever prove capable of responding to the challenges of sustainable development.[74] While there are occasional examples of the private sector taking its own market-oriented initiatives – such as the recently announced decision of Canadian packaging manufacturers to follow a voluntary code that will reduce by half, at the end of the century, the amount of packaging going into landfills[75] – progress so far with finding economic mechanisms to pursue environmental objectives suggests that this approach may have been overrated by its proponents.

B. Better Enforcement Of Environmental Laws

In response to growing public concerns about the environment, legislators have adopted a "get tough" approach through, among other things, a greater emphasis upon enforcement, including increased penalties, more usage of imprisonment, and liability for corporate officers and directors in their personal capacity.[76] This so-called piercing of the corporate veil to further the objectives of protecting the environment has recently led to a prison term for a corporate director for the first time in Canada.[77] The corporate world has responded to the changing context of environmental law and policy in a number of ways, including the establishment of environmental committees, the issuing of corporate policies about the environment, the escalating use of environmental audits to ensure that there is compliance with existing legal obligations, and, as mentioned earlier, the adoption of voluntary codes of conduct.

Another likely response, however, is reliance upon the *Charter* to attack the validity of some of the above legislative strategies.[78] Recent cases have clear implications in this regard.

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[74]J. Knetsch, *Economics, Losses, Fairness and Resource Use Conflicts* prepared for the First Canadian Institute of Resources Law (CIRL) Conference on Natural Resources Law, Growing Demands on a Shrinking Heritage: Managing Resource Use Conflict, held in Ottawa, Ontario on 9-11 May 1991 (forthcoming in Conference Proceedings).

[75]"Package makers adopt green code" *Globe and Mail* (7 November 1991) A7.

[76]For an assessment of the impact of these approaches on corporate directors and officers, see D. Saxe, "The Impact of Prosecution of Corporations and Their Officers and Directors upon Regulatory Compliance by Corporations" (1990) 1 J.E.L.P. 91.

[77]Leave to appeal sentence denied. The argument for personal liability in this case was compelling: 185 barrels of contaminant had been placed in or on the lands of the accused with his knowledge; *Ontario* v. *Crowe*, [1991] O.J. No. 902 (C.A.).

[78]This possibility was predicted soon after the *Charter* was passed. See A.R. Lucas, "The New Environmental Law" in R.L.Watts & D.M. Brown, eds, *Canada: The State of the Federation, 1989* (Kingston: Institute of Intergovernmental Relations, 1989) 167 at 180.

1. Due Diligence and the *Wholesale Travel* Decision

Much of the strategy of environmental enforcement has been predicated upon a command/penalty methodology: often a strict liability approach is utilized which requires the Crown to only prove the offending act, with the onus then shifting to the accused to establish that "due diligence" (often, a reasonable amount of care) has been pursued. The validity of such provisions from the point of view of s. 7 (the right to life, liberty and the freedom of the person) and s. 11 (the presumption of innocence) has recently been considered by the Supreme Court of Canada in the *Wholesale Travel* case.[79] The case concerned the *Charter* vulnerability of a prohibition in the *Competition Act* relating to false or misleading advertising, a breach of which could result in imprisonment but which could be defended through the establishment of due diligence.

A majority of the Court upheld the validity of these provisions, although a different majority found that they breached either s. 7 or s. 11.[80] The outcome of the case appears to be that, in order for due diligence to be used in provisions the breach of which could give rise to imprisonment, a s. 1 analysis will have to be applied to ensure that the law is justified in a free and democratic society. This result may be contrasted to that proposed by Justices Cory and L'Heureux-Dubé, who argued that the interests of a vulnerable society would be better served if regulatory offences were upheld and if the due diligence defence could be relied upon only where the accused could show reasonable care on a balance of probabilities.

2. The Right to Remain Silent and the Duty to Report Breaches of Environmental Laws

It has also become common for legislatures to impose an obligation upon parties to file reports where there have been breaches of environmental statutes; such provisions recognize the difficulty faced by enforcement agencies in detecting breaches.

As a result of recent decisions, doubt has been cast upon the validity of such requirements, at least to the extent that they do not simultaneously protect the information giver from having that information used against him or her in a

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[79] *R.* v. *Wholesale Travel Group Inc. & Chedore*, [1991] 130 N.R. 1.

[80] *Ibid.* at 1.

subsequent prosecution.[81] One legislative response has been to provide such a protection in tandem with the requirement to report a breach.[82]

While this outcome may not be totally unacceptable, it does reveal another aspect of a legal system that makes it difficult for legislators to employ all the techniques that might be appropriate to ensure that the environment is protected.

In future, enforcement provisions will have to be more carefully drafted to ensure that they do not run afoul of these or other *Charter* requirements.

C. An Ecosystem Approach To Law

The so-called first generation of environmental laws,[83] passed in the late 1960s and early 1970s, was characterized by separate statutes to regulate emissions into air and water. This followed the approach traditionally used in Canada to regulate the use of natural resources – with separate statutes for forests, mining, oil and gas, water, etc. A more recent approach, at least in regard to the control of emissions and toxics, has been to consolidate these statutes under one umbrella, using a broad definition of "environment" that reflects the essential nature of the ecosystem.[84]

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[81]In *R.* v. *Weil's Food Processing Ltd. & Henry Weil* (20 September 1991) (Ont. C.J.) (general division) held that mandatory self-reporting provisions in the *Environmental Protection Act* and the *Ontario Water Resources Act* infringed the right to silence under s. 7 of the *Charter*. The parties were permitted to provide evidence on the question of whether the provisions could be upheld pursuant to s. 1 of the *Charter*. A decision on this aspect of the case is awaited. For a brief discussion, see R. Cotton, "Impending Ruling on Weil Case to Settle Self-Reporting Dilemma" (1991) 2:6 Environment Policy and Law 285. The Supreme Court of Canada dismissed the accused's appeal and allowed the Crown's appeal in part. The court held that ss. 37.3(2)(a) and (b) violated the presumption of innocence (s. 11(b)), but were reasonable limits prescribed by law under s. 1. Sections 37.3(2)(c) and (d) violated the right to life, liberty and security of the person (s. 7), were not justified under s. 1 and were, accordingly, struck down under s. 52 of the *Constitution Act* as having no force and effect.

[82]Bill 20, *The Environment Act*, 2d Sess., 27th Leg. Assembly, The Yukon Territory (assented to 29 May 1991); Sections 113 and 133 of the Act require the reporting of releases of contaminants over set limits and of spills. Section 187.1 provides that such reports or the provision of information pursuant to the *Act* "are not admissible as evidence in a prosecution of the individual for a contravention of this Act or the regulations ... ." This section was reportedly added in response to the Ontario case referred to *ibid.* See G. Bell, "Final Version Includes Some Significant Alterations" (1991) 2:5 Environment Policy and Law 270–71.

[83]*Supra*, note 78 at 168–69.

[84]The definition of "environment" that has become common is the components of the earth and includes: (i) air, land and water; (ii) all layers of the atmosphere; (iii) all organic and inorganic matter and living organisms; and (iv) the interacting natural systems that include components referred to above. For a discussion, see W. L. Francis, "Sustainable Development – An Environmentalist's Dream or Nightmare?" presented at the Canadian Bar Association Annual meeting, Calgary, August

An example of this trend at the federal level is the *Canadian Environmental Protection Act*[85] (CEPA). Passed in 1988, this legislation amends or replaces six federal statutes and attempts to provide for "cradle-to-grave" regulation of toxic substances. In this regard it goes beyond the point-source control strategy that characterized earlier laws and provides greater recognition for the fact that we need to be concerned about the multitude of media into which contaminants are deposited. At the provincial level, Alberta is taking a similar approach with its proposed *Environment Protection and Enhancement Act.*[86]

The new *Environment Act* passed in the Yukon Territory goes somewhat further down this track than most of the other current legislation in Canada. Among its objectives are "to ensure the maintenance of essential ecological processes and the preservation of biological diversity" and "to ensure comprehensive and integrated consideration of environmental and socioeconomic effects in public policy making in Yukon."[87] Principles laid out in the Act include that economic development and the health of the natural environment are interdependent and that the government has a responsibility for the protection of the global ecosystem.[88] These principles and objectives, according to s. 5(3), are to govern the interpretation and application of the Act. In addition to regulating development, managing waste, controlling contaminants, hazardous substances and pesticides and spills, the Act provides a comprehensive basis for integrated land use and natural resource planning and management. Interestingly, it also contains a partnership approach that authorizes the government to enter into agreements with affected parties including the Yukon First Nations, municipalities, private sector or other non-governmental groups, and other jurisdictions and groups.[89]

While the Yukon legislation may have limited impact at the present time due to the fact that the federal government retains considerable control over resources there, this broader, more integrated approach to resource use and planning and emphasis on broad public involvement will need to be pursued if we are to improve our decision-making. That such an approach is developing in other countries illustrates the point that such initiatives may well be the wave of the

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1991.

[85]*Canadian Environmental Protection Act* (CEPA), S.C. 1988, c. 22.

[86]Bill 53, *The Environmental Protection and Enhancement Act*, Alberta 1991.

[87]*Supra*, note 82, (Bill 20, s. 5(1)(a) and (d)).

[88]*Ibid.* s. 5(2)(a) and (c).

[89]*Ibid.* Part 3. In regard to First Nations, s. 53(1) requires the Minister to "recognize and enhance, to the extent practicable, the traditional economy of the Yukon First Nations members and their special relationship with the natural environment."

future.[90]

IV. Implications For The Legal Profession

The environmental crisis offers our society new challenges that have ushered in a period of enormous and rapid change. What are some of the implications of these changes for lawyers and other members of our profession? What steps can be taken to enhance the attainment of sustainable development? Let me offer the following suggestions.

A. A Multi-disciplinary Approach

If lawyers have tended to be isolated within their discipline, this cannot continue to be the case. An ecosystem view mandates that we develop deeper ties with, and a better understanding of, many other disciplines. Laws that approach resource use and management from an ecosystem perspective will not succeed if those responsible for applying, enforcing and interpreting them do not understand the science upon which they are based.

In law schools, this suggests that we should be working more effectively at introducing multi-disciplinary courses and research projects. The latter imperative is being encouraged by the Social Science and Humanities Research Council's pilot project, Law as a Social Phenomena, which, among other things, has funded a crossdisciplinary workshop launched by Dalhousie Law School. It is hoped that this workshop will result in a longer-term, cross-disciplinary project concerning an ecosystem approach to law. Such joint research projects will aid in the development of joint courses for students. Law schools and professors, moreover, should take advantage of the recently-announced federal program which commits $50 million toward environmental research and training, and which is intended to create partnerships and teams that will integrate skills from a number of disciplines to study regional ecosystems in Canada.[91]

While law is clearly not the only player in the sustainable development game, it will be called upon to make a major contribution. For example, we may look

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[90]Sir Geoffrey Palmer, "Sustainability-New Zealand's Resource Management Legislation" prepared for the Fifth Canadian Institute of Resources Law (CIRL) Conference on Natural Resources Law, Growing Demands on a Shrinking Heritage: Managing Resource Use Conflict, held in Ottawa, Ontario on 9-11 May 1991 (forthcoming in Conference Proceedings). Sir Geoffrey Palmer, "Sustainability-New Zealand's Resource Management Legislation" (1991) 34 Resources 3 (Newsletter of the Canadian Institute of Resources Law).

[91]Canada's Green Plan News Release PR-HQ-091-34 "Ottawa Commits $50 Million for Environmental Research and Training" (29 September 1991).

to law to help adjust people's behaviour so that they become more environmentally conscientious. Unfortunately, we know relatively little about the effect that law has on behaviour. It is encouraging to note some recent studies that try to cast some light on this subject, in the environmental context.[92] Much more of this is needed if law is to do the job expected of it.

In regard to the judiciary, there is a growing need for judges to also learn about science and other environmentally-relevant disciplines. It has become commonplace, over the past decade, to accept the notion that judges can benefit from learning about the social context in which their decisions occur. Thus, many programs have been mounted to expose judges to such issues as gender and race bias. A major need in the future will be to develop similar workshops to help judges understand the scientific context of their decisions.[93]

B. Greater Knowledge Of Developments Elsewhere

I have argued that, in the future, much of what happens in the environmental field will occur at the international level. The traditional view of international law, then, as a remote force that does not really affect us or our clients, will no longer suffice. We will have to become more knowledgeable about developments at the international level because, increasingly, those developments will drive developments at the national and provincial level. This will also make it important for lawyers to help their clients find entry points into the process of international law-making.

With so many people in so many countries searching for solutions to the same kinds of problems, it will also be important for us to develop a higher level of awareness about legal strategies and solutions in other countries and provinces. For example, the adoption by the Northwest Territories legislature[94] of the "public trust" concept may not be terribly significant from a national perspective, but if Ontario goes the same route (as it has been contemplating),[95] other jurisdictions are likely to follow suit. Similarly, if Japanese and American courts

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[92]D. Saxe, "Impact of Prosecution of Corporations and Their Officers and Directors Upon Regulatory Compliance by Corporations" (1990) 1 J.E.L.P. 91; M. Rankin, "Economic Incentives for Environmental Protection: Some Canadian Approaches" (1991) 1 J.E.L.P. 241.

[93]For a good illustration of the growing importance of the scientific element in judicial decision-making, see *Cantwell* v. *Canada (Minister of the Environment)*, [1991] 41 F.T.R. 18 (F.C.T.D.), (appeal dismissed 6 June 1991 (F.C.A.D.)).

[94]Bill 17, *Environmental Rights Act*, N.W.T. 7th Sess., 11th Leg. Assembly, 1990 (assented to 6 November 1990).

[95]R. Cotton, "Ontario Bill of Rights Promise Suggests Expanded Rights to Sue" (1990) 1:9 Environmental Policy and Law 121.

are demonstrating some willingness to relax standards of proof of causation in pollution cases (by, for example, accepting general epidemiological evidence in cases of exposure to radioactivity and toxic chemicals),[96] counterpart arguments will soon appear here. We must be prepared to stay on top of such developments if we are to serve the interests of our clients. In the law schools, one way of pursuing these goals will be the encouragement of student and professor exchanges with other jurisdictions in Canada and abroad.

C. Creativity And Imagination

Learning, practising and applying law in this context will draw upon our powers of creativity and imagination as never before. "Standard form" agreements will have to be closely monitored to ensure that they reflect rapidly-changing legislative requirements and obligations. New concepts appearing in legislation, such as a "public trust in the environment" and "sustainable development" will eventually be interpreted and applied by the courts; the imagination of judges and lawyers involved in such decisions will be critical in determining what path we follow.

D. More Talking

The impetus toward broader public involvement at all stages of environmental decision-making, both as a result of judicial decisions and legislative trends, will make it impossible in the future for such decisions to be taken behind closed doors. It is arguable that past failures to involve local people in decisions have contributed to the lengthy litigation that is plaguing resource projects throughout our country. New institutions such as the Round Tables have been established in recognition of the fact that a greater exchange of ideas is essential.

Discussion, exchange of information, even negotiation and mediation will not necessarily mean that conflict can be avoided, for in some cases the clash of values may be so profound as to make impossible the achievement of a common solution. Yet a failure to talk to each other will only exacerbate such conflicts. These discussions will take time, patience and a willingness to learn on all sides, since they will require the interaction of people from different disciplines and cultures whose world view is not the same as that of our clients. These developments will provide wonderful opportunities for lawyers, who pride themselves on their communication skills, to make a lasting contribution.

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[96]S. Gaines, "International Principles for Transnational Environmental Liability: Can Developments in Municipal Law Help Break the Impasse?" (1989) 30 Harvard International Law Journal 311 at 336–37.

V. Conclusion

The final chapter of Rachael Carson's book *Silent Spring* begins:[97]

> We stand now where two roads diverge. But unlike the roads in Robert Frost's familiar poem, they are not equally fair. The road we have long been travelling is deceptively easy, a smooth super-highway on which we progress with great speed, but at its end lies disaster. The other fork of the road – the one "less travelled by" – offers our last, our only chance to reach a destination that assures the preservation of our earth.

The choice, after all, is ours to make...

I hope I have convinced you that, in making such a choice, members of our profession have an important (though by no means exclusive) role to play. I hope that we prove ourselves up to the task.

[97] *Supra*, note 2 at 277.